CALL FOR PAPERS

Capacity Sharing Workshop

co-located with CoNEXT 2012, December 10, 2012, Nice, France.

Internet data traffic continues to grow rapidly. The challenge that operators face, especially in the mobile Internet, is to support more subscribers with higher bandwidth demands. Therefore, operators need to seek for new technologies to efficiently utilize the available network resources, in particular, this concerns resource allocation and flow management. In wireless networks, the problem is particularly relevant due to the inherently limited resources, which render a simple “throwing bandwidth at the problem” solution impossible. The higher rate of optical technology in access networks introduces the potential for capacity sharing problems to move closer to the core, while passive optical networks move sharing problems closer to the end-user (more like cable and radio access networks). Data centers typically employ yet another type of network with different characteristics – and different tools for capacity sharing.

Addressing this topic correctly is not trivial as there are different interests to consider: operators naturally want to be able exercise control on how the network is used, avoid service disruptions and account for network usage. Users are interested to use different applications and expect a certain level of service quality, consistent experience etc. Many applications today are provided by so-called over-the-top (OTT) providers – in conjunction with web-services, smart-phone applications etc. These applications and the corresponding platforms are important drivers for innovation and sources of revenue – although there is controversy over whether enough revenue is directed into capacity growth. Still, application providers are interested in their application working with sufficient quality. In addition, there is regulation that can impose additional requirements in some markets, such as availability requirements, network neutrality etc.

The objective of this workshop is to bring together researchers in the area of transport protocols, system designers of fixed and mobile access networks, and their applications to advance the state of research on capacity sharing. We solicit contributions on the state-of-the-art, results of ongoing research, open issues, trends and new ideas.

Topics

Topics of particular interest include, but are not limited to

• Context-aware resource allocation & cross-layer adaptation
• Similarities and differences of capacity sharing in mobile and fixed access networks
• Application-layer adaption for mobile services
• Transport layer solutions and possible interactions with cellular/fixed access networks
• Capacity sharing in data centers for Cloud Computing
• The interaction between capacity sharing mechanisms at different layers
• Leveraging Software-Defined Networking for Capacity Sharing
• QoE and fairness definitions, metrics and evaluation
• Data traffic characteristics in fixed and mobile Internet
• Economic aspects on capacity sharing and business models
• Related standardization activities and projects

Submission

Submissions must be original, unpublished work, and not under consideration at another conference or journal. Submitted papers must be at most six (6) pages long, including all figures, tables, references, and appendices in 10pt, double column ACM SIGCOMM format. Please see the workshop webpage for further submission guidelines. (http://conferences.sigcomm.org/co-next/2012/Workshops/CSWS/)

Workshop Co-Chairs

Bob Briscoe, BT Research & Technology, UK
Mirja Kühlewind, IKR University of Stuttgart, Germany
Dirk Kutscher, NEC Europe Labs Heidelberg, Germany