

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

May 21, 2008

CHANGE NOTICE NO. 4
 TO
 CONTRACT NO. 071B2001367
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR		TELEPHONE Jeanette Frank (571) 313-2615
Northrop Grumman Information Technology 15010 Conference Center Drive, #4014 Chantilly, VA 20151 Jeanette.Frank@ngc.com		VENDOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Joe Ross (517) 322-6844 Electronic Uniform Commercial Code (UCC) System -- Department of State		
CONTRACT PERIOD: From: March 15, 2002 To: September 30, 2009		
TERMS	N/A	SHIPMENT N/A
F.O.B.	N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A		

NATURE OF CHANGE (S):

Effective immediately, this contract is hereby **EXTENDED** from May 31, 2008 to September 30, 2009 and **INCREASED** by \$328,844.08 per the attached vendor letter. All other pricing, terms, and specifications remain unchanged.

AUTHORITY/REASON:

On 9/11/2007, the Administrative Board approved a \$62,200.00 increase. \$42,117.08 of this remains, and will be used for these services. On 5/20/2008, the Administrative Board approved the remaining balance.

INCREASE: \$328,844.08

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$3,560,519.91

March 26, 2008

Michigan Secretary of State
Office of Customer Services
7064 Crouner Drive
Lansing, MI 48918-1502

Attention: Joe Ross
Subject: 1 Year extension to contract 071B2001367
Reference: Electronic Uniform Commercial Code (UCC) System

Dear Mr. Ross:

Please find attached to this letter Northrop Grumman's proposal to extend our existing contract (Contract #071B2001367) with the Michigan Secretary of State. The proposal is to extend the existing contract for a period of one (1) year.

The attached modification contains the new rates for maintenance during the extension period, shown as three figures for portions of your fiscal years 2008 and 2009. The period of the extension will be from 1 June 2008 to 30 September 2009. This proposal is valid for sixty (60) days from the date listed above.

Please note that we have provided you with three options for your selection.

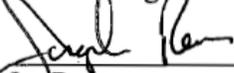
- **Option A** provides for purchase of one new piece of server hardware with the associated 3-year manufacturer's maintenance coverage. This server would partially mitigate the risk of failure of one of the State's existing aging production servers. This option would provide for building the new server as a replacement for an existing server. This would allow cutover to the new server and leave the old hardware as a backup.
- **Option B** does not provide for the new hardware and thus increases the risk and the maintenance cost to both the State and Northrop Grumman. The risk is due to your existing production servers being in place since 2002 and now past normal industry standards of hours for 'mean-time-between-failures'.
- **Option C plus Five Months** covers the State of Michigan providing two existing Michigan surplus servers, with associated warranty and with OS licenses. These servers would also partially mitigate the risk of failure of the State's existing aging production servers. This option would provide for building the two new servers as replacements for existing servers. This would allow cutover to the new servers and leave the old hardware as backup. This option also includes five additional months to coincide with State of Michigan financial year end.

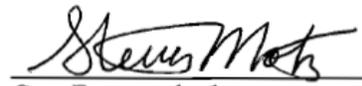
If after your review, should you agree, please sign and fax a copy of the attached modification to me at (703) 935-1455. If you have any questions or concerns, please feel free to contact me at (571) 313-2615.

Sincerely,


Jeanette Frank
Contract Administrator

Acknowledgement


Joe Ross
Project Sponsor


Greg Faremouth STEVE MOTZ
Buyer/CA

**AMENDMENT #3
EXTENSION FOR YEAR-7 MAINTENANCE SUPPORT
TO
CONTRACT NUMBER 071B2001367**

MI UCC

The purpose of this Amendment is to extend the period of performance from June 1, 2008 until September 30, 2009 and incorporate the labor rates listed below for year 7 of the Maintenance Support Contract Number 071B2001367 between The Michigan Department of State and Northrop Grumman Information Technology, Inc.

Please indicate your selection by your initials in the Yes / No spaces provided and confirm by your signature(s).

Cost breakout for dates of service for MI budget periods:

Option A: _____ -Yes _____ -No

Includes annual maintenance support and one new Dell PowerEdge server, (with dual 2.0GHz Quad Core Intel processors/4GB RAM/redundant power supplies/integrated RAID5/with 5-300GB 10K SCSI - HotPlug hard drives/dual Gigabit Ethernet NIC/Dell 3Yr Gold Enterprise Support: 7/24 Onsite).

May 1, 2008 through September 30, 2008 – (5 months): \$113,468.58

Maintenance Cost: \$100,414.58

One server: \$13,054.00

October 1, 2008 through April 30, 2009 – (7 months): \$140,580.42

Option A: Year-7 Total: \$254,049.00

Option B: _____ -Yes _____ -No

Includes annual maintenance support

May 1, 2008 through September 30, 2008 – (5 months): \$108,473.75

October 1, 2008 through April 30, 2009 – (7 months): \$151,863.25

Option B: Year-7 Total: \$260,337.00

Option C plus Five Months: -Yes _____ -No

The State of Michigan shall supply two existing Michigan surplus servers with the adequate configuration, associated warranty, and OS licenses. The State will install on the network accessible to Northrop Grumman. Per Michigan instruction, Northrop Grumman is to collaborate remotely with Michigan Department of Information Technology, in creation of virtual server copies for ProdApp and DevApp servers, and migration to the two new servers, which will then be placed into production.

June 1, 2008 through September 30, 2008 – (4 months) \$80,331.66

October 1, 2008 through April 30, 2009 – (7 months): \$140,580.42

May 1, 2009 through September 30, 2009 – (5 months) \$107,932.00

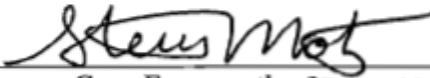
Option C: Year-7 Total: \$328,844.08

All work performed under this amendment will be in accordance with the maintenance provisions currently specified in contract number 071B2001367 and its subsequent amendments.

AMENDMENT #3
EXTENSION FOR YEAR-7 MAINTENANCE SUPPORT
TO
CONTRACT NUMBER 071B2001367
Page 2

EXCEPT AS SET FORTH ABOVE, ALL PROVISIONS, TERMS AND CONDITIONS OF
CONTRACT NUMBER 071B2001367 REMAIN UNCHANGED.

STATE OF MICHIGAN

By: 
Name: ~~Greg Faremouth~~ STEU MOTZ
Title: Buyer/CA

Date 5/21/08

NORTHROP GRUMMAN INFORMATION TECHNOLOGY

By: 
Name: Jeanette Frank
Title: Contract Administrator

Date 3/26/08

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

March 27, 2008

CHANGE NOTICE NO. 3 (REVISED)
 TO
 CONTRACT NO. 071B2001367
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR		TELEPHONE Jeanette Frank (571) 313-2615
Northrop Grumman Information Technology 15010 Conference Center Drive, #4014 Chantilly, VA 20151 Jeanette.Frank@ngc.com		VENDOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Joe Ross (517) 322-6844		
Electronic Uniform Commercial Code (UCC) System -- Department of State		
CONTRACT PERIOD: From: March 15, 2002 To: May 31, 2008		
TERMS	N/A	SHIPMENT
		N/A
F.O.B.	N/A	SHIPPED FROM
		N/A
MINIMUM DELIVERY REQUIREMENTS		
N/A		

NATURE OF CHANGE (S):

Effective immediately, this contract is hereby EXTENDED from May 1, 2008 to May 31, 2008 and INCREASED by \$20,082.92, per the attached vendor letter.

Please note, the vendor contact has been changed to Jeanette Frank, and the vendor mailing address has been updated.

AUTHORITY/REASON:

On 9/11/07, the Administrative Board approved a one month extension and \$62,200.00 increase. The State is applying \$20,082.92 of that increase to this change notice.

INCREASE: \$20,082.92

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$3,231,675.83

March 26, 2008

Michigan Department of Management and Budget
Purchasing Operations
530 W. Allegan
Lansing, MI 48933

Attention: Steve Motz - Buyer IT Division
Subject: 1 month extension to contract 071B2001367
Reference: Electronic Uniform Commercial Code (UCC) System

Dear Mr. Motz:

Please find attached to this letter Northrop Grumman's Amendment #2, to extend our existing contract (Contract #071B2001367) with the Michigan Secretary of State. The proposal is to extend the existing contract for a period of one (1) month.

The attached modification contains the rate for maintenance during the extension period, shown for the period of May 1, 2008 to May 31, 2008.

Per our telephone call today, you stated that the Michigan State Administrative Board has already approved funding for this modification.

If after your review, should you agree, please sign and fax a copy of the attached modification to me at (703) 935-1455. If you have any questions or concerns, please feel free to contact me at (571) 313-2615.

Sincerely,


Jeanette Frank
Contract Administrator

Acknowledgement


Steve Motz
2008.03.27 15:27:13
-04'00'

Steve Motz
Buyer IT Division

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

October 1, 2007

CHANGE NOTICE NO. 3
TO
CONTRACT NO. 071B2001367
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Northrop Grumman Information Technology 7555 Colshire Drive McLean, VA 22102	TELEPHONE Dan Hiatt (703) 556-2197
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Joe Ross (517) 322-6844 Electronic Uniform Commercial Code (UCC) System -- Department of State	
CONTRACT PERIOD: From: March 15, 2002 To: May 30, 2008	
TERMS <p style="text-align: center;">N/A</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, this contract is hereby **EXTENDED** to May 30, 2008 and **INCREASED** by \$62,200.00.

AUTHORITY/REASON:

On 9/11/07, the Administrative Board approved a one month extension and \$62,200.00 increase. This change notice has been approved by DIT and the contractor.

INCREASE: \$62,200.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$3,273,792.91

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

March 23, 2007

CHANGE NOTICE NO. 2
 TO
 CONTRACT NO. 071B2001367
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Northrop Grumman Information Technology 7555 Colshire Drive McLean, VA 22102	TELEPHONE Dan Hiatt (703) 556-2197
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Joe Ross (517) 322-6844 Electronic Uniform Commercial Code (UCC) System -- Department of State	
CONTRACT PERIOD: From: March 15, 2002 To: April 30, 2008	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, this contract is hereby EXTENDED from one year to April 30, 2008 and INCREASED by \$214,693.00, per the attached vendor quote. Please note that the buyer has been changed to Steve Motz.

AUTHORITY/REASON:

On 3/6/2007, the Administrative Board approved a one year extension and \$214,693.00 increase. This change notice has been approved by DIT and the contractor.

INCREASE: \$214,693.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$3,211,592.91



Northrop Grumman Corporation
Commercial, State & Local Solutions
100 Sun Avenue, Suite 300
Albuquerque, NM 87109

22 March 2007

Michigan Secretary of State
Office of Customer Services
Attn. Mr. Steve Motz
PO Box: 30026
530 West Allegan
Lansing, MI 48909

Subject: 1 Year extension to contract 071B2001367

Reference: Electronic Uniform Commercial Code (UCC) System

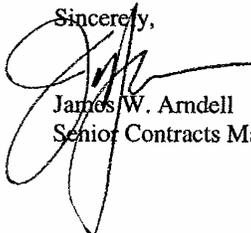
Dear Mr. Ross:

Please find attached Northrop Grumman's proposal to extend our existing contract (Contract #071B2001367) with the Michigan Secretary of State. The proposal is to extend the existing contract for a period of one (1) year.

The attached modification contains the new rates for maintenance during the extension period, shown as two figures for portions of your fiscal years 2007 and 2008. The period of the extension will be from 01 May 2007 to 30 April 2008. This proposal is valid for thirty (90) days from the above listed date.

If after your review, should you agree, please sign and fax a copy of the attached modification to me at (505) 998-8115. If you have any questions or concerns, please feel free to contact me at (505) 998-8403.

Sincerely,



James W. Arndell
Senior Contracts Manager

AMENDMENT #1

EXTENSION FOR YEAR-6 MAINTENANCE SUPPORT

TO

CONTRACT NUMBER 071B2001367

MI UCC

This Extension for Year-6 Maintenance Support, to Contract Number 071B2001367 between The Michigan Department of State and Northrop Grumman Information Technology provides as follows:

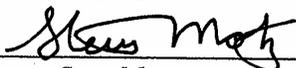
The purpose of this Amendment is to extend the period of performance from May 1, 2007 until April 30, 2008 and incorporate the below listed year 6 labor rates.

Cost breakout for dates of service for MI budget periods:
May 1, 2007 through September 30, 2007 – (5 months): \$89,455.42
October 1, 2007 through April 30, 2008 – (7 months): \$125,237.58

All work performed under this amendment will be in accordance with the maintenance provisions currently specified in contract number 071B2001367 and it's subsequent amendments.

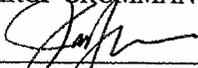
EXCEPT AS SET FORTH ABOVE, ALL PROVISIONS, TERMS AND CONDITIONS OF CONTRACT NUMBER 071B2001367 REMAIN UNCHANGED.

STATE OF MICHIGAN

By: 
Name: Steve Motz
Title: Buyer

Date 3/22/2007

NORTHROP GRUMMAN INFORMATION TECHNOLOGY

By: 
Name: James W. Arndell
Title: Senior Manager

Date 3/22/07

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

April 6, 2005

CHANGE NOTICE NO. 1
 TO
 CONTRACT NO. 071B2001367
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Northrop Grumman Information Technology 7555 Colshire Drive McLean, VA 22102	TELEPHONE Dan Hiatt (703) 556-2197
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1646 Greg Faremouth
Contract Compliance Inspector: Joe Ross (517) 322-6844 Electronic Uniform Commercial Code (UCC) System -- Department of State	
CONTRACT PERIOD: From: March 15, 2002 To: April 30, 2007	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Add funding of contract to make changes to the e-SOS system per public act 212 of 2004. Per attached work statement.

AUTHORITY/REASON:

Per DMB/Acquisition Services.

INCREASE: \$89,958.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,996,899.91

**AMENDMENT #1 TO
CONTRACT NO. 071B2001367
between**

**THE STATE OF MICHIGAN
and
NORTHROP GRUMMAN INFORMATION TECHNOLOGY, INC.,
A SUBSIDIARY OF NORTHROP GRUMMAN CORPORATION**

The Contract between the **State of Michigan** (hereinafter "**State**") and **Northrop Grumman Information Technology, Inc.**, a subsidiary of **Northrop Grumman Corporation** (hereinafter "**NGIT**"), is hereby amended as follows:

1. Implement the UCC Debtor Notification Work Statement for Implementing PA 212 of 2004 dated September 30, 2004. See Attachment A.
 - a. The State is requesting two separate estimates of total cost and project duration to complete the required enhancements to the UCC e-SoS system.
 1. One estimate will be for the total cost and project duration to add fee changes and to produce a *Debtor Notice of UCC Filing* and related images for all initial and amendment filings, including amendments for continuation, termination and collateral changes.
 2. The second estimate will be for the total cost and project duration to add fee changes and to produce a *Debtor Notice of UCC Filing* and related images for all initial filings and only those amendments that add debtors, but will exclude amendments for continuation, termination and collateral changes.

NGIT's analysis has shown that the estimate for the total cost and project duration will be the same for which ever method is implemented and will therefore submit one estimate for the total cost and project duration.
2. Implement the SOAP Listener Multi-Thread task. See Attachment B.
3. The two tasks will be completed sequentially as detailed on the project schedule.
4. A new set of documentation will not be developed for these two tasks, rather the existing documentation set will be updated as required.
5. The contract value will be increased by \$89,958.00 to implement the two tasks called out in items 1 and 2.

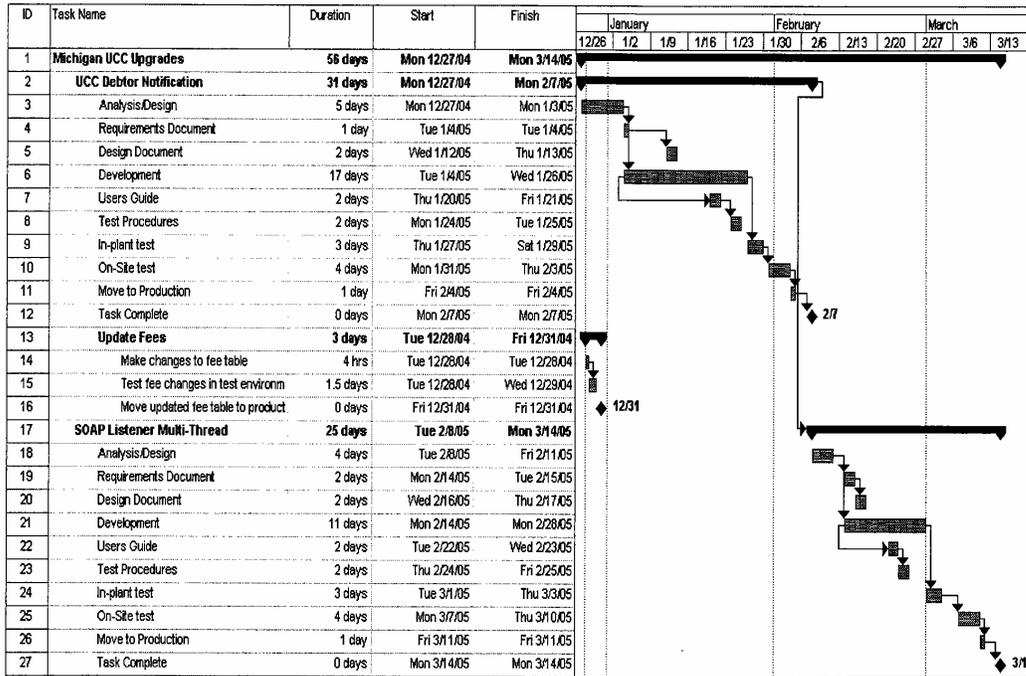
TASK ESTIMATES

Task	Cost
UCC Debtor Notification Work Statement for Implementing PA 212 of 2004	\$46,671.00
SOAP Listener Multi-Thread task	\$43,287.00
Total Cost	\$89,958.00

DELIVERABLE PAYMENT SCHEDULE

Deliverable Number	Deliverable Title	Deliverable Due Date	Deliverable Price
Task 1	UCC Debtor Notification Work Statement for Implementing PA 212 of 2004	02/07/2005	\$46,671.00
Task 2	SOAP Listener Multi-Thread task	03/14/2005	\$43,287.00

PROJECT SCHEDULE





**DEPARTMENT OF INFORMATION TECHNOLOGY
IT SERVICES
STATEMENT OF WORK**

Project Title: UCC Debtor Notification Work Statement for Implementing PA 212 of 2004	Period of Coverage:
Requesting Department: Michigan Department of information Technology	Date: 2-24-05
Agency Project Manager: Mike Coyer	Phone: 517/322-5388
DIT Contract Liaison: Jacque Kuch	Phone: 636-0327

BACKGROUND: Public Act 212 of 2004 requires changes to the Uniform Commercial Code (UCC) e-SoS system. This law changes fees and adds a requirement to notify individual debtors that a UCC financing statement has been filed under their name. These changes are effective January 1, 2005. Under Public Act 212 of 2004, when a UCC financing statement is filed with the Michigan Department of State UCC filing office and the debtor(s) listed on the financing statement is an individual, the UCC filing office will send a notification of the filing and an image of the filing with all attachments to each individual debtor listed on the filing. The Michigan UCC Office also requires a method for the internal e-SoS system only where the filing officer may manually select an option to have a notification and image with all attachments sent to an organization identified as a debtor on the financing statement.

The current UCC e-SoS system can only process one transaction at a time because of the single-thread interface. Web application "traffic" backs up or times out when large transactions are processed. Both the back end and the web application can process multiple transactions at a time. However, the interface between them can only process one transaction at a time.

SCOPE OF WORK: Change to new fees, add debtor notification and multithread to the UCC e-SoS system.

PROJECT OBJECTIVE: Implement PA 212 of 2004

SEE ATTACHMENT FOR BALANCE OF WORK STATEMENT.

TO BE COMPLETED BY CONTRACTOR (WRITTEN RESPONSE REQUIRED WITHIN 14 BUSINESS DAYS FROM RECEIPT OF AGENCY WORK STATEMENT)		
Response Approved	Response Denied	Date:
Reason for Denying:		
Signature of Contractor:		

Page 2

TASKS: See attached

DELIVERABLES: See attached

Deliverables will not be considered complete until the Agency Project Manager has formally accepted them. Deliverables for this project include:

SKILL SET/EXPERIENCE REQUIRED:

PROJECT CONTROL AND REPORTS:

A bi-weekly progress report must be submitted to the Agency Project Manager through the life of this project. This report may be submitted with the billing invoice. Each bi-weekly progress report must contain the following:

1. **Hours:** Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also state whether the remaining hours are sufficient to complete the project.
2. **Accomplishments:** Indicate what was worked on and what was completed during the current reporting period.
3. **Funds:** Indicate the amount of funds expended during the current reporting period, and the cumulative total to date for the project.

SPECIFIC DEPARTMENT STANDARDS:

Agency standards, if any, in addition to DIT standards.

PAYMENT SCHEDULE:

Payment will be made on a "Fixed Price" basis and paid quarterly. All invoices should reflect actual work completed by payment date, and must be approved by the Agency Project Director prior to payment.

PROJECT CONTACTS:

The designated Agency Project Manager is:

Mike Coyer
Michigan Department of State
Office of Customer Services
7064 Crowner Dr
Lansing, MI 48918
517/322-5388

The DIT Contract Liaison for this project is:

Jacque Kuch
Michigan Department of Information Technology
Operations Center 1st floor
7285 Parsons Dr
Dimondale, MI 48821
517-636-0327
517-636-0402
kuchj@michigan.gov

AGENCY RESPONSIBILITIES/ASSUMPTIONS:

RIGHT TO OWNERSHIP:

All data, materials, documentation and other things developed by the contractor for this project shall belong exclusively to the State. This includes, but is not limited to, source code *and documentation*. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein.

UCC Debtor Notification Work Statement for Implementing PA 212 of 2004

September 30, 2004

Public Act 212 of 2004 requires changes to the Uniform Commercial Code (UCC) e-SoS system. This law changes fees and adds a requirement to notify individual debtors that a UCC financing statement has been filed under their name. These changes are effective January 1, 2005.

Two Estimates

The Michigan Department of State is requesting two separate estimates of total cost and project duration to complete the required enhancements to the UCC e-SoS system. One estimate will be for the total cost and project duration to add fee changes and to produce a *Debtor Notice of UCC Filing* and related images as described below for all initial and amendment filings, including amendments for continuation, termination and collateral changes. The second estimate will be for the total cost and project duration to add fee changes and to produce a *Debtor Notice of UCC Filing* and related images as described below for all initial filings and only those amendments that add debtors, but will exclude amendments for continuation, termination and collateral changes. The Michigan Department of State will then make a selection from the estimate options.

Debtor Notice of UCC Filing

Under Public Act 212 of 2004, when a UCC financing statement is filed with the Michigan Department of State UCC filing office and the debtor(s) listed on the financing statement is an individual, the UCC filing office will send a notification of the filing and an image of the filing with all attachments to each individual debtor listed on the filing. The Michigan UCC Office also requires a method for the internal e-SoS system only where the filing officer may manually select an option to have a notification and image with all attachments sent to an organization identified as a debtor on the financing statement.

Requirements:

1. The e-SoS system must distinguish between debtors listed as individuals and debtors listed as organizations. The e-SoS system must automatically create and print a *Debtor Notice of UCC Filing* and an image of the filing with all attachments associated with the filing for each debtor listed as an individual.
 2. If multiple individuals are listed as debtor on the filing, the e-SoS system must automatically create and print a separate *Debtor Notice of UCC Filing* and image of the filing with all attachments associated with the filing for each debtor, using the address provided on the financing statement as input by the data entry clerk for that debtor. Each *Debtor Notice of UCC Filing* will only contain the name and address of one debtor.
 3. If the filing has debtors listed as individuals and debtors listed as organizations, the e-SoS system will automatically create and print a *Debtor Notice of UCC Filing* and image of
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the filing with all attachments associated with the filing for only the debtors listed as individuals.

4. For the debtors listed as organizations on the filing, the filing officer will be able to select an option to have a *Debtor Notice of UCC Filing* and an image of the filing with all attachments created and printed for the debtors listed as organizations. This option will be for the internal users only and will not appear on the UCC Online web application. This option should appear on the Add Secured/Debtor box on the e-SoS system and will be available on all initial and amendment filing transactions. The default for this organization notification option will be set to not print the Debtor Notice and related attachments.
 5. When all debtors listed on a filing are individuals, the option for printing a *Debtor Notice of UCC Filing* will be disabled. Printing should be done automatically. The *Debtor Notice of UCC Filing* and related documents will print automatically for all individuals named as debtors.
 6. The e-SoS system will be able to distinguish between debtors listed as individuals and debtors listed as organizations on a financing statement prepared on the UCC Online web application, and create and print in the UCC Unit a *Debtor Notice of UCC Filing* and image of the filing for each individual debtor. The UCC Unit will mail this notice package to the named individuals.
 7. The e-SoS system will not return a copy of the *Debtor Notice of UCC Filing* to the UCC Online web application Order History. The on-line filer will not receive any information or notice that the *Debtor Notice of UCC Filing* is being printed or mailed.
 8. The e-SoS system must evaluate debtor names on all financing statements except the UCC 5 correction statement and the Filing Officer statement. Search requests (UCC 11) are also not included.
 9. Internal e-SoS users with the proper authorization/privilege will be able to locate a previously issued *Debtor Notice of UCC Filing* on the e-SoS system and be able to regenerate, if needed, and reprint the *Debtor Notice of UCC Filing* and image of the filing with all attachments associated with the filing.
 10. An internal e-SoS system user will be able to search for a previously issued *Debtor Notice of UCC Filing* by using any of the following three criteria: job number, file number, and debtor name.
 11. The *Debtor Notice of UCC Filing* and the image of the filing with all attachments associated with the filing for each individual debtor must print as a collated set. If there are multiple debtors on a single filing, a separate, collated set of the *Debtor Notice of UCC Filing* and images with all attachments associated with the filing must print in collated format for each debtor, with only the name and mailing address for that specific debtor shown on the letter and in the area that will show in the mailing envelope window.
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12. If the option to print a *Debtor Notice of UCC Filing* is selected for a debtor that is an organization, the *Debtor Notice of UCC Filing* and the image of the filing with all attachments associated with the filing must also print as a collated set.
13. The *Debtor Notice of UCC Filing* must contain the following information:
 - a. The debtor's name and address,
 - b. All secured party names and addresses from this filing,
 - c. Remedies available
 - d. The filing number,
 - e. The date of filing.
14. The *Debtor Notice of UCC Filing* letter will use the same letterhead as is currently used on other UCC e-SoS system correspondence.
15. The *Debtor Notice of UCC Filing* shall generate as a Microsoft Word document, in the same way that other UCC notifications are generated. Michigan UCC system administrators will be able to modify the text of the *Debtor Notice of UCC Filing* without needing assistance from Northrop Grumman.
16. The debtor's name and address will print on the *Debtor Notice of UCC Filing* in such a way that it appears in the window box for mailing in flat envelopes VR-ENV-15 and VR-ENV-16 (the envelopes currently used for mailing e-SoS correspondence). A separate cover sheet for mailing may be used; however, the debtor's name and address must still appear on the *Notice* in a professional manner.
17. The *Debtor Notice of UCC Filing* may be one or more page in length.
18. The *Debtor Notice of UCC Filing* will use the same storage and purge rules as the current e-SoS correspondence.
19. The *Debtor Notice of UCC Filing* will not be microfilmed.
20. The *Debtor Notice of UCC Filing* will be generated as specified in this document for both initial financing statements and any amendment financing statements that add debtors.
21. The format of the *Debtor Notice of UCC Filing* letter must be approved by the State of Michigan before being released for production on the Uniform Commercial Code Section e-SoS system.

Fees

22. The fee structure in the e-SoS system will be changed according to the following table.
 23. The fees for Tax Liens do not change.
-

24. Any necessary changes needed to pass the fees to the ARS system or to UCC On-line are a part of this work statement.
25. All changes from this work statement will be fully tested by Northup Grumman before implementation. The changes must also be user-tested and approved by the Department of State before implementation.

Transaction	Current Statute	Current Fee	HB 5148 Numbering	New Fee
Filing Statements:	Sec. 9525(1)	\$10	Sec. 9525(1)	\$15
Amendments				
Assignments				
Continuations				
Initial				
Manufactured Home				
Partial Release				
Terminations				
Utility				
Non-Standard Forms	Sec. 9525(1)(a)	\$7	Deleted	None
100+ Page Filings	Sec. 9525(1)(b)	\$12	Deleted	None
Additional Debtors	Sec. 9525(1)(c)	\$10	Deleted	None
Correction Statements	Sec. 9525(1)	\$10	Sec. 9525(4)	None
Search Request	Sec. 9525(2)	\$6	Sec. 9525(2)	\$6
100+ Search Listing	Sec. 9525(2)(a)	\$6	Deleted	None
Expedited Search	Sec. 9525(2)(b)	\$25	Sec. 9525(2)(a)	\$25
Search Copy Pages	Sec. 9525(2)(c)	\$2/page	Sec. 9525(2)(b)	\$2/page
Official Seal Certificate	Sec. 9525(2)(d)	\$6	Sec. 9525(2)(c)	\$6

Implementation

The changes required by this work statement must be completed and ready for implementation by the effective date of the legislation, which is January 1, 2005.

Suggested "Debtor Notice of UCC Filing"

[Date of Filing]

[Debtor Name]

[Debtor Address]

[Debtor City, State Zip]

RE: Michigan Uniform Commercial Code
Financing Statement [File Number]

Your name has been shown as a debtor with the Michigan Department of State UCC filing office on financing statement [File Number]. A copy of this financing statement is attached for your review.

The following secured parties are listed on this financing statement:

[First Secured Party Name]
[First Secured Party Address]
[First Secured Party City, State Zip]

[Second Secured Party Name]
[Second Secured Party Address]
[Second Secured Party City, State Zip]

[Other Secured Parties as needed]

What is a financing statement?

A financing statement is a public notice of a security agreement between a debtor (borrower) and a secured party (lender) and shows what property or items are used as collateral. The State UCC filing office is a central location where potential lenders can search to ensure collateral is not already encumbered. The State UCC filing office is not a consumer credit bureau and does not provide information to consumer credit agencies. For more information about financing statements, visit the UCC website at www.michigan.gov/sosucc, then go to *Uniform Commercial Code Home Page*.

What do I need to do?

- If you did enter into a security agreement with this lender, and all the information is correct, you do not need to take any action with the State UCC filing office. When you have satisfactorily completed your obligation, the lender will file another financing statement terminating the lien.
-

- If you entered into a security agreement but the attached filing contains errors, contact your lender. The lender can file a statement to fix those errors.
- If you believe that the financing statement has been erroneously or fraudulently filed, you have several options:
 - First, you may record a correction statement with the State UCC filing office explaining why you believe this financing statement is inaccurate or wrongfully filed. By law, a correction statement does not change the recorded financing statement, but is added to the history of the financing statement and is provided if a lender searches your record. A correction statement may be filed at no charge via the Internet at www.michigan.gov/sosucc.
 - Second, in accordance with Michigan Compiled Laws 440.9501(6) and (7), you may initiate a court action against the person who filed the financing statement. In the court action, you may seek appropriate equitable relief or damages, including, but not limited to, an order declaring the financing statement ineffective and ordering the UCC filing office to terminate the financing statement. The person who filed the financing statement may be convicted of a felony with up to 5 years imprisonment, up to \$2,500 in fines and ordered to pay reasonable attorney fees and restitution. To initiate a court action, you should seek legal counsel.
 - Third, you may choose to take no action. Most filings automatically expire after 5 years unless continued by the lender.

If you have questions, contact us at UCCSection@michigan.gov or call (517) 322-1144. Please have this document available when calling.

Sincerely,

Michigan Department of State
UCC Filing Office

Debtor Notice of UCC Filing

Requirements:

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
1	1	The e-SoS system must distinguish between debtors listed as individuals and debtors listed as organizations.	Current e-SoS system performs this function.	Activate the Add Secured Party/Debtor dialog and verify that there are checkboxes for "Individual" and "Organization" and one of them must be selected.
2	1	The e-SoS system must automatically create and print a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing for each debtor listed as an individual.	This applies only to debtors added by the current filing, not existing debtors.	Complete a filing with new debtors that are individuals and verify that the <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing is generated.
3	2	If multiple individuals are listed as debtor on the filing, the e-SoS system must automatically create and print a separate <i>Debtor Notice of UCC Filing</i> and image of the filing with all attachments associated with the filing for each debtor, using the address provided on the financing statement as input by the data entry clerk for that debtor. Each <i>Debtor Notice of UCC Filing</i> will only contain the name and address of one debtor.		Complete a filing with multiple new debtors that are individuals and verify that the <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing is generated for each debtor and that each <i>Debtor Notice of UCC Filing</i> contains only the name and address of one debtor.
4	3	If the filing has debtors listed as individuals and debtors listed as organizations, the e-SoS system will automatically create and print a <i>Debtor Notice of UCC Filing</i> and image of the filing with all attachments associated with the filing for only the debtors listed as individuals		Complete a filing with multiple new debtors that are individuals and organizations and verify that the <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing is generated only for the debtors that are individuals.

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
5	4	For the debtors listed as organizations on the filing, the filing officer will be able to select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments created and printed for the debtors listed as organizations.		Complete a filing with new debtors that are organizations and verify that the filing officer will be able to select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing generated.
6	4	This option will be for the internal users only and will not appear on the UCC Online web application.		Complete a filing with new debtors that are organizations and verify that the user cannot select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing generated.
7	4	This option should appear on the Add Secured/Debtor box on the e-SoS system and will be available on all initial and amendment filing transactions.	This option will appear on the Add Secured Party/Debtor dialog for all initial filings and amendment filings that add new debtors.	Complete a filing with new debtors that are organizations and verify that the filing officer will be able to select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing generated.
8	4	The default for this organization notification option will be set to not print the Debtor Notice and related attachments.		Complete a filing with new debtors that are organizations and verify that the filing officer will be able to select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing generated, and the default is set to not print the Debtor Notice and related attachments.

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
9	5	When all debtors listed on a filing are individuals, the option for printing a <i>Debtor Notice of UCC Filing</i> will be disabled. Printing should be done automatically. The <i>Debtor Notice of UCC Filing</i> and related documents will print automatically for all individuals named as debtors.		Complete a filing with new debtors that are only individuals and verify that the filing officer is not able to select an option to have a <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing generated, rather than these items are generated automatically.
10	6	The e-SoS system will be able to distinguish between debtors listed as individuals and debtors listed as organizations on a financing statement prepared on the UCC Online web application ...	Current e-SoS system performs this function.	Complete a web filing with multiple new debtors that are individuals and organizations and verify that there are checkboxes for "Individual" and "Organization" and one of them must be selected for each debtor.
11	6	... and create and print in the UCC Unit a <i>Debtor Notice of UCC Filing</i> and image of the filing for each individual debtor.	Should this be automatically printed or emailed to the UCC Unit to be printed by the staff?	Complete a web filing with new debtors that are individuals and verify that the <i>Debtor Notice of UCC Filing</i> and an image of the filing with all attachments associated with the filing is generated and printed .
12	6	The UCC Unit will mail this notice package to the named individuals.		No test required. Manual process.
13	7	The e-SoS system will not return a copy of the <i>Debtor Notice of UCC Filing</i> to the UCC Online web application Order History.		Complete a web filing with new debtors that are individuals and verify that the e-SoS system does not return a copy of the <i>Debtor Notice of UCC Filing</i> to the UCC Online web application Order History.
14	7	The on-line filer will not receive any information or notice that the <i>Debtor Notice of UCC Filing</i> is being printed or mailed.		Complete a web filing with new debtors that are individuals and verify that the on-line filer does not receive any information or notice that the <i>Debtor Notice of UCC Filing</i> is being printed or mailed.
15	8	The e-SoS system must evaluate debtor names on all financing statements except the UCC 5	This applies only to debtors added by the current filing, not	Complete a web filing of a UCC3 adding multiple new debtors that are individuals

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
16	9	<p>correction statement and the Filing Officer statement. Search requests (UCC 11) are also not included.</p> <p>Internal e-SoS users with the proper authorization/privilege will be able to locate a previously issued <i>Debtor Notice of UCC Filing</i> on the e-SoS system and be able to regenerate, if needed, and reprint the <i>Debtor Notice of UCC Filing</i> and image of the filing with all attachments associated with the filing.</p>	<p>Assumes this is not using the UCC application.</p>	<p>and organizations and verify that there are checkboxes for "Individual" and "Organization" and one of them must be selected for each debtor.</p> <p>Open a job folder and regenerate, if needed, and reprint the <i>Debtor Notice of UCC Filing</i> and image of the filing with all attachments associated with the filing.</p>
17	10	<p>An internal e-SoS system user will be able to search for a previously issued <i>Debtor Notice of UCC Filing</i> by using any of the following three criteria: job number, file number, and debtor name</p>	<p>Assumes this is not using the UCC application.</p>	<p>Search the Job folders for the previously issued <i>Debtor Notice of UCC Filing</i> three times, each using a different criteria, job number, file number, debtor name.</p>
18	11	<p>The <i>Debtor Notice of UCC Filing</i> and the image of the filing with all attachments associated with the filing for each individual debtor must print as a collated set.</p>		<p>Complete a filing with multiple new debtors that are individuals and verify that the <i>Debtor Notice of UCC Filing</i> and the image of the filing with all attachments associated with the filing for each individual debtor prints as a collated set.</p>
19	11	<p>If there are multiple debtors on a single filing, a separate, collated set of the <i>Debtor Notice of UCC Filing</i> and images with all attachments associated with the filing must print in collated format for each debtor, with only the name and mailing address for that specific debtor shown on the letter and in the area that will show in the mailing envelope window.</p>		<p>Complete a filing with multiple new debtors that are individuals and verify that a separate, collated set of the <i>Debtor Notice of UCC Filing</i> and images with all attachments associated with the filing will print in collated format for each debtor, with only the name and mailing address for that specific debtor shown on the letter and in the area that will show in the mailing envelope window.</p>

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
20	12	If the option to print a <i>Debtor Notice of UCC Filing</i> is selected for a debtor that is an organization, the <i>Debtor Notice of UCC Filing</i> and the image of the filing with all attachments associated with the filing must also print as a collated set.		Complete a filing with multiple new debtors that are organizations, select the option to print a <i>Debtor Notice of UCC Filing</i> , and verify that the <i>Debtor Notice of UCC Filing</i> and the image of the filing with all attachments associated with the filing for each individual debtor prints as a collated set.
21	13	The <i>Debtor Notice of UCC Filing</i> must contain the following information: a. The debtor's name and address, b. All secured party names and addresses from this filing, c. Remedies available d. The filing number, e. The date of filing.	Suggested format and content of the <i>Debtor Notice of UCC Filing</i> is contained at the end of this document.	Complete a filing with new debtors and verify that the <i>Debtor Notice of UCC Filing</i> is generated and contains the following information: a. The debtor's name and address, b. All secured party names and addresses from this filing, c. Remedies available d. The filing number, e. The date of filing.
22	14	The <i>Debtor Notice of UCC Filing</i> letter will use the same letterhead as is currently used on other UCC e-SoS system correspondence.		Complete a filing with new debtors and verify that the <i>Debtor Notice of UCC Filing</i> is generated and uses the same letterhead as is currently used on other UCC e-SoS system correspondence.
23	15	The <i>Debtor Notice of UCC Filing</i> shall generate as a Microsoft Word document, in the same way that other UCC notifications are generated.		Complete a filing with new debtors and verify that the <i>Debtor Notice of UCC Filing</i> is generated as a Microsoft Word document, in the same way that other UCC notifications are generated.

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
24	15	Michigan UCC system administrators will be able to modify the text of the <i>Debtor Notice of UCC Filing</i> without needing assistance from Northrop Grumman		The Michigan UCC system administrators will modify the text of the <i>Debtor Notice of UCC Filing</i> without any assistance from Northrop Grumman, then complete a filing with new debtors and verify that the changes are contained in the <i>Debtor Notice of UCC Filing</i> is generated
25	16	The debtor's name and address will print on the <i>Debtor Notice of UCC Filing</i> in such a way that it appears in the window box for mailing in flat envelopes VR-ENV-15 and VR-ENV-16 (the envelopes currently used for mailing e-SoS correspondence). A separate cover sheet for mailing may be used; however, the debtor's name and address must still appear on the <i>Notice</i> in a professional manner.		Complete a filing with new debtors and verify that the <i>Debtor Notice of UCC Filing</i> is generated in such a way that it appears in the window box for mailing in flat envelopes VR-ENV-15 and VR-ENV-16 (the envelopes currently used for mailing e-SoS correspondence).
26	17	The <i>Debtor Notice of UCC Filing</i> may be one or more page in length.		Complete a filing with new debtors and verify that the <i>Debtor Notice of UCC Filing</i> is one or more pages in length.
27	18	The <i>Debtor Notice of UCC Filing</i> will use the same storage and purge rules as the current e-SoS correspondence.		Verify that the Doc Class for the <i>Debtor Notice of UCC Filing</i> is set to the same Doc Class as that used for the current e-SoS correspondence.
28	19	The <i>Debtor Notice of UCC Filing</i> will not be microfilmed.		Verify that the Doc Class for the <i>Debtor Notice of UCC Filing</i> is set to the same Doc Class as that used for the current e-SoS correspondence.
29	20	The <i>Debtor Notice of UCC Filing</i> will be generated as specified in this document for both initial financing statements and any amendment financing statements that add debtors.		Complete both internal and web filings for a UCC1 and a UCC3 adding multiple new debtors that are individuals and organizations and verify that the <i>Debtor Notice of UCC Filing</i> and an image of the

Req #	Ref #	Requirement	Assumptions and Agreements	Acceptance Criteria
30				filing with all attachments associated with the filing is generated correctly..
31	21	The format of the <i>Debtor Notice of UCC Filing</i> letter must be approved by the State of Michigan before being released for production on the Uniform Commercial Code Section e-SoS system.		Obtain approval of the format of the <i>Debtor Notice of UCC Filing</i> letter from the State of Michigan before it is released for production on the Uniform Commercial Code Section e-SoS system.
32	22	The fee structure in the e-SoS system will be changed according to the following table.		Complete a transaction of each type noted in the following table and verify that the proper fee is charged.
33	23	The fees for Tax Liens do not change.		Complete a Tax Lien and verify that the correct fee is charged.
34	24	Any necessary changes needed to pass the fees to the ARS system or to UCC On-line are a part of this work statement		Complete multiple filings and verify that the fees are correctly passed to the ARS system.
35	25	All changes from this work statement will be fully tested by Northrup Grumman before implementation. The changes must also be user-tested and approved by the Department of State before implementation.		Provide a Test Results Report to the State of Michigan documenting the results of Northrup Grumman testing and conduct on-site user testing with the Department of State.

Transaction	Current Statute	Current Fee	HB 5148 Numbering	New Fee
Filing Statements:	Sec. 9525(1)	\$10	Sec. 9525(1)	\$15
Amendments				
Assignments				
Continuations				
Initial				
Manufactured Home				
Partial Release				
Terminations				
Utility				
Non-Standard Forms	Sec. 9525(1)(a)	\$7	Deleted	None
100+ Page Filings	Sec. 9525(1)(b)	\$12	Deleted	None
Additional Debtors	Sec. 9525(1)(c)	\$10	Deleted	None
Correction Statements	Sec. 9525(1)	\$10	Sec. 9525(4)	None
Search Request	Sec. 9525(2)	\$6	Sec. 9525(2)	\$6
100+ Search Listing	Sec. 9525(2)(a)	\$6	Deleted	None
Expedited Search	Sec. 9525(2)(b)	\$25	Sec. 9525(2)(a)	\$25
Search Copy Pages	Sec. 9525(2)(c)	\$2/page	Sec. 9525(2)(b)	\$2/page
Official Seal Certificate	Sec. 9525(2)(d)	\$6	Sec. 9525(2)(c)	\$6

Implementation

The changes required by this work statement must be completed and ready for implementation by the effective date of the legislation, which is January 1, 2005.

Suggested "Debtor Notice of UCC Filing"

[Date of Filing]

[Debtor Name]

[Debtor Address]

[Debtor City, State Zip]

RE: Michigan Uniform Commercial Code
Financing Statement [File Number]

Your name has been shown as a debtor with the Michigan Department of State UCC filing office on financing statement [File Number]. A copy of this financing statement is attached for your review.

The following secured parties are listed on this financing statement:

[First Secured Party Name]

[First Secured Party Address]

[First Secured Party City, State Zip]

[Second Secured Party Name]

[Second Secured Party Address]

[Second Secured Party City, State Zip]

[Other Secured Parties as needed]

What is a financing statement?

A financing statement is a public notice of a security agreement between a debtor (borrower) and a secured party (lender) and shows what property or items are used as collateral. The State UCC filing office is a central location where potential lenders can search to ensure collateral is not already encumbered. The State UCC filing office is not a consumer credit bureau and does not provide information to consumer credit agencies. For more information about financing statements, visit the UCC website at www.michigan.gov/sosucc, then go to *Uniform Commercial Code Home Page*.

What do I need to do?

- If you did enter into a security agreement with this lender, and all the information is correct, you do not need to take any action with the State UCC filing office. When you have satisfactorily completed your obligation, the lender will file another financing statement terminating the lien.
- If you entered into a security agreement but the attached filing contains errors, contact your lender. The lender can file a statement to fix those errors.
- If you believe that the financing statement has been erroneously or fraudulently filed, you have several options:
 - First, you may record a correction statement with the State UCC filing office explaining why you believe this financing statement is inaccurate or wrongfully filed. By law, a correction statement does not change the recorded financing statement, but is added to the history of the financing statement and is provided if a lender searches your record. A correction statement may be filed at no charge via the Internet at www.michigan.gov/sosucc.
 - Second, in accordance with Michigan Compiled Laws 440.9501(6) and (7), you may initiate a court action against the person who filed the financing statement. In the court action, you may seek appropriate equitable relief or damages, including, but not limited to, an order declaring the financing statement ineffective and ordering the UCC filing office to terminate the financing statement. The person who filed the financing statement may be convicted of a felony with up to 5 years imprisonment, up to \$2,500 in fines and ordered to pay reasonable attorney fees and restitution. To initiate a court action, you should seek legal counsel.
 - Third, you may choose to take no action. Most filings automatically expire after 5 years unless continued by the lender.

If you have questions, contact us at UCCSection@michigan.gov or call (517) 322-1144. Please have this document available when calling.

Sincerely,

Michigan Department of State
UCC Filing Office

Form No. DMB 234A (Rev. 1/96)
 AUTHORITY: Act 431 of 1984
 COMPLETION: Required
 PENALTY: Failure to deliver in accordance with Contract
 terms and conditions and this notice, may be considered
 in default of Contract

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

September 26, 2008

**NOTICE
 OF
 CONTRACT NO. 071B2001367
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR <p style="text-align: center;">Northrop Grumman Information Technology 1831 Wiehle Avenue, Suite 100 Reston, VA 20190</p>	TELEPHONE Dan Hiatt (703) 556-2197
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Joe Ross (517) 322-6844 <p style="text-align: center;">Electronic Uniform Commercial Code (UCC) System -- Department of State</p>	
CONTRACT PERIOD: From: March 15, 2002 To: April 30, 2007	
TERMS <p style="text-align: center;">N/A</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

The terms and conditions of this Contract are enclosed. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.

Estimated Contract Value: \$2,906,941.91

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

CONTRACT NO. 071B2001367
 between
THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Northrop Grumman Information Technology 1831 Wiehle Avenue, Suite 100 Reston, VA 20190	TELEPHONE Dan Hiatt (703) 556-2197 VENDOR NUMBER/MAIL CODE BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Joe Ross (517) 322-6844 Electronic Uniform Commercial Code (UCC) System -- Department of State	
CONTRACT PERIOD: From: March 15, 2002 To: April 30, 2007	
TERMS <p style="text-align: center;">N/A</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	
MISCELLANEOUS INFORMATION: The terms and conditions of this Contract are enclosed. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence. Estimated Contract Value: \$2,906,941.91	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the **ITB No. 071I2000101**. A Purchase Order Form will be issued only as the requirements of the State Departments are submitted to the Acquisition Services. Orders for delivery may be issued directly by the State Departments through the issuance of a Purchase Order Form.

All terms and conditions of the invitation to bid are made a part hereof.

FOR THE VENDOR: <p style="text-align: center;">Northrop Grumman Information Technology</p> <hr/> <p style="text-align: center;">Firm Name</p> <hr/> <p style="text-align: center;">Authorized Agent Signature</p> <hr/> <p style="text-align: center;">Authorized Agent (Print or Type)</p> <hr/> <p style="text-align: center;">Date</p>	FOR THE STATE: <hr/> <p style="text-align: center;">Signature Mike Katlin, Director</p> <hr/> <p style="text-align: center;">Name Strategic Purchasing</p> <hr/> <p style="text-align: center;">Title</p> <hr/> <p style="text-align: center;">Date</p>
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**ACQUISITION SERVICES
STATE OF MICHIGAN**

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A Detailed Schedule



DEFINITION OF TERMS

TERMS	DEFINITIONS
Contract	A binding agreement entered into by the State of Michigan resulting from a bidder's proposal; see also "Blanket Purchase Order."
Contractor	The successful bidder who is awarded a Contract.
DMB	Michigan Department of Management and Budget
RFP	Request For Proposal - A term used by the State to solicit proposals for services such as consulting. Typically used when the requesting agency requires vendor assistance in identifying an acceptable manner of solving a problem.
ITB	Invitation to Bid - A generic form used by Acquisition Services to solicit quotations for services or commodities. The ITB serves as the document for transmitting the RFP to interested potential bidders.
Successful Bidder	The bidder(s) awarded a Contract as a result of a solicitation.
State	The State of Michigan For Purposes of Indemnification as set forth in section I-J, State means the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents.
Blanket Purchase Order	Alternate term for "Contract" used in the State's Computer system (Michigan Automated Information Network [MAIN])
Expiration	Except where specifically provided for in the Contract, the ending and termination of the contractual duties and obligations of the parties to the Contract pursuant to a mutually agreed upon date.
Cancellation	Ending all rights and obligations of the State and Contractor, except for any rights and obligations that are due and owing.
Work Product	Work Product means any data compilations, reports, and any other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of and in furtherance of performing the services required by this Contract.
UCC	Uniform Commercial Code, the set of laws that govern the filing of financial statements to record security interests in collateral used to secure loans. The UCC also covers the searching of these documents.
RA9	Revised Article 9. Article 9 of the Uniform Commercial Code sets the requirements that the Michigan Department of State must follow in recording and searching filing statements. Revised Article 9 is the legislative change that was enacted on July 1, 2001 in Michigan and most other states so that the UCC would be uniform from state to state. RA9 provides the basic requirements for the system to be procured by this ITB. RA9 is also known as Public Act 348 of 2000.
Department	The Michigan Department of State, the agency that has the legal responsibility for administering the UCC in this state.
UCC Unit	This unit is a generic term to refer to the work area and staff that complete the tasks required by the UCC.
ARS	Accounts Receivable System, part of a centralized receipts processing system used by the Michigan Department of State, Finance Division, to record and track financial payments made to the agency.
IACA	International Association of Corporation Administrators, a professional association for government administrators of business entity and secured transaction record systems at the state, provincial and national level in any jurisdiction which has or anticipates development of such systems. The IACA was responsible for promoting the model legislation and developing model rules and related specifications to implement RA9 uniformly in all states.
PPM	Principle Period of Maintenance, which is 8:00 a.m. to 5:00 p.m., Monday through and including Friday, but excluding state holidays.



SECTION I CONTRACTUAL SERVICES TERMS AND CONDITIONS

I-A PURPOSE

The purpose of this contract is to obtain a Uniform Commercial Code system. This system will support the Uniform Commercial Code (UCC) Unit of the Michigan Department of State (the Department). The new system will replace a microfilm-based, computer-assisted retrieval system currently in use and will put the Department in full compliance with Public Act 348 of 2000, also known as the Revised Article 9 (RA9) as enacted in Michigan.

The UCC system will be used to record financing statements and perform the searches required by law. The system will provide for electronic filing, indexing, storage, reviewing and retrieval of documents received on paper or in an electronic format.

The UCC Unit provides a central location in Michigan for filing a public notice of a secured transaction. This notice, called a financing statement, is evidence of a commercial agreement between two parties. The Department's UCC office, upon request, also searches the filed information by name. When a business applicant pledges collateral on a loan, UCC search results tell lenders whether others have filed a claim against the same collateral.

The Department will meet its functional requirements with a dual integrated business solution that operates in the Department's technical environment and provides a public facing web solution for filing and searching. The web solution will be handled by IBM with Northrop Grumman assisting the State in integrating the internal solution into the web solution. The scope of this contract includes all required application and system software, hardware, and local area networking interface equipment for the UCC system only. The State will provide network cabling and hubs. Conversion of existing indexes and microfilm images to a format usable by the new system is a requirement.

Project Scope

Under this contract, Northrop Grumman will be required to provide the following items. Detail about specific requirements for each item is included later in this document. The items considered to be within the scope of this project are as follows:

1. A UCC system that meets the requirements of Michigan law and that incorporates the requirements outlined in this ITB. The system would include the following elements:
 - a. All software needed to operate the system.
 - b. Required specialized hardware.
 - c. Indexing, storage, and retrieval processes.
 - d. Microfilming for long-term archival storage.
 - e. Redundancy for back-up and disaster recovery.
 - f. Work throughput performance standards as outlined in this ITB.
2. Data conversion from the existing UCC system to populate the new system.
3. Conversion of existing microfilm images. Because not all images may be needed, the vendor will also develop a strategy for conversion, including a comparison of alternatives by operational desirability, efficiency, and cost.
4. Limited business process reengineering. Based on the vendor's experience with other state-level UCC systems, the Department expects the vendor to recommend best practices as adopted in those states, even if those practices conflict with a requirement contained in this document. Such recommendations would generally occur during the business requirement definition phase of the project or during training and implementation. The vendor would also be expected to recommend procedures that would enable the most efficient use of the system. A full analysis of workflow and unit practices is beyond the scope of this bid.



5. Some Management and interface capabilities to the Electronic filing and search solution from IBM.
6. Automated processes for handling rejected filings and acknowledgement copies.
7. Interfacing with existing Departmental systems, which are the Accounts Receivable System and the Department's internal network.
8. Staff training.
9. System maintenance agreement.
10. Project management to oversee the development, installation, and implementation of the new system.
11. System documentation.

In some states, the agency that handles UCC filings and searches is also responsible for corporation name and report filings. However, in this state, the Michigan Department of Consumer and Industry Services (MDCIS) handles corporation functions separately. The MDCIS system does not interact in any way with the UCC system. For contract, the system must be primarily focused on UCC operations.

Also not included in the scope of this project is the mail opening process and cashiering steps. These operations are not under the control of the Michigan UCC unit, but limit the time available to complete the UCC processing requirements. As a result of these operational restrictions, the work must be processed within 24 hours of receipt in the UCC unit to maintain the legislatively mandated turnaround time

Northrop Grumman assumes a role as prime contractor with contractual accountability for complete solution delivery.

Northrop Grumman will have a good understanding of the UCC law (Michigan Public Act 348 of 2000) that became effective July 1, 2001. The application the Department seeks, will allow the Department to comply fully with this Act. The law is available on the web at <http://www.michiganlegislature.org/pdf/publicact/1999-2000/pa034800.pdf>.

This project is to develop, install, and implement an internal UCC solution and support the web application.

The contract will be for a fixed price. This contract covers application software, server, network hardware, hardware setup, peripherals, warranty, maintenance, back file conversion, training, knowledge transfer, reports, and the recommended number of workstations (desktop computers, application software user fee, document transport). The contract also covers a fee structure for additional users (internal).

I-B TERM OF CONTRACT

The State of Michigan is not liable for any cost incurred by any bidder prior to signing of a Contract by all parties. The activities in the proposed Contract cover the period from March 15 2002 through April 30, 2007. The State fiscal year is October 1st through September 30th. The prospective Contractor should realize that payments in any given fiscal year are contingent upon enactment of legislative appropriations.

I-C ISSUING OFFICE

This Contract is issued by the State of Michigan, Department of Management and Budget (DMB), [Acquisition Services](#), hereafter known as [Acquisition Services](#), for the State of Michigan, Department of State. Where actions are a combination of those of [Acquisition Services](#) and the Department of State, the authority will be known as the State.



Acquisition Services is the sole point of contact in the State with regard to all contractual matters relating to the services described herein. Acquisition Services is the only office authorized to change, modify, amend, alter, clarify, etc., the prices, specifications, terms, and conditions of this Contract. Acquisition Services will remain the SOLE POINT OF CONTACT throughout the Contractual process, until such time as the Director of Acquisition Services shall direct otherwise in writing. See Paragraph II-C below. All communications concerning this Contract must be addressed to:

Greg Faremouth
Strategic Purchasing
DMB, Acquisition Services
2nd Floor, Mason Building
P.O. Box 30026
Lansing, MI 48909
E-mail: faremouthg@michigan.gov
Telephone: (517) 241-1646

I-D CONTRACT ADMINISTRATOR

Upon receipt at Acquisition Services of the properly executed Contract Agreement, it is anticipated that the Director of Acquisition Services will direct that the person named below or any other person so designated be authorized to administer the Contract on a day-to-day basis during the term of the Contract. However, administration of any Contract resulting from this Request implies no authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions, and specifications of such Contract. Acquisition Services retains that authority. The Contract Administrator for this project is:

Joseph Ross
Michigan Department of State
Office of Customer Services
7064 Crowner Drive
Lansing, MI 48918
E-mail: rossi1@michigan.gov
Telephone: (517) 322-6844

I-E COST LIABILITY

The State of Michigan assumes no responsibility or liability for costs incurred by the Contractor prior to the signing of any Contract resulting from this Request. Total liability of the State is limited to the terms and conditions of any resulting Contract.

I-F CONTRACTOR RESPONSIBILITIES

The Contractor will be required to assume responsibility for all contractual activities offered in this proposal whether or not that Contractor performs them. Further, the State will consider the Prime Contractor to be the sole point of contact with regard to contractual matters, including but not limited to payment of any and all costs resulting from the anticipated Contract. If any part of the work is to be subcontracted, the contractor must notify the state and identify the subcontractor(s), including firm name and address, contact person, complete description of work to be subcontracted, and descriptive information concerning subcontractor's organizational abilities. The State reserves the right to approve subcontractors for this project and to require the Contractor to replace subcontractors found to be unacceptable. The Contractor is totally responsible for adherence by the subcontractor to all provisions of the Contract.

**I-G NEWS RELEASES**

News releases pertaining to this document or the services, study, data, or project to which it relates will not be made without prior written State approval, and then only in accordance with the explicit written instructions from the State. No results of the program are to be released without prior approval of the State and then only to persons designated.

I-H DISCLOSURE

All information in a bidder's proposal the Contract resulting from the ITB is subject to the provisions of the Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, *et seq.*

I-I ACCOUNTING RECORDS

The Contractor will be required to maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the State of Michigan. Financial and accounting records shall be made available, upon request, to the State of Michigan, its designees, or the Michigan Auditor General at any time during the Contract period and any extension thereof, and for three (3) years from the expiration date and final payment on the Contract or extension thereof.

I-J INDEMNIFICATION**1. General Indemnification**

The Contractor shall indemnify, defend and hold harmless the State from and against all lawsuits, liabilities, damages and claims or any other proceeding brought against the State by any third party (which for the purposes of this provision shall include, but not be limited to, employees of the State, the Contractor and any of its subcontractors), and all related costs and expenses (including reasonable attorneys' fees and disbursements and costs of investigation, litigation, settlement, judgments, interest and penalties), arising from or in connection with any of the following:

- a. Intentional tortious act by the Contractor or any of its subcontractors, or by anyone else for whose acts any of them may be liable, in the performance of this Contract;
- b. The death or bodily injury of any person or the damage, loss or destruction of any real or personal property in connection with the performance of this Contract by the Contractor, or any of its subcontractors, or by anyone else for whose acts any of them may be liable provided, and to the extent that the injury or damage was caused by the fault or negligence of the Contractor.
- c. Any act or omission of the Contractor or any of its subcontractors in their capacity as an employer in the performance of this Contract;
- d. Any claim, demand, action or legal proceeding against the State arising out of or related to occurrences, if any, that the Contractor is required to insure against as provided in this Contract.

2. Indemnification Obligation Not Limited

In any and all claims against the State by any employee of the Contractor or any of its subcontractors, the indemnification obligation under the Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its subcontractors under worker's disability compensation acts, disability benefits acts, or any other employee benefits acts. This indemnification clause is intended to be comprehensive. Any overlap in subclauses, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other subclause.



3. Continuation of Indemnification Obligation

The duty to indemnify will continue in full force and effect, notwithstanding the expiration or early cancellation of the Contract, with respect to any claims based on facts or conditions that occurred prior to expiration or cancellation.

I-K LIMITATION OF LIABILITY

Except as set forth herein, neither the Contractor nor the State shall be liable to the other party for indirect or consequential damages, even if such party has been advised of the possibility of such damages. Such limitation as to indirect or consequential damages shall not be applicable for claims arising out of gross negligence, willful misconduct, or Contractor's indemnification responsibilities to the State as set forth in Section I-J with respect to third party claims, action and proceeding brought against the State.

I-L NON INFRINGEMENT/COMPLIANCE WITH LAWS

The Contractor warrants that in performing the services called for by this Contract it will not violate any applicable law, rule, or regulation, any contracts with third parties, or any intellectual rights of any third party, including but not limited to, any United States patent, trademark, copyright, or trade secret.

I-M WARRANTIES AND REPRESENTATIONS

The Contract will contain customary representations and warranties by the Contractor, including, without limitation, the following:

1. The Contractor will perform all services in accordance with high professional standards in the industry;
2. The Contractor will use adequate numbers of qualified individuals with suitable training, education, experience and skill to perform the services;
3. The Contractor will use its best efforts to use efficiently any resources or services necessary to provide the services that are separately chargeable to the State;
4. The Contractor will use its best efforts to perform the services in the most cost effective manner consistent with the required level of quality and performance;
5. The Contractor will perform the services in a manner that does not infringe the proprietary rights of any third party;
6. The Contractor will perform the services in a manner that complies with all applicable laws and regulations;
7. The Contractor has duly authorized the execution, delivery and performance of the Contract;
8. The Contractor has not provided any gifts, payments or other inducements to any officer, employee or agent of the State;

I-N TIME IS OF THE ESSENCE

The Contractor agrees that time is of the essence in the performance of the Contractor's obligations under this Contract.

I-O STAFFING OBLIGATIONS

The State reserves the right to approve the Contractor's assignment of Key Personnel to this project and to recommend reassignment of personnel deemed unsatisfactory by the State.

The Contractor shall not remove or reassign, without the State's prior written approval any of the Key Personnel until such time as the Key Personnel have completed all of their planned and assigned responsibilities in connection with performance of the Contractor's obligations under this Contract. The Contractor agrees that the continuity of Key Personnel is critical and agrees to the continuity of Key



Personnel. Removal of Key Personnel without the written consent of the State may be considered by the State to be a material breach of this Contract. The prohibition against removal or reassignment shall not apply where Key Personnel must be replaced for reasons beyond the reasonable control of the Contractor including but not limited to illness, disability, resignation or termination of the Key Personnel's employment. All of the key personnel listed below have not been proposed as full-time for the duration of the project. However they will all have a significant level of involvement in the project execution.

Key Personnel

- | | | |
|----|---------------|-------------------------|
| 1. | Carol Cannon | Project manager |
| 2. | Doug Pachunka | Vice President |
| 3. | Chris Brooks | Business Analyst |
| 4. | Jim Dodson | Data Base Administrator |
| 5. | Jim Nelson | System Analyst |
| 6. | Fern Duncan | QA/Test |
| 7. | Mark Hunter | Trainer |

I-P WORK PRODUCT AND OWNERSHIP

1. Work Products shall be considered works made by the Contractor for hire by the State and shall belong exclusively to the State and its designees, unless specifically provided otherwise by mutual agreement of the Contractor and the State. If by operation of law any of the Work Product, including all related intellectual property rights, is not owned in its entirety by the State automatically upon creation thereof, the Contractor agrees to assign, and hereby assigns to the State and its designees the ownership of such Work Product, including all related intellectual property rights. The Contractor agrees to provide, at no additional charge, any assistance and to execute any action reasonably required for the State to perfect its intellectual property rights with respect to the aforementioned Work Product.
2. Notwithstanding any provision of this Contract to the contrary, any preexisting work or materials including, but not limited to, any routines, libraries, tools, methodologies, processes or technologies (collectively, the "Development Tools") created, adapted or used by the Contractor in its business generally, including any and all associated intellectual property rights, shall be and remain the sole property of the Contractor, and the State shall have no interest in or claim to such preexisting work, materials or Development Tools, except as necessary to exercise its rights in the Work Product. Such rights belonging to the State shall include, but not be limited to, the right to use, execute, reproduce, display, perform and distribute copies of and prepare derivative works based upon the Work Product, and the right to authorize others to do any of the foregoing, irrespective of the existence therein of preexisting work, materials and Development Tools, except as specifically limited herein.
3. The Contractor and its subcontractors shall be free to use and employ their general skills, knowledge and expertise, and to use, disclose, and employ any generalized ideas, concepts, knowledge, methods, techniques or skills gained or learned during the course of performing the services under this Contract, so long as the Contractor or its subcontractors acquire and apply such information without disclosure of any confidential or proprietary information of the State, and without any unauthorized use or disclosure of any Work Product resulting from this Contract.
4. The Contractor shall protect all of the State of Michigan work products provided during performance of this contract, as contemplated in this Provision, consistent with Northrop Grumman Corporate Policy CP-A12 - entitled "Protection of Confidential Data." At no time will any Northrop Grumman Corporation employee, subcontractor or vendor disclose State of Michigan data to a third party without the express consent of the State of Michigan.

I-Q CONFIDENTIALITY OF DATA AND INFORMATION



1. All financial, statistical, personnel, technical and other data and information relating to the State's operation which are designated confidential by the State and made available to the Contractor in order to carry out this Contract, or which become available to the Contractor in carrying out this Contract, shall be protected by the Contractor from unauthorized use and disclosure through the observance of the same or more effective procedural requirements as are applicable to the State. The identification of all such confidential data and information as well as the State's procedural requirements for protection of such data and information from unauthorized use and disclosure shall be provided by the State in writing to the Contractor. If the methods and procedures employed by the Contractor for the protection of the Contractor's data and information are deemed by the State to be adequate for the protection of the State's confidential information, such methods and procedures may be used, with the written consent of the State, to carry out the intent of this section.
2. The Contractor shall not be required under the provisions of this section to keep confidential, (1) information generally available to the public, (2) information released by the State generally, or to the Contractor without restriction, (3) information independently developed or acquired by the Contractor or its personnel without reliance in any way on otherwise protected information of the State. The Contractor shall protect the State's properly identified confidential information from unauthorized use and disclosure using the same standards of care and procedures employed by the Contractor for protection of its own confidential information of a like nature.

I-R REMEDIES FOR BREACH OF CONFIDENTIALITY

The Contractor acknowledges that a breach of its confidentiality obligations as set forth in section I-Q of this Contract shall be considered a material breach of the Contract. Furthermore the Contractor acknowledges that in the event of such a breach the State shall be irreparably harmed. Accordingly, if a court should find that the Contractor has breached or attempted to breach any such obligations, the Contractor will not oppose the entry of an appropriate order restraining it from any further breaches or attempted or threatened breaches. This remedy shall be in addition to and not in limitation of any other remedy or damages provided by law.

I-S CONTRACTOR'S LIABILITY INSURANCE

The Contractor shall purchase and maintain such insurance as will protect him/her from claims set forth below which may arise out of or result from the Contractor's operations under the Contract (Purchase Order), whether such operations be by himself/herself or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- (1) Claims under workers' disability compensation, disability benefit and other similar employee benefit act. A non-resident Contractor shall have insurance for benefits payable under Michigan's Workers' Disability Compensation Law for any employee resident of and hired in Michigan; and as respects any other employee protected by workers' disability compensation laws of any other State the Contractor shall have insurance or participate in a mandatory State fund to cover the benefits payable to any such employee.
- (2) Claims for damages because of bodily injury, occupational sickness or disease, or death of his/her employees.
- (3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his/her employees, subject to limits of liability of not less than \$300,000.00 each occurrence and, when applicable \$1,000,000.00 annual aggregate, for non-automobile hazards and as required by law for automobile hazards.
- (4) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom, subject to a limit of liability of not less than \$50,000.00 each occurrence for non-automobile hazards and as required by law for automobile hazards.



- (5) Insurance for Subparagraphs (3) and (4) non-automobile hazards on a combined single limit of liability basis shall not be less than \$300,000.00 each occurrence and when applicable, \$1,000,000.00 annual aggregate.

The insurance shall be written for not less than any limits of liability herein specified or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under the Indemnification clause of the Contract (Purchase Order).

UPON CONTRACT EXECUTION, THE CONTRACTOR'S INSURANCE AGENCY MUST FURNISH TO THE DIRECTOR OF ACQUISITION SERVICES, ORIGINAL CERTIFICATE (S) OF INSURANCE VERIFYING LIABILITY COVERAGE. THE CONTRACT OR PURCHASE ORDER NO. MUST BE SHOWN ON THE CERTIFICATE OF INSURANCE TO ASSURE CORRECT FILING. These Certificates shall contain a provision that coverage's afforded under the policies will not be canceled until at least fifteen days prior written notice bearing the Contract Number or Purchase Order Number has been given to the Director of [Acquisition Services](#).

I-T NOTICE AND RIGHT TO CURE

In the event of a curable breach by the Contractor, the State shall provide the Contractor written notice of the breach and a time period of 30 days to cure said breach described in the notice. This section requiring notice and an opportunity to cure shall not be applicable in the event of successive or repeated breaches of the same nature or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage or destruction of any real or tangible personal property.

I-U CANCELLATION

The State may cancel this Contract without further liability or penalty to the State, its departments, divisions, agencies, offices, commissions, officers, agents and employees for any of the following reasons:

1. Material Breach by the Contractor. In the event that the Contractor breaches any of its material duties or obligations under the Contract, which are either not capable of or subject to being cured, or are not cured within the time period specified in the written notice of breach provided by the State, or pose a serious and imminent threat to the health and safety of any person, or the imminent loss, damage or destruction of any real or tangible personal property, the State may, having provided written notice of cancellation to the Contractor, cancel this Contract in whole or in part, for cause, as of the date specified in the notice of cancellation.

In the event that this Contract is cancelled for cause, in addition to any legal remedies otherwise available to the State by law or equity, the Contractor shall be responsible for all costs incurred by the State in canceling the Contract, and any additional costs the State may incur to procure the services required by this Contract from other sources. All excess procurement costs and damages shall not be considered by the parties to be consequential, indirect or incidental, and shall not be excluded by any other terms otherwise included in the Contract.

In the event the State chooses to partially cancel this Contract for cause charges payable under this Contract will be equitably adjusted to reflect those services that are cancelled.

In the event this Contract is cancelled for cause pursuant to this section, and it is therefore determined, for any reason, that the Contractor was not in breach of contract pursuant to the provisions of this section, that cancellation for cause shall be deemed to have been a cancellation for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in the Contract for a cancellation for convenience.

2. Cancellation For Convenience By the State. The State may cancel this Contract for it convenience, in whole or part, if the State determines that such a cancellation is in the State's best interest. Reasons for such cancellation shall be left to the sole discretion of the State and may



include, but not necessarily be limited to (a) the State no longer needs the services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Contract services no longer practical or feasible, and (c) unacceptable prices for additional services requested by the State. The State may cancel the Contract for its convenience, in whole or in part, by giving the Contractor written notice 30 days prior to the date of cancellation. If the State chooses to cancel this Contract in part, the charges payable under this Contract shall be equitably adjusted to reflect those services that are cancelled.

3. Non-Appropriation. In the event that funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available. The Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this project. If funds are not appropriated or otherwise made available, the State shall have the right to cancel this Contract at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of cancellation to the Contractor. The State shall give the Contractor written notice of such non-appropriation or unavailability within 30 days after it receives notice of such non-appropriation or unavailability.
4. Criminal Conviction. In the event the Contractor, an officer of the Contractor, or an owner of a 25% or greater share of the Contractor, is convicted of a criminal offense incident to the application for or performance of a State, public or private Contract or subcontract; or convicted of a criminal offense including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of Michigan employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects upon the Contractor's business integrity.
5. Approval(s) Rescinded. In the event any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Article 11, Section 5 of the Michigan Constitution of 1963 and Chapter 7 of the Civil Services. Notwithstanding any other provision of the Contract to the contrary, the State Personnel Director is authorized to disapprove contractual disbursements for personal services if the Director determines that the Contract or the disbursements under the Contract violate Article 11, Section 5 of the Constitution or violates applicable Civil Service rules or regulations. Cancellation may be in whole or in part and may be immediate as of the date of the written notice to the Contractor or may be effective as of the date stated in such written notice.

I-V RIGHTS AND OBLIGATIONS UPON CANCELLATION

1. If the Contract is canceled by the State for any reason, the Contractor shall, (a) stop all work as specified in the notice of cancellation, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Work Product or other property derived or resulting from the Contract that may be in the Contractor's possession, (c) return all materials and property provided directly or indirectly to the Contractor by any entity, agent or employee of the State, (d) transfer title and deliver to the State, unless otherwise directed by the Contract Administrator or his or her designee, all Work Product resulting from the Contract, and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or cancellation settlement costs, to the maximum practical extent, including, but not limited to, canceling or limiting as otherwise applicable, those subcontracts, and outstanding orders for material and supplies resulting from the canceled Contract.
2. In the event the State cancels this Contract prior to its expiration for its own convenience, the State shall pay the Contractor for all charges due for services provided prior to the date of cancellation and if applicable as a separate item of payment pursuant to the Contract, for partially completed Work Product, on a percentage of completion basis. In the event of a cancellation for cause, or any other reason under the Contract, the State will pay, if applicable, as a separate item of payment



pursuant to the Contract, for all partially completed Work Products, to the extent that the State requires the Contractor to submit to the State any such deliverables, and for all charges due under the Contract for any cancelled services provided by the Contractor prior to the cancellation date. All completed or partially completed Work Product prepared by the Contractor pursuant to this Contract shall, at the option of the State, become the State's property, and the Contractor shall be entitled to receive just and fair compensation for such Work Product. Regardless of the basis for the cancellation, the State shall not be obligated to pay, or otherwise compensate, the Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.

3. If any such cancellation by the State is for cause, the State shall have the right to set-off against any amounts due the Contractor, the amount of any damages for which the Contractor is liable to the State under this Contract or pursuant to law and equity.
4. Upon a good faith cancellation, the State shall have the right to assume, at its option, any and all subcontracts and agreements for services and materials provided under this Contract, and may further pursue completion of the Work Product under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

I-W EXCUSABLE FAILURE

1. Neither party shall be liable for any default or delay in the performance of its obligations under the Contract if and to the extent such default or delay is caused, directly or indirectly, by: fire, flood, earthquake, elements of nature or acts of God; riots, civil disorders, rebellions or revolutions in any country; the failure of the other party to perform its material responsibilities under the Contract (either itself or through another contractor); injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of such party; provided the non-performing party and its subcontractors are without fault in causing such default or delay, and such default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans. In such event, the non-performing party will be excused from any further performance or observance of the obligation(s) so affected for as long as such circumstances prevail and such party continues to use its best efforts to recommence performance or observance whenever and to whatever extent possible without delay provided such party promptly notifies the other party in writing of the inception of the excusable failure occurrence, and also of its abatement or cessation.
2. If any of the above enumerated circumstances substantially prevent, hinder, or delay performance of the services necessary for the performance of the State's functions for more than 14 consecutive days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected services from an alternate source, and the State shall not be liable for payments for the unperformed services under the Contract for so long as the delay in performance shall continue; (b) the State may cancel any portions of the Contract so affected and the charges payable thereunder shall be equitably adjusted to reflect those services canceled; or (c) the Contract will be canceled without liability of the State to the Contractor as of the date specified by the State in a written notice of cancellation to the Contractor. The Contractor will not have the right to any additional payments from the State as a result of any excusable failure occurrence or to payments for services not rendered as a result of the excusable failure condition. Defaults or delays in performance by the Contractor which are caused by acts or omissions of its subcontractors will not relieve the Contractor of its obligations under the Contract except to the extent that a subcontractor is itself subject to any excusable failure condition described above and the Contractor cannot reasonably circumvent the effect of the subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

**I-X ASSIGNMENT**

The Contractor shall not have the right to assign this Contract or to assign or delegate any of its duties or obligations under this Contract to any other party (whether by operation of law or otherwise), without the prior written consent of the State. Any purported assignment in violation of this section shall be null and void. Further, the Contractor may not assign the right to receive money due under the Contract without the prior written consent of the State [Acquisition Services](#) Director.

I-Y DELEGATION

The Contractor shall not delegate any duties or obligations under this Contract to a subcontractor other than a subcontractor named in the bid unless the State [Acquisition Services](#) Director has given written consent to the delegation.

I-Z NON-DISCRIMINATION CLAUSE

In the performance of any Contract or purchase order resulting herefrom, the bidder agrees not to discriminate against any employee or applicant for employment, with respect to their hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental disability unrelated to the individual's ability to perform the duties of the particular job or position. The bidder further agrees that every subcontract entered into for the performance of any Contract or purchase order resulting herefrom will contain a provision requiring non-discrimination in employment, as herein specified, binding upon each subcontractor. This covenant is required pursuant to the Elliot Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2101, *et seq*, and the Persons with Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, *et seq*, and any breach thereof may be regarded as a material breach of the Contract or purchase order.

I-AA MODIFICATION OF SERVICE

The Director of [Acquisition Services](#) reserves the right to modify this service during the course of this Contract. Such modification may include adding or deleting tasks that this service shall encompass and/or any other modifications deemed necessary.

Any Contract resulting from this RFP may not be revised, modified, amended, extended, or augmented, except by a writing executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in writing signed by the other party.

The State reserves the right to request from time to time, any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. The Contractor shall provide a change order process and all requisite forms. The State reserves the right to negotiate the process during contract negotiation. At a minimum, the State would like the Contractor to provide a detailed outline of all work to be done, including tasks necessary to accomplish the deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

1. Within five (5) business days of receipt of a request by the State for any such change, or such other period of time as to which the parties may agree mutually in writing, the Contractor shall submit to the State a proposal describing any changes in products, services, timing of delivery, assignment of personnel, and the like, and any associated price adjustment. The price adjustment shall be based on a good faith determination and calculation by the Contractor of the additional cost to the Contractor in implementing the change request less any savings realized by the Contractor as a result of implementing the change request. The Contractor's proposal shall describe in reasonable detail the basis for the Contractor's proposed price adjustment, including the estimated number of hours by task by labor category required to implement the change request.
2. If the State accepts the Contractor's proposal, it will issue a change notice and the Contractor will implement the change request described therein. The Contractor will not implement any change request until a change notice has been issued validly. The Contractor shall not be entitled to any



compensation for implementing any change request or change notice except as provided explicitly in an approved change notice.

3. If the State does not accept the Contractor's proposal, the State may:
 - a. withdraw its change request; or
 - b. modify its change request, in which case the procedures set forth above will apply to the modified change request.

If the State requests or directs the Contractor to perform any activities that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly, and before commencing performance of the requested activities, that it believes the requested activities are New Work. If the Contractor fails to so notify the State prior to commencing performance of the requested activities, any such activities performed before notice is given by the Contractor shall be conclusively considered to be In-scope Services, not New Work.

If the State requests or directs the Contractor to perform any services or functions that are consistent with and similar to the services being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the scope of the Contractor's responsibilities and charges as set forth in the Contract, then prior to performing such services or function, the Contractor shall promptly notify the State in writing that it considers the services or function to be an "Additional Service" for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing such services or functions. If the Contractor does so notify the State, then such a service or function shall be governed by the change request procedure set forth in the preceding paragraph.

IN THE EVENT PRICES ARE NOT ACCEPTABLE TO THE STATE, THE CONTRACT SHALL BE SUBJECT TO COMPETITIVE BIDDING BASED UPON THE NEW SPECIFICATIONS.

I-BB NOTICES

Any notice given to a party under this Contract must be written and shall be deemed effective, if addressed to such party as addressed below upon (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this section; (iii) the third (3rd) Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

For the Contractor: **Daniel Hiett**, 12005 Sunrise Valley Drive, Reston VA 22191

For the State: **Greg Faremouth**, 530 West Allegan, Lansing 48933

Either party may change its address where notices are to be sent giving written notice in accordance with this section.

I-CC ENTIRE AGREEMENT

The contents of this contract will become contractual obligations. Failure of the successful bidder to accept these obligations may result in cancellation of the award.

This Contract shall represent the entire agreement between the parties and supersedes all proposals or other prior agreements, oral or written, and all other communications between the parties relating to this subject.

**I-DD NO WAIVER OF DEFAULT**

The failure of a party to insist upon strict adherence to any term of this Contract shall not be considered a waiver or deprive the party of the right thereafter to insist upon strict adherence to that term, or any other term, of the Contract.

I-EE SEVERABILITY

Each provision of the Contract shall be deemed to be severable from all other provisions of the Contract and, if one or more of the provisions of the Contract shall be declared invalid, the remaining provisions of the Contract shall remain in full force and effect.

I-FF HEADINGS

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of this Contract.

I-GG RELATIONSHIP OF THE PARTIES

The relationship between the State and the Contractor is that of client and independent Contractor. No agent, employee, or servant of the Contractor or any of its subcontractors shall be or shall be deemed to be an employee, agent, or servant of the State for any reason. The Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and subcontractors during the performance of this Contract.

I-HH UNFAIR LABOR PRACTICES

Pursuant to 1980 Public Act 278, as amended, MCL 423.231, et seq, the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled pursuant to section 2 of the Act. This information is compiled by the United States National Labor Relations Board.

A Contractor of the State, in relation to the Contract, shall not enter into a Contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to section 4 of 1980 Public Act 278, MCL 423.324, the State may void any Contract if, subsequent to award of the Contract, the name of the Contractor as an employer, or the name of the subcontractor, manufacturer or supplier of the Contractor appears in the register.

I-II SURVIVOR

Any provisions of the Contract that impose continuing obligations on the parties including, but not limited to the Contractor's indemnity and other obligations shall survive the expiration or cancellation of this Contract for any reason.

I-JJ GOVERNING LAW

This Contract shall in all respects be governed by, and construed in accordance with, the laws of the State of Michigan. Any dispute arising herein shall be resolved in the State of Michigan.

I-KK YEAR 2000 SOFTWARE COMPLIANCE

The Contractor warrants that services provided under this Contract including but not limited to the production of all Work Products, shall be provided in an accurate and timely manner without interruption, failure or error due the inaccuracy of Contractor's business operations in processing date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000, including leap year calculations. The Contractor shall be responsible for damages resulting from any delays, errors or untimely performance resulting therefrom.

I-LL CONTRACT DISTRIBUTION

[Acquisition Services](#) shall retain the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by [Acquisition Services](#).



I-MM STATEWIDE CONTRACTS

If the contract is for the use of more than one agency and if the goods or services provided under the contract do not meet the form, function and utility required by an agency, that agency may, subject to state purchasing policies, procure the goods or services from another source.

I-NN ADHERANCE TO STATE STANDARDS

1. **Existing Technology Standards.** The Contractor will adhere to all existing standards as described within the comprehensive listing of the States existing technology standards at <http://www.state.mi.us/cio/oits>.
2. **PM Methodology Standards.** The State has adopted a standard, documented Project Management Methodology (PMM) for use on all Information Technology (IT) based projects. This policy is referenced in the document titled "Project Management Methodology" – DMB Administrative Guide Procedure 1380.02 issued June 2000. Vendors may obtain a copy of this procedure by contacting the DMB Office of Information Technology Solutions. The State of Michigan Project Management Methodology can be obtained from the DMB Office of Project Management's website at <http://www.state.mi.us/cio/opm>.

The contractor shall use the State's PMM to manage State of Michigan Information Technology (IT) based projects. The requesting agency will provide the applicable documentation and internal agency processes for the methodology. If the vendor requires training on the methodology, those costs shall be the responsibility of the vendor, unless otherwise stated.

Northrop Grumman IT assumes our proposed approach and deliverables as stated in the Management Summary satisfies Michigan's management requirements.

3. **Adherence to Portal Technology Tools.** For all projects involving e-Government, all bidders are expected to read, understand and support compliance with the provisions of Executive Order No. 2000-6 and Executive Directive 2001-1, issued by the State of Michigan, Office of the Governor.

The State of Michigan, e-Michigan Office has adopted the following tools as its Portal Technology development efforts:

- Vignette Content Management and Personalization Tool
- Inktomi Search Engine
- Tivoli Directory Services (Presentation Layer)
- WebSphere Application Server
- WebSphere e-Pay Payment Processing Module

Vendors must use the Portal Technology Tools to implement web content management and deployment efforts for agencies. Tools used for web based application development must work in conjunction with Vignette and Inktomi. The interaction with Vignette and Inktomi must be coordinated with the Center of Excellence at the Office of e-Michigan.

Under special circumstances vendors that are compelled to use alternate tools must submit an exception request to the e-Michigan Office for evaluation and approval of each alternate tool prior to proposal evaluation by the State.

I-OO TRANSITION ASSISTANCE



If this Contract is not renewed at the end of this term, or is canceled prior to its expiration, for any reason, the Contractor must provide for up to 180 days after the expiration or cancellation of this Contract, all reasonable transition assistance requested by the State, to allow for the expired or canceled portion of the Services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of this Contract, (notwithstanding this expiration or cancellation) except for those Contract terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Contractor for any resources utilized in performing such transition assistance at the most current rates provided by the Contract for Contract performance. If the State cancels this Contract for cause, then the State will be entitled to off set the cost of paying the Contractor for the additional resources the Contractor utilized in providing transition assistance with any damages the State may have otherwise accrued as a result of said cancellation.

I-PP DISCLOSURE OF LITIGATION

1. The Contractor shall notify the State, if it, or any of its subcontractors, or their officers, directors, or key personnel under this Contract, have ever been convicted of a felony, or any crime involving moral turpitude, including, but not limited to fraud, misappropriation or deception. Contractor shall promptly notify the State of any criminal litigation, proceeding which may have arisen or may arise involving the Contractor or any of the Contractor's subcontractor, or any of the foregoing entities' then current officers or directors during the term of this Contract and three years thereafter.
2. The Contractor shall notify the State promptly thereafter as otherwise applicable, of any civil litigation, arbitration, proceeding, or judgments that may have arisen against it or its subcontractors during the five years proceeding its bid proposal, or which may occur during the term of this Contract or three years thereafter, which involve (1) products or services similar to those provided to the State under this Contract and which either involve a claim in excess of \$250,000 or which otherwise may affect the viability or financial stability of the Contractor, or (2) a claim or written allegation of fraud by the Contractor or any subcontractor hereunder, arising out of their business activities, or (3) a claim or written allegation that the Contractor or any subcontractor hereunder violated any federal, state or local statute, regulation or ordinance. Multiple lawsuits and or judgments against the Contractor or subcontractor, in any an amount less than \$250,000 shall be disclosed to the State to the extent they affect the financial solvency and integrity of the Contractor or subcontractor.
3. All notices under subsection 1 and 2 herein shall be provided in writing to the State within fifteen business days after the Contractor learns about any such criminal or civil investigations and within fifteen days after the commencement of any proceeding, litigation, or arbitration, as otherwise applicable. Details of settlements which are prevented from disclosure by the terms of the settlement shall be annotated as such. Semi-annually, during the term of the Contract, and thereafter for three years, Contractor shall certify that it is in compliance with this Section. Contractor may rely on similar good faith certifications of its subcontractors, which certifications shall be available for inspection at the option of the State.
4. Assurances - In the event that such investigation, litigation, arbitration or other proceedings disclosed to the State pursuant to this Section, or of which the State otherwise becomes aware, during the term of this Contract, causes the State to be reasonably concerned about:
 - a) the ability of the Contractor or its subcontractor to continue to perform this Contract in accordance with its terms and conditions, or



- b) whether the Contractor or its subcontractor in performing services is engaged in conduct which is similar in nature to conduct alleged in such investigation, litigation, arbitration or other proceedings, which conduct would constitute a breach of this Contract or violation of Michigan or Federal law, regulation or public policy, then

The Contractor shall be required to provide the State all reasonable assurances requested by the State to demonstrate that: (a) the Contractor or its subcontractors hereunder will be able to continue to perform this Contract in accordance with its terms and conditions, (b) the Contractor or its subcontractors will not engage in conduct in performing services under this Contract which is similar in nature to the conduct alleged in any such litigation, arbitration or other proceedings.

5. The Contractor's failure to fully and timely comply with the terms of this section, including providing reasonable assurances satisfactory to the State, may constitute a material breach of this Contract.

I-QQ STOP WORK

1. The State may, at any time, by written stop work order to the Contractor, require that the Contractor stop all, or any part, of the work called for by this Contract for a period of up to 90 days after the stop work order is delivered to the Contractor, and for any further period to which the parties may agree. The stop work order shall be specifically identified as such and shall indicate that it is issued under this section. Upon receipt of the stop work order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State shall either:
 - a) Cancel the stop work order; or
 - b) Cancel the work covered by the stop work order as provided in the cancellation section of this Contract.
2. If a stop work order issued under this section is canceled or the period of the stop work order or any extension thereof expires, the Contractor shall resume work. The State shall make an equitable adjustment in the delivery schedule, the contract price, or both, and the Contract shall be modified, in writing, accordingly, if:
 - a) The stop work order results in an increase in the time required for, or in the Contractor's costs properly allocable to the performance of any part of this Contract; and
 - b) The Contractor asserts its right to an equitable adjustment within 30 days after the end of the period of work stoppage; provided, that if the State decides the facts justify the action, the State may receive and act upon a proposal submitted at any time before final payment under this Contract.
3. If the stop work order is not canceled and the work covered by the stop work order is canceled for reasons other than material breach, the State shall allow reasonable costs resulting from the stop work order in arriving at the cancellation settlement.
4. If a stop work order is not canceled and the work covered by the stop work order is canceled for material breach, the State shall not allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop work order.
5. An appropriate equitable adjustment may be made in any related contract of the Contractor that provides for adjustment and is affected by any stop work order under this section. The State shall not be liable to the Contractor for loss of profits because of a stop work order issued under this section.

I-RR PERFORMANCE AND RELIABILITY EVALUATION (PARE)



When the State requires that a performance and reliability evaluation (PARE) is to be performed, the standard of performance for the PARE will be closely monitored during the acceptance period.

In the event that the PARE is for components only, all references to systems (processors) should be changed to components.

The Performance and Reliability Evaluation will consist of two phases.

1. PHASE I

The first phase shall be comprised of a specification compliance review of the equipment listed on the ordering documents. Such equipment shall be checked for total compliance with all required specifications of the RFP. In the event that the State determines that any component or feature of the delivered equipment or software does not comply with the mandatory specifications of the RFP, the State shall so notify the Contractor, allowing 14 calendar days for rectification by the Contractor. Should the Contractor be unable to rectify the deficiency, the State reserves the right to cancel the ordering document. Should the equipment and software pass the specification conformance review, the equipment shall enter Phase II of the PARE.

2. PHASE II

a. Determination of System Readiness

- 1) Prior to the PARE, a committee of three persons will be formed to evaluate the system's performance on a daily basis. The committee will consist of one Contractor representative and two State personnel.
- 2) The PARE will begin on the installation dates when the Contractor certifies that the equipment is ready for use by the State.

b. During the PARE:

All rerun times resulting from equipment failure and preventive maintenance shall be excluded from the performance hours.

- 1) All reconfiguration and reload time shall be excluded from the performance hours.
- 2) If files are destroyed as a result of a problem with Contractor equipment and must be rebuilt, the time required to rebuild the files will be considered "down-time" for the system.
- 3) If the Contractor requests access to failed equipment and the State refuses, then such maintenance will be deferred to a mutually agreeable time and the intervening time will not count against the PARE.
- 4) A functional benchmark demonstration will be run for the PARE Committee to confirm that the installed system is capable of performing the same functions that were demonstrated. This run must be completed to the satisfaction of the PARE Committee.

1. STANDARD OF PERFORMANCE

- a. The performance period (a period of forty-five consecutive calendar days) shall commence on the installation date, at which time the operational control becomes the responsibility of the State. It is not required that one forty-five day period expire in order for another performance period to begin.



- b. If each component operates at an average level of effectiveness of 95 percent or more for a period of forty-five consecutive days from the commencement date of the performance period, it shall be deemed to have met the State's standard of performance period. The State shall notify the Contractor in writing of the successful completion of the performance period. The average effectiveness level is a percentage figure determined by dividing the total operational use time by the total operational use time plus associated down-time. In addition, the equipment shall operate in substantial conformance with the Contractor's published specifications applicable to such equipment on the date of this Agreement. Equipment added by amendment to this contract shall operate in conformance with the Contractor's published specifications applicable to such equipment at the time of such amendment.
- c. During the successful performance period, all rerun time resulting from equipment failure and preventive maintenance time shall be excluded from the performance period hours. All reconfigurations and reload time shall be excluded from the performance hours. Equipment failure down-time shall be measured by those intervals during the performance period between the time that the Contractor is notified of equipment failure and the time that the equipment is returned to the State in operating condition.
- d. During the successful performance period, a minimum of 80 hours of operational use time on each component will be required as a basis for computation of the average effectiveness level. However, in computing the effectiveness level, the actual number of operational use hours shall be used when in excess of the minimum stated above.
- e. No more than one hour will accrue to the performance hours during any one wall clock hour.
- f. Equipment shall not be accepted by the State and no charges will be paid by the State until the standard of performance is met.
- g. When a system involves on-line machines that are remote to the basic installation, the required effectiveness level shall apply separately to each component in the system.
- h. Promptly upon successful completion of the performance period, the State shall notify the Contractor in writing of acceptance of the equipment and authorize the monthly payments to begin on the first day of the successful performance period.
- j. If successful completion of the performance period is not attained within 90 days of the installation date, the State shall have the option of terminating the Contract, or continuing the performance tests. The State's option to terminate the contract shall remain in effect until such time as a successful completion of the performance period is attained. The Contractor shall be liable for all outbound preparation and shipping costs for contracted items returned under this clause.
- k. The PARE will be complete when the equipment has met the required effectiveness level for the prescribed time period.

I-SS LIQUIDATED DAMAGES

- A. The State and the Contractor hereby agree to the specific standards set forth in this Contract. It is agreed between the Contractor and the State that the actual damages to the State as a result of Contractor's failure to provide promised services would be difficult or impossible to determine with accuracy. The State and the Contractor therefore agree that liquidated damages as set out herein shall be a reasonable approximation of the damages that shall be suffered by the State as a result thereof. Accordingly, in the event of such damages, at the written direction of the State, the Contractor shall pay the State the indicated amount as liquidated damages, and not as a penalty. Amounts due the State as liquidated damages, if not paid by the Contractor within fifteen (15) days of notification of assessment, may be deducted by the State from any money payable to the



Contractor pursuant to this Contract. The State will notify the Contractor in writing of any claim for liquidated damages pursuant to this paragraph on or before the date the State deducts such sums from money payable to the Contractor. No delay by the State in assessing or collecting liquidated damages shall be construed as a waiver of such rights.

- B. The Contractor shall not be liable for liquidated damages when, in the opinion of the State, incidents or delays result directly from causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God, fires, floods, epidemics, and labor unrest; but in every case the delays must be beyond the control and without the fault or negligence of the Contractor.
- C. Liquidated Damages - The parties acknowledge and agree that in the event that the Contractor fails to complete certain obligations as specified in the Contract, damage shall be sustained by the State. The parties also agree that it is impractical and difficult to determine the actual amount of such damages. Therefore, the parties agree that the State may receive liquidated damages in the amounts specified below for any of the following failures due to the sole fault of the Contractor.
 - a.) Failure by Northrop Grumman IT to deliver a substantially acceptable Software system as determined by system acceptance test plan in accordance with the schedule as detailed in the accepted project plan. The Liquidated Damage amount shall be \$8000.00 per week as of the Effective Date of this Contract. The Damages are equal to the extra staffing requirements needed to run the manual system.
 - b.) In no event shall the total amount of Liquidated Damages in this provision exceed one hundred thousand dollars (\$100,000).

The State is not obligated to assess liquidated damages before availing itself of any other remedy. The State may chose to discontinue liquidated damages and avail itself of any other remedy available under this contract or at law or equity provided however the contractor shall receive credit for said liquidated damages previously withheld, unless the contract is cancelled by the State for contractors material breach.



SECTION II WORK STATEMENT

II-A STATEMENT OF THE PROBLEM

On December 27, 2000, Michigan enacted Public Act 348 of 2000, revising Article 9 of the Uniform Commercial Code, under which the Michigan UCC Unit operates. That legislation had an effective date of July 1, 2001. The Revised Article 9 (RA9) provides many significant changes that have an impact on the UCC Unit and complicate the implementation of the new law. Because of system limitations and lack of support for the existing UCC system, the current system cannot provide the performance standards mandated by the new law. The State must procure a new UCC system that will bring the State into compliance with RA9.

Northrop Grumman IT brings a unique understanding of UCC system requirements and knowledge of the best industry practices beginning on day one of contract execution. The State's current system is running on hardware and software that is soon becoming obsolete. The current business processes are labor intensive and time consuming. Michigan is seeking a Revised Article 9 compliant solution that is capable of meeting their increased filing and search requirements. The centralization of filings within the implementation of RA9 significantly increases the number of filings to be performed in the Michigan State office. It is the stated goal of Michigan to handle this increased workload and improve the level of service to their customers without hiring additional staff. To increase the number of filings processed through the office, the state must upgrade their technology to:

- Reduce the manual processes through document imaging, automated correspondence, and improved reporting;
- Improve response time and access to the data using state-of-the-art client server technology and document imaging;
- Improve the filing and search processes using a user-friendly, intuitive Graphical User Interface that captures errors before they are filed, and requires data to be entered only once; and
- Most importantly, the State must increase the number of filings performed over the Internet through the e-Michigan portal, thereby increasing the level of customer support and data access while decreasing the workload in the State office

The Northrop Grumman IT team understands Michigan's issues. We will work with you to finalize your model rules to be compliant with your statutes while implementing the best industry practices. The State is looking for a partner with experience implementing RA9 compliant UCC systems and offers a software package that can be quickly implemented using state-of-the-art, e-business enabling technologies. Northrop Grumman IT has implemented RA9 UCC solutions based on our e-SoS product resulting in increased productivity as well as increased Internet access for filings, searches, and bulk data.

Management Summary

The Northrop Grumman Information Technology approach is based on a paradigm combining the best technical people with a proven engineering process and practical tools to provide superior service. Northrop Grumman IT applies approved CMM Level 3 management processes. We have proposed a full-time project manager for the duration of the project. Proactive management will ensure staff stability and responsive execution.

We have proposed our e-SoS product, which currently satisfies the most exacting IACA requirements. We have proposed a staff experienced in implementation of UCC systems, MicroSoft technology, FileNET products, the @Work product, integration with Michigan's ARS system and document imaging integration. Our work plan incorporates the specialized skills of all of our subcontractors and our



vendor alliances to provide a seamless team with a single face that will meet and exceed the stated requirements.

e-SoS UCC is an existing product with a functional baseline and baseline set of documentation (i.e. Detailed Design Document based on a Rational Based model, Acceptance Test Documentation, a User's Manual, Training Documentation, and System Administrator/Operator's Guide). For Michigan, we propose managing the development of changes to the existing baseline software and documentation, not a redesign or complete documentation re-writes. Each new requirement for Michigan will be treated as an approved change request to be integrated into an operational baseline. We have identified known changes to the baseline as a result of our analysis of the ITB, we included the integration of these changes into our project plan, and we have allocated a fixed number of hours for new changes that will result from our discussions and analysis. With an aggressive schedule, we must leverage our existing documentation, in the current format, concentrating our reviews on changes to the current baseline. It has been our experience that the customers desire to review and approve functional descriptions of all of the changes to the baseline. Modifications to the User's Manual are the most effective means of communicating these changes. The test plan is the most effective means to ensure that the requirements are thoroughly satisfied. We plan to concentrate our customer reviews in these areas. The Detailed Design document is a 2-dimensional view of our e-SoS UCC Rational Rose model. It is a very technical document that will be delivered with the system and should be considered primarily a tool for developers. We have not planned on an exhaustive review and approval of our existing Detailed Design. Our focus is on changes to the baseline.

Northrop Grumman IT is the most qualified vendor to deliver the entire system capability within the scheduled guidelines. Our system has been in production longer than our competitors and has been integrated with FileNET since day one.

Northrop Grumman IT brings 25 years of performing change management of centralized baselines for deployment with customer-specific configurations and capabilities. We are doing this now for our State and Local customers with our e-SoS UCC and Corporations product, the Department of Defense for their secure messaging systems, and the Federal Aviation Administration for systems that manage surface traffic in the worlds busiest airports. We have well-defined processes for managing change and integrating the changes into an operational baseline.

Northrop Grumman IT is an experienced systems integrator and software developer. As you can see in our work plan we have detailed the project activities based on our past experience and the ITB requirements. From our analysis of the ITB, we have defined specific software development tasks where we are certain the system must be customized to meet Michigan's needs. In our narrative descriptions we have identified those items that require development or customization and those items that will satisfy the requirements out of the box. We have also allocated a reasonable number of additional hours for customization items that will result from our immediate analysis task. We will manage to these tasks, the hours, and the schedule. We will provide regular reports to Michigan and Northrop Grumman IT executive management so they are always aware of the status of the project.

We have proposed hardware configurations that meet or exceed your stated capacity requirements and allow for future growth and expandability. We have provided the rationale applied to determining these configurations.

Project Approach

Strong project management is essential to the success of the State of Michigan UCC project. With an aggressive schedule that includes many deliverables, it is imperative that the progress of the project be tracked and reported weekly. Northrop Grumman IT will provide a dedicated project manager, Ms. Carol Cannon, to be responsible for successful execution of the project. It will be her responsibility to execute our project tracking and oversight procedures. Her responsibilities include but are not limited to delivery of Weekly Status Reports, support of meetings with Michigan Staff, management of the Northrop Grumman IT Project Team, and management of all sub-contractors. It is our assumption that the bi-weekly meetings with the Michigan Staff will be primarily conducted by tele-conference. To

develop the weekly status reports, Ms. Cannon must track and update the internal project budget, schedule, problem reports, change requests, risks and mitigation strategies. Ms. Cannon will also be the primary point of contact for communication with the Michigan Project Manager. Ms. Cannon and the Michigan Project Manager will work as a team to prioritize task and schedule requirements as well as to integrate the Michigan Staff into the appropriate tasks.

The proposed project staff is comprised of highly experienced engineers and managers familiar with Secretary of State applications for UCC, Trademarks, and Commercial Recordings as well as software development, network, and imaging technologies. Proactive management will ensure staff stability and responsive execution. Our approach is presented in detail in paragraph 3.2 “Work Plans.” Figure 1 presents a high-level depiction and timeline of our master schedule.

ID	Task Name	Duration	Start	Finish	2nd Quarter			3rd Quarter			4th Quarter					
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Contract Start	0 days	Mon 4/1/02	Mon 4/1/02	4/1											
2	Project Management	180 days	Wed 4/3/02	Wed 12/18/02	[Gantt bar spanning from 4/3 to 12/18/02]											
3	Bi-Weekly Status Meetings	175 days	Wed 4/3/02	Wed 12/11/02	[Vertical blue bars representing meetings from 4/3 to 12/11/02]											
23	Weekly Status Reports	180 days	Wed 4/3/02	Wed 12/18/02	[Vertical blue bars representing reports from 4/3 to 12/18/02]											
62	PHASE I	181 days	Mon 4/1/02	Tue 12/17/02	[Gantt bar spanning from 4/1 to 12/17/02]											
63	TASK 1 - Finalize Approach, Work Plan and Schedule	15 days	Mon 4/1/02	Fri 4/19/02	4/19											
105	TASK 2 - Define Application, Software, and Equipment C	62 days	Mon 4/1/02	Wed 6/26/02		6/26										
179	TASK 3 - Install, Configure and Test Software, Equipmen	111 days	Mon 4/29/02	Thu 10/3/02							10/3					
271	TASK 4 - Train System Operators and Support Personne	30 days	Thu 8/1/02	Thu 9/12/02						9/12						
310	TASK 5 - Convert Business Operations from Current Equ	13 days	Mon 9/30/02	Thu 10/17/02							10/17					
326	TASK 6 - Provide Post-Launch End User and Technical S	25 days	Mon 9/16/02	Mon 10/21/02							10/21					
355	TASK 7 - Support the State's Web Vendor	159 days	Wed 5/1/02	Tue 12/17/02	[Gantt bar spanning from 5/1 to 12/17/02]											

Figure 1 Master Schedule Overview

Northrop Grumman IT uses a Standard Engineering Process (SEP), which is very closely aligned with the standards defined in this contract. Our SEP is overviewed below:

The Northrop Grumman IT team is guided by a Software Engineering Institute (SEI) Capability Maturity Model (CMM) Level 3 compliant SEP. The SEP provides the framework necessary to:

- Increase staff productivity by delineating project activities and execution steps;
- Provide the State customer visibility into project activities;
- Foster predictable cost and schedule performance through consistent execution, tracking, and oversight, and;
- Support continuous process and product improvement using quantitative measurement

Sound management begins with a carefully developed plan — one that specifies required activities, assigns personnel resources, and allocates funds to activities by generating a program budget. Figure 2 overviews critical elements of the management approach that has successfully supported numerous imaging and software development projects in the past.

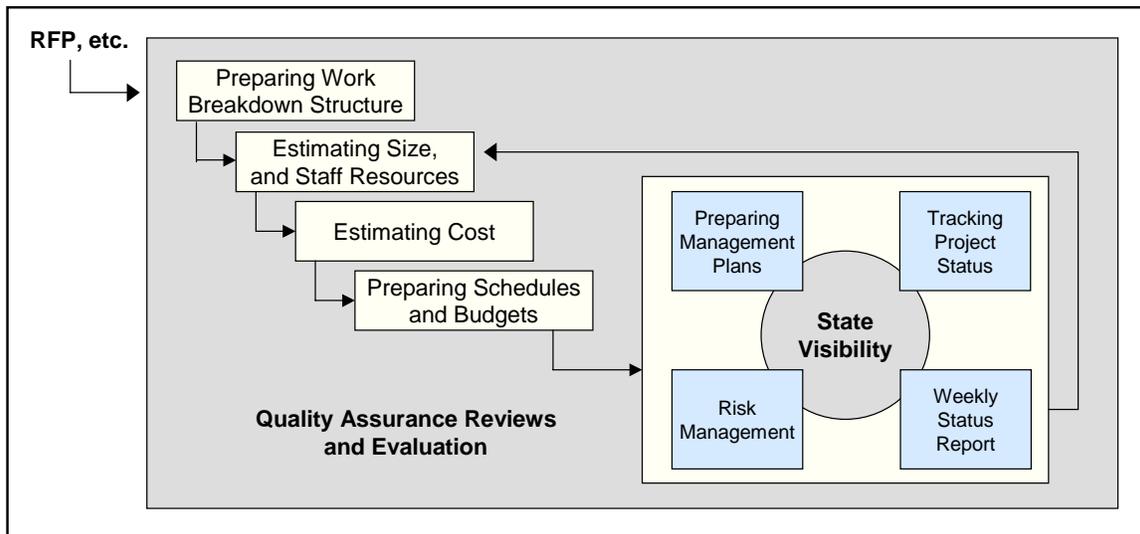


Figure 2 Project Management Approach

The Northrop Grumman IT Team’s management staff has developed a detailed work plan and project schedule, presented in paragraph 3.2. Our work plan includes all tasks required for accomplishing Michigan’s required objectives, including all deliverables, and meets the State’s Project schedule. Each task has specific staff assignments and completion dates. The team has performed the required estimating procedures. The labor distribution and deliverables are directly applied to our pricing in Section 6 Price Proposal.

In addition to our sound management approach, our engineering procedures depicted in Figure 3 represent “best practice” activities that have earned as high as SEI CMM Level 5 ratings.



Our Quality Engineering focus is on how processes are performing in making the resultant products. We couple this process-orientation with complete review of all contract deliverables (i.e., quality control) – ultimately delivering quality products and services within budget and schedule.

Configuration Management

Northrop Grumman IT will utilize established and proven methods for performing configuration management control to ensure that any changes to controlled configuration items are submitted, evaluated, approved or disapproved, implemented, verified, and released according to established configuration management procedures.

Requirements, design details, and code will be maintained and tracked using a source control system. The system used shall have the ability to return to a previous version of the document or the code and may also be used to compare two versions of a file. All software versions of each interface shall be maintained in this system for reference and retrieval if necessary. This source control system will be maintained as long as Northrop Grumman IT has a development or maintenance support contract with the State.

Our Configuration Management (CM) tool is Microsoft Visual SourceSafe. This tool shall be used to create, automate, and manage a CM Library system. This tool provides the linking facility that allows sharing of common software components, files, and work products among multiple engineers. In addition, Visual SourceSafe supports:

- Multiple levels of access control;
- Storage and retrieval of configuration items;
- Sharing and transfer of configuration items among affected groups;
- Use of product standards for configuration items;
- Storage and recovery of archive versions of configuration items;
- Correct creation of products from the software baseline library;
- Storage, update, and retrieval of CM records; and,
- Production of CM reports

A baseline shall be established for release into the production system. As the baseline is released for production, a description of the contents shall be documented identifying the components of the build (i.e., hardware/software requirements, source code, fulfilled system requirements). Modifications to the software as a result of a documented problem or change request will follow established configuration management procedures. The affected software is checked out, modified, reviewed, tested and checked in. The established testing practices are then followed prior to release of the modified software.

Change Management

Change Management can be related to all project deliverables including requirements, documentation, source code, or test procedures. Northrop Grumman IT supports a well-defined change management process in our SEP. The determination of whether an item is a change or problem can sometimes create problems within a project. We plan to reduce the risk of the problems with regular reviews and customer approvals. If something is requested that clearly deviates from the approved requirements then it is a change. If there are issues, our standard issue resolution process consists of involving State and contractor management parties necessary to reach a solution. Figure 4 shows our standard Problem Report/Change Request analysis procedure that we use when evaluating user reports/requests.



Once it is determined that a change is required, the State will submit a Change Request Form. Northrop Grumman IT will estimate cost and project impacts and submit the results in the form of a work plan. These work plans will be associated with an entry in our Problem Report/Change Request database. We assume that the changes to our baseline, identified in the ITB, will be verified and approved during the initial analysis phase of the project. Our Problem Report/Change Request database tool is Rational ClearQuest. All changes to be developed will be tracked and monitored in ClearQuest. The status will indicate that the change has a completed work plan that is approved or deferred. A permanent record of the change request will be maintained as long as Northrop Grumman IT has a maintenance or support contract. The implementation of any changes are subject to State approval which may also result in a contract modification before the development process begins during testing and maintenance phases of a project.

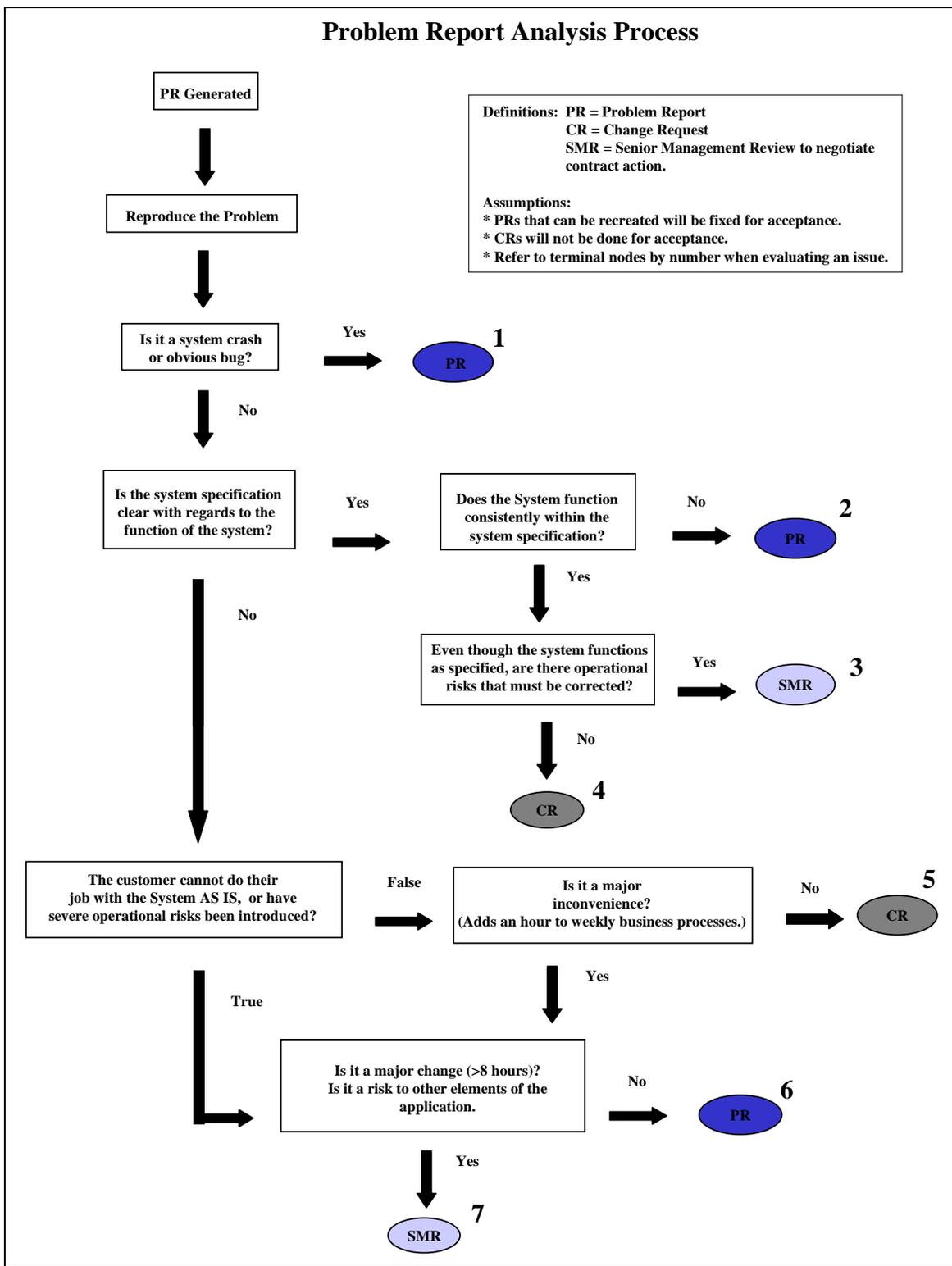


Figure 4 Problem Report/Change Request Analysis Procedures

Problem Resolution

As problems are identified, they will be recorded in our Problem Report/Change Request database. Each problem report will have a criticality associated with it and we can work with the State to develop a prioritization scheme. Northrop Grumman IT will track these problems to closure and provide regular reports on their status. The status will indicate when a fix has been identified and when it is incorporated into the baseline. A permanent record of the problem report will be maintained as long as Northrop Grumman IT has a maintenance or support contract.

Testing Strategy

Northrop Grumman IT, having achieved the SEI CMM Level 3 rating for performing engineering activities, has an established method for conducting all levels of testing. This method shall be followed to ensure that the requirements for the Michigan UCC System are met. Figure 5 depicts the method of test that will be performed. System Testing for the Michigan UCC System shall be executed to assure that the software, as documented in the detailed system design, is in compliance with the stated requirements.

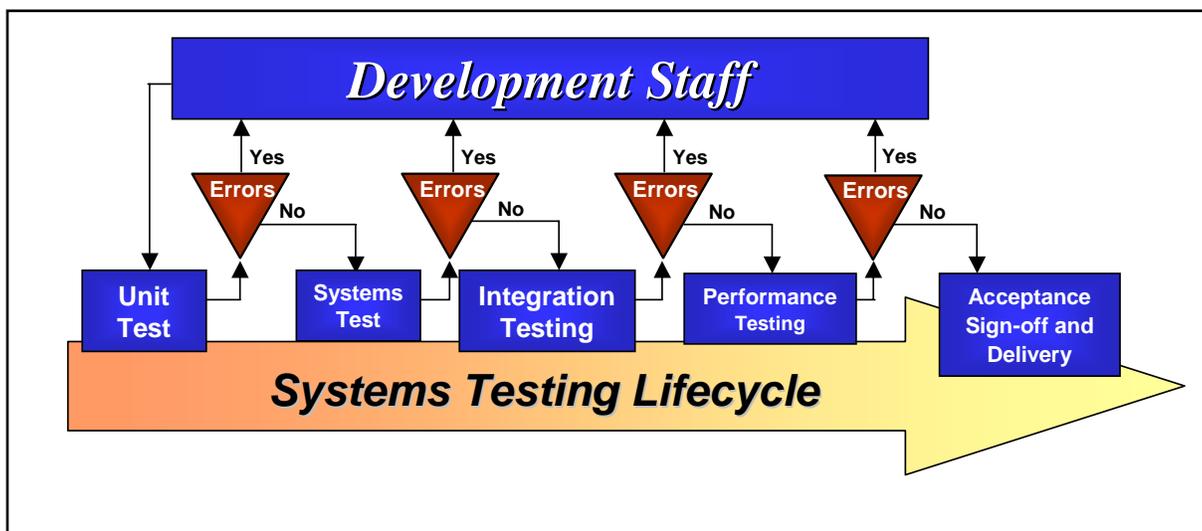


Figure 5 Northrop Grumman IT Test Methodology

Northrop Grumman IT's proven test strategy begins with the preparation of a detailed system Test Management Plan. The Test Management Plan shall address the technique used in all test environments – Unit Test, Integration Test, Regression Test, System Test, and User Acceptance Test. The Test Management Plan shall address the technique used in all test environments – Unit Test, Integration Test, System Test, and User Acceptance Test. The plan shall address the objectives, the environment, the approach, test condition level and format, source and management of test data, and test validation procedures. The plan shall also outline resource requirements in terms of personnel, hardware, and testing tools. Procedures in the plan shall address test data management, problem reporting and tracking, software migration, and data backup and recovery. Individual test plans shall be developed for each level of testing and detailed step by step procedures shall be documented in the test plans to identify the expected output for each test executed. To assure that all requirements have been addressed, a traceability matrix cross-referencing the test cases to the stated requirements shall be utilized.

Testing activities shall begin with the development and execution of unit level testing. Unit test cases shall test various input parameters and shall be considered successfully executed when expected results are achieved. The software development staff primarily performs these activities. The QA organization will ensure that there is evidence of unit tests being performed for all new development. Successfully executed unit test cases shall be integrated and tested for all interfacing systems. Northrop



Grumman IT's independent test organization performs the system integration testing in cooperation with the development staff.

Regression testing shall be executed as development of new software components or modifications of previously designed components are completed to assure that previously successful functionality of the system has not been interrupted. Northrop Grumman IT's independent test organization is responsible for executing these tests. Following integration testing, internal system level testing shall be executed. Primarily the customer performs these tests with assistance and participation from the Northrop Grumman IT independent test organization. Stress or load testing shall be developed based upon previous levels of testing documented and executed for the system. These tests will be performed as part of the User Acceptance Testing.

Northrop Grumman IT will assist in the recording of the User Acceptance Test results and get acknowledgement of success or details of problems from the customer. Our Problem Report/Change Request database shall be used to monitor and track any problems identified during testing. A user acceptance check-off sheet will be used to document successful test execution. Utilizing the database, problems identified during each test phase, shall be prioritized and reviewed through implementation of the problem fix. A copy of the developed software shall be maintained in a verified and controlled baseline to assure that only the successfully tested software is stored.

Northrop Grumman IT proposes to install our existing package e-SoS UCC and modify the baseline to meet the needs of the State of Michigan. The e-SoS UCC System is a comprehensive filing management solution. The system supports FileNET document imaging, Internet customer access, word processing, accounts receivable, query and reporting for a complete solution.

The commercial product vendors or approved resellers shall be used in integrating the workflow system as this area requires specific skills and product knowledge. These services are typically quoted with the product purchases. The use of the approved product support vendors allows Northrop Grumman IT to provide the highest quality product while reducing risk and cost to the State. Northrop Grumman IT is responsible for the activities and will manage our vendors to meet our customer's expectations.

Northrop Grumman IT proposes the use of subcontractors for software development during the execution of this contract. Subcontractor staff will be fully integrated into our development processes as defined in our SEP. They will participate in regular meetings and weekly status reports and will execute under the direction of the full-time project manager. All subcontractor work-products will be subject to the same rigorous cycle of reviews, testing, and management oversight defined in our SEP.

Refer to our response to "Project Staffing" for a description of our organization and positions for all of the team members. The Northrop Grumman Project Manager, Ms. Carol Cannon will orchestrate the activities of the project personnel consistent with the project plan and require regular reporting from all participants. All of our resources are managed out of our Bellevue, Nebraska facility.

Proposed System Overview

The Department of State has defined an improved, simplified process to address current operational inefficiencies and problems. The Department believes that the proposed process will provide the UCC Unit with significant operational efficiencies and throughput improvements.

Key Characteristics

The desired future process has some key characteristics that distinguish it from the current process, offering substantial performance improvement. These characteristics include:

- There are minimal hand-offs of work to other areas or to employees within the unit.

- For each transaction, a single operator captures all initial ancillary and transaction data in a single step. A second staff member would do data verification.
- Work-in-process is minimized and cycle times are decreased. The process must be completed within one business day (24 clock hours) from receipt in the UCC Unit.

It is important that these key process characteristics are preserved.

Workflow Proposal.

We have proposed our RA9 compliant e-SoS UCC system based on fielded production systems in Nebraska, Nevada and soon to be Virginia. We also have an e-SoS product, based on the same technology and software objects, that supports Corporations and Trademark filings. These systems are very user friendly with similar look and feel. The systems are 100% Internet ready for E-Commerce. The systems are designed so that the user should only have to enter information once to support multiple transactions.

We have implemented Microsoft's Distributed interNet Architecture (DNA). We have proposed a systems architecture using a Database Server, Image Server, Applications Server, Scan Server, Print/Fax Server and Client Systems. Our web interface utilizes many of the same software objects as the internal business support system. The fully integrated software packages for imaging and workflow offer low risk development and customization as well as cost-effective maintenance with more robust capabilities available out of the box. We have designed the system to integrate with commercially available Accounts Receivable Systems to satisfy our customer's preference. Our system will easily integrate with Michigan's ARS system with minimal changes to the software baseline. Your data will be stored in a Microsoft SQL Server database that can be easily accessed through open-systems protocols allowing linkage with other databases, automated data exchange capabilities, commercial reporting and query tools.

Proposal with Workflow Software and Pre-Scan

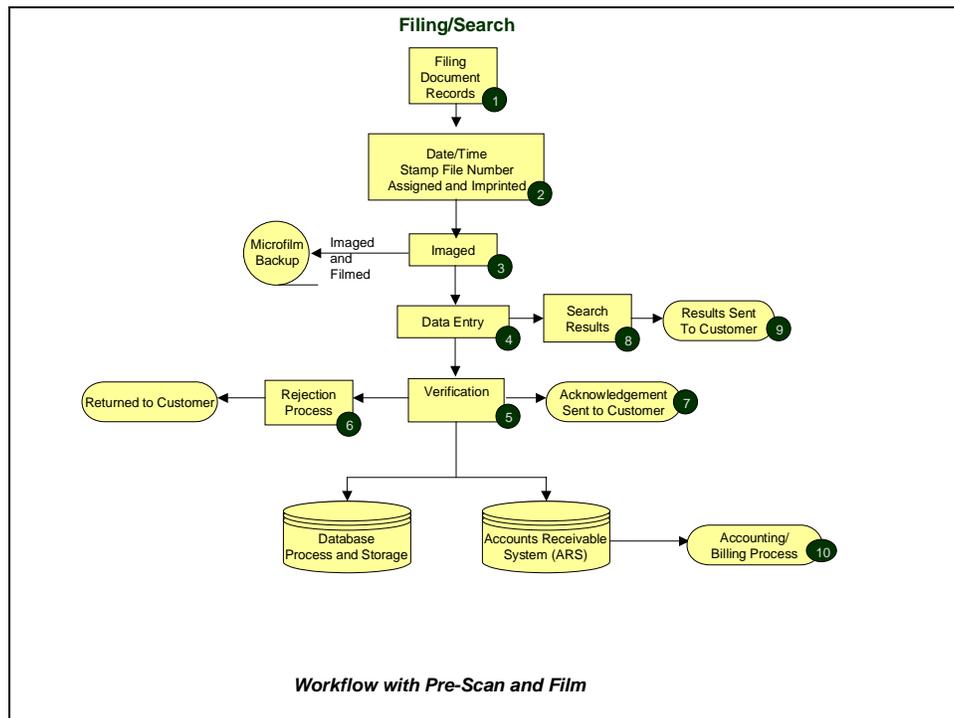


Figure 6 Workflow with Pre-Scan and Film



The process depicted in Figure 6 will achieve the key characteristics as stated above, which are:

- There is minimal hand offs of work to other areas or to employees within the unit.
- For each transaction, a single operator captures all initial ancillary and transaction data in a single step. A second staff member will do the verification.
- Work-in-process is minimized and cycle times are decreased.

Although the customary location of scanning operation in a pre-scan scenario is in the mailroom, benefits can be realized by delaying this operation to the image capture step. The steps indicated in Figure 6 above are described briefly in the corresponding section below.

Filing Process

1. Filing Document Records

This box depicts the beginning of the filing and search workflow. We have combined the filing and search workflows depicted in the Department of State's ITB. The e-SoS UCC application is capable of performing searches, producing copies and filing from the same workstation. The ITB stated that department personnel will switch jobs between search and filing periodically. Given that all department personnel are cross-trained in all job functions, we see no need to separate searches from filings, or other normal work items.

The mail has been opened prior to this step and the payment instrument has been removed and recorded into the ARS system.

2. Date/Time Stamp File Number Assigned

The e-SoS system assigns a filing date and time and a unique file number. The filing date and time will be 5:00 PM of the current day. The current day will be the day specified on the scan station. The filing number is a unique number assigned automatically by the e-SoS UCC system that includes a 1 digit check digit. The check digit is mathematically derived from the other numbers in the file number. If the filing is rejected, the system identifies the date and time of rejection in the rejection letter.

The date and time of filing is imprinted onto the first page of the physical filing as it passed through the feeder of the scanner. This will make it possible for the scanned and filmed documents to have the date/time and the filing number as part of the imaged document.

3. Imaged and Filmed

The scanning will be accomplished using a Kodak 9520D duplex scanner that is rated at 165 pages per minute duplex. Duplex means that the scanner can read both sides of the page in one pass through the scanner. Northrop Grumman IT has proposed the integration of a Kodak Archive Writer. The Kodak Archive Writer films the document as the Kodak 9520D scanner images it. This provides for virtually simultaneous imaging and filming. It also eliminates the need for an operator at both the scanner, and the microfilm machine. With the Kodak Archive Writer and the Kodak 9520D scanner the same operator can run both pieces of equipment. The tremendous efficiencies and savings of this image and film process can be implemented by the Department of State.

The national standard forms patch code indicator in the upper left-hand corner of the first page will identify the start of a new document. The system is able to recognize the path position and properly orient the image for presentation to the data entry clerk. Because Michigan allows for non-standard forms, the system provides for a separator sheet containing only the patch code to separate documents. Separator sheets will not be permanently stored images; they will only serve as a document separator. Another separator sheet will be required to separate individual jobs as this will delineate individual units of work for the workflow.

Further investigation since Northrop Grumman IT submitted their proposal has shown that the patch code indicators on the National UCC forms are identical and cannot be used to uniquely identify the



filing type. It is desired that the document type be identified at scan time to allow the assignment of a filing number only to filing documents and not to non-filing documents (UCC11, etc.). This will prevent the "burning" of filing numbers unnecessarily. Additionally, the scanner requires a separator sheet to signal that the document that follows is a filing document and therefore needs to have a filing number imprinted upon it. For this to work correctly, a separator sheet identifying the document type must be placed between *each* document within a job.

4. Data Entry

The Filing Officer will use the e-SoS UCC system to enter all required data entry fields. The entry of data will take advantage of shortcuts, selections from dropdown lists, or searchable fields to minimize typing. This will dramatically increase throughput, reduce the errors inherent in freeform typing, and improve the quality of the data. The e-SoS UCC system's data capture screens are configured so that a single operator can perform all tasks necessary to complete the transaction. However, supervisory approval is required to delete an image or transaction data from the e-SoS UCC database.

Data captured at data input is retained on the e-SoS UCC database server. Northrop Grumman IT will not upload any data to the Department of State's mainframe although financial data will be passed to the Finance Division ARS for billing and customer inquiry purposes.

Using the @WORK workflow, the system can be configured to push work to the data entry clerk or the system can be configured to allow the user to select the next work item. The delivery methodology is an option that the Department of State will have to select. Our experience has demonstrated that pushing the work to the user avoids "cherry picking" or selection of easy units of work. The @WORK workflow products are flexible and configurable and will meet or exceed the Department of State's business requirements.

The e-SoS system provides the ability to view the e-SoS application and a copy of the image of the transaction side by side, as long as the monitor is 21" or larger. This eliminates any toggling or "thrashing" in order to accomplish the data entry.

Walk-in UCC Counter

Filings presented at the UCC counter for immediate filing are easily accommodated by the e-SoS UCC system. Imaging the documents from counter customers will likely require the use of a bar-coded self-stick label on the document. The document is then imaged and filmed later and associated to the originating action. The customer can accomplish verification of the filing at the counter. This is accomplished by presenting the customer with an acknowledgement letter for the filing that restates the information recorded in the filing. The customer can then verify that the information is recorded correctly either on-site or at a later time. If the customer requires a copy of the filing, the filing officer would need to make a photocopy.

With the e-SoS UCC system, the operator can save a job in process (pause), open and complete the individual counter filing, then open the saved work on a job at the point where the operator originally saved the paused work (resume). This powerful tool is included in the base operational e-SoS UCC application and can be used at all e-SoS workstations not only at the counter workstations.

Search Reports and Copy Requests

For search reports, the e-SoS UCC application complies with the strictest interpretation of the RA9 standards. During development of our RA9 compliant version of the e-SoS UCC application the users of our system made it apparent that they wanted to be compliant with RA9 but not totally bound by it. They wanted the ad-hoc search capabilities of our original system to remain in the baseline. These popular capabilities are still in the RA9 compliant search screen. The users are aware that if they use a feature such as: issuing a compound search, or limiting the search results to a particular city, the results they get are not compliant with RA9 standards. This allows them more flexibility to quickly satisfy customer service requests and further verify filing status. Our



current search report process does not require independent verification of the search report prior to delivery to the customer. We are assuming that this process will also meet the requirements for Michigan.

5. Verification

The e-SoS UCC application requires an independent verification of each filing action before the filing is committed to the searchable database. One verification process consists of the independent visual inspection of the data entry performed for each and every filing. A second verification process option of double-blind data entry will also be provided. After the data entry has been independently verified and determined to be correct it can be committed to the operation database tables.

6. Rejection Process

The e-SoS UCC system provides an automated approach for handling rejections. The system generates a laser-printed form letter that includes the rejection reasons, the time and date the filing was rejected. The rejection reasons are selected from a list of standard rejection reasons based upon the IACA RA9 rules. If in the future the rejection reasons require modification, they can be modified in the reference tables in the database server. The rejection letter is oriented to accommodate a self-addressing window envelope. The e-SoS UCC system can collate and print the rejection letter and a copy of the filing document in a pre-scan scenario. The correspondence is then sequentially printed together. The system will retain a copy of the rejected filing and reason in a searchable database to use in case of customer questions on proper form completion.

To support the State's web UCC application the e-SoS UCC application must provide the following functionality:

- Evaluate the rules detailed in Appendix C and automatically create rejection correspondence in Microsoft Word 2000 (.DOC) format
- Create a filing acknowledgement in .DOC format
- Be able to output all generated .DOC correspondence to print, fax or e-mail

The three requirements stated above are in the UCC baseline. Some time is required to tailor the rules processing engine so that it is compatible with the MI MARs. This cost has been included in the bid.

7. Acknowledgement Sent to Customer

The e-SoS UCC system automatically generates an acknowledgement letter to show that the filing has been accepted. The acknowledgement letter shows the filing date, time, and assigned filing number, all parties and the complete filing history, along with a statement that the filing has been recorded at the Michigan UCC unit (the actual statement wording will be finalized by the Department of State). This restatement of the information recorded in the filing will serve as the copy of the filing currently returned with the acknowledgement. With this pre-scan scenario we could return a printed image of the filing.

The e-SoS system allows sending acknowledgement copies to the secured party, although it has a manual override to allow the acknowledgement to be mailed to a different address. The e-SOS system can immediately print individual acknowledgements, search reports, or copies to service walk-in filers. The e-SoS UCC system can also deliver acknowledgement, search reports, or copies to the customer via e-mail and fax.



8. Search Results

Search results are displayed to the Filing Officer who can review, verify and in some cases edit the search results. Editing can be accomplished given the proper security level. More detailed information regarding the search capabilities are described later in this document.

9. Results Sent to Customer

Search Results are sent to the customer with a self-addressing cover page so that they can be inserted into a windowed envelope. Search results can also be sent to the customer through fax and e-mail directly from the e-SoS client workstation. This gives the Department of State the utmost flexibility.

10. Accounting Billing Process

Transmit the details of the accounting transaction to the ARS system.

Requirements of the New UCC System

The State has identified several requirements that must be met by the UCC system to be procured through this contract. State requirements are numbered below. Northrop Grumman IT responses immediately follow the applicable requirement:

1. The UCC system must comply with all requirements of UCC Revised Article 9 as adopted in Michigan.

The e-SoS UCC system is fully compliant with the UCC RA9 Specification and the IACA Model Administrative Rules (MAR), dated October 16, 2000, which includes comments from the September 2000 IACA XML Meeting. There were changes made to the IACA MAR between the August 10, 1999 version and the October 16, 2000 version. As a sponsor of the IACA Conferences Northrop Grumman IT is committed to the successful implementation of the UCC RA9 and the IACA MAR and invests significant resources to keep our products current with any changes to the UCC RA9 and the IACA MAR.

2. The UCC system must comply with the Michigan Administrative Rules governing UCC operations. A draft of these Rules had been provided in Appendix C of the ITB. The selected vendor will review the draft rules to make certain the proposed solution can comply with these Rules. If draft rule changes are suggested, the vendor will immediately notify the Department's project manager. This review is a Task 1 deliverable. The Department's project manager will also notify the vendor of any changes that develop from the public hearings to be held on the rules.

After analyzing the Michigan MAR document in Appendix C we have determined that the e-SoS UCC system only differs slightly. Where differences were found, we added development time to bring the e-SoS UCC system into compliance with the Michigan MAR. Northrop Grumman IT will immediately notify the Department's project manager if we have any suggestions to the draft rules. We understand that a Michigan MAR review is a Task 1 deliverable.

3. The system must use electronic imaging to meet the performance standards mandated by law. Because of the Department's requirements that the mail be opened and processed by areas outside of the UCC unit, this process will use one of the statutory two days for turnaround. The UCC system must allow all functions and work flow to occur in the unit within one business day of delivery to the unit.

Based on the assumptions stated in Northrop Grumman IT's proposal and input provided in the ITB, we feel that the implementation of our e-SoS UCC system and the Internet interface will satisfy these performance requirements.

4. The installed system must utilize a State of Michigan approved standard for document management (currently either FileNET or Open Text). The FileNET imaging system is the preferred standard because the Michigan Department of State has adopted it for other applications.



Northrop Grumman IT chooses FileNET for e-SoS UCC imaging solutions because they are clearly the “best of breed” in the industry. For systems such as UCC and Corporate Filings, which we intend to employ across the U.S. and overseas, we recognize that FileNET offers the very best software from the most stable company. We have been a FileNET ValueNET partner for over 6 years. We have not just recently engaged FileNET to be responsive for this particular system. Northrop Grumman IT has the only commercial UCC solution on the market today that is integrated exclusively with FileNET imaging.

5. The proposed solution will provide a fully functional relational database (i.e., SQL Server or Oracle) capable of automated data exchange with systems such as the Accounts Receivable System (ARS).

Northrop Grumman has proposed a SQL Server relational database for this implementation primarily because the ARS system is SQL Server. The SQL Server solution is the most cost-effective for Michigan’s particular configuration.

6. Data contained in the existing system’s database must be imported into the new system to avoid or minimize manual re-keying. See the “Data Conversion Plan” section that follows.

Northrop Grumman has experience converting the data for several states. Northrop understands the challenge of cleaning up the legacy data and converting the names to RA9 compliant conventions. Northrop has provided the details of our proposed conversion process in Data Conversion Plan.

7. The system must be able to accommodate increases in UCC workload volume through cost-effective scalability, with little or no downtime. It must comply with the throughput rates given later in this section.

The design of the e-SoS UCC system minimizes downtime through the use of redundant components. Backup hard drives, network cards, fans, power supplies, uninterruptible power supplies and hardware maintenance contracts will keep the system operational in case of a minor failure.

Northrop’s proposed system includes a RAID 5 configuration with magnetic tape backups accessible to all server systems. RAID 5 allows for the recovery of single disk failure simply by replacing the disk in the array. Northrop also recommends a hardware maintenance contract for all systems so that they can be restored to operational status if there is a failure.

In Northrop’s system administration training, we will cover the backup and restore procedures for the system. Note that FileNET offers a System Administration course, which includes training regarding backup, restore and disaster recovery of the FileNET image server. By supporting the recommended back-up methodology and storing tapes and optical disks off-site, recovery of the system is possible if the entire system or disk configuration is compromised. The FileNET system creates transaction logs on optical disks that should also be taken off-site to enable recovery of the data on the Image Management System. In summary, Northrop’s is proposing fault tolerant disk configuration and off-site backup combined with hardware maintenance to enable system recovery and minimize downtime.

Scalability is handled primarily through hardware expansion. Northrop has specified a configuration with sufficient capacity to provide good performance while handling your internal staff workload and the anticipated volume of Web activity. And if volumes rise above projected expectations, the servers are capable of tremendous expandability.

Both the database and imaging servers can be expanded from the specified two 900 MHz Xeon processors to four 900 MHz Xeon processors. The external RAID disk storage for each of these servers can be increased from the proposed 144 GB to a total of 396 GB. Additionally, the application server could be increased from one 900 Mhz Xeon processor to four 900 Mhz Xeon processors. Northrop does not ever expect to saturate these servers but if additional hardware must be added the application’s component-based architecture makes it easy to split services across multiple servers.



To facilitate online image retrieval, we have configured a HP C1105M jukebox for optical storage with 128 media slots and 6 read/write drives. The HP jukebox is a Write Once, Read Many (WORM) system. The WORM media has 9.1 GB of capacity per disc. When all slots are utilized, the jukebox has a capacity of 1164.8 GB (1.16 Terabyte). The following calculations confirm that 128 media slots at 9.1 GB capacity per Worm Media will accommodate Michigan’s increased workload.

Table 1 – OSAR Sizing

OSAR Sizing	
Filings/Year @ 120% of Max	900,000
Estimated Pages/Filing	4
Total Images/Year	3,600,000
Average Image Size (K Bytes)	50
Storage/Year (Giga Bytes)	180
Osar Slots/Year at 9GB	20
Osar Slots for 5 Years	100

As the State requested, we have contacted Dell for pricing a fully loaded disk array for the Image Server Cache. In doing this, Dell has informed us the PowerVault 210 model of disk array cannot be quoted. Our Dell representative is recommending we move to the PowerVault 220. We have received pricing for this model. The original disk array quoted for the Image Server was configured with (5) 36GB drives out of 12 bays. The PowerVault 220 has 14 bays. We have also quoted the 73GB drives since the price point was much better. We have priced a configuration using the PowerVault 220 with 11 drives. This equates to 657GB of space in a RAID 5 configuration with one spare drive. This configuration will hold approximately 10 years of images in cache. Fully loaded, this array can hold 949GB or 867GB in a RAID 5 configuration.

8. All work done by unit employees must be physically contained within the UCC Unit. Mail opening, sorting, and revenue receipting are tasks outside the scope of this project that are currently done by other areas of the Department. Those tasks will remain in these respective areas.

Northrop Grumman proposed workflow allows the UCC Unit employees to accomplish all tasks physically within the UCC Unit. Space permitting, the scanning and filming equipment will be located in the UCC unit for accessibility. The workflow application will make the images accessible online for processing by the staff in the unit. As the document images come online there will be very few functions that cannot be performed entirely on the desktop.

9. The system must provide streamlined capture of financing statement data to reduce the number of processing steps, improve labor, and increase accuracy. Instead of the multiple hand-offs of the current system, the goal is to have one clerk perform all data entry tasks except data verification in a single step. Other than the possible task of removing staples, documents should not require special handling or “pre-auditing” before imaging or data entry.

The e-SoS UCC application provides for the streamlined capture of financing statement data in the GUI presentation to the user. With the e-SoS UCC system all job functions can be performed from any workstation. No handoffs are required. All of the filing information can be entered in a single step from our e-SoS UCC system. We provide Cut, Copy, and Paste features and selectable lists to reduce the amount of typing required by the user. Hot keys allow for easy movement on the screen and the entire application can be navigated without using a mouse. This is the preferred method by most data entry personnel. We require fields to be filled by the user and script some data entry to increase accuracy and improve throughput. As a Microsoft Certified Solution Provider we provide the ease of use and features that Microsoft has come to be known for.



Separator sheets will be required for jobs and forms to delineate units of work. We believe that the additional document preparation of separator sheets can be recovered in the subsequent processing of the filing.

10. The Department requires the contractor to license the UCC Software to the State with unlimited rights to use the software within the Department.

The e-SoS UCC software, including source code, will be licensed and delivered to the state as a repository of software objects with unlimited access to the source code and unlimited rights to use the software within the Department.

11. The system will provide efficiencies and incorporate best practices identified in other states into the UCC Unit's business processes. If another state's best practice appears to be more beneficial than a Michigan requirement, the vendor's project manager will immediately notify the Department's project manager for a determination of which practice to use.

After contract award Northrop Grumman IT can enter into open dialogue with the Michigan UCC staff. We will immediately review the Michigan UCC unit's work process flow and our proposed process flow during the requirements verification phase of the project. We will bring a demonstration copy of our software to further clarify the requirements. We will suggest possible changes based on our experience with other state implementations. We may be able to make suggestions that improve the throughput, eliminate unnecessary or redundant tasks, reduce the equipment requirements or improve redundancy. We have offered our best solution in our response to the ITB. When we engage in open dialogue and requirements clarification, additional solutions may be suggested and considered by the State. Northrop Grumman IT will apply the appropriate contractual change management processes as required if there are any impacts to the proposed cost.

12. The solution must follow guidelines for search criteria as found in the draft Michigan Administrative Rules. In addition to these guidelines, the system will allow for ad hoc searches by internal staff based on criteria specified by customers or the Department.

The e-SoS UCC application is well suited to meet the searching and report generation requirements specified by the State. We have implemented a design that separates the searching and reporting into two independent processes. This separation allows each process to concentrate exclusively on its unique task and provides maximum flexibility in responding to a customer's varied needs for searching and reporting.

The searching process is responsible for quickly and accurately retrieving data from the database based upon user input. The reporting process is designed to accept the output of the searching process and format the results in one of two basic formats:

- An information listing, either certified or uncertified.
- A copy of a document, uncertified.

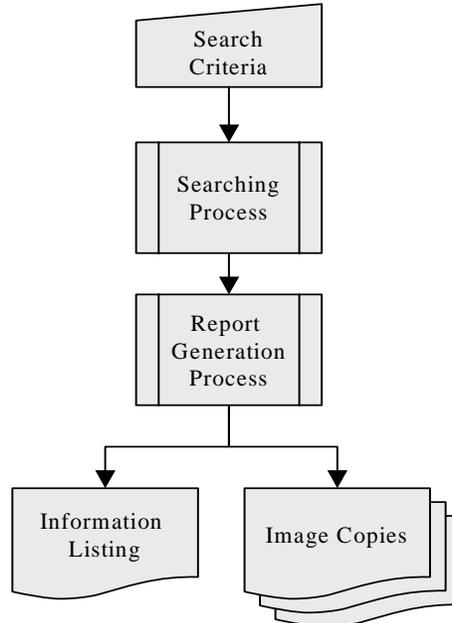


Figure 7 Searching Process

The format of the information listing and document copy documentation can be defined and tailored to meet the State’s requirements early in the development process. Since these pieces of correspondence elements are based on Microsoft Word templates, the State may freely change the content at any point in the future to meet evolving needs. The template for the information listing’s cover sheet will contain language indicating that the search is “certified,” meaning the search complies with IACA search standards. A different paragraph (disclaimer) is inserted if the submitter has selected a “limited” search.

The State has specified seven search types that are expected to appear in the replacement application procured by this contract. The e-SoS UCC application is well suited to provide these searches and offers most without modification. In addition, the application allows for soundex-based searching, wildcard searching and IACA- recommended “limited” searching as provided in Rule 504(1) of the *Proposed Michigan Administrative Rules* document.

The e-SoS UCC application will require modifications to meet some stated requirements. State-specific fee information, such as a surcharge for searches returning more than 100 records, will need to be developed. We will also need to make modifications to allow the ability to limit a search by the debtor’s address. This cost has been included in our pricing.

The e-SoS UCC application does not have a function specifically designed to limit copies returned from a search. However, the application does allow the filing officer to conduct a search and then request copies from the documents returned. When the copies dialog window appears, it contains the number of pages to be printed and the charges associated with the copy request. If the filing officer wishes to abort the copy request because the number of copies exceeds the customer’s limit, the dialog can simply be dismissed and the information listing printed instead.

13. The proposed solution will include the necessary conversion of data from the existing database system and of microfilm images as needed to provide internal staff and customers with quick and efficient UCC record access and accurate search results. The system will improve responses in terms of reduced turnaround time and accuracy for both filings and requests for information (less than one business day within the unit). It will also provide system edits and other required validation to reduce or limit manual intervention or review by staff. The selected vendor will serve as the prime contractor for the data and image conversion processes.



Northrop Grumman IT will discuss the data conversion options with the state to determine the best cost-benefit approach to accomplish the Microfilm-Image conversion. Northrop Grumman IT will team with GET Imaging, Inc. (GET Imaging) to fulfill the film conversion requirement for Michigan. Our proposal, included later in this document, details both their qualifications and how the work will be performed. Northrop Grumman IT will develop an image import process to take the images received from GET Imaging and import them into the FileNET Image Management System. We will write an image import routine that will access necessary index information from the existing data based on the roll-frame number of the document. This routine will be automated enough to allow state personnel to import images into the system. The conversion contractor should only need to convert the film to images and provide us with the start of document indication, roll-frame, and images associated with the document. We have developed a similar routine for the State of Nebraska. State personnel import the images from CDs created by their Records Management division. In an effort to keep the price down, we plan to train the Michigan state systems administrator to execute the import process for loading the images as they are received from GET Imaging.

14. The application will have a global search and change capability, to change the name or addresses of secured interests.

Our current application has a global search and change feature for secured parties.

15. The UCC system must provide the ability to verify the accuracy of the data entry through methods such as (but not limited to) use of different staff to enter and verify data, double-blind keying for key fields such as debtor name, frequent party lists, and visual inspection of data. The vendor and the State will work together to select the best strategy to use at implementation; however, multiple options for data verification are necessary to comply with audit recommendations.

The e-SoS UCC application requires an independent verification of each filing action before the filing is committed to the searchable database. The verification process consists of the independent visual inspection of the data entry performed for each and every filing. After the data entry has been independently verified and determined to be correct it can be committed to the operation database tables. If data entry associated with a filing is determined to be incorrect, the verifying filing officer may perform the necessary corrections. Only authorized filing officers are allowed to verify filings and a filing officer is never allowed to verify their own data entry.

In addition, the system will allow for double-blind data entry. Northrop Grumman IT is leveraging the verification process developed for Virginia as the basis for double blind keying functionality. We have proposed the integration of the double-blind data entry steps within this existing process to minimize the complexity and cost impact. We assume that the debtor name is the only piece of data that needs to be double-blind data entered even though other data elements (debtor city, secured party name, filing date) are searchable under RA9.

The double-blind data entry process requires the verifying filing officer (verifier) to select a document to verify. Once the document is selected, a dialog box will be presented asking the verifier if any debtors were indicated on the document. If the verifier indicates yes, another dialog box will be displayed allowing them to select the type of debtor (organization or individual) and name of debtor. Once the debtor is entered, the verifier may indicate that another debtor is present, and enter the appropriate data, or close the dialog. When the dialog is closed, any discrepancies will be displayed and the verifier may take appropriate action on the lien form to ensure the debtor name has been added correctly.

Double-blind data entry must test for a number of conditions. One of the conditions to test, for instance, is whether the first filing officer entered all of the listed debtors. In some cases, the number of debtors entered by the first filing officer and the verifier will differ, producing a discrepancy indicating that too few or too many debtors were entered. Reconciling this discrepancy without reviewing the entire lien is difficult. The verifier will therefore need to review the debtors added to the lien and make



adjustments as necessary. In this case, the verifier may be adding a debtor that was overlooked by the first filing officer. This addition will not be subsequently verified so the verifier must work diligently to ensure the data is entered correctly.

In addition to the verification process the e-SoS UCC application interface provides a variety of features to help reduce the numbers of data entry errors and increase productivity. These features include frequent party lists, action and edit checks, and cut, copy and paste operations.

The UCC System Administrator will be able to enable or disable the double blind keying functionality. The ability to enable or disable the double blind keying functionality at the user level will be addressed in a change order if the State so desires at a later time. Northrop Grumman IT will work with the Michigan Department of State and make minor modifications, when necessary, to provide a verification solution that best satisfies their requirements.

16. The system will allow Department of State staff to perform routine maintenance and changes (such as fee modifications, user adds/deletes, and noise words adds/deletes) without requiring outside programming to the source code. Using tables is recommended. This objective will require the integration of the State's technical staff into the development effort and a transfer to State staff of knowledge necessary to maintain the system after implementation. If the Department elects to outsource ongoing maintenance, this objective is still applicable.

The e-SoS UCC system was engineered to allow the Department of State staff to perform routine maintenance and changes. The Fee Table is easily modified to adjust fees, as changes are required. Common noise words are also contained in a table and can be adjusted as your business needs require. This minimizes the necessity of expensive source code modifications. We provide the training required for modifying these tables in the system administration course. The System Administration course will transfer to State staff the knowledge necessary to maintain the system after implementation. Our goal is to give the state the ability and detailed knowledge required to maintain the e-SoS system with confidence. We do however offer packages to augment the State's staff by phone or on an as needed basis.

17. The system must have the ability to capture current required data elements and be able to add data fields in the future with little or no customization to package application source code.

The e-SoS UCC application allows for the capture of new data elements with no source code modification. This is accomplished by attaching "attributes tables" to the core tables at the database level. The adding of these attribute tables is done during system development. Once they are in place, a new data element can be added to the application by simply adding a new attribute definition to the attribute table.

For example, if you want to capture the total amount of the lien, you add a new entry to the attribute table called "Lien Amount." Additionally, you may specify the data type (string, number, date) and data length so that rudimentary data validation rules can be applied.

These attributes replace the much less flexible "User 1" and "User 2" fields often found in applications. These attributes are displayed in the user interface and can be edited directly by the user.

Presently, these attribute tables are implemented on the Lien Master table and the Document table. Additional attribute tables can be accommodated at an additional cost.

18. The system will enable the Department to meet acceptable State accounting standards in the processing of fees received from customers.

A key member of the Northrop Grumman IT team is Kunz, Leigh and Associates. We have a preliminary design for the integration of the Michigan ARS application with e-SoS UCC application. Mr. John Leigh is familiar with the state's current requirements for UCC accounting and has provided



valuable input to our solution so that we design a system that meets the current state accounting standards.

19. The system will interface with the Accounts Receivable System (ARS). The application must be able to track payments made or due. If the work is from a customer who does not have a Department billing account, the application must total the fees due, and allow the operator to enter what amount, if any, has been prepaid by the customer. The application will then calculate the final amount due. The system will also prepare the invoice using an invoice number obtained from the ARS system. The system will also prevent work processing from account customers who have been denied credit by the State. Fees will be calculated by individual filing or by a group of filings from the same customer. Billing notices or invoices will be printed on a separate sheet from the filing acknowledgement or search results.

We have had several discussions with Kunz, Leigh and Associates regarding the integration of e-SoS with the Michigan ARS system. We feel we have a sound approach that will satisfy Michigan's requirements. Please refer to paragraph 3.1.10 of our proposal response for more details on the solution.

20. The application will provide a search capability to search multiple criteria. The user has the capability to search by the document filing number, debtor name (individual or organization), or secured party name. Search options will include using standard Soundex or wildcard option or limiting the search to a specific date, date range, address, city or secured party. Search reports may be edited before they are printed, faxed, or sent electronically.

The e-SoS UCC application complies with the strictest interpretation of the RA9 standards. During development of our RA9 compliant version of the e-SoS UCC application the users of our system made it apparent that they wanted to be compliant with RA9 but not totally bound by it. They wanted the ad-hoc search capabilities of our original system to remain in the RA9 compliant version. These popular capabilities are still in the RA9 compliant search screen. The users are aware that if they use a feature such as: issuing a compound search, or limiting the search results to a particular city the results they get are not compliant with RA9 standards. This allows them more flexibility to get their job done efficiently and with exacting results. The user, either internal or external, will have the capability to search by the document filing number, debtor name (individual or organization), or secured party name. The e-SoS UCC application includes the searching options using standard Soundex or wildcard option or limiting the search to a specific date, date range, address, city or secured party. The search results can be used to create a search report. Search reports may be edited before they are printed, faxed, or sent electronically. This ability to edit gives the user the flexibility to change erroneous information prior to delivering the report to the requester. /- Note that the Address search will be an exact match only. For example, "123 Main St." will not find "123 Main Street" or "123 N. Main St.". A wildcard option will be provided so that "123 Main*" will return both "123 Main St." and "123 Main Street". The cost of this feature is included in the pricing proposal. There would be additional effort required to allow a substring wildcard search so that "123*Main St." would return "123 ½ Main St." and "123 N. Main St." The cost of this modification has not been included in the pricing proposal.

21. The system and data will be secure – allowing only authorized users with appropriate levels of security to perform requested functions. Security levels are defined later in this section. Tracking mechanisms, such as audit trails of any activity by operator, supervisor, or system administrator, are required.

Currently there are three levels of security: user, supervisor and administrator. We have plans to offer a "read only" level for Kiosk use. The e-SoS system maintains an audit trail and system log that records who, when, and where within the application. The FileNET imaging system also maintains a transaction log related to imaging functions.



22. The Department offers a service where UCC data, such as new filings can be purchased in bulk as a subscription service. The UCC system must be able to accommodate subscription service sales and allow for information retrieval based on the subscriber's requested criteria. In addition, it must provide for the export of data from the database in different formats (such as magnetic tape, disk, optical, CD-ROM, compressed electronic files for e-mail).

The e-SoS UCC system provides the ability to extract filing information from the operational database tables residing in the e-SoS UCC database and make that information available to subscribers. The bulk filing data is produced on a configurable periodic basis (e.g. weekly, monthly, etc.) and includes information for all liens with an active status on the date that it is run. The extracted data consists of all filing actions associated with each active lien, including the filing number, image number, and microfilm roll and frame numbers. In addition, each secured party and debtor associated with the lien is also included. The bulk filing data will be extracted as an XML formatted document and compressed into a ZIP file for space efficiency. This file could be copied to a variety of output media including tape, disk, and CD-ROM for delivery to the appropriate subscribers; this file could also be delivered electronically using e-mail.

A bulk data subscription is purchased through the e-SoS UCC application using a special bulk data order dialog. A filing officer uses this dialog to enter a bulk data subscription request and have the appropriate request fees applied. The request is defined for a specific calendar month period. The subscriber will therefore have the right to receive the generated bulk filing data during the calendar months defined within that subscription request.

Northrop Grumman IT will work with the Michigan Secretary of State to define specific extract format and content, as well as, the mechanism by which the data will be distributed to each of the subscribers.

23. The application will provide two automated letter processes. The first will automate the rejection letter process, using the standard rejection reasons and including the time and date when the filing would have been completed had it been accepted. The second provides an acknowledgement letter, which includes the filing number and a copy of the image filed. The system administrator will easily change either letter to quickly accommodate text or format changes needed by the Department. All correspondence will have the addressing information printed in a way that it can be inserted into a window envelope and mailed.

The e-SoS UCC application supports the generation of both filing rejection and acknowledgement letters. Both letter types are printed such that the address information is visible from the envelope window, in addition, each letter contains the filing number and the date and time it was processed.

The application generates rejection letters when it is determined that the submitted filing cannot be processed due to either errors with the filing or with the payment provided for that filing. Filing rejections are the result of either an automatically detected event or manually at the discretion of the filing officer. Any number of rejection reasons may be associated with a filing and are listed separately on the correspondence.

If no rejection errors are identified, the e-SoS UCC application generates an acknowledgement letter. This letter serves as confirmation that the filing was filed properly. The filing image will be produced along with the acknowledgement letter.

All correspondence letters generated from the e-SoS UCC application are produced using Microsoft Word document templates. Each document template represents a unique piece of correspondence that can be generated from the application. Each template contains a certain number of bookmarks that identify locations within the correspondence that will be updated programmatically by the e-SoS UCC application. These bookmarks represent the positional location of information such as the filing number and date. This approach allows the header, footer, signature block and generic wording of each correspondence to be easily updated by a system administrator without requiring modifications to the application.



Northrop Grumman IT will work with the Michigan Secretary of State to customize their rejection and acknowledgement correspondence letters and to define the Michigan specific rejection reasons and automatic rejection events. Northrop Grumman IT will implement the ability to retrieve the filing image from FileNET and print it along with the acknowledgement correspondence.

24. Data and images on the system must be maintained for five years after the lapse date of the initial filing. If the initial filing has been amended by a continuation amendment, the initial filing and all related filings must be maintained for five years from the lapse of the most recent continuation. An archival method must be provided.

The retention schedule for e-SoS UCC is based upon the maturity date. The maturity date is incremented when a continuation is filed within the six-month window. Outside the six month window the user is warned that the action will not effect the maturity date. The user can then change the maturity date manually. All filings and the initial filing are maintained in the e-SoS UCC system for 1 year after all continuations and initial filings have matured. The retention period of one year after maturity is configurable within the e-SoS UCC system.

We can establish an archive purge process to occur after any duration. There is ample disk space available to store 10 years (lapse + 5 yrs.) worth of data.

Images are written to write once, read many (WORM) media and are controlled differently than data. The images can be marked as "archived" in the FileNET system. This effectively removes the link to the image. The image remains on the optical platter, however, as it cannot be deleted. Over time, all of the images on the optical platter will be marked as archived. At this point the platter can be removed from the jukebox. Platters can also be removed from the jukebox prior to all images being archived. In this case it would require a manual process to re-load the platters that have been removed if an image is requested. The administrator can use a background job to consolidate platters with a small percentage of active documents to the currently active platter.

25. Workstations will be a PC. The State intends to use such a PC to access the Department of State's Windows 2000 network and to also run standard PC applications (Microsoft Office Suite and Outlook). The vendor would not required to interface such PC equipment with the network but must provide hardware specifications that are sufficiently robust to run the Departmental applications in addition to the UCC software.

We have priced client systems with sufficient capacity to support our e-SoS applications and most office applications. We assume that the State will purchase the Microsoft Office suite for the client workstations. More detail on the proposed hardware configuration is included later in this contract.

26. A process to create a microfilm back-up, made at image capture, must be provided. If the State elects to purchase the necessary equipment from the vendor for this process, the equipment will enable the State to capture electronic images for the UCC system and generate a microfilm at the same time.

Our e-SoS UCC system interfaces with equipment that facilitates the creation of microfilm backups. The film backups are made via a Kodak Archive Writer 4800. This allows for not only backup film images of paper-originated filings, but also for filings that come from other electronic means. The Archive Writer creates film backups in real-time, pulling from a queue of both scanned paper and e-filings. The image backup solution is even more comprehensive when paired with the optical WORM backups that are also created by FileNET's imaging system for disaster recovery. By making optical WORM backups in addition to film backups, we provide dual layers of protection and faster recovery than film alone.

27. The system will use drop-down menus or pick lists, where applicable, to ensure uniformity and standardization throughout the system.



The e-SoS UCC application was engineered to reduce or eliminate the typing required to complete a filing. As such the e-SoS UCC system makes extensive use of drop-down menus or pick lists. The drop-down menus and pick lists have the business logic built-in to present only relevant items for the filing type being worked. This minimizes the items or options presented to the user to only relevant ones, reducing errors and data recognition times. This all boils down to faster filing times. Northrop Grumman IT being a Microsoft Certified Solution Provider means that we implemented the e-SoS UCC Graphical User Interfaces using the methods and tools prescribed by Microsoft. This ensures the Department of State of uniformity and standardization throughout the e-SoS UCC system.

28. The system will allow for multiple means of access for entering data, such as mouse and keyboard commands. Short cuts, such as a button to use the secured party as filer, are preferred.

With the e-SoS UCC system the application has been engineered with the capability to navigate the Graphical User Interface without ever touching the mouse. Through the tab key, advanced function keys, and short cuts the user can navigate the application from the keyboard. Our experience shows that users prefer navigation from the keyboard. The e-SoS UCC application has many short cuts to increase the efficiency of the user, one example of which is the “use as filer” button. The “use as filer” button takes the indicated secured party record and copies the secured party information to the Job Window. The information is then used as the basis for job correspondence. This feature is just one example of many powerful, enabling, technological tools contained within the e-SoS UCC system that empowers your users to deliver unparalleled service to your important customers.

29. The UCC system will provide the capability to fax or e-mail acknowledgements, search reports, and correspondence to the submitter in addition to or in lieu of printing the documents, at the system operator’s choice.

All correspondence is generated automatically for the user when a filing is committed to the database. The e-SoS UCC system uses information gathered during the filing process as the basis for addressing the correspondence. Information such as: service(s) delivered, fee charged, submitter name, address, city, state, and zip code. The user has the option to view, print, fax, and/or e-mail the correspondence or any combinations of view, print, fax, and/or e-mail. If the user views the acknowledgement the printing, faxing, or e-mailing is delayed until after the user closes the acknowledgement. This enables the user to verify the accuracy and to make any changes to the acknowledgement prior to sending to the submitter. The e-SoS UCC application automates as much typing as possible, this frees up the user to perform more meaningful tasks.

30. The application will provide basic inbound and outbound fax capabilities from the unit’s workstations.

At the heart of the fax solution is the Optus Facsys system. This system can be used for inbound and outbound fax capabilities to the unit’s workstations. This function will require setup at the Department of State’s office but is considered part of the e-SoS UCC installation. Once setup the user can fax from any application on the workstation. Inbound fax is limited to a central queue or inbox due to a maximum of 4 inbound lines. Items can be directed from the central queue to individual users via the e-mail system or @Work workflow. The only way to setup individual inbound fax is to have a dedicated telephone line for each user to receive inbound faxes on. We assume that the State will provide the telephone lines.

31. The internal application and the web application are integrated so that changes need to be made only once to affect both programs, instead of having to make changes in both the internal and web applications separately. In the bid proposal, the vendor will give the approximate percentage of commonality between the web and internal applications.



The commonality and level of integration between the web and internal applications is extensive. Approximately 78% of the web application is shared with the internal application. Paragraph 3.1.5 below describes the relationship between components of the two types of user interface more completely. It also shows the breakdown of common and isolated components and their relative portions of the application.

32. Because of the Department's operational needs and work process, mail will continue to be opened and sorted in the Cashier Unit. The UCC system solution will not propose efficiencies in mail opening because this function is beyond the scope of this contract. However, the mail process will reduce the amount of time the UCC Unit will have to process work to meet the time requirements specified by statute. As much as one day may be used in the mail opening process. Turnaround times for throughput in the new system must take this step into consideration.

The Northrop Grumman IT team understands that the throughput of the system must consider one full day for the mail opening process. We have proposed a configuration that will be capable of processing the filings and search requests within one business day. See Production Performance Standards.

33. The standard forms have a patch code indicator at the upper left-hand corner of the first page to identify the start of a new set of documents. The system will be able to recognize the patch position and properly orient the image for presentation to the data entry clerk. Because Michigan allows for non-standard forms, the system shall provide for a separator sheet containing only the patch code to separate transactions. Separator sheets should not be permanently stored images; they should only serve as a transaction separator.

FileNET's Panagon Capture software is capable of configuring several patch codes to perform a variety of tasks including document separation. The patch codes on the standard UCC forms can be configured as document separators. For non-standard forms, some document preparation is required by the scanning operator(s) to insert separator sheets. The FileNET Panagon Capture can be configured to recognize a patch code on a separator sheet, start a new document and remove the separator sheet. Orientation of documents can be configured within the Panagon Capture software. See Filing Process Overview item number 3 for additional information.

34. In a solution that utilizes initial image capture, the system shall build a file of pending work to be passed to an image workstation. The system administrator will be able to alter the size of future files (i.e., the number of images to be worked) to match workloads with available staff.

The data entry clerk will be able to do all input while viewing the image on the workstation. Toggling between the image and an input screen is not acceptable. All fields needed for input must be available on one screen. If optical or intelligent character recognition is available to pre-populate the data fields, this technology should be incorporated.

The system will present the operator with appropriate data entry fields based on the recognition of the document type, if possible. However, the system should also allow the operator to launch a different data entry screen based on a visual review of the document.

The data capture screens will be configured so that a single operator can perform all tasks necessary to complete the transaction. However, supervisory approval should be required to delete an image or transaction data from the database.

Data captured at data input shall be retained in a dedicated server. No upload to the Department's mainframe is planned, although financial data will be passed to the Finance Division ARS (Accounts Receivable System) for billing and customer inquiry purposes.

The system must have the capability of completing individual filings on an ad hoc basis, and not just as batches of work. This requirement is needed for filings presented at the UCC counter for immediate filing. The methodology for completing individual filings may be determined by the vendor. Ideally, the



operator should be able to pause a batch of work, complete the individual filing data input, then resume work on the batch at the point where the operator ceased work.

The user can view the e-SoS UCC data entry application and a copy of the image of the transaction side by side, as long as the monitor is 21" or larger. This eliminates any toggling or "thrashing" in order to accomplish the data entry.

In the pre-scan scenario utilizing the @Work workflow system the system administrator has full control over the units of work and can perform workload-balancing techniques to ensure timely completion of work items. These controls and specifications will be analyzed and recommendations presented based upon the specific requirements of the department. During installation of the @Work workflow product we can make parameter changes and queue definitions for staff. The system administrator will be trained on how to take full advantage of the robust workload balancing feature of the @Work product.

The @Work workflow product can recognize the document type and present the operator with appropriate data entry screens based on the document type. The e-SoS UCC system was engineered from day one to reduce or eliminate the typing required to complete a filing. As such the e-SoS UCC system makes extensive use of drop-down menus or pick lists. The drop-down menus and pick lists have the business logic built-in to present only relevant items for the filing type being worked. This minimizes the items or options presented to the user to only relevant ones, reducing errors and data recognition times. This all boils down to faster filing times. Northrop Grumman IT being a Microsoft Certified Solution Provider means that we implement graphical user interfaces using the methods and tools prescribed by Microsoft. This ensures the Department of State of uniformity and standardization throughout the e-SoS UCC system.

The e-SoS UCC systems data capture screens are configured so that a single operator can perform all tasks necessary to complete the transaction. This eliminates any handoffs that may be currently required. However, supervisory approval is required to delete an image or transaction data from the database.

Data captured at data input is retained on the e-SoS UCC database server. Northrop Grumman IT will not upload any data to the Department of State's mainframe although financial data will be passed to the Finance Division ARS for billing and customer inquiry purposes.

Filings presented at the UCC counter for immediate filing are easily accommodated by the e-SoS UCC system. Imaging the documents of counter customers will likely require the use of a bar-coded self-stick label on the document. The document is then imaged and filmed later and associated to the originating action. The customer can accomplish verification of the filing at the counter. This is accomplished by presenting the customer with an acknowledgement letter for the filing that restates the information recorded in the filing. The customer can then verify that the information is recorded correctly either on-site or at a later time.

With the e-SoS UCC system the operator can save (pause) a job in process, open and complete the individual counter filing, then open the saved (resume) work on a job at the point where the operator originally saved the paused work. This powerful tool is included in the base operational e-SoS UCC application and can be used at all e-SoS UCC workstations not only at the counter workstations.

35. The system shall assign a filing date and time and a unique identifier to the transaction (such as a transaction number). The filing date and time will be 5:00 P.M. of the current day. If the transaction is rejected, the system will identify the date and time of the rejection. This information is required by statute when preparing a rejection response.

The system must have the capability of allowing the operator or system administrator to assign a different date and time to individual filings or a specific batch of work. Michigan's administrative rules differ from the IACA rules on this time. Michigan defines the filing time as "the time the financing statement is accepted for filing or the next close of office hours following the time of delivery." In other



words, if an incoming volume of work is too great to handle in a given day and must be completed the following day, the operator or system administrator must be able to change the time to the appropriate “close of business hours,” generally 5:00 pm on the day of receipt. The same rule holds true for filings received through a facsimile machine. Time of delivery is not considered for these transactions. Electronic filings use the time and date the filing is accepted by the system.

The e-SoS UCC system assigns the filing date and time at the instant that the recording is committed (written) to the e-SoS database. The system has an override for the date and time that allows the authorized user to override the automated filing date and time. The user simply types the date and time they wish to use and the override time and date is used as the filing time and date. Depending upon the business case, with the Department of State’s authorization and with a minimal development effort we could add a button that would assume 5:00 pm of the previous business day to the dialog.

36. The filing number is a unique number that includes the year of filing expressed as the first four digits of a unique number assigned to the financing statement by the filing office. A one or two digit verification number, referred to as a check digit, must be included. The check digit is mathematically derived from the other numbers in the file number. The filing number bears no relation to the time of filing and is not an indicator of priority.

The filing number, date, and time must appear on the image, or be closely associated with the image. The vendor must propose a solution in which the filing number, date and time can be easily and clearly distinguished as being connected to a specific document.

The e-SoS system has been developed to use a 12 digit filing number that perfectly fits the Department of State’s requirements. The format is described in the following table:

Table 2 File Number Format

YYYYSSSSS-C	
YYYY	<i>A four-digit year</i>
SSSSSS	<i>A six-digit sequence number</i>
-	<i>A separator position to make it easier to read</i>
C	<i>The check digit number</i>

The e-SoS UCC system closely associates the filing date and time with the image of the filing instrument. The e-SoS UCC system places information on the filing number, filing date and time, originating action, originating Clerk with the link or action history item to the digital document. This creates a tight coupling between the digital document and the action history information.

The synchronization required to place the filing number and filing date and time onto the document itself would require the purchase of an imprinting feature on the document scanner and software to control and feed information to the imprinter. The software would require modification and setup to get the information from the e-SoS UCC database. The imprinter and software modification has been included in the contract price. The filing number, time, and date will be imprinted on the source document before the document is scanned.

The check digit is mathematically derived from the other numbers in the file number. The filing number bears no relation to the time of filing and is not an indicator of priority.

37. The Department requires an automated approach for handling rejections. The system will generate a laser-printed form letter that will include the rejection reasons and the time and date the reason was rejected. The system may generate an image of the filing or clerical staff will match the letter to the paper filing and send both items to the customer. The system will retain a copy of the rejected filing and reason in a searchable database to use in case of customer questions on proper form completion.



For electronic filings, an on-screen message, e-mail, or e-mail alternative will be sent to the customer, giving the reason for rejection and the time and date involved. The system will have edits to check for the rejection reasons covered in the Administrative Rules. For on-line applications, the customer will have the opportunity to correct the transaction if possible without having to reenter all data.

The e-SoS UCC application has an integrated rejection capability. This capability allows rejected filings and their rejection reasons to be recorded in the e-SoS UCC database which can be recalled and reviewed at a later date. The application is capable of either automatically or manually rejecting a filing. An automatic rejection is the result of a specific rejection event being raised during the processing of the filing, typically an error with the data entry. A manual rejection is the result of the filing officer explicitly creating a rejection as the result of visually inspecting the filing. In either case the specific rejection reasons, along with the filing date and time, will be recorded in the system.

A rejected filing may have any number of rejection reasons assigned to it. Each reason is listed in the corresponding rejection letter that is printed when the filing is committed. This rejection letter also contains the date and time that the filing was rejected. If the upfront scanning solution is chosen, the image of the rejected filing will be printed along with the rejection letter.

Filings submitted electronically will undergo a series of edit checks before they are accepted. If a filing fails any one of these checks, the filing will be rejected. In most cases, the rejection reasons associated with an online filing will be immediately presented to the user submitting the filing. The user will have the opportunity to correct the problems and resubmit the filing; in this case no rejection record will be generated. However, if an electronically submitted filing is received by the Michigan Secretary of State and can still be rejected, a rejection record and an image of the submitted filing will be stored in the e-SoS UCC system. A rejection letter will be sent to the submitter via e-mail or some other suitable electronic means.

Northrop Grumman IT will work with the Michigan Secretary of State to precisely define the automatic rejection reason events and the electronic rejection processing. This includes the means by which rejection responses are delivered to the submitter.

38. The UCC Unit must send an acknowledgement copy to show that the filing has been accepted. The acknowledgement also gives the filing number that must be used for subsequent amendments. In the current process, a UCC Unit staff member places an adhesive label on a photocopy of the filing document and mails the copy to the customer. This intensely manual process must not be replicated in the new system.

The Department requests that an acknowledgement copy is automatically generated, showing the filing date, time, and assigned filing number, along with a statement that the filing has been recorded with the Michigan UCC unit (the actual statement wording will be finalized during requirements definition). The new UCC system would default to sending acknowledgement copies to the secured party, although it should have a manual override where the customer wishes to have the acknowledgement mailed to a different address. An immediate print of individual acknowledgement copies is also needed to service walk-in filers.

The e-SoS UCC application generates acknowledgement letters with every filing. The acknowledgement letter gives information such as filing number, date and time of filing, service performed, and price charged. The actual acknowledgement wording will be modified to meet the requirements of the Department of State. The system automatically defaults the addressing to the secured party. The user can override the default addressing by using the "send to" option on the job window.

The e-SoS UCC application will easily facilitate the immediate print of individual acknowledgement letters for service walk-in filers.



39. The new system will have a method to search for a given secured party name and be able to change that name to a new name entered by data entry on the keyboard. A choice verification box (i.e., "Are you sure you want to make this change?") will appear before the change is finalized. A log should be developed to track global changes so that a global change can be changed back to the original name, if needed, at a later date if the change was made in error.

We have implemented a *Global Change of Secured Party* function for previous e-SoS UCC application customers to allow for the easy change of Secured Party names and/or addresses. The function works by first asking the filing officer to enter the name of the Secured Party requesting the change and what the name and address should be changed to. The database is then searched for each filing associated with the provided Secured Party. The filing officer is then given the opportunity to select any or all of the Secured Parties listed. Once the filing officer has indicated which Secured Parties should be updated, the "Execute Change..." button is clicked. A warning dialog box is presented asking the filing officer to confirm the update.

Updates of this type are added to the filing's history and the former added to an action note, so a permanent log of the action is maintained. This log allows the filing officer to revert back to a previous name on a case-by-case basis.

40. The new system shall have the ability to print required documents immediately on demand or by a batch process.

The e-SoS UCC application allows for documents and correspondence to be generated on demand and sent to any supported output device i.e. printer, fax and e-mail. The application also supports the ability to queue output so that it can be printed as a single batch of documents.

41. The solution will include producing microfilm for long-term archival storage. Microfilm is essential because of the indefinite length of transmitting utility filings and the 30-year retention for manufactured housing financing statements. State record retention standards currently require microfilm if the record is to be retained more than 10 years.

The microfilm must include the filing number assigned and the fil/ing time and date. The filing information will be imprinted on the source document before the document image is created.

The system shall include a method that produces microfilm with minimal staff involvement. Under State requirements, the microfilm must be made when the image is captured. For security purposes, a second copy of each microfilm is stored in a secure, off-site location. If the system can produce two copies without significant additional cost, this approach is preferred; however, the Department can currently duplicate microfilms on-site with existing equipment if necessary.

The State is also interested in other cost-effective or efficient alternative archival methods, such as (but not limited to) storage on CD-ROM or optical platters, to be used in addition to microfilming. We envision the UCC unit using this alternative to retrieve archived documents, rather than using microfilmed images, to provide more efficient service to the customer. The vendor is encouraged to propose additional archiving solutions that will provide quick, dependable long-term access to archived images. If the UCC unit uses an alternative archival method, then only one microfilm as described in the previous paragraph would be required.

The archiving needs must take into account all documents received and/or produced. The documents may be received in paper form or electronic form. The paper is usually received from the mail or over the counter. The electronic form will be received from the web or facsimile. Under both approaches described in Proposed System Overview, we plan on scanning paper documents and storing the images as well as the documents in electronic form within the FileNET Imaging System with the file number included on the image. The filing number will be imprinted on the document along with the filing date/time as the document is scanned. Any date/time (not just the present or previous day) can be specified at the scanner prior to scanning a batch of documents.



FileNET's Imaging System is configured to use a Hewlett Packard (HP) optical jukebox, currently configured with 128 slots, capable of holding up to (238) 9.1 GB optical platters. According to State requirement of creating the microfilm when the image is captured, the scanned images will be sent to a Kodak Document Archive Writer for microfilming. We are using this technology to produce microfilm for scanned images as well as images/electronic documents coming from the web or facsimile. We have found that sending the document (scanned-in, faxed-in or via web) to be microfilmed in this manner meets the State's requirements.

Since the imaging system is preserving images on optical media and producing a backup, we believe microfilm will not have to be copied. However, there is an option on the Kodak Document Archive Writer to produce two rolls of microfilm simultaneously. As a configuration item within FileNET's Imaging software, the images and a backup of the images are produced. Once the backup platters are full, the system administrator is notified and the platter should be taken off-site. This backup platter is only used to rebuild the imaging system if a failure exists in a primary platter or in case of catastrophe.

42. The proposed solution must have a method to provide back up of images and database information. This backup shall occur at least daily, must be scheduled to run outside of normal production hours, and include automatic scheduling for weekends and holidays.

The backup may be to a redundant server or drive. The back up process shall also provide a method that will produce transportable media that may be stored in a secured location off site. This backup shall contain sufficient data and program files to recreate a UCC system in the event of catastrophic failure of the primary system. The ability to retrieve data from such a backup mechanism must be inherent in the UCC system solution.

The proposed production e-SoS UCC configuration has three servers for the purpose of distributing the workload. Each server has one or more subsystems that require a backup. An auto-loading tape drive has been configured for performing all of the backups on all of the servers. Backups are written across several tapes if necessary. The tape drive will be physically attached to the Image Server but could be attached to any of the servers.

The Application Server is configured with two 18GB or better drives that will hold the operating system (OS) and related files. There is also a file structure used by the application. The two drives are mirrored for faster recoverability from hardware failure. A backup must still be performed of the OS and file structure. The Application Server can recover quickly from hardware failure by using the mirrored drive or from the backup tapes in a catastrophic failure.

The Database Server is configured with two 18GB or better drives for the OS and related files. These are also mirrored in the same manner as the Application Server. The Database Server is also configured with an external storage array of five (5) 36GB drives in a RAID 5 configuration. This striping of data across the drives allows the system to recover from the failure of one of the drives with minimal down time. A backup of the OS and related files is required. The database files must also be backed up. Incremental and full backups can be performed. The Database Server can recover quickly from hardware failure by using the mirrored or RAID drives or from the backup tapes in a catastrophic failure.

The Imaging Server is also configured with two 18GB or better drives for the OS and related files. The Imaging Server also contains a database that must be backed up. As the State requested, we have contacted Dell for pricing a fully loaded disk array for the Image Server Cache. In doing this, Dell has informed us the PowerVault 210 model of disk array cannot be quoted. Our Dell representative is recommending we move to the PowerVault 220. We have received pricing for this model. The original disk array quoted for the Image Server was configured with (5) 36GB drives out of 12 bays. The PowerVault 220 has 14 bays. We have also quoted the 73GB drives since the price point was much better. We have priced a configuration using the PowerVault 220 with 11 drives. This equates to



657GB of space in a RAID 5 configuration with one spare drive. This configuration will hold approximately 10 years of images in cache. Fully loaded, this array can hold 949GB or 867GB in a RAID 5 configuration. The Image Server also maintains all the images on optical platters using a physically attached jukebox. The FileNET Imaging Services will be configured to create a backup as documents are added to the repository. This backup set of platters is called a 'tran log'. These platters should be taken offsite as they are filled. The Image Server can recover quickly from hardware failure by using the mirrored or RAID drives or from the backup tapes in a catastrophic failure. The 'tran log' is also required to rebuild the primary platters.

There are several layers of redundancy involved in our configuration. It is possible to add or remove some of this redundancy. However, we have found that this is a cost effective set of redundant backups that protect your investment.

- 43. Certain production performance standards must be achieved by the new system. The volume of work processed by the unit varies from day to day. In calendar year 2000, the average number of filings was 740 per day. Search requests averaged 301. However, with the implementation of RA9, work will be shifting from the county Register of Deeds offices to the UCC unit. As a result, work volumes are expected to increase. The following table shows statistics regarding filings for calendar year 2000 with a projection of volumes expected under the new law:

Table 3: Filings - Per Day Transactions

	Actual transactions	Projected volume under RA9
Average	740	1,111
Maximum	2,035	3,053

Similarly, an increase in search requests is anticipated because of the workload shift. The table that follows shows the calendar year 2000 statistics and projected volume increase for searches:

Table 4: Search Requests - Per Day Transactions

	Actual transactions	Projected volume under RA9
Average	301	391
Maximum	1,098	1,427

Currently, the UCC unit has seven staff members assigned to tasks related to filing, seven completing search requests, and six performing ancillary tasks that are not directly related to filing and searching, such as processing mail and handling telephone calls. For purposes of throughput projections, the numbers of staff will remain the same.

The Department prefers to have work processed on a 7.5 production hour day shift, Monday through Friday, except for state holidays. Except for extenuating circumstances, weekends, and holidays, incoming work is to be input to system and results generated within 24 hours of receipt from the Cashier Unit. Because of staggering beginning times, the normal business day for processing work is from 6:00 a.m. to 5:00 p.m., Eastern Time.

The proposed solution must have sufficient capacity and throughput ability to complete a **daily work volume that is 20% greater than the maximum projected volume** under RA9 within the normal workday. Currently 14 staff members are assigned to filing and searching tasks. This employee number cannot be increased by the proposed solution; it is preferred that fewer employees would be needed to complete a day's work. The UCC Unit must complete all work within one business day of receipt.

To respond to the Production Performance Standards, Northrop Grumman IT has gathered the annual performance statistics from our Nebraska implementation drawing parallels to the Michigan performance requirements based on our e-SoS system. The Nebraska implementation is slightly different than the proposed system for Michigan.



For Michigan we are proposing an automated rejection correspondence capability. At this time, Nebraska must enter MS Word natively to document the rejection reason. The Nebraska UCC Manager has indicated that this capability would provide a significant performance gain for them. We are looking at the possibility of integrating it into the Nebraska configuration in the future. This capability will enable the Michigan staff to exceed the daily performance averages of Nebraska. We have proposed some other efficiency in the verification and validation process.

For the purposes of this analysis we are equating searches in Michigan to service requests in Nebraska. Based on a breakout of the Nebraska service requests, they are predominately searches and copy requests.

Nebraska's average daily transactions performed by the Secretary of State staff are presented in the following table as well as a projection of the performance applying the system improvements as proposed for Michigan:

Table 5 Nebraska Transactions	Annual	Daily Average
Filings	77,107	315
Service Requests	89,110	364
		678
Number of FTEs		8
Average Transaction/FTE/day		85
Anticipated Performance Improvement		30%
Xactions/FTE/Day with Performance Increase		110

These numbers do not include filings, searches and copy requests performed online by the customers over the Internet.

With the Nebraska analysis above, we will draw parallels with the Michigan requirements. The following is a breakout of the Production Performance Standards requirements:

Table 6 Michigan Transactions/Day	Actual Average	Actual Max	RA9 Average	RA9 Max	120% of RA9 Max
Filings/Day	740	2035	1111	3053	3664
Search Requests	301	1098	391	1427	1712
Total Transactions	1041	3133	1502	4480	5376

Average number of transactions/FTE/day	52	157	75	224	269
Transactions/FTE/hour	7	20	9	28	34

Just by reviewing the numbers provided in the ITB for 120% of the maximum number of transactions anticipated with RA9, each staff member in the UCC Unit (20 FTEs) would be required to handle a total of 34 filing requests/hour for an eight-hour day (bottom right cell in the table above). It would be difficult to sustain that level of activity on a daily basis considering the minimum time required for entering data, verifying transactions and physically preparing responses. The numbers presented above do not include the time factors for double-blind data entry of the Debtor field which was identified as a requirement during oral presentations. The average number of transactions/FTE/day for your anticipated average RA9 day, 75 transactions/FTE/day (bolded cell near middle), aligns well with Nebraska's average performance.

To support the Maximum+20% level of filing and search activity, you must assume that a percentage of the filings will be performed online by the customers over the Internet and all of the documents are available online without the need to access microfilm. You must also assume that your staff has

become very familiar with the application. The following table presents the number of filings/FTE/day assuming 40% of your transactions are performed online in the future:

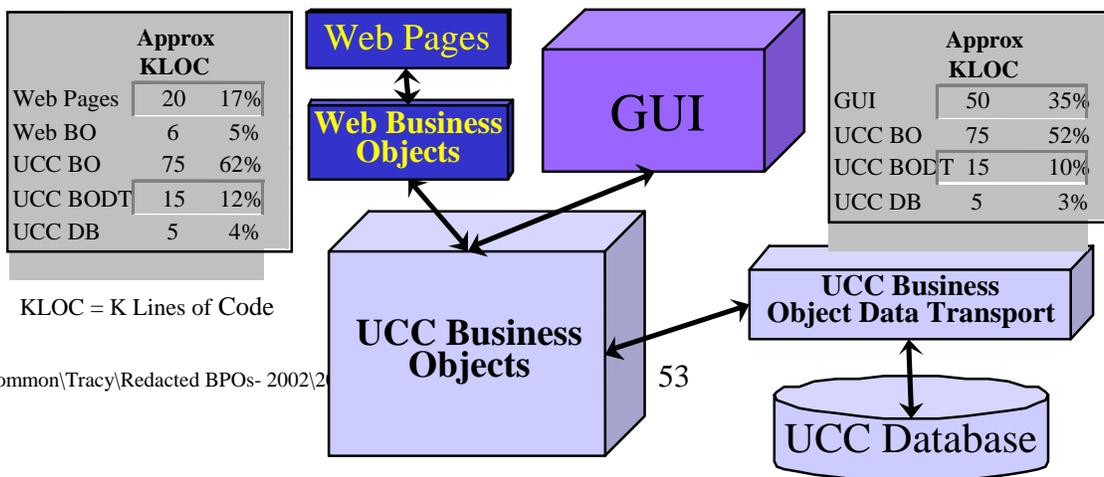
Table 7	RA9 Average	RA9 Max	120% of RA9 Max
Total Number of Transactions	1502	4480	5376
Number of transactions to be performed online	601	1,792	2,150
Number of transactions to be performed within the UCC Unit	901	2,688	3,226
Average number of transactions/FTE/day	45	134	161

Online filings were introduced in Nebraska in 2001. Based on discussions with the Nebraska staff, the number of filings processed by the office was reduced by approximately 20-25% when just online initial filing was made available. Electronic copies of the images were recently made available. Discussions with Iowa have also indicated that a significant number of filings are now performed online or via bulk data automated interfaces. Achieving a 40% online filing activity is reasonable to expect in the very near future assuming the majority of your filings are imaged and online. Therefore we believe that it is reasonable to expect that your staff can accomplish the RA9 Maximum of 134 transactions/FTE/day in the table above based on the Nebraska average of 110 per day with performance improvements.

We have configured the hardware and software to support 120% of the RA9 maximums as presented in the ITB. We will provide enough Juke Box capacity to store the required number of active images online. We have configured the servers to support these capacities. In the rare instance that your staff is required to support 120% of the maximum, if they must be processed within 24 hours, additional hours or temp support may be required. We will have four extra workstations configured for your administrators that could be used by temp employees representing a 20% increase in labor capacity.

- 44. The proposed application will be an integrated single solution that provides both the internal staff processing requirements and a public facing search and filing capability. The application will leverage program logic and components so that the system administrator can update business rules, fee changes, or other items in a single location or in a single action. The web capability and the internal solution cannot be separate, independent solutions, each requiring separate modifications. For example, if the filing fee changes, the system administrator only needs to make a single change to have the proper fee shown by both applications. Modifying tables, program logic, or other components that are shared by both systems could update this change to both systems.

Northrop Grumman's proposed solution incorporates its existing e-SoS UCC main application and its built in user interface with a web served browser capable interface to give the public direct access to the system for certain filing and searching capabilities using the same system. Figure 9 is a simplified





block diagram of the UCC filing software component of the system. It indicates the level of integration of the two user interface types (i.e., GUI and Web) with the rest of the system.

Figure 9 Northrop Grumman's proposed solution maximizes program integration.

Both user interface mechanisms share the same main business objects of the system, their data transport layer, and the central database. The common components comprise approximately 78% of the web application and approximately 65% of the internal application. All system configuration tables are maintained in the same UCC Database so that changes made by the system administrator (e.g., updates to the fees table) will affect both interfaces at the same time. Any changes to business rules associated with the common business objects will also be felt by both interfaces. Only interface specific logic is isolated in the separate user interface components.

45. The proposed solution must include an approach to system security to prevent unauthorized usage. Password protection for the entire system or passwords to be entered by individual operators at the beginning of work is required. Passwords should automatically expire after defined periods of inactivity. Other security features should be built in, such as allowing only three password attempts, and deletion of inactive user IDs. The internal system must provide sufficient unique user IDs to identify at least 20 or more individual operators. Performance metrics for each operator, covering items such as processing rate, and equipment usage time, must be captured. Supervisory access levels and unique IDs must be created for at least 4 additional staff members.

Different user access profiles must be included to provide data security. At minimum, three (3) security levels should be created in the internal application, with the ability to add additional levels in the future:

Level 1: Operator. This level allows basic filing and search processing functions and includes the ability to void transactions when insufficient data is provided.

Level 2: Supervisor. This level is a supervisory mode to transmit, alter, or delete captured data; complete work flow maintenance activities; access standard reports; and perform ad hoc customized reports. This level automatically includes Level 1 privileges.

Level 3: System Administrator. This level allows the system administrator to access performance metrics, create/edit/delete user IDs, reset passwords, and perform other system administration functions. This level automatically includes Level 1 and 2 privileges.

The vendor will create an automated, user-friendly process to allow Department staff to efficiently manage all UCC system user rights changes without assistance from vendor staff. The process should allow approved Department staff to grant new UCC administrative and user rights within one business day. A desired option would be the ability to create additional security layers if that need is identified in the future.

A fourth security level is needed for web customers. Access shall be allowed to file financing statements and to search records. Such users must not be able to access the UCC system directly and will not be able to modify or delete any database records or images. Outside access to the system must not cause any response time problems to the UCC unit staff.

The solution must include an ability and an approach to address the following key security issues:

- Assure confidentiality of data
 - In transit via the web – provide the ability to execute secure, authenticated, two-way transactions as well as ensuring that other data is encrypted beyond the reasonable threat of a successful brute force attack



- In storage – ensure that confidential data in databases from which public data is being extracted will not be compromised.
- Assure integrity of data – determine how to maintain data integrity and user's confidentiality and privacy
- Maintain access control – determine methods needed to prohibit users from accessing data unless the State's system administrator expressly approved such access.
- Provide audit capabilities – implement date-time stamp and audit trail for identifying all network security breaches and attempted breaches.

The e-SoS UCC application requires each user to authenticate themselves with a user name and password before being allowed entry into the application. Any number of users may be given access to the application, however each user must be assigned a unique user name. In addition to the existing authentication capabilities, Northrop Grumman IT will enhance the application to support account expiration and limited logon attempts. Account expiration consists of denying access to the application from a user account after a defined period of inactivity. The defined period of inactivity will be a configurable parameter that is set by the system administrator. Limited logon attempts will restrict the number of consecutive invalid login attempts against a given user name. Once the consecutive invalid login attempts limit has been exceeded, the user account will be locked and will require system administrator intervention to unlock the account before that user account can be used to logon to the application. The invalid password attempt limit will be a configurable parameter that can be set only by the system administrator.

User access rights are supported by the e-SoS UCC application using a user access bit mask. Users are assigned access rights by enabling specific bits within this mask. Each bit represents a specific access right, such as search authority or report generation. This mask is also used to assign supervisor and administrative authority to an individual user. When a user logs on to the application this mask is down loaded and used by the e-SoS UCC application to control which capabilities will be accessible to that user. This same mechanism will be used to restrict access of Web users and prevent them from updating database records and images. Northrop Grumman IT will work with the Michigan Secretary of State to define the specific access rights and privileges that need to be supported by the e-SoS UCC application.

Northrop Grumman IT will develop an easy to use system administrative tool that enables a user with system administrator privileges to create and maintain user accounts. This includes the ability to lock and unlock user accounts, reset user passwords, delete accounts, and manage user access rights and privileges. In addition, this tool will allow the system administrator to view user performance metrics.

The e-SoS UCC system uses a number of security mechanisms to provide a comprehensive security solution, which includes leveraging upon the native capabilities of the Windows 2000 operating system and SQL Server database, and the capabilities developed with in the e-SoS UCC application itself.

First, the servers within the system are protected using Windows 2000 security. Windows 2000 has achieved a C2 level security rating making it compatible with secured network environments within the National Security Agency (NSA) and the Defense Intelligence Agency (DIA). We use Windows 2000 to define user and group accounts and to control access to different assets within the network including other servers, printers, files and software components.

Second, the various components of the e-SoS UCC system are designed to integrate with the Windows 2000 security system, and rely heavily on the security architecture built into Component Services. The UCC application was developed using the standard three-tier model. In a three-tier application, the user interfaces are separated into the first tier, the business logic into the middle tier, and the data storage into the third tier. Between each of these tiers is a security layer. Users no longer access the database directly from the client application. Instead, users access components running under Windows 2000 Component Services. The Component Services objects then access the database and perform updates or retrievals on behalf of the users.

The business logic tier allows for additional security checks. This includes the ability to check authorization between one or more components. Using tools provided under Windows 2000, an administrator could define groups of related users (roles) that have access to a collection of components in the second tier. The administrator can control the access rights associated with each role, as well as define which users are associated with a given role. Component Services checks security on each object called to verify that the current user has access to the specified object. This allows the administrator to define security for the e-SoS UCC application at a functional level. Figure 10 shows how security works in the e-SoS UCC system.

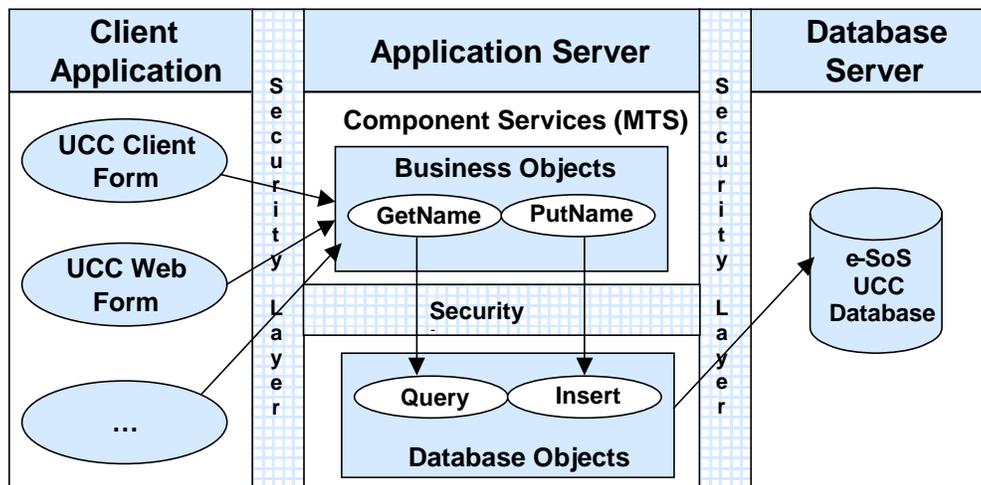


Figure 10 e-SoS Security Architecture

All components verify that the user requesting an object's service is authorized within the network to have access to that service. In cases where data is to be written or updated to the database, the component cannot be called directly by a user. A higher-level object that has verified the user's identity and checked that the data is valid for placement within the database must call it.



In the third tier (data access), all access to the database is controlled through a single database user account. Having a single encrypted account has several advantages. It allows the application to utilize database connection pooling for increased performance. It also eliminates the need to identify a separate account for each user thus reducing the network administrator's workload. Most importantly, it significantly reduces the number of accounts that can be compromised.

This modularity of components allows the system administrator to maintain user and group accounts and assign permissions at the object level. This affords the administrator very fine control over the services and data that a particular user, or group of users, can access.

Lastly, the e-SoS UCC system requires that each user of the system be properly authenticated before they are allowed access to the application. This, coupled with enhanced password management features (password expiration and limited attempts) that will be provided for the Michigan Secretary of State will provide an excellent first line of defense against unauthorized access. In addition, the e-SoS UCC system provides an audit trail of all database table operation, which include inserts, updates and deletes. In this auditing process, the *actual* user name is recorded in order to maintain a complete and thorough audit trail. This audit trail can be used to monitor who is updating the database tables regardless of whether it is being updated from the e-SoS application or from some other application, such as Microsoft access.

46. The system will include appropriate logs that UCC Unit staff may use to track the progress of a particular transaction, determine when certain system functions occurred (e.g., file transfers or billing downloads), or identify what/why transactions error out of the system. These logs should be viewable using text editor software (like Notepad or WordPad) and exportable into other Department of State standard software applications. These logs are in addition to the UCC System Reports described later in this section.

Northrop Grumman IT will enhance the e-SoS UCC application to include an integrated application logging facility. This logging facility will provide the means by which user, transaction and other application events can be recorded and tracked. The log will exist as a table within the e-SoS UCC database. Access to this table will be highly restricted to prevent unauthorized alteration or deletion of log entries. Log records will be inserted into the table from the e-SoS UCC application and other related processes as certain processing events occur. Each log record will record the date, time and description of the event. Northrop Grumman IT will work with the Michigan Secretary of State to define the specific log events and the information that will be recorded within each log record. Log records will be queried and downloaded to the local workstation using the e-SoS system administrative tool. Once downloaded, it will be possible to be review these log records using native Windows applications such as Notepad or WordPad.

47. To achieve the full searching potential of the new UCC solution and to enable electronic searching through the Internet, existing microfilm images must be converted to electronic images that can be accessed by the new system. Of the approximately 4,000,000 records currently on microfilm, about 1,100,000 records fall within the age of records to be searched by RA9 standards (lapse date plus one year). The current UCC system has archived the database information relating to older filings, but the images still remain on the microfilm.

The State believes the cost of converting all 1,100,000 microfilm records to electronic images would outweigh the benefit of having the images available electronically. Many of these images would not be needed. Instead, the State envisions an approach in which the database information is imported into the new system and a "placeholder" would be inserted where the related image would appear electronically. When completing the search, if a placeholder appears, UCC unit staff would then find the microfilm image and convert it to the electronic version. The search results would then be completed and printed. However, the State wishes to use the vendor's experience to develop a strategy that may not follow the State's conceptual plan.



There may be an efficiency to be gained from converting all microfilm for a certain period (such as all 2001 filings) to electronic images. The vendor will use knowledge of the best practices used in other states, and develop a strategy that provides an efficient and cost effective method to convert existing microfilm images. The vendor will provide options with cost comparisons, and recommend the backfile conversion solution that should be adopted. At the very least, enough images need to be converted to make electronic searching a viable alternative to mail-in searches, to encourage first-time electronic search customers to continue to use that method in the future.

Northrop Grumman IT will be responsible for image conversion. They may subcontract with other parties to convert images, but must disclose the name of the subcontractor and what working relationships Northrop Grumman IT has had in the past. The vendor will serve as prime contractor and must support the back-scanning process by working with the selected back-scanning vendor to define the indexing, media and image formats required to import the data into the operational system. The UCC vendor will create an image import mechanism. This mechanism will enable state employees to import the images from CD ROM or other media into the operational UCC system.

Northrop Grumman IT will team with GET Imaging, Inc. (GET Imaging) to fulfill the film conversion requirement for Michigan. GET Imaging is an Oklahoma City company that specializes in delivering high-volume microfilm conversion services. They are uniquely qualified to successfully perform the specified work. Our proposal details both their qualifications and how the work will be performed. Northrop Grumman IT will develop an image import process to take the images received from GET Imaging and import them into the FileNET Image Management System. In an effort to keep the price down, we plan to train the Michigan state systems administrator to execute the import process for loading the images as they are received from GET Imaging.

Get Imaging will convert the microfilm into CCITT Group IV TIFF images, scanned at 200 dpi images. They will automatically crop, deskew, and enhance all scanned images. In the sample conversion returned to Michigan, the sample directory named *UNCROPPED* contains examples of images that were automatically processed through various software applications that performed the crop, deskew, and enhancement functions. This approach has a confirmed Fixed Price of \$0.034/page assuming 4,000,000 pages. Any pages in addition to 4,000,000 will require a contract change order at a unit price of \$0.034/page. For a volume of 4,000,000 images there will be no shipping charges added to the unit price for returning the film and the converted images. If the volume is significantly less than 4,000,000 images, shipping charges will be billed at cost or a change order can be processed for re-pricing to include shipping.

GET Imaging can manually crop all images as presented in the sample directory returned to Michigan named *CROPPED*. These examples of images have been automatically processed through software applications and were also manually processed by operators to further crop the images. This approach was not proposed because of the additional cost. To manually crop the images the price is \$0.056/page. If Michigan desires this approach we can process a contract change order for the desired volume at \$0.056/page.

GET Imaging will make weekly deliveries to the State of Michigan. Northrop Grumman IT will invoice for all deliveries on a weekly basis. The invoice will bill for all deliveries accomplished during the proceeding week. Payment of all valid invoices is due NET 30 days.

GET Imaging owns and operates a high-volume document management facility in Oklahoma City. Their 78,000 square foot facility is equipped and staffed to convert more than 3,000,000 frames of 16mm microfilm per day. Their employees have converted more than 200 million frames of microfilm during the past eight years. They do not need to acquire equipment or train employees to perform your project—they are ready today! Few companies can match either their capability or experience converting microfilm into digital images.



GET Imaging will provide the below detailed services when converting your 4,000,000 records, stored on an unspecified number of rolls of 16mm microfilm. The records are reported to average four pages in length, thus the entire collection of records is estimated to contain 2 to 4 million images.

GET Imaging is ready to immediately begin work on this project. The State of Michigan will furnish the microfilm in weekly processing lots of approximately 500,000 images. GET Imaging will complete its processing of each weekly processing lot within three weeks of its receipt. GET Imaging will deliver the deliverables on a weekly basis. GET Imaging will complete the project in 8 to 12 weeks, depending upon the total number of furnished records. GET Imaging is open to discussing an alternative production schedule.

The State of Michigan will provide the rolls of microfilm for conversion to GET Imaging. The State of Michigan will identify and package the rolls microfilm in shipping cartons for transfer to GET Imaging. The State of Michigan will inventory the rolls of microfilm and provide a shipping list within each carton. Michigan will be responsible for shipping costs associated with sending the film to GET Imaging.

The State of Michigan will ship the microfilm, via commercial carrier, directly to GET Imaging's facility in Oklahoma City. Immediately upon receipt, GET Imaging will validate the shipping list prepared by the State of Michigan, signing for the contents of each carton. GET Imaging will immediately report any exception to the information reported on the shipping list to the State of Michigan.

GET Imaging will return any requested image and/or reel of microfilm within 72 hours of a receipt of request by the State of Michigan.

GET Imaging owns and operates a document management facility at 3909 N.W. 36th Street, Oklahoma City, Oklahoma 73112. The facility is located in a stand-alone building, occupying more than 78,000 square feet. The facility is specifically designed for the conduct of document conversion operations. It is equipped with monitored security and fire alarm systems. They will store your microfilm in metal cabinets when it is not being directly scanned or reviewed. GET Imaging routinely processes confidential and personal information. They are familiar with the requirements of the Privacy Act and have implemented safeguards to protect information. Their employees are willing to sign non-disclosure agreements.

GET Imaging will prepare the rolls of microfilm for scanning. If authorized by State of Michigan, we will add leader strips as needed to rolls of microfilm and repair broken strips of film.

GET Imaging will use their seven SunRise P4 and/or SunRise 2000 microfilm scanners to convert the microfilm into CCITT Group IV TIFF images. Their operators will establish an individual set-up for the scanning of each roll of microfilm. The operators will select images from various locations on each roll of film to establish the set-up. The operators will customize the set-up to best suit each roll of microfilm, thereby optimizing the overall quality of images captured from the individual rolls of microfilm. They will capture images at a 200 dot per inch—the State of Michigan will select either 200 dpi as the scanning resolution for the capture of all images. GET Imaging will deliver a TIFF image of each source microfilm image. They will scan all frames containing information on the rolls of microfilm.

To validate capture of every frame, the first and last images captured will be compared with the source microfilm to ensure the entire roll of film was scanned; however, this still may not result in capture of all the frames. During the "setup" phase, the scanners will be adjusted to ensure appropriate detection parameters are established. This includes determining the type of detection method, for example if the records are variable length or a fixed page size. The benefit of scanning in a variable length mode is that the detection algorithms not only detect the leading edge of a document but also the trailing edge of the document improving the correct detection of frames. The over scan distance will be set to scan beyond the trailing edge of the document to ensure documents are not skipped. Should a section of film be encountered that the scanner does not detect a frame within an anticipated time, the scanner will stop and the operator will ensure a frame was not missed.



GET Imaging will use the internal software of the SunRise microfilm scanner and other vendors' image processing boards or software to automatically crop and deskew each TIFF image. They will crop and deskew all rectangular source images. As necessary, they will use image enhancement tools to improve the legibility of the TIFF images by applying various image-filtering techniques, such as Edge Enhancement and Noise Removal. Images found to be defective in quality will be reworked.

GET Imaging will index each image by its associated Reel Number and Frame Number. They will either (i) assign directly paths and file names or (ii) output delimited text files to communicate the indexing information to the State of Michigan.

GET Imaging will randomly review (at least 10% of each batch) converted TIFF images, checking for defects during the image processing stage. In addition, an existing quality control software application will employ valid random sampling techniques to allow operators to verify correct indexing values and image quality. GET Imaging will repair or rework images and/or batches that exhibit conversion-induced quality defects or indexing errors, as identified by the quality control inspector.

GET Imaging will write the images and their associated indexes to CD ROM disks for delivery to the State of Michigan. They will not output images from a single roll of microfilm onto more than one disk.

GET Imaging will package the microfilm records and CD ROM disks in shipping cartons for return to the State of Michigan. They will prepare and enclose a shipping list with each carton, identifying its contents.

On a weekly basis, GET Imaging will return the reels of microfilm and deliver their associated CD ROM disks to the State of Michigan. They will provide a detailed inventory of records that were returned with the shipment. They will provide a listing of CD ROM disks delivered with the shipment. They will provide an invoice detailing the number of images delivered on the CD ROM disks. The State of Michigan will acknowledge receipt of the returned reels of microfilm and delivery of the disks.

GET Imaging acknowledges that the State of Michigan may choose to inspect the returned reels of microfilm and delivered images with each shipment. The State of Michigan will complete any formal inspections within 30 calendar days of receipt of delivery and report its findings to GET Imaging and Northrop Grumman IT. The State of Michigan will specifically identify defective images, providing the subject reels of microfilm for reprocessing. If a single image fails the State inspection, GET Imaging will rework all images or index quality defects on that batch, within 30 days of notification and receipt of any required source reels of microfilm. Prior to image conversion, GET Imaging will work with the State and Northrop Grumman IT to identify acceptable image standards for state inspection.

All deliverables will be considered formally and finally accepted at the conclusion of the 30 calendar day formal inspection period, unless otherwise identified and reported by the State of Michigan to GET Imaging to contain specific image and/or index defects. Specific images and/or indexes identified to contain defects will be considered formally and finally accepted upon the State of Michigan's determination that the defects have been corrected.

GET Imaging warrants that 100 percent of the data will be converted from the reels of microfilm. The image quality and legibility with image quality will be as good or better than the source frame whenever practically achievable given the state of the art of digital imaging technical available at award of the contract. GET Imaging will repair any and all images found not to adhere to this quality standard.

The proposed solution does provide for viewing images over the Web. The same core services used in the internal application will be used. Once the image is retrieved from FileNET, however, it will be sent to the customer's browser to be viewed. The fee assessed for each page viewed is customizable.



48. A critical element for the full implementation of the new business solution is that data from the existing system must be imported to provide the full history required in searching. The goal is that the data from the old system is cleaned up as part of the conversion, i.e., individual names will be separated from company names; truncated words would be made whole. The vendor will be expected to convert the data for all filings, including those marked as archived.

The State understands the complexity of the data conversion process. The State and the vendor will have to work closely to accurately convert the data, clean up existing data problems, and perform the integration in a timely fashion to minimize operational impacts. The vendor must provide a description of the proposed data base conversion plan to include how the data is mapped, downloaded from the existing system, and prepared for the final implementation.

Data conversion is a significant portion of the entire project. The State's legacy data is critical to the entire operation. All legacy data will be converted as designed in cooperation with the State. A Data Conversion Plan will be provided describing the process by which the legacy data will be converted. As the conversion process progresses, all rules, mappings, and specifications will be added to the plan. With the RA9 implementation the name field must be broken up into first, middle and last for individuals. This has proven to be a time-consuming task requiring extensive support from the state. For Nebraska we developed an interactive conversion program to assist the State staff in the conversion.

Once the State has provided the initial data extract, Northrop Grumman IT will work closely with the State to map the legacy data into Northrop Grumman IT's existing database schema. Once mapping is designed, the conversion procedures can be created. Several informal conversions will be performed during development of the conversion procedures. The time required to create these procedures is dependent on the cleanliness and integrity of the data. Several adjustments to the conversion will be necessary to map everything into the new schema.

Since the State desires to cleanup up data in fields that do not have sufficient space, this requires a linkage between existing data and the cleaned data. There must also be a method of identifying changes to existing data since it was cleaned. The process of cleaning the data must begin immediately to ensure it is ready for the final conversion. Cleaning of the data will be performed throughout the length of the project to ensure a small amount of data to be cleaned during final conversion. Since the State is most familiar with the procedures for data entry in the legacy system, Northrop Grumman IT assumes that the State is responsible for cleaning up the data.

The State must also be very involved in the mapping, data extracts, and validation process. The first formal conversion procedure is to validate the process with the State prior to in-plant testing by visually examining a representative sample of the results of the conversion. This will require the State to provide additional data extracts with modifications due to data clean up during the formal conversions. Data validation will also be performed with the software during development and In-plant Testing. The second formal conversion will be performed at the start of Acceptance Testing. The final formal conversion of the UCC data will be performed prior to going into production. Metrics will be documented in order to schedule the proper amount of time prior to going into production. Final conversion must be performed during a weekend.

49. The Department uses a centralized receipts processing system that includes an accounts receivable system (ARS). The new UCC system must be fully integrated with that system. The ARS needs transaction level detail from the UCC system.

The new UCC system must create a transaction database or table that is posted with each day's work. This database or table may be populated in real time or scheduled as a batch update process outside of normal production hours; whichever would cause less degradation to performance. The database or table must include the transaction type (such as filing or search), a description of the transaction, and the associated fees charged to a customer. For an account customer, the database must capture the account number. For other customers, the database must capture the company name, contact name (if



applicable) and billing address of the customer. Each transaction will have a unique identifier that is not an invoice number. The transaction identifier number and the invoice number must be cross-referenced.

In some cases, customers may prepay part of the required fees but still owe additional funds. For example, the customer may have paid the basic search fee but failed to include the correct amount for copies. The transaction database must indicate how much has been paid and the amount still due. The UCC system will calculate the amount still required after the operator inputs the amount paid. This calculation will avoid math errors made in computing the due amounts manually.

The ARS will be given access to the transaction database. The database will contain a field that the ARS can mark to indicate that ARS has retrieved the information from the transaction database, to avoid inadvertently retrieving the data again in a subsequent session. For billing problem resolution, information will not be purged from the transaction database for at least 2 years for audit purposes.

For customers who do not have a billing account with the Department, the UCC system will prepare an invoice to the customer. If fees were submitted with the transaction, the invoice serves as a receipt for the fees paid. An invoice would show the amount paid and the amount due, with the difference from the amount paid and the amount due computed by the UCC system. The amount due could be zero. The UCC system will interface with the ARS system, obtain an integer invoice number from a table that is resident on the ARS system, and use that number in generating an invoice. The invoice will resemble those produced for other areas using the ARS system. For example, the bottom portion of the form is a tear-off stub that is returned with the customer's payment. For billing account customers, an invoice number is not required.

ARS is a SQL Server application. It was designed and implemented by Kunz, Leigh and Associates.

Northrop Grumman IT has reviewed the interface to the Michigan ARS system with our teammate Kunz, Leigh and Associates. The e-SoS UCC system was designed from day 1 to support an interface to any commercial Accounts Receivable solution. After technical discussions with John Leigh, we are confident that our accounting interface will support integration with Michigan's ARS system. We have developed a preliminary interface design between the e-SoS UCC and ARS. The interface mechanisms are not complex because we have proposed using MicroSoft SQL Server 2000 as the database engine and the ARS system is also running on SQL Server 2000. Data can be easily exchanged between the systems. Several shared tables, views of data, and stored procedures will be setup to provide the detailed transaction level accounting information to flow freely between the ARS and e-SoS UCC application. The e-SoS UCC system will automatically calculate fees for the actions and services provided and, if necessary, produce the invoices for non-account customers. The invoice number can be retrieved from the ARS using the same stored procedures. Some of the reports we currently produce must be modified to work with this integration and provide the information the State requires. We are confident the interface can be integrated seamlessly into our system with the support of Kunz, Leigh and Associates on our team combined with our e-SoS UCC technical experts.

50. Multiple methods of submitting filings or searches shall be provided by the new system. For XML transmissions, the XML format as adopted by IACA shall be the standard for the UCC Unit. The IACA standards are found at <http://www.iaca.org/xml/>. XML documents should have the capability of naming multiple debtors and be accepted as such by the UCC system.

The Department encourages the vendor to provide as many alternatives as is reasonably and economically feasible to address the most commonly used data transmission protocols. For other electronic transmissions, the standard shall be a recognized and widely accepted industry standard.

Customers must be able to submit filings or search requests either individually (one at a time) or in batches. Both options will be available, depending on the customer's needs.



Any electronic filing will receive a date and time of filing only after it is analyzed by the system and determined to be machine readable and that all required elements of the transmission have been received in an approved format. The time and date of filing will not be based solely on the time the transmission is received by the UCC Unit.

Both search and filing requests can be submitted electronically to the UCC application via XML that adheres to the *IACA XML Technical Specifications*. There are a number of implementation options for this type of submission. The details of the Michigan implementation will be worked out during the Solution Outline and Design phases of the project.

51. The vendor shall develop a separate testing environment that mimics the production technical environment and the functionality of the UCC system, where business rule or fee changes, software modifications, and upgrades can be tested – unit and end-to-end – before implementation. The functionality of all items will be tested before implementation into the system to ensure that the UCC application will function properly when the changes are placed into production. For example, when UCC fees need to be changed, programming changes should be completed and tested in a testing environment to ensure proper functionality and technical compatibility with the production environment. If the testing produces favorable results, the code can be transferred to the production environment during a scheduled downtime. The test environment shall also have the capacity to maintain versions of the system distinctly for accurate promotion of newly tested versions to production, while preserving the previous version in case it need be restored.

The testing environment must be available after the UCC system is implemented, not just before the initial rollout. The system should have the capability to “copy” select live records to the testing environment to use as test records. This testing environment should not interfere with the production application or with the UCC Unit’s production work. The test environment must emulate the production environment and be able to complete system load testing.

To ensure proper tracking mechanisms are in place, the system should have a “change tracking process” that logs changes that are implemented.

A Test/Development Environment is critical for testing software changes and avoiding impacts to the production environment. Our proposed Test/Development Environment is a smaller set of servers that have sufficient space to hold a copy of the production database. A Test/Dev Application Server allows us to replicate the production environment for future changes in our software as well as operating system changes. A Test/Dev Database Server has sufficient space to hold a copy of the production database for testing purposes. We believe the Production Database Server is a critical element and all of its resources should be devoted to the production environment to meet performance requirements. We have not proposed a Test Imaging Server due to additional software costs; but test areas can be setup within the existing Imaging Server with very little overhead.

52. At the minimum, graphical user interfaces shall be the standard in any screens, with customization to the user’s preferences available. Customization should be based on individual users, rather than by work station (some work stations may have multiple users). Web browser access for all screens is acceptable.

Different types of end users will be performing tasks with the system. Some of these users are UCC staff in completing filings and searches, outside customers (lending institutions) performing electronic filings and searches, and state and federal agencies filing liens and performing searches. Users will be presented a screen appropriate for their security level and business needs. At no time should outside customers have the full function capability that the internal staff will have.



Graphical User Interfaces (GUIs) are standard in all UCC desktop and Web applications. Customization of the user interface is generally handled through the Windows operating system. Items such as screen size, window color scheme, fonts and date & time format are handled through the Windows Control Panel. The UCC desktop application manages window size and position for each user.

Access to the different functions of the application is handled through the user interface and enforced by the underlying business objects. For the desktop application, functionality is controlled through the UserID of the filing officer. Menu options and buttons are enabled or disabled based on the permissions assigned to the filing officer. Web users are presented with an entirely different user interface more suited to their business needs. This interface exposes a limited subset of the desktop application, primarily the basic searching and filing functions. Northrop Grumman IT will work with the State to define which access method is best suited for the various users.

53. The system will have at least eight standard reports pre-programmed. These reports, to be defined in conjunction with Department staff and based on the best practices of other states using the system, will cover normal reporting volumes, such as performance metrics, work volumes, and total revenue by transaction and payment type. Any report, either standard or ad hoc, should be capable of being printed immediately or exported to an industry-standard software package, such as found in the Microsoft Office Suite.

The Department also requests a report generator to produce ad hoc reports as needed. This generator can be another software product, such as Crystal Reports.

The e-SoS UCC application provides a standard statistics report that details filing quantities and revenues generated per user over a specified period of time. Most states have found this report sufficient to meet their needs. Additional reports, up to 8 total, shall be developed with the Department staff to meet any additional reporting needs.

Crystal Reports is the standard e-SoS UCC reporting tool. Crystal Reports allows the user to have control over the output to print, fax, e-mail or a variety of other exported data formats suitable for importing into third-party applications. Our use of Crystal Reports as the standard reporting tool makes it easy to develop additional ad hoc reports that have the same look and feel as the core e-SoS UCC reports.

54. The contractor should provide specifications, pricing, and number of units recommended by the contractor to achieve the desired throughput rate for the following hardware components complete with the required software configurations.

- Application Server
- Database Server
- Scan Server
- Image Management System Server
- Client Workstation Configuration Juke Box
- Development/Testing Server
- Development Workstation
- Other equipment needed to implement the solution

The State will purchase the above equipment from Northrop Grumman IT. The current State standard for a PC is the following Dell computer system:

- Class B GX150 Tower 1GHz/133 PIII 4MB
- Business Sound
- Internal NIC
- No Modem,



- 256K RAM
- Intellimouse
- Standard Keyboard
- 256 Non-ECC
- 20/48X CD
- 20 GB Hard Drive
- ATA 100
- Windows 2000
- 19" Monitor

The vendor will review this standard and identify any changes that would be needed for the proposed system.

The Hardware Requirements for our proposed solution include the following configurations:

Production

- Application Server
- Database Server
- Imaging Server
- Print/Fax Server and Fax Boards
- Scanner Workstation(s)
- Scanner(s)
- Jukebox and Cable
- Auto-Loading Tape Drive
- Label Printers (Alternative Solution Only)

Test/Development

- Application Server
- Database Server

The Application Server and Database Server were sized based on the expected transaction rates for similar systems that we have proposed in Nevada. We have configured the Database and Imaging Servers with the capability to expand from two 900 MHz Xeon processors, to four 900 MHz Xeon processors. The external RAID disk storage for each of the Database and Imaging Servers could be increased from the proposed 144 GB, to a total of 396 GB. Additionally, the Application Server could be increased from one 900 Mhz Xeon processor up to four 900 Mhz Xeon processors.

The sizing of the proposed Imaging Server, Print/Fax Server and Scan Server were all based on an analysis tool provided by FileNET that determines the configuration based on the proposed software and anticipated throughput rates for the system operating at 120% of the Revised Article 9 maximum volume stated in the ITB.

The Test/Development configurations offer adequate capacity to perform tests in nearly production configurations to verify release updates and software upgrades. We did not propose a test Image Management System or scan station primarily due to cost considerations. It would not be cost effective to maintain a duplicate IMS for test and development purposes. Northrop Grumman IT has a comprehensive test laboratory to verify upgrades to the FileNET configurations and interface objects.



The proposed client systems meet or exceed the standard desktop configuration in Michigan. We have proposed 21" monitors for the systems used in Workflow applications to enable viewing of the image with the e-SoS data entry application.

Northrop Grumman IT would be glad to discuss alternate configurations with Michigan during negotiations or as change requests after award. We would also consider reuse of existing Michigan equipment for the scan server, client workstations, print/fax server, or test/development systems when the exact configuration can be reviewed to determine suitability for the application.

The UCC web application will be hosted within the infrastructure of the Michigan.gov portal. Therefore, the State can assume that there will be adequate hardware capacity within that infrastructure to support the needs of the UCC web application. No additional hardware investments will be required.

By leveraging the e-Michigan infrastructure, there will be no hosting charges (such as performance monitoring, system administration, backups, etc.) to the Secretary of State associated with the UCC web application.

Our technology proposal for the UCC web application is closely tied to the software standards established by e-Michigan. Therefore, the Secretary of State will incur no costs for commercial software that adheres to those standards. The exception to this rule is the use of MQ Series. Although this product has been proposed for other e-Michigan development projects that are pending, it is not currently a part of the architecture. If MQ Series has been licensed by e-Michigan for other projects before the UCC web application requires it, there will be not cost to Secretary of State for using it. If however, the UCC web application is the first application to use MQ Series, there will be a charge as outlined in the pricing portion of this proposal. Since a single MQ Series can be leveraged throughout the State once implemented in the e-Michigan architecture, we urge the Secretary of State to negotiate with the e-Michigan office on possible ways to reduce or eliminate this cost.

55. Equipment Maintenance -- The contractor must warrant for 120 days after launch that the final production system will satisfy the business test conditions as designed. Any costs associated with satisfying warranty claims will be the responsibility of the contractor.

The vendor must be responsible for maintenance (labor and parts) for equipment furnished by the vendor at the prices shown in the cost model for each maintenance cost and shall keep quoted equipment in good operating condition for the length of the contract. All maintenance performed must be identified by equipment serial number. If the State elects to purchase non-specialized equipment from sources other than the vendor, the vendor would not be responsible for the maintenance of equipment purchased elsewhere.

The vendor shall respond by phone within one hour after notification by the State that the equipment is inoperative. The phone call will establish the urgency and time of arrival on site. In critical situations (whenever a failure causes a malfunction that renders the system inoperative or halts production) the vendor shall arrive within 4 Principle Period of Maintenance (PPM) hours and the equipment shall be repaired within 24 clock hours. If the vendor fails to repair the equipment within the above period, the vendor shall allow credit, for each workday the equipment is inoperative, in an amount of 1/30 of the monthly maintenance charge for equipment furnished by the vendor that is not operable (not to exceed one month charge in any calendar month). For the purposes of credit calculation, a partial workday will count as one full day. Equipment which experiences repeated failures may be deemed unreliable equipment as described below.

All remedial (non critical) maintenance will be performed promptly after notification of equipment becoming inoperative. The vendor shall provide the State with a designated continuous contact point and shall make arrangements to enable the maintenance representative to receive such notification and respond. There are no additional charges for maintenance during the principal period of maintenance.



The vendor must be responsible for any required preventive maintenance. Preventive maintenance must be performed at no additional cost during the PPM, not including State holidays, at a time agreeable to the State.

The vendor must supply a monthly service report to the State for services performed. The following information must be provided on the monthly Vendor Service Report, due by the tenth of the following month:

- Serial/Model number of equipment being repaired
- Service performed
- Date/Time equipment repaired
- Date/Time service request received
- Location of service
- Cause of breakdown or need of service
- Field engineer's name performing service
- Service report control number
- Replacement part description

Principle Period of Maintenance (PPM) will be the same hours as the State's normal working hours (currently Monday through Friday, 8:00 a.m. to 5:00 p.m., excepting State-observed holidays).

The principle period of maintenance hours may be changed upon 30 days written notice by mutual agreement, except that the vendor shall make every reasonable effort to change his schedule in a shorter period of time.

All repairs performed must be guaranteed for 30 days. Any subsequent related failure during this 30-day period will be repaired at no additional cost to the State.

As part of the bid, the vendor will propose a Maintenance Contract to cover the ten-year period following the expiration of the warranty period. The Contract will provide an annual fixed cost. After the initial 48 months of the Maintenance Contract, provided the vendor has given thirty days prior written notice, the State agrees to change the maintenance charges paid to the vendor not to exceed five percent per year.

The State has the option to cancel or switch the type of maintenance for any or all devices with thirty days written notice.

In the bid proposal the vendor will describe the type of maintenance they have provided on similar UCC systems in the past. In addition, the vendor will list the field representative who will maintain the equipment or will list any subcontractor who will perform this service. The physical location of the field representatives and service depot must be included.

Malfunction Reports

The vendor shall furnish a malfunction incident report to the State upon completion of each maintenance call. Such report shall continue until designated by the Contract Administrator to halt. The report shall include, as a minimum, the following:

- (1) Date and time (hours, minutes, and a.m. or p.m.) notified (to be supplied by user and verified by the vendor).
- (2) If applicable, date and time (hours, minutes, and a.m. or p.m.) of arrival (to be supplied by user and verified by the vendor).
- (3) Type and model number(s) of machine(s).
- (4) Time (hours, minutes, and a.m. or p.m.) repair completed.



- (5) Description of malfunction (equipment or software).
- (6) If charges are applicable, the estimated full amount.

Unreliable Equipment

In the event of equipment failure to the degree that productivity is seriously impaired, the State shall call for a review of the malfunction reports, as required in "Malfunction Reports" section immediately above, for the preceding three months. If accumulated malfunction time for this period is equal to or exceeds 5% of the schedule hours for this period, it shall be determined that the productivity has been seriously impaired.

The malfunction condition(s) shall be corrected within five working days of such review. If at the end of this period it has not been corrected, the issue will be escalated to a special committee, which shall consist of:

1. Two Departmental Representatives
2. One Vendor Representative

This committee shall determine by majority vote which of the following three options is most appropriate.

1. Provide a backup machine, without additional charge to the State.
2. Provide on-site service and call in appropriate vendor engineering or plant personnel.
3. Mechanically replace the equipment (in whole or in part). The vendor shall replace a persistently failing machine for up to one year after warranty commencement. Thereafter, the vendor shall replace all persistently failing components.

The vendor will not unreasonably decline to perform the option determined by the Committee.

At the end of the five working day period, and upon written notice to the vendor, the State may exercise the option to initiate termination proceedings on the unreliable equipment. The vendor is obligated to continue, in compliance with contractual terms contained herein, to the date set forth for removal and replacement of the equipment in a written notice from the State to the vendor.

The vendor shall be liable for all outbound preparation and shipping costs for equipment returned pursuant to this provision.

The major software components of the proposed Michigan UCC system consists of the Northrop Grumman IT e-SoS UCC application, FileNET Imaging Systems, @Work Workflow, and the standard MS Infrastructure Software configuration. FileNET and @Work have standard commercial maintenance programs that are presented in our pricing proposal. The Northrop Grumman IT e-SoS application will be customized to meet Michigan's specific requirements therefore requiring a custom maintenance approach. The Microsoft software is not under maintenance. Any support or upgrade for these components required directly from Microsoft will be an additional charge. Northrop Grumman IT is knowledgeable in the configuration and administration of the Microsoft components. The major hardware components of the Michigan UCC system include the Dell Servers and Client Systems, Kodak Scanner and imprinter, HP printers and Jukebox.

The source code for the Northrop Grumman IT e-SoS base application and all customized objects will be delivered to Michigan with fully paid, perpetual, unlimited right to use, modify or duplicate within the state. Title to the source code resides with Northrop Grumman. In our plan we will be training the Michigan employees to support the system. This support includes configuration and operation.



There are not typically regular releases of customized software packages as the change control is too difficult for a diverse customer base. Our technical staff will be knowledgeable of updates to the base product and considerate of those modifications that may be applied to the Michigan System as the Northrop Grumman IT e-SoS product evolves. The price for integrating these modifications can be negotiated on a case-by-case basis using our average hourly bid rate.

Northrop Grumman IT has proposed maintenance support for the e-SoS system, which includes all hardware and third-party software. This support is limited to problem resolution. Any software change requests will require a contract modification. See Figure 4 on Page 15 of our RFP response for Problem Report/Change Request Analysis Procedures. We will deliver this service with support from our vendors. We have proposed support from Dell, Cranel (for Kodak and HP equipment), FileNET, Apex Consulting for @Work, IBM for the Web application and Northrop Grumman IT as the primary software support for e-SoS. Northrop Grumman IT will escalate all hardware and third-party software support calls to the appropriate vendor. The State must understand that our support of the Third Party software products is limited to that provided by the vendors. The maintenance begins as soon as the hardware and third party software is delivered Filenet and Apex software has 90 days of warranty prior to maintenance beginning.

Our maintenance approach is based on the following assumptions:

- Michigan has a help desk to support the initial call for web application support. Any issues with the web application should be first escalated to Michigan's UCC system administrator to ensure that all application components are up and functioning.
- Michigan's system administrator will be involved in diagnosing any problems with the client and server UCC systems.
- Only trained system administrators will call Northrop Grumman IT for maintenance support unless they are unavailable. In that event, a knowledgeable unit supervisor may escalate problems to Northrop Grumman IT.
- The Michigan system administrator must document any configuration changes or parameter changes and communicate them at the time of the incident.
- The State will provide dial-up access for Northrop Grumman IT staff for System Warranty/Support and maintenance purposes.
- Northrop Grumman IT is not responsible for maintenance of the web application, only those components of the e-SoS baseline.

Northrop Grumman IT will maintain a current copy of the software, documentation, source code, problem reports and change requests as long as a Warranty/Maintenance agreement is in place. We will also maintain a system representative of the Michigan configuration for development and testing in our Bellevue, Nebraska facility. If the Warranty and Support is allowed to lapse after the first year, Northrop Grumman IT may revise the quoted price for Warranty and Support.

It is expected that the State will not modify the baseline source code without coordination in the form of written approval of Northrop Grumman IT. Any source code modifications performed by the State or State vendors will be provided to Northrop Grumman IT for integration with the baseline software. If problems are found with state-modified software, a change request will be required for any support provided by Northrop Grumman IT.

The State's primary contact for support will be a pager that is accessible from 7:00 AM – 5:00 PM CST 5 days/week (normal business hours). Northrop Grumman IT will provide this support using the staff in



Bellevue Nebraska supported by IBM staff in Lansing for the web application. Northrop Grumman IT's responsibility with respect to the proposed Maintenance and Support plan shall be the correction of errors, defects, and/or design deficiencies (collectively "deficiencies") in Work Products. Minor problems will be corrected as soon as they can be reasonably identified, resolved and integration tested. The State may want to consider collecting minor fixes into a single release to avoid impacts to the day-to-day operation of the system. If the problem is preventing the State from successful operation of the system, Northrop Grumman IT shall act to repair the deficiencies as quickly as possible, bringing to bear all reasonable resources. In some cases, this may require Northrop Grumman IT to perform emergency maintenance to correct system defects, working on a twenty-four-(24) hour, seven- (7) day a week basis. If the problem is causing the corruption of data or an inability to use the system, on-site Northrop Grumman IT will provide support until the problem is resolved.

Hardware sourced from Dell, HP, and Kodak, all have service contracts. The length of contract from these three vendors is five years on all products with the sole exception being the HP LaserJet Printers which could only be quoted for 3 years.

We have proposed Dell service contracts for 4-hour (same-day) onsite response. Dell has arranged service of their equipment from Unisys. Unisys's nearest location is in Alma MI, approximately 51 miles from Lansing. Once Dell receives notice of a problem, they will contact Unisys who will then dispatch a field representative to be onsite within 4 hours. The field representative will be a technician with specific experience with the product being serviced.

The Kodak service proposed is for 4 hour response service. The field representatives are from Kodak, not a subcontractor or third party. We feel the advantage of having Kodak service the equipment is preferable to seeking another third party quote for maintenance. When aware of an issue, Kodak will send the closest available technician to resolve the situation. They do guarantee 4-hour same business day response.. Kodak offers the best scanning and filming solutions available.

HP includes 3 years of servicing with the printers, but does not offer any extension or the like for any of their printers. We have proposed 4-hour (same-day) onsite response. HP fulfills their service obligations from their locations throughout Michigan. HP supports their own service with actual company employees thereby eliminating the need and use of subcontractors or third parties. Once HP is notified of the problem, they will have their technician onsite within 4 hours to address and correct the issue.

The maintenance costs for all 5 years for the Optical Jukebox are listed as a separate line item in our proposal. The response time for jukebox repairs is 4 hours on site.

The label printers and hand-scanners will each have 2 spares to allow for quick and easy replacement if a unit should fail. The cost of a service contract or repairs would be significantly more than the cost to replace the unit(s) with a new one. So, the best value is to forward supply 2 units of each for replacement purposes. These additional units are included in the pricing in the bid.

56. Provide a plan for accomplishing the work. Indicate the number of person-hours allocated each task and the estimated state resources necessary for each task. A MS Project Schedule, time related, showing each event, task, and decision point in your work plan must also be provided. Include action required to be completed by the State, dates, and dependencies.

The vendor will also give a date for starting the project in Michigan and a proposed completion date. If the due dates for deliverables are changed because of the vendor's proposed time line, the vendor will include an adjusted schedule indicating when each task would be complete. The State desires to implement the full solution as soon as possible, with a project start date of March 15, 2002. The project's proposed start and completion dates will be considered in the proposal review to determine if the dates are compatible with the State's vision for timely implementation.

All features and capabilities described in vendor responses will be presumed accurate by the department. The vendor is advised that the State intends to use stated features and capabilities as the basis for a warranty clause in contracts executed pursuant to the Invitation to Bid.

As stated in Section 3 our e-SoS UCC product is a functional baseline with a supporting documentation set. As a result, we will manage this project as a change management process where the focus is on developing changes to our existing baseline and documentation. We do not plan to significantly change the format of our existing documents.

Early in the project we will meet with the State of Michigan staff and review the current e-SoS UCC application and documentation to determine the required changes, to both software and documentation, necessary to satisfy the state's change requirements. These changes will be documented via Change Requests and will be managed in accordance with our well-defined Change Management Process.

As stated in the ITB, the state requires 5 days to review all contract deliverables. If we were to stop work until the deliverables are approved for each phase, we could not possibly meet the schedule required by the ITB. In the cases where approval of a deliverable is on the critical path, the contractor will be required to proceed at risk to meet the schedule identified in the ITB. This represents risk to the contract schedule and level of effort applied by the contractor. To mitigate this risk, we plan to have the State staff intimately involved with the development of the deliverables. We will present elements of the deliverables in meetings and technical interchanges and document the results of these meetings. When the deliverable is presented, the state staff will be very familiar with the information contained in the deliverables. The state must make every attempt to remain consistent with their requirements from our technical discussions through review of the deliverables. When the state provides comments on the initial draft, Northrop Grumman IT will incorporate the requested changes and deliver a final version of the document. The state will review those items that were changed or impacted as a result of the state supplied comments to the draft. With regular communication and presentation of interim deliverables, we mitigate the risk of proceeding without explicitly approved deliverables and reduce the level of effort associated with review and re-review of the deliverables.

Figure 10 summarizes the UCC System by major tasks over the life of the contract.

ID	Task Name	Duration	Start	Finish	2nd Quarter			3rd Quarter			4th Quarter					
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Contract Start	0 days	Mon 4/1/02	Mon 4/1/02	4/1											
2	Project Management	180 days	Wed 4/3/02	Wed 12/18/02	[Gantt bar from 4/3 to 12/18]											
3	Bi-Weekly Status Meetings	175 days	Wed 4/3/02	Wed 12/11/02	[Vertical bars from 4/3 to 12/11]											
23	Weekly Status Reports	180 days	Wed 4/3/02	Wed 12/18/02	[Vertical bars from 4/3 to 12/18]											
62	PHASE I	181 days	Mon 4/1/02	Tue 12/17/02	[Gantt bar from 4/1 to 12/17]											
63	TASK 1 - Finalize Approach, Work Plan and Schedule	15 days	Mon 4/1/02	Fri 4/19/02	4/19											
105	TASK 2 - Define Application, Software, and Equipment C	62 days	Mon 4/1/02	Wed 6/26/02	6/26											
179	TASK 3 - Install, Configure and Test Software, Equipmen	111 days	Mon 4/29/02	Thu 10/3/02	10/3											
271	TASK 4 - Train System Operators and Support Personne	30 days	Thu 8/1/02	Thu 9/12/02	9/12											
310	TASK 5 - Convert Business Operations from Current Equ	13 days	Mon 9/30/02	Thu 10/17/02	10/17											
326	TASK 6 - Provide Post-Launch End User and Technical S	25 days	Mon 9/16/02	Mon 10/21/02	10/21											
355	TASK 7 - Support the State's Web Vendor	159 days	Wed 5/1/02	Tue 12/17/02	[Gantt bar from 5/1 to 12/17]											

Figure 8 Summary Schedule

II-B TASKS

This section provides an overview of the major tasks the Department anticipates in the implementation of an UCC solution. The contractor is asked to prepare an approach to these tasks.

The contractor is not, however, constrained from supplementing this listing with additional steps, subtasks or elements deemed necessary to permit the development of alternative approaches or the application of proprietary or product-specific techniques. The tasks should not be considered as consecutive steps. Some tasks, or portions of tasks, may be completed more efficiently when done concurrently with other tasks. In particular, web functionality, if contracted for by the State, may be done in conjunction with internal program tasks.



This project will define, install, and implement the internal solution that the UCC unit will use in everyday operation. In addition, Phase I includes the conversion of data and images from the old system to the new. Although this contract covers only the purchase and installation of the internal UCC solution Northrop Grumman will assist and help manage as part of their contract the implementation of an electronic filing enabling solution from IBM.

The dates in the tasks and in Table 8 below are based on the State's expected completion dates. The State desires to implement the full solution as soon as possible, with the project to start on March 15, 2002. Task 1 must be completed within fifteen days of contract award, regardless of the proposed project start date. All other tasks are due in accordance with the approved project schedule as detailed in the project plan.

Task 1 – Finalize Approach Work Plan and Schedule (Due within 15 business days of contract award)

This task will involve the review and scheduling of all work activities with the Department of State's UCC Unit. This must include all tasks for application design/configuration, implementation of equipment and technical infrastructure, integrated solution implementation, testing, training, launch and post-launch support. The plan must also highlight Department of State responsibilities, particularly for potentially long lead-time activities, such as site preparation and obtaining state-supplied equipment. Of particular importance is the vendor's commitment to a firm and timely delivery date.

The continuation of the contract will be dependent upon the acceptability of the work plan and schedule by the State.

Deliverables:

1. A Project Quality plan. The plan will contain the following elements:
 - a) Summary approach and project scope.
 - b) The contractor's project organizational structure.
 - c) The project breakdown showing sub-projects, activities, dependencies, and tasks, along with resources required and allocated to each, the deliverables and their due date (in Microsoft Project format).
 - d) Inventory of State responsibilities and key milestone dates.
 - e) A timeline, using Microsoft Project.
 - f) Scope change management mechanism.
 - g) Deliverable approval process.
 - h) Contractor Responsibilities.
2. Change control process.
3. A risk analysis.
4. The contractor will review the proposed Michigan Administrative Rules and identify any requirement that cannot be met by the new system, provide suggested wording that will enhance the functionality of the new system, and provide enhancements or changes based on the best practices of other states that have implemented the UCC system. Because of the State's time frames for promulgating rules, including scheduling public hearings, this task must be completed promptly so that the Rules can be in place when the system is implemented.

Task 2 – Define Application, Software, and Equipment Configuration Options

During this task, the contractor shall work with the State to assess the business, information technology, and technical infrastructure environments as they relate to this project. The contractor will then develop several deliverables that evaluate this assessment and explain how the proposed solution will meet the challenges posed by the various environments.



Deliverables:

5. A detailed analysis of the business requirements as understood by the contractor. The requirements will include:
 - a) An inventory of detailed business conditions that must be addressed by the UCC process.
 - b) An analysis of logical conclusions (outcomes) for each business condition.
 - c) A list of integration needs with the ARS.
 - d) A list of the application and equipment features that will achieve the business outcomes.
 - e) A description of the custom applications or required package software modifications.
 - f) A description of points of system failure and their remedial procedures.
 - g) A set of the procedures necessary to achieve the business requirements.
6. Documentation of the recommended system (software and hardware) indicating the package software and equipment configuration options.
7. System Functional Specification Report (including the specifications for any custom applications or required package software modifications, technical specifications, work process flows, and database and table structures. See Project Reports for more definitions).
8. A site plan and system schematic with points of failure and action plans.
9. Inventory of business test conditions and required outcomes.
10. A workflow process chart for configuring Michigan's unique changes for the system and to assist Department staff in work procedure development.
11. A functional prototype of the workstation operator user interface to confirm productivity will meet or exceed the State's desired levels.
12. System Technical Specification Report, (including the test plan with test specifications and test procedures. See Project Reports for more detail).

Task 3 – Install, Configure and Test Software, Equipment, and Procedures

The contractor shall:

- Deliver, install and configure computer hardware, ancillary equipment, system software, and package application software to meet requirements as defined in Task 2.
- Document, code and test any required software modifications or custom programs.
- Conduct a technical and business integration test of the solution to verify and document the capability to handle the full inventory of test conditions.
- Prepare a test plan to ensure proper system functionality.
- Conduct necessary tests to ensure proper system functionality including, but not limited to, a parallel test between current and new UCC systems, a stress or load test to assure the State that the new system can handle the volumes as required, and an interface test to ensure that automated billing processes with ARS are functional.
- Conduct a user acceptance test (end-to-end).
- Review test results with the State to obtain the State's approval of the results.

Deliverables:

13. Documented, coded and unit tested software modifications (as applicable).
14. Installed and configured hardware and software.



15. Documentation of all test results, including unit tests and integration tests to verify the required interoperability and business functionality, and resolution of non-compliant results.
16. A System Launch Report, including an implementation plan that includes a conversion schedule and script. See Project Reports for more information.

Task 4 – Train System Operators and Support Personnel

The vendor will provide adequate training to at least 20 system operators, up to 6 system administrators, and 4 technical support personnel to enable day-to-day operation without the need for vendor technical support. Training is to be provided on-site or in the Lansing, Michigan area. If out of area training is required, that training must be identified. Because of Departmental travel requirements, it is highly desirable that all training be completed within the State of Michigan. Tuition expense, if any, is the vendor's expense. The FileNET training facilities are located in Chicago IL, Kirkland WA, Atlanta GA, Boston MA, and Costa Mesa CA. Northrop Grumman IT covers tuition. Travel related expenses for this training are left to the State.

The training materials delivered will enable the state to train additional staff as required and should be used as quick reference guides for the "learners." The training should be a mixture of classroom, demonstration and hands-on exercises to enable the user to perform their job functions with the new system. All users will be experienced with Microsoft Windows and PCs and familiar with the UCC job functions before the training class.

The system administrator training will cover recommended backup and restore procedures, adding and deleting users, maintenance activities that must be performed or monitored periodically and troubleshooting problems.

Deliverables:

17. Training plans, including objectives for the training to be provided, and a listing of prerequisite knowledge needed before the class.
18. Trained operators and support personnel.
19. Written operator and user procedures.
20. A printed training guide and materials for ongoing training of new operators and an electronic version of the guide and materials, preferably in Microsoft Word format.
21. This was removed by the State
22. A printed operator guide and system administration guide with an electronic version of the guides, preferably in Microsoft Word format.

Task 5 – Convert Business Operations from Current Equipment and Process to New Equipment and Process

This task will involve the transition from the current equipment, database, and process to the new equipment, database, and process. The key objective for this task is the transition to the new environment with minimal (less than one day) or no business disruption.

Deliverables for this task will include:

23. Successful total system acceptance testing based on all deliverables to date and as defined by Section I-RR, "Performance and Reliability Evaluation (PARE)".



24. Successful implementation of full production business process functionality according to specifications defined in deliverables 5, 6, and 7.

Task 6 – Provide Post-Launch End User and Technical Support

The contractor will provide at least five consecutive business days of staffed, on-site operational support after launch to assist Department of State personnel with operation and administration of the integrated system. If hardware or software problems are discovered during this period, the contractor will remain on-site until the system is fully functional, free of production bugs.

Deliverables for this task will include:

25. A plan showing contractor staffing support for post launch coverage.
26. A service escalation chart, showing contractor contacts to use if initial contacts are nonproductive or unavailable.
27. Review results of integration and acceptance with the State and obtain approval.
28. Installed and configured hardware, software, and application.
29. Documentation of all test results, including unit and integration tests that verify required interoperability and business functionality, and resolution of non-compliant results.

As stated in Section 3 our e-SoS UCC product is a functional baseline with a supporting documentation set. As a result, we will manage this project as a change management process where the focus is on developing changes to our existing baseline and documentation. We do not plan to significantly change the format of our existing documents.

Early in the project we will meet with the State of Michigan staff and review the current e-SoS UCC application and documentation to determine the required changes, to both software and documentation, necessary to satisfy the state's change requirements. These changes will be documented via Change Requests and will be managed in accordance with our well-defined Change Management Process.

As stated in the ITB, the state requires 5 days to review all contract deliverables. If we were to stop work until the deliverables are approved for each phase, we could not possibly meet the schedule required by the ITB. In the cases where approval of a deliverable is on the critical path, the contractor will be required to proceed at risk to meet the schedule identified in the ITB. This represents risk to the contract schedule and level of effort applied by the contractor. To mitigate this risk, we plan to have the State staff intimately involved with the development of the deliverables. We will present elements of the deliverables in meetings and technical interchanges and document the results of these meetings. When the deliverable is presented, the state staff will be very familiar with the information contained in the deliverables. The state must make every attempt to remain consistent with their requirements from our technical discussions through review of the deliverables. When the state provides comments on the initial draft, Northrop Grumman IT will incorporate the requested changes and deliver a final version of the document. The state will review those items that were changed or impacted as a result of the state supplied comments to the draft. With regular communication and presentation of interim deliverables, we mitigate the risk of proceeding without explicitly approved deliverables and reduce the level of effort associated with review and re-review of the deliverables.

Figure 11 summarizes the UCC System by major tasks over the life of the contract.



ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Contract Start	0 days	Fri 3/15/02											
2	Project Management	190 days	Wed 3/20/02											
3	Bi-Weekly Status Meetings	185 days	Wed 3/20/02											
24	Weekly Status Reports	190 days	Wed 3/20/02											
65	PHASE I	192 days	Fri 3/15/02											
66	TASK 1 - Finalize Approach, Work Plan and Schedule	15 days	Fri 3/15/02											
108	TASK 2 - Define Application, Software, and Equipment C	73 days	Fri 3/15/02											
182	TASK 3 - Install, Configure and Test Software, Equipmen	113 days	Mon 4/29/02											
283	TASK 4 - Train System Operators and Support Personne	127 days	Fri 3/15/02											
322	TASK 5 - Convert Business Operations from Current Equ	13 days	Mon 9/30/02											
338	TASK 6 - Provide Post-Launch End User and Technical S	25 days	Mon 9/16/02											
367	TASK 7 - Support the State's Web Vendor	159 days	Wed 5/1/02											

Figure 11 Summary Schedule

To meet the aggressive schedule, we will be updating the current documentation set to satisfy the documentation deliverables stated in the ITB. In the following summary of each task we present a table showing how the documentation deliverables listed in the ITB will be satisfied.

Task 1 - Finalize Approach, Work Plan and Schedule

This task is critical to the successful completion of the UCC system. It involves the review and scheduling of all work activities for the UCC system. Working with the UCC Staff, Northrop Grumman IT will schedule a Kickoff Meeting to set expectations, answer questions and identify risks. The following table lists the deliverables for this task and states how we propose to satisfy each item.

Deliverables	Satisfaction Criteria
.A Project Quality plan. The plan will contain the following elements: i) Summary approach and project scope. j) The contractor's project organizational structure. k) The project breakdown showing sub-projects, activities, dependencies, and tasks, along with resources required and allocated to each, the deliverables and their due date (in Microsoft Project format). l) Inventory of State responsibilities and key milestone dates. m) A timeline, using Microsoft Project. n) Scope change management mechanism. o) Deliverable approval process. p) Contractor Responsibilities.	The majority of elements in the Project Quality Plan are contained in our response. This information will serve as the basis for the Project Quality Plan we will submit. We anticipate few changes will be required to satisfy this deliverable.
. Change control process.	The Change Control Process will be documented in the Project Quality Plan.
A risk analysis.	A Risk Analysis will be performed and the results will be documented in a Risk Analysis Report.
The contractor will review the proposed Michigan Administrative Rules and identify any requirement that cannot be met by the new system, provide suggested wording that will enhance the functionality of the new system, and provide enhancements or changes based on the best practices of other states that have implemented the UCC system. Because of the State's time frames for promulgating rules, including scheduling public hearings, this task must be completed promptly so that the Rules can be in place when the system is implemented.	The Michigan Administrative Rules will be reviewed and the results will be documented in a Michigan Administrative Rules Review Report.



Figure 12, presents the Task 1 schedule and major tasks.

ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter		
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
66	TASK 1 - Finalize Approach, Work Plan and Schedule	15 days	Fri 3/15/02	■	■	■	■						
67	Project Kickoff Meeting	3 days	Mon 3/18/02	■	■	■							
68	Project Quality Plan	10 days	Thu 3/21/02	■	■	■	■						
77	Change Control Process	10 days	Thu 3/21/02	■	■	■	■						
86	Perform Risk Analysis	15 days	Fri 3/15/02	■	■	■	■						
97	Review Michigan Administrative Rules	15 days	Fri 3/15/02	■	■	■	■						
107	TASK 1 COMPLETE	0 days	Thu 4/4/02	■	■	■	■						

Figure 12 Task 1 Schedule

Task 2 – Define Application, Software, and Equipment Configuration Options

This task is the most important task in the schedule. It defines the work to be performed and defines the acceptance criteria for the entire project. Northrop Grumman IT will interview the Michigan staff to ensure we have a thorough understanding of the Michigan business requirements, as well as to identify necessary changes to our packaged e-SoS UCC system, such as changes to existing windows or dialogs, fee structures, and nomenclature. We will also detail the interfaces to external systems.

Northrop Grumman IT will schedule interviews with Michigan staff to provide an in-depth understanding of the Michigan functions. These interviews will take place over two, five-day periods with a break in between to allow our analysis team to ingest and document findings. It is our belief that these interviews and the accompanying analysis provide the foundation for a successful implementation.

The focus of the interviews will be on reviewing the baseline e-SoS UCC application, our current Users Manual, System Test Plan, and e-SoS UCC System Requirements Table, and the Functionality Checklist contained in Appendix A of the ITB. These artifacts will be used to help determine the changes necessary to satisfy Michigan’s requirements. Using the information gathered during the interviews, Northrop Grumman IT and Michigan staff will work together to document the agreed upon changes on Change Request Forms which will be entered into our Problem Report/Change Request database. It will be the responsibility of the Management Team, both Northrop Grumman IT and the Michigan staff, to contain the scope of the requirements to mitigate the cost and schedule risks.

The Users Manual will be updated to reflect the required changes to the system. The Operator and User procedures contained in the Users Manual will also be updated to reflect the Michigan procedures. The e-SoS UCC System Requirements Table will be updated with all Michigan specific requirements and will become the Michigan e-SoS UCC System Requirements Table. This table will be maintained using our requirements tracking tool, Rational RequisitePro. The System Test Plan will contain a requirements matrix which will map the Michigan requirements to specific test cases and will be used to verify that all requirements are successfully tested. Once final, these documents will serve as the primary requirements definition for the remainder of the project. They will be the main reference for all other documentation.

Data Conversion analysis is very important during this task. During this task, Northrop Grumman IT will start by reviewing the documentation available for the legacy system. We will then schedule discussions with users and system administrators. The output of this process will be a data-mapping table, or Data Conversion Map, that presents our best estimate at how the fields translate in the data conversion process between the Legacy database and the new database. This data mapping will be based on the best information that was provided to Northrop Grumman IT. This is the most important part of the data conversion. Accuracy in this area is essential to support the software development and future conversion activities. The State will be asked to review the data-mapping table to verify accuracy. The State must actively assist in our validation process as the users or systems maintenance personnel have the best working knowledge of how the legacy data is applied. The State staff also has ready access to the legacy data to validate the contents of specific fields. Once the



mapping table is approved, we will request that data files be exported from the legacy system in a specific format. As the application customization progresses, the State may be required to modify the export procedure prior to the final conversion test. We assume that the State is extracting the data from the legacy database for conversion.

The following table lists the deliverables for this task and states how we propose to satisfy each item.

Deliverables	Satisfaction Criteria
<p>A detailed analysis of the business requirements as understood by the contractor. The requirements will include:</p> <ul style="list-style-type: none"> h) An inventory of detailed business conditions that must be addressed by the UCC process. i) An analysis of logical conclusions (outcomes) for each business condition. j) A list of integration needs with the ARS. k) A list of the application and equipment features that will achieve the business outcomes. l) A description of the custom applications or required package software modifications. m) A description of points of system failure and their remedial procedures. n) A set of the procedures necessary to achieve the business requirements. 	<p>As stated in ITB section I-A Purpose, subparagraph Project Scope item #4. Limited Business Process Reengineering “A full analysis of workflow and unit practices is beyond the scope of this bid”. Business requirements will be discussed during the on-site interviews and will be documented in the Users Manual and Detailed Design Document.</p>
<p>Documentation of the recommended system (software and hardware) indicating the package software and equipment configuration options.</p>	<p>Documentation of the recommended system configuration will be developed and delivered.</p>
<p>System Functional Specification Report (including the specifications for any custom applications or required package software modifications, technical specifications, work process flows, and database and table structures. See Project Reports for more definitions).</p>	<p>This information will be documented in our Detailed Design Document and Users Manual.</p>
<p>A site plan and system schematic with points of failure and action plans.</p>	<p>A site plan and system schematic will be developed and delivered.</p>
<p>Inventory of business test conditions and required outcomes.</p>	<p>This information will be documented in our System Test Plan</p>
<p>A workflow process chart for configuring Michigan’s unique changes for the system and to assist Department staff in work procedure development.</p>	<p>This information will be documented in our Detailed Design Document.</p>
<p>A functional prototype of the workstation operator user interface to confirm productivity will meet or exceed the State’s desired levels.</p>	<p>A functional UCC system will be delivered and demonstrated during the on-site interviews.</p>
<p>System Technical Specification Report, (including the test plan with test specifications and test procedures. See Project Reports for more detail).</p>	<p>This information will be documented in our Detailed Design Document and System Test Plan.</p>

As in every phase, all activities will be monitored and documented by the project manager. After completion of all task deliverables, a review will be scheduled in Michigan to review the requirements, detailed design and supporting documentation. Timely receipt of comments is critical as development is at risk until these documents are approved. Regular communication with the state will ensure that we are preparing the deliverables as planned.

We will also discuss the hardware and software configuration during the interviews to determine exactly what is needed. The recommended system configuration will be identified and documented during this task as well. A majority of the project's hours are spent during this task to assure that we have mutual agreement on the scope of the project and have a common definition for success. Figure 13, presents the Task 2 schedule and major tasks.

ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter		
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
108	TASK 2 - Define Application, Software, and Equipment C	73 days	Fri 3/15/02	[Gantt bar]				6/26					
109	Perform System Requirements Analysis	15 days	Mon 4/8/02	[Gantt bar]				4/26					
112	Complete System Analysis and Design	39 days	Mon 4/8/02	[Gantt bar]				5/31					
140	Work Backscan Issues (#13, 47)	73 days	Fri 3/15/02	[Gantt bar]				Sr. Prog/Anal 2					
141	Business Requirements Document (Requirements a	14 days	Mon 4/29/02	[Gantt bar]				5/16					
150	User Manual	30 days	Mon 5/13/02	[Gantt bar]				6/24					
159	System Test Plan	14 days	Fri 5/17/02	[Gantt bar]				6/6					
168	Prototype of Workstation Operator User Interface	6 days	Tue 4/16/02	[Gantt bar]				4/23					
171	Detailed Design Document	16.5 days	Mon 6/3/02	[Gantt bar]				6/25					
180	Conduct Requirements/Design Review	3 days	Mon 6/24/02	[Gantt bar]				Project Manager, Sr. Prog/Anal 1, S					
181	TASK 2 COMPLETE	0 days	Wed 6/26/02	[Gantt bar]				6/26					

Figure 13 Task 2 Schedule

Task 3 – Install, Configure, and Test Software, Equipment, and Procedures

Northrop Grumman IT's e-SoS UCC system will be used as the basis of Michigan's UCC system. The Change Requests which comprise the software development effort for this project will be worked in accordance with our Standard Software Development Procedures and following the approved project schedule.

Northrop Grumman IT is responsible for procuring the hardware and software, they will deliver, install and configure all computer hardware, ancillary equipment, system software, and package application software to meet requirements as defined in Task 2. Northrop assumes all network and communications links are provided by the State.

Testing is a key activity in this task. The test activities listed on the work plan in Task 3 reflect mainly those performed during the In-Plant System Test, User System Test and User Acceptance Test. A System Test Plan will be prepared and will be used to define the parameters of this testing. Extensive internal end-to-end testing of the system will be performed during the In-Plant System Test activity. We have allocated a full time experienced independent test resource. All external interfaces to the system will be tested during the In-Plant System test as well as during User Acceptance Testing. All batch jobs and reporting will be tested.

At the time of User Acceptance testing, the new development has been unit and system tested and internal integration testing has been performed in our development facility. This task is essential to ensuring the successful implementation of the system. The User Acceptance Testing will begin with a test data conversion on the systems to be delivered. At this point we have a high degree of confidence in the format of the data and the conversion procedure. We have also gathered metrics on the amount of time it will take to run the conversion procedure. We will schedule a time to perform the conversion so that the State can begin testing. Testing will be conducted to ensure proper system functionality including, but not limited to, a parallel test between current and new UCC systems, a stress or load test to assure the State that the new system can handle the volumes as required, an interface test to ensure that automated billing processes with ARS are functional, and an end-to-end user acceptance test.

All problems identified during In-Plant System Testing, User System Testing and User Acceptance Testing will be tracked through final disposition. It is important for the users and testers to identify the problems in detail so that we can isolate and correct them. It is the objective of this task to move into the Task 5 with a high level of confidence in the completed system.



Deliverables	Satisfaction Criteria
preferably in Microsoft Word format.	
An electronic (audio/video) training guide for basic operating functions.	This requirement has been removed by Michigan..
A printed operator guide and system administration guide with an electronic version of the guides, preferably in Microsoft Word format.	Both hard and soft copy of the Users Manual and the System Administrators Guide will be delivered.

Figure 15, presents the Task 4 schedule and major tasks.

ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter				
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
283	TASK 4 - Train System Operators and Support Personnel	127 days	Fri 3/15/02	[Gantt bar from 3/15 to 9/12]											
284	Training Plans	12.5 days	Thu 8/15/02	[Gantt bar from 8/15 to 9/3]											
293	Operator and User Procedures (Contained in User Manual)	0 days	Fri 3/15/02	[Gantt bar at 3/15]											
294	Training Guide and Materials	17 days	Thu 8/15/02	[Gantt bar from 8/15 to 9/9]											
295	Operator Training Guide	17 days	Thu 8/15/02	[Gantt bar from 8/15 to 9/9]											
304	System Administrator Training Guide	11.75 days	Thu 8/15/02	[Gantt bar from 8/15 to 8/30]											
313	Conduct Formal Training	7 days	Tue 9/3/02	[Gantt bar from 9/3 to 9/11]											
314	Conduct User/Operator Training	7 days	Tue 9/3/02	[Gantt bar from 9/3 to 9/11]											
317	Conduct System Administrator Training	3 days	Mon 9/9/02	[Gantt bar from 9/9 to 9/12]											
318	Conduct Informal Training	30 days	Thu 8/1/02	[Gantt bar from 8/1 to 9/12]											

Figure 15 Task 4 Schedule

Task 5 – Convert Business Operations from Current Equipment and Process to New Equipment and Process

Task 5 execution will be based on the Implementation Plan, finalized in Task 3. The major tasks will include, converting the UCC data, the transition from the current equipment, database, and process to the new equipment, database, and process, and monitoring performance.

The key objective for this task is the transition to the new environment with minimal (less than one day) or no business disruption. To accomplish this, the final conversion of the UCC data will take place over a weekend with the Go Live scheduled for the following Monday.

The final approved baseline will be delivered to the Michigan Project Manager and installed by our engineering staff. All system configuration items will be verified and tested according to delivered documentation.

Northrop Grumman IT and the Michigan Staff must work together to complete the UCC Data Conversion to ensure security and completeness. This joint effort will allow a smooth transition of legacy data into the new system. The state staff may be required to clean-up legacy data on the legacy system prior to the final conversion. In the Nebraska implementation we identified several “dirty data” issues early in the analysis, which afforded the state staff time to make the necessary corrections on the legacy system. The cleaner the data is prior to going live, the faster the conversion will run enabling us to limit concurrent operation. When the data is clean and converted, it will be delivered to the state for approval. All required documentation will be completed and delivered to the state, and an implementation report created, detailing all activities and status. The details of the data conversion process are presented in our response to ITB paragraph 3.1.9.

The following table lists the deliverables for this task and states how we propose to satisfy each item.

Deliverables	Satisfaction Criteria
Successful total system acceptance testing based on all deliverables to date and as defined by Section I-RR, “Performance and Reliability Evaluation (PARE)”.	The system will be successfully tested.
Successful implementation of full production business process functionality according to	The system will be successfully implemented.



Project Reports

Five copies of the following reports will be required of the contractor:

Project Quality Plan, including:

- Summary approach and project scope
- Project work breakdown structure
- Project schedule
- Scope change management mechanism
- Deliverable approval process
- Contractor responsibilities
- State responsibilities
- Contractor organizational structure

Weekly Status Reports, including:

- Scheduled activities
- Accomplished activities
- Variance from schedule and recommended action plans to address negative deviations
- Revised work plan, showing revised task dates (if any) and percent of tasks completed
- Issues for project management
- Risk plan update, as needed
- Key activities planned for the next week

System Functional Specification Report, including:

- Process flow diagrams
- Summary of operator procedures
- Inventory of business test conditions and required outcomes
- Inventory of selected system (software and hardware) configuration options
- Inventory of custom modules, if any
- Inventory of software modification requirements, if applicable
- Operator screen layouts
- Report formats
- Custom module/modification descriptions, if applicable
- Functional specification acceptance document
- Other elements as required in task 2

System Technical Specification Report, including:

- System test approach
- Custom module specifications
- Package modification specifications, (if applicable)
- Unit test documentation
- Commented source code listings for custom software
- Integration test documentation
- Technical specification acceptance document
- Other elements as required in Task 2

System Launch Report, including:

- Conversion schedule and script

- Inventory of post-conversion issues
- Launch acceptance document
- Contingency plan

Drafts of the Project Quality Plan, the System Functional Specification Report, the System Technical Specification Report, and the System Launch Report must be submitted to the Department’s project manager for approval before final publication.

II-D PRICE PROPOSAL

All prices/rates quoted will be firm for the duration of the Contract. No price changes will be permitted.

II-E CONTRACT PAYMENT

The film to image conversion task will have weekly costs as the conversion progresses. Northrop Grumman IT will bill monthly for those images converted and delivered to the State of Michigan at a rate of \$0.034/page. The percentages listed below are based on \$2,022,745.41 which represents the bid price of \$2,148,837.41 less the film conversion total price of \$136,092.00.

The payments shall be as follows:

- A. Upon completion and State acceptance of Task 110%
- B. Upon completion and State acceptance of Task 220%
- C. Upon completion and State acceptance of Task 3 and 430%
- D. Upon completion and State acceptance of Task 5 and 625%
- E. Upon successful completion of Phase I PARE and State acceptance of full business process10%
- F. Upon completion and State acceptance of IBM Web Interface and full functionality of web product5%

After each deliverable has been submitted to the Department, the Department will have a period of five working days to accept or reject the deliverable. Each deliverable shall be considered completed when the Department’s project manager has accepted it in writing. Deliverables, due dates, and payment schedules (related to the letters shown above) are given in the following table:

Table 8: Deliverable Reference Guide

<i>Ref Number</i>	<i>Deliverable</i>	<i>Payment phase</i>
1	Project Quality Plan	A
2	Change Control Process	A
3	A risk analysis	A
4	Administrative Rules review	A
5	Business requirements as understood by the contractor	B
6	Documentation of the recommended system (software and hardware) indicating the package software and equipment configuration options	B
7	System Functional Specification Report	B



<i>Ref Number</i>	<i>Deliverable</i>	<i>Payment phase</i>
8	A site plan and system schematic with points of failure and action plans	B
9	Inventory of business test conditions and required outcomes	B
10	A work flow process chart for Michigan's system changes	B
11	A functional prototype of the workstation operator user interface to confirm productivity	B
12	System Technical Specification Report	B
13	Documented, coded and unit tested software modifications	C
14	Installed and configured hardware and software	C
15	Documentation of all test results and resolution of non compliant results	C
16	System Launch Report	C
17	Training plans	C
18	Trained operators and support personnel	C
19	Written operator and user procedures	C
20	A training guide and materials for new operator training	C
21	Deleted per State request	C
22	An operator guide and system administration guide	C
23	Successful total system acceptance testing using PARE.	E
24	Successful implementation of full production business process functionality	D
25	A plan showing contractor staffing support for post launch coverage	D
26	A service escalation chart, showing contractor contacts	D
27	Review results of integration and acceptance with the State and obtain approval.	D
28	Installed and configured hardware, software, and application.	D
29	Documentation of all test results, including unit and integration tests that verify required interoperability and business functionality, and resolution of non-compliant results	D

The specific payment schedule for any Contract(s) entered into, as the State and the Contractor(s) will mutually agree upon the result of the ITB. The schedule should show payment amount and should reflect actual work done by the payment dates, less any penalty cost charges accrued by those dates. As a general policy statements shall be forwarded to the designated representative by the 15th day of the following month.

APPENDIX A Detailed Schedule

ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Contract Start	0 days	Fri 3/15/02	█										
2	Project Management	190 days	Wed 3/20/02	█	█	█	█	█	█	█	█	█	█	█
3	Bi-Weekly Status Meetings	185 days	Wed 3/20/02											
24	Weekly Status Reports	190 days	Wed 3/20/02											
65	PHASE I	192 days	Fri 3/15/02	█	█	█	█	█	█	█	█	█	█	█
66	TASK 1 - Finalize Approach, Work Plan and Schedule	15 days	Fri 3/15/02	█										
67	Project Kickoff Meeting	3 days	Mon 3/18/02	█										
68	Project Quality Plan	10 days	Thu 3/21/02	█										
69	Prepare Project Quality Plan	2 days	Thu 3/21/02	█										
70	Peer Review	0.5 days	Mon 3/25/02	█										
71	Deliver Draft Project Quality Plan	0 days	Mon 3/25/02	█										
72	State review and provide comments	5 days	Mon 3/25/02	█										
73	Update Project Quality Plan per comments	1 day	Mon 4/1/02	█										
74	Peer Review	0.5 days	Tue 4/2/02	█										
75	Deliver Final Project Quality Plan	0 days	Tue 4/2/02	█										
76	Receive State Approval	0 days	Wed 4/3/02	█										
77	Change Control Process	10 days	Thu 3/21/02	█										
78	Develop Change Control Process	2 days	Thu 3/21/02	█										
79	Peer Review	0.5 days	Mon 3/25/02	█										
80	Deliver Draft Change Control Process	0 days	Mon 3/25/02	█										
81	State review and provide comments	5 days	Mon 3/25/02	█										
82	Update Change Control Process per comments	1 day	Mon 4/1/02	█										
83	Peer Review	0.5 days	Tue 4/2/02	█										
84	Deliver Final Change Control Process	0 days	Tue 4/2/02	█										
85	Receive State Approval	0 days	Wed 4/3/02	█										
86	Perform Risk Analysis	15 days	Fri 3/15/02	█										
87	Conduct Risk Analysis	4 days	Fri 3/15/02	█										
88	Document Findings	1 day	Thu 3/21/02	█										
89	Develop and Document Risk Mitigation Strategies	2 days	Fri 3/22/02	█										
90	Peer Review	0.5 days	Tue 3/26/02	█										
91	Deliver Risk List w/ Mitigation Strategies	0 days	Tue 3/26/02	█										
92	State review and provide comments	5 days	Tue 3/26/02	█										
93	Update Risk List w/ Mitigation Strategies per comm	1 day	Tue 4/2/02	█										
94	Peer Review	0.5 days	Wed 4/3/02	█										
95	Deliver Updated Risk List w/ Mitigation Strategies	0 days	Wed 4/3/02	█										
96	Receive State Approval	0 days	Thu 4/4/02	█										

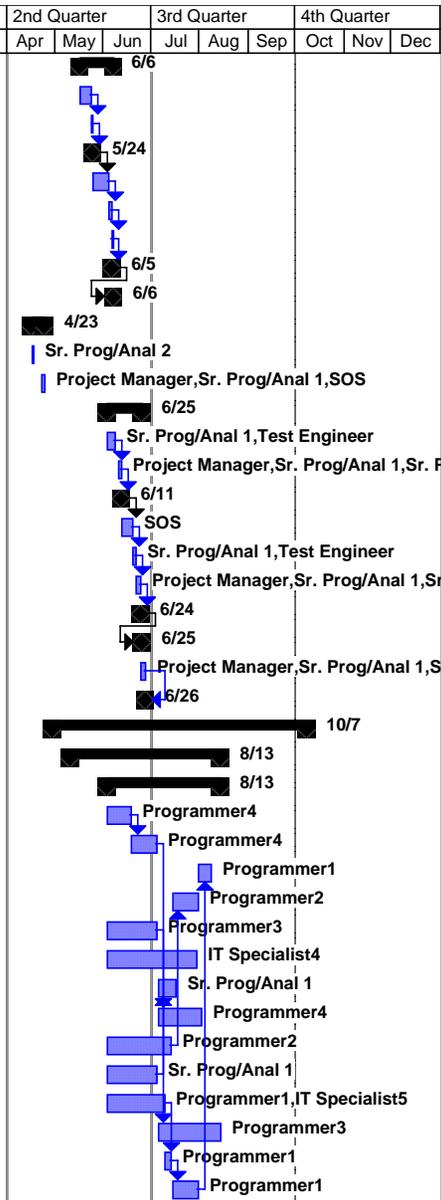


ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter						
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
97	Review Michigan Administrative Rules	15 days	Fri 3/15/02														
98	Complete review of Michigan Administrative Rules	4 days	Fri 3/15/02														
99	Document MARS Recommendations	2 days	Thu 3/21/02														
100	Peer Review	0.5 days	Mon 3/25/02														
101	Deliver Draft MARS Recommendations to State	0 days	Mon 3/25/02														
102	State review and provide comments	5 days	Mon 3/25/02														
103	Update MARS Recommendations per comments	2 days	Mon 4/1/02														
104	Peer Review	0.5 days	Wed 4/3/02														
105	Deliver Final MARS Recommendations to State	0 days	Wed 4/3/02														
106	Receive State Approval	0 days	Thu 4/4/02														
107	TASK 1 COMPLETE	0 days	Thu 4/4/02														
108	TASK 2 - Define Application, Software, and Equipment C	73 days	Fri 3/15/02														
109	Perform System Requirements Analysis	15 days	Mon 4/8/02														
110	On-Site Requirements Interviews - Week 1	5 days	Mon 4/8/02														
111	On-Site Requirements Interviews - Week 2	5 days	Mon 4/22/02														
112	Complete System Analysis and Design	39 days	Mon 4/8/02														
113	Analyze/Design Additional UCC Functionality	39 days	Mon 4/8/02														
114	Image Import Routine for Backscan (#13)	30 days	Mon 4/8/02														
115	Verification (#15)	12 days	Mon 4/8/02														
116	Double Blind Keying (#15)	6 days	Wed 4/10/02														
117	Add New Fields (#17)	6 days	Thu 5/2/02														
118	ARS Integration (#18, 19)	16 days	Mon 5/6/02														
119	Searching (#20)	10 days	Thu 4/18/02														
120	Bulk Filings (#22)	8 days	Mon 5/20/02														
121	Two Automated Letter Processes (#23)	27 days	Mon 4/8/02														
122	Workflow (#34)	35 days	Mon 4/8/02														
123	Rejection Process (#37)	22 days	Wed 4/24/02														
124	System Security (#45)	30 days	Mon 4/8/02														
125	Transaction, System and Error Logs (#46)	15 days	Fri 5/10/02														
126	System Reports (#53)	12 days	Wed 5/15/02														
127	Save Web Transaction Results	2 days	Mon 4/8/02														

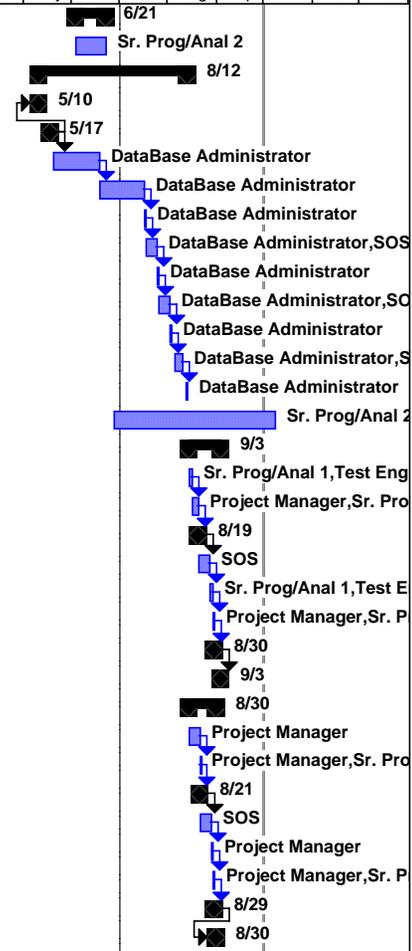


ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
128	Data Conversion Analysis (#6, 48)	30 days	Mon 4/8/02				5/17							
129	Receive Database dump from Michigan	0 days	Mon 4/8/02		4/8									
130	Analyze Michigan UCC data	10 days	Mon 4/8/02											
131	Data Conversion Plan	20 days	Mon 4/22/02				5/17							
132	Prepare Data Conversion Plan	10 days	Mon 4/22/02											
133	Peer Review	1 day	Mon 5/6/02											
134	Deliver Draft Data Conversion Plan	0 days	Mon 5/6/02				5/6							
135	State review and provide comments	5 days	Tue 5/7/02											
136	Update Data Conversion Plan per co	2.5 days	Tue 5/14/02											
137	Peer Review	0.5 days	Thu 5/16/02											
138	Deliver Final Data Conversion Plan	0 days	Thu 5/16/02				5/16							
139	Receive State Approval	0 days	Fri 5/17/02				5/17							
140	Work Backscan Issues (#13, 47)	73 days	Fri 3/15/02											
141	Business Requirements Document (Requirements a	14 days	Mon 4/29/02				5/16							
142	Prepare Business Requirements Document	5 days	Mon 4/29/02											
143	Peer Review	0.5 days	Mon 5/6/02											
144	Deliver Draft Business Requirements Document	0 days	Mon 5/6/02				5/6							
145	State review and provide comments	5 days	Mon 5/6/02											
146	Update Business Requirements Document per corr	2 days	Mon 5/13/02											
147	Peer Review	0.5 days	Wed 5/15/02											
148	Deliver Final Business Requirements Document	0 days	Wed 5/15/02				5/15							
149	Receive State Approval	0 days	Thu 5/16/02				5/16							
150	User Manual	30 days	Mon 5/13/02											
151	Prepare User Manual	20 days	Mon 5/13/02											
152	Peer Review	0.5 days	Tue 6/11/02											
153	Deliver Draft User Manual	0 days	Tue 6/11/02											
154	State review and provide comments	5 days	Tue 6/11/02											
155	Update User Manual per comments	3 days	Tue 6/18/02											
156	Peer Review	0.5 days	Fri 6/21/02											
157	Deliver Updated Draft User Manual	0 days	Fri 6/21/02											
158	Receive State Approval	0 days	Mon 6/24/02											

ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter				
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
159	System Test Plan	14 days	Fri 5/17/02				6/6								
160	Prepare System Test Plan	5 days	Fri 5/17/02												
161	Peer Review	0.5 days	Fri 5/24/02												
162	Deliver Draft System Test Plan	0 days	Fri 5/24/02												
163	State review and provide comments	5 days	Fri 5/24/02												
164	Update System Test Plan per comments	2 days	Mon 6/3/02												
165	Peer Review	0.5 days	Wed 6/5/02												
166	Deliver Final System Test Plan	0 days	Wed 6/5/02												
167	Receive State Approval	0 days	Thu 6/6/02												
168	Prototype of Workstation Operator User Interface	6 days	Tue 4/16/02												
169	Prepare Prototype of Workstation Operator User In	1 day	Tue 4/16/02												
170	DISCUSS DURING ON-SITE INTERVIEWS	2 days	Mon 4/22/02												
171	Detailed Design Document	16.5 days	Mon 6/3/02												
172	Prepare Detailed Design Document	5 days	Mon 6/3/02												
173	Peer Review	2 days	Mon 6/10/02												
174	Deliver Draft Detailed Design Document	0 days	Tue 6/11/02												
175	State review and provide comments	5 days	Wed 6/12/02												
176	Update Detailed Design Document per comments	2.5 days	Wed 6/19/02												
177	Peer Review	1 day	Fri 6/21/02												
178	Deliver Updated Draft Detailed Design Document	0 days	Mon 6/24/02												
179	Receive State Approval	0 days	Tue 6/25/02												
180	Conduct Requirements/Design Review	3 days	Mon 6/24/02												
181	TASK 2 COMPLETE	0 days	Wed 6/26/02												
182	TASK 3 - Install, Configure and Test Software, Equipmen	113 days	Mon 4/29/02												
183	Software Development	66 days	Fri 5/10/02												
184	Develop Additional UCC Functionality	51 days	Mon 6/3/02												
185	Searching (#20)	11 days	Mon 6/3/02												
186	Verification (#15)	12 days	Tue 6/18/02												
187	Add New Fields (#17)	6 days	Wed 7/31/02												
188	Bulk Filings (#22)	12 days	Mon 7/15/02												
189	Two Automated Letter Processes (#23)	23 days	Mon 6/3/02												
190	Workflow (#34)	40 days	Mon 6/3/02												
191	Customization and Configuration (3.1.4)	8 days	Fri 7/5/02												
192	Rejection Process (#37)	20 days	Fri 7/5/02												
193	System Security (#45)	29 days	Mon 6/3/02												
194	Transaction, System and Error Logs (#46)	23 days	Mon 6/3/02												
195	ARS Integration (#18, 19)	25 days	Mon 6/3/02												
196	System Reports (#53)	28 days	Fri 7/5/02												
197	Save Web Transaction Results	4 days	Tue 7/9/02												
198	Double Blind Keying (#15)	12 days	Mon 7/15/02												

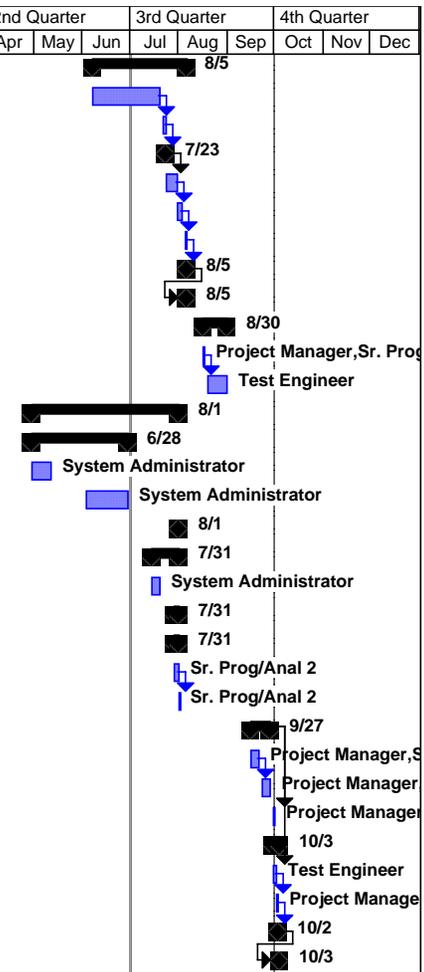


ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
199	Backscan Activities (#13, 47)	15 days	Mon 6/3/02					6/21						
200	Develop image import routine	15 days	Mon 6/3/02											
201	Data Conversion (#6, 48)	65 days	Fri 5/10/02											
202	Request Legacy Data in Flat Files	0 days	Fri 5/10/02					5/10						
203	Receive Legacy Data in Flat Files	0 days	Fri 5/17/02					5/17						
204	Setup Mapping in Conversion Tool	20 days	Mon 5/20/02											
205	Create Conversion Programs	20 days	Tue 6/18/02											
206	Data Conversion 1	1 day	Wed 7/17/02											
207	Resolve Errors	5 days	Thu 7/18/02											
208	Data Conversion 2	1 day	Thu 7/25/02											
209	Resolve Errors	5 days	Fri 7/26/02											
210	Data Conversion 3	1 day	Fri 8/2/02											
211	Resolve Errors	5 days	Mon 8/5/02											
212	Final In-Plant Data Conversion	1 day	Mon 8/12/02											
213	Work Backscan Issues (#13, 47)	71 days	Thu 6/27/02											
214	Detailed Design Document (As Built)	13.5 days	Wed 8/14/02											
215	Prepare Updated Draft Detailed Design Document	2 days	Wed 8/14/02											
216	Peer Review	2 days	Fri 8/16/02											
217	Deliver Updated Draft Detailed Design Document	0 days	Mon 8/19/02											
218	State review and provide comments	5 days	Tue 8/20/02											
219	Update Draft Detailed Design Document per comm	2.5 days	Tue 8/27/02											
220	Peer Review	1 day	Thu 8/29/02											
221	Deliver Final Detailed Design Document	0 days	Fri 8/30/02											
222	Receive State Approval	0 days	Tue 9/3/02											
223	User Manual	13 days	Wed 8/14/02											
224	Update Draft User Manual	5 days	Wed 8/14/02											
225	Peer Review	0.5 days	Wed 8/21/02											
226	Deliver Updated Draft User Manual	0 days	Wed 8/21/02											
227	State review and provide comments	5 days	Wed 8/21/02											
228	Update User Manual per comments	1 day	Wed 8/28/02											
229	Peer Review	0.5 days	Thu 8/29/02											
230	Deliver Final User Manual	0 days	Thu 8/29/02											
231	Receive State Approval	0 days	Fri 8/30/02											





ID	Task Name	Duration	Start	2nd Quarter			3rd Quarter			4th Quarter		
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
232	System Test Procedures	41 days	Fri 6/7/02									
233	Prepare System Test Procedures	30 days	Fri 6/7/02									
234	Peer Review	2 days	Mon 7/22/02									
235	Deliver Draft System Test Procedures	0 days	Tue 7/23/02									
236	State review and provide comments	5 days	Wed 7/24/02									
237	Update System Test Procedures per comments	3 days	Wed 7/31/02									
238	Peer Review	1 day	Mon 8/5/02									
239	Deliver Final System Test Procedures	0 days	Mon 8/5/02									
240	Receive State Approval	0 days	Mon 8/5/02									
241	In-Plant Test Activities	11 days	Fri 8/16/02									
242	Conduct Internal Test Readiness Review	1 day	Fri 8/16/02									
243	Perform In-Plant System Testing	10 days	Mon 8/19/02									
244	Hardware and Software Procurement	66 days	Mon 4/29/02									
245	Order Hardware/Software	44 days	Mon 4/29/02									
246	Coordinate Hardware/Software Purchase and	10 days	Mon 4/29/02									
247	Configuration and Installation Verification w/MI	20 days	Mon 6/3/02									
248	Receive Hardware/Software	0 days	Thu 8/1/02									
249	Hardware and Software Installation Tasks	13 days	Mon 7/15/02									
250	Install Hardware	5 days	Mon 7/15/02									
251	Install Software	3 days	Mon 7/29/02									
252	FileNet Software Install	3 days	Mon 7/29/02									
253	Install FileNet Software	2.5 days	Mon 7/29/02									
254	Test FileNet Software	0.5 days	Wed 7/31/02									
255	On-Site Test Activities	10 days	Mon 9/16/02									
256	Support User System Testing	5 days	Mon 9/16/02									
257	Support User Acceptance Testing	5 days	Mon 9/23/02									
258	Deliver UCC Software	1 day	Mon 9/30/02									
259	Test Results Report	4 days	Mon 9/30/02									
260	Prepare Test Results Report	2 days	Mon 9/30/02									
261	Peer Review	1 day	Wed 10/2/02									
262	Deliver Test Results Report	0 days	Wed 10/2/02									
263	Receive State Approval	0 days	Thu 10/3/02									





ID	Task Name	Duration	Start	2nd Quarter				3rd Quarter			4th Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
264	System Administrator Guide	15 days	Mon 8/12/02								8/30			
265	Prepare System Administrator Guide	5 days	Mon 8/12/02								Project Manager, Sr. Prog			
266	Peer Review	1 day	Mon 8/19/02								Project Manager, Sr. Pro			
267	Deliver Draft System Administrator Guide	0 days	Mon 8/19/02								8/19			
268	State review and provide comments	5 days	Tue 8/20/02								SOS			
269	Update System Administrator Guide per comments	2 days	Tue 8/27/02								Project Manager, Sr. P			
270	Peer Review	1 day	Thu 8/29/02								Project Manager, Sr. P			
271	Deliver Final System Administrator Guide	0 days	Thu 8/29/02								8/29			
272	Receive State Approval	0 days	Fri 8/30/02								8/30			
273	System Launch Report	11.5 days	Mon 8/26/02								9/11			
274	Prepare System Launch Report	3 days	Mon 8/26/02								Sr. Prog/Anal 2			
275	Peer Review	1 day	Thu 8/29/02								Project Manager, Sr. P			
276	Deliver Draft System Launch Report	0 days	Thu 8/29/02								8/29			
277	State review and provide comments	5 days	Fri 8/30/02								SOS			
278	Update System Launch Report per comments	1 day	Mon 9/9/02								Sr. Prog/Anal 2			
279	Peer Review	0.5 days	Tue 9/10/02								Project Manager, Sr.			
280	Deliver Final System Launch Report	0 days	Tue 9/10/02								9/10			
281	Receive State Approval	0 days	Wed 9/11/02								9/11			
282	TASK 3 COMPLETE	0 days	Mon 9/30/02								9/30			
283	TASK 4 - Train System Operators and Support Personne	127 days	Fri 3/15/02								9/12			
284	Training Plans	12.5 days	Thu 8/15/02								9/3			
285	Prepare Training Plans	5 days	Thu 8/15/02								Training Specialist			
286	Peer Review	0.5 days	Thu 8/22/02								Project Manager, Sr. Pro			
287	Deliver Draft Training Plans	0 days	Thu 8/22/02								8/22			
288	State review and provide comments	5 days	Thu 8/22/02								SOS			
289	Update Training Plans per comments	0.5 days	Thu 8/29/02								Project Manager, Train			
290	Peer Review	0.5 days	Fri 8/30/02								Project Manager, Sr. P			
291	Deliver Final Training Plans	0 days	Fri 8/30/02								8/30			
292	Receive State Approval	0 days	Tue 9/3/02								9/3			
293	Operator and User Procedures (Contained in User Man	0 days	Fri 3/15/02								3/15			



**APPENDIX B
PRICING**

Section 1 (Required)		
Pricing for complete solution, consisting of both Phase I and Phase II. Include first year maintenance in this price:		
Price including all hardware:		
\$2,152,408.96		
Maintenance for above solution:	All hardware supplied by vendor:	
Year 2:	\$184,004.09	
Year 3:	\$184,488.35	
Year 4:	\$189,974.90	
Year 5:	\$196,065.61	
Year 6:		
Year 7:		
Year 8:		
Year 9:		
Year 10:		



Pricing Summary

	Phase I	Phase 2	Phase 1 & 2 Totals
Labor	\$ 894,374.31	\$110,648.34	\$ 1,005,022.65
HW/SW	\$ 595,575.96		\$ 595,575.96
UCC Application	\$ 150,000.00		\$ 150,000.00
Y1 Maintenance	\$ 181,875.07		\$ 181,875.07
Film Conversion (4M)	\$ 136,092.00		\$ 136,092.00
Travel	\$ 71,803.32		\$ 71,803.32
Other Direct Costs	\$ 12,039.97		\$ 12,039.97
Phase 1 & 2 Totals	\$ 2,041,760.62	\$110,648.34	\$ 2,152,408.96

Phase 1 Hours

Task 1	392
Task2	2596
Task 3	3680
Task 4	364
Task 5	260
Task 6	136
Total	7428

Phase 2 Hours

Task 7	360
Task 8	520
Task 9	80
Task 10	80
Total	1040

Phase I	HW/SW Maintenance	ESOS Maintenance	Total Phase I
Y2 Maintenance	\$ 73,946.65	\$ 110,057.44	\$ 184,004.09
Y3 Maintenance	\$ 74,430.91	\$ 110,057.44	\$ 184,488.35
Y4 Maintenance	\$ 79,917.46	\$ 110,057.44	\$ 189,974.90
Y5 Maintenance	\$ 86,008.16	\$ 110,057.44	\$ 196,065.61
	Total Phase I Maint.		\$ 754,532.95



FileNET Software

Quantity	Model Number	Description	Price Each	Extended Price	Year 1 Maintenance	Year 2 Maintenance	Year 3 Maintenance	Year 4 Maintenance	Year 5 Maintenance
1	305600	Workgroup Image Services 3.6	\$ 10,637.86	\$ 10,637.86	\$ 2,835.25	\$ 2,835.25	\$ 2,835.25	\$ 3,118.78	\$ 3,430.65
20	305371	Image Services 3.x Dedicated User Lic	\$ 2,792.44	\$ 55,848.80	\$ 14,879.39	\$ 14,879.39	\$ 14,879.39	\$ 16,367.33	\$ 18,004.06
10	305372	Image Services 3.x Shared User Lic	\$ 3,989.20	\$ 39,892.00	\$ 10,637.86	\$ 10,637.86	\$ 10,637.86	\$ 11,701.64	\$ 12,871.81
1	305468	Web Services/IDM Toolkit 3.x	\$ 5,698.85	\$ 5,698.85	\$ 1,519.69	\$ 1,519.69	\$ 1,519.69	\$ 1,671.66	\$ 1,838.83
1	305097	Capture Professional High Volume 3.x	\$ 18,996.18	\$ 18,996.18	\$ 5,103.45	\$ 5,103.45	\$ 5,103.45	\$ 5,613.80	\$ 6,175.17
5	305098	Capture Professional Add'l DocEntry 3.x	\$ 151.97	\$ 759.85	\$ 203.00	\$ 203.00	\$ 203.00	\$ 223.30	\$ 245.63
1	305100	Capture Professional File Import 3.x	\$ 1,899.62	\$ 1,899.62	\$ 506.94	\$ 506.94	\$ 506.94	\$ 557.64	\$ 613.40
1	305090	Capture Toolkit 3.x	\$ 3,799.24	\$ 3,799.24	\$ 1,012.75	\$ 1,012.75	\$ 1,012.75	\$ 1,114.03	\$ 1,225.43
1	305118	Fax Inbound 3.x	\$ 2,279.54	\$ 2,279.54	\$ 607.88	\$ 607.88	\$ 607.88	\$ 668.67	\$ 735.53
1	304675	Fax Outbound 2.x	\$ 4,559.08	\$ 4,559.08	\$ 1,215.76	\$ 1,215.76	\$ 1,215.76	\$ 1,337.33	\$ 1,471.06
1	304672	Print 4.x	\$ 3,039.39	\$ 3,039.39	\$ 809.75	\$ 809.75	\$ 809.75	\$ 890.72	\$ 979.79
1	502222	Optical Drivers-High Capacity	\$ 9,118.16	\$ 9,118.16	\$ 2,449.66	\$ 2,449.66	\$ 2,449.66	\$ 2,694.62	\$ 2,964.08
				\$ 156,528.57	\$ 41,781.38	\$ 41,781.38	\$ 41,781.38	\$ 45,959.52	\$ 50,555.47

Professional Services

Quantity	Model Number	Description	Price Each	Extended Price
1	201005	Image Services Implement Pkg-Foundation	\$ 16,869.74	\$ 16,869.74
1	200737	Capture Implementation Pkg-Basic	\$ 5,783.91	\$ 5,783.91
1	200057	Print Field Integration	\$ 2,120.77	\$ 2,120.77
1	200061	Fax Field Integration per 8-line Fax Svr	\$ 2,120.77	\$ 2,120.77
				\$ 26,895.19

FileNET Summary	
Software	\$ 156,528.57
Services	\$ 26,895.19
Annual Maintenance - Year 1	\$ 41,781.38
Total FileNET	\$ 225,205.14

Y2 Maintenance	\$ 41,781.38
Y3 Maintenance	\$ 41,781.38
Y4 Maintenance	\$ 45,959.52
Y5 Maintenance	\$ 50,555.47



**Hardware and Software Required for Michigan
Production Environment**

Qty	Item Description	Price Each	Extended Price	Service	Maintenance				
					Y1	Y2	Y3	Y4	Y5
App and DB Servers									
1	Application Server - Dell 6450 (1) 900 MHz Xeon w/ 1M Cache, 2 GB RAM, 2-Mirrored 18GB, Dual Channel RAID Controller, 100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$15,926.35	\$15,926.35	3yrs GOLD 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
1	Database Server - Dell 6450 (2) 900 MHz Xeon w/ 1M Cache, 2GB RAM, 2-Mirrored 18 GB, Dual Channel RAID Controller, (2)100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$21,143.25	\$21,143.25	3yrs GOLD 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
1	PowerVault 220S Disk Arrays 14-Bay Hot Swap Enclosure w/4 73GB Drive	\$9,118.30	\$9,118.30	3yrs 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
App and DB Servers Sub-Total			\$46,187.90						

Qty	Item Description	Price Each	Extended Price	Service	Maintenance				
					Y1	Y2	Y3	Y4	Y5
Imaging System									
1	Imaging Server - Dell 6450 (2) 900 MHz Xeon w/ 1M Cache, 2GB RAM, 2-Mirrored 18 GB, Dual Channel RAID Controller, 100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$21,143.21	\$21,143.21	3yrs GOLD 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
1	PowerVault 220S Disk Arrays 14-Bay Hot Swap Enclosure w/11 73GB Drive	\$13,314.47	\$13,314.47	3yrs 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
1	Scanner 9520D DUPLEX 160PPM/32IPM	\$50,762.32	\$50,762.32	4 Hour Response	\$12,574.90	\$13,329.39	\$13,329.39	\$14,129.16	\$14,976.91
1	OSAR HP SureStore Optical 1105M Jukebox 6 Dr 128 Slots	\$35,366.91	\$35,366.91	HP 4 Hr response on site	\$2,762.67	\$4,137.20	\$4,343.60	\$4,560.78	\$4,901.58
128	HP 9.1 GB WORM cartridges Formatted.	\$85.62	\$10,959.36						
1	Film Imager Kodak Archive Writer 4800	\$41,020.40	\$41,020.40	Next-Day onsite	\$5,557.09	\$5,557.09	\$5,834.94	\$6,126.41	\$6,432.62
2	Adaptec SCSI Controller, SCSI 2(AHA-2944UW)	\$425.29	\$850.58						
1	SCSI cable, Ultra Wide(68M-68M)	\$79.39	\$79.39						
1	Adaptec SCSI Controller, Ultra160(AHA-29404)	\$221.15	\$221.15						
1	SCSI cable, High Density (50M-50M)	\$45.36	\$45.36						
Imaging System Sub-Total			\$173,763.15		\$20,894.66	\$23,023.68	\$23,507.94	\$24,816.35	\$26,311.11

Qty	Item Description	Price Each	Extended Price	Service	Maintenance				
					Y1	Y2	Y3	Y4	Y5
Printing & Fax Services									
1	Print & Fax Server - Dell 2500 (1) 1 GHz Pentium III w/256 Cache, 1 GB RAM, (2) 18 GB Drive, 100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$5,714.73	\$5,714.73	3yrs SILVER next business day N/C	Included	Included	Included	Included	Included
1	4 Line Gamalink CPI/400 PCI Fax Card	\$3,287.76	\$3,287.76						
4	HP LaserJet 4050 TN Printers	\$1,238.44	\$4,953.75	3 Year Next-Day onsite	Included	Included	Included	Not Available	Not Available
Print & Fax Server Sub-Total			\$13,956.24						

Qty	Item Description	Price Each	Extended Price	Service	Maintenance				
					Y1	Y2	Y3	Y4	Y5
Server Peripherals									
1	Autoloader Tape Storage Rack-mount (120T DLT1) w/ 5 Tape	\$7,305.87	\$7,305.87	3yrs SILVER 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
1	Dell Server Rack w/ 8 port KVM switch	\$3,185.69	\$3,185.69	3yrs SILVER 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
Server Peripherals Sub-Total			\$10,491.56						

	Client Workstations	Price Each	Extended Price	Service	Y1	Y2	Y3	Y4	Y5
24	Dell Optiplex GX150, 1 Ghz, 256 MB, 20 GB, 21" Monitor, Windows 2000 Pro.	\$2,015.41	\$48,369.82	3yrs SILVER 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
2	TLP2742 Label Printers	\$408.28	\$816.55	Depot					
0	QS 1000 Hand Held Scanner	\$193.93	\$0.00	Depot					
Client Workstation Sub-Total			\$49,186.37						

	Production Server Software	Price Each	Extended Price	Service	Y1	Y2	Y3	Y4	Y5
4	Microsoft SQL 2000 Per Processor	\$5,900.72	\$23,602.88						
1	Vertias BackupExec 8.6 w/open file option	\$1,694.35	\$1,694.35						
3	Vertias BackupExec 8.6 Remote Agents	\$264.25	\$792.75						
1	Kodak Archive Writer Software 3.0	\$5,301.92	\$5,301.92						
1	Facsys Server Lic.	\$901.61	\$901.61		\$283.53	\$283.53	\$283.53	\$283.53	\$283.53
25	Facsys Client Lic.	\$40.83	\$1,020.75		\$85.06	\$85.06	\$85.06	\$85.06	\$85.06
1	Facsys Install Support & Y1 Maint.	\$1,548.05	\$1,548.05						
Production Software Sub-Total			\$34,862.31		\$368.59	\$368.59	\$368.59	\$368.59	\$368.59

Production Environment Summary

App and DB Servers	\$46,187.90
Imaging System	\$173,763.15
Printing & Fax Services	\$13,956.24
Server Peripherals	\$10,491.56
Client Workstations	\$49,186.37
Production Server Software	\$34,862.31
Yr 1 Maintenance	\$21,263.25
Totals	\$349,710.78

Y2 Maintenance	\$23,392.27
Y3 Maintenance	\$23,876.53
Y4 Maintenance	\$25,184.94
Y5 Maintenance	\$26,679.70

Optional, Not included in total price				Maintenance					
Qty	Item Description	Price Each	Extended Price	Service	Y1	Y2	Y3	Y4	Y5
1	Film Retriever Kodak Intelligent Microimage Scanner	\$20,606.60	\$20,606.60	Next -Day onsite	\$2,721.84	\$2,721.84	\$2,885.15	\$3,363.74	\$3,210.64
1	Adaptec SCSI Controller, 19160, Ultra160	\$296.03	\$296.03						
1	Cable, 50M-50M High Density	\$45.36	\$45.36						
1	Kodak IMS Software	\$3,402.30	\$3,402.30						
Optional Total			\$24,350.29						



Development Environment

Qty	Item Description	Price Each	Extended Price	Service	Maintenance				
					Y1	Y2	Y3	Y4	Y5
1	Dev. Database Server - Dell 2550 1-1GHz Pentium III w/ 256K Cache, 1GB RAM, (3) 18 GB RAID 5, PERC3/DC RAID Controller, 100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$6,846.61	\$6,846.61	3yrs SILVER 24X7 4 hr reponse	Included	Included	Included	Included	Included
1	Dev. Application Server - Dell 2550 1-1GHz Pentium III w/ 256K Cache, 512 MB RAM, (2) 18 GB, 100 NIC. Windows 2000 Server w/ 5 CAL's (Factory Installed).	\$6,619.79	\$6,619.79	3yrs SILVER 24X7 4 hr reponse N/C	Included	Included	Included	Included	Included
Development Server Sub-Total			\$13,466.40						

Qty	Development Servers Software	Price Each	Extended Price
1	Microsoft SQL 2000 Dev. 5-user	\$1,783.94	\$1,783.94
2	Vertias BackupExec 8.6 Remote Agents	\$264.25	\$528.49
2	Microsoft Visual Studio 6 Ent. Edition	\$2,040.25	\$4,080.49
1	Seagate Crystal Reports 8.5 Dev 5-user	\$2,264.23	\$2,264.23
1	Build Manager License and Media	\$507.74	\$507.74
1	Ehelp RoboHelp 9.1	\$2,586.71	\$2,586.71
Development Software Sub Total			\$11,751.60

Development Environment Summary	
Servers	\$13,466.40
Software	\$11,751.60
Total	\$25,218.00

Workflow Software		
@Work, @Work SDK, @Work Rules server and run-time. @Work Office reporting server component and run-time	25 User	\$ 58,486.67

Y1 Maintenance	\$ 8,773.00
Y2 Maintenance	\$8,773.00
Y3 Maintenance	\$8,773.00
Y4 Maintenance	\$8,773.00
Y5 Maintenance	\$8,773.00

Note: Additional cost per seat is \$983.26