ISO 21806-6:2020 (E)

Road vehicles — Media Oriented Systems Transport (MOST) — Part 6: Data link layer

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Symbols and abbreviated terms

4.1 Symbols
4.2 Abbreviated terms

5 Conventions

6 DLL — Service interface to upper layers

6.1 DLL — Overview
6.2 DLL — Data type definitions
6.3 DLL — Parameters
6.3.1 DLL — Parameters – DLL to TL/NL
6.3.1.1 DLL — Overview
6.3.1.2 DLL — Network_Event
6.3.1.3 DLL — Node_Position
6.3.1.4 DLL — Maximum_Position
6.3.1.5 DLL — Transmission_Status
6.3.2 DLL — Parameters – TL/NL to DLL
6.3.2.1 DLL — Overview
6.3.2.2 DLL — Network_Request
6.3.2.3 DLL — Network_Startup_Type
6.3.2.4 DLL — Number_Of_Retries
6.3.2.5 DLL — Waiting_Period
6.3.2.6 DLL — Priority
6.3.2.7 DLL — Group_Address
6.3.2.8 DLL — Node_Address
6.3.2.9 DLL — EUI_48
6.3.2.10 DLL — Bandwidth
6.3.3 DLL — Parameters – DLL to TL/NL and TL/NL to DLL
6.3.3.1 DLL — Overview
6.3.3.2 DLL — Media_Interface_ID
6.3.3.3 DLL — Length
6.3.3.4 DLL — Data
6.3.3.5 DLL — Session_ID
6.3.3.6 DLL — Target_Address
6.3.3.7 DLL — Source_Address
6.3.3.8 DLL — Destination_MAC_Address
6.3.3.9 DLL — Source_MAC_Address
6.4 DLL — Event indications and action requests
6.4.1 DLL — L_EVENT.INDICATE
6.4.2 DLL — L_NODE_POSITION.INDICATE
6.4.3 DLL — L_MAXIMUM_NODE_POSITION.INDICATE
6.4.4 DLL — L_ACTION.REQUEST
6.4.5 DLL — L_NETWORK_STARTUP.REQUEST

6.4.6 DLL — L_SET_GROUP_ADDRESS.REQUEST
6.4.7 DLL — L_SET_NODE_ADDRESS.REQUEST
6.4.8 DLL — L_SET_EUI_48.REQUEST
6.4.9 DLL — L_SET_TRANSMISSION_ATTRIBUTES.REQUEST
6.5 DLL — Control Data
6.5.1 DLL — L_CONTROL_DATA.RECEIVE
6.5.2 DLL — L_CONTROL_DATA.CONFIRM
6.5.3 DLL — L_CONTROL_DATA.SEND
6.6 DLL — Packet data
6.6.1 DLL — 16-bit addressing
6.6.1.1 DLL — L_PACKET_DATA_16.RECEIVE
6.6.1.2 DLL — L_PACKET_DATA_16.CONFIRM
6.6.1.3 DLL — L_PACKET_DATA_16.SEND
6.6.2 DLL — 48-bit addressing
6.6.2.1 DLL — L_PACKET_DATA_48.RECEIVE
6.6.2.2 DLL — L_PACKET_DATA_48.CONFIRM
6.6.2.3 DLL — L_PACKET_DATA_48.SEND
6.7 DLL — Streaming data
6.7.1 DLL — L_ALLOCATE.INDICATE
6.7.2 DLL — L_DEALLOCATE.INDICATE
6.7.3 DLL — L_CONNECT.INDICATE
6.7.4 DLL — L_DISCONNECT.INDICATE
6.7.5 DLL — L_SOURCE_DROP.INDICATE
6.7.6 DLL — L_STREAMING_DATA.RECEIVE
6.7.7 DLL — L_ALLOCATE.REQUEST
6.7.8 DLL — L_DEALLOCATE.REQUEST
6.7.9 DLL — L_CONNECT.REQUEST
6.7.10 DLL — L_DISCONNECT.REQUEST
6.7.11 DLL — L_STREAMING_DATA.SEND

7 DLL — Network frame

7.1 DLL — General
7.2 DLL — Administrative area
7.3 DLL — Source data area
7.4 DLL — Indicators

8 DLL — Channels

8.1 DLL — Allocation channel
8.1.1 DLL — General
8.1.2 DLL — Allocation frame structure
8.1.3 DLL — Common allocation channel related subjects
8.1.4 DLL — Allocation channel related subjects for the TimingMaster
8.1.4.1 DLL — Allocation-defend frame
8.1.4.2 DLL — Arbitration-result frame
8.1.4.3 DLL — Allocation channel handling
8.1.5 DLL — Allocation channel related subjects for a TimingSlave
8.1.5.1 DLL — Allocation-defend frame
8.1.5.2 DLL — Arbitration-result frame
8.1.5.3 DLL — Allocation channel handling
8.1.6 DLL — De-allocating
8.1.7 DLL — Source-drop recognition
8.1.7.1 DLL — General
8.1.7.2 DLL — Unexpected connection label
8.1.7.3 DLL — New allocation flag
8.1.8 DLL — Error handling
8.1.8.1 DLL — 4-bit CRC
8.1.8.2 DLL — Network synchronisation and bandwidth allocation
8.1.8.3 DLL — Specifics for TimingMaster
8.1.8.4 DLL — Specifics for TimingSlave
8.2 DLL — Control channel
8.2.1 DLL — General
8.2.2 DLL — Control frame structure
8.3 DLL — Protected system channel
8.3.1 DLL — General

8.3.2 DLL — Protected system frame structure
8.3.2.1 DLL — Indicator
8.3.2.2 DLL — Node counter
8.3.2.3 DLL — Visible nodes
8.3.2.4 DLL — Customisation bytes
8.3.2.5 DLL — System flags
8.3.2.6 DLL — CRC
8.4 DLL — Timestamp channel
8.4.1 DLL — General
8.4.2 DLL — Timestamp frame structure
8.4.3 DLL — Behaviour
8.5 DLL — Packet channel
8.5.1 DLL — General
8.5.2 DLL — Packet frame structure
8.5.3 DLL — Ethernet data frame structure
8.5.4 DLL — Short packet frame or short Ethernet data frame
8.6 DLL — Synchronous channel
8.6.1 DLL — General
8.6.2 DLL — Synchronous frame structure
8.7 DLL — Isochronous channel
8.7.1 DLL — General
8.7.2 DLL — Isochronous frame structure
8.8 DLL — Channel frame delay

9 DLL — Flow control

9.1 DLL — Pre-emptive acknowledge byte
9.2 DLL — Early ending
9.3 DLL — Low-level retries

10 DLL — Arbitration

10.1 DLL — General
10.2 DLL — Load-adaptive arbitration
10.2.1 DLL — General
10.2.2 DLL — Downstream arbitration
10.2.3 DLL — Downstream or upstream arbitration
10.2.4 DLL — Conditional upstream arbitration
10.3 DLL — Round-robin arbitration
10.3.1 DLL — Basics
10.3.2 DLL — Ensuring round-robin transmit order
10.3.3 DLL — Examples

11 DLL — Addressing

11.1 DLL — General
11.2 DLL — 16-bit address types
11.2.1 DLL — General
11.2.2 DLL — Free-up address
11.2.3 DLL — Logical node address
11.2.4 DLL — Group address
11.2.5 DLL — Blocking broadcast address
11.2.5.1 DLL — General
11.2.5.2 DLL — Entering blockage mode
11.2.5.3 DLL — Receiving a blocking broadcast
11.2.5.4 DLL — Leaving blockage mode/free-up mechanism
11.2.6 DLL — Non-blocking broadcast address
11.2.7 DLL — Node position address
11.2.8 DLL — Debug address
11.3 DLL — 48-bit address types

12 DLL — Cyclic redundancy check (CRC)

12.1 DLL — General
12.2 DLL — 4-bit CRC
12.3 DLL — 16-bit CRC
12.4 DLL — 32-bit CRC
12.5 DLL — CRC usage

12.6 DLL — CRC acknowledge

Annex A (normative) MOST network configurations

A.1 DLL — Network frame
A.2 DLL — Administrative area
A.2.1 DLL — General
A.2.2 DLL – Default protected system channel
A.2.3 DLL – Default control channel
A.3 DLL — Source data area
A.3.1 DLL — General
A.3.2 DLL — Default packet channel
A.3.2.1 DLL — General
A.3.2.2 DLL — NPBC handling
A.3.2.2.1 DLL — Packet bandwidth control (NPBC) value
A.3.2.2.2 DLL — Special values of NPBC versus normal operating range
A.3.2.2.3 DLL — Handling special value FE16 in TimingMaster
A.3.2.2.4 DLL — Handling special values in TimingSlave
A.3.3 DLL — Packet channel
A.3.4 DLL — Addressing

Annex B (normative) Frame indicators

B.1 DLL — PREAMBLE indicator
B.2 DLL — START indicator
B.3 DLL — END indicator
B.4 DLL — WAIT indicator

Page count: 69