

Mass High Tech: The Journal of New England Technology - May 9, 2005

<http://masshightech.bizjournals.com/masshightech/stories/2005/05/09/story12.html>



## Networks

# No big loss

Mass High Tech: The Journal of New England Technology - May 6, 2005 by [Efrain Viscarolasaga](#)

One of the biggest stumbling blocks in the ubiquitous deployment of Internet protocol networks and traffic is the inevitable packet loss that goes along with transmitting data over a network. In the case of real-time applications, such as mission-critical video, the problem is even more pronounced.

It just has to be accepted as a fact of life in the IP network.

Not so, says Portsmouth, N.H.'s Rivulet Communications Inc. According to company collateral and its founder and chief executive officer Steven Rogers, Rivulet's new suite of Internet Endpoint Systems (IES) guarantee zero packet loss.

Zero. None. Perfect delivery, guaranteed.

In the industry, this is a bold claim. Because Rivulet is in its early stages, it is not yet on the radar screens of most analysts. At least two, however, when told the claims, reacted with surprise and interest. Right now it seems impossible, they said, but if Rivulet can do it, they are going to be very successful.

Menlo Ventures in California agrees. The venture capital firm recently led the company's first round of funding, generating \$15 million for the company that was founded just two years ago.

William Stofega, a senior analyst with IDC in Framingham, said he believes the primary application for such a technology would be in video and video mixed with voice, rather than just voice.

"Voice on an IP network is approaching 3 percent packet loss these days, and that is a level barely audible to most people," he said.

The two main targets in Rivulet's early days will be telecommunications carriers running voice and data over a TDM network and users of very high-resolution, real-time video applications.

"If you are a service provider with a large TDM network, the infrastructure to conduct business is antiquated," said Rogers. "If you can move that network to an IP network, the benefits are tremendous. In the past, it hasn't been viable to operate an IP network over a TDM network because of excessive packet loss."

Central to the product platform is Rivulet Queuing (RQ), an algorithm that uses the common features of existing new and legacy routers and switches to manipulate data streams and ensure complete delivery.

Part of the process is a network "discovery" in which signals are sent between endpoints, like a network sonar pinging signals back and forth, to discover precisely when routers are available to carry real-time applications. The gear can then insert streams close together within that timeframe, because it is aware no other traffic will interfere.

*All contents of this site © American City Business Journals Inc. All rights reserved.*

The elimination of packet loss in mission critical applications would allow for the expansion of creative services, especially in the realm of video, that are currently too sensitive to risk the skip or replacement of selected frames in a video feed. Medical imaging, video surveillance and storage networks are all possible applications.

While the company is not releasing any names, Rogers claims the company has customers already using the product and migrating from TDM to IP networks. The company shipped its first product for revenue in fall of 2004, and plans to apply its new infusion of cash to building markets for its main applications and expanding the company, which Rogers aims to grow to about 60 people by 2006.

In its collateral, the company claims it can guarantee packet loss rates below 10<sup>-9</sup>. This exceeds T-1 specifications and is low enough to transport studio quality (HDTV quality) video in real time.

If Rivulet can execute the impossible, the complete elimination of packet loss could open doors for quite a few carriers, services providers and enterprises, let alone new services.

That would be guaranteed to be quite a feat.

[Contact the Editor](#)[Need Assistance?](#)[More Latest News →](#)[Subscribe or renew online](#)

---