AV news

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The direct channel to the industry

Hot topic: HD over IP

When Herman Cardenas took NetStreams from under the wing of its co-owners, GE and Microsoft, his intention was to manufacture AV network components based on licensed technologies. The problem was that there were no appropriate technologies available to licence, compelling NetStreams to undertake the research into some of the core technologies on which the AV industry might come to depend.

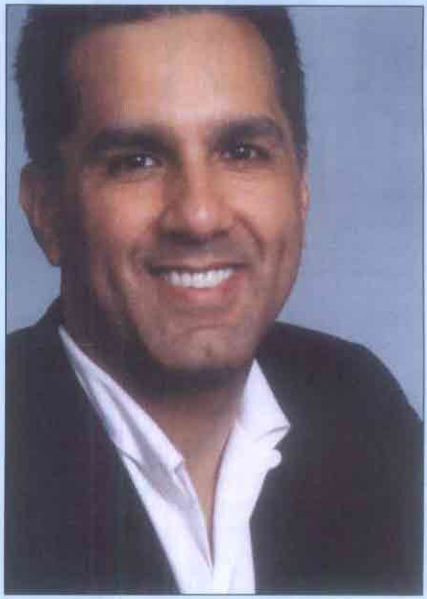
Being in the right place in the right time is rarely quite the stroke of luck that it seems. If Bill Gates had stumbled across an operating system that allowed did just the right job, he might have become Michael Dell or, heaven forbid, Alan Sugar. He might also have become just another programmer.

Gates' big break was his recognition that there was little available to serve as an operating system for the newly created microcomputer, and Microsoft filled the niche.

Even a brief acquaintance with CEO and founder of NetStreams Herman Cardenas is enough to know that he would shy away from comparisons with Bill Gates, but the situation in which he found himself five years ago is not dissimilar.

Cardenas believes that IP should be the current and future infrastructure of AV networks. In trying to develop network products based on IP technology he found that the technological building blocks he needed simply didn't exist.

His response was to create a range of technologies that dealt with the particular challenges posed by transporting audio and video over IP networks. Chief among these problems was the delays inherent to IP networks carrying digital content – delays that can sometimes amount to several seconds. Network consistency and integrity



CEO and founder of NetStreams Herman Cardenas: "We eat the dog food."

cessing and other intermediate functions.

StremNet enabled loudspeakers can not only accept audio content directly, but can also configure themselves around a user selectable sweet spot.

Technology advances

Cardenas explains: "When we looked around, no one had the solution to these problems – solutions on which our product introductions depended. We had to put the products on hold while we developed the technology and filed the patents".

The delay in the product introductions was, in some cases, as long as three years. The first video product, for example, was introduced only in January of this year.

In the meantime, other developers had produced solutions, although, in the view of Cardenas, rival products are compromised because they depend on compression and are limited to point-to-point networks. Cardenas is an advocate of networks capable of transporting native resolution digital files over fully functioning networks.

The result of the development work by NetStreams was a technology branded StreamNet. Cardenas explains that the initial intention was simply to create a technology that allowed NetStreams to build its products. There was no intention to licence StreamNet to third parties, but with no one else developing a technology that works in this way, StreamNet has become something of a hot property.

StreamNet currently exists in a card format, but prospective licensees and NetStream's investors are pushing hard to reproduce the technology on a chip. Once this is achieved, Cardenas believes that licensing will reach "major volumes" within two years.

The reason for this level of interest in StreamNet is that the technology enables consumer electronics devices to both receive digital content directly, and to take advantage of network functionality.

Cardenas is, for example, working with manufacturer on the development of a projector which can accept digital content directly, obviating the need for signal pro-

Eat the dog food

Cardenas believes that StreamNet ccan become a standard, like Dolby, as consumer electronics manufacturers try to accelerate network enabled devices to coincide with the widespread adoption of wireless networks and content-on-demand by consumers. Cardenas believes that it will be the growth of digital content services that will drive the market, pushing IP technologies to the forefront.

Success in licensing StreamNet will have an impact on the NetStreams business. How long the development of StreamNet as a core technology will sit comfortably alongside Netstreams' product development is a matter for conjecture.

Cardenas is already talking with consumer electronics manufacturers about implementations of the technology in devices scheduled for release in three or four years time, and can foresee the day when this level of interest will result in StreamNet being hived off as a separate entity.

In the meantime, revenues from NetStreams' products provide the funding for StreamNet development, and aside from an understandable aversion to venture capital funding, Cardenas believes that there has been a real advantage to developing StreamNet alongside real, marketable NetStreams products. "We eat the dog food," he says.

The conclusion drawn from these parallel developments is, Cardenas argues, that NetStreams' IP products already provide an increasingly attractive option in an HD world, where the only alternative is to scale up the copper to handle the increased file sizes.

But as content networks evolve, the lasting legacy of NetStreams could be the StreamNet technology embedded in IP enabled professional and consumer AV devices.