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Subject: WorldCom/UUNet/Modulus Summary
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Hello -

Here is the summary of our conference call last Friday. Please
forward this to anyone I missed. Best regards.

- Rex
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WorldCom/UUNet/Modulus Conference Call Summary
1/17/97

Background

By all projections, push technology will be one the core technologies for
intranet and Internet-based applications over the next decade. Modulus
offers a proven technology, InterAgent, for building Internet and
WAN-based Publish/Subscribe and Push applications. With InterAgent, major
problems in the current Internet 'push' environment are addressed. In essence,
the current polled approach to push-based applications can be replaced and
thereby made much more efficient across the network backbone. InterAgent also
overcomes the problems of security, infrastructure, and underlying technology
barriers that limit other proposed approaches.

Additionally, InterAgent works with the IP multicasting approaches being
proposed and gives the developer an easy way to access these and other
protocols at a higher level. Applications built in this way can utilize
the current infrastructure efficiently, be deployed immediately, and later
work with any multicast technology improvements as they appear. It
overcomes the
firewall issues of a UDP implementation and does not require any hardware
rework, because it can run TCP/IP for a segment through the firewall, and
thereafter UDP as required. The underlying key technology is the
property-based application routing technology in InterAgent. This
technology enables intelligent multicasting across LANs and WANs on top of
TCP/IP, UDP, Novell, and SLIP/PPP.

WorldCom/UUNet has an opportunity to take a leadership position in this
technology arena, to use this technology for a range of internal applications,
and to use this approach as a basis for new products and services for customers.

Additional Opportunities:

During the conference call, we identified two new opportunity areas. One
key area is the combined value of InterAgent's Push technology with the
Multipoint Distribution System (MDS) that UUNet has created to optimize
multicasting on its backbone. In essence such an offering would allow
applications to even more efficiently utilize the UUNet infrastructure.

While IP scaling is the big concern right now for UUNet, the added burden of non-InterAgent-based push applications that is coming could present additional challenges. The combination of InterAgent and MDS provides an impressive operating environment that enables the development of a new class of network-based applications that make optimal and dynamic use of both application level and infrastructure level capabilities.

It was also clear that other approaches to push technology such as the MBONE do not adequately address the scalability issue. The MBONE model of conferencing is not the model that is really desirable for large scale applications. MBONE models a few hundred processes exchanging information, rather than an approach in which a few servers push data to 100,000 customers that are on-line through dial-up. The InterAgent/MDS approach is a model that can provide an intelligent multicasting capability that dramatically
improves efficiency and scalability.

The second area is the WorldCom offering, ExtraNet, to its established base of customers who would like to build these types of applications. Private Virtual IP backbones that form virtual LANs can be used to deliver applications that were formerly restricted to true LAN segments only. This traffic was formerly restricted because of overloading the virtual LAN.

Next Steps

1. InterAgent can already be utilized in Extranet type offerings.
We should pitch this to some customers (e.g., NBC).

2. Both MDS and InterAgent would benefit from a direct linkage. Continue separate efforts but costruct a driver to join them. This could then lead to a large-scale Internet offering.

3. Approach MSN with an offering that would help their efficiency on UUNet and allow them to more quickly build push applications using InterAgent.

Let us know if we have missed any key points from the conference call.
Best regards.