



# GENBAND™

DRIVING THE NETWORK EVOLUTION

## CENTRAL OFFICE MODERNIZATION

### EWSD & DCO Next Gen Evolution

*Cost-Effective Solution for Evolving EWSD & DCO Networks to Softswitch Call Control*

The G6® Universal Gateway and G2® Compact Gateway allow EWSD and/or DCO line frames to be controlled by virtually any vendor's standards-compliant softswitch, preserving 70% to 80% of a carrier's investment.



#### BUSINESS REQUIREMENT

Evolution of EWSD and DCO networks to VoIP call control in the past has required the replacement of the entire network, inclusive of the proprietary EWSD and DCO line frames. The line frames typically account for 70% to 80% of the service provider's Class 5 network investment. Service providers are looking for ways to make network evolution more cost-effective. Ideally, the proprietary line frames could be retained and hosted by virtually any softswitch, giving the service provider a wider choice of network evolution paths.

#### TECHNICAL CHALLENGE

Because EWSD and DCO line frames are proprietary to EWSD and DCO host switches, softswitch deployment in these networks would require replacing all of the line frames. These line frames may be spread across a wide geographical area and include numerous remotes (RCUs, RLSs, etc.). In addition, the proprietary line frames may provide TR-08 connectivity to DLC equipment in the network. Gateways currently available on the market do not support TR-08 hosting.

A highly-desirable network deployment strategy is network consolidation, wherein a single softswitch replaces multiple Class 5 offices. Most of the Class 5 offices can be replaced by a gateway. However, the gateway needs to support Emergency Standalone Service (ESA) both for regulatory reasons and to provide the same level of reliability and public safety as the former TDM network.

#### SOLUTION

GENBAND's G6 Universal Gateway and G2 Compact Gateway provide Packet Line Gateway (PLG) capabilities that allow EWSD and DCO line frames and remotes to be hosted by virtually any standards-compliant softswitch. The EWSD Host, DCO Host and/or SmartRemote processors are displaced by a softswitch and G6 Packet Line Gateway. The G6 platform can simultaneously provide Trunking Gateway support including intermachine trunks and PRI as well as GR-303 and TR-08 support for DLC equipment. For former host sites where a softswitch is no longer required, the G6 platform also includes Emergency Standalone capabilities which are essential to successful network migration.

#### BENEFITS

- Cost-effectively converts EWSD and DCO host/remote line frames to softswitch control, preserving up to 80% of the embedded assets
- Softswitch enables legacy GR-303, TR-08, EWSD and DCO access plant (line frames and remotes) at a fraction of the cost of replacement
- Offers new, softswitch-based revenue-generating services to POTS (and VoIP) subscribers
- Provides Emergency Standalone services to both directly-connected and VoIP lines
- Consolidates DCO, EWSD and SmartRemote elements, reducing network costs and complexity
- Enables the lower network costs of a softswitch architecture without the expense of an overlay access network, even during transition to IP



## CASE STUDY 1 - DCO EVOLUTION

Service Provider A has a 3,000 line DCO network consisting of a DCO, RNS, 2 RLSs and 4 TR-08 DLCs which are hosted by the LLSs and RLSs. A year ago they deployed a softswitch as an overlay to provide VoIP services and GR-303. They have decided that they want to displace their DCO processor and use the softswitch for all call control. The existing line frames are continuing to provide excellent service (in some cases augmented with DSLAM equipment that was deployed 2 years ago). Replacing the various line frames with new DLC equipment is a cost prohibitive option and had been a blocking point to replacing the DCO and RNS processors.

Service Provider A is deploying a G2 Packet Line Gateway to support their DCO and TR-08 line frames at a fraction of what it would have cost to replace the DCO line frames and TR-08 DLCs. The same G2 is also providing Trunking gateway capabilities. At the RNS site, the G2 uses Emergency Standalone Service to provide the same level of reliability and public safety that had been offered in the DCO network.

## CASE STUDY 2 - EWSD EVOLUTION

Service Provider B has a 14,000 line EWSD network consisting of an EWSD, 2 SmartRemotes, 2 RCUs (in outdoor cabinets), GR-303 DLCs, and some DCO line frames that had been ONEUP'ed. They are in the process of selecting a softswitch vendor with the idea that their existing EWSD processor and SmartRemote will be displaced. The existing line frames are not fully depreciated, and replacing them would be cost prohibitive. The RCUs in the outdoor cabinets are particularly expensive and logistically challenging to replace.

The ability to support the G6 Packet Line Gateway has become a key decision criterion for Service Provider B in making their softswitch selection. All of the former EWSD, DLU, RCU, LLS, and RLS line frames remain in service, connected to the softswitch via the G6. The G6 also serves as the Trunking Gateway. The SmartRemote is replaced by a G6 with Emergency Standalone Service in order to continue to provide B-911, E-911 and call processing capabilities in the event that the link to their softswitch is severed.

