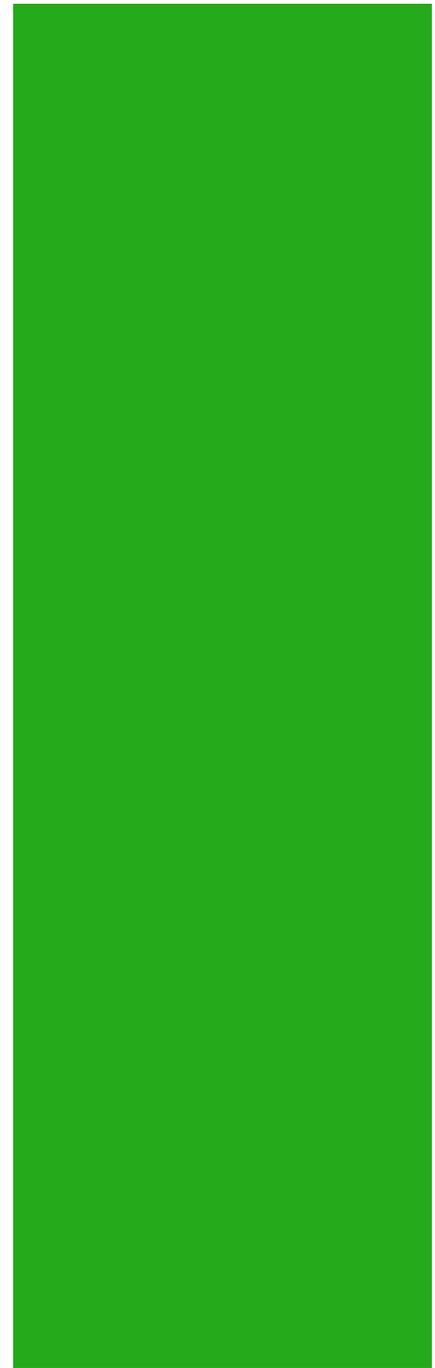




**Unication**

**Vic Jensen**



# WHO WE ARE



- A major supplier of voice and critical messaging solutions to Operators in Asia, the Americas and Europe
- A Taiwan based company founded in 1992 with extensive experience designing and manufacturing wireless communications products
- An ODM to major telecommunications companies
- A Corporation of more than 300 associates worldwide with Engineering Design Centers in Taipei, China and Vancouver, BC
- About quality. Our Accelerated Life Testing facility, ensures the highest quality products for our customers. And, our factories are ISO 9001 Certified
- America's Corporate Office is in Arlington, Texas

# ACCELERATED LIFE TESTING



- Simulates multi-years of field use
- Temperature Cycling
- Drop Testing
- Humidity
- Static Discharge

# NOT YOUR FATHER'S PAGER



# EVOLUTION OF UNICATION'S ALPHA PAGERS



- **2003**- Introduced the Alpha GOLD and Alpha Elite
  - Functionally the same as the Motorola versions
- **2008**-Introduced the Legend Series
  - More Addresses
  - Extended Alerting and Message Storage Options
- **2010**- Introduced the Dual Frequency Model
  - On Site to Wide Area Roaming
- **2011**- Introduced the Legend+
  - Only pager that automatically migrates from Wide Band to Narrow Band Environments
- **2012**- Introduced the Legend Secure
  - AES 128 Bit Encryption
  - Designed to Minimally Impact Air Time
  - Provided DLLs/Linux Libraries to Provide System Support

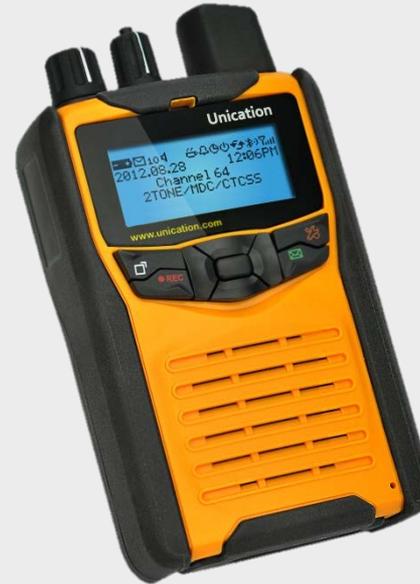
# PUBLIC SAFETY PORTFOLIO



- IP64
- 64 Addresses
- Large Display
- Extra Loud Audible Alerts
- AES 128 Encryption
- Dual Channel
- Rechargeable or Alkaline
- Multiple Color Backlights



- IP67
- 1024 Channels
- Conventional, P25, DMR
- Best in Class RF
- Low Band, VHF, UHF, 700/800MHz
- Integrated GPS
- Software Defined



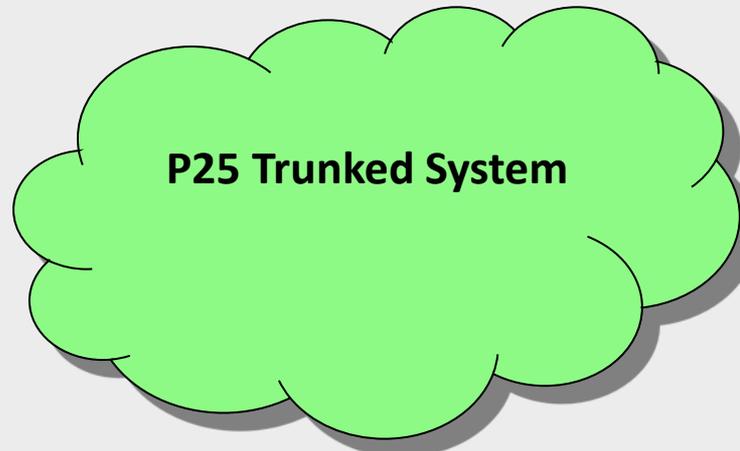
- IP67
- 64 Channels
- 16 Minutes Voice Storage
- 16 Minutes of Voice memo
- 2 Tone + MDC
- Best in Class RF
- NiMH or Alkaline
- Wav File Alerts
- Color Backlights
- PL/DPL
- Software Defined

# G4 SERIES SOLUTIONS



- IP67
- Release 1- 700/800MHz, Conventional, P25 Trunking and P25 Conventional
- Release 2- VHF/700/800 or UHF/700/800MHz , Conventional, 2Tone, P25 Trunking, and P25 Conventional
- 32 Minutes of Voice Message Storage
- 32 Minutes of Voice Memo Storage
- 128 Channels
- 64 IDs
- Out of Range Alert
- Wav Files
- Integrated Bluetooth
- Lithium Ion Battery Pack
- USB For Programming and Charging
- Charger / Amplifier Accessory
- Software Defined

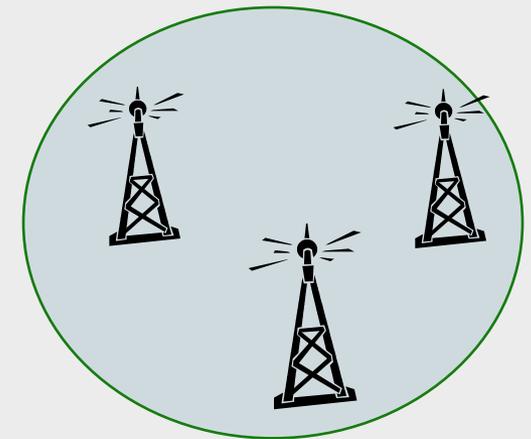
# HOW DOES IT WORK?



Site 1



Site 2

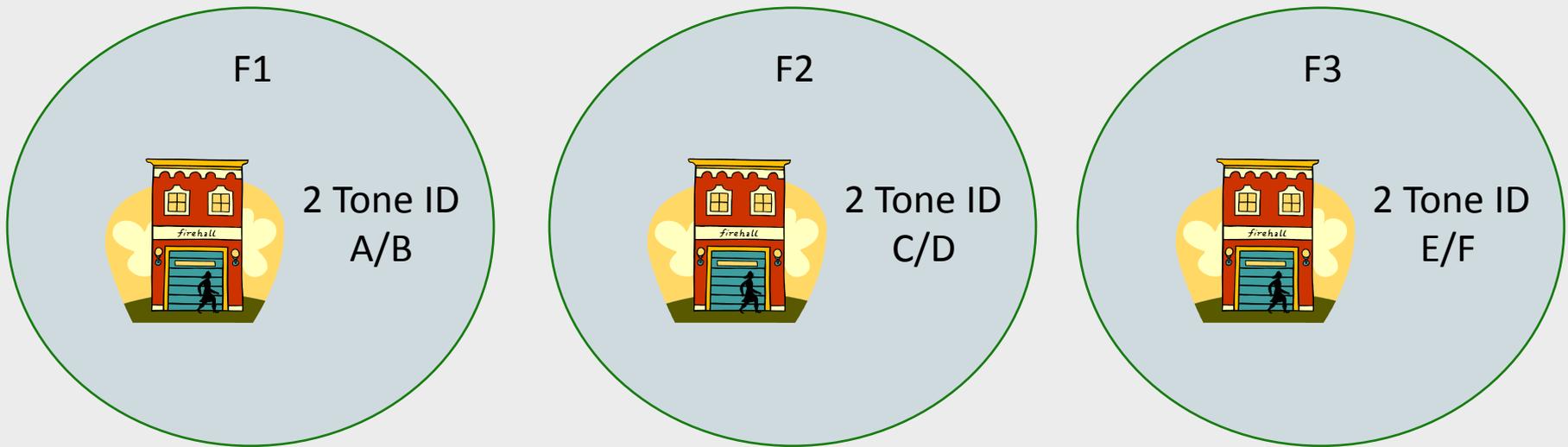


Simulcast Area

- G4 is programmed with Site/Zone Control Channel(s) and TGIDs
- TGIDs are “Forced” to “Critical Sites”
- A Radio need not be Registered/Affiliated to this Critical Site/Zone

# CASE 1- MIGRATE TO P25

## Current Analog Environment



- Three Fire Stations with individual “Tone Out” 2 Tone IDs
- On different RF frequencies, but they could be on a common RF frequency where PL/DPL is used for privacy.
  - If on a common frequency, it is possible each Fire Station’s pager may be programmed with each other’s IDs for Mutual Aid reasons.

# CASE 1- MIGRATE TO P25

## New P25 Environment



- Three Fire Stations with individual Talk Group IDs
- The TGIDs are “Forced” to specific sites/simulcast areas , a 2-Way radio is **not** needed at each site for TGID affiliation.
- It is possible each Fire Station’s pager may be programmed with each other’s IDs for Mutual Aid reasons.

# CASE 2- P25 AND ANALOG - DIFFERENT COVERAGE AREAS



P25 Coverage

TAC Communications  
uses TGID XX

F1



- 2 Tone ID A/B
- TGID XX

- G4 is programmed for 2 Tone ID A/B and TGID XX
- When the G4 is in P25 coverage it listens to the TAC communications on TGID XX

# CASE 3- P25 AND ANALOG CO-EXIST- SAME OR OVERLAPPING COVERAGE AREAS



## P25 Coverage

- TAC Communications uses TGID XX
  - Dispatch Uses TGID YY

## F1



- 2 Tone ID A/B
- TGID XX
- TGID YY

- G4 is programmed for 2 Tone ID A/B ,TGID XX and TGID YY
- G4 can be dispatched on 2 Tone or P25 (TGID YY). Provides for redundant communications solution.
- When at the incident, the G4 listens to the TAC communications on TGID XX

# SYSTEM IMPLICATIONS



- Perform Propagation Studies
  - Pager RF Performance is 3-6dB degraded versus a Portable/Mobile at 700/800MHz
  - We are looking at further antenna optimization
- Map Sites/Zones for Specific TGIDs
- Review Traffic Loading
  - Need more Traffic Channels
- Policy Impacts
  - Programming
  - Monthly Charges
- Dispatching Process

# MILESTONES



- P25 Pre-Beta Testing is On Going
- P25 Beta Test Units available in late February
- Formal Launch in April