

SPIRENT GEM ETHERNET NETWORK IMPAIRMENT EMULATORS

RAPID TRIPLE PLAY DEVELOPMENT AND DEPLOYMENT

Use ITU-T G.1050/TIA-921 IP Network Models on Spirent GEM Ethernet Network Impairment Emulators to verify performance of multimedia solutions under real-world network conditions prior to deployment.

APPLICATIONS

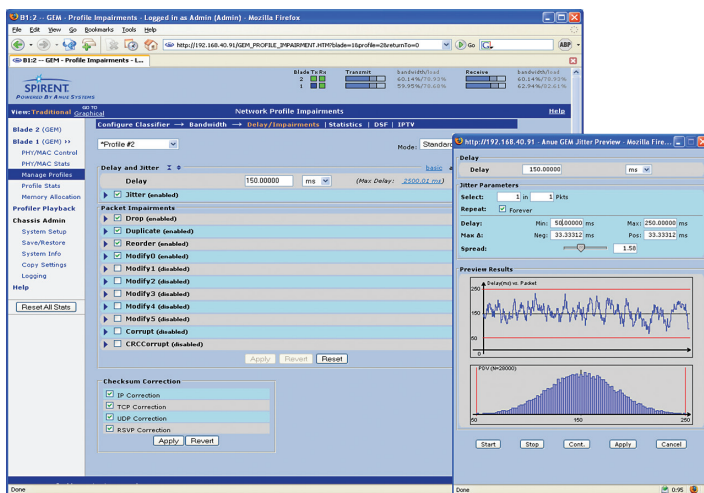
- Video Quality - IPTV
- Voice over IP (VoIP)
- Video on Demand
- Multicast or Unicast Multimedia Applications
- Video Conferencing
- Distributed Software Applications
- Any service running over IP
- Define Minimum Service Level Agreements (SLAs)

The convergence of voice, video and multimedia services onto IP Networks is now a reality that opens up new possibilities for providers to drive revenue. With many alternatives available to implement Triple Play, design and testing has never been more important than at this critical stage in building the next infrastructure.

BENEFITS

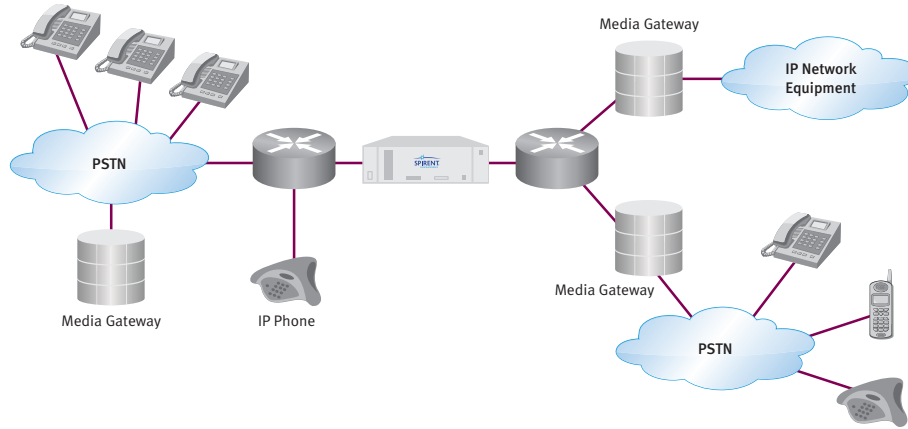
Evaluate the equipment and applications that comprise your Triple Play solution under real-world conditions using standard-based network modes developed by the TIA as TIA-921 and adopted by the ITU-T as G.1050.

Test with any or all of the 1064 statistically based, time-varying scenarios for well-managed, partially managed and unmanaged networks or create your own custom scenario.



- Reduce time to market with higher quality and greater customer satisfaction
- Reduce risk by verifying performance of multimedia solutions under real-world network conditions prior to deployment
- Prevent under- and over-engineering by precisely characterizing minimum required SLAs
- Define new revenue generating services with a competitive advantage
- Discover potentially catastrophic design flaws prior to deployment
- Characterize problems painlessly with dynamic impairments through manual or automated control
- Reproduce production environment issues easily in a support lab

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TECHNICAL SPECIFICATIONS

Spirent’s ITU-T G.1050/TIA-921 module is an application residing on Spirent GEM Ethernet Network Impairment Emulators. Spirent GEM enables users to accurately create the delays and impairments that occur over live production 10/100/1G/10GigE networks for validating and evaluating new products and technologies. Key specifications include:

- Hardware-based architecture provides maximum accuracy and repeatability
- 100% line rate capable even with minimum size frames
- Precise emulation of delays and impairments that occur over Ethernet networks including:
 - Static and Variable Delay (Packet Jitter)
 - Packet Corruption, Drop, Reorder, Duplication, Modification
 - 10-bit domain line bit errors, LOS, comma aligner bit rotation
- Define up to 16 Network Profiles per interface with separate delay, bandwidth and impairments for emulating different classes of service or multiple network paths
- Ability to dynamically change impairment profile without data loss or test restart
- Chaining of multiple impairments
- Powerful filtering for focused impairments
- GUI and/or Tcl scripting support
- Support for all proprietary and standard L3–L7 protocols including IPv6

- Jumbo frame support—infinite size (12K bytes for reorder and duplication)
- Multi protocol support (Ethernet, SONET/SDH, OTN, CPRI and Fibre Channel)

Spirent GEM’s ability to precisely emulate delays and impairments that occur over Ethernet networks ensures that ITU-T G.1050/TIA-921 IP Network Model test results are accurate and repeatable from test to test - providing users with the tools required to fully validate equipment and services both pre- and post-deployment.

REQUIREMENTS

- ITU-T G.1050/TIA-921 IP Network Models are available for use on any GEM product
- Qty. 1 x AS-TIA-921-B IP Network Models module per 2 line cards

ORDERING INFORMATION	
Description	Part Number
ITU-T G.1050/TIA-921 IP Network Models	AS-TIA-921-B
Spirent GEM Ethernet Impairment Emulator	Various depending on configuration and interfaces

SPIRENT SERVICES

- First year SW Maintenance included with purchase; software maintenance includes all fixes and enhancements to base package
- Additional years of software maintenance available at time of purchase or prior to expiration of current maintenance contract

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