# The 63rd IETF - IPPM Working Group

# IPPM Metrics for IPTV performance and QoS measurement

dratf-stephan-ippm-multimetrics-01.txt

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# Presentation Overview

◆ Performance of broadcast/multicast IPTV services

◆ Multimetrics draft presentation

- one-to-group metrics

- Spatial metrics

◆ Discussion

# Broadcast/Multicast IPTV services

- New and critical opportunities
- Many technologies, barriers, contents
  - VoIP, coding, routing, QoS
  - XDSL, satellite, mobile
  - Weather forecasting, animation, sports, news
- What about performance?

# Motivations for One-to-group Metrics
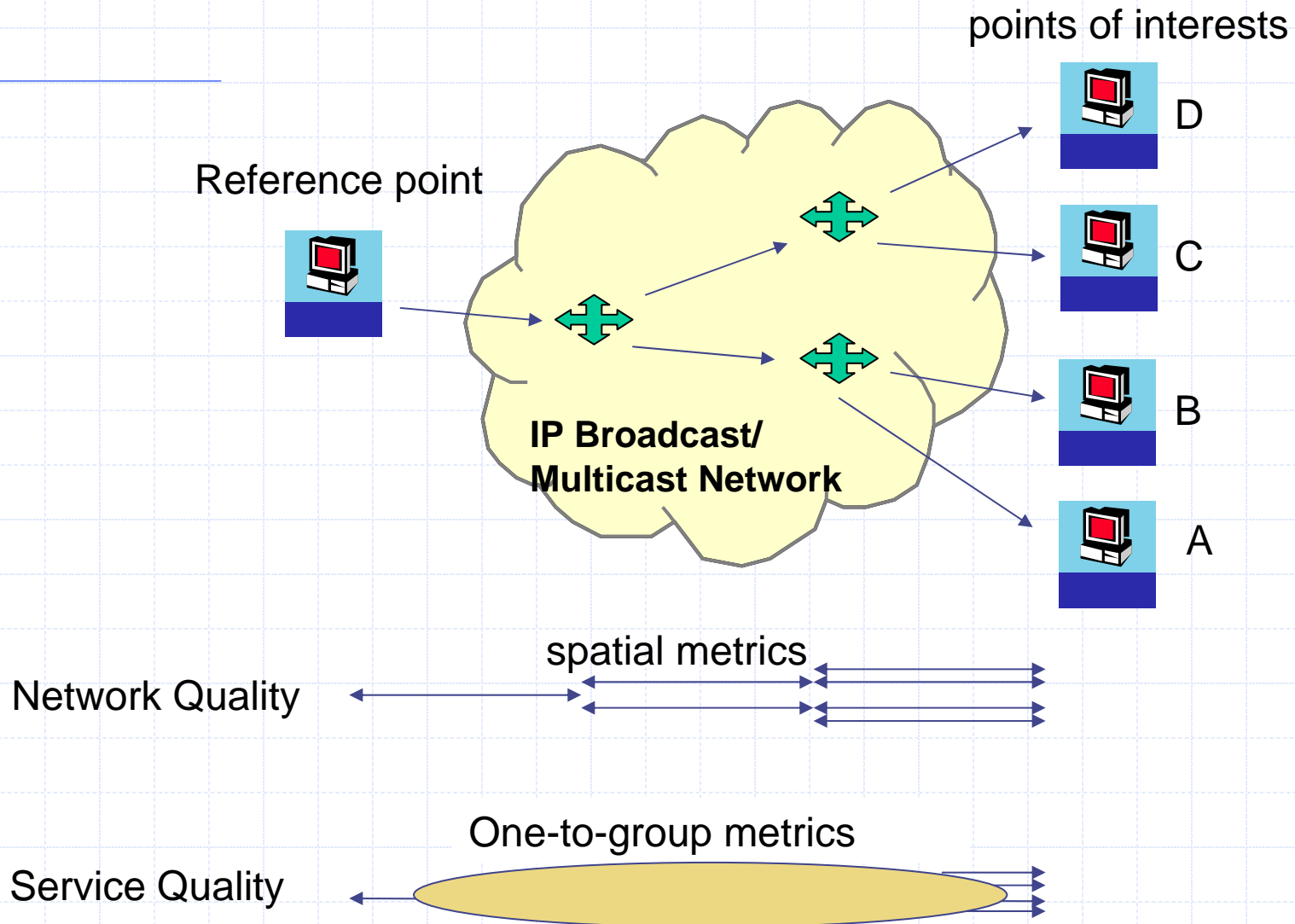
◆ IPPM existing metrics

  ■ One-to-one connections

◆ Broadcast and multicast services?

  ■ Difficult to describe

  ■ Inappropriate information

◆ Absolute QoS & Relative QoS

# Terminologies and Scenario

points of interests

Reference point

D

C

IP Broadcast/
Multicast Network

B

A

spatial metrics

Network Quality

One-to-group metrics

Service Quality

# Discussion on One-to-group Statistics

◆ Statistics to present the group performance and relative QoS

◆ One-to-group mean streams

- Overall QoS for a group of users
- A reflection of the absolute QoS when we treat all receivers as one node

◆ One-to-group variation streams

- How the QoS varies among all of the users
- A reflection of the relative QoS, i.e., the level of the difference between the absolute QoS of each receivers

◆ The QoS trend and range of a multiparty communication service

# Motivations for Spatial Metrics

- Inter-domain path computation
- Performance of different segments of networks
- Detailed performance on each branched of multicast and broadcast tree

# Discussion

◆ Benefit of one-to-group metrics

  ■ Broadcast and multicast service performance

  ■ Relative QoS

◆ Benefit of spatial metrics

  ■ Broadcast network performance measurement

  ■ Standard reference for composition of metrics