IPPM Session of BMWG

Los Angeles IETF

4 March 1996

Agenda:

- Review of history/status
- Discussion of Path Metrics
- Availability Discussion
- Identification of Router Enhancements
- Considerations to support Probe Machines
- Volunteers for work on needed IDs

Review of History/Status

- Stockholm, Pittsburgh, and Dallas meetings
- ISMA Workshop

Hierarchy of Metrics

- Vague, gut-level concept: e.g., delay
- Precise, but possibly not measurable, concept: e.g., one-way delay of 0-byte packet from a to b
- Precise, measurable, repeatable concept useful for ‘standard’ metrics

Discussion of Delay Metrics

- Does ping measure the right thing?
- Delay minimum? average? percentile?
- Impact of asymmetric routing
- Is one-way *delay* measurement practical?
- Is *variation* in one-way delay measureable?
- Do partial path delays combine?

Discussion of Flow Capacity

- Does treno measure the right thing?
- Single sustained flow capacity?
- Aggregate over many short flows?
- Do partial path flow capacities combine?
- Can current flow capacity be estimated from baseline flow capacity measurement *and* current delay measurement?

Discussion of Availability

- Different notions of availability:
  - email vs telnet/ftp/web vs MBone
  - to a given host vs to the 'whole' Internet
- How could availability be measured without huge numbers of pings?
- Route instability as one source of unavailability.

Examples of Router Enhancement

- Examples: traceroute and treno
- What are the right semantics?
- Who can write an ID to define this?

Considerations to Support Probe Machines

- Probe machines do *not* require promiscuity
- They *do* need to be placed at AS-to-AS adjacencies
- Composition of path metrics from path metrics of partial paths
- Avoidance of repeated measurements of the same phenomenon

Closing Administrativia

- Volunteers needed
- IPPM Email list
- IPPM Web Page