| **Comment Number:**  **Name-#** | **Change Log ID #[[1]](#footnote-1)** | **Annex / Section** | **Section, Table, Figure** | **Type of change** | **Reason for the change, or what you want to accomplish** | **Proposed change to ITU-R M.2092-1, short editorial changes can be include here (large changes should be documented below)** |
| --- | --- | --- | --- | --- | --- | --- |
| General Information |  | 4 | Multiple sections within Annex 4, section 4 – Link Layer | Technical clarification | The link layer for the VDE-TER has some inconsistencies and invalid references including how the term “data sessions” are used and references to “Session ID”, which is not used anymore. | Modify the sections as proposed. |
| IEC WG15-1 |  | 4 | 4.30 | Technical clarification | Segment should not span multiple data sessions. | Segments may span multiple fragments, but not multiple data sessions. See Fig. 44. |
| IEC WG15-2 |  | 4 | 4.9.10, Table 47 | Technical clarification | Fragments are contained within a TDMA frame, not a session.  Footnote on the wrong field | See details on IEC WG15-2 below. |
| IEC WG15-3 |  | 4 | 4.2.6 | Technical clarification | The description of “data session” is not consistent. For clarity and compatibility with other statements in the document, modify as follows: | **4.2.6 Data session**  A data session refers to the period of data transfer, starting with the first fragment, and ending with a fragment that sets the “Continue resource usage” flag to “End data session” and may span multiple TDMA frames. See § 4.17. |
| IEC WG15-4 |  | 4 | 4.2.7 | Technical clarification | With the modification proposed in IEC WG15-3, this section is no longer required and should be deleted | **4.2.7 Data fragment**  During a data session, the data may be broken into multiple data fragments to be transmitted in separate slots. The data fragments refer to the start fragment, continuation fragment and end fragment VDE messages. See § 4.17. |
| IEC WG15-5 |  | 4 | 4.17 | Technical clarification | This section needs to be modified -due to the new Data Session definition. | All data fragments will be transmitted on DC slots on the assigned LC only. ACK/NACK messages will be transmitted on the DSCH slots as assigned.  When data exceeds the data packet payload capacity, then data should be broken up and transmitted in fragments.  The first data fragment starts with a start fragment (#74) message, continues with continuation fragment (#75) messages onwards and ends with an end fragment (#76) message. |
| IEC WG15-6 |  | 4 | Figure 44 | Technical clarification | This figure makes it look like there are separate headers on segments. This was discussed at one point but removed and the figure was not updated. This figure is no longer required and is confusing and should be deleted. | See details on IEC WG15-6 below. |
| IEC WG15-7 |  | 4 | 4.9, Table 33 | Technical clarification | Fragments should refer to TDMA fame, not data session. | See details on IEC WG15-7 below. |
| IEC WG15-8 |  | 4 | 4.9.10, Table 47  4.9.12, Table 49  4.17 | Technical clarification | With the proposed changes, the Start and End fragment “continue data session” flag needs clarification | See details on IEC WG15-8 below. |
| IEC WG15-9 |  | 5 | 4 | Editorial | Incorrect reference to the VDE-TER segmentation section | **4 Segmentation of VHF data exchange-satellite payload**  See § 4.7, Annex 4.30 |
| IEC WG15-10 |  | 4 | Figure 42 | Technical clarification | Remove “Generate Session ID”, as Session ID is not used and always 0.  Remove “…with incremented Session ID” in transition from last fragment received with continuation data flag set.  Change “continue data session” to “continue resource usage” | Note that figures 41 and 42 are difficult to follow and should be updated. Currently they are only a picture and we should find the source files.  Consider deleting them? |
| IEC WG15-11 |  | 5 | Figures 39 and 40 | Editorial | These figures have the same titles. | Figure 37 title: Ship to ship short data message sequence diagram with ACK  Figure 38 title: Ship to ship short data message sequence diagram without ACK |
| IEC WG15-12 |  | 4 | Table 34 | Technical | The media access control message has no Source ID. | See details on IEC WG15-12 below. |
| IEC WG 15-13 |  | 4 | 4.28.2 | Technical | Resource allocation for broadcast from ship outside control area is not clear. -> Proposal is to always use RAC for broadcast of data (no streaming). This means that there would be no use for the method described in 4.28.2.  Also, this may potentially be harmful for the VDL and should therefore be deleted from ITU-R M.2092 in future revisions. | Delete section 4.28.2 of M.2092-1. |
| IEC WG 15-14 |  | 5 | 3.10.7 a) | Technical | For one fragment session, the transmission of a start fragment only is ambiguous because there would be no way to indicate the end of the session. An end fragment is always required to end the session. | Change as follows:  a) In case the complete payload of a session transfer fits into the end fragment, only an end fragment with fragment number set to 0 is sent. |
| IEC WG15-15 |  | 5 | 3.10.4  Table 71, row 4 (field No.3), Content | Technical | The definition of 4 LSB Bit 0 would seem to conflict with definition of “Output average power (W)” in Table 9. | Change the definition of 4 LSB Bit 0 as follows:  Bit 0: Reserved for future use. Default = 0. |
| IEC WG15-16 |  | 4 | Figure 36 | Editorial | The sequence diagram indicates that the Shore to Ship 2 uses a “Resource request (#90) and Resource allocation (#4). The diagram needs to be updated to indicate “Transmission announcement” | Update the diagram as shown on IEC WG15-16 below. |
| IEC WG15-17 |  | 4 | Figure 39 | Technical | The sequence diagram indicates that the ship uses the “Announcement signalling channel” for a short message (#92), and the shore uses the “Random access channel” for the ack (#13). Ships are not allowed to use the “Announcement signalling channel." | Update the diagram as shown on IEC WG15-17 below. |

*Here you have to provide the detailed change proposal to ITU-R M.2092-1 -Technical characteristics for VDES in following way*

* *copy paste the affected sections from “yyyymmdd\_M2092-1 WD PDNR”1 to here*
* *accept all changes in that copied section here*
* *enable track changes*
* *change the section according to your proposal*
* *name and store this document according to following rules:*
  + Committees/ENAV/WG3/*ws-working-groups-working-space/INPUT/ YYYYMMDD \_M2092-1\_CP\_logid\_initials.docx*

*\*Note that “ws-working-groups-space” refers to the subfolder for a specific meeting.*

**IEC WG15-2:**

Table 47 should be modified as follows:

Table 47

Start fragment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field  no. | Value  (dec) | Size  (bytes) | Function | Content |
| 1 | 074 | 1 | Type |  |
| 2 | 0 to 216-1 | 2 | Length | Total size in bytes, variable |
| 3 | 0 to 232-1 | 4 | Source ID | The unique identifier of the current node transmitting this message, as described in § 2.4, Annex 1. |
| 4(1) | 0 | 1 | Session ID | Session ID |
| 5 | 0 to 232-1 | 4 | Destination ID | The unique identifier of the current node receiving this message, as described in § 2.4, Annex 1.  Set to 0 for broadcast. |
| 6 | 0-255 | 1 | Number of fragments | Number of fragments in this TDMA frame.  Should be a value from 1 to 14. |
| 7 | 0-255 | 1 | Fragment number | Fragment number of the payload in this message. First fragment should start at 0, increment with any additional fragment and wrap at 255. |
| 8 | 0-255 | 1 | Continue data session | 0 – Ends data session  1 – Continue data session with new |
| 9 |  | Variable | Payload |  |
| Notes:  Should always be transmitted on the TDMA channel (derived from the logical channel) as assigned by a resource allocation.  Will always be transmitted to carry payload of first data fragment.  (1) Session ID is reserved for future use. | | | | |

**IEC WG15-6:**

Segments may span multiple fragments, but not multiple data sessions.

Figure 44

Segmentation across data session boundaries

### 4.30.1 Segment description

**IEC WG15-7:**

## **4.9 VHF data exchange-terrestrial messages**

Table 33

VHF data exchange message summary

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Name | Description | Slot function |
| 0 | Media access control | Changes random access selection interval | BB, AC |
| 4 | Resource allocation | Allocated LC resource to data session | AC, RAC, DSCH |
| 13 | ACK/NACK | Acknowledgement or negative-acknowledgement | AC, RAC, DSCH |
| 20 | Bulletin board message start fragment | Start fragment of bulletin board message used for control station service area configuration | BB |
| 21 | Bulletin board message continuation fragment | Middle fragment of bulletin board message used for control station service area configuration | BB |
| 22 | Bulletin board message end fragment | Last fragment of bulletin board message used for control station service area configuration | BB |
| 74 | Start fragment | Start data fragment of TDMA frame | DC |
| 75 | Continuation fragment | Middle data fragment of TDMA frame | DC |
| 76 | End fragment | Last data fragment of TDMA frame | DC |
| 81 | Padding byte | Byte used for padding | BB, AC, RAC, DSCH |
| 90 | Resource request / Transmission announcement | Request resource from station or announce transmission to follow | AC, RAC |
| 92 | Short data message (with ACK) | Short data message. ACK is required | AC, RAC |
| 93 | Short data message (no ACK) | Short message that does not require an ACK. May be used for broadcasting | AC, RAC |

**IEC WG15-8:**

Modify the following tables and sections as follows:

Table 47

**Start fragment**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field  no.** | **Value  (dec)** | **Size  (bytes)** | **Function** | **Content** |
| 1 | 074 | 1 | Type |  |
| 2 | 0 to 216-1 | 2 | Length | Total size in bytes, variable |
| 3 | 0 to 232-1 | 4 | Source ID | The unique identifier of the current node transmitting this message, as described in § 2.4, Annex 1. |
| 4 | 0 | 1 | Session ID | Session ID |
| 5(1) | 0 to 232-1 | 4 | Destination ID | The unique identifier of the current node receiving this message, as described in § 2.4, Annex 1.  Set to 0 for broadcast. |
| 6 | 0-255 | 1 | Number of fragments | Number of fragments in this session.  Should be a value from 1 to 14. |
| 7 | 0-255 | 1 | Fragment number | Fragment number of the payload in this message. First fragment should start at 0, increment with any additional fragment and wrap at 255. |
| 8 | 0-255 | 1 | Continue resource usage n | 0 – Ends data session  1 – Continue resource usage |
| 9 |  | Variable | Payload |  |
|  | | | | |

Table 49

**End fragment**

| **Field no.** | **Value  (dec)** | **Size  (bytes)** | **Function** | **Content** |
| --- | --- | --- | --- | --- |
| 1 | 076 | 1 | Type |  |
| 2 | 0 to 216-1 | 2 | Length | Total size in bytes, variable. |
| 3 | 0 to 232-1 | 4 | Source ID | The unique identifier of the transmitting station, as described in § 2.4, Annex 1. |
| 4(1) | 0 | 1 | Session ID | Session ID. |
| 5 | 0 to 232-1 | 4 | Destination ID | The unique identifier of the current node receiving this message, as described in § 2.4, Annex 1.  Set to 0 for broadcast. |
| 6 | 0-255 | 1 | Number of fragments | Total number of fragments in this session.  Should be a value from 1 to 14. |
| 7 | 0-255 | 1 | Fragment number in this message | Fragment number of the payload in this message. First fragment should start at 0, increment with any additional fragment and wrap at 255. |
| 8 | 0-255 | 1 | Continue resource usage | 0 – Ends data session.  1 – Continues resource usage. |
| 9 |  | Variable | Payload |  |
|  | | | | |

(Note: the next paragraph is located just above section 4.18)

If the maximum number of fragments (14) are being used and there are data left for transmission, then the data transmission can be continued by setting the “continue resource usage” parameter in the end fragment (#76) message to 1. On successful transmission, the data transmission session will be acknowledged with an ACK/NACK (#13) message and a logical channel will be immediately assigned by means of a Resource Allocation (#4) message. Both messages ACK/NACK (#13) and resource allocation (#4) will be transmitted in the same data signalling slot. If no more LC resources are available, then an ACK/NACK (#13) message may be transmitted with the ACM or end delivery notification (EDN) parameter set to 3.

**4.18 Data frame retry**

**IEC WG15-12:**

Modify the table 34 as follows:

Table 34

Media access control

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Media access control | | | | |
| Field no. | Value (dec) | Size  (bytes) | Function | Content |
| 1 | 000 | 1 | Type |  |
| 2 | 0 to  216-1 | 2 | Length | 8: Total size in bytes, fixed at 8 bytes |
| 3 | 0 to  232-1 | 4 | Source ID | The unique identifier of the transmitting station as described in § 2.4, Annex 1 |
| 4 | 0-255 | 1 | Media Access priority level | Reserved for future use. Always 0 |
| 5 | 0-511 | 2 | Random access selection interval | The random access scheme selection interval in hexslots.  0 – Default selection interval applies |
| 6 | 0-127 | 1 | Short data message limit | Maximum allowed number of short data message transmissions on the RAC during a frame |
| 7 | 0-255 | 1 | System status | 0: Normal  10: Busy  20: Temporarily out of service  30: Scheduled out of service |

**IEC WG15-16:**

Old figure 36

New figure 36:

Table

Description automatically generated

**IEC WG15-17:**

Old figure 39:

New figure 39:

Diagram

Description automatically generated

1. The latest version of the change log and M.2092-1 will be located on the IALA file share under the sub-folder:

   Committees/ENAV/WG3/Revision of M2092-1   
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