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A Secure Future

Marriage of Comcast, Motorola Gives CCAD a Reason to Grow Locally

■ BY JULIE GALLANT

Two cable industry giants, Comcast Corp. and Motorola, Inc., have formed a combined business unit locally to develop security technology for a media-savvy retail market.

The offspring of Philadelphia-based Comcast and Schaumburg, Ill.-based Motorola is **Combined Conditional Access Development & Support, LLC**.

CCAD is rapidly growing its new technology in Sorrento Valley at the San Diego Tech Center, where the company moved into a 25,000-square-foot lab and office facility this month.

Formed in March 2005, the joint venture has already doubled in size from 20 to 40 employees, and the company is in the process of hiring an additional 15 to 20 staff members — primarily engineers.

CCAD is refining technology introduced by Comcast, the largest cable operator in the United States, and Motorola, a global supplier of cable equipment and mobile equipment and services.

CCAD's security device gives consumers the ability to access cable programming in a secure environment, using cable set-top boxes, digital cable ready TVs, personal computers, mobile devices or equipment built into TVs.

CCAD Vice President of Engineering Bridget Kimball said when cable operators offer paid programming services, such as video on demand, Showtime or HBO, they would use CCAD's technology to ensure they can collect revenue for program viewing.

"The joint venture takes the proprietary solution and modifies it so it can run in an open environment," Kimball said. "The



Michael S. Domine

Bridget Kimball is CCAD's vice president of engineering. The Federal Communications Commission is in the process of reviewing CCAD's proposed cable security technology.

technology can be used in the consumer market in a free and open manner."

The technology also enables TV programs to be safely downloaded into other devices, such as computers and mobile devices, including video cell phones and Apple's video iPods.

"When you move content from one environment to another, there's an opportunity to be pirated," Kimball said.

Kimball is anticipating products incorporating CCAD's technology will be launched in 2008.

She said the technology opens possibilities for innovation.

"It's in the infancy of bringing this to realization so I would imagine there will be a lot of options," Kimball said. "When cell phones first came out, we couldn't imagine using it for e-mails and photography."

Comcast reported revenues for its cable segment of \$21.2 billion in 2005, a 9.5 percent increase from 2004. Total revenues for

the company were reported at \$22.3 billion in 2005, an increase of 9.6 percent over the previous year.

Motorola increased its sales last year, reporting \$36.8 billion in net sales for 2005, an 18 percent increase over \$31.32 billion in sales from 2004.

CCAD is developing downloadable security technology based on Motorola's satellite and cable security system MediaCipher, which was developed in the early 1990s as high-definition television emerged.

MediaCipher is a cable security technology that's being used in North America by such companies as Time Warner Cable and Cox Communications — both of which service hundreds of thousands of customers locally.

Today, cable set-top boxes, which are leased to customers by the cable companies, incorporate MediaCipher solutions with proprietary security chips. Typically,

CCAD: Company Is Modifying Technology for Cable, Consumer Devices

cable companies such as Time Warner and Cox charge a monthly fee of \$7 to \$10 for the boxes.

More Uses

CCAD is modifying the technology so it can be used in a variety of cable and consumer devices. When the next-generation cable technology is in place for cable providers, the cable devices can be portable, so if a consumer moves they can take the set-top box with them. The cable equipment using this technology can also be sold at retail outlets, making it more available to consumers.

Kimball said an open cable initiative was launched six years ago in response to a Federal Communications Commission ruling mandating that the cable industry develop downloadable security devices that would be portable and available at retail outlets.

FCC spokeswoman Rebecca Fisher said the issue of strengthening competition within the cable market began with an FCC ruling in 1998. The concept was to permit unaffiliated manufacturers and retailers to commercially market host devices while allowing the cable industry to retain control over its own systems' security, Fisher said.

"The point is to increase the availability of these navigational devices to the consumers, rather than keep these cable devices always within the cable providers' control," Fisher said.

The biggest obstacle to fulfilling the mandate is creating a security system within

the cable devices that protects the video content from piracy.

Going Both Ways

Brian Dietz, a spokesman for the National Cable & Telecommunications Association in Washington, D.C., said although some TV sets today allow one-way cable services, they do not offer interactive features.

Dietz said some TV manufacturers have signed agreements with Cable Television Laboratories, Inc., a Denver-based nonprofit research and development consortium, to allow them to manufacture TV sets that can access interactive digital cable features without the set-top boxes.

"That's definitely something the industry is working on," Dietz said.

During the last decade, Dietz said the cable industry has invested \$100 billion toward building out a nationwide fiber optic network that enables cable operators to use advanced services such as digital cable and has laid the groundwork for this interactive technology.

"It's the investment in the network that enables these features to be developed for the consumer in the future," Dietz said. "Downloadable security is one example of the innovations that cable operators will be delivering to consumers in the future."

CCAD's technology is still in the engineering and design phase. Issues the company is grappling with include standardization within the industry.

Under Review

The FCC is still reviewing the technology,

but CCAD is expecting a decision will be made on its approval this summer.

CCAD staffers formally demonstrated the company's technology to the FCC in Washington in July and again in November. Kimball said the first demonstration showed CCAD's security system can be used within its own equipment, such as a set-top box. The follow-up demonstration showed its technology is interchangeable and can be used in equipment developed by other providers.

The second FCC demonstration was considered a milestone, because it showed the technology is compatible with other providers' equipment, and the device could ultimately be plugged into any cable system.

The FCC's Fisher said the consumer electronics industry and the cable industry have been negotiating the technical aspects of developing cable security technology for years. An agreement between the two industries was submitted to the FCC in 2002, and a year later the FCC adopted the proposed rules.

In a 2003 FCC report, the commission expressed concerns with preventing unauthorized access to cable service and unauthorized redistribution or copying of programming content legally acquired for a limited use.

Now the FCC is monitoring the industry's progress toward meeting an FCC deadline of July 1, 2007, that requires cable operators to separate security and non-security functions from the cable devices.