VSI-E Status

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Agenda

- VSI-E Overview
- VSI-E Trial
- e-Merlin
- Next Steps
VSI-E Overview

• VSI-E primary objective
  – A media independent data format
    • Transmitted “on the wire”
      – from source to destination
        » DIM to DOM
  – Is compatible between heterogeneous DTSs

• VSI-E Proposal extends
  – Real-time Transport Protocol (RTP) / RTP Control Protocol (RTCP)
  – Proposed as the basis for the VSI-E Standard
  – IETF Standards RFC3550, RFC3551, RFC3605
VSI Model
VSI-E Trial

- Non-real time transfer from
  - NyAlesund to Haystack
- UDP Protocol
  - Rate Controlled at 100Mbps
- UDP based protocols
  - vfer / UDT
- Integrating functionality with EGAE software.
e-Merlin

• As part of the express project
• Goal is 4 Gbps
  – Over dedicated light paths
• Use 4 iBoBs
  – 1 Gbps
• Output is VSI-E Format
  – Over UDP protocol
  – Implemented UDP / IP protocol stack (~10% FPGA Fabric)
• Using vtp libraries to test out functionality
  – To transfer data to Mark5B+
Next Steps

• Have the community ratify the specification

• Ensure that work done for VSI-G (Gigabit layer 2 data format)
  – Extends easily to VSI-E

• Extend VSI-E to handle corner turning format.
  – The VSI-H specification
    • Data rates of $2^n$ Mbps to be selected by the DIM and DOM