



Cognitive Radio Networks for Police Applications

About xG Technology



THE COMPANY

- 10 years experience developing wireless communications technologies
- Headquartered in Sarasota, FL; engineering facilities in Fort Lauderdale, FL
- 84 employees (64 in engineering)
- Broad IP portfolio: 60 US patent matters (49 issued) 138 international (64 issued)
- Shares are traded on NASDAQ (symbol: XGTI)

OUR PROPRIETARY XMAX COGNITIVE RADIO TECHNOLOGY

- Allows all wireless devices to automatically identify and utilize available frequencies to ensure optimal communications
- Contains end-to-end IP architecture supports all applications/ services/technologies
- Can operate in unlicensed, licensed and shared spectrum
- Is an all digital communications system for higher performance and lower operating costs
- Mitigates interference found in crowded wireless communication environments



xMax Benefits in Policing Operations



- Can serve as a primary or backup communications system
- Supports key applications:
 - mobile voice (two-way and push-to-talk)
 - broadband data (access to centralized information and productivity apps)
 - video (push/receive mobile video and video surveillance)
 - position location
 - sharing and collaboration tools
- Provides high level of resilience and continuity of operations
- Post-disaster emergency communications: can immediately deploy expeditionary communications to provide coverage wherever and whenever needed
- Optimized for long range and challenging propagation conditions







xMax Key Features



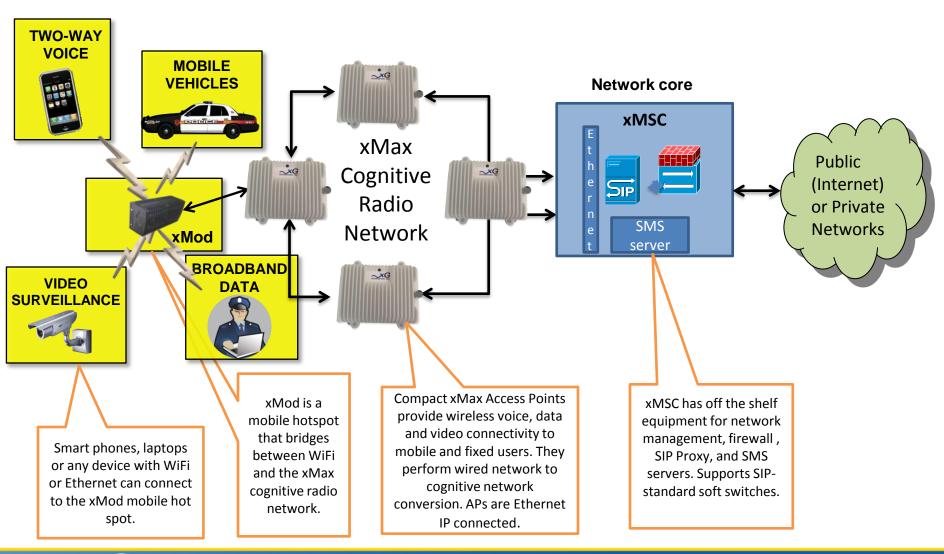
Seamless delivery of PTT/voice/mobile data/video applications to support all aspects of law enforcement operations

- Flexible Deployment can be used as a permanent wide area network,
 mobile emergency command and control system or both
- **Self-Optimizing** uses Dynamic Spectrum Access technology to maximize throughput and reliability, delivering a licensed spectrum experience in unlicensed spectrum
- Leverages existing smartphones, laptops, tablets, etc. directly into the xMax mobile radio network to save costs and offer unmatched applications and functionality
- **End-To-End IP Architecture** 100% digital radio system simplifies integration with LTE, P25 and other networks via industry-standard interfaces and protocols
- **Tactical and Scalable Deployments** rapidly deployable size and weight, proven integration with satellite and point to point backhaul radios for EOC operations
- **Difficult to Jam or Hack** Dynamic channel/band hoping makes jamming attacks and penetrations far more difficult than traditional analog radio systems



xMax Network Diagram: Police & Public Security Applications









- Pre-disaster
- Sectorized cellular coverage in populated areas
- Unpopulated area with no cellular coverage







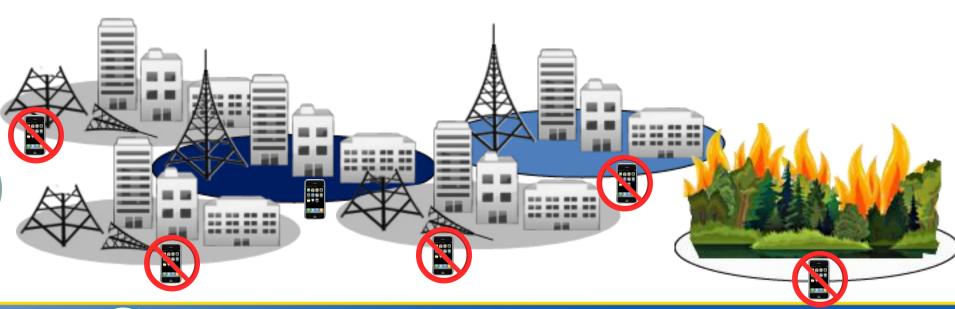
► Disaster occurs, creating partial cellular blackout







► Aerial layer knocks-out terrestrial cellular network







xMax does not conflict with terrestrial cellular

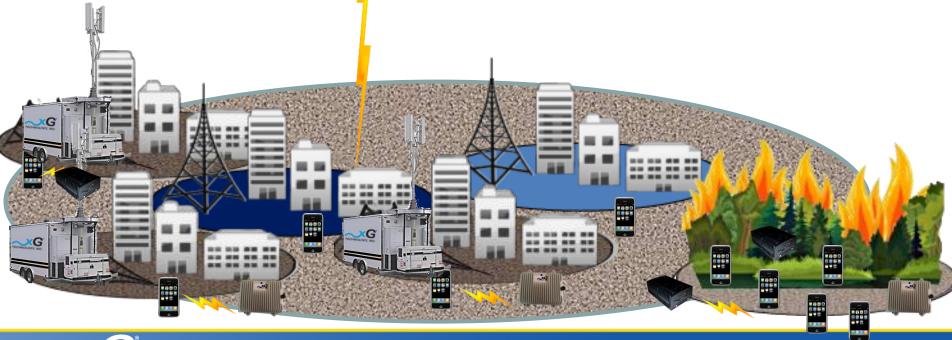






- xMax embraces cellular devices, reestablishes coms
- ► Tactical cellular replaces aerial layer
- Operates in parallel with cellular network









Easy breakdown once networks are back up

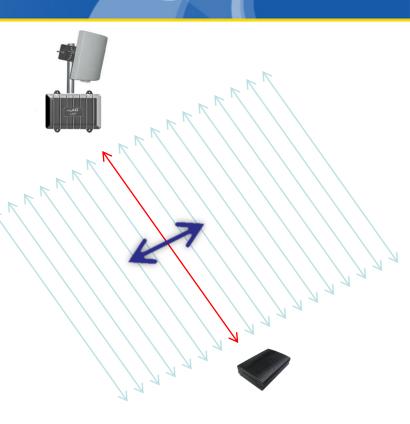




About Cognitive Radio



- Groundbreaking, field-proven technology
- Identifies unused spectrum and quickly tunes to those frequencies
- Instantly finds other spectrum if interference is detected while protecting existing band users
- Can mitigate interference found in high noise environments



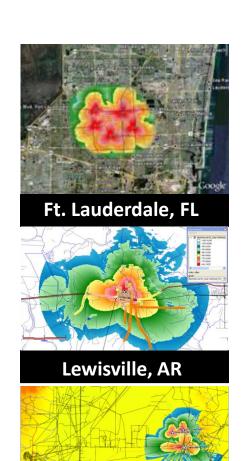
"I ran an excursion where we attempted to jam it with conventional military jamming systems, and we were unable to do it, xMax was able to stay ahead of the jammers that were trying to attack it and kept the communications systems up and operational throughout the two weeks that I ran the jammers".

Mike McCarthy, Director of Operations, Brigade Modernization Command, Ft. Bliss, TX



Field-Tested Technology





White Sands, NM

Urban/Suburban - Ft. Lauderdale, Florida

- fully mobile 32 sq. mile network
- densely populated
- interference-heavy environment
- extensive testing has allowed continual system performance enhancement and development of robust system

Rural – Lewisville, Arkansas & MacClenny, FL

- underserved market
- low noise, excellent range

Military - US Army - TX, NM, NJ

- lab validated (CERDEC)
- garrison enterprise solution
- tactical cellular austere desert



Summary



xMax delivers:

- Low capital and operating costs
- Seamless mobility and carrier-class reliability
- Radio flexibility frequency agile, support for licensed, unlicensed and shared spectrum
- Interference-resistant, resilient system operates in environments where traditional cellular and other communications systems can't
- High network availability rapidly deployable, highly scalable
- Support for key applications and devices already being used

