Interfacing to the MOST Ethernet Channel

IEEE 802.1 Plenary Meeting

July 18, 2013
Geneva
Switzerland
Agenda

- Progress Made
- Data Multiplexing and Distribution
- Specifying the MOST media type
- MediaLB – Public High Speed Interface
- Summary: MOST in 802.1 Specifications
- Q & A
The MOST Cooperation will open physical layer specifications if IEEE 802.1AC includes the MOST Ethernet Packet channel in its media types.

The automotive industry represented in the MOST Cooperation is still interested in bridging to 802 technologies.

Automotive industry feels a coordinated effort with IEEE is the best way to meet IEEE 802.1 bridging requirements.

There already exists an interface to the MOST Ethernet Packet channel that is available under RAND licensing terms: MediaLB. The spec is royalty free and publicly available.
MOST – A Multiplexed Network

- Multiple implementation speeds
- Multiple physical layers
- Multiplexes multiple data streams
- Includes a packet data channel with Ethernet
- Will enhance MEP in future generations
### MOST: Data Multiplexing And Distribution

- **Multiple possibilities of interfacing of data channels for applications**
  - Multi purpose interfaces can interface to all data channels
  - Packet and streaming interfaces restricted to some data channels
- **Routing not only from Network to interface and vice versa but also from interface to interface**
- **MediaLB used by all existing network interface controllers**

#### Interfaces

<table>
<thead>
<tr>
<th>Application Specific Streaming Interfaces</th>
<th>Multi Purpose Interfaces</th>
<th>Packet Interfaces</th>
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<td>I2S, SPDIF</td>
<td>TSI</td>
<td>YUV, MIPI</td>
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- **Routing Engine**
Different types of channels transport different types of data
Can provide specific/typical interfaces for each protocol (SPI, RGB, CAN, USB, MediaLB …)
Could add future protocol channels
Would like to define Ethernet bridging jointly with IEEE 802 group
- MediaLB is the common interface to access the MOST50 and MOST150 INICs
- MediaLB Device Interface IP is offered through a royalty free license agreement
- Details public at www.smsc.com/Products/Automotive/MediaLB
Summary: MOST in 802.1 Specifications

- It is not possible to access the MOST Ethernet Channel at the physical layer, without implementing a complete MOST interface.

- MOST bridging is only the mapping of the ISS to the MOST Ethernet Packet channel, not bridging to all MOST data streams.

- There already exists an interface to the MOST Ethernet Packet channel that is widely used and available under RAND licensing terms - MediaLB. The basic spec is public and royalty free.

- MediaLB is a logical interface for implementation of a bridge.

- Simple additions (less than 2 pages) could easily be done as part of the 802.1AC revision project.
Questions?

Thank You for Your Attention!!!