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Performance Benchmarking BOF

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What is Performance Benchmarking?
Why ATM Forum should work on it?
Initial goals
Dictionary Definition

- **Benchmark** *v. trans.* To subject (a system) to a series of tests in order to obtain prearranged results not available on competitive systems.

  From: The Devil’s DP Dictionary
  
  S. Kelly-Bootle
Networking Benchmarks

- Benchmarking Methodology Working group (BMWG) formed in January 1990
- Defined a number of terms that are commonly (mis)used by vendors
Terms Defined in RFC 1242

- Back-to-back
- Frame Size
- Frame Loss Rate
- Latency
- Throughput
Throughput

155 Mbps → 100 Mbps

- Is the throughput 100 Mbps?
- NO!

- Correct definition: The maximum rate at which none of the offered frames are dropped by the device
- Issues: Must specify the frame size, path
Why not QoS Group?

- Quality of Service definitions:
  - Cell error ratio
  - Cell misinsertion ratio
  - Cell loss ratio

- QoS parameters may be OK for VC setup but not for customer buying the equipment.

- Benchmarks allow customers to compare different products and make an apple-to-apple comparison.
Why not Testing Group?

- Testing group is working on conformance testing.
- Conformance ≠ Performance
- Conformance is mostly “Yes-No”
- Performance is mostly quantitative.
Can we use BMWG?

- Yes, we can. The terms and methodology have to be extended for ATM.
- ATM provides many variations of many services not provided by traditional networks.
- We need to identify meaningful combinations and their measurement conditions.
Why Do This at ATM Forum?

- ATM Forum has the most interest of making ATM successful (compared to IETF)
- Confusion caused by differing terminology and differing benchmarks will eventually lead to customer dis-satisfaction
- Better customer information will contribute to more customer satisfaction and more sales and hence success of ATM.
**Initial Goals of Performance Benchmarking BOF**

- Identify performance terms used by vendors
- Define these terms consistently
- Define measurement methodology
  - Define key configurations
  - Identify key issues and declarations
- Define scripts or benchmark that can be used by vendors and independent test labs to compare product offerings
Performance benchmarking is important to avoid customer confusion.

It would work only if there is a majority agreement among the vendors/users.

Benchmark ≠ QoS ≠ Conformance