

DAIMLER

MOST150's New Features in a Series Project

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Overview

MOST150 and MOST Specification 3.0

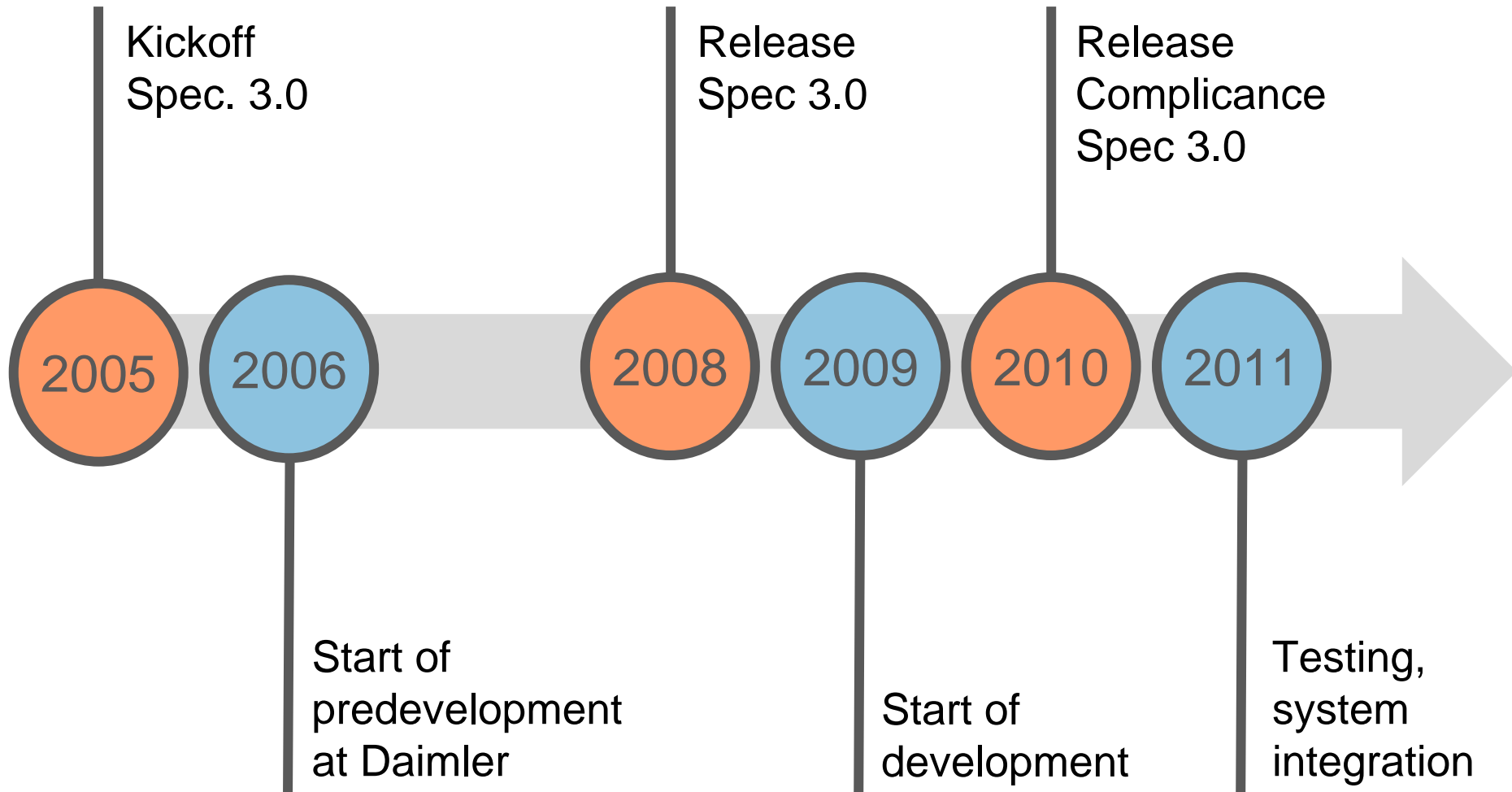
Next Daimler Infotainment System

System Management

MOST Ethernet Packet Channel

Conclusion

Timeline



MOST Specification 3.0 - Goals

Improve Specification

Specification Structure, Wording, ...

Improve Mechanisms

Updated Network Management, Framework, ...

Improved Network Diagnosis

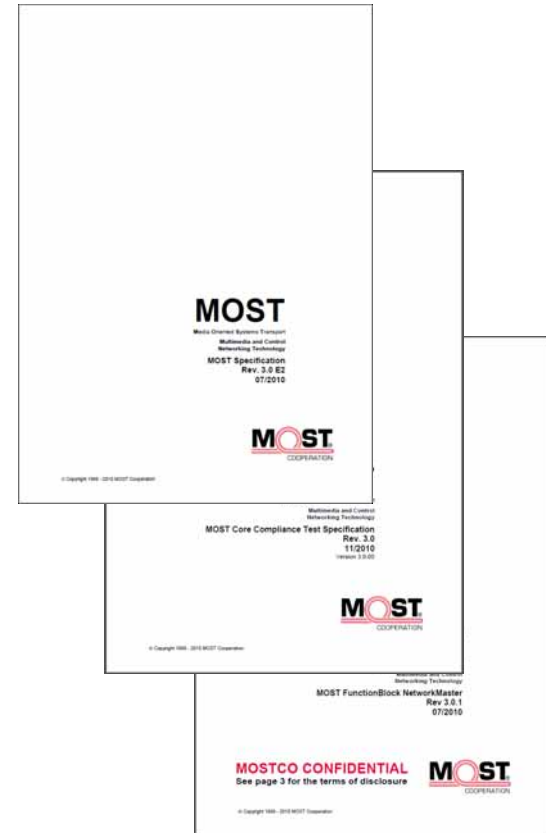
Sudden Signal Off Detection, Electric Control Line, ...

Video Transmission

Isochronous Channels, Content Protection, ...

Transmission of IP-Traffic

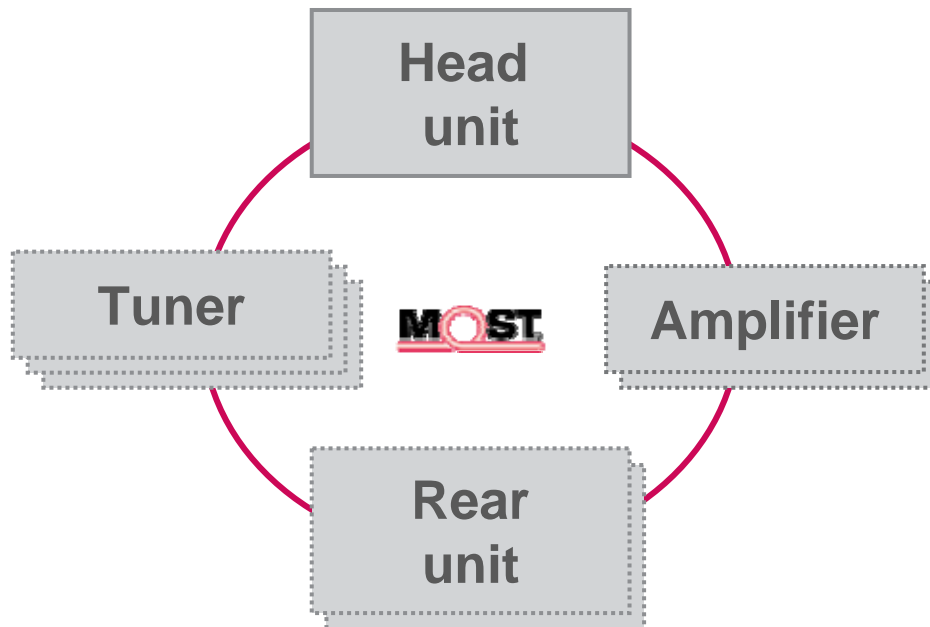
MOST Ethernet Channel, MAC Addressing, ...



...

Next Daimler Infotainment System

- Control unit for driver and front passenger (head unit)
- Control unit(s) for rear passengers (rear units)
- Country-specific radio and TV tuners
- External amplifiers



Key Features

- Audio and video sources shared via MOST
- Information/data shared via MOST
- Multi user system
 - Audio and video sources controlled from different seats
 - Meta data is distributed
 - Support of access control
- Internet access from every seat

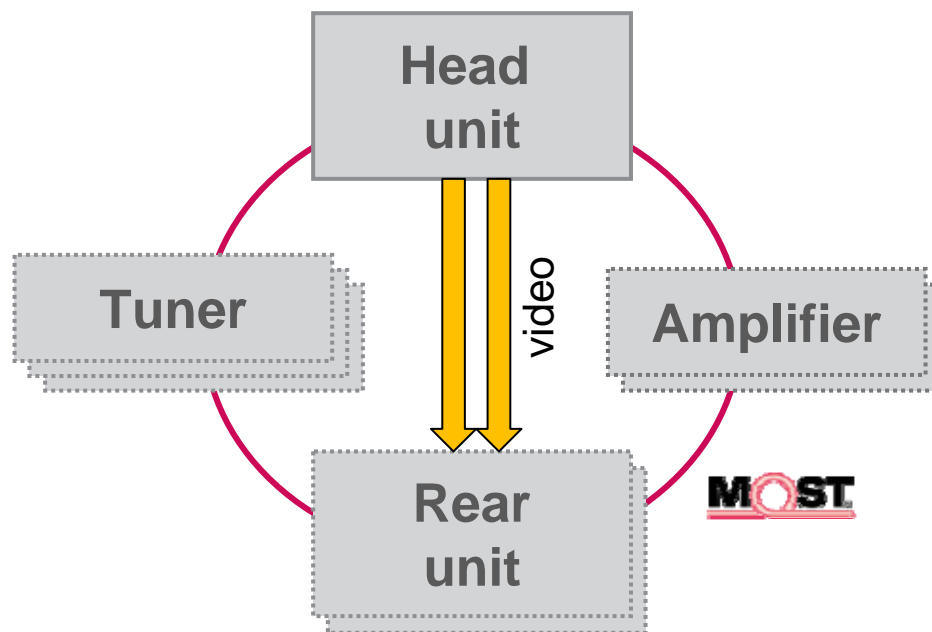


System Management Functions

- Based on MOST Specification 3.0
- Updated Network Management, e.g.
 - Support of Extended FBlock Information
 - Detection of System Ready Status
- Connection Management
 - Using MOST150 Mechanisms (Connection Label)
 - Support for multi user environment
- Enhanced Diagnosis Mechanisms
 - “Sudden Signal Off” Detection
 - Electrical Control Line

Transmission of Audio/Video

- Transmission of up to
 - two videos from HU to RU using isochronous channels
 - one 5.1 audio stream
 - four stereo audio streams for entertainment audio
 - Mono channels for infotainment audio
- Synchronization
 - Between different audio sources
 - Between audio and video (lip sync)



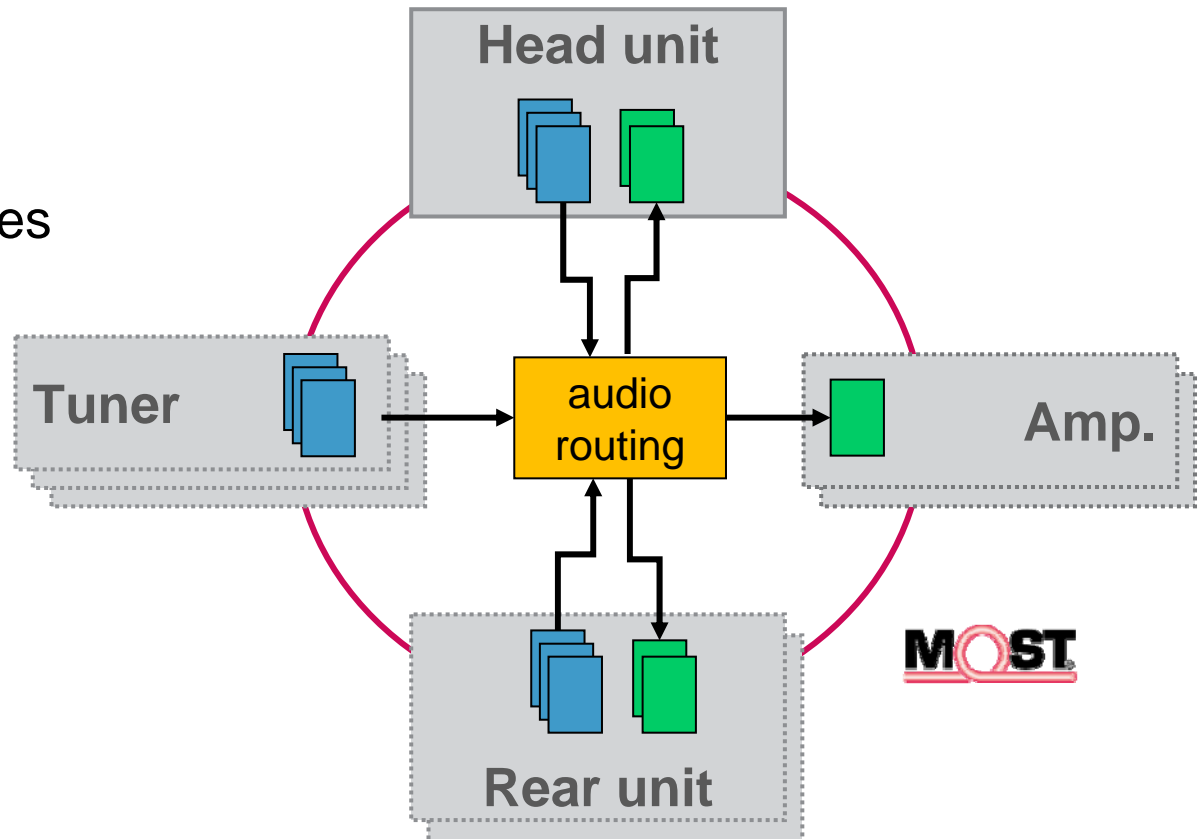
Audio/Video Management

Controlling up to:

- 20 entertainment sources
- 10 information sources
- 5 audio sinks

Responsibilities:

- Mixing and fading
- Muting
- Conflict handling
- Priorization
- Settings



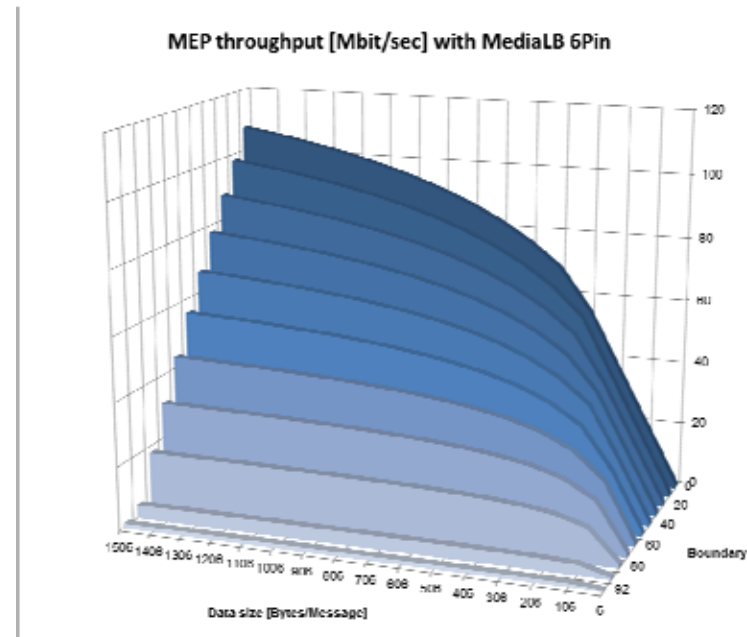
MOST Ethernet Packet Channel (MEP)

- Introduced with MOST150
- Compatible to Ethernet
 - 1522 Byte packets
 - 48 Bit MAC-Address
- Bandwidth
 - up to 107 MBit/s netto
 - controlled via Boundary
- Benefits
 - basis for standard IP stacks
 - provide Internet access
 - use standard IT protocols

3.2.7.1.1.2 Ethernet over MOST

Data Area MOST Network Interface Controller = max. 1522 bytes (48 bit addressing)

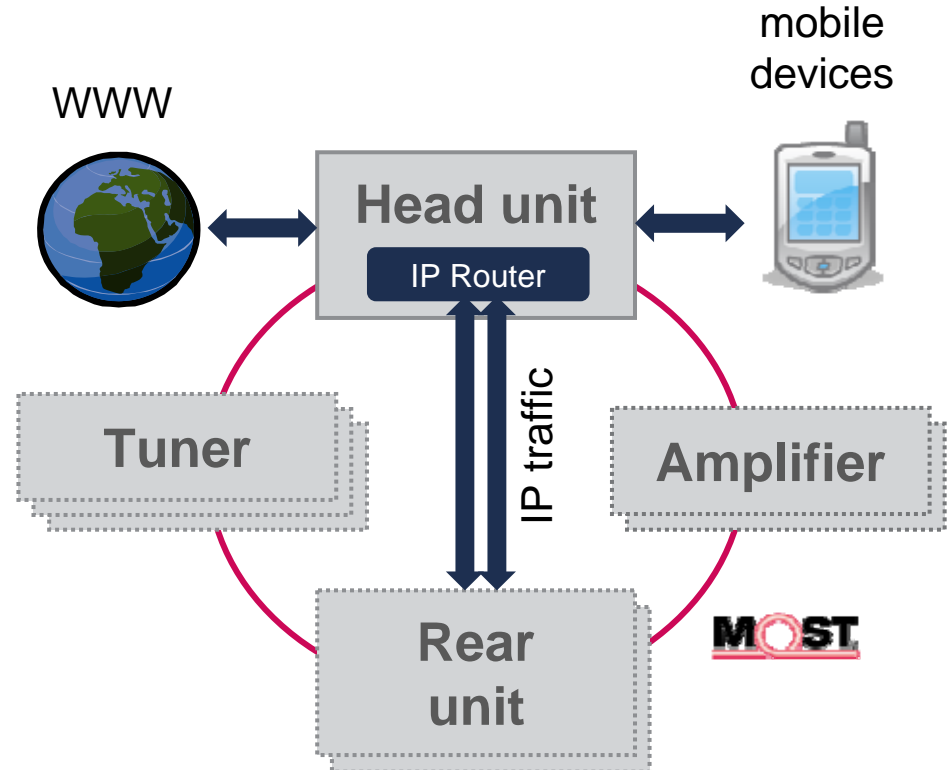
48 bits Destination Address	48 bits Source Address	8 bits Data 0	8 bits Data 1		8 bits Data 1505	32 bits CRC
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Source: Ontorix GmbH

IP Architecture

- IP routing
 - to and from mobile devices
 - access to Internet
 - access to specific Internet-based services
- IP-based protocols
 - HTTP for access to file structures
 - HTTP for transmission of large data between HU and RU
 - HTML for the presentation of information



Conclusion

- MOST150 used for the transmission of
 - control information,
 - audio/video streams, and
 - packet data
- Reuse of proven mechanisms based on MOST25
- Bandwidth and mechanisms for multi user system
- MEP channel with IP and protocols from IT world
- Further development of architecture:
 - Increase use of video transmission
 - Increase use of IT protocols and standards (e.g., UPnP)

Thank you very much for your attention!

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