Simple Economic Management Approaches of Overlay Traffic in Heterogeneous Internet Topologies

European Seventh Framework STREP FP7-2007-ICT-216259

ALTO-FCP: Application Layer Traffic Optimization Feedback-Based Client Protocol

Zoran Despotovic, Wolfgang Kellerer  
DOCOMO Euro-Labs, Munich, Germany  
Dirk Stähle  
University of Wuerzburg, Germany  
Ioanna Papafili  
AUEB, Greece

Spiros Spirou  
Intracom Telecom, Greece  
Maria A. C. Rodriguez  
Telefonica I+D, Spain

© 2009 The SmoothIT Consortium
Background

- Simple Economic Management Approaches of Overlay Traffic in Heterogeneous Internet Topologies (SmoothIT)

- European Seventh Framework STREP FP7-2007-ICT-216259

- Internal Trial with Telefonica, Madrid, Spain
- External Trial with PrimeTel, Cyprus
Protocol

- Complement existing protocol drafts

Three main steps:

1. **Capabilities**
   - Which rating criteria are supported
   - Select a server that fulfils your needs

2. **Guidance**
   - Conversation to support HLA refinements

3. **Evaluation (Feedback)**
   - Learn about conditions in distant networks
   - Learn clients’ preferences and find best tradeoffs
   - Support for new applications (unknown rating criteria)
Feedback from Clients

- Where are bottlenecks?
  - Server has path A-B-C-D to AS D (possibly from BGP)
  - Clients say there is no problem with A,B,C
  - -> rank low peers that are on a path passing through D

- New applications
  - E.g., what parameters matter for P2P video streaming?
  - Only distance? RTTs?
  - In case you don’t know, you can learn from clients’ feedback
Thank you for your attention!