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Summer 2007

*The Best of the Best:  
Handheld Devices  
that Rock!*

Page 3



## IN THIS ISSUE



Product Review | Page 8  
Interoperability Gateway

Industry Spotlight | Page 13  
Colleges and Universities

Wireless Lifestyle | Page 18  
AT&T Classic

Success Story | Page 23  
Birdville ISD

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www.TodaysWirelessWorld.com

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**BEARCOM®**  
Wireless Worldwide

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# Contents

- 1** OPENING THOUGHTS:  
Variety is the Spice of Life
- 3** COVER STORY (Handheld Devices):  
The Best of the Best: Handheld Devices that Rock!
- 8** PRODUCT REVIEW (Raytheon JPS Interoperability Gateway):  
Crossing the Wireless Communications Chasm with Interoperability
- 13** INDUSTRY SPOTLIGHT (Colleges and Universities):  
Using Wireless Technology to Attract Top College Students
- 16** COMIC STRIP:  
The Adventures of Wireless Woman
- 17** DID YOU KNOW?  
High-Frequency Radio Technology Gaining Recognition
- 18** WIRELESS LIFESTYLE (AT&T Classic):  
Scoring a Hole-in-One with Wireless Technology
- 23** SUCCESS STORY (Birdville ISD):  
Providing a Wireless Interoperability Strategy for a School District
- 24** AROUND THE WORLD:  
Wireless News and Views
- 26** CALENDAR:  
Upcoming Wireless Industry Events
- 27** BEARWIRE:  
What's Happening at BearCom
- 28** FINAL WORD:  
Partnerships are Helping Businesses Become More Efficient

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*"The real beauty of wireless technology is not  
that you hold it in your hand—it's the fact  
that countless others do, too."*

**Mark Kroh**  
Vice President  
Motorola Sales & Service



## OPENING THOUGHTS:

# Variety is the Spice of Life

By John Watson and Jerry Denham

That statement is especially true as you peruse this particular issue of *Today's Wireless World*, which features a cover story that highlights the breadth of handheld wireless devices and accessories that are available to corporations, trades, and government entities. This expanding menu of high-tech products is a great source of pride for us here at BearCom, as we count each of these device providers as our partner.

But what does partnering mean to BearCom? It means that we have a joint commitment to excellence when it comes to implementing our partner's respective products and solutions. And never before have we been able to offer our customers so many types of innovative technologies from so many industry-leading providers.

The rest of this issue of *Today's Wireless World* reflects variety in another fashion. Wireless technology is being applied in many, many different ways. For example, in our Product Review section, you'll notice Raytheon JPS's latest interoperability gateway. That technology is leading the charge toward true interoperability.

Few industries are as dynamic as higher education in its use of wireless technologies. In our Industry Spotlight, you'll learn how college students and teachers alike are leveraging these products to learn and grow as young adults. What's more, the same technology is allowing them to do so in a safer, more secure environment.

This issue's Did You Know? feature looks at how high-frequency (HF) radio is becoming an invaluable backstop when the infrastructure that so many wireless devices rely on goes down. Before the recent spate of deadly hurricanes, HF wouldn't have been given another thought. Today, corporate and government entities alike are taking heed and embracing this powerful technology.

In our Wireless Lifestyle section, you will learn about the AT&T Classic and how Outdoor Events has developed that professional golf tournament into a high-profile sports marketing opportunity. Partnered with BearCom, Outdoor Events uses wireless devices to put on a seamless, first-class event.

Finally, there's a provocative piece in the Final Word section from Palm's Director of Wireless Solutions about how he views partnerships in the wireless industry.

As always, we encourage your feedback, since our ultimate goal is to make *Today's Wireless World* the best it can be. ●

In addition to publishing *Today's Wireless World*, BearCom sells, rents, and services a broad line of quality wireless communications products and designs and implements complete mobility solutions. Thousands of organizations around the world depend on BearCom to help keep them connected... everywhere, all the time.

*"And never before have we been able to offer our customers so many types of innovative technologies from so many industry-leading providers."*



JOHN WATSON  
Chairman, BearCom

JERRY DENHAM  
President & CEO, BearCom



FreeLinc FreeMotion 200  
Tactical Headset



Icom IC-F3061T  
Digital Two-Way Radio



Novatel Ovation U720  
Mobile Broadband Card



Motorola Buzz ic502  
Cellular/Push-to-Talk Phone



Sanyo KATANA  
Cellular Phone



Motorola MOTOQ  
Smart Phone



Impact Radio Accessories  
Gold Series Surveillance Kit



Palm Treo 755p  
Smart Phone



OTTO Storm  
Speaker-Microphone



Motorola MOTOKRZR  
Cellular Phone



Samsung IP-830w  
Smart Phone



Pantech PX-500  
Mobile Broadband Card



Samsung M610  
Cellular Phone



RIM BlackBerry 8830  
Smart Phone



Sierra AirCard 595U  
Mobile Broadband Card



Motorola MOTOTRBO XPR 6550  
Digital Two-Way Radio

## COVER STORY (Handheld Devices):

# The Best of the Best: Handheld Devices that Rock!

By Holt Hackney

Wireless communication has had—and will undoubtedly continue to have—an incredible impact on efficiency and effectiveness in a variety of industries, from public safety, education, hospitality, and retail to manufacturing, construction, security, and many more.

Sorting through the wide selection of mobile devices and accessories is no easy task these days, noted Scott Riddle, Digital Sales Supervisor for BearCom. “With advances in wireless technology, providers of these products have introduced a growing selection of options designed to meet users’ specific needs,” he said.

*Today’s Wireless World* can help with your selection process. What follows is our “wireless products at a glance” list—a quick look at the cream of the crop in digital two-way radios, cellular/push-to-talk phones, smart phones, mobile broadband cards, and accessories. Hardly exhaustive, this list is a good beginning point, featuring the best-of-the-best products from the leaders in the wireless communications industry. Let’s get started.

### Digital Two-Way Radios

**Motorola MOTOTRBO XPR 6550:** For businesses and professional organizations whose workers are mobile and need a solution that makes it easy and affordable for them to stay in touch, the new XPR 6550 combines exceptional two-way radio functionality with digital technology to deliver increased capacity and spectrum efficiency, integrated data capabilities, and enhanced voice communications.

**Icom IC-F3061T:** The IC-F3061T is a hard radio to outgrow since it operates on standard 12.5/25.0 kHz channels in the analog mode and on 6.25 kHz in the new digital mode. This increases the spectrum efficiency in crowded markets.

In addition, the IC-F3061T operates as an LTR trunking radio to increase the total number of users on a given set of frequencies.

### Cellular/Push-to-Talk Phones

**Motorola Buzz ic502:** This dual-mode device truly does take advantage of the merger between Sprint and Nextel by allowing you to make voice calls anywhere on the nationwide Sprint network, while also giving you instant access to other push-to-talk phone users coast to coast on the Nextel network. When enabled with a Sprint PCS Vision access plan, the ic502 also gives you the power to stay in touch with text messaging, Web access, and other advanced data applications.

**Motorola MOTOKRZR:** As the element of design grows in importance, more business customers are opting for the MOTOKRZR. On the heels of the original RAZR, the latest device to emerge from this family packs significant functionality

*Continues on page 4...*



Boy, how wireless technology has changed! Motorola’s DynaTAC 6000XL vehicular cellular telephone, circa 1987, featured a 120-number phone book, twin antennas, speakerphone, and theft alarm. It was employed by public safety professionals as a complement to mobile two-way radios.





The innovative Motorola dual-mode, cellular/push-to-talk phones from Sprint Nextel are becoming very popular in a number of industries where reliability, efficiency, and durability are paramount.

*“With advances in wireless technology, providers of these products have introduced a growing selection of options designed to meet users’ specific needs.”*

**Scott Riddle**  
Digital Sales Supervisor  
BearCom

*“Wireless communication has had—and will undoubtedly continue to have—an incredible impact on efficiency and effectiveness in a variety of industries, from public safety, education, hospitality, and retail to manufacturing, construction, security, and many more.”*

*...Continued from page 3*

into an even cooler, smaller phone. The MOTOKRZR embodies the cutting edge in technology, from its ultra-slim form factor to its integrated stereo Bluetooth connectivity for hands-free convenience.

**Sanyo KATANA:** Inspired by the legendary sword once used by Japan’s Samurai, the KATANA offers a very attractive, sleek design that meets the needs of customers seeking a slimmed-down, yet highly functional device. What differentiates the KATANA from other phones that leverage design elements is a stunningly clear screen, complemented by an Access NetFront Web browser.

**Samsung M610:** Measuring less than half an inch in thickness, the M610 is the thinnest clamshell wireless phone available in the U.S. This handset features a 2.0 megapixel camera, large QVGA internal display, stereo Bluetooth technology, speakerphone, and advanced voice recognition. The Sprint version of the M610 utilizes two digital bands, allowing you to roam on other carriers’ digital networks.

#### **Smart Phones**

**RIM BlackBerry 8830:** Billed as the first global BlackBerry, the 8830 continues RIM’s tradition of providing quick, easy access to e-mail, contacts, calendar, organizer, and the Web. The extra benefit associated with this device is the convenience of one local number for domestic and international use in Australia, Europe, parts of Africa, Asia, Latin America, the Middle East, and North America. The Sprint version of the 8830 also offers the unique ability to have an unlocked SIM card, a USB-tethered modem, and GPS.

**Palm Treo 755p:** The much-anticipated 755p is the first Treo device to offer built-in Microsoft direct-push technology e-mail support and Google Maps for mobile users. The 755p brings customers quick, wireless access to the Web, e-mail, and business and multimedia applications, as well as providing instant messaging for Sprint customers nationwide. It runs on the Sprint mobile broadband network, the nation’s largest. As the newest member of the Treo family, the 755p features Palm’s latest OS software.

**Motorola MOTOQ:** No smart phone appears to be thinner than the Motorola MOTOQ. It is also lightweight and includes electro-luminescent keys, a thumbwheel for single-handed control, and an internal antenna. One of the first devices to run on Microsoft Windows Mobile 5.0, it is also optimized for Exchange 2003 and a variety of third-party e-mail solutions.

**Samsung IP-830w:** The recently launched, dual-mode IP-830w boasts a GSM radio, which allows for worldwide roaming. It uses the Sprint CDMA/EV-DO networks in the U.S., Canada, and Mexico, and it roams on CDMA and/or GSM networks (voice) and GPRS networks (data) outside of North America.

#### **Mobile Broadband Cards**

**Novatel Ovation U720:** Known for its speed and flexibility, the U720 is an excellent EV-DO solution for users who don’t have a PC card slot. It works with any PC or Mac with a USB port. Using

*Continues on page 7...*

# THE POWER TO --- CONNECT TO THE INTERNET REMOTELY

Sprint has the nation's largest mobile broadband network. Now you can connect to the Internet from just about anywhere!



#### Novatel Ovation U720

- Plugs into USB port
- Advanced flip-up antenna
- CDMA security authentication
- Sprint location services

#### Pantech PX-500

- Flip-up antenna
- CDMA security authentication
- Advanced power management
- PCS connection software



#### Novatel Merlin S720

- Rugged antenna
- Advanced power management
- Backward compatible
- PCS connection software

Additional models and details available at [www.BearCom.com](http://www.BearCom.com)



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...Continued from page 4

the GPS chipset embedded in the card and the latest version of the Sprint Connection Manager, users can conduct a "locate and search," which plots their current location on a map and then searches for nearby points of interest.

*Sierra AirCard 595U:* Many mobile professionals will find value in the latest technologically advanced AirCard product developed by Sierra Wireless. The 595U design and operational features include a built-in antenna that provides maximum speed, signal sensitivity, and coverage. This EV-DO card is the first USB device to include a docking cradle and rechargeable battery.

*Pantech PX-500:* Customers looking for the best value to meet both professional and personal needs can take advantage of the PX-500. This card supports both the original EV-DO, as well as its newer cousin, Revision A. The PX-500 has a dual-band antenna that maintains the signal at the fringes of the coverage areas. Sprint also has gone to great pains to make sure the card does not drain the laptop battery.

**Accessories**

*FreeLinc FreeMotion 200 Tactical Headset:* The FreeMotion 200 is a wireless headset with push-to-talk

capability that allows for cord-free operation of a two-way radio. It provides up to 20 hours of continuous talk time on one battery charge. It also features voice-operated transmission to allow for completely hands-free, secure communication. This accessory is very popular in the public safety industry.

*OTTO Storm Speaker-Microphone:* The Storm Speaker-Microphone is a high-performance speaker-mic with a two-meter immersion rating and multi-function buttons. Its new contoured design allows for easier handling and offers a larger push-to-talk button and volume control. It is designed for rugged environments, including public safety, marine law enforcement, industrial, and military applications.

*Impact Radio Accessories Gold Series Surveillance Kit:* This kit is designed for the budget-conscious user who refuses to sacrifice quality and is the perfect solution for hospitality, retail, light security, and sporting applications. All gold series kits are available with interchangeable ear options. ●

*Holt Hackney is Managing Editor for Today's Wireless World magazine. For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.*

**Extranets Save Money and Time for Employers and Employees Alike**

There is a rapidly-growing trend toward creating customized extranet sites for placing and fulfilling orders for all types of handheld wireless devices, including cellular phones, smart phones, mobile broadband cards, two-way radios, and wireless accessories.

Over the past few years, BearCom has created a number of these sites for its customers, making the process of browsing, comparing, and ordering a wide range of wireless devices fast and easy for



employees, while at the same time providing cost savings and asset management tools to the employer. Because the purchasing of the devices is aggregated, greater discounts can be offered for both "individual-liable" (employee-paid) and "corporate-liable" (employer-paid) orders.

The centralized management system also allows access to various metrics related to the extranet orders, giving the employer greater visibility into the process and tighter control over wireless equipment expenditures.

*"This powerful SIP capability allows radios to be operated from anywhere on the network."*



*"Now you can bring all of the advantages of the open-standards SIP protocol to your radio systems and add radio functionality to your network."*

**Keith McDonald**  
VP of Sales & Marketing  
Raytheon JPS

## **PRODUCT REVIEW (Raytheon JPS Interoperability Gateway): Crossing the Wireless Communications Chasm with Interoperability**

**By Mike Butler**

For decades, Raytheon was known primarily for its work in the defense industry, building missiles and other systems for the U.S. military. That positive reputation, however, started spreading to other capabilities—such as IP communications—when JPS Communications was acquired as a wholly owned subsidiary.

In the mid-1990s, Raytheon JPS introduced the ACU-1000—a gateway that offers interoperability for diverse radios and other communications devices—to the public safety sector and other mission-critical industries, enhancing the nation's security by providing a common platform for all wireless communications.

In the years since, Raytheon JPS has leveraged its ability to create meaningful IP communications products, the latest of which was introduced this spring: the ACU-2000 IP. This gateway offers a full suite of networking capabilities, including the linking of radios over an IP network, control of large interoperability systems via IP, remote channel change over IP, and the ability to interface radios via Session Internet Protocol (SIP). SIP is used to create, manage, and terminate sessions in an IP-based network. It enables the convergence of voice, data, and video, allowing equipment with varying media capabilities to be conferenced together. An essential component of the protocol is a determination of the services supported by each of the different types of communications equipment in the conference, so that any services held in common can be exchanged between the devices.

The new ACU-2000 IP builds upon the ACU-1000, which had set an industry standard with its ability to link disparate communications systems. These systems can be linked, monitored, and controlled

over an IP network, and the new SIP capabilities allow SIP-based systems or individual SIP endpoints (such as SIP phones or softphones) to be included in the interoperable conferences. Like the ACU-1000, the ACU-2000 IP is modular, completely scalable, and field configurable to meet customer needs.

Raytheon JPS provides customers with the ability to employ the new SIP communication capabilities in either of two versions, based on their requirements, for both local and wide area networks.

The ACU-2000 IP adds SIP phones, SIP PBXs, and other SIP devices to the long list of communications media that can be included in an interoperability conference. This powerful SIP capability allows radios to be operated from anywhere on the network. It is as simple as using a telephone with a speed dial option. This new version continues the ACU-1000's "distributed network" approach, with local interoperability links taking place within the unit itself, not relying on a network server—thus assuring continuity of local operations in the event of network failure.

It also allows radios and other four-wire devices to be included in a server-based network topology using SIP to initiate and manage all cross-connections. Each radio is assigned its own IP address, and the interoperability takes place in the IP realm.

"Now you can bring all of the advantages of the open-standards SIP protocol to your radio systems and add radio functionality to your network," said Keith McDonald, Vice President of Sales & Marketing for Raytheon JPS. "The ACU-2000 IP leads the IP communications market by bridging the field-proven

*Continues on page 11...*

ACU-2000 IP

One SIP-based gateway. Multiple devices.  
Infinitely better communications.

A woman with short brown hair, wearing a blue short-sleeved shirt and a headset with a microphone, is looking intently at a control panel. The panel has several buttons and a small screen. The background is dimly lit, suggesting an interior of a vehicle or a control room.

When the situation is critical, your team needs integrated voice, data, and multimedia communications in conjunction with seamless interoperability. Only the new ACU-2000 IP from JPS provides a true SIP-based gateway to digitally converge existing radio systems with SIP telephones, networks, and devices. Now you can bring all of the advantages of the open-standards SIP protocol to your radio systems and add radio functionality to your network. Visit our website to learn how the ACU-2000 IP from JPS can integrate your communications.

[www.raytheon.com/jps](http://www.raytheon.com/jps)

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...Continued from page 8

ACU technology with innovative SIP capabilities that include a multitude of services," he added. "Now, users can expect to enjoy several additional SIP and IP benefits with ACU technology to create highly effective operations among multiple incompatible wireless communications systems."

Not surprisingly, several industries are already embracing the gateway, mostly in the government, military, and wireless carrier operations sectors. Public safety, in particular, has a real need for the gateway. Take fire departments as an example. It's not enough that all of the municipality's stations be linked, but it has become equally important that volunteer fire department personnel be able to utilize this important technology to keep connected as well.

But it definitely would be a misconception to assume that public safety is the only industry that can benefit from one of Raytheon JPS' gateways. McDonald noted that all sorts of enterprises need interoperability. Hospitals and universities, for example, are ideal customers for the interoperability that the gateway provides because the facilities can be spread out, making security a significant issue. Another example is a company that has just gone through a merger. In such cases, organizations may end up with multiple radio systems using different proprietary radio technologies, systems operating in different bands (150 MHz, 450 MHz, 800 MHz, or 900 MHz), and similar radio systems that are not designed to be networked. The result can be inefficiency that stops workflow and creates a liability in case of emergency.

A specific example of a non-public safety entity benefiting from a Raytheon JPS gateway is John Deere, Inc. The company has two facilities in Waterloo, Iowa, employing more than 5,000 people. While each Waterloo facility has

similar five-channel, 800 MHz trunked radio systems, they still could not communicate back and forth, because they were not designed to be networked. Additionally, the Waterloo Fire Department needed to be quickly tied into the system in order to talk to John Deere's security team when entering the premises in the event of an emergency. Also, John Deere practices "just-in-time" manufacturing, where costs are kept low by reducing the number of parts that are on hand, so communications between the components facility and the assembly



plant are critical to make the system work smoothly. With the production plant unable to communicate with the assembly plant, John Deere decided to tie the two radio systems together.

Enter Raytheon JPS. Now, if the production plant has an issue concerning parts when it is about to launch or ship a tractor, it can contact the components facility and quickly resolve the matter. This allows the company to keep the assembly line moving, according to Larry Meany, Radio Communications Electronics Technician at John Deere. "You want to have the minimum amount of parts on hand to keep the line going, and therefore, you need to know where more parts are and how to get them when they are needed," said Meany.

And the ACU-2000 IP only amplifies

Raytheon JPS' menu of gateway solutions. "In addition to all the legacy equipment that we've supported, such as land mobile radios, hand-held radios, and consoles, our system now can plug into a VoIP infrastructure," said Doug Hall, a scientist at Raytheon JPS. "That makes it nice for people who want to integrate an interoperability solution with a telephony solution they may already own."

Among its many features, the new ACU-2000 IP gateway provides users with the ability to:

- Access features that have traditionally been available only to telephone users, including the ability to directly call phone extensions, forward calls, log calls, and record calls
- Easily control a large interoperability system via IP
- Connect radio systems at multiple sites across an IP network
- Remotely change radio channels or frequencies over IP
- Ensure continuity of local operations in the event of network failure because of the distributed design

Given its long, proud corporate history, the introduction of the ACU-2000 IP is just one more example of how Raytheon JPS is meeting—and often exceeding—customer needs. ●

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*Mike Butler is Project Manager for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*

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## INDUSTRY SPOTLIGHT (Colleges and Universities):

# Using Wireless Technology to Attract Top College Students

By Hugh Johnston

With an eye toward attracting the best and brightest college students, universities are doing all they can to accomplish that objective. One of the most effective tools in their arsenals is helping students wirelessly connect to the Internet.

According to data reported in the 2006 Campus Computing Survey, a highly respected annual study of how higher education leverages information technology, the majority of colleges and universities across the U.S. offer wireless access to the Internet. The survey specifically shows that 51.2 percent of college classrooms now have wireless connectivity, up from 42.7 percent in 2005.

By improving wireless access, college campuses across the country are responding to the demand from tech-savvy high school graduates. The evidence of this demand is compelling. At the University of Texas at Austin, for example, the school provided 35,271 unique users with wireless services during the spring 2006 semester, compared to 4,382 users of wired services during that same semester. The cumulative wireless connection time was 2.8 million hours compared to only 88,887 hours for wired connections.

Kenneth Green of The Campus Computing Project, which is the largest continuing study of computing and information technology in American higher education, noted that the expansion of wireless networks on campus mirrors the explosive growth of wireless in the consumer and corporate sectors over the past three years. "Households that have high-speed Internet access also typically have wireless networks," said Green. Consequently, "...it should be no surprise that students and faculty come

to campus expecting their college or university to provide the same wireless connectivity that they experience in their homes." Green added that, for the most part, wireless Internet access is viewed as "...a great thing. It fosters access, mobility, and collaborative work among students and faculty."



University of Texas senior Alexandra Huddleston said she enjoys the benefits on a daily basis. "Many of my classes provide PowerPoint slides as a guide for the day's lecture but only post them minutes before class. Having wireless access in the classroom allows me to download the notes before the lecture. That way, I'm able to add notes directly into the outline, saving time and paper."

An additional advantage is the ability to research topics further while the professor is discussing them in class. During an advertising research lecture with Dr. Marina Choi at the University of Texas, students are able to get access

to real life examples via the Internet. When Dr. Choi asks her students to search online databases, everyone with a notebook computer has an instant answer to her question.

Helping to facilitate this proliferation of wireless connectivity are companies like Firetide, with its world-class wireless mesh networks. And the Wi-Fi phenomenon is hardly relegated only to American campuses. Motorola, for example, recently announced it would provide public access for three campuses in China after being selected by the China Education and Research Network (CERNET). CERNET selected Motorola's HotZone Duo solution to provide public access for the universities that were selected as part of the pilot for CERNET's campus Wi-Fi initiative. CERNET's deployment of HotZone Duo will allow teachers, students, and researchers ubiquitous wireless access to online courses, research, educational tools, and a wide range of communication possibilities from anywhere on campus.

"No matter where the Wi-Fi connectivity is deployed, colleges and universities are finding it to be extremely versatile, amplifying the effectiveness of smart phones like those produced by Palm and Research In Motion (RIM)," said Scott Riddle, Digital Sales Supervisor for BearCom.

Another vibrant new use of wireless technology is emerging in the area of SMS text messaging. Rave Wireless, Inc., a New York City-based firm, has a strong partnership with Sprint Nextel. "Our partnership with Rave Wireless strengthens our commitment to enhance the learning environment for higher education institutions across

*Continues on page 16...*



## Interoperable • Expandable • Networkable

### The T5m Radio Console from Positron Public Safety Systems

The power of the T5 family of fully featured radio control in a cost effective package.

Designed for the modest sized dispatch center, the T5m delivers integrated radio, telephony and auxiliary control necessary to meet the demands of today's emergency response environment.

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***Giving you the Power to Respond™***



...Continued from page 13

the nation,” Craig Carroll, the National Director of Education for Sprint Nextel, recently said.

The Sprint/Rave solution is already bearing fruit at Mercer University. “The partnership between Mercer University, Sprint, and Rave Wireless provides a state-of-the-art campus communication program that ensures students have instant access to a broad spectrum of information tools,” said Major General Richard N. Goddard (retired), Vice President and Chief Technology Officer for Mercer University. “This program improves safety and security, enhances access to educational applications, broadens communication options between students and faculty, and ensures signal reception in every university facility.”

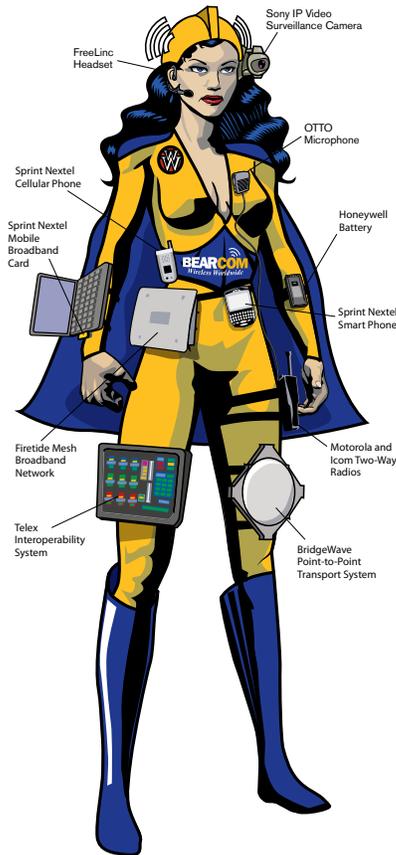
While it is partnered with Firetide on some of the Wi-Fi projects, BearCom also is focused on helping colleges and universities leverage wireless technology in the form of handheld devices, such as two-way radios, cell phones, smart phones, and mobile broadband cards. “BlackBerry and Palm smart phones and mobile broadband cards from Sprint are popular with educators and administrators who don’t have the same

data-intensive needs as students but need the connection for e-mail and other applications,” said Riddle.

In addition, the digital two-way radio is increasingly being recognized as the device of choice for university employees who work outside the classroom. This is especially true in the areas of security and maintenance, where time is critical.

The final benefit of wireless technology –better security–is important to students, teachers, and administrators alike. It doesn’t take much to see the value of Motorola or Icom two-way radios or Sony IP surveillance cameras in the wake of the Virginia Tech tragedy earlier this year. Besides providing instant communications within the campus security organization, two-way radios can easily be made to interoperate with local and state public safety agencies. Additionally, campuses can be equipped with strategically located emergency call boxes, using either a two-way radio connection or IP telephones on the campus-wide Wi-Fi network. ●

*Hugh Johnston is Purchasing Manager for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*



Meg A. Hertz, the Chief Technology Officer at BearCom, provides innovative wireless solutions to BearCom customers every day. But when a communications problem requires superhuman powers, Meg becomes Wireless Woman—and always saves the day!

## The Adventures of Wireless Woman™



## DID YOU KNOW?

# High-Frequency Radio Technology Gaining Recognition

By Ian Torok

With each passing day, wireless technology is ensuring that people can connect better and more cheaply, no matter where the location. This is best exemplified by high-frequency (HF) radio technology.

HF radio frequencies range between 1.6 and 30 MHz. Since the ionosphere is quite effective when it comes to reflecting HF radio waves, this range is extensively used for medium- and long-range terrestrial radio communication.

Companies like Codan Limited, an Australia-based manufacturer of radio and satellite communications systems, are changing the world by manufacturing devices and equipment that leverage this technology, which is highly reliable, provides for a robust connection, and offers an attractive value proposition.

On the first point, HF radio technology provides for true infrastructure-free communications. The fact is, conventional, VoIP, cellular, and satellite phones all rely on land-based infrastructure. In the event of a natural disaster, these communications schemes can be rendered inoperable,

meaning that HF radio technology offers the ability to literally save lives in such scenarios. "When all else fails, a user relying on HF radio technology still has an open line of communication," said Lachlan Flint of Codan. "It's an excellent backup technology which is truly independent of any infrastructure."

HF radio technology also has soared in popularity because of its strong, robust connection, aided by the development of Automatic Link Establishment (ALE). This feature enables the operator to find the best channel available by quickly zeroing in on an optimal frequency.

With the reality of compressed budgets, HF radio technology provides a cost-effective solution. Compared to satellite phones, the most commonly deployed alternative for communications of last resort, HF is budget friendly from a lifetime cost perspective.

Once the initial equipment investment is made, there is no cost for calls or monthly equipment rentals. For that reason and others, governmental agencies and other entities involved in mission-critical services often are among the first to the table when

it comes to exploring HF radio technology. In their case, wireless emergency communication is a necessary component of emergency preparedness. For example, the American Red Cross and the United Nations use HF extensively.

Many emergency preparedness plans can benefit significantly from simultaneous communications among a large number of operators in a command-and-control communication network. Whether an HF radio serves as a base station, is mounted in a vehicle, or is carried in a portable "manpack" configuration, command-and-control communication is readily accomplished.

What does the future hold? HF radio technology already goes beyond just voice to accommodate fax, computer data and files, e-mail, text messages, and phone calls. Current technology supports these capabilities, which have become standard options to most HF radio products. ●

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*Ian Torok is Director of Technical Services for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*





The AT&T Classic is held each year in Duluth, Georgia, just outside Atlanta. Formerly known as the Atlanta Golf Classic, the tournament dates back to 1966 and was officially added to the PGA Tour in 1967. The event was held at the Atlanta Country Club for many years before moving to the Sugarloaf Country Club in 1997.

## WIRELESS LIFESTYLE (AT&T Classic):

# Scoring a Hole-in-One with Wireless Technology

By Brent Bisnar

Bad weather, the last-minute withdrawal of a big-name golfer, programming interruptions, and bad cell phone connections between tournament officials are just a few of the factors that typically plague a tournament promoter during a professional golf tournament.

That is, unless you are Outdoor Events, a company that specializes in managing professional golf tournaments and other types of major events. Over the last few years, the Columbus, Georgia, outfit has been able to trim away at least one of those uncontrollable challenges—unreliable communications—by taking advantage of recent improvements in wireless technology.

A case in point is one of its premier tournaments, the AT&T Classic, a PGA Tour event held at the Sugarloaf Country Club in the suburbs of Atlanta each year. For the 2007 AT&T Classic, Outdoor Events again contracted with BearCom to provide two-way radios as well as manage the overall

implementation and maintenance of the wireless communication network. And that's only the beginning of the story. Outdoor Events, whose principals have worked with BearCom at various events for more than a decade, counts on the provider of wireless communications equipment and solutions to use its know-how and expertise to introduce new efficiencies to the way Outdoor Events manages its customers' tournaments.

The relationship between the two companies has strengthened over time. "A few years ago we actually went with a cheaper provider," said Charlton Norris, Vice President of Outdoor Events. "But you get what you pay for. So we came right back to BearCom. In BearCom, we know we are going to get superior service, as well as the latest and greatest technology."

A classic example of this is BearCom's commitment to using lithium-ion batteries in all the devices they rent to

customers. Such batteries extend the talk time that tournament employees have. "The last thing you want is to have the battery dying toward the end of the day in a radio being used by a course marshal," said Suzzie Mortazavi, who manages BearCom's golf industry business. "In our years of working with tournament promoters, battery life has been identified as a top priority."

Another big change, noted Mortazavi, is an increasing demand for two-way radios. "Most tournaments rent anywhere from 100 to 200 units," she said. "Since I began in this field 12 years ago, I've seen golf tournament promoters request more and more radios for their events." She added that event managers are starting to take a more holistic view of tournaments, recognizing that there are other constituencies beyond just the course marshals who need to be connected to a wireless communications network. To

*Continues on page 20...*

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More than 130 Motorola two-way radios were rented by Outdoor Events for use at the 2007 AT&T Classic. All units were inspected and tested by BearCom technical experts before the start of the golf tournament.

...Continued from page 18

that end, BearCom has embraced other constituencies, such as security, catering, transportation, hospitality, and valet parking staffs, all of whom need the ability to communicate with other people in their workgroups.

"The increase in the number of radios used also has increased efficiency," Mortazavi said. "Instead of hiring more security staff, the tournament promoters simply rent more radios, so that fewer people can cover a greater space using wireless communications devices. This also is true for the catering staff. Thanks to their ability to communicate with one another, that service has become more efficient as well."

One of the most popular two-way radios for golf tournaments as well as other events is the Motorola PR400. It is compact and at just 13.3 ounces is ideal for rangers to carry around the course on a long day. The benefits of the PR400

don't end there, according to Mortazavi. "This business radio has a number of outstanding features that make it the ideal choice for golf tournaments. Its programmable buttons allow the user to easily customize the radio's operation to suit his or her requirements. A full range of signaling capabilities also enables control of transmissions with extraordinary precision. In addition, the dual-mode operation offers the ability to switch between LTR and conventional modes at a touch of a button. Finally, user-friendly icons on the large eight-character alphanumeric display provide clear, understandable information at a quick glance."

Outdoor Events and BearCom usually work together before an event to establish a half-dozen or more channels that are linked to an individual in a trailer, which functions as the communications

Continues on page 21...



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...Continued from page 20

center during the tournament. "That way, any first aid emergency or rule challenges can be quickly relayed to the appropriate person," said Norris.

Besides the battery life, there have been other improvements to the devices that promote efficiencies, such as their reduced size. "They also have program features allowing course-side workers to adjust the volume of beeps, so as to not interrupt the golfers. The use of accessories such as earpieces and voice-activated microphones add additional convenience," said Mortazavi.

With so many constituencies using wireless communications devices at the tournament, BearCom must be prepared for everything, long before the first player tees off. "A few months before an event, we do a site walk at the golf course.

We make sure we have the proper coverage mapped out and that we have on-site staffing to work the week before, setting up equipment, checking out radios, and of course, servicing anything that



needs attention. The third thing we do is to monitor frequencies with the FCC."

In order to be legally compliant, each channel must be assigned a special temporary authorization license. A risk for unlicensed radios could be a fine anywhere from \$1,000 to \$10,000 per channel. Mortazavi said that many of the smaller two-way radio rental companies are not FCC compliant. "BearCom will never put radios out if they are not compliant. We would not jeopardize our customers in that way, but some of the smaller companies simply do not have the experience or financial resources to be compliant."

While the AT&T Classic and some other high-profile PGA Tour events, including

the Ford Championship, certainly have been the crown jewels of Outdoor Events' portfolio, the company also has developed a bustling business involving hunting and fishing trips that take advantage of wireless technologies. For example, Outdoor Events has planned a wide range of corporate outings over the years, such as pheasant hunting in South Dakota, turkey hunting in Texas, elk hunting in Montana, largemouth bass fishing in Florida, deer hunting in Georgia, duck hunting in Arkansas, quail hunting in Georgia, and fishing for redfish in the Louisiana bayous and trout in the Pacific Northwest.

"Corporate America has developed a hunger for unique types of entertainment that allow more time for interaction between the customer and the client or between the company and the

employee," said Norris. "We believe that outdoor experiences are a unique alternative to time-worn customer and employee entertainment events. The camaraderie created on hunting and fishing trips or during a day spent on the golf course lasts a lifetime."

The company's successful formula has been developed over time, Norris added. "For example, we have searched the Americas for the best lodges, with the objective of making our clients' event as comfortable and productive as any they have ever had before." ●

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*Brent Bisnar is Executive Vice President for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*



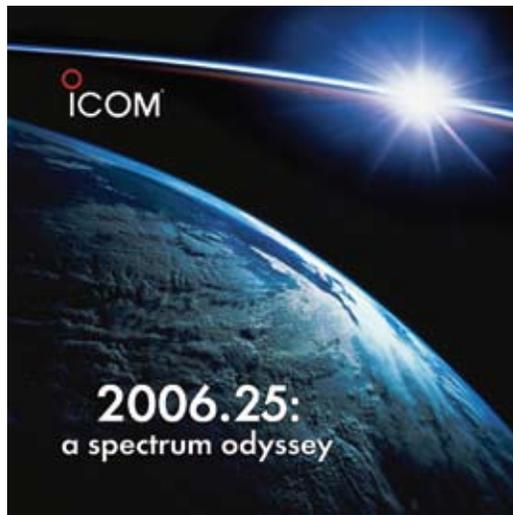
### It Pays to Know the Course

BearCom's experience with wireless equipment and extensive knowledge of the challenges faced at golf tournaments come into play when positioning repeaters, antennas, and other equipment to ensure strong, reliable wireless connections during outdoor events.

"Whenever we look at a golf tournament site ahead of time, we take into account which trees will have leaves when the event comes around," said Suzzie Mortazavi of BearCom. "The foliage will affect the cellular and wireless service. We also must address the fact that most golf courses have lots of hills."

At the AT&T Classic, two Motorola repeaters and a rooftop antenna were used at the clubhouse to ensure complete wireless coverage across the entire 27-hole course at the Sugarloaf Country Club.

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## SUCCESS STORY (Birdville ISD):

# Providing a Wireless Interoperability Strategy for a School District

By Kristin Kirkham

### The Customer

Located in the heart of the Dallas/Fort Worth Metroplex, Birdville Independent School District (ISD) covers more than 40 square miles in Northeast Tarrant County, Texas. Birdville ISD employs 2,800 faculty members, serving 22,000 students at 32 campus locations, consisting of 21 elementary, seven middle, and four high schools.

### The Challenge

Birdville ISD's two-way radio system consisted of several different brands of radios at virtually every school and in every department. Some of the radios couldn't communicate with each other because of interoperability issues. The district also faced unnecessary difficulties by having to carry multiple inventories of batteries and accessories to service the various models. To address the problem, Birdville ISD took its radio fleet out to bid. Competing with several local companies, BearCom, a nationwide wireless dealer, won the Birdville ISD project with a carefully tailored system and several thoughtful consultations with the district.

### The Solution

BearCom helped Dr. Rick Kempe, Administrator for Birdville ISD, to devise a five-year plan to implement a complete interoperability strategy for the district. With an original order of 350 Icom IC-F4GS and IC-F21 two-way radios, Birdville ISD was well on its way to connecting all 32 campuses. Because the wireless solution involved only Icom products, BearCom was able to streamline the district's entire stock of batteries and accessories, saving Birdville ISD time and money associated with its previous multi-brand fleet. Two additional equipment orders followed the first, each requesting 104 Icom IC-F4021 digital radios. The digital display allows users to switch channels by simply scrolling through a list of schools.

### The Results

In only three years, BearCom was able to accomplish more than what was expected in the original five-year plan. By updating its two-way radio fleet, Birdville ISD significantly reduced costs by standardizing the makes and models of radios and accessories, as well as user training processes. The district plans to auction off its entire stock of old



radios as its budget allows, so that it can continue to upgrade the system. And by utilizing the state bid that is available to all schools in Texas, Birdville ISD no longer puts its radios out for public bid. This guarantees that the district gets a product that meets its needs at a competitive price. Dr. Kempe said, "The people at BearCom don't just provide radios—they provide top customer service and professional, personalized consulting. An experience like that is priceless." ●

*Kristin Kirkham is Marketing & Technical Writer for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*

*"The people at BearCom don't just provide radios—they provide top customer service and professional, personalized consulting."*

### Dr. Rick Kempe

Administrator  
Birdville ISD

Icom's IC-F4021 digital two-way radio is housed in a compact, lightweight body and has many attractive features, such as multiple signalings, a high-capacity battery, and wide frequency coverage. The large, programmable buttons have ample pitch to allow blind-touch operation, and the radio meets IP54 requirements for dust and splash resistance.



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**BlackBerry**

## AROUND THE WORLD:

# Wireless News and Views

By Holt Hackney

### Research In Motion Plans to Sell Wi-Fi Enabled BlackBerry

RIM will start selling a BlackBerry device with both cellular and Wi-Fi wireless capabilities later this year, according Co-CEO Jim Balsillie.

Speaking at the JP Morgan Technology Conference in May, Balsillie went public with his change of heart on Wi-Fi.

Having originally told some media that Wi-Fi was "overhyped," Balsillie admitted to *InfoWorld* that he "...was not a big believer in it for the first two or three years because it was hyped as something that would subsume everything, that you would get rid of your cell phone." Since then, he has come to the conclusion that it is "complementary to a cell phone."

Central to this conclusion is the fact that the BlackBerry Enterprise Server (BES) already supports roaming for customers, who may travel between multiple operators. So the server would treat Wi-Fi networks just like additional cellular networks.

This capability facilitates the transition between data connections and voice

calls between Wi-Fi and cellular networks as customers move. Balsillie added that the BES "...presupposes the airlink is insecure," meaning that all voice and data transmissions are encrypted using either technology.

One of the last pieces to the puzzle may be getting mobile operators, specifically those that aren't related to a landline service provider, to embrace FMC—or fixed mobile convergence—since theoretically, they could lose revenue by transferring calls from their cellular networks to a potential opponent's Wi-Fi network.

Balsillie isn't worried, however. "Most of the carriers I've dealt with are supportive of FMC," he said at the conference, adding that "...an increasing number of operators have both cellular and fixed-line networks, and those companies are looking for strategic ways to leverage both assets." ●

### Codan Releases New Lightweight and Rugged HF Manpack Radio

Codan Limited has announced the availability of its 2110 SSB manpack radio. The 2110 is a lightweight,

rugged, and waterproofed solution for long-range communications on foot, complementing Codan's highly successful NGT family of base and mobile systems.

This self-contained, high-frequency manpack transceiver—with an integrated antenna tuner and optional GPS receiver—offers frequency hopping and voice encryption for secure communications. It also is fully compliant with FCC, NTIA, and MIL-STD 810F (dust and immersion) standards, and it is JITC certified for MIL-STD 188141B ALE.

"Traditionally, manpack radios were simple modifications of existing base or vehicle radios," said Matthew Cook, Codan's HF Product Manager. "With the 2110, Codan delivers a new full-featured radio, tailored to meet essential manpack requirements, including longer battery life, greater durability, and a lighter carrying weight."

While the radio is suitable for various applications, such as customs,

*Continues on page 25...*

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border patrol, and police services, the 2110 is completely ruggedized and complies with tough environmental standards including MIL-STD-810F. "Codan's 2110 has the lowest power consumption of any commercial manpack radio, so users can operate continuously for several days on a single battery charge," Cook said. Using state-of-the-art battery management, the 2110 reduces ongoing costs by automatically preventing batteries from overcharging, thus extending battery life.

Codan's 2110 radio features a user-friendly interface with a large, clear backlit display and keypad and a fast-integrated automatic antenna tuner. Most immediate functions are accessible via a single key press to minimize operator training. The 2110 fully complies with FED-STD-1045 and MIL-STD-188-141B ALE standards and is enhanced by Codan's advanced ALE technology. It operates seamlessly between Codan's NGT series and other commercial- and military-grade radios.

With its large memory capacity and hardware design, the company says that the 2110 protects the user's investment by accommodating future upgrades. It also offers support for data applications, such as e-mail, integrated voice security, and GPS receiver options. ●

### **Was Telex a Good Luck Charm for Friday Night Lights?**

Concerned fans of the critically acclaimed television show Friday Night Lights, which is based on a fictional high school football team in Texas, had every reason to believe the new NBC drama would not be renewed by network executives, given its overall poor viewership. Their support was rewarded, however, when NBC announced the show would be back. At least one company also was applauding on the sidelines—Telex Communications.

Telex, the nation's leading manufacturer and provider of wireless football coaching headsets, had secured the placement of its product (TelexLegacy)

on the show. The show's main characters used the TelexLegacy for the authentic football scenes. It should surprise no one that the product looked perfectly at home on the sidelines, since it was designed specifically for high school and small college football programs. In fact, the system was so successful that acclaimed writer/director Peter Berg used the live system to pass instructions to the actors.

Virle Reid, Assistant Prop Master for Friday Night Lights, said that "...while doing research into football coaching headsets, especially among the bigger high schools in Texas, Telex emerged as the leading brand and product. To accurately portray that aspect of the game, we had to have the genuine system being used by respected programs across the country. The added bonus was that the TelexLegacy product worked so well, it helped us improve our own communications."

The relationship has been a positive one for Telex. "It has been a real coup to be involved with Friday Night Lights," said Telex's Marc Archer. "Telex wireless football coaching headsets are seen on TV most nights of the week, with all the professional, college, and high school games. It's great to see them featured every Tuesday night on NBC in primetime." ●

### **Impact Radio Accessories Experiences Record Growth**

Impact Radio Accessories, a world leader in the design and manufacture of unique communications products for public safety, military, security, retail, and hospitality applications, is experiencing record growth of its new Impact universal charger line, which it first introduced at the 2006 International Wireless Communications Expo (IWCE).

The company announced that sales exceeded all forecasts for Q3 and Q4 of 2006. "We started with a small pre-release at IWCE and an initial offering of 15 adapter cups. Over the last 10

months, we have not only added an additional 27 cups (total now 42), but we also have improved every detail on all three units," said President Keith Kostek, who added that drivers for the growth were word of mouth, advertising, and repeat purchases.

"The AC/DC-6 in particular has been an incredible seller. There is simply no other six-bank unit on the market like it, and rental fleet owners especially like the small size and light weight which saves them freight costs," said Kostek. "We have a hard time keeping them in stock but we're ramping up production to meet current and future demand from interested OEMs and international distributors. We have a large inventory of cups now, and we keep flying these things in by the planeload to keep up."

BearCom, which is a reseller of Impact products, has witnessed the market's acceptance of the products firsthand. "Impact Radio Accessories has had a huge impact on the wireless technology industry," said John Czapko, Vice President of Sales for BearCom. "Impact has introduced innovative and reliable products that facilitate better use of wireless devices, creating overall efficiencies for companies in many different industries. What's more, the company's products are also very user friendly and affordably priced." Many other factors have positively influenced the acceptance of Impact's products:

- A two-year, no-hassle warranty is offered on all devices.
- On-staff engineers oversee all design and production processes.
- Full-time inspectors make sure that quality control processes are followed at all times.
- High-grade components and materials are specified by Impact to ensure top-quality finished products.

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*Holt Hackney is Managing Editor for Today's Wireless World magazine. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*

**CALENDAR:**

# Upcoming Wireless Industry Events

By Elizabeth Wiseman

**Wireless & Mobile Expo**

Toronto, Ontario  
July 17-18, 2007  
[wirelessandmobile.wowgao.com](http://wirelessandmobile.wowgao.com)

**WiMAX Focus Amsterdam**

Amsterdam, The Netherlands  
September 5, 2007  
[www.meridianconferences.com/WiMAX\\_Focus\\_Amsterdam\\_2007.htm](http://www.meridianconferences.com/WiMAX_Focus_Amsterdam_2007.htm)

**Wireless China Industry Summit**

Beijing, China  
September 5-6, 2007  
[www.wirelesschina-beijing.com](http://www.wirelesschina-beijing.com)

**Mobile Web Americas**

Orlando, Florida  
October 2-4, 2007  
[www.mobilewebexpo.com](http://www.mobilewebexpo.com)

**Symbian Smartphone Show**

London, England  
October 16-17, 2007  
[www.symbiansmartphoneshow.com](http://www.symbiansmartphoneshow.com)

**IEEE International Symposium on Wireless Communications**

Trondheim, Norway  
October 17-19, 2007  
[www.iswcs.org/iswcs2007](http://www.iswcs.org/iswcs2007)

**Mobile Business Expo 2007**

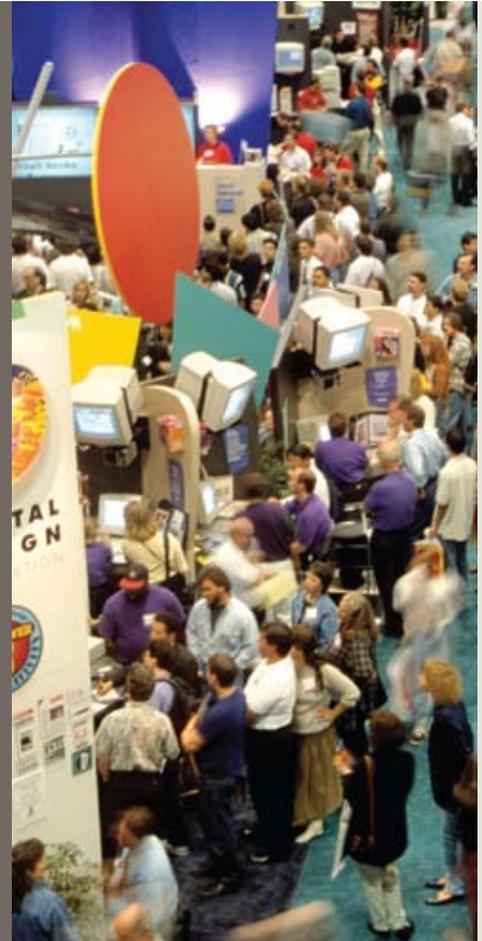
New York City, New York  
October 22-25, 2007  
[www.mobilebusinessexpo.com](http://www.mobilebusinessexpo.com)

**CTIA Wireless I.T. & Entertainment**

San Francisco, California  
October 23-25, 2007  
[www.wirelessit.com](http://www.wirelessit.com)

**Enterprise Wireless 2007**

San Antonio, Texas  
October 25-26, 2007  
[www.enterprisewireless.org/events/events.htm](http://www.enterprisewireless.org/events/events.htm)



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For more information, contact BearCom:  
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## BEARWIRE:

# What's Happening at BearCom

By John Czapko

### BearCom Practices What It Preaches

BearCom doesn't just preach to our customers and prospects about the need to use technologically advanced communications systems—we also practice that philosophy within our own company.

"BearCom has 26 branches across the nation. Until recently, each of those branches had a different phone system, including unique voicemail systems, music-on-hold systems, after-hours answering services, and more often than not, inadequate capacity for our growing business' needs," said Jenny Kruppenacher, Director of Information Technology for BearCom. "Overall, the amount of money we were spending on maintenance, answering services, long distance, and missed opportunities prompted us to start a search for the perfect solution."

What was the right solution? It had to bring costs down and provide an ROI for least-cost routing, long distance, and conference calling. It also needed to be able to handle the smallest of BearCom branches across the country with five phones all the way up to our headquarters in Dallas, which has close to 200 phones. In addition, we needed to be able to deploy and manage the new system ourselves, and it had to offer five-digit dialing, call forwarding, internal night ring options, call reporting, and more.

"We crafted an RFP that encompassed both a hybrid and full VoIP (Voice Over Internet Protocol) solution that would meet our needs," said Kruppenacher. "Nine manufacturers pitched their solutions, and we quickly narrowed the field of contenders to three. After several months of strategy planning sessions, call mapping, and intense reference calling, we selected a Cisco VoIP system, supported

by INXI in Lewisville, Texas. Soon thereafter, we began the installation and implementation process at our corporate headquarters. As that process extends to our branches across the U.S., we will become even more efficient and effective at meeting our customers' needs." ●

### BearCom Adds MeshTrack System to Wireless Product Lineup

A rapid, coordinated response is imperative when lives are at stake. Real-time tracking of emergency personnel at an incident can help improve situational awareness and aid the efficient and effective deployment of resources.



The MeshTrack system from Motorola has been engineered to provide a fast and easy-to-deploy tracking and data networking solution for command and control. This powerful location and wireless broadband capability can help incident commanders and resource managers prevent, preempt, and respond to on-scene emergencies.

Unlike global positioning systems (GPS), MeshTrack does not require a link to a satellite. This enables it to work in places where GPS cannot, including deep inside buildings, urban canyons, and underground locations. This advanced location technology makes MeshTrack an ideal solution for emergency response agencies. Personnel and resources can be easily located and tracked as they move through an area, exit a building, or enter a restricted area.

BearCom now offers MeshTrack as a key component in our growing portfolio of wireless equipment. ●

### BearCom to Exhibit at Several Trade Shows in Coming Months

Please stop by the BearCom booth at the following events to learn more about the latest in wireless products and integrated solutions:

- Firehouse Expo  
Baltimore, Maryland  
July 24-29, 2007  
[www.firehouseexpo.com](http://www.firehouseexpo.com)
- MPI World Education Congress  
Montreal, Quebec  
July 28-31, 2007  
[www.mpiweb.org](http://www.mpiweb.org)
- APCO International Conference & Exposition  
Baltimore, Maryland  
August 5-9, 2007  
[www.apco2007.org](http://www.apco2007.org)
- ASAE Meeting & Exposition  
Chicago, Illinois  
August 11-14, 2007  
[www.asaeannualmeeting.org](http://www.asaeannualmeeting.org)
- Fire Rescue International 2007  
Atlanta, Georgia  
August 23-25, 2007  
[www.iafc.org](http://www.iafc.org)
- IFEA Convention & Expo  
Atlanta, Georgia  
September 17-21, 2007  
[www.ifea.com/about/convention.asp](http://www.ifea.com/about/convention.asp)
- ASIS International 2007  
Las Vegas, Nevada  
September 24-27, 2007  
[www.asisonline.org](http://www.asisonline.org)

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*John Czapko is Vice President of Sales for BearCom. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*

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## FINAL WORD:

# Partnerships are Helping Businesses Become More Efficient

By Joe Fabris

It was one of those news items that the general public might have missed. We announced last year that customers using Palm Treo smart phones running on Windows Mobile could derive seamless access to their corporate e-mail through the introduction of the Messaging and Features Service Pack (MFSP) compatible with Microsoft Exchange Server 2003 Service Pack 2. This year, we've extended that capability to Treo smart phones running Palm OS. With the Microsoft Exchange ActiveSync Update, these customers now have the same seamless, direct access to e-mail.

By making its server accessible to smart phone manufacturers like our company and others, Microsoft has unlocked unprecedented efficiencies for businesses and their employees. Today, businesspeople receive more e-mail than phone calls when they are away from their desks. Smart phones enable users not only to respond to urgent e-mail, but also delete spam. Our research has shown that users can save up to an average of one hour each day by being

able to manage their inboxes while away from their offices.

This is not a new revelation to some users who have been accessing their component e-mail for years, thanks to an independent—but costly—server that resides next to the Microsoft Exchange Server. The difference is that companies today have more choices than they have ever had to benefit from this technology.

In addition, Microsoft deserves a lot of credit for setting the stage for future improvements by creating the .NET platform. Using this common framework, Microsoft is encouraging custom development. And we're increasingly seeing applications that had previously been relegated to the desktop but are now available as mobile applications, especially in areas like real estate and the medical field. A case in point is the way technicians at Stanley Access Technologies are using their Palm Treo smart phones to install, calibrate, and repair automated doors at hospitals, airports, hotels, and restaurants. Among the many benefits that employees at

Stanley are experiencing through their use of smart phones are:

- Improved communication between field service technicians and their local offices
- Streamlined software update process, which delivers updates directly to technicians in the field
- Simplified photo handling using the Treo's built-in camera to take photos of damaged parts and immediately send images via e-mail

But this is only a small part of the overall story. Thanks to partnerships like Palm and Microsoft, a variety of companies and organizations all over the country are now leveraging new applications on their mobile devices to become more efficient and profitable. And that trend is sure to expand in the coming months and years. ●

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*Joe Fabris is Director of Wireless Solutions for Palm. For more information about the wireless products discussed in this article, please contact BearCom at [TodayWirelessWorld@BearCom.com](mailto:TodayWirelessWorld@BearCom.com).*

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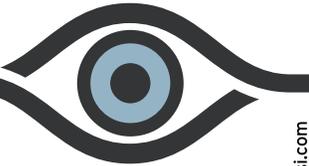
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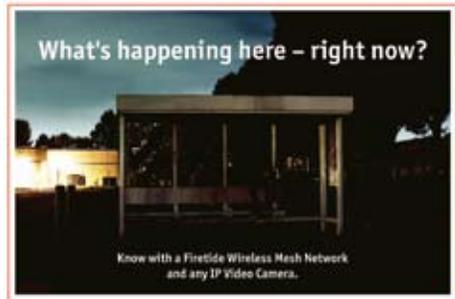
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# Warning: This Ad Contains Strong Language.



In the wireless communications industry, BearCom has always had a **strong** reputation. We've been going **strong** for more than 25 years, but now we're sending an even **stronger** signal than before.

BearCom is committed to **strong** customer service, has **stronger** relationships with the leading manufacturers of wireless equipment, and has the **strongest** wireless product line in the world. If that weren't enough, we also have some of the **strongest** minds in the

business, and our wireless experts number more than 400 **strong**. Simply put, we're **strong** medicine for all your wireless communications needs.

We think we've made a **strong** statement with this ad, but if you're still not convinced, contact BearCom today. We'll show you first-hand how we can help you build a **stronger** foundation for your wireless communications system. And we promise not to mention the word **strong** when you call.

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