Case Study

Seamless TDM Traffic over IP

Shanghai Mobile, China

中国移动通信
CHINA MOBILE
上海移动通信有限责任公司

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>
> Senior official at Shanghai Mobile

Challenge
To find a way to transmit mission critical data over an IP backbone without sacrificing reliability and QoS guarantees.

Solution
RAD's Megaplex-2100 integrated access multiplexer, which grooms TDM-based billing traffic over an SDH network as well as IP backbone.

Benefits
- **One box includes all necessary functions**
- **Simple configuration and easy management**
- **TDMoIP transmits legacy TDM traffic over an IP network with all the quality of an SDH network**

Shanghai Mobile Deploys RAD's Megaplex-2100 to Groom Billing Information over Both SDH and IP

To address growing business demand, Shanghai Mobile is constantly adding more and more billing sites, even as transmission resources become increasingly expensive. Shanghai Mobile originally used a 2 Mbps leased line and its own SDH network for TSM-based billing information collection and transition from the MSC to its original billing sites. Some of the newer billing sites, which continue to use a traditional 64 kbps/X.21 interface, are connected to IP networks. Deploying an SDH network to serve new sites would require a major investment that Shanghai Mobile was not interested in making.

Instead, Shanghai Mobile opted to deploy Megaplex-2100 multiservice access multiplexers from RAD Data Communications to groom its billing traffic over both its SDH network and its IP backbone with Quality of Service (QoS) guarantees. The Megaplex-2100 also provides Shanghai Mobile a cost-effective, seamless migration path to IP for all of its TDM-based traffic.

Using RAD's patented TDM over IP (TDMoIP®) technology, the Megaplex, equipped with a ML-IP main link module, converts and encapsulates E1 traffic into packets for transmission over the IP/Ethernet/MPLS domain. A key benefit of TDMoIP technology is that it does not require any software or hardware upgrade to existing TDM equipment, transporting TDM signaling and protocols transparently. As a result, the operator's overhead is greatly reduced. This protects PBX investments while enabling a smooth migration to tomorrow's Next Generation packet switched networks.

"We were excited to learn that RAD offers an amazing solution that enables us to migrate billing information from TDM to IP, and our decision to go ahead and deploy it was immediate," said a senior official at Shanghai Mobile.

TDMoIP®
Driven

RAD
data communications

TDM Traffic over SDH and IP

Seamless TDM Traffic over IP

Shanghai Mobile, China

"We are very proud that the Megaplex-2100 meets both the current and future needs of Shanghai Mobile, providing them a seamless migration path to IP for their billing and other traffic."
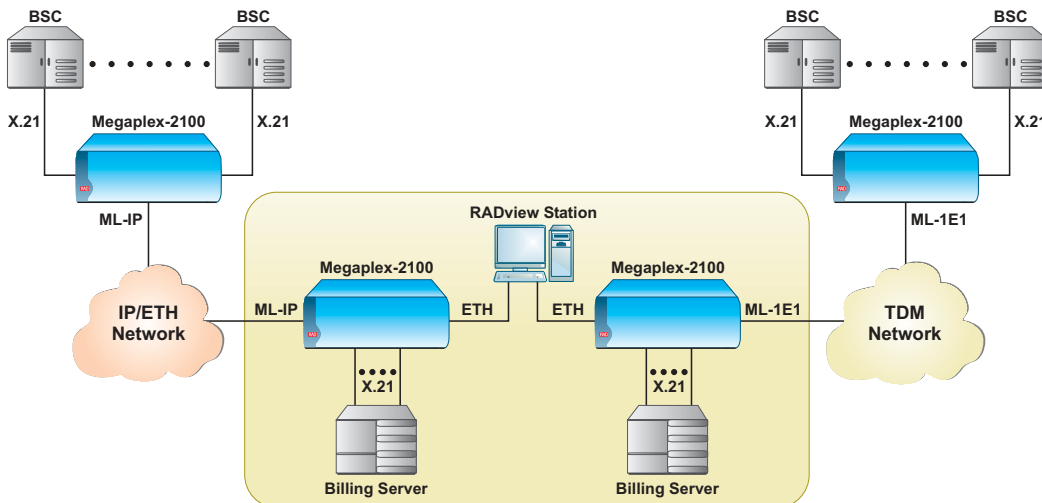
Jeremy Zimman, Director of Operations for Greater China at RAD

Megaplex-2100 units are now deployed at three separate Shanghai Mobile remote billing sites. The Megaplex grooms the 64 kbps/X.21 traffic from the MSC to an IP uplink in order to transmit the TDM traffic over the operator's IP network. Three additional Megaplex units are located at the central billing site, where they regenerate the TDM traffic from the IP backbone.

RAD is a pioneer in legacy over IP, having first introduced TDMoIP to the market in 1999. The technology is now fully accepted as a standard for transporting TDM traffic over IP, Ethernet and MPLS-based networks.

"We are very proud that the Megaplex-2100 meets both the current and future needs of Shanghai Mobile, providing them a seamless migration path to IP for their billing and other traffic," stated Jeremy Zimman, Director of Operations for Greater China at RAD Data Communications. "We thank Shanghai Mobile for their trust and recognition of RAD's technology and experience."

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