

VIVALDI Meta-Architecture

Flexible QoS Provisioning over
DVB-RCS Satellite Networks



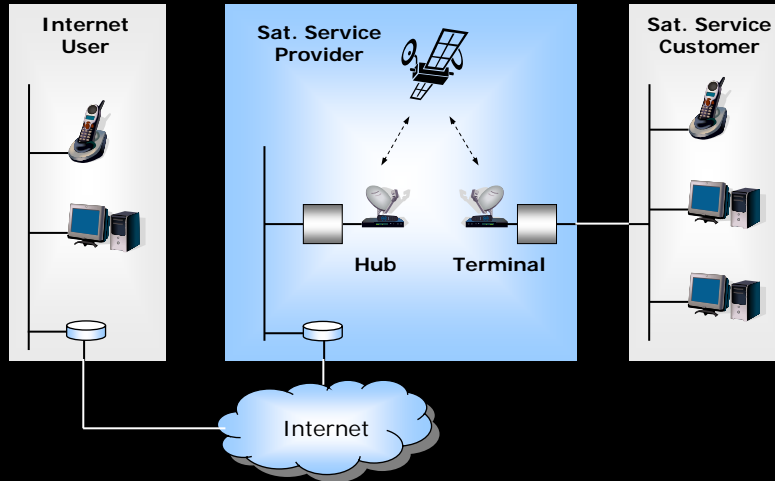
HELSINKI UNIVERSITY OF TECHNOLOGY
NETWORKING LABORATORY

Agenda

- The problem: Real-time media over DVB-RCS
- Different solution approaches
- VIVALDI Meta-Architecture
- Implementations

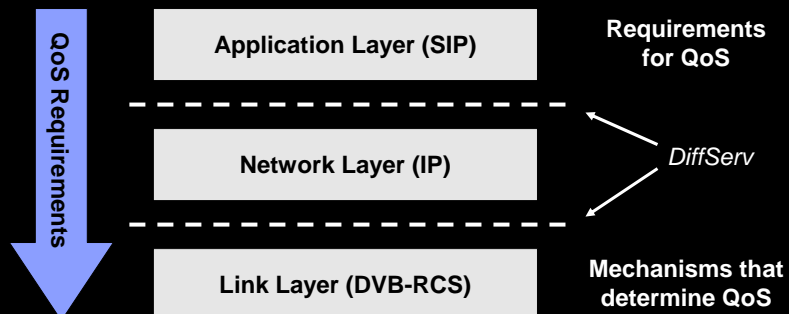
Teemu Kärkkäinen, teemuk@netlab.tkk.fi

The Practical Problem



Teemu Kärkkäinen, teemuk@netlab.tkk.fi

The Conceptual Problem



Teemu Kärkkäinen, teemuk@netlab.tkk.fi

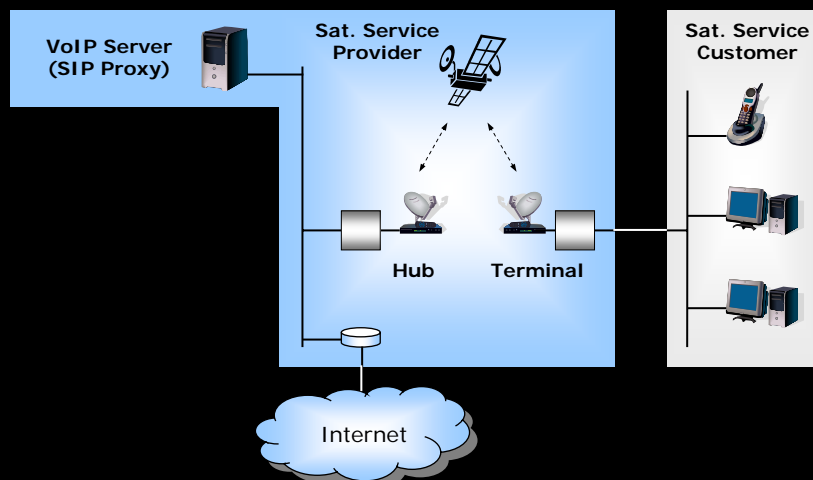


The Functional Problem

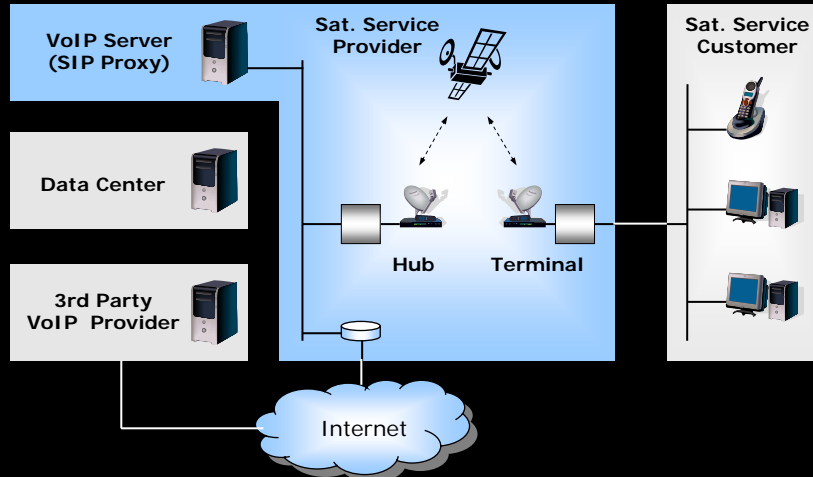
- Detection of real-time traffic
- Designation of traffic flows into QoS classes
- Call admission control
- Busy condition handling



Approach 1: Centralized Control

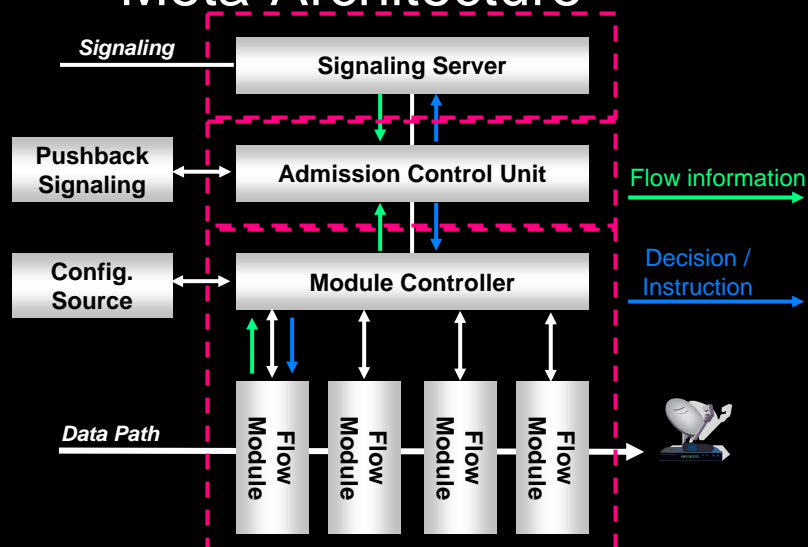


Approach 2: Transparent Operation



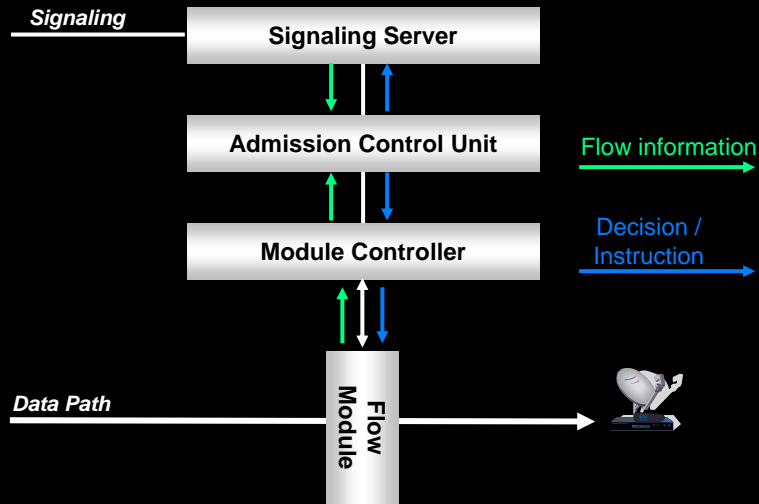
Teemu Kärkkäinen, teemuk@netlab.tkk.fi

Meta-Architecture



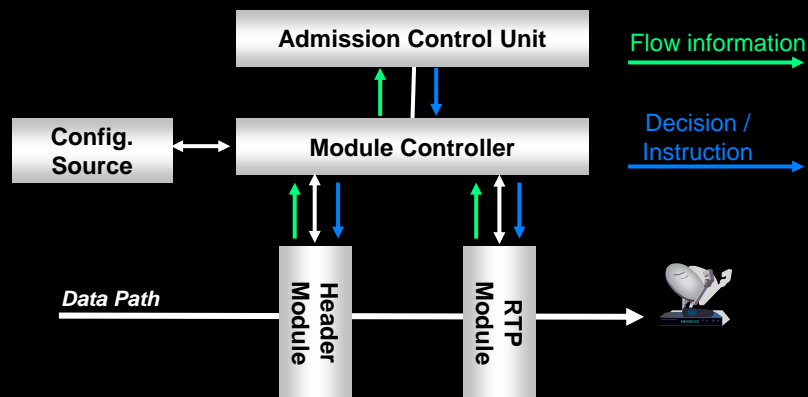
Teemu Kärkkäinen, teemuk@netlab.tkk.fi

Implementation 1: Centralized



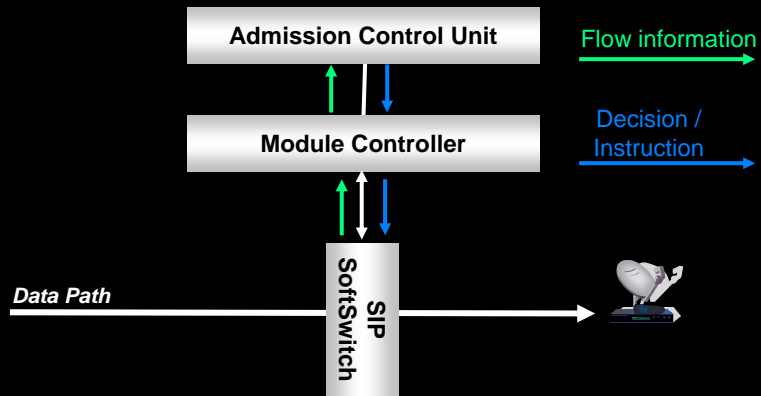
Teemu Kärkkäinen, teemuk@netlab.tkk.fi

Implementation 2: Fully Transparent

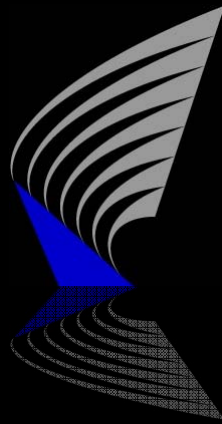


Teemu Kärkkäinen, teemuk@netlab.tkk.fi

Implementation 3: SIP “SoftSwitch”



Teemu Kärkkäinen, teemuk@netlab.tkk.fi



Thank You!

Teemu Kärkkäinen
teemuk@netlab.tkk.fi