97-0611
Modifications to the Latency
Section of Performance Testing Baseline Text

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More precise measurement procedures
Complete list and description of foreground and background traffic characteristics
Scalable test configurations
Reporting requirements
Latency Measurement

- Precise procedure description
- Includes mean and standard deviations
- Various intensities of foreground traffic
  (0+%, 50%, 75%, 87.5%, ...)
- Various intensities of background traffic
  (0%, 50%, 75%, ... of max background load)
Foreground Characteristics

- Type of VCCs: PVP, SVP, PVC, SVC,
- VCCs between ports on same/different modules/fabrics.
  “Same module” may or may not be better.
- Service class: UBR, ABR
- Arrival patterns: equally spaced frames, self-similar, random
- Frame length: 64 B, 1518 B, 9188 B or 64 kB, variable;
- Full foreground load (FFL)
- Input rate/FFL = 0⁺, 0.5, 0.75, ... 1-2⁻ᵏ, k = 1, 2, ...
Background Characteristics

- Type of VCCs: PVP, SVP, PVC, SVC,
- VCCs between ports on same/different modules/fabrics
- Connection configuration: n-to-n straight, n-to-(n-1) full cross, \textbf{n-to-m partial cross with m = 2, 3, 4, ...,n-1}
- Service class: UBR, ABR, CBR, and VBR
- Arrival patterns: equally spaced frames, self-similar, random
- Frame length: 64 B, 1518 B, 9188 B or 64 kB, variable
- Maximum background load (MBL) = Σ Link Rates
- Input rate/MBL = 0, 0.5, 0.75, 0.875, ..., 1-2^{-k}, k = 0, 1, 2, ...
Scaleable Test Configuration

System under Test: ATM Switch

ATM Monitor

A In
A Out

B In
B Out

P0 Out
P0 In

P1 Out
P1 In

P2 Out
P2 In

P3 Out
P3 In

P4 Out
P4 In

P5 Out
P5 In

P6 Out
P6 In

P7 Out
P7 In

7-to-7 Straight background VCs

Foreground traffic

Background traffic
Motion

- Adopt the text of 97-0611 to replace section 3.2 of Performance Testing Baseline Text.