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TODAY'S WIRELESS WORLD

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"Criminals are smart, so law enforcement agencies must be smarter. Today's wireless technologies provide for a more comprehensive intelligence base by enabling data sharing across agencies and jurisdictional boundaries."

Alan Sefton

President & CEO PIPS Technology

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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.

OPENING THOUGHTS:

Wireless Technology Enhances Safety

By John Watson and Jerry Denham

The primary focus of this issue of *Today's Wireless World* is the importance of public safety and how wireless technology is making the world a much safer place.

First up is the cover story on automated license plate recognition technology (ALPR). Solutions that are being developed around this technology are putting a huge dent in the nation's auto theft problem, helping police departments quickly identify stolen cars. Of even greater importance, ALPR is saving the lives of police officers by giving them the ability to determine, in real-time, if a vehicle is connected to a violent criminal before approaching that vehicle. This flexible technology can also be used for school campus security, parking lot access control, and a variety of other applications.

New wireless technology also is enabling powerful devices that better assist those brave citizens that staff the country's volunteer fire departments. Leading the way is the lcom IC-F50V two-way radio/pager, which is featured in the second article of this issue. By delivering both the functionality of a radio and a pager in one device, lcom is giving volunteer firefighters the ability to receive immediate notification of a fire, as well as the ability to promptly report on the status of that incident once they arrive. Additional kudos should go to lcom for developing and delivering this cost-effective product, which is mindful of the thin budgets that typify volunteer fire departments.

Nowhere is safety more paramount than in the air travel industry, our featured Industry Spotlight in this issue, where a single mistake could cost hundreds of lives. We're working with companies like Firetide, which produces wireless mesh networks that ensure better communications on the tarmac. Such communications are vital to maintenance workers, who face constant pressure to resolve problems and move on to the next plane. Firetide enhances their ability to reliably and wirelessly communicate whether the necessary repairs have been made to an aircraft.

Our Ask Wireless Woman section addresses reader questions that also touch on safety: how AdvanceTec hands-free devices are keeping road warriors' eyes on the road and how Positron is simplifying the challenge of handling and dispatching calls across a variety of formats, including data and voice, with minimal delays. And our Success Story details how a solution was created for Port Freeport that provides for seamless communications between safety personnel and stakeholders in the area.

Finally, our Wireless Lifestyle article departs from our focus on public safety and covers how vacation destinations around the world use wireless communications to enhance amenities and improve customer service. Anyone for a swim? •

"Wireless technology is making the world a much safer place."



JOHN WATSON
Chairman, BearCom
JERRY DENHAM
President & CEO, BearCom



COVER STORY (Automated License Plate Recognition):

ALPR: A Good Tool for Catching the Bad Guys

By Holt Hackney

The elderly man looked up from the ground, a pained look on his face. He had just been struck down by a car, which had left the scene of the accident. While there were witnesses, all they could share with the police was the color of the vehicle and a few characters from the license plate.

For the vast majority of law enforcement organizations, eyewitness accounts like these would be of little use. But the Roseville Police Department in Roseville, California, isn't just any law enforcement organization. It has access to the latest in technology, the Automated License Plate Recognition (ALPR) system, which was created by PIPS Technology and which many in the public safety field deem the greatest innovation for law enforcement since the two-way radio.

A typical ALPR system is made up of several elements, including:

- Dual-lens cameras mounted on the light bar of a police cruiser (capture both color and infrared images of the vehicle and license plate)
- Triple-flash technology (varies the flash, shutter, and gain settings of the cameras to quickly capture multiple plate images, ensuring the highest quality photos regardless of light or weather conditions)
- Platefinder (sophisticated firmware that continually searches the cameras' fields of view for the presence of license plates)
- Optical character recognition (OCR) engine (tool designed to read lettering that may be skewed or otherwise difficult-to-read license plates)
- Processors (technology that performs the OCR translation and can use the captured data in a variety of ways via a PIPS software application or thirdparty solution)
- Application software (industry-specific applications that allow the user to easily view and manage the data)

"ALPR is a true force multiplier," said Brian Shockley, Vice President of Marketing for PIPS Technology. "While an average police officer may run 50 plates in a shift, the ALPR system will scan every plate and is limited only by the number of plates that it sees. It's not uncommon for an officer to scan 5,000 to 8,000 plates in one shift."

Such technology can put a dent in the nation's auto theft problem. In fact, the National Insurance Crime Bureau noted recently in its annual auto theft report that 1,235,226 motor vehicles were stolen in 2005. Using the FBI's average valuation of \$6,173 per stolen vehicle, this amounts to more than \$7.6 billion in losses in 2005 in vehicle value alone.

Thanks to the power of ALPR technology, Roseville PD was able to solve the hit-and-run case and curb such abhorrent behavior in the future. In this instance, Roseville's crime analyst searched a database using the department's Back

Continues on page 5...



The PIPS system captures color images of each vehicle, as well as an infrared image of the license plate, which is converted into a text file that is then checked against onboard databases of interest (stolen vehicles, wanted felons, AMBER alerts, etc.) stored in the SupeRex processor. In the event of a "hit," an audible and visual alert notifies the officer.



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Completely Automated

The system runs autonomously, requiring intervention only upon "hits".

Learn more about PIPS today.



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This is one of those technologies that we are extremely proud to deploy at all types of law enforcement agencies around the country."

John Watson, Chairman BearCom

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Office System Software (BOSS), also developed by PIPS Technology. "Our BOSS database maintains a history of all plates seen by our patrol unit," said Roseville Police Chief Mike Blair. "By using the vehicle type and partial license plate, we were able to find a match on the vehicle. The match provided us with a complete license plate and led us to the suspect, who was arrested for felony hit-and-run."

The Roseville Police Department's use of ALPR is only one application of many. At the University of Kentucky, the school's Parking and Transportation Services (PTS) department recently installed a PIPS ALPR system on one of its parking control vehicles to locate vehicles that have outstanding parking violations. The hope is that the system will benefit permit holders by efficiently locating vehicles with unpaid citations in campus controlled parking areas, effectively making more spaces available to those with valid parking permits and in good standing with the university.

"On the university front, ALPR adds value to the parking permit programs by driving out violators and freeing up spaces for parking permit holders," said Shockley. "The system may look for scofflaw vehicles or vehicles with unpaid tickets. The system also may be used for virtual permitting or permitting by license plate."

The system consists of two cameras manufactured by PIPS Technology. Each camera captures a color image of the vehicle, along with an infrared image of the license plate which is then processed using optical character recognition software. Every plate is then checked

against a data file of vehicles with outstanding parking violations. When a match is found, the officer is immediately notified with an audible and visual alert on a notebook computer in the front of the vehicle.

The University of Kentucky had previously used the technology for more than a year at a fixed location, so the decision to install an ALPR system on a vehicle was an easy one, given its track record of success. "This technology is amazing," said PTS Director Don Thornton. "It adds value to parking permits by allowing us to enforce parking regulations effectively and efficiently. The PIPS system is a sound investment and a good business decision." Longer term, the university may use the system to look for stolen vehicles, calculate the length of stay for crucial parking locations, and a variety of other purposes.

"ALPR is a powerful example of how wireless technology can make a real difference in people's lives," said BearCom Chairman John Watson. "Not only does ALPR protect victims by removing criminals from the street, it also enhances the safety of officers in the field by helping them identify dangerous situations before they result in a confrontation. This is one of those technologies that we are extremely proud to deploy at all types of law enforcement agencies around the country."

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.



PIPS Technology and Its Eye in the Sky

Taking Automated License
Plate Recognition (ALPR)
technology to the next level,
PIPS offers a license plate
recognition package that
incorporates the camera,
illuminator, and ALPR
processor within a single
sealed enclosure.

With its compact, rugged design, PIPS' Spike+ offers the most efficient and effective way to monitor areas from a fixed location. Operating seamlessly with PIPS software in total darkness, bright sunlight, or adverse weather conditions, Spike+ has a dual-channel camera with both integrated infrared and color, as well as patented tripleflash technology, which varies infrared camera settings to obtain the highest confidence of license plate reads.

Although it takes up little space, Spike+ is sturdy and designed to deliver reliable operation 24 hours a day.

"Icom has a real winner on its hands with the IC-F50V. One of the best things about this new



device is that you do not have to carry two separate units. And even with the combined features of both a radio and a pager, it's still cheaper than buying a standard pager."

PRODUCT REVIEW (Icom IC-F50V Two-Way Radio/Pager): Device Helps Firefighters Combat Blazes More Effectively

By Mike Butler

There's a long-held perception that most firefighters in America live full-time in the stationhouse, where, when prompted by an alarm, they slide down a pole, strap on their gear, and ride together in a fire truck to a nearby blaze.

Don't believe it. The truth is that more than 70 percent of the fire departments in the United States are exclusively staffed by volunteers, according to the National Fire Protection Association. Furthermore, the ability to communicate wirelessly is essential to helping these 832,000 volunteer firefighters perform their jobs.

Historically, volunteer firefighters have depended on two different wireless devices to facilitate their communication. First, they have relied on pagers, which can easily be worn throughout the day, causing minimal interruptions in meetings, movies, and dinners, thanks to the vibration feature. These devices can offer voice storage capability, allowing personnel to record critical communications and play back messages at a later time, a necessity for emergency workers.

At the scene of most any fire, however, volunteers must have the ability to communicate. This requires the use of a second type of wireless device: a portable or mobile radio, usually installed on fire trucks and other response vehicles and distributed to volunteers at the scene of the fire. Many departments also have used two-way radios to notify and dispatch volunteers.

Immediate acknowledgement of an emergency call—as well as the ability to report on the status of an incident, provide preliminary intelligence regarding the situation, and request additional aid if required—are all necessary attributes of such wireless communication for firefighters.

Being forced to choose between the devices has become a major problem for volunteer fire departments. They either can outfit volunteers with a pager and lose the two-way communication features, or they can issue radios, which can be cumbersome for personnel to wear throughout the day. Some departments, believed to be at least 50 percent, go so far as to provide both two-way radios and pagers to volunteers. This option, however, adds the burden of carrying a second device each day and can be very expensive, since an appropriate pager alone retails for approximately \$600.

In an attempt to put this dilemma to rest, Icom recently created a solution to help volunteer fire departments around the country. Priced very reasonably-a little more than the cost of a standalone pager-the new IC-F50V offers a unique "3V" proposition (voice storage, vibrate, and value). In short, the IC-F50V combines the best of a pager and a radio into one "hybrid" package. Similar to other fire-type receivers on the market, the IC-F50V's vibration alert feature allows users to wear the radio in church, at meetings, or during dinner without missing a call or disturbing the environment. Its eightminute voice storage capability provides ample recording time for firefighters to play back communications, confirm a message, or log critical communications for future verification.

At the same time, the IC-F50V offers a full suite of radio features ideal for the volunteer firefighting market. Small and compact, with a 10-hour, 1700 mAh Li-ion battery, the radio can be worn comfortably all day. Rugged MIL-STD construction and IPX7 submersible protection stand up to harsh environmental conditions. The radio's

Continues on page 7...

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...Continued from page 6

BTL amplifier provides a loud 700 mW audio output, enabling firefighters to clearly hear communications, even at noisy or chaotic incident scenes.

Finally, the IC-F50V can be a lifesaver, thanks to the lone-worker function for remote check-in. When the radio is not operated for a preset period, it sounds a beep and requires the user to push the emergency button. If that button is not pushed for a preset length of time, an emergency signal automatically transmits and informs co-workers or the dispatcher that something may have happened to the user.

Resellers of the product are already seeing a groundswell of interest from firefighters as well as other public safety professionals. John Czapko, Vice President of Sales for Dallasbased BearCom, said the company's representatives are reporting strong demand in the field. "This is a fantastic product," said Czapko. "Once public safety professionals recognize the



versatility of the IC-F50V, we'll start seeing even more interest."

One user elaborated on Czapko's point, noting that "Icom has a real winner on its hands with the IC-F50V. One of the best things about this new device is that

you do not have to carry two separate units. And even with the combined features of both a radio and a pager, it's still cheaper than buying a standard

> pager." It's that ability to get the same functionality that one would find in a standard pager and in a two-way radio into one device that wins over public safety professionals and others, such as volunteer firefighters.

> With so many communities reliant on volunteer fire departments to save lives and property, Icom is doing its part to help firefighters become more efficient with a world-class device tailored exclusively

to their requirements. •

Mike Butler is Project Manager for BearCom.

For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.

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Auto-Incoming Call Recording & On-Demand Voice Record.

As long as the F50V is within system range, you won't miss any calls – even when you're away from the radio. When a pre-programmed 2-tone or 5-tone code or a SelCall (MDC mode only) is received, the incoming call voice recorder automatically starts recording. Your messages will be waiting for you! Additionally, up to 8 minutes of manual voice recording is also available.



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Stay safe when working alone! Set the F50V so if the emergency button is not pushed within a pre-programmed time, an emergency signal automatically transmits back to base.

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INDUSTRY SPOTLIGHT (Airlines and Airports):

Air Travel Industry Finds Much-Needed Efficiencies

By Hugh Johnston

The lone agent at the gate at the Detroit Metropolitan Wayne County Airport nervously closed the glass door to the breezeway leading to the plane bound for Dallas. As she cast a pensive glance at three more passengers hoping to walk the bridgeway to the plane and ultimately their seats on the plane, she raised the Icom two-way radio to her lips in hopes of averting a public relations black eye for the airline. At issue was the plane's weight, which was close to exceeding the allotted amount for such a flight.

"Can you confirm whether or not we can add three more passengers?" she asked the supervisor on the tarmac. The man radioed back that the passengers could board, spreading a feeling of relief to the agent and passengers alike.

Such efficiencies brought about by wireless technology are becoming much more commonplace in the air travel industry, where companies like Icom, Motorola, Firetide, and Peltor are introducing devices and technology that make a difference.

There are three primary areas where technology is being applied in the

industry. The first is passenger service, or communications inside the terminal area. This involves customer service, gate check-in, arrival/departure coordination, supervisory assignment



of personnel to gates, and response to problems, delays, etc., all of which are vital, given the current business climate.

"Demand for new and efficient uses of wireless technology is being fueled by fierce competition in the airline industry," said Chris Lougee, Vice President of

Icom America. "The airlines seek the loyalty of passengers, and one way to engender that loyalty is to make sure employees, vehicles, services, supplies, and airplanes are at the right place at the right time. Profits are thin, so maximization of all assets-material and human-is important."

An additional key area where wireless technology is having an impact is ramp operations. Here, too, radios have been useful, especially those with higher durability specifications because of wet, dirty, and/or harsh environments.

Another vital tool for ramp operations in light of the high-noise environment is the heavy-duty headset. For example, Peltor headsets are popular in the airline industry because of their ability to amplify voices and signals, while instantly suppressing dangerous highdecibel noise like aircraft engines. "These are really unique," said John Czapko, Vice President of Sales for BearCom. "With a typical noisereduction headset, ambient sound-such as the human voice-is also suppressed. That could be dangerous on an airport

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Alaska Airlines Warms to a Wireless Partner

Alaska Airlines, like a number of companies in the ultra-competitive airline industry, is constantly seeking better ways of doing business. So when one of its employees came to the management team with the idea that the airline rent or lease two-way radios from BearCom, the executives were all ears.

What they then heard is that BearCom could not only deliver a menu of Motorola devices but could also service those devices from one central location. "That was very important to Alaska Airlines," said Ian Torok, BearCom's Director of Technical Services. "The airline wanted a simpler, more cost-effective way to manage the telecom piece on its own. Alaska Airlines also realized it could get the latest technology and continually upgrade its devices well into the future."

...Continued from page 9

ramp, where vehicles are constantly running around. The Peltor headsets actually amplify this type of sound. However, when the noise level becomes dangerous, the headset instantly applies a 26db noise reduction ratio to protect the user's hearing."

"Peltor also has a wireless headset for push-back operations. In the past, you may have seen the operation where the ramp man connects a long wire into the receptacle in the nose of the aircraft in order to communicate with the flight crew," said Czapko. "Those wires can get tangled and limit the mobility of the man on the ramp. To alleviate that problem, Peltor uses Bluetooth technology. A transmitter is plugged into the aircraft, and the ramp man is not tethered by a wire."

A final area where wireless technology is being used is in the maintenance function. Here, BearCom works closely with companies like Firetide, which through its wireless mesh networks can provide connectivity across the airport ramp and enable concurrent video, voice, and data transmissions.

"The mesh is important," said Czapko, "since a moving tail of an aircraft would block signals when passing through a particular RF path. Wireless mesh networks are not bothered by that, since signals can be rerouted instantly through alternate paths."

The maintenance segment also is making effective use of notebook computers and their various wireless technology capabilities. Besides creating a network of hot spots in the terminal for the convenience of passengers, companies like American Airlines are using notebook computers to fix problems with planes that are stuck at the gate.

Icom and Motorola also are looking hard at municipal and private airports, where mobile wireless devices score points as facilitators for security. "Believe it or not, security is often a huge issue at small airports," said Tim Holt, General Manager of BearCom's northern California branch. "People are flying in and stealing equipment from small jets, such as avionic devices, and then flying out. Whether you're a passenger at the airport or the owner of a jet, wireless technology is making the airport a more desirable place to be."

Hugh Johnston is Purchasing Manager for BearCom.

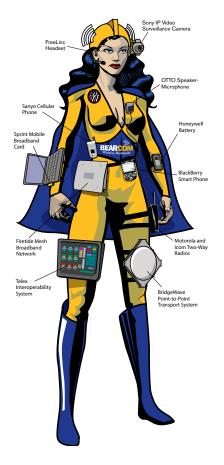
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Meg A. Hertz, the Chief Technology Officer for BearCom, provides innovative wireless solutions to BearCom customers every day. But when a communications problem requires superhuman powers, Meg becomes Wireless Woman-and always saves the day!

ASK WIRELESS WOMAN:

Questions and Answers about Hands-Free Kits and 911 Systems

By Wireless Woman

Question:

I've seen a number of studies where researchers conclude that driving while talking on the cell phone is dangerous. Using my mobile device on the road is critical for my business. Are there any solutions available that make driving safer while talking on the phone?

Answer:

Yes, AdvanceTec Industries has made tremendous strides with its advanced hands-free cellular kits, which make it safer than ever to use your mobile device while driving. It creates accessories, for example, for more than a dozen different Motorola iDEN phones.

It should surprise no one that Motorola is a partner in this endeavor. Several years ago, Motorola embarked on a multi-pronged "Drive Safe, Call Smart" campaign. As part of that effort, Motorola supported research and education to help people drive more responsibly. Motorola also had the foresight to see that many states were going to place restrictions on use of the cell phone while driving. And indeed many states have gone down that path. In New York, for example, use of cell phones while

driving has been banned, except in instances where a "hands-free" system is being employed.

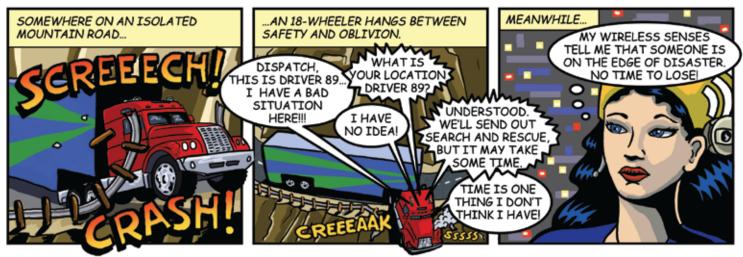
This is where AdvanceTec enters the picture. Established in 1987, the Miami-based company has embraced Bluetooth technology, which allows the user to have a phone anywhere in the car and still make and receive calls. Not surprisingly, AdvanceTec's products have a diverse user base, ranging from major metropolitan-area police forces, firefighters, and EMS teams to Fortune 500 companies.

AdvanceTec's cutting-edge research and development efforts have earned it the coveted C.E.S. "Innovations in Design and Engineering" award for three years and yielded a line of products that have gone on to become the technology and value standards in their categories.

By continuing to take advantage of emerging technologies, AdvanceTec is setting the standard in the industry for excellence and performance at a fair and competitive price.

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The Adventures of Wireless Woman™



...Continued from page 12

Question:

With heightened security awareness at airports and other mass transit hubs, how is wireless technology helping public safety professionals do their jobs in a more cohesive, safe, efficient, and all-encompassing manner?

Answer:

One word comes to mind-Positron, a leader in fully integrated, end-to-end public safety solutions for call handling and dispatching.

Positron's flagship product is called VIPER (Voice over IP for Emergency Response). It addresses customers' demands for a scalable solution that allows them to move easily and efficiently onto a single physical network by integrating data, voice, and future video/wireless traffic, while at the same time benefiting from next-generation PBX services.

One customer using the VIPER system is in Clewiston, Florida, where the Hendry County Sheriff's Office (HCSO) and the Clewiston Police Department (CPD) are using it to stay one step ahead of the bad guys.

As the nerve center of most law enforcement or emergency services agencies, the communications center, or dispatch, serves as the intake point of vital information from residents in trouble as well as relay point to the officers sent to assist. The communications centers for both the HCSO and CPD recently got a powerful boost, thanks to Positron.

For several years, Caller ID provided the dispatcher with the name and address of a 911 caller. VIPER and its Power 911 Mapping have taken that capability even further.

HCSO is only the second public safety agency in Florida to implement the VIPER system. Power 911 Mapping can allow the dispatcher to very accurately pinpoint a cell phone caller (with GPS capability) to within one foot of his or her position.

The advantage is obvious. Someone calling 911 on a cell phone can be located immediately on the VIPER computer screen so the dispatcher can send help exactly where it's needed without any delay.

The map also can show the dispatcher an aerial view of an entire city, all the way down to a specific house, including outbuildings and trees. The dispatcher then can advise an officer of possible hiding places, providing additional security for that officer searching for a suspect at night.

Also, 911 calls from the hearing impaired or mute come through on the system like an e-mail message, allowing the dispatcher to type in a response.

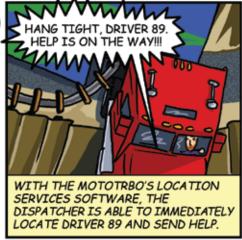
In the HCSO Communications Center, the dispatcher now monitors four computer screens—two VIPER screens, one PC, and one CAD screen—that show which officers, firefighters, and EMS personnel are on duty, as well as their status. The system also enables communication with other public safety agencies in the area, should a large-scale emergency arise.

Positron also experiences its share of upgrades. For example, Guilford Metro 911 (North Carolina) recently deployed the VIPER system, becoming the first to do so in the state. Guilford has been a Positron customer for more than 10 years and handles more than 1,000 emergency calls per day while supporting multiple fire, police, and EMS agencies. Wesley Reid, the Executive Director of Guilford Metro, noted that the new system replaced a Positron Life Line 100 system that had been in place for more than a decade.

Wireless Woman, a.k.a. Meg A. Hertz, is Chief Technology Officer for BearCom.

For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.









Two-way radios and smart phones are becoming standard equipment for employees at luxury hotels and resorts. Staffers use radios, like those manufactured by Motorola and Icom, to provide an exemplary level of customer service, while management has begun using smart phones, such as the BlackBerry, so they can more efficiently access e-mail and maintain contact lists, calendars, and documents.

WIRELESS LIFESTYLE (Vacation Destinations):

Improving Service at High-End Hotels and Resorts

By John Czapko

The now-famous TV advertisement featuring a couple sitting on a serene beach with a popular beer at arm's reach is rapidly losing favor with today's leisure traveler. In its place is another ad that presupposes the same gorgeous setting. But instead of a beer, there's a mobile communications device.

Consumers love their electronics and these days are increasingly demanding that resorts and high-end hotels enable their connectivity.

"Our clientele tends to be more upscale, and they like to stay in touch with family, friends, and associates while they are visiting the islands," said Anita Davis, the IT Manager for McLaughlin Anderson Luxury Villas, a company based in the Virgin Islands. "Wi-Fi is becoming the most in-demand amenity at our rental villas, as many of our guests travel with their notebooks to keep up with their offices or their own virtual online lives. If their cellular providers do not extend service to the area they are visiting, we have a number of reliable local vendors who are happy to issue SIM cards and/ or rent cell and GSM-capable phones." And this trend extends beyond any

particular class of resort or geographic location. "It's all about the consumer," said James Chung, an analyst at Reach Advisors, a research firm focused on emerging shifts in how people live, play, and buy. "We're now at the point where the consumer pretty much demands wireless technology at resorts."

But that doesn't mean they'll get it for free, said Chung. "Interestingly, there tends to be a big split between highend hotels and resorts vs. lower-end hotels," he said. "Lower-end hotels tend to offer wireless access for free. Higher-end hotels and resorts tend to charge for in-room access. Why? The lower-end hotels typically serve the independent road warrior who's paying out of pocket. The higher-end hotels and resorts are happy to take the money from expense-account travelers. And yet they'll still offer free access to those on a budget if they're willing to come down to the lobby."

The higher-end hotels and resorts are benefiting in other ways as well, Chung said. "At many resorts that we track, we've seen the average length of stay increase in the past two years, because their guests feel comfortable booking an extra day knowing they can still check in on work."

But whether they make money or lose money by offering wireless access, such properties must offer the service, according to Abigail Lorden, the Editor of *Hospitality Technology* magazine. "Wireless technology is huge in the hospitality industry right now," said Lorden. "As a hotel or resort, you must offer connectivity to your guests. It's no longer just a luxury—it's totally required and expected. One reason for this is that Americans are increasingly savvy about technology. Today's generation has grown up with technology, and now they're entering the business world."

Lorden sees another developing trend with hotels and resorts in that they are offering different tiers of service, typically a free service and a paid one. "If guests want the basic level of service for checking e-mail or browsing, the property will provide that level of service for free," she said. "However, if they are going to need more bandwidth

Continues on page 15...

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... Continued from page 14

because they are downloading files, there is an additional charge." But wireless technology's biggest impact may be on the internal side, according to Lorden. She cited the Mandarin Oriental in Manhattan as a prime example, noting how hotel staff at the luxury hotel identify the guest as they are dropped off and alert the employees in the lobby. By the time the guests arrive in the lobby, the employees greet them personally, a touch of customer service that is earning accolades in the industry.

Another example of the effective application of wireless technology is in the housekeeping arena, where staff can be notified quickly and easily by two-way radio of a hotel guest's preferences or redirected to another task based on the needs of a particular guest.

Davis agreed with Lorden about wireless technology's capacity for improving

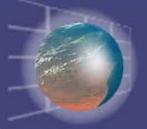
customer service. "When we have a situation that demands immediate attention, such as a travel delay, guest illness, or service request, our staff are always available on their cell phones," said Davis. "We also maintain contact lists, calendars, and documents on smart phones and sync them with our desktop and notebook computers here. Although we live in a low-tech realm (the islands), we require high-tech solutions. And the wireless technology industry is rising to meet our special needs."

John Czapko is Vice President of Sales for BearCom.

For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.



The wireless footprint is growing exponentially at most high-end properties, often helped along by Firetide's mesh networks. But when a guest drifts out of range, other wireless devices, such as Sprint mobile broadband cards, ensure a robust connection to the online world.



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SUCCESS STORY (Port Freeport):

Leveraging Interoperability to Help Ensure Safety for a Seaport

By Kristin Kirkham

The Customer

Located in South Texas, Port Freeport is ranked as the 13th-largest seaport in the United States in terms of tonnage, with operations dating back more than 100 years. Offering a 400-foot-wide and 45-foot-deep channel, the Port is one of the most accessible points off the Gulf Coast. Port Freeport offers unencumbered growth, with 7,500 acres of surrounding land available for development, a safety record that speaks for itself, and insurance claims far below the national average for the industry.

The Challenge

Port Freeport needed a new twoway radio interoperability system to provide seamless communications during emergencies between public safety personnel and stakeholders in the Port Freeport area. The Port's desire to upgrade its communications equipment led to a competitive request for proposal (RFP) process, funded primarily by Homeland Security grants. The interoperability initiative was part of a "waterside perimeter" project, which included radar, an automatic identification system (AIS), and video cameras. When Rick Benavidez, Port Freeport's Security Manager, saw the Raytheon JPS ACU-1000 system, he contacted BearCom for advice.

The Solution

BearCom concurred that the ACU-1000 would be the right choice for Port Freeport, as it would allow the Port to communicate with all required radio frequencies—VHF, UHF, 800 MHz, and 700 MHz—in order to send out emergency notifications for situations ranging from weather notifications to terrorist alerts to "everyday emergencies." To further strengthen its communications abilities, Port Freeport took an extra step and reached out to the Freeport Police Department to see if that organization would agree to host the ACU-1000,

which it did. The system now ties Port Freeport together with six public safety agencies, including the U.S. Coast Guard, as well as five major industrial companies in the area.

The Results

Port Freeport has been very pleased with the ACU-1000 unit, and a successful test of its capabilities performed by the "Raytheon JPS and
BearCom have enabled
all of us to talk to each
other with just the click of
a mouse."

Rick Benavidez
Security Manager
Port Freeport



Freeport Police Department during a hurricane drill confirmed the system installation by BearCom to be a success. "Port Freeport, private industry, public safety, and federal government personnel can now use their existing radio systems to communicate more effectively and efficiently, and that is of paramount importance when an emergency arises," said Benavidez.

Kristin Kirkham is Marketing & Technical Writer for BearCom.

For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.

Located just three miles from deep water, Port Freeport is one of the most accessible seaports on the Gulf Coast. Its location offers efficient transportation via highway, railroad, or intercoastal waterway. And Port Freeport's flexible approach to doing business cuts through the red tape that is often associated with larger ports.

AROUND THE WORLD:

Wireless News and Views

By Holt Hackney

RIM Goes Live with First CDMA-Enabled BlackBerry Pearl

Never one to rest on its laurels, Research In Motion has smartly stepped forward this fall with the BlackBerry Pearl 8130, the first BlackBerry Pearl smart phone to run on CDMA networks.

The new model stays true to the highly acclaimed style and compact design of the BlackBerry Pearl and comes packed with new features, including communications enhancements, a striking new software interface, rich multimedia capabilities, built-in GPS, and support for high-speed mobile broadband networks.

"With its unique blend of functionality and design, the BlackBerry Pearl smart phone has been turning heads and winning praise from business users," said Mike Lazaridis, President and Co-CEO at Research In Motion. "The new BlackBerry Pearl 8130 builds on all the great features and aesthetic design that people love about the BlackBerry Pearl and offers an exceptional new choice for CDMA customers who are looking to upgrade their mobile phones."

While it includes all of the features that have made BlackBerry smart phones popular among mobile users, including unrivaled e-mail and messaging (SMS, IM, MMS), Web browsing, and organizer, the BlackBerry Pearl 8130 also expands on its communications and multimedia features. Among the many enhancements that business users may appreciate are:

- The intuitive user experience associated with the SureType keyboard system
- Built-in GPS to provide out-of-thebox support for location-based applications and services
- Many convenient phone features, including speaker-independent voice recognition for voice-activated dialing; Bluetooth 2.0 support for

hands-free use with headsets, car kits, and Bluetooth peripherals; dedicated send, end, and mute keys; smart dialing; speed dialing; conference calling; call forwarding; a low-distortion speakerphone for hands-free conversations; and support for polyphonic, MP3, and MIDI ring tones

Firetide Deploys Mesh Network at International Airport

Yuma International Airport in Arizona, which serves the Southwest Desert Triangle cities of San Diego, Las Vegas, and Phoenix, has deployed a Firetide wireless mesh network to support an access control and surveillance system. The system enables airport personnel to remotely secure and manage gates and entry points. The deployment also ensures airport compliance with security-related Transportation Security Administration requirements.

A wired system would have required trenching the airport to lay fiber-optic cable, and the associated costs and disruption to airport operations would have resulted in a major interference with the busy airport schedule. Those considerations, in addition to the extra time it would have taken to deploy an in-ground solution, made using a wired system prohibitive.

"The biggest challenge was the distance involved—there are two miles between the most remote airfield access point and the operations control center," said Brian Thompson, Operations Manager at Yuma International Airport. "Cost effectiveness and ease of installation of the Firetide wireless system are huge benefits for busy airports that don't have time or money to spare."

With Firetide's wireless solution, Yuma International Airport personnel can now update access privileges remotely, without the need to physically drive to the gates. The new system also supports a surveillance camera system that allows Yuma to monitor the activities of people and vehicles entering and exiting the airport.

ACT Continues to Draw Rave Reviews from Customers

John McGuire is a self-proclaimed pessimist when it comes getting extended battery life out of his two-way radio. In fact, the Operations Liaison for the Unified Port District of San Diego's Airport Traffic Control has first-hand experience with how problematic radios can be. Then he tested Advanced Charger Technology's (ACT's) latest battery charger.

"We've tried a bunch of different chargers, and this is the first thing that works," said McGuire. "We were absolutely amazed at how quickly it brought life back to batteries." And McGuire is far from ACT's only fan. As a leader in battery charger technology, the company, which was founded in 1996, continues to receive great reviews from its customers.

ACT remains ahead of the game with its iCHARGE line of products. Originally developed for the two-way radio industry, ACT's product technology has expanded into other applications where superior battery charging performance is required. ACT devices use real-time feedback to monitor the state of the battery throughout the charging process with ACT's Dynamic Electrochemical Waveform (DEW) technology—a constantly varying system of positive and negative charges which respond to the needs of the battery to maximize the efficiency of each charge. •

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.

CALENDAR:

Upcoming Wireless Industry Events

By Elizabeth Love

International Wireless Communications Expo

February 25-29, 2008 Las Vegas, Nevada www.iwceexpo.com

Gartner Wireless & Mobile Summit

March 3-5, 2008 Chicago, Illinois www.gartner.com/it/summits/ra11/index.jsp

Spring VON.x

March 17-20, 2008 San Jose, California www.von.com/2008/sanJose/web

CTIA Wireless 2008

April 1-3, 2008 Las Vegas, Nevada www.ctiawireless.com

Wireless Enterprise Symposium

May 13-15, 2008 Orlando, Florida www.attendwes.com

The Wireless Event

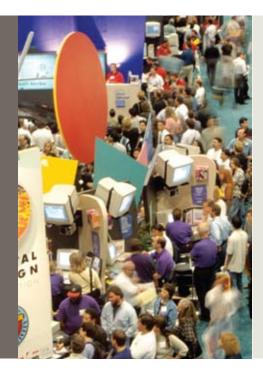
May 21-22, 2008 London, England www.thewirelessevent.com

Mobile & Wireless World

June 9-10, 2008 Miami, Florida www.mwwusa.com

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July 15-16, 2008 Toronto, Ontario wirelessandmobile.wowgao.com





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FINAL WORD:

How Many Radios Do You Need in a Cell Phone?

By Gerry Purdy, Ph.D.

How many radios do you need in a cell phone? That may seem like a silly question. After all, most cell phones were initially built with a single radio that could operate on an "A" or "B" channel to provide backup and competition. The connections were worse than they are today. You had to create a new account in every city you visited, since there were no roaming agreements.

But then, as we migrated from analog to digital "2G" services, and now into newer "3G" services, the number of radios has gone up to (most typically) five: one to four bands for GSM (two in the U.S. and two in Europe) so the phone can work in most developed areas except Japan, and a fifth band for Bluetooth to allow the use of a wireless headset, thus removing the wire between the ear and the phone.

We're about to see a fairly significant increase in the number of radios that will be incorporated into many cell phones. By mid-2008, a feature-rich phone could have more than 10 radios.

We're now going to see the day before too long (perhaps around 2010) where

handset manufacturers can incorporate enough wireless radios in new model handsets that they will be able to work in any country. If China goes ahead with a different 3G standard than the rest of the world, then some handset manufacturers will simply add that radio to their designs to ensure that the device works everywhere.

While it's true that the lower-cost devices will incorporate the minimum number of radios, it will become cost-effective for the devices sold to the majority to include the different radios used around the world, so that if the subscriber ever has to travel outside the United States, the phone will work.

Recently, RIM (the BlackBerry folks) announced its new BlackBerry 8800 series "World Phone" that moves exactly in the direction I was talking about above. It runs in the United States on Sprint or Verizon, but it also includes additional GSM radios, so that it can work outside the U.S. Thus, travelers on Verizon and Sprint now have a phone that works great in the U.S. but also works great outside the U.S. in most other countries.

We expect other wireless handset operators to do the same thing—they will add more radios to provide more services in greater areas than in the past. GPS will bring true location availability to all handsets, while Wi-Fi offers a number of benefits, from fast downloading of rich media to interaction with an enterprise IP/PBX using VoIP.

All of this further points to the cell phone becoming the most valuable device any of us will own, perhaps even replacing our wallet, watch, and keys that have been so indispensable for so many years. •

Gerry Purdy is Vice President & Chief Analyst, Mobile & Wireless for Frost & Sullivan.

For more information about the wireless products discussed in this article, please contact BearCom at TodaysWirelessWorld@BearCom.com.

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