



Anue Systems

Passive Optical Network Solutions BPON, GPON and (G)EPON

- ▶ Characterize problems painlessly with dynamic impairments through manual or automated control
- ▶ Reduce risk by verifying performance under real world network conditions
- ▶ Troubleshoot production environment issues easily in a support lab
- ▶ Discover potentially catastrophic design flaws prior to deployment

Overview

New high-availability, high-bandwidth applications are driving fiber deployments closer to the end user. The fiber build-out of the last decade is reaching saturation. As more carriers evaluate and rollout PON solutions to address this aging infrastructure and the need for more bandwidth, testing is key to trouble-free, on-time delivery.

Anue Systems' Network Emulators provide the ability to emulate real-world conditions on the Optical Distribution Network (ODN) prior to deployment, accelerating time to market and reducing support cost.

Challenges of Deploying PON

The promise of PON is accompanied by significant challenges for those who develop, design and implement the solutions.

- New, high-bandwidth services place greater demands on access networks.
- Real-world network conditions must be duplicated in the lab to test with reproducible, relevant and efficient methodologies.
- Providers and equipment manufacturers must stage field issues in the test lab for swift troubleshooting and reliable problem resolution.
- Testing must stress the ranging algorithms used to determine distance between the OLT and each ONT in a PON network and verify that the system addresses bit errors properly.
- Test engineers need ways to emulate the delay and error characteristics of the ODN with bit-time precision over a range of distances for all versions of PON, independent of the layers 1 and 2 transport used.



The Win

- Precise, user-configurable delay injection allows emulation of propagation delay.
- Single-bit precision supports emulation of a bit-slip in the network.
- Physical-layer bit-error injection facilitates performance testing.
- A consistent test methodology can be applied to BPON, GPON and (G)EPON applications with a single network emulator.
- All PON data rates are supported (633 Mbps, 1.25 Gbps 2.488 Gbps).
- Interfaces are available for any ITU-T grid wavelength.

Applications

- Fiber to Home/Premises
- Triple-Play Infrastructure
- Video-on-Demand Infrastructure

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