

Want the news to come to you?  
Sign up for **URGENT** COMMUNICATIONS E-Newsletters!

**URGENT**  
COMMUNICATIONS  
Formerly MRT: Mobile Radio Technology

[Subscribe](#) [About Us](#) [Advertise](#) [Logout](#) 

Advanced Search |

Enter Keywords

**SEARCH**

MOBILE VOICE

MOBILE DATA

NETWORKS & SYSTEMS

TEST & MEASUREMENT

POLICY & LAW

urgentcomm >>> Talking points

   

ShareThis

## TALKING POINTS

Sep 1, 2008 12:00 PM, By Donny Jackson

### Demonstration shows that wireless broadband isn't just for data anymore

In recent years, the public-safety community's interest in broadband technologies has increased tremendously, as first-responder agencies have realized the benefits of leveraging high-speed networks that enable IP-based applications such as remote reporting, identification and mapping.

Of course, the most fundamental application is voice. While broadband networks certainly have the capacity to accommodate the relatively low bandwidth needs of voice, this capability typically has not been a focal point for public-safety agencies for several reasons, including fondness for their private land mobile radio systems, the lack of hardening in many broadband networks and the desire to reserve broadband capacity for data applications that are not effective when attempted on LMR networks.

But IP-based wireless broadband networks can be used for voice, something the U.S. Department of Homeland Security (DHS) has demonstrated in recent months with its radio-over-wireless-broadband (ROW-B) project. In addition to providing interoperable, push-to-talk (P2T) capability between disparate technologies — even with devices not designed with push-to-talk functionality — the solution also is designed to provide enhanced situational awareness through location and presence functionality.

"Our aim is ... to find ways to complement and augment [LMR radio]," said Luke Klein-Berndt, chief technology officer for the DHS Office for Interoperability and Compatibility (OIC). "There may be a bus driver that you may want to be able to talk to during an incident, but you don't want to have to give him a \$5000 [LMR] radio."

While such interoperability solutions have long been considered possible and discussed for years, this one is available immediately, said Gordon Reichard, CEO of ISCO International.

"What you're going to see today is not smoke and mirrors, it's real," Reichard said.

Key components of the ROW-B solution are the P2T-over-cellular (PoC) capabilities of Clarity Communications — a subsidiary of ISCO International — and the recently created bridging systems interface (BSI) protocol that enables widespread P2T capability via broadband wireless networks.

Clarity's software-based technology enables any handheld device using the Windows Mobile or BREW operating systems and operating on a wireless network that supports IP packet data — for instance, a CDMA EV-DO or WCDMA network, but not an EDGE network — to act as a P2T device with a call-setup time of less than 800 milliseconds with quality-of-service assurances, said Dan Esposito, systems engineer for Clarity Communications.

### More From Mobile Voice

**TCS pays \$25 million for location-based service provider**

**FDNY Chief Cassano: Is New York ready for another 9/11?**

**ZigBee Alliance proposes ZigBee for energy-distribution standard**

**Reporter's notebook: APCO releases candidate American National Standard**

**DHS approves labs for P25 compliance program**

[» more](#)

advertisement



### Hot Spots

**Project 25 Interoperability Rebanding PSAP**

advertisement



### Essential Reading

**A corner turned Let the buyer beware When measurements aren't feasible Verizon, AT&T both plan 2010 launch for LTE networks Motorola shuffles the deck**

### Most Popular Articles

**TV white spaces could be a boon to rural areas Contemplating the seemingly unthinkable Sprint Nextel's rebanding price tag continues to increase Sprint Nextel: iPCS situation will not harm iDEN customers NATE revises tower climber fall protection training standard**

Want to use this article? Click here for options!

© 2009 Penton Media, Inc.

### ONLINE SHOWCASE

Get vendor information in this special **online showcase**.

### WHITE PAPERS

Download these new free public safety **white papers from Motorola**.

### E-NEWSLETTERS

Check out our latest edition of **Urgent Communications Today** and **Tech Talk**. Not a subscriber? **Subscribe now!**



# URGENT COMMUNICATIONS

Formerly MRT: Mobile Radio Technology

[Subscribe](#) [About Us](#) [Advertise](#) [Logout](#)

Advanced Search |

**SEARCH**

[MOBILE VOICE](#) | [MOBILE DATA](#) | [NETWORKS & SYSTEMS](#) | [TEST & MEASUREMENT](#) | [POLICY & LAW](#)

[urgentcomm](#) » » Talking points

[MY YAHOO!](#) [newsgator](#) [Bloglines](#) [ShareThis](#)

## TALKING POINTS

Sep 1, 2008 12:00 PM, By Donny Jackson

### Demonstration shows that wireless broadband isn't just for data anymore

Communications from such devices are sent to a Clarity server, which transmits the information to a BSI-capable gateway. In demonstrations conducted last month, DHS used the Raytheon JPS ACU-2000 as its BSI gateway. Roman Kaluta, director of interoperability solutions for Raytheon JPS, said the ACU-2000 now ships with the BSI protocol and that his company's popular ACU-1000 can be upgraded to an ACU-2000 with the addition of a couple of modules.

A simple graphical user interface lets users quickly construct talk groups or choose from pre-configured talk groups. The mapping interface also allows users to select a geographic area — an incident scene, for example — and immediately create a talk group with all personnel in that zone, said Emil Olbrich, senior systems engineering consultant for Protiro and consultant on the ROW-B project.

"We're working with Clarity to make it so that users are automatically included in the talk group when they enter the geographic area," he said. "Now the bus driver doesn't have to have a \$5000 radio."

Indeed, during a demonstration conducted last month at the Association of Public-Safety Communications Officials conference in Kansas City, Mo., Olbrich established several talk groups from his laptop PC, connecting with a PC tablet, a smartphone, a cell phone and an LMR handset. In a couple of instances, there was some very noticeable latency in the call-setup time, something Klein-Berndt attributed to the fact that they were forced to use another laptop as a mobile router instead of leveraging an Internet drop into the site.

"What we had was an ACU-2000 with an aircard basically attached to it, which had to go over the air to where the ROW-B servers were located and then back, through a different air interface, to the handset of the laptop," Klein-Berndt said. "Essentially, you had two different going-over-the-data-network instances instead of just one."

In most instances, the ACU-2000 would be located where it can access a wired high-speed connection. However, the APCO demonstration showed that the solution could function in less-than-ideal environments that often occur during an incident, Klein-Berndt said.

"I think what it modeled really well was congested areas — when you had a lot of people trying to use the same resource, it was still able to perform there," he said, noting the concentration of wireless data devices in the conference area. "That is definitely a good modeling of a worst-case scenario, if you had to bring everything into the field and set it up on the fly."

Another disadvantage of the APCO demonstration was that the wireless broadband network used was from a cellular provider and included no quality-of-service guarantees. During a demonstration scheduled for Aug. 27, DHS planned to use a private 700 MHz EV-DO network in Washington, D.C., for its wireless link.

### More From Mobile Voice

- [TCS pays \\$25 million for location-based service provider](#)
- [FDNY Chief Cassano: Is New York ready for another 9/11?](#)
- [ZigBee Alliance proposes ZigBee for energy-distribution standard](#)
- [Reporter's notebook: APCO releases candidate American National Standard](#)
- [DHS approves labs for P25 compliance program](#)

[» more](#)

advertisement



### Hot Spots

- [Project 25 Interoperability Rebanding PSAP](#)

advertisement



### Essential Reading

- [A corner turned](#)
- [Let the buyer beware](#)
- [When measurements aren't feasible](#)
- [Verizon, AT&T both plan 2010 launch for LTE networks](#)
- [Motorola shuffles the deck](#)

### Most Popular Articles

- [TV white spaces could be a boon to rural areas](#)
- [Contemplating the seemingly unthinkable](#)
- [Sprint Nextel's rebanding price tag continues to increase](#)
- [Sprint Nextel: iPCS situation will not harm iDEN customers](#)
- [NATE revises tower climber fall protection training standard](#)

[Previous](#) [1](#) [2](#) [3](#) [Next](#)

Want to use this article? [Click here for options!](#)

© 2009 Penton Media, Inc.

### ONLINE SHOWCASE

Get vendor information in this special [online showcase](#).

### WHITE PAPERS

Download these new free public safety [white papers from Motorola](#)

### E-NEWSLETTERS

Check out our latest edition of [Urgent Communications Today](#) and [Tech Talk](#). Not a



# URGENT COMMUNICATIONS

Formerly MRT: Mobile Radio Technology

[Subscribe](#) [About Us](#) [Advertise](#) [Logout](#)

Advanced Search |

**SEARCH**

[MOBILE VOICE](#) | [MOBILE DATA](#) | [NETWORKS & SYSTEMS](#) | [TEST & MEASUREMENT](#) | [POLICY & LAW](#)

[urgentcomm](#) >>> [Talking points](#)

[MY YAHOO!](#) [newsgator](#) [Bloglines](#) [ShareThis](#)

## TALKING POINTS

Sep 1, 2008 12:00 PM, By Donny Jackson

### Demonstration shows that wireless broadband isn't just for data anymore

"One of the things we're going to show in D.C. is that, when you actually own and operate your own network for public safety, you're able to set the quality of service and priority based around those calls," Klein-Berndt said. "What you could do is give the higher priority to the back-end link to the ACU-2000 and to people with handsets that are important."

The ROW-B effort has captured the attention of many in the public-safety community. Harlin McEwen, chairman of the Public Safety Spectrum Trust that holds the nationwide license for public safety's 700 MHz broadband spectrum, acknowledged that he does not believe public safety would use the ROW-B solution for mission-critical voice communications now. However, McEwen said he believes the ROW-B technology could be valuable for public-works employees in the near term, with a possibility of public safety using it when the solution is proven more reliable.

"I can see where there would be applications for non-mission-critical stuff and someday even mission-critical stuff," he said. "I don't think you can discount these types of things, because they work pretty good under certain circumstances. ... I'm glad they're doing the research they're doing."

John Powell, senior consulting engineer for the National Public Safety Telecommunications Council, said he believes that the demonstrations can give officials a glimpse of the possibilities associated with the nationwide 700 MHz network being proposed by the FCC.

"The concept, I think, is really good; it's a matter of cost and network availability," Powell said, questioning whether public safety would use the solution over a commercial wireless network. "The overhead was not high, in terms of the load on the network. But you're talking about a minimum of \$49 per month just to subscribe to the basic data service, plus the fees on top of that to support the client and other applications that go on top of that."

"I think if they could get on networks with quality of service, where you're going to get guaranteed delivery, that would be a big help," he added.

Klein-Berndt agreed that public-safety usage of the ROW-B solution largely would depend on the ability of first-responder agencies to secure access to broadband networks with quality-of-service guarantees. Such an evolution likely will be dictated by market realities, he said.

"I see it as sort of a chicken-and-egg situation, where applications will drive better networks, and better networks will drive those applications," Klein-Berndt said.

### More From Mobile Voice

[TCS pays \\$25 million for location-based service provider](#)

[FDNY Chief Cassano: Is New York ready for another 9/11?](#)

[ZigBee Alliance proposes ZigBee for energy-distribution standard](#)

[Reporter's notebook: APCO releases candidate American National Standard](#)

[DHS approves labs for P25 compliance program](#)

[» more](#)

advertisement



### Hot Spots

[Project 25 Interoperability Rebanding PSAP](#)

advertisement



### Essential Reading

[A corner turned](#)  
[Let the buyer beware](#)  
[When measurements aren't feasible](#)  
[Verizon, AT&T both plan 2010 launch for LTE networks](#)  
[Motorola shuffles the deck](#)

### Most Popular Articles

[TV white spaces could be a boon to rural areas](#)  
[Contemplating the seemingly unthinkable](#)  
[Sprint Nextel's rebanding price tag continues to increase](#)  
[Sprint Nextel: iPCS situation will not harm iDEN customers](#)  
[NATE revises tower climber fall protection training standard](#)

[Previous 1 2 3](#)

Want to use this article? [Click here for options!](#)

© 2009 Penton Media, Inc.

<p><b>ONLINE SHOWCASE</b></p> <p>Get vendor information in this special <a href="#">online showcase</a>.</p>	<p><b>WHITE PAPERS</b></p> <p>Download these new free public safety <a href="#">white papers from Motorola</a>.</p>	<p><b>E-NEWSLETTERS</b></p> <p>Check out our latest edition of <a href="#">Urgent Communications Today</a> and <a href="#">Tech Talk</a>. Not a subscriber? <a href="#">Subscribe now!</a></p>
--	---	--