

**95-1347R1**

# **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
- ❑ RFC 1242 “Benchmarking Methodology for Network Interconnection Devices” written in July 1991.
- ❑ 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



- ❑ 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  $\neq$  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.

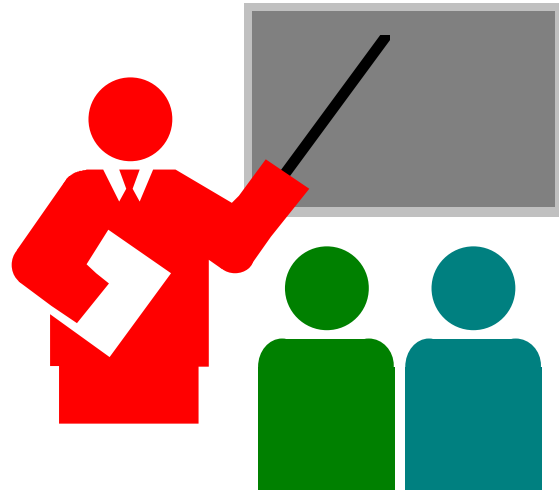
# Why Do This at ATM Forum?

- ❑ 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

# Summary



- ❑ Performance benchmarking is important to avoid customer confusion
- ❑ It would work only if there is a majority agreement among the vendors/users.
- ❑ Benchmark  $\neq$  QoS  $\neq$  Conformance