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December 9, 2011

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VIA ECFS

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

RE: Notice of Ex Parte Presentation
PS Docket No. 06-229
PS Docket No. 11-15

Dear Ms. Dortch:

On Dec. 8, 2011, Harold Mordkofsky of this firm and representatives of xG Technology, Inc. (xG) and its parent company, MB Technology Holdings, LLC, met with members of the Commission's staff to describe xG's breakthrough cognitive radio technology and its capabilities in meeting public safety and homeland security goals in emergency and mission critical situations. Also discussed was the prospect of xG obtaining a waiver of the power limitations in Part 15 of the Commission's Rules to operate in the unlicensed 900 MHz with increased power in very low population density rural areas to facilitate bringing cost-effective fixed and mobile broadband service to rural America. In this latter regard, the xG representatives also described xG's proprietary techniques for interference avoidance and mitigation.

Attached are documents that were distributed to the Commission's staff. The notations on the attachments as to their confidentiality are no longer applicable and may be dispensed with.

The xG representatives were George Schmitt (CEO of xG's parent), John Coleman (CEO of xG) and Pertti Alapuranen (xG's Director of System Design).

The first meeting of the day was with members of the Bureau of Public Safety and Homeland Security, including Robert Pavlak (Director, Emergency Response Interoperability Center), David Furth (Deputy Chief), Jennifer Manner (Deputy Chief), Kenneth Moran, Sr.

(Deputy Chief and Chief Preparedness Officer), Richard Lee (Associate Chief for National & Homeland Security) and William D. Lane (Chief Engineer).

The second meeting was with members of the Office of Engineering and Technology, including Julius Knapp (Chief), Ira Keltz (Deputy Chief), Bruce Romano (Associate Chief - Legal), Geraldine Matisse (Chief - Policy and Rules Division) and Walter Johnston (Chief - Electromagnetic Compatibility Division).

If you have any questions regarding this matter, please do not hesitate to contact the undersigned.

Respectfully submitted,

/s/ Harold Mordkofsky

Harold Mordkofsky

Cc: Robert Pavlak
David Furth
Jennifer Manner
Kenneth Moran, Sr.
Richard Lee
William D. Lane
Julius Knapp
Ira Keltz
Bruce Romano
Geraldine Matisse
Walter Johnston



White Paper:

xMax System—Benefits of Increased Power in Unlicensed Bands using Cognitive Radio

Dec 2011

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Introduction

xG Technology, Inc. has developed core intellectual property (IP) within the field of carrier-class cognitive cellular radio —including dynamic spectrum access (DSA), interference avoidance and interference mitigation technologies. The company has implemented its IP on one of the most advanced and power efficient fully programmable baseband processors available.

Having begun to productize its Software Defined Radio(SDR) solution for the US Department of Defense, xG Technology believes that its cognitive radio IP, particularly its layered interference mitigation techniques, are also of significant value to commercial spectrum stakeholders that envision a future with more rather than less congested airwaves.

Using its Software Defined Radio approach, xG Technology has developed a mobile VoIP and data cellular technology called xMax. xMax represents a complete, scalable mobile broadband transport technology and system implementation that is capable of supporting a wide range of smartphones, tablets, netbooks and other end-user devices.

Through the use of interference mitigation techniques that are built into the physical layer, xMax is capable of making unlicensed spectrum communications appear to users as licensed band communications. The ability to effectively mitigate the interference in congested and chaotic unlicensed bands both threatens and bodes well for cellular communications. Reshaping how free, shared spectrum can be utilized globally, xMax technology can be adapted to a wide array of TV white spaces, unlicensed and licensed frequencies.

The xMax over-the-air protocol was designed to support large-scale high mobility voice and data across an Internet Protocol platform. Layering low-cost to free VoIP calling services, such as Skype, onto free spectrum cellular represents a powerful combination for increasingly cost-conscious enterprises and consumers, as well as, those seeking to simply control portions of their wireless connectivity away from incumbent cellular carriers.

xG Technology believes that xMax is of particular relevance to companies that may be concerned with:

- Seeking alternatives that counter cellular carrier market consolidation,
- Strategically ensuring future access to spectral capacity;
- Guaranteeing unfettered wireless delivery of packets to consumers.

Objective

xG will demonstrate the ability of the xMax system to use increased transmit power for unlicensed bands in rural areas to improve the cost and quality of service to consumers in the disadvantaged rural areas. This improved system will show the benefits in economic impact and interference protection to other band users.

Rural Telephony Landscape

Rural operators have long provided efficient service to the communications disadvantaged due to location. Today these operators are seeking ways to effectively provide high speed data to this same collection of geographically dispersed customers. Today they face the challenge of affordably providing data service over a large geographic area to a small number of customers. The recent USF reform incents the rural telco to provide reliable broadband data to all users. Cellular or WiMAX equipment is expensive and licensed spectrum must be obtained. Many rural telco operators do not have access to licensed spectrum, so this is not an option for them. Wired systems like DSL lack mobility have distance limitations on installed plant. This leaves the rural telco operators searching for an effective way to meet the USF regulations and accomplish the national mandate to bring mobile broadband data service to all customers. xG Technology is building a solution to this dilemma with the xMax system.

Benefit of Increased Power in Unlicensed Bands

The primary benefit of using increased power in the 900MHz band for rural areas is increased range. The xMax system uses a 2x4 MIMO PHY transmission system. The transmitters both transmit the same data steam. This transmit diversity increases the reliability and range of the signal. The receiver system is composed of 4 separate paths that allow Maximal Ratio Combining to produce a 6dB gain in link budget. This table illustrates the range difference for the xMax system operating at 915 MHz with 100Ft AP height and 3 FT subscriber device using FCC standard 36dB EIRP and increased EIRP of 42 dB EIRP. This range was calculated using a HATA propagation model. The example shows the increase in coverage area using increased transmit power.

Power	Sq Miles Covered
36 dB EIRP	108.2
42 dB EIRP	237.1

Table 1- Comparison of Coverage Area with Increased Power

If the assumption is equal subscriber distribution per square mile for the rural area, then more than twice as many subscribers can be covered with the same equipment cost using a 6dB power increase. This will greatly improve the economics for rural broadband deployment.

xMax Interference Mitigation

As output power increases, the assumption is that unwanted interference to other users in the band increases. The xMax system has multiple ways to limit this interference.

Cognitive operation including DSA and interference mitigation

xMax employs advanced cognitive radio and networking techniques, including dynamic spectrum access to provide reliable operation in unlicensed but interference prone spectrum. xMax's dynamic spectrum access technology is frequency agnostic and can be re-tuned to operate in TV white spaces, unlicensed or licensed

commercial bands.

Cognitive sensing, interference mitigation

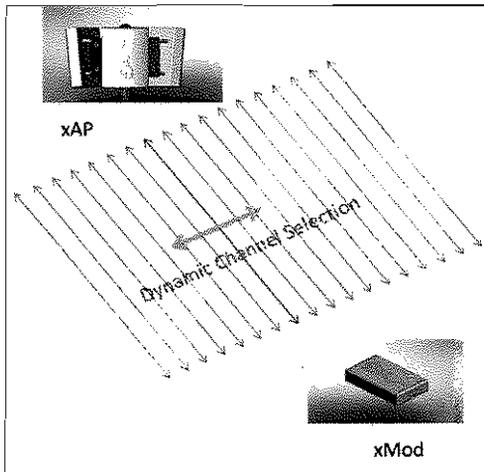


Figure 1- Dynamic Channel Selection

Dynamic spectrum access and interference mitigation are the cornerstones of xMax radio technology. The commercial xMax system utilizes the 902-928 for license free operation. Using this freely available band allows the xMax system to scan frequencies for avoiding the use of channels with interferers. Both the xMax access node and end-user devices are frequency agile and have several built-in capabilities to mitigate interference by first employing advanced signal/spatial processing as well as dynamically switching channels to avoid overwhelming interference or jamming.

Advanced antenna, PHY layer and software radio design

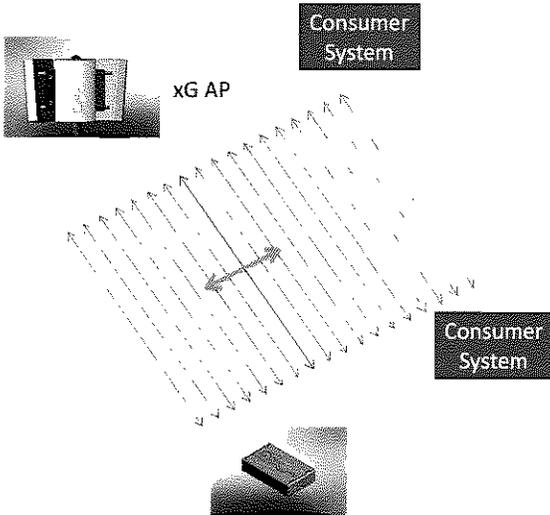
xMax uses a Physical Layer implementation that maximizes range and reliability while minimizing power consumption. The system continually self-adjusts to optimize the wireless communications link. It was also designed so that end users *and* network infrastructure are capable of high mobility. The patented technologies incorporated to support these capabilities also enable xMax to minimize power consumption and maximize battery life while maintaining robust and secure connectivity.

The xMax PHY layer is designed with a proprietary multiple input multiple output (MIMO) antenna and radio configuration. This MIMO system enables longer range, higher throughput and is a key enabler of the xMax interference mitigation technology.

The system uses orthogonal frequency division modulation (OFDM) which is found in other state-of-the-art wireless systems such as LTE, WiMAX, WiFi and other 4G+ solutions. The xMax PHY supports adaptive modulation with multiple modes that allow the system to dynamically self-configure for the optimal combination of range, throughput and interference rejection.

Reducing interference to other users on the band

xG AP Measures Interference on Initialization



The xMax system described above minimizes interference to other band users even when high power is utilized. Figure 2 shows a case where the AP detects an interferer on multiple xMax channels. The xG AP scans and determines an existing consumer system is operating on xG channels. The xG system uses frequencies with lowest amount of interference detected.

Figure 2 xG AP Detects Interference

xG Subscriber Device Detects Interference

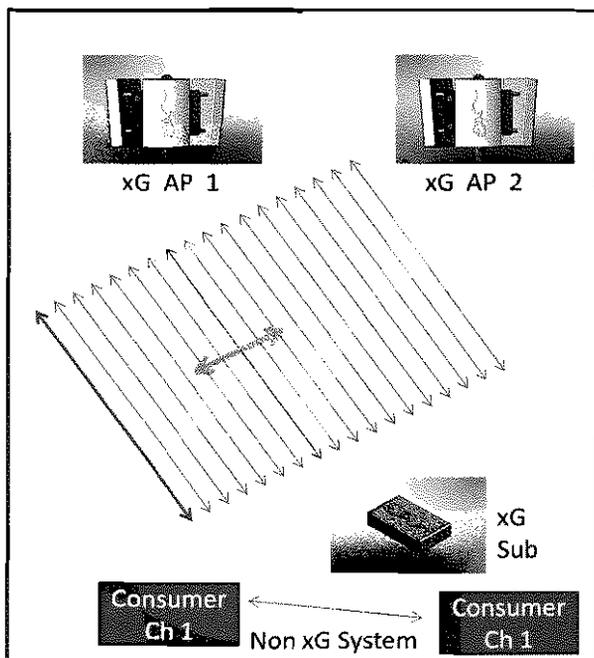


Figure 3 xG Subscriber Device Detects Interference

In this example the remote xG subscriber devices (xMods) detect interference that the xAP cannot detect. The xG AP 1 is operating on a channel that overlaps the consumer Ch 1. The AP is distant but the xG subscriber device is interfered with. The xG subscriber device senses the interference and switches to xG AP 2. The xMod reports the interference to the xAP so that xAP can change its channel if another channel has less interference.

xG Detection vs. Interference Range

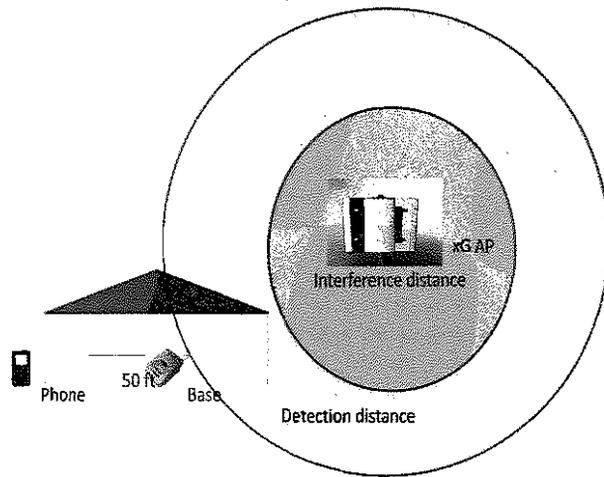
In all cases the xMax system is fair with other band users. The xMax system can in many cases detect other systems before it interferes and moves before it interrupts its own data flow. The xMax detection range is large enough that it can be fair in its spectrum use.

802.11 Example

The 802.11a/b/g/n standards use -62dBm Clear Channel Assessment (CCA) threshold for a 20MHz signal. If the power in the channel is less than CCA threshold the system assesses the channel to be free and can transmit. This protocol is designed to play "fair" with other users. However, in reality, the protocol steps over other users because it expects other users to use the same protocol. A cordless phone does not sense and transmits over 802.11 burst causing packet failure. Similarly, 802.11 transmits packets that are up to several milliseconds in time thus blocking large amount of spectrum (20MHz) thus interfering with other users with real-time communication needs.

xMax receiver sensitivity -80dBm is much better than -62dBm. An 802.11 system would not detect xMax signal and would cause large interference to the xMax operation. xMax detects this interference and changes to another channel if one is available with less interference. If no "better" channel is available xMax will use its receiver interference mitigation technology to remove the interference and maintains the data link.

Cordless Phone Example



A consumer has 900 MHz cordless phone at 900MHz located near an xG transmitter. Typical transmit power for cordless phones use low power and need about 6dB Signal to Noise ration to operate. Assume distance between cordless phone and its base is 50 ft. The xG system can detect the cordless phone transmitter and will take action to avoid interfering with this user if the interference is continuing.

Conclusion

The xMax system is designed to mitigate interference. One of the methodologies it uses to mitigate interference is to sense interference from other systems and avoid them by switching to other channels. With its advanced receiver system and DSA capabilities the xMax network can operate at significantly higher transmit power levels than prescribed by the FCC rules today and still share the spectrum fairly with other unlicensed systems. Therefore xG systems is asking for an experimental license to test and increased power (approximately 6dB over current FCC part 15 rules) in rural and ultra rural areas.

xMax System Overview

The xMax mobile cellular solution leverages a standard cellular architecture – with some notable enhancements. The following are the major components of the system:

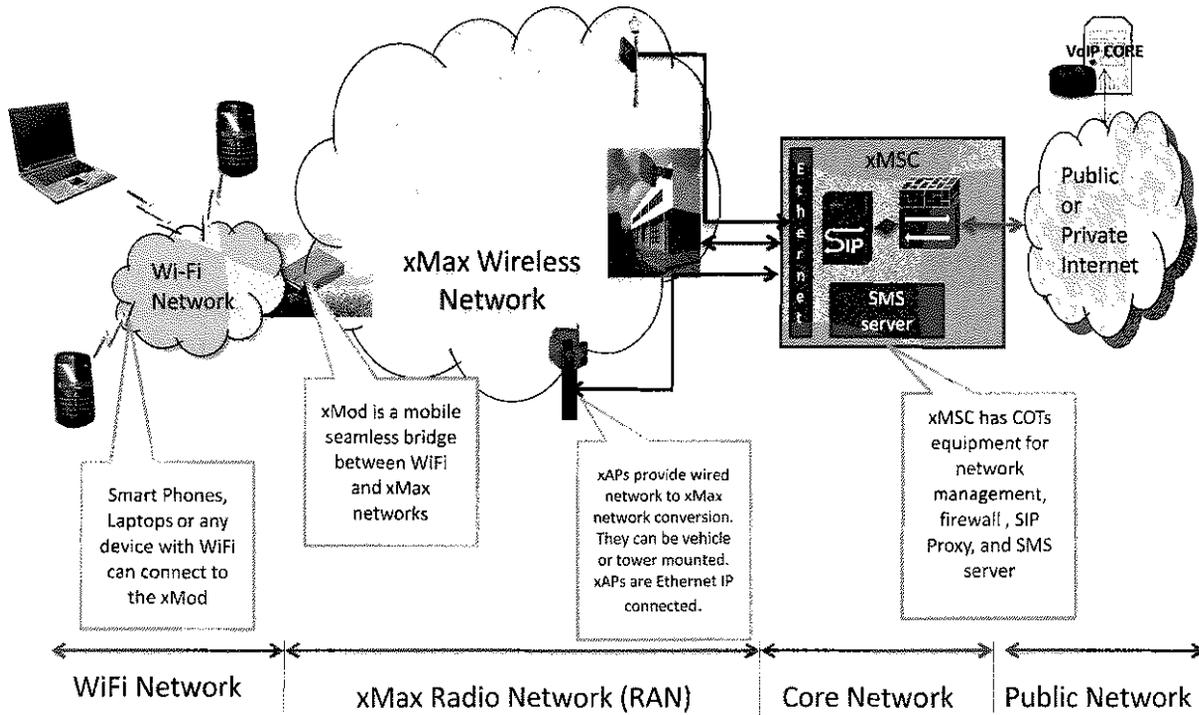
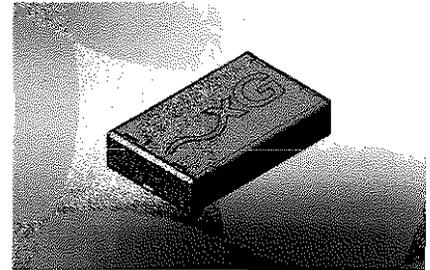
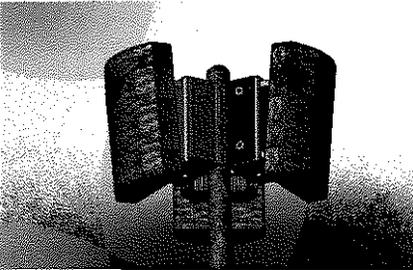


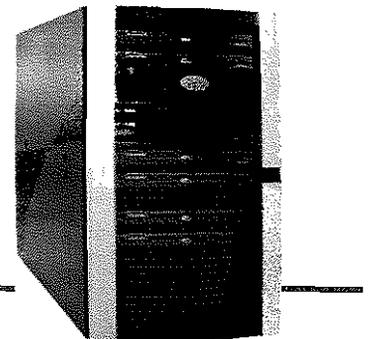
Figure 4 – xMax Mobile Cellular Network

xMod: the xMod is a small battery powered personal router that bridges WiFi-enabled end user devices to the cognitive radio transport layer of the xMax system. The current xMod product implementation can deliver up to 3.5Mbps to the connected end user device(s) under real world conditions.

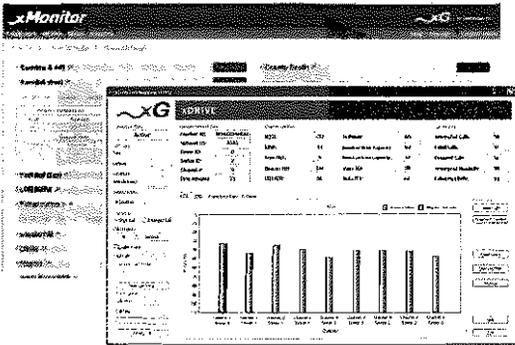


xAP: the xAP acts as a compact, high-performance base station and wirelessly connects to the xMod using the xMax cognitive networking waveform. Each xAP can deliver multiple megabits of total user bandwidth to its associated xMods. xAPs may be deployed individually or in clusters to increase total throughput.

xMSC: the xMSC acts as both a base station controller and aggregation point for the connected xAPs. It performs routing and security functions, as well as proprietary mobile VoIP optimization and compression. The xMSC is typically connected to the worldwide Internet and one or more VoIP soft switches.



xG White Paper: Benefits of Increased Power in Unlicensed Bands using Cognitive Radio



xMonitor/xDrive: these software tools provide integrated and comprehensive network and element management for the xMax network, as well as mobile network throughput and coverage optimization.

About xG Technology

xG Technology is a leading developer of innovative and disruptive communications technologies for wireless networks. Its extensive patented intellectual property portfolio covers a broad range of applications including cognitive radio networks. The company has commercialized some of these technologies to create xMax, the world's first carrier-class cognitive radio network.

xMax's standards-based IP architecture minimizes network deployment, management and operational costs while simplifying the delivery of fixed and mobile services. Using field-proven cognitive radio technology, xMax enables the delivery of mobile services in both licensed and unlicensed bands.

xMax offers unique capabilities to enterprises, utilities, government agencies and others who require advanced wireless communications to support business operations and mission critical applications.

xG Technology offers turnkey xMax network solutions including base stations, mobile switching centers, network management systems, deployment tools, handsets and customer support.

xG has deployed four networks in the field that showcase xMax's cognitive radio, mobile VoIP, and dynamic interference mitigation capabilities. These include a trial network at the US Army's base at Fort Bliss, Texas and White Sands Missile Range; two rural deployment trial networks with Townes Tele-Communications, Inc.; and a 32 square mile urban/suburban xMax network in Fort Lauderdale, Florida.

Based in Florida, xG Technology has over 50 US and more than 100 international patents and pending patent applications. For more information, please visit www.xgtechnology.com.

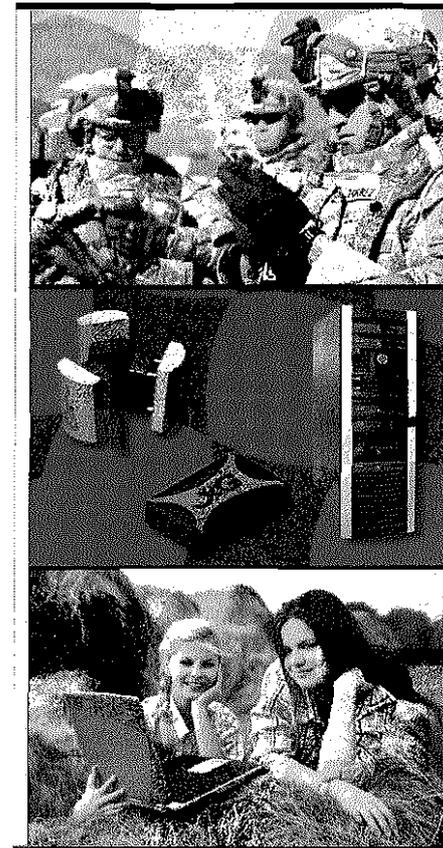
xMax



Delivering Carrier-Class
Cognitive Radio Networks

FCC Presentation

December 2011



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Agenda



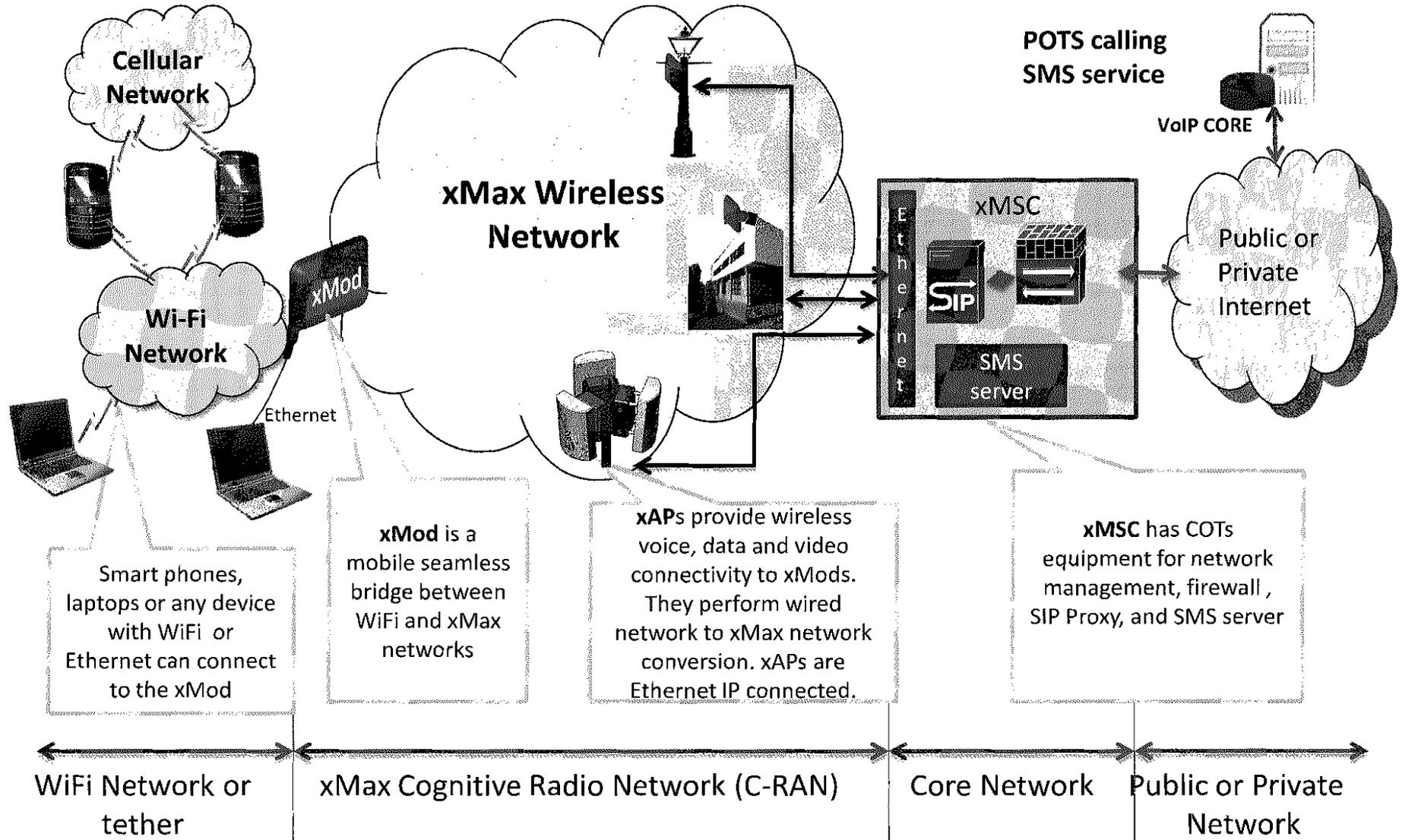
- ▶ Quick Introduction to xG Technology
- ▶ How the xG System Works
- ▶ Discussion of Interference Avoidance
- ▶ Request for Experimental Waiver

Introduction to xG Technology

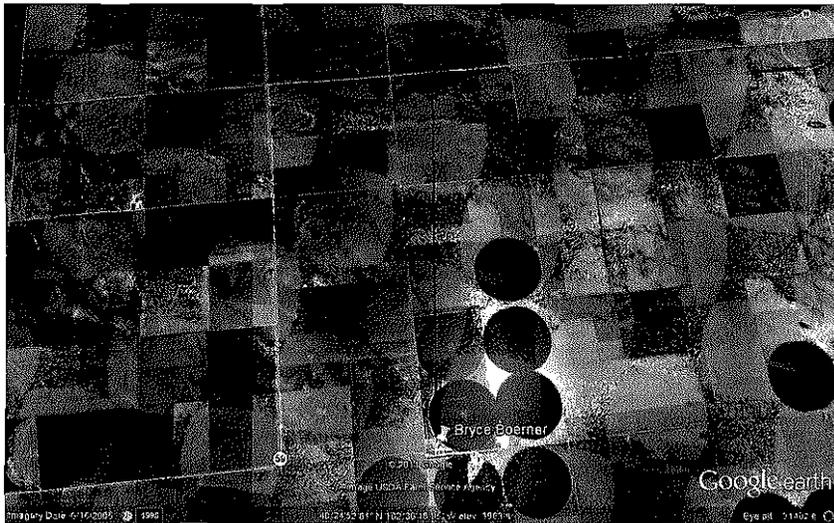


- ▶ Leading player in cognitive radio network technology – enabling more efficient use of scarce and/or expensive wireless spectrum
 - continuing rapid growth of wireless data consumption creating ‘spectrum crisis’
- ▶ Positive third party product validation
- ▶ Exceptional in-house R&D and product delivery team and extensive patent portfolio (over 60 US and 130 international patents and patent filings)
- ▶ Significant near-term opportunities within existing core vertical markets
- ▶ Major longer term market opportunity across additional verticals and through continued IP product and development

xMax: How it Works



Low Probability of Interference In Rural Areas

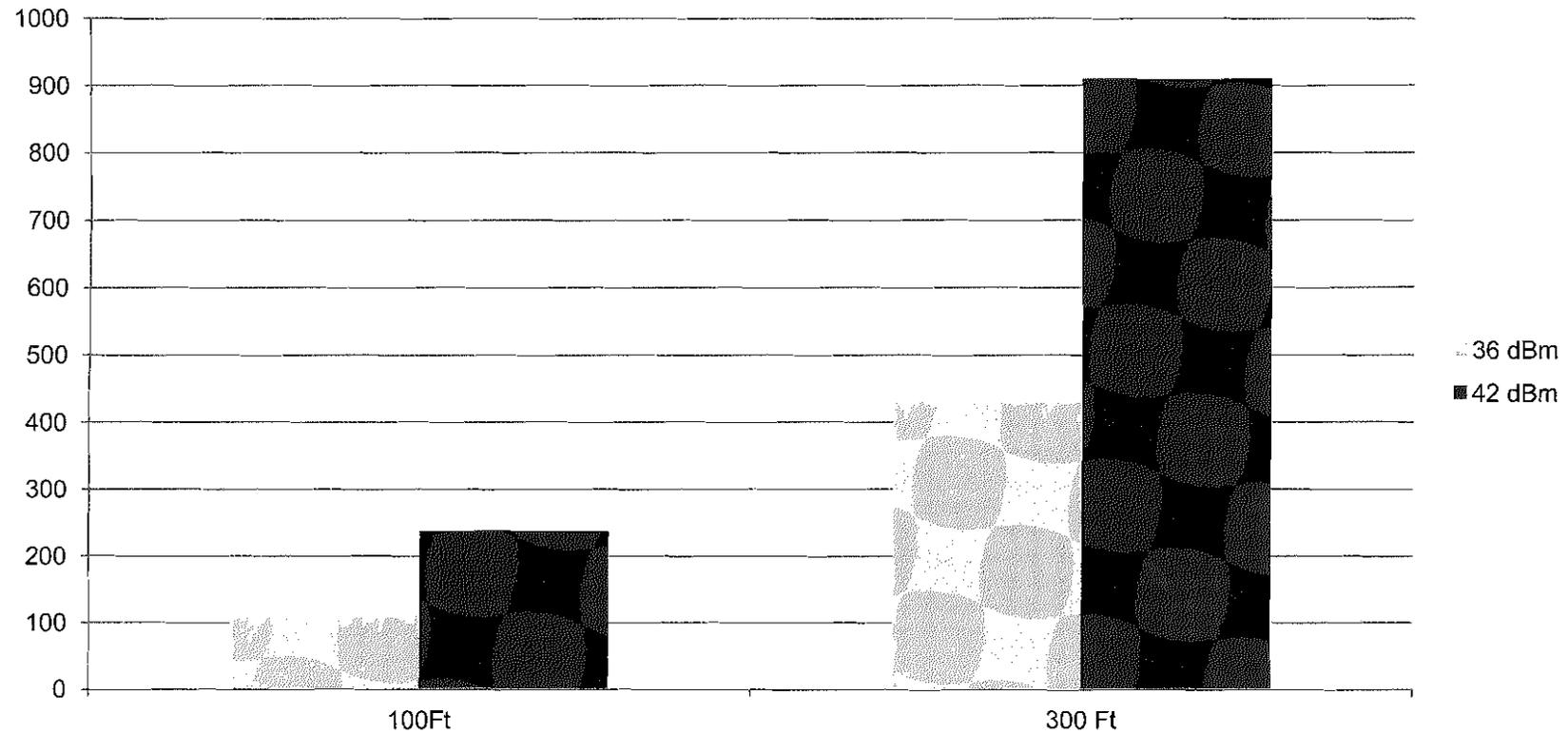


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Improved Coverage for Ultra Rural Areas



Square Miles Covered

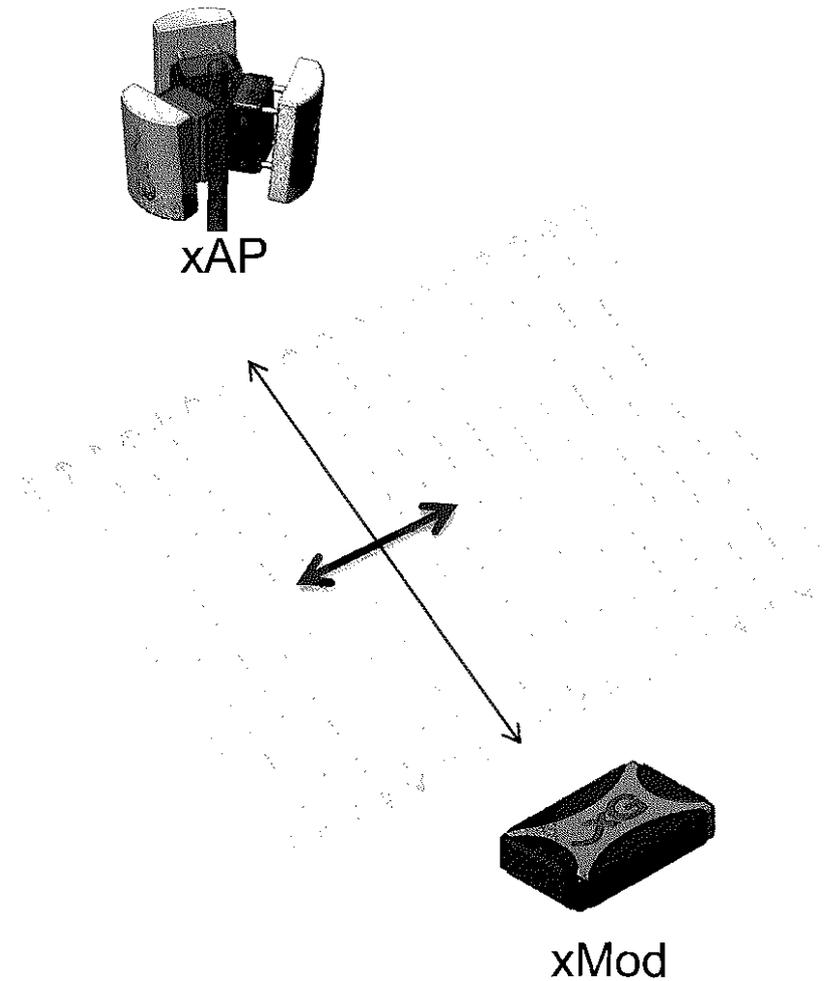


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Keys to xG Cognitive Radio



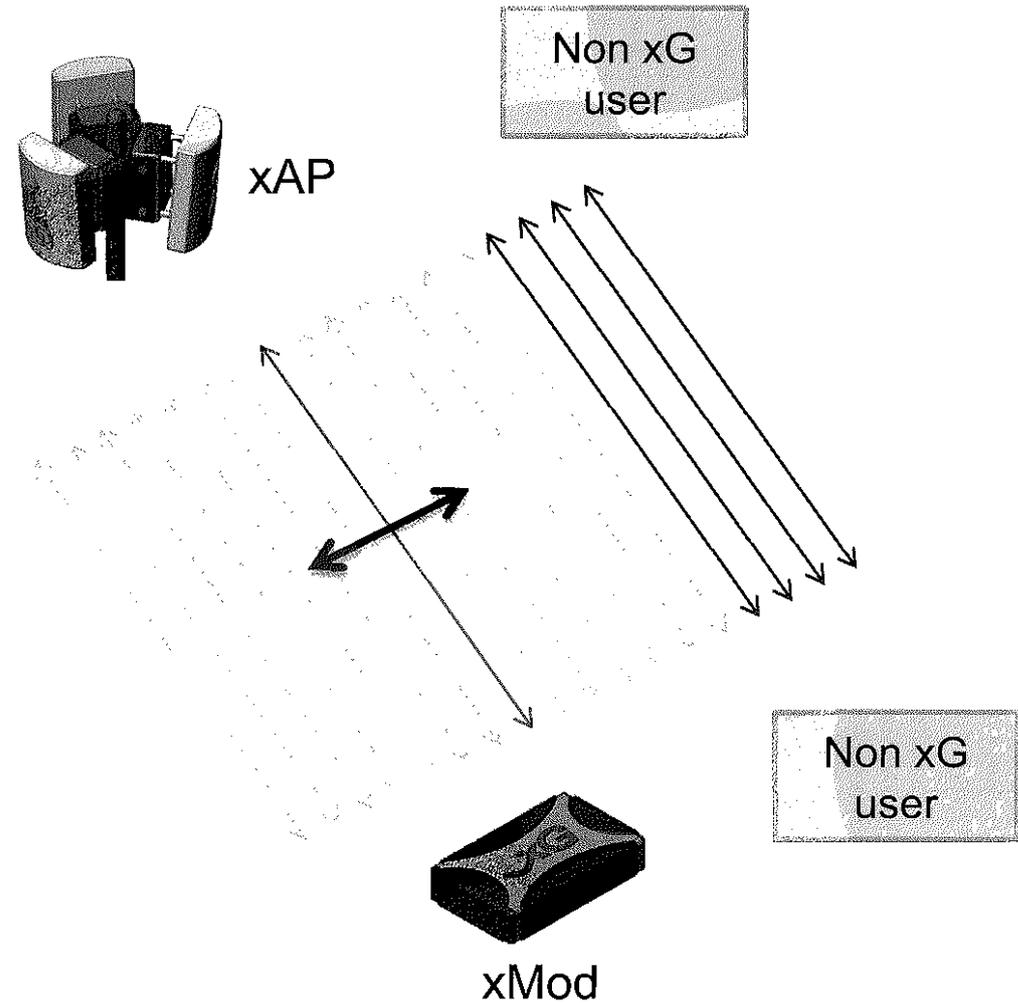
- xG xMax system can change channels in the face of interference



Interference Avoidance: xAP Detects Interference

xMax

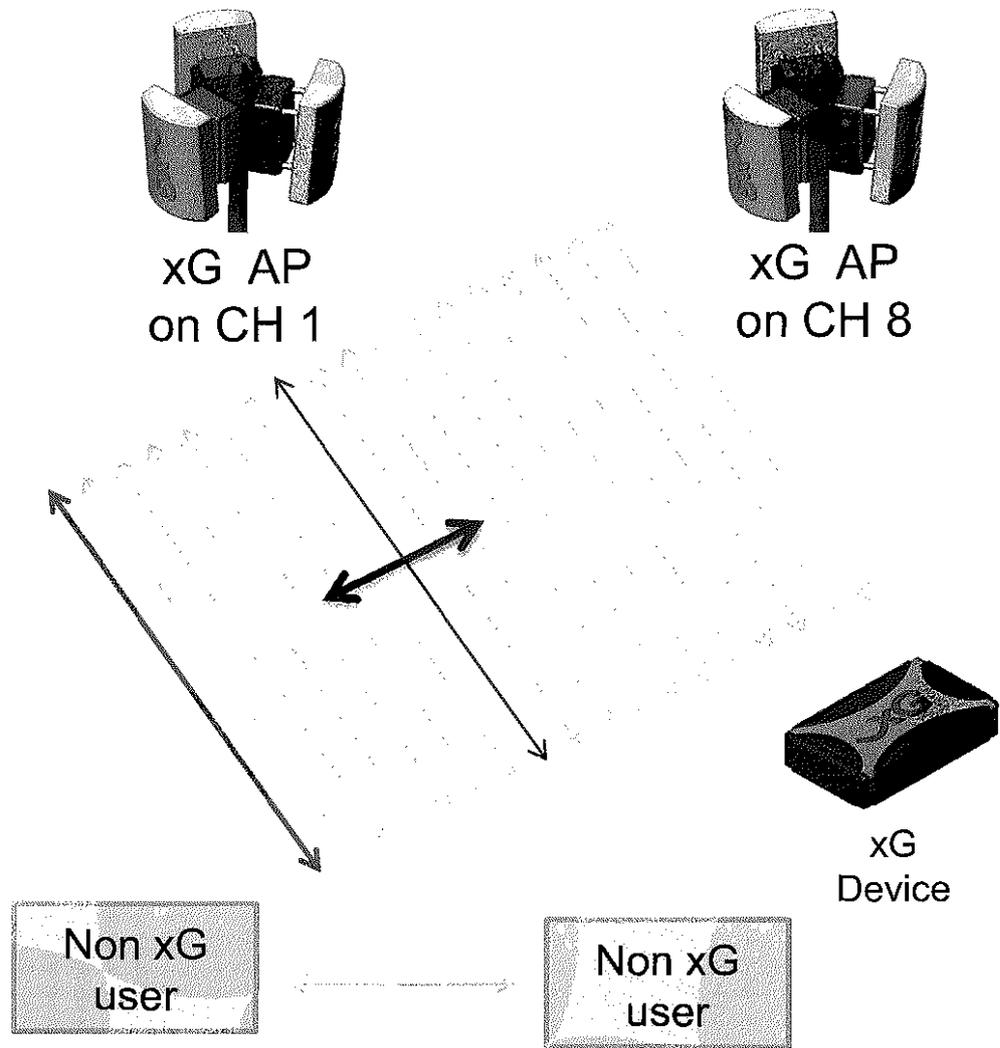
- xAP determines non xG system is operating nearby
- xMax system avoids using busy channels
- Channels are marked for reuse if interference clears



Interference Avoidance: xG Subscriber Detects



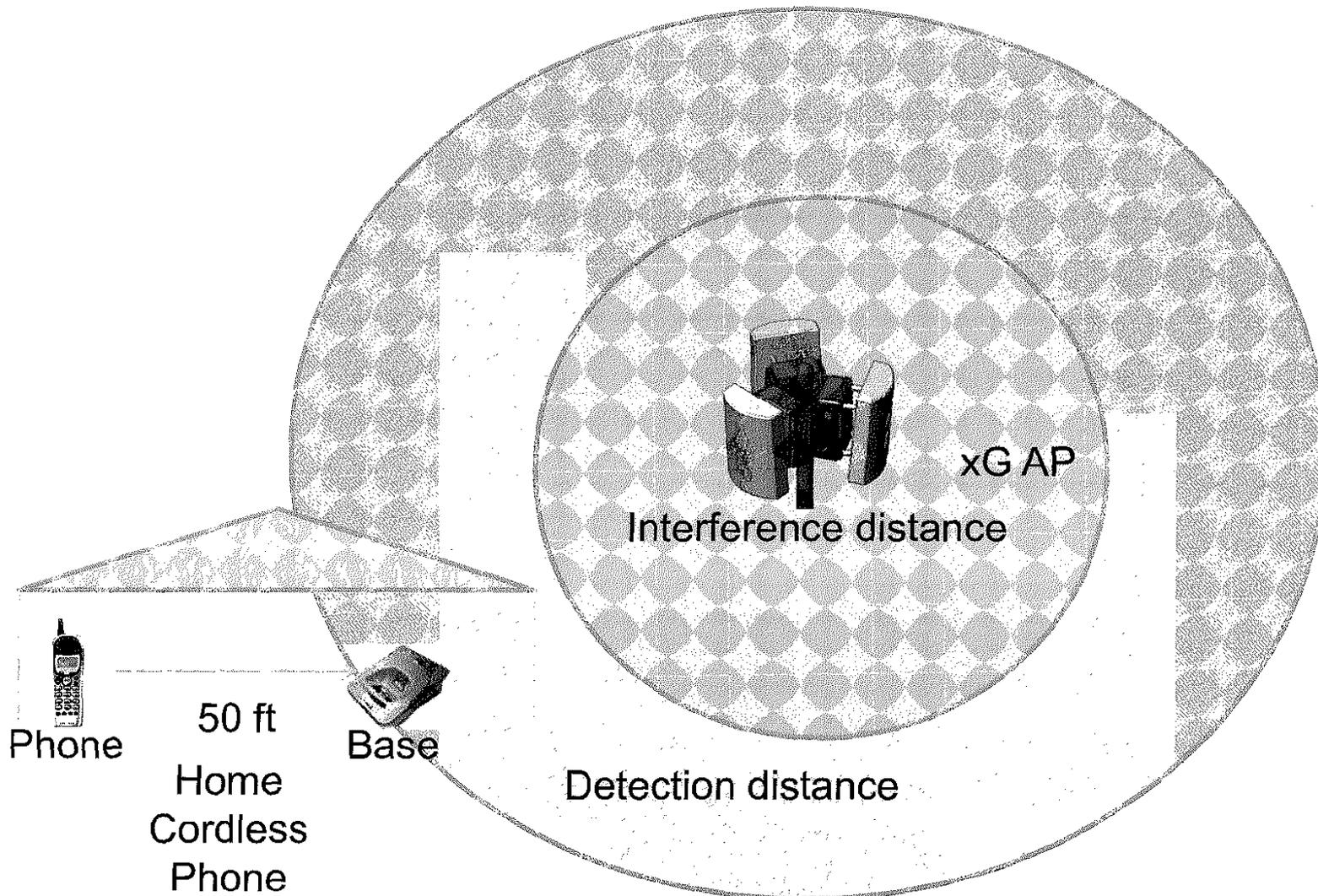
- Remote xG subscriber device detects interference that AP does not see on channel 1
- xG subscriber device selects different channel from another AP
- xG "plays nice" with other spectrum users.



Interference Avoidance: Frequency-Hopping Spread Spectrum

- ▶ Many systems operating in 900 MHz are Frequency Hopping Spread Spectrum
- ▶ FHSS systems occupy narrow bands across the 902-928 MHz band for short intervals in time.
- ▶ xG system occupies channel until it must move
- ▶ xG system employs passive interference mitigation

Example: 900MHz Cordless Phone



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Conclusion



- ▶ xG system can cover large areas economically in rural and ultra rural regions offering a solution to the national mandate for broadband data
- ▶ The xG cognitive radio can provide improved protection for other users in the operating band
- ▶ xG asks for a waiver in 900MHz to operate at 42dBm EIRP for increased coverage and signal quality in areas defined as rural by the FCC
- ▶ xG requests a waiver for all rural areas after trial and study completed

xMax[®]

xG[®]
TECHNOLOGY, INC.

**Delivering Carrier-Class
Cognitive Radio Networks**

DECEMBER 2011



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TECHNOLOGY, INC.

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Market: Mobile bandwidth demand exploding
26x increase in data traffic 2010 - 2015, 92% CAGR (Cisco forecast, Feb '11)

Problem: Wireless network capacity is spectrum limited

Solution: Increased capacity through more efficient use of spectrum

Innovation: Cognitive radio technology is the key to better spectrum utilization

Opportunity: xG is a leader in cognitive wireless networks

xG Technology: improving spectrum efficiency



- ▶ Recent advancements in technology and spectrum policy provide strategic path for the “spectrum challenged” – spectrum ‘haves’ as well as ‘have nots’
 - **Cognitive radio technology** enables the delivery of a licensed spectrum experience using ‘free’ spectrum
 - Cognitive radio networks are able to deliver additional spectral capacity
 - Regulators introducing “opportunistic” spectrum use and dynamic spectrum access to maximize value from the ‘digital dividend’
 - foster innovation to deliver low cost Broadband to rural areas and business/public service campus environments
 - ease overcrowding
 - encourage competition – lower barriers to entry into wireless space

"xG brings a capability we have not seen in any other products available today, especially in a cellular form factor. As we develop new technologies for the Army, one of our biggest challenges will always be spectrum availability."

– Lieutenant Colonel John Moelter, Chief of Integrations, U.S. Army Signal Center of Excellence

- ▶ xG has developed xMax - the world's first wide area cellular cognitive radio network solution
 - Carrier-grade VoIP and Broadband on one network
 - Low cost: no spectrum licence fees, lower network engineering and management costs
 - Frequency agnostic
 - Rapidly deployable – leverages existing Internet infrastructure
 - End-to-end Internet Protocol (IP) system – can be integrated into any IP service (e.g., Skype) and device (e.g., smartphones)

- ▶ System level experience in Fort Lauderdale trial network demonstrated need for a broader network solution
 - building on the foundations of **Dynamic Spectrum Access**

" Put simply, xMax enables enterprises of any kind to set up a mobile communications network quickly, cheaply and efficiently – providing a licensed spectrum experience to end users operating in unlicensed spectrum. As such, the addressable market is vast."

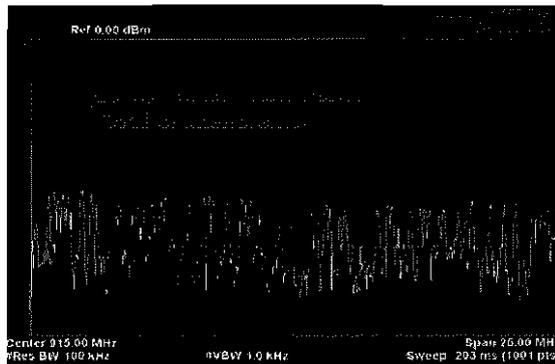
– Matt Walker, Research Analyst, First Columbus

Solution: Cognitive Radio



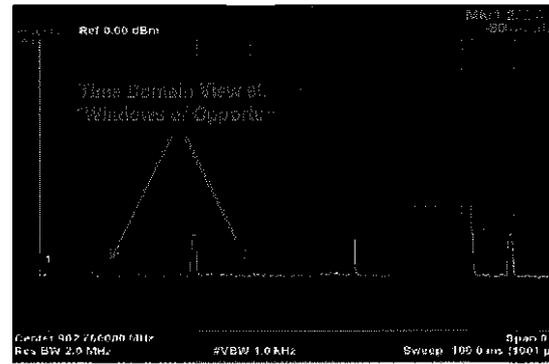
- ▶ Dynamic Spectrum Access - identifies spectrum that is not being used and quickly tunes to those frequencies
- ▶ xMax provides the ability to avoid or mitigate interference as well as hop to other 'cleaner' spectrum instantly

CONVENTIONAL RADIO VIEW



Conventional radios see congested radio spectrum with heavy interference.

COGNITIVE RADIO VIEW



Cognitive radios view the same radio spectrum in deeper detail, allowing them to identify unused gaps to transmit signals.

SOURCE: SPECTRUM ANALYZER READING, xMAX NETWORK, FORT LAUDERDALE, FL

- ▶ In addition, xMax adapts power output, modulation, channel plan, network protocol, etc. dynamically in real time to maximize throughput (or range) and minimize interference

xG's Cognitive Radio network solution dynamically optimizes spectrum utilization through opportunistic use of all available resources

US Portfolio

63

Issued patents and filings

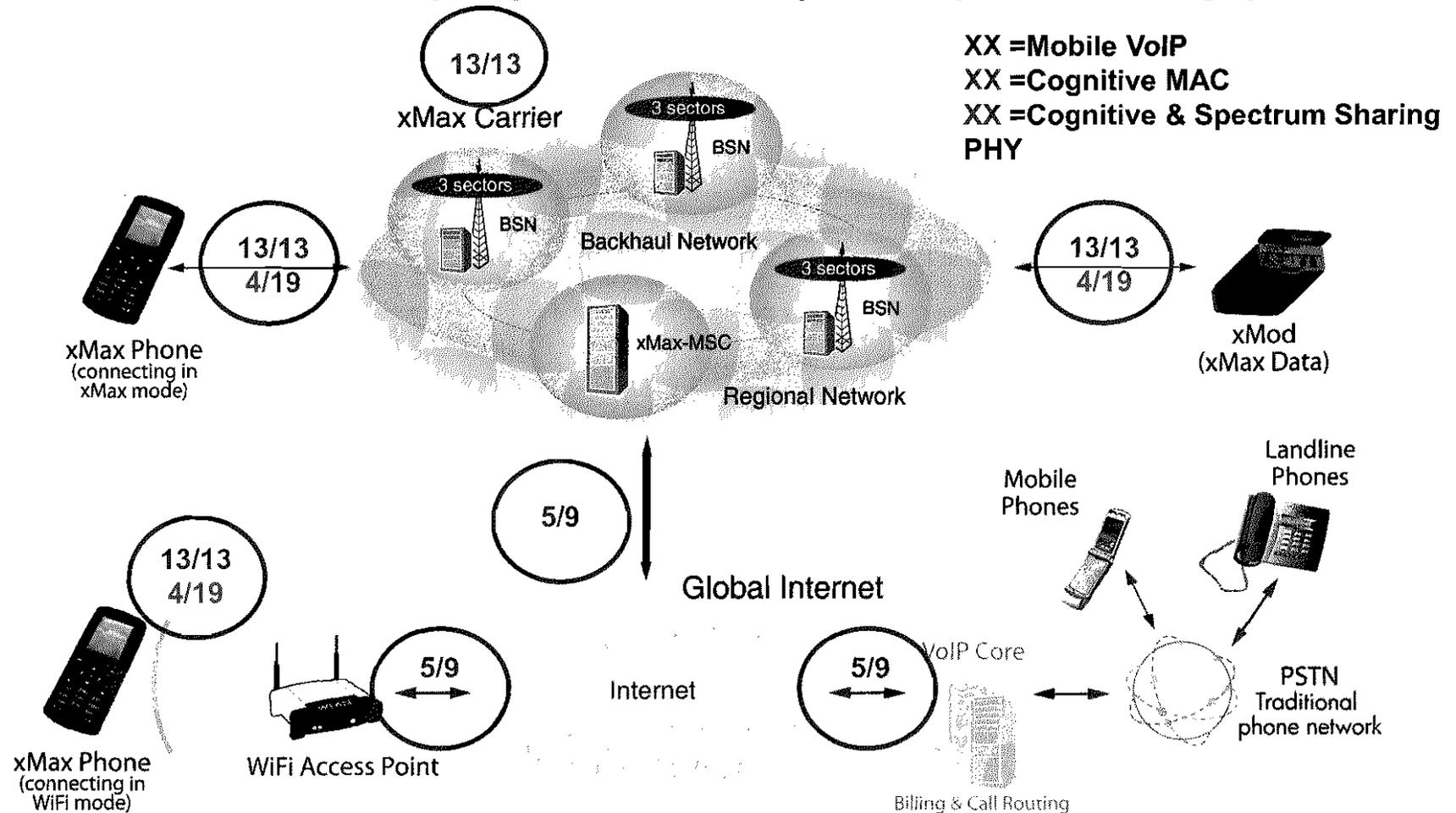
Foreign Portfolio

134

Issued patents and filings

Technology	Issued	Filings
Mobile VoIP	5	9
Cognitive Radio:		
- Cognitive MAC (media access control layer)	4	19
- Cognitive & Spectrum Sharing PHY (physical layer)	13	13
Totals	22	41

Intellectual Property Breakdown (Issued patents/filings)



Market: opportunity here & now



- ▶ Massive growth in demand for wireless data
 - Cisco forecasts that mobile data traffic will increase 26x between 2010 to 2015, reaching 6.3bn Gigabytes/month
- ▶ Wireless network capacity becoming increasingly constrained
- ▶ Cost of acquiring licensed spectrum prohibitive to most
 - 24 MHz band auctioned by the FCC in 2008 cost wireless carriers \$19bn
 - UK's 2000 auction of 3G spectrum cost £22.5bn
- ▶ Significantly more spectrum available in unlicensed bands
- ▶ Unlicensed spectrum “free”, but impeded by variety of interference (e.g., baby monitors, wireless security surveillance)
 - 26 MHz of ‘free’ spectrum is underutilised in the unlicensed 902-928Mhz block across the Americas
 - 100s of MHz of TV White Space spectrum being released worldwide as part of the ‘digital dividend’
- ▶ Significant increase in processing power has opened door to new solutions

The spectrum have-nots

Cable Companies

Rural Carriers

Competitive Carriers

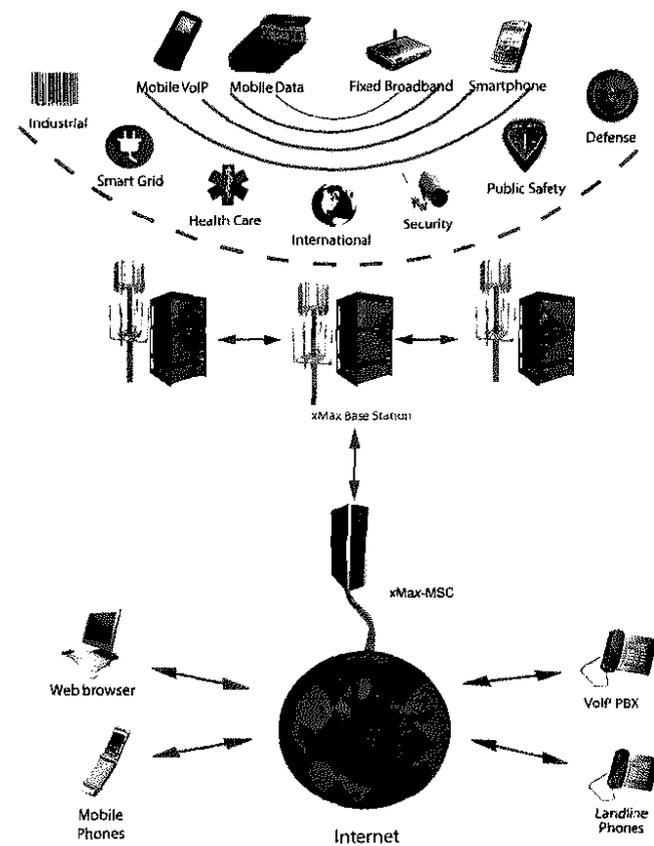
Defense

Public Safety

Smart Grid

Security Alarms

Machine-to-Machine (M2M)



\$1-2 billion market opportunity

- Currently identified U.S. Army needs

1st Contract Win – U.S. Army

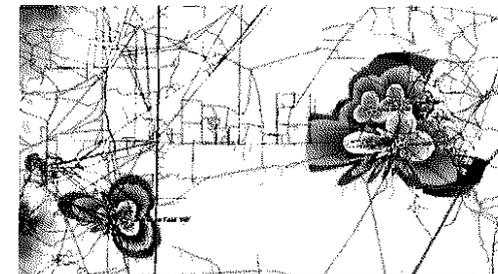
- Ft. Bliss, TX Desert Training Area
- Ft Monmouth, NJ – CERDEC
- Deployment commenced in Feb. 2011

1st Design Win – Western DataCom

- Licensed xMax IP to supply modems to DoD

\$17.5 billion in 2011

- Total U.S. DoD Communication, Electronics, Telecom & Intelligence (CET&I) budget



Fort Bliss, TX
xMax network

Over 1,000 rural telcos & co-ops

- \$14 billion market potential*

USF and ICC account for 70% of revenues

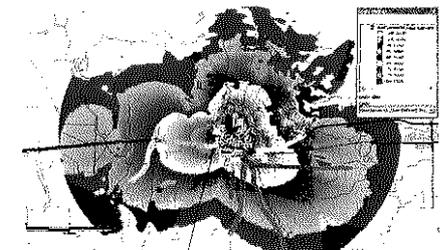
- Both disappear in mobile Internet world
- “Cord cutting” being felt in many rural areas

1st Pilot Network Win – Townes Tele-Communications

- Expanded deployment in Lewisville, AR and additional rural market in April 2011
- RUS funding will drive new xMax equipment sales

National Rural Telecom Cooperative

- Randy Houdek, NRTC Board Member is a key xG advisor



Lewisville, AR
xMax network

*Internal estimates

\$26 billion US market opportunity*

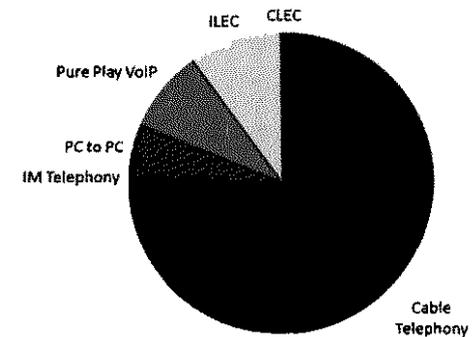
xMax offers quad-play bundle opportunity

Cable operators without wireless offerings are at a competitive disadvantage

Cable companies are largest fixed VoIP providers

- **completed successful xMax demo with major N.Y.- based cable company March 2011**

SHARE OF RESIDENTIAL VoIP REVENUE, 2008



Source: New Paradigm Resources Group, Inc.



*Internal estimates

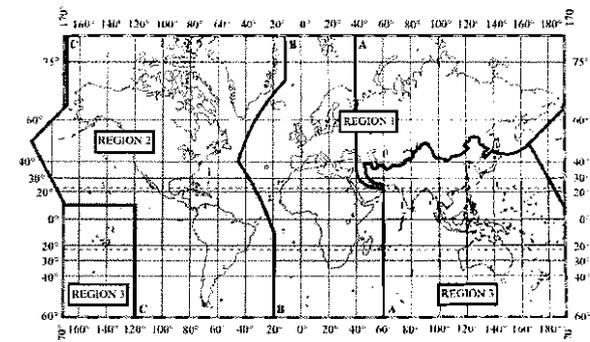
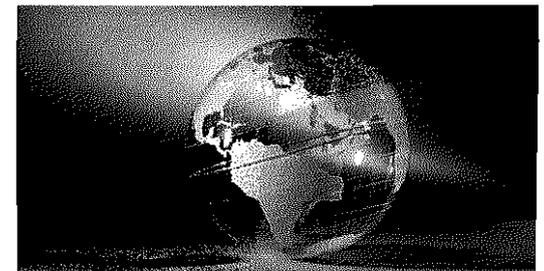
Potential market for xMax currently spans nearly a billion people in over 40 countries

- Frequency plan is the same throughout North and South America

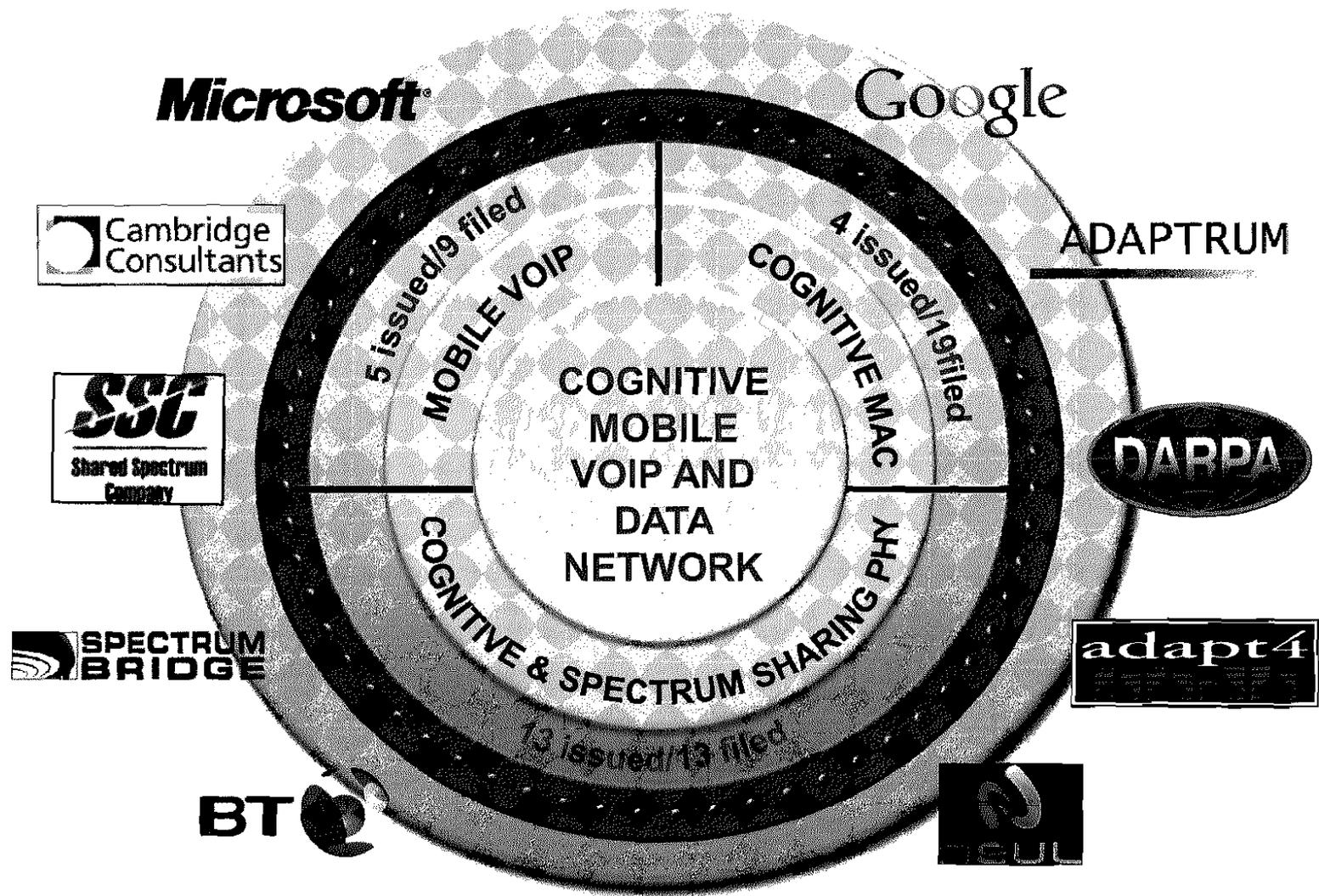
Global marketplace growing

- Regulatory bodies worldwide are seeking to make new spectrum available for “opportunistic” use (e.g. UK –OFCOM, TV ‘White Space’)

US deployments will further stimulate world-wide xMax demand



Strong IP Portfolio – a barrier to competition



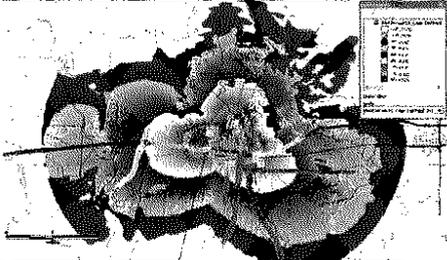
Why xG unique: Real World Experience through Pilot Networks



Urban/Suburban - Ft. Lauderdale, Florida

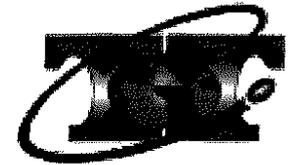
- fully mobile network
- densely populated
- interference-rich environment
- extensive testing has allowed continual system performance enhancement and development of robust system

*"These are major-league pioneers who have built something that works well."
Craig Mathias,
Wireless Analyst, 2010*



Rural – Lewisville, Arkansas & Macclenny, FL

- underserved market
- low noise, excellent range



TOWNES TELECOMMUNICATIONS, INC.



Military - US Army - TX, NM, NJ

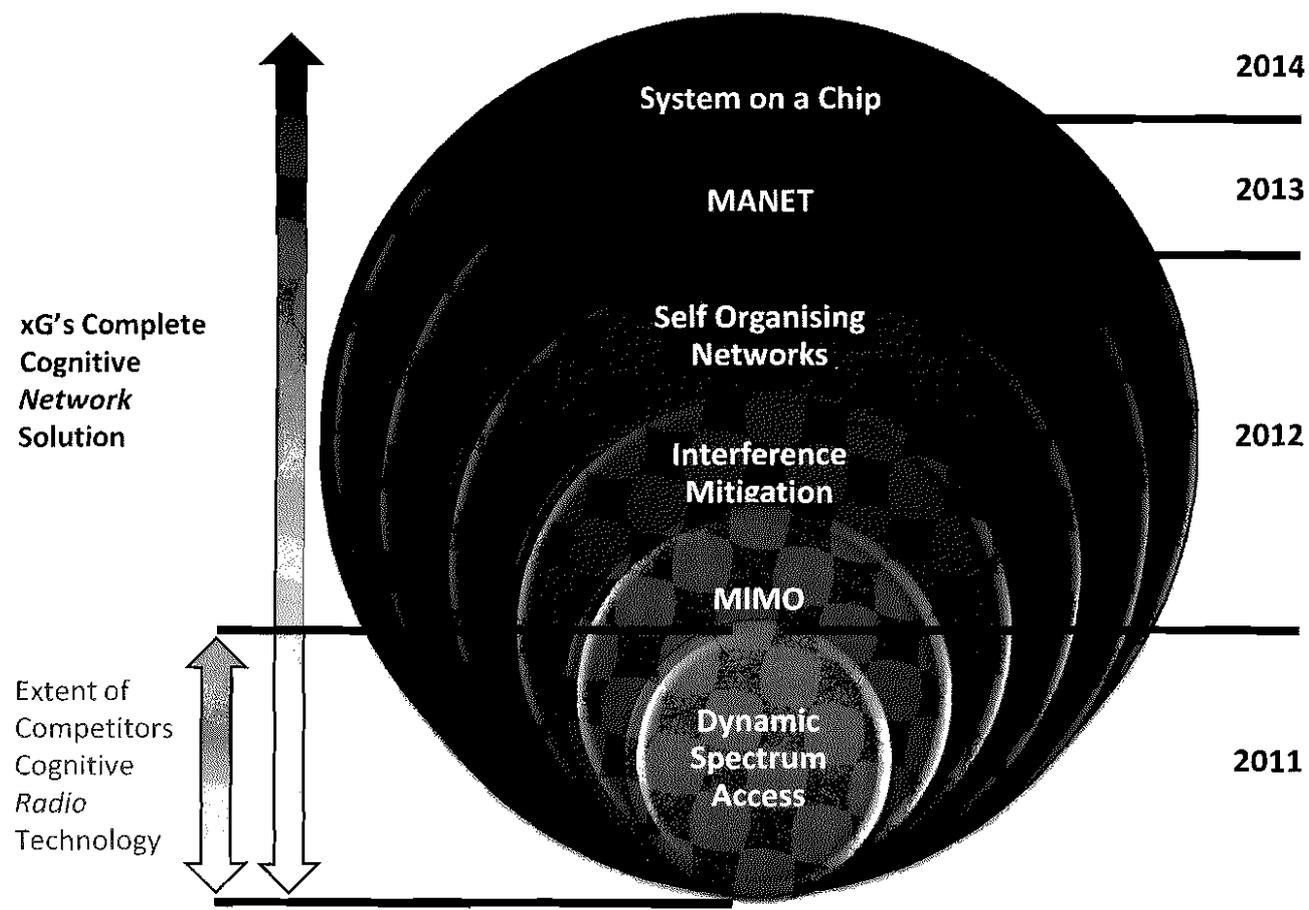
- lab validated (CERDEC)
- garrison enterprise solution
- tactical cellular – austere desert



Innovation: xMax features



- ▶ Dynamic Spectrum Access (DSA) is key
- ▶ **But** xG's Cognitive Network solution xMax delivers much more than just DSA



- **System on a Chip:**
Moves xMax functionality to chip level
Installation by any OEM
- **MANET:**
Mobile mesh networks
Every user makes the network stronger
- **Self-Organising Networks:**
Automatic networking & optimization
No wireless experience needed
- **Interference Mitigation:**
xMax works where other radios can't
Higher capacity and reliability
- **MIMO:**
Extends range and throughput
Lower cost per bit & per customer
- **Dynamic Spectrum Access:**
Finds & uses available frequencies
Saves \$billions in spectrum costs

MB TECHNOLOGY HOLDINGS, LLC



Markes S. Smith
CEO, MBTH
Board Member, xG

xG Operational Management



John C. Coleman
CEO



Scott Garlington
VP of Engineering



Pertti Alapuranen
Director of Systems Design



Mike Johnson
Senior Product Manager



Rick Rotondo
VP of Marketing



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Security & Public Safety



Kenneth A. Hoffman
Electric Utility



Randy Houdek
Rural Independents

Corporate Structure



George Schmitt, CEO

Merchant bank with significant interest
in xG Technology, Inc (XGT)



Leading provider of cognitive wireless technology

Publicly traded company, listed on the London Stock
Exchange's Alternative Investment Market (AIM)



Income Statement and Balance Sheet



	Six months ended 30 June 2011 (unaudited) \$'000	Six months ended 30 June 2010 (unaudited) \$'000	Year ended 31 Dec. 2010 (audited) \$'000
Revenue	150	-	-
Cost of sales	50	-	-
Gross profit	100	-	-
Administrative expenses	(5,347)	(5,624)	(10,606)
Research & Development	-	-	(18,519)
Bad debts expense	-	-	(20,454)
Interest receivable and similar income	-	27	28
Interest expense	(726)	-	(62)
Share-based payments	(272)	(325)	(648)
Other income		1,000	1,000
Comprehensive (expense) for the period	(6,245)	(4,922)	(49,261)
(Loss)/earnings per share			
Basic & Diluted	\$(0.040)	\$(0.035)	\$(0.336)

	30 June 2011 (unaudited) \$'000	30 June 2010 (unaudited) \$'000	31 December 2010 (audited) \$'000
Assets			
Non-current assets	32,293	45,546	29,684
Current assets			
Trade receivables and other current assets	93	388	68
Trade receivables due after more than one year	-	20,272	-
Inventory	388	1,250	528
Cash and cash equivalents	98	512	91
	579	22,422	687
Total assets	32,872	67,968	30,371
Current liabilities			
Trade payables and other current liabilities	(678)	(1,368)	(3,233)
Net assets	32,194	66,600	27,138

Key Milestones - Roadmap



- **Delivery of xMax network equipment to US Army, Fort Bliss, TX**
Status: completed
- **Delivery of xMax network equipment to CERDEC, Fort Monmouth, NJ**
Status: completed
- **Expansion of xMax rural trial system in Lewisville, AR**
Status: completed
- **Increase technical staffing levels to meet product roadmap**
Status: completed
- **On-site network installation and demonstration for major cable company**
Status: completed
- **Add rural network trial location**
Status: completed
- **Expand Fort Bliss trial at completion of evaluation**
Status: TBD
- **Satellite and aerostat integration testing**
Status: in progress
- **Other pilots: Telefonica**

Conclusion



- ▶ Leading player in 'Cognitive Radio' technology – key to maximising spectrum efficiency
- ▶ Disruptive, patented, technology that creates a licensed spectrum experience in unlicensed spectrum
- ▶ Quality leadership team, supported by several key hires over last 18 months
- ▶ Positive third party product validation and customer traction
 - ▶ US Army
 - ▶ Townes Telecommunications (Rural network)
 - ▶ pre-orders from rural telcos, public safety integrator and major US security network
- ▶ Significant near-term opportunities within existing core vertical markets
- ▶ Major longer term market opportunity across additional verticals and through product and IP development

"In PA's view, there are no realistic alternatives to xMax for a business wishing to deploy a dedicated mobile network without owning a spectrum licence" – PA Consulting Group Report Summary, Sept 2010