MoCA: Lose One, Win Many

The MoCA crowd seems to have taken in stride the loss of the AT&T account to the rival HomePNA networking technology, if Patrick Henry, CEO of MoCA chipmaker Entropic, is an indicator. He started an interview by talking about the fact that Entropic has shipped its two-millionth c.LINK chipset, the basis for the MoCA standard, with 80% of them going into boxes that’ll be used in gear implementing the MoCA standard for home entertainment networks.

Verizon and its FiOS TV service is the largest publicly announced user of MoCA boxes. J:COM, Japan’s largest cable TV operator, is the second-largest user of c.LINK chipsets. Both companies are shipping c.LINK-equipped boxes that deliver triple-play services: phone, pay-TV and broadband. J:COM uses the c.LINK boxes mainly to network multi-tenant buildings. Verizon is putting them in homes to support its multi-room DVRs. Currently sell multi-room DVRs, Henry said, are one of those things about which people say, “It changes my life.”

The Evolution: Standalone DVR to Multi-room HD DVR

According to Henry, there is no other solution except MoCA for delivering high-quality, secure video throughout the home for all the US service providers - cable TV, satellite TV, telco TV and retail - short of re-wiring the house. Re-wiring is something the carriers and the homeowners do not want to do - too costly, too messy, too disruptive.

MoCA technology was designed specifically for operation over coax wires. Thus it can, unlike HomePNA, coexist with other services and applications except MoCA for delivering high-quality, secure video throughout the home. The MoCA crowd seems to have taken in stride the loss of the AT&T account to the rival HomePNA networking technology, if Patrick Henry, CEO of MoCA chipmaker Entropic, is an indicator. He started an interview by talking about the fact that Entropic has shipped its two-millionth c.LINK chipset, the basis for the MoCA standard, with 80% of them going into boxes that’ll be used in gear implementing the MoCA standard for home entertainment networks.

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MoCA: continued from page FIVE

designed to meet the requirements of the cable TV operators as well.

Henry also says that PCs will be connected to the MoCA network. They’ll be used to stream videos that have been downloaded from independent online service such as Movielink and from the pay-TV services themselves to TV sets.

It Won’t Be Wireless

Wireless networking, according to Henry, is not good enough for high-quality and reliable video streaming. That, he said, is also the belief of every US pay-TV service, whether cable, satellite or telco. Not one of them intends to deploy wireless networks in the home; at least in the near term for whole house video.

A major Wi-Fi weakness

Yet, Wi-Fi will continue to be popular in homes, but for data and device portability, just not for securely streaming high-quality videos.

A major Wi-Fi weakness, Henry said, is its use of an unlicensed spectrum. This means that any consumer device can use that spectrum, and potentially cause interference. That problem is a showstopper for pay-TV service providers in distributing their video content throughout the home.

AT&T’s Homezone boxes, he said, don’t have MoCA capabilities today, and consequently cannot serve as a multi-room DVR.

Tivo’s strategy, he said, is to put a Tivo box with a hard disk in every room, then allow a user to copy video files from one Tivo to another. That means there’s a long delay between hitting the “play” button and actually seeing something.

DirectTV does not currently offer any multi-room networking.

Henry said that the big market for home networking for digital entertainment, and for MoCA, is North America, because of the high percentage of pay-TVs households, the number of TV sets per household, the penetration of DVR and HDTV and the existence of coax wiring in most homes.

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The core AirReferee technology, which will be licensed to OEMs, includes access points with two off-the-shelf 802.11 radios, each attached to one or more of Rotani’s specialized directional antennas. The AirReferee AP scans the environment and automatically sets the channel for each radio and antenna to minimize interference with adjacent networks. The system automatically determines the best transmit and receive antennas.

Rotani has raised $4 million in venture capital so far, from German investor Firstventury and from Klaus Tschira, billionaire founder of software giant SAP. Rotani is now entering an “aggressive B round” of funding.

Separate from the Wireless Watch article, Rotani made the following announcement:

“One key issue for carriers wishing to deploy IPTV services is how to facilitate an appropriate connection between the DSL modem and the IPTV set-top box connected to the TV. Traditional installation methods require the installer to run new wiring, which is very time-consuming, costly and undesirable to the homeowner.

“A wireless (Wi-Fi) connection is generally the solution of choice for both the home-owner and service provider. Yet today’s commercial Wi-Fi gear is used predominately for data networking, and does not provide support for wireless multicast IPTV. What’s more, Wi-Fi gear suffers from packet loss that ultimately results in screen pixilation and poor video quality.

“VideoPuck software turns today’s commercial Wi-Fi gear into a robust wireless solution for streaming multicast IPTV. VideoPuck is basically a wireless replacement of Ethernet cables and just as simple to install. Without any user intervention, VideoPuck automatically configures and establishes an error-free link for wireless transmission of IPTV. VideoPuck is processor and radio chip independent.

“We have already validated VideoPuck on commercial platforms sold by leading Wi-Fi gear vendors for less than $49,” said Nicholas Funke, executive VP of Rotani. “The video quality on this low-cost platform is immaculate and the range is exceptional, even when surrounded by multiple WLans co-located in neighboring apartments.”

The following originally appeared in Wireless Watch. To get a copy of the complete newsletter, please e-mail paperboy@riderresearch.com

Effective delivery of IPTV over wireless networks is a key objective for triple- and quad-play carriers and their suppliers, but this is an area where Wi-Fi has remained largely unproven.

Two start-ups are grappling, however, to convince customers that their techniques for reducing interference on license-exempt networks will make WLans competitive for supporting IPTV and other advanced multimedia applications around the home or even the metro area.

One, which has had significant attention and some early customer wins, is Ruckus Wireless. And now Arizona’s Rotani, which recently released reference designs for its patent-pending AirReferee technology, is challenging it. Rotani claims to make 802.11g networks - and in the future, the emerging high-speed 802.11n - resistant to interference and able to deliver a guaranteed 35 Mbps even in congested wireless conditions.

Like Ruckus, Rotani is targeting IPTV providers looking to distribute video to different televisions and other devices around the home, where typically there will be high levels of interference from other units, especially in the free-for-all 2.4GHz band. The start-up has announced its first product based on AirReferee, called VideoPuck, software that can be added to the firmware of standard access points and set-top boxes to address interference and problems with multicasting over Wi-Fi.

Multicast signaling, which sends one stream simultaneously to many users with no requirement for acknowledgement by the receiver, can reduce Wi-Fi performance to under 1 Mbps but VideoPuck converts a UDP multicast signal into a point-to-point UDP signal in order to prevent that drop-off.

Rotani says Deutsche Telekom and Telecom Italia are already interested in its approach, especially as it uses standard APs rather than dedicated bridges, and so could be a lower cost method than Ruckus’, which uses specialized IPTV bridges.

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