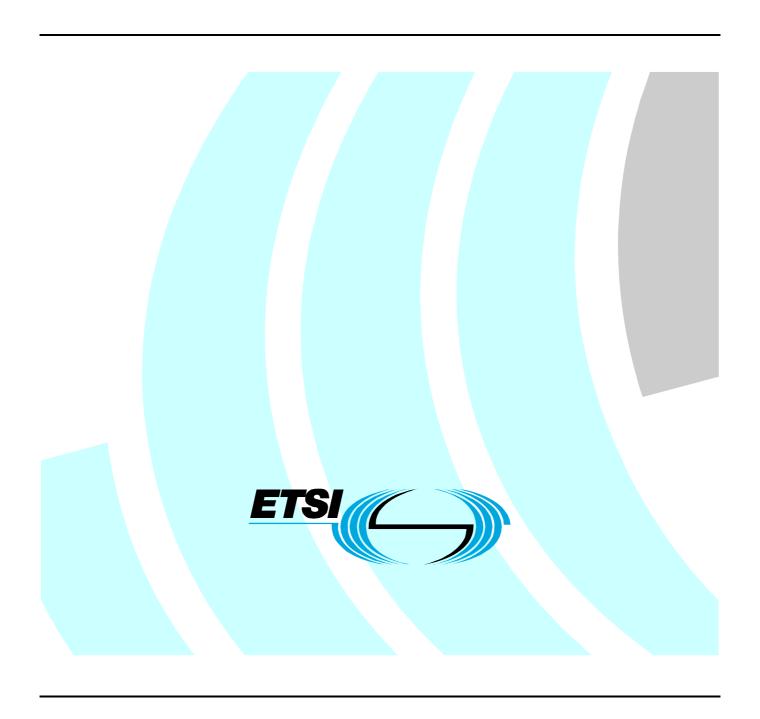
ETSITS 102 587-2 V1.3.1 (2010-09)

Technical Specification

Electromagnetic compatibility and Radio spectrum Matters (ERM); Peer-to-Peer Digital Private Mobile Radio; Part 2: Conformance testing; Test Suite Structure and Test Purposes (TSS&TP) specification



Reference

RTS/ERM-TGDMR-297-2

Keywords

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document is part 2 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM); Peer-to-Peer Digital Private Mobile Radio, as identified below:

- Part 1: "Conformance testing; Protocol Implementation Conformance Statement (PICS) proforma";
- Part 2: "Conformance testing; Test Suite Structure and Test Purposes (TSS&TP) specification";
- Part 3: "Requirements catalogue";
- Part 4: "Conformance testing; Abstract Test Suite (ATS)";
- Part 5: "Interoperability testing; Interoperability Test Suite Structure and Test Purposes (TSS&TP) specification";
- Part 6: "Interoperability testing; Test Descriptions (TD)".

1 Scope

The present document specifies the conformance Test Purposes (TPs) for the Peer-to-Peer digital Private Mobile Radio (dPMR) standard, TS 102 490 [1]. TPs are defined using the TPLan notation described in ES 202 553 [i.1]. Test purposes have been written based on the test specification framework described in TS 102 351 [2] and based on the methodology defined in ISO/IEC 9646-2 [3].

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 102 490 (V1.6.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Peer-to-Peer Digital Private Mobile Radio using FDMA with a channel spacing of 6,25 kHz with e.r.p. of up to 500 mW".
- [2] ETSI TS 102 351 (V2.1.1): "Methods for Testing and Specification (MTS); Internet Protocol Testing (IPT); IPv6 Testing: Methodology and Framework".
- [3] ISO/IEC 9646-2: "Information technology Open Systems Interconnection Conformance testing methodology and framework Part 2: Abstract Test Suite specification".
- [4] ETSI TS 102 587-3: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Peer-to-Peer Digital Private Mobile Radio; Part 3: Requirements catalogue".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI ES 202 553: "Methods for testing and Specification (MTS); TPLan: A notation for expressing test Purposes".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CF (Test) ConFiguration
CSF Configured Services and Facilities
dPMR digital Private Mobile Radio
ISDM Individual Short Data Message
ISF Initial Services and Facilities
IUT Implementation Under Test
MS Mobile Station

MS Mobile Station
OACSU Off Air Call Set-Up
PTT Push To Talk

RC Requirements Catalogue

RQ ReQuirement
TP Test Purpose
TSS Test Suite Structure

4 Test Suite Structure (TSS)

The Test Suite Structure is based on the dPMR Requirements Catalogue (TS 102 587-3 [4]). It is defined by the groups within the following TPLan specification of test purposes. The numbering is not contiguous so that new TPs can be added at a later date without the need to completely renumber the TSS groups.

The test purposes have been divided into three groups:

Group 1: Common requirements.

Group 2: CSF requirements.

Group 3: ISF requirements.

The sub-grouping of these three group follows the structure of the RC. Some of the sub-groups of the RC contained no testable requirement. Headings for those sub-groups are in this test purpose document in the node group to give a full view on the relation between RQ and TSS&TP.

```
Group 1 "ISF CSF Common"
Group 1.1 "All Call"
Group 1.2 "Channel Access"
Group 1.3 "Framing"
Group 1.3.1 "End frame"
Group 1.3.2 "Header frames"
Group 1.3.2.1 "Call information field"
Group 1.3.3 "Packet data frame"
Group 1.3.4 "Superframe"
Group 1.3.4.1 "Type 1 data"
Group 1.3.4.2 "Type 2 data"
Group 1.3.4.3 "Voice"
Group 1.4 "Late Entry'
Group 1.5 "Powersave"
Group 1.6 "Talking Party ID"
Group 2 "CSF"
Group 2.1 "Broadcast Call"
Group 2.2 "Dialling Plan"
Group 2.3 "Individual Short Data Message"
Group 2.3.1 "ISDM Free Text Message"
Group 2.3.2 "ISDM Precoded Message"
Group 2.3.3 "ISDM Short File Transfer"
Group 2.3.4 "ISDM Status Message"
Group 2.4 "OACSU"
Group 2.5 "Short Appended Data"
Group 2.6 "Slow User Data"
Group 2.7 "Type 3 data"
Group 3 "ISF"
```

5 Test Purposes (TP)

The test purposes have been written in the formal notation TPlan. Configurations that are referenced by test purposes are shown in annex A. TPLan user definitions are listed in annex B.

5.1 ISF CSF Common

Group 1 'ISF CSF Common'

```
5.1.1
          All Call
Group 1.1 'All Call'
TP id
       : TP PMR 0824 01
summary : 'ISF All Call'
RQ ref : RQ_001_0824
TP type : conformance
Role
       : ISF
       : CF_dPMR_01
: TC_PMR_0824_01
config
TC ref
with {
         IUT in standby and using a Common ID between 1 and 254
ensure that
 when { IUT receives a Voice_Transmission
               containing Call Data
                  containing Common_ID set to 255 and
               containing 'audible test tone as payload' }
       { IUT outputs the 'audible test tone' }
  then
TP id
      : TP_PMR_0858_01
summary : 'ISF All Call'
RQ ref
       : RQ 001 0858
TP type : conformance
       : ISF
Role
       : CF_dPMR_01
config
TC ref
       : TC_PMR_0858_01
with {
         IUT in standby and using a Common ID of 255
ensure that
 when { IUT receives a Voice_Transmission
               containing Call_Data
                  containing Common ID set to 255 and
               containing 'audible test tone as payload'}
  then { IUT outputs the 'audible test tone' }
TP id
      : TP PMR 0858 02
summary : 'ISF All Call'
RQ ref : RQ_001_0858
TP type : conformance
       : ISF
Role
config
       : CF_dPMR_01
TC ref : TC_PMR_0858_02
         IUT in standby and using a Common ID of 255
with {
ensure that
 when { IUT receives a Voice Transmission
               containing Call Data
                  containing Common_ID between 1 and 254 and
               containing 'audible test tone as payload'}
  then
       { IUT does not output the 'audible test tone'
```

```
TP id : TP PMR 1317 01
summary : 'Standard user interface transmitting All Call'
RQ ref : RQ_001_1317
TP type : conformance
Role
       : CSF
config : CF_dPMR_01
TC ref : TC_PMR_1317_01
with {    IUT configured_for_Standard_User_Interface and in standby
ensure that
 when { IUT is requested to send a Voice_Transmission to all_call_address }
then { IUT sends a Voice_Transmission
                   with Header Frame
                      containing Called Station ID set to 'F8 33 A6h' }
: TP PMR 1317 02
summary : 'Standard user interface All Call within prefix'
RQ ref : RQ 001 1317
TP type : conformance
Role
       : CSF
      : CF_dPMR_01
config
TC ref : TC_PMR_1317_02
       IUT configured_for_Standard_User_Interface and in standby
with {
ensure that {
 when { IUT is requested to send a Voice Transmission to all call within a prefix address }
  then { IUT sends a Voice Transmission with Header Frame
              containing Called Station ID set to the Tx B2 conversion of the
all_call_within_a_prefix_address }
TP id : TP PMR 1317 03
summary : 'Standard user interface Receiving All Call'
RQ ref : RQ_001_1317
TP type : conformance
       : CSF
Role
      : CF dPMR 01
config
TC ref : TC_PMR_1317_03
       IUT configured_for_Standard_User_Interface
with {
             and in standby
\quad \textbf{ensure that } \{
  when { IUT receives a Voice_Transmission containing Called_Station_ID
                 set to 'F8 33 A6h' and
               containing 'audible test tone as payload'}
  then { IUT outputs 'the audible test tone' }
TP id
      : TP PMR 1317 04
summary : 'Standard user interface receiving All Call within a prefix'
RQ ref : RQ_001_1317
TP type : conformance
       : CSF
Role
config
       : CF_dPMR_01
TC ref
       : TC_PMR_1317_04
       IUT configured for Standard User Interface
with {
             and in standby
ensure that {
  when { IUT receives a Voice_Transmission containing Called_Station_ID
                set to the Tx B2 conversion of an all call within a prefix address valid for the
individual_address of the IUT and
               containing 'audible test tone as payload'}
  then { IUT outputs 'the audible test tone' }
End group 1.1
```

5.1.2 channel access

```
Group 1.2 'Channel Access'
TP id
      : TP PMR 1004 01
summary : 'Interference on channel'
RQ ref : RQ_001_1004
TP type : conformance
     : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_1004_01
with {
       IUT in standby and configured for polite to own CC
ensure that {
 when { TESTER sends a continuous Voice_Transmission using an invalid colour_code and 'a signal
level of >-102 dBm' and
        IUT is requested to make a Voice Transmission }
 then { IUT sends the Voice Transmission
: TP PMR 1005 01
TP id
summary : 'Tx WAIT Time'
RQ ref : RQ_001_1005
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_1005_01
with {
      IUT in standby
ensure that
 when { TESTER sends a Voice_Transmission with an End_Frame containing Tx_WAIT set to a non_zero
value and
        IUT is requested to send a PTT Call during the Tx WAIT time }
 then { IUT does not transmit during the Tx WAIT time }
TP id : TP PMR 1007 01
summary : 'Acknowledgement response time'
RQ ref : RQ 001 1007
TP type : conformance
Role
       : CSF
config
      : CF_dPMR_01
      : TC_PMR_1007_01
TC ref
       IUT in standby and configured_for_impolite_channel_access
ensure that {
 when { TESTER sends a continuous Voice_Transmission using 'a signal level of >-102 dBm' and
               sends a Voice Transmission using 'a signal level of >-82 dBm'
                      with an End Frame containing ARQ set to '01b' }
 then { IUT sends an Ack Frame
TP id : TP_PMR_1007_02
summary : 'Acknowledgement response time'
RQ ref : RQ_001_1007
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
      : TC_PMR_1007 02
TC ref
with {
        IUT in standby and configured for polite to own CC and configured to use Tack
ensure that {
 when { TESTER sends a continuous Voice Transmission using 'a signal level of >-102 dBm' and
               sends a Voice Transmission using 'a signal level of >-82 dBm'
                      with an End Frame containing ARQ set to '01b' }
 then { IUT sends an Ack_Frame within T_Ack seconds }
```

```
TP id : TP PMR 1007 03
summary : 'Acknowledgement response time'
RQ ref : RQ_001_1007
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_1007_03
ensure that {
 when { TESTER sends a continuous Voice_Transmission using 'a signal level of >-102 dBm' and
              sends a Voice_Transmission using 'a signal level of >-82 dBm'
                     with an End Frame containing ARQ set to '01b' }
 then { IUT sends an Ack_Frame after the TESTER terminates the continuous Voice_Transmission}
TP id : TP PMR 1008 01
summary : 'Party to call'
RQ ref : RQ_001_1008
TP type : conformance
     : ISF, CSF
Role
      : CF_dPMR 01
config
TC ref : TC_PMR_1008_01
with { IUT in standby
ensure that
 when { TESTER sends a continuous Voice Transmission using a wildcard group address or
numeric_group_address of the IUT and
        IUT is requested to send a PTT Call to the same wildcard group address or
numeric_group_address
 then { IUT sends the PTT_Call}
: TP PMR 1009 01
summary : 'Polite to CC'
RQ ref : RQ_001 1009
TP type : conformance
Role : ISF
config : CF_dPMR_01
TC ref : TC_PMR_1009_01
with {
      IUT in standby and configured for polite to own CC
ensure that {
 when { TESTER sends a continuous Voice_Transmission 'not addressed to the IUT' and
        IUT is requested to send a Voice_Transmission
 then { IUT does not transmit}
TP id : TP_PMR_1010_01
summary : 'Polite to CC'
RQ ref : RQ_001_1010
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_1010_01
with {    IUT in standby and configured_for_impolite_channel_access
ensure that
 when { TESTER sends a continuous Voice_Transmission 'not addressed to the IUT' and
        IUT is requested to send a Voice_Transmission
      { IUT sends that Voice Transmission}
 then
```

```
TP id : TP PMR 1011 01
summary : 'Polite to own group'
RQ ref : RQ_001_1011
TP type : conformance
Role
      : CSF
config : CF dPMR 01
TC ref : TC_PMR_1011_01
with {
        IUT in standby and configured for polite to own group
ensure that {
 when { TESTER sends a continuous Voice_Transmission to an individual_address
               that is 'also a member of a group configured in the IUT' and
         IUT is requested to send a Voice_Transmission
  then { IUT does not transmit}
TP id
       : TP PMR 1012 01
summary : 'Multiple acknowledgements'
RQ ref : RQ_001_1012
TP type : conformance
     : CSF
config : CF_dPMR_01
TC ref : TC_PMR_1012_01
with {
       IUT in standby and configured for impolite channel access and configured for multiple acks
ensure that {
  when { TESTER sends a continuous Voice_Transmission using 'a signal level of >-102 dBm' and
               sends a Voice Transmission using 'a signal level of >-82 dBm'
                       with an End Frame containing ARQ set to '01b' }
  then { IUT sends up to 4 Ack Frames }
TP id : TP_PMR_1012_02
summary : 'Acknowledgement response time'
RQ ref : RQ_001_1012
TP type : conformance
Role : CSF
config : CF_dPMR_01
TC ref : TC_PMR_1012_02
with {    IUT in standby and configured_for_polite_to_own_CC and configured_for_multiple_acks and
configured to use Tack
ensure that {
  when { TESTER sends a continuous Voice Transmission using 'a signal level of >-102 dBm' and
               sends a Voice_Transmission using 'a signal level of >-82 dBm'
                      with an End Frame containing ARQ set to '01b' }
  then { IUT sends up to 4 Ack_Frames within T_Ack seconds }
TP id : TP PMR 1012 03
summary : 'Acknowledgement response time'
RQ ref : RQ_001_1012
TP type : conformance
      : CSF
Role
config
       : CF_dPMR_01
TC ref : TC_PMR_1012_03
       IUT in standby and configured for polite to own CC and configured for multiple acks
with {
ensure that {
  when { TESTER sends a continuous Voice_Transmission using 'a signal level of >-102 dBm' and
              sends a Voice Transmission using 'a signal level of >-82 dBm'
                       with an End Frame containing ARQ set to '01b'
  then { IUT sends up to 4 Ack_Frames after the TESTER terminates the continuous
Voice Transmission }
End group 1.2
```

5.1.3 framing

```
Group 1.3 'Framing'
: TP PMR 0401 01
summary : 'Payload frame length with voice data'
RQ ref : RQ_001_0401
TP type : conformance
Role : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0401_01
with {
      IUT in standby
ensure that
 when { IUT is requested to start a Voice_Transmission }
then { IUT sends Voice_Transmission containing 384 bit Payload_Frames }
TP id : TP PMR 0401 02
summary : 'Payload frame length with Type 1 data'
RQ ref : RQ_001_0401
TP type : conformance
      : ISF, CSF
config : CF dPMR 01
TC ref : TC_PMR_0401_02
with { IUT in standby
ensure that {
 when { IUT is requested to start a T1_Transmission }
 then { IUT sends T1_Transmission containing 384 bit Payload_Frames }
TP id
     : TP PMR 0401 03
summary : 'Payload frame length with Type 2 data'
RQ ref : RQ 001 0401
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
ensure that
 when { IUT is requested to start a T2_Transmission }
 then { IUT sends T2 Transmission containing 384 bit Payload Frames }
TP id : TP_PMR_0403_01
summary : 'There are four payload frames in a superframe in a voice transmission'
RQ ref : RQ_001_0403
TP type : conformance
Role
     : ISF, CSF
      : CF_dPMR_01
config
TC ref : TC_PMR_0403 01
with { IUT in standby
ensure that
 when { IUT is requested to start a Voice_Transmission }
       { IUT sends a Voice Transmission containing Superframes (each containing 4 Payload Frames) }
```

```
TP id : TP PMR 0403 02
summary : 'There are four payload frames in a superframe in a Type 1 data transmission'
RQ ref : RQ_001_0403
TP type : conformance
Role
       : ISF, CSF
config
      : CF dPMR 01
TC ref : TC_PMR_0403_02 with { IUT in standby
ensure that
 when { IUT is requested to start a T1_Transmission }
      { IUT sends a T1_Transmission containing Superframes (each containing 4 Payload_Frames) }
  then
TP id : TP PMR 0403 03
summary : 'There are four payload frames in a superframe in a Type 2 data transmission'
RQ ref : RQ 001 0403
TP type : conformance
Role
       : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0403_03
with { IUT in standby
ensure that {
  when { IUT is requested to start a T2_Transmission }
       { IUT sends a T2_Transmission containing Superframes (each containing 4 Payload_Frames) }
TP id : TP PMR 0404 01
summary : 'A voice transmission is composed of header frame, integral superframes, end frame'
RQ ref : RQ_001_0404
TP type : conformance
     : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0404_01
with {
      IUT in standby
ensure that {
 when { IUT is requested to start a Voice_Transmission }
then { IUT sends a Voice_Transmission containing a Header_Frame
                    followed by an integral_number of Superframes
                    followed by an End Frame }
: TP_PMR_0404_02
TP id
summary : 'A Type 1 data transmission is composed of header frame, integral superframes, end frame'
RQ ref : RQ 001 0404
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
TC ref
      : TC_PMR_0404_02
       IUT in standby
with {
ensure that
         IUT is requested to start a T1_Transmission }
  when {
  then
        IUT sends a T1_Transmission containing a Header_Frame
                    followed by an integral number of Superframes
                    followed by an End Frame }
```

```
TP id : TP_PMR_0404_03
summary : 'A Type 2 data transmission is composed of header frame, integral superframes, end frame'
RQ ref : RQ_001_0404
TP type : conformance
Role
      : ISF, CSF
ensure that
 when { IUT is requested to start a T2_Transmission }
       { IUT sends a T2_Transmission containing a Header_Frame
 then
                  followed by an integral_number of Superframes
                  followed by an End Frame }
: TP PMR 0405 01
summary : 'Header and end frame in manual connection request'
RQ ref : RQ 001 0405
TP type : conformance
      : CSF
Role
ensure that
 when { IUT is requested to send Connection Request }
      { IUT sends a Connection Request }
 then
TP id
     : TP_PMR_0405_02
summary : 'Header and end frame in automatic connection request'
RQ ref : RQ_001_0405
TP type : conformance
Role
      : CSF
config
      : CF_dPMR_01
TC ref
      : TC PMR 0405 02
with {
      IUT in standby and
          OACSU enabled
ensure that {
 when
      { IUT is requested to send a Voice Transmission to an individual address }
       IUT sends a Connection_Request }
 then
TP id : TP PMR 0406 01
summary : 'Header frame is used to acknowledge connect request'
RQ ref : RQ_001_0406
TP type : conformance
Role
      : CSF
config
      : CF_dPMR_01
TC ref : TC PMR 0406 01 with { IUT in standby
ensure that {
 when { IUT receives a Connection_Request }
      IUT sends a Ack Frame
 then
```

```
TP id : TP PMR 0406 02
summary : 'Acknowledge frame is used to acknowledge type 1 data transmission'
RQ ref : RQ_001_0406
TP type : conformance
Role
       : CSF
config : CF dPMR 01
TC ref : TC_PMR_0406_02
with {    IUT 'receiving a T1_Transmission'
ensure that
 when { IUT receives End_Frame indicating Ack_Request }
then { IUT sends a Ack_Frame }
TP id : TP PMR 0406 03
summary : 'Acknowledge frame is used to acknowledge Type 2 data transmission'
RQ ref : RQ 001 0406
TP type : conformance
        : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0406_03
with {    IUT 'is receiving T2_Transmission'
ensure that {
  when { IUT receives End_Frame indicating Ack_Request }
then { IUT sends a Ack_Frame }
TP id : TP PMR 0406 04
summary : 'Acknowledge frame is used to acknowledge Type 3 data transmission'
RQ ref : RQ_001_0406
TP type : conformance
      : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0406_04
with {    IUT 'is receiving T3_Transmission'
ensure that {
  when { IUT receives End_Frame indicating Ack_Request }
then { IUT sends a Ack_Frame }
TP id : TP PMR 0407 01
summary : 'Header and end frame pairs in manual disconnection request'
RQ ref : RQ 001 0407
TP type : conformance
Role
       : ISF, CSF
config
       : CF dPMR 01
TC ref : TC PMR 0407 01
with {
       IUT in standby
ensure that {
  when { IUT is requested to send Disconnection_Request }
then { IUT sends a Disconnection_Request }
TP id : TP PMR 0407 02
summary : 'Header and end frame pairs in automatic disconnection request'
RQ ref : RQ_001_0407
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0407_02
        IUT is 'sending T1 Transmission' to TESTER
with {
ensure that {
  when { IUT completes T1_Transmission }
then { IUT sends a Disconnection_Request }
```

```
TP id : TP PMR 0407 03
summary : 'Header and end frame pairs in automatic disconnection request'
RQ ref : RQ 001 0407
TP type : conformance
Role
       : CSF
config : CF dPMR 01
TC ref : TC_PMR_0407_03
with { IUT is 'sending T2_Transmission' to TESTER
ensure that
 when { IUT completes T2_Transmission }
then { IUT sends a Disconnection_Request }
  TP id
      : TP PMR 0407 04
summary : 'Header and end frame pairs in automatic disconnection request'
RQ ref : RQ_001 0407
TP type : conformance
       : CSF
Role
config : CF dPMR 01
TC ref : TC PMR_0407_04
with {    IUT is 'sending T3_Transmission' to TESTER
 when { IUT completes T3 Transmission }
  then { IUT sends a Disconnection Request }
TP id : TP PMR 0408 01
summary : 'Header frame and End frame pair is used to respond to a status request'
RQ ref : RQ_001 0408
TP type : conformance
Role : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0408_01
with {    IUT in standby
ensure that {
 when { IUT receives a Header_Frame
                          containing a Header_Type indicating Status_Request
                      followed by an End_Frame}
  then { IUT sends a Status_Response
TP id : TP PMR 0811 01
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
Role
      : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0811_01
        IUT in standby and 'using channel 446,103125 MHz'
with {
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'F7 57 57h' }
  TP id : TP_PMR_0811_02
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref : TC PMR 0811 02
with {
         IUT in standby and 'using channel 446,109375 MHz'
```

```
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'F7 7D 57h' }
TP id : TP PMR 0811 03
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0811_03
with {
       IUT in standby and 'using channel 446,115625 MHz'
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'F7 D5 55h' }
: TP PMR 0811 04
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
      : CSF
Role
config : CF dPMR 01
TC ref : TC_PMR_0811_04
       IUT in standby and 'using channel 446,121875 MHz'
with {
ensure that {
 when { IUT is requested to send a Voice_Transmission }
 then { IUT sends a Voice_Transmission with colour_code set to 'F7 FF 55h' }
TP id : TP PMR 0811 05
summary : 'CSF Colour Codes'
RQ ref : RQ 001 0811
TP type : conformance
Role
      : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0811_05
        IUT in standby and 'using channel 446,128125 MHz'
with {
ensure that {
 when { IUT is requested to send a Voice_Transmission }
 then { IUT sends a Voice Transmission with colour code set to 'F5 5F 5Dh'
TP id
      : TP PMR 0811 06
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
      : CSF
Role
config
      : CF_dPMR_01
      : TC_PMR_0811_06
TC ref
       IUT in standby and 'using channel 446,134375 MHz'
ensure that
 when { IUT is requested to send a Voice Transmission }
 then
       { IUT sends a Voice_Transmission with colour_code set to 'F5 75 5Dh' }
```

```
TP id : TP_PMR_0811_07
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
Role
     : CSF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'F5 DD 5Fh' }
TP id : TP_PMR_0811_08
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0811_08
with {    IUT in standby and 'using channel 446,146875 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'F5 F7 5Fh' }
TP id : TP_PMR_0811_09
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
     : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0811_09
with {
       IUT in standby and 'using channel 446,153125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FF 5D 7Fh' }
TP id : TP PMR 0811 10
summary : 'CSF Colour Codes'
RQ ref : RQ 001 0811
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 0811 10
with {
        IUT in standby and 'using channel 446,159375 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FF 77 7Fh' }
```

```
TP id : TP_PMR_0811_11
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
Role
      : CSF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FF DF 7Dh' }
TP id : TP_PMR_0811_12
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0811_12
with {    IUT in standby and 'using channel 446,171875 MHz'
ensure that {
  when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FF F5 7Dh' }
TP id : TP_PMR_0811_13
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
     : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0811_13
with {
       IUT in standby and 'using channel 446,178125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FD 55 75h' }
TP id : TP PMR 0811 14
summary : 'CSF Colour Codes'
RQ ref : RQ 001 0811
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 0811 14
with {
        IUT in standby and 'using channel 446,184375 MHz'
\quad \textbf{ensure that} \ \{
  when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FD 7F 75h' }
```

```
TP id : TP_PMR_0811_15
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
Role
     : CSF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FD D7 77h' }
TP id : TP_PMR_0811_16
summary : 'CSF Colour Codes'
RQ ref : RQ_001_0811
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0811_16
with {    IUT in standby and 'using channel 446,196875 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to 'FD FD 77h' }
TP id : TP PMR 0812 01
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
     : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_01
with {
       IUT in standby and 'using channel 446,103125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '57 75 77h' }
 TP id : TP PMR 0812 02
summary : 'ISF Colour Codes'
RQ ref : RQ 001 0812
TP type : conformance
Role
       : ISF
config
       : CF dPMR 01
TC ref : TC PMR 0812 02
with {
        IUT in standby and 'using channel 446,109375 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '57 DD 75h' }
```

```
TP id : TP_PMR_0812_03
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
     : ISF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '57 F7 75h' }
TP id : TP_PMR_0812_04
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_04
with {    IUT in standby and 'using channel 446,121875 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '55 57 7Dh' }
TP id : TP PMR 0812 05
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_05
with {
       IUT in standby and 'using channel 446,128125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
 then { IUT sends a Voice_Transmission with colour_code set to '55 7D 7Dh' }
TP id : TP_PMR_0812_06
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
      : ISF
Role
config : CF dPMR 01
TC ref : TC_PMR_0812_06
with {
        IUT in standby and 'using channel 446,134375 MHz'
ensure that {
 then { IUT sends a Voice_Transmission with colour_code set to '55 D5 7Fh' }
```

```
TP id : TP_PMR_0812_07
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
     : ISF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '55 FF 7Fh' }
TP id : TP_PMR_0812_08
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
       : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_08
with {    IUT in standby and 'using channel 446,146875 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '5F 55 5Fh' }
TP id : TP_PMR_0812_09
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
     : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_09
with {
       IUT in standby and 'using channel 446,153125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '5F 7F 5Fh' }
TP id : TP PMR 0812 10
summary : 'ISF Colour Codes'
RQ ref : RQ 001 0812
TP type : conformance
Role
       : ISF
config
       : CF dPMR 01
TC ref : TC PMR 0812 10
with {
        IUT in standby and 'using channel 446,159375 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '5F D7 5Dh' }
```

```
TP id : TP_PMR_0812_11
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
     : ISF
ensure that
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '5F FD 5Dh' }
TP id : TP_PMR_0812_12
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_12
with {    IUT in standby and 'using channel 446,171875 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '5D 5D 55h' }
TP id : TP PMR 0812 13
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_13
with {
       IUT in standby and 'using channel 446,178125 MHz'
ensure that {
 when { IUT is requested to send a Voice_Transmission }
 then { IUT sends a Voice_Transmission with colour_code set to '5D 77 55h' }
TP id : TP_PMR_0812_14
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
      : ISF
Role
config : CF dPMR 01
TC ref : TC_PMR_0812_14
with {
        IUT in standby and 'using channel 446,184375 MHz'
ensure that {
 then { IUT sends a Voice_Transmission with colour_code set to '5D DF 57h' }
```

```
TP id : TP_PMR_0812_15
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
      : ISF
ensure that
 when { IUT is requested to send a Voice_Transmission }
      { IUT sends a Voice_Transmission with colour_code set to '5D F5 57h' }
 then
: TP_PMR_0812_16
TP id
summary : 'ISF Colour Codes'
RQ ref : RQ_001_0812
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0812_16
       IUT in standby and 'using channel 446,196875 MHz'
with {
ensure that {
 when { IUT is requested to send a Voice_Transmission }
then { IUT sends a Voice_Transmission with colour_code set to '77 5D D7h' }
5.1.3.1
            end frame
Group 1.3.1 'End frame'
TP id : TP_PMR_0994_01
summary : 'END Information'
RQ ref : RQ 001 0994
TP type : conformance
      : ISF, CSF
Role
config : CF_dPMR_01
TC ref
      : TC_PMR_0994_01
      IUT in standby
with {
ensure that {
 when { IUT is requested to send a Connection_Request }
       { IUT sends a Connection Request
            containing End Frame
               containing 'bit exact pairs of END information' }
End group 1.3.1
5.1.3.2
            header frames
Group 1.3.2 'Header frames'
: TP PMR 0816 01
summary : 'Type 3 Data Frame Sync'
RQ ref : RQ_001_0816
TP type : conformance
Role
      : CSF
config : CF dPMR 01
TC ref : TC_PMR_0816_01
        IUT in standby
with {
ensure that {
 when { IUT requested to send a T3_Transmission }
 then { IUT sends a T3_Transmission
```

```
containing Header_Frame
             containing Frame_Sync
                set to 'FD 55 F5 DF 7F DDh'
5.1.3.2.1
               call information field
Group 1.3.2.1 'Call information field'
 -- No TP specified
End group 1.3.2.1
End group 1.3.2
5.1.3.3
             packet data frame
Group 1.3.3 'Packet data frame'
 -- No TP specified
End group 1.3.3
5.1.3.4
             superframe
Group 1.3.4 'Superframe'
5.1.3.4.1
                type 1 data
Group 1.3.4.1 'Type 1 data'
      : TP PMR 0807 01
TP id
summary : 'T1 data transmission'
RQ ref : RQ_001_0807
TP type : conformance
Role
      : ISF, CSF
      : CF_dPMR_01
: TC_PMR_0807_01
config
TC ref
with {
       IUT in standby
ensure that
 when { IUT is requested to send a T1_Transmission }
 then
       { IUT sends T1_Transmission
                   containing a Header Frame
                     containing Communications_Mode
    set to '010b'}
TP id : TP PMR 0831 01
summary : 'Group status message using T1 Data'
RQ ref : RQ 001 0831
TP type : conformance
Role
      : ISF
config
      : CF_dPMR_01
TC ref : TC PMR 0831 01
with {
       IUT in standby
ensure that {
 when { IUT is requested to send a T1_Status_Message }
then { IUT sends T1 Transmission
                  containing a Header_Frame
                    containing CI_information with the format_coding set to '0000b' }
: TP_PMR_0831_02
summary : 'Group status message using T1 Data'
RQ ref : RQ 001 0831
TP type : conformance
Role
     : CSF
config
      : CF dPMR 01
TC ref : TC_PMR_0831_02
      IUT in standby
with {
ensure that {
```

```
when { IUT is requested to send a T1_Status_Message to a wildcard_group_address or
numeric group address
 then { IUT sends T1 Transmission
                 containing a Header Frame
                    containing CI information with the format coding set to '0000b' }
}
: TP PMR 0832 01
summary : 'Group precoded message using T1 Data'
RQ ref : RQ 001 0832
TP type : conformance
Role
      : ISF
config
       : CF_dPMR_01
TC ref : TC PMR 0832 01
      IUT in standby
with {
ensure that
 when { IUT is requested to send a T1 Precoded Data Message }
       { IUT sends T1 Transmission
 then
                 containing a Header_Frame
                    containing CI_information with the format_coding set to '0001b' }
TP id : TP_PMR_0832_02
summary : 'Group precoded message using T1 Data'
RQ ref : RQ 001 0832
TP type : conformance
Role
     : CSF
config : CF dPMR 01
TC ref : TC_PMR_0832_02
with {    IUT in standby
ensure that {
 when { IUT is requested to send a T1 Precoded Data Message to a wildcard group address or
numeric_group_address
 then { IUT sends T1_Transmission
                 containing a Header Frame
                    containing CI information with the format coding set to '0001b' }
}
TP id : TP PMR 0833 01
summary : 'Group free text message using T1 Data'
RQ ref : RQ_001_0833
TP type : conformance
Role
      : ISF
       : CF_dPMR_01
config
TC ref : TC_PMR_0833_01
with {
       IUT in standby
ensure that
 when { IUT is requested to send a T1_Freetext_Data_Message }
       { IUT sends T1_Transmission
                 containing a Header Frame
                    containing CI information with the format coding set to '0010b' }
TP id : TP_PMR_0833_02
summary : 'Group free text message using T1 Data'
RQ ref : RQ_001_0833
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0833_02
      IUT in standby
with {
ensure that
 when { IUT is requested to send a T1_Freetext_Data_Message to a wildcard_group_address or
numeric group address
 then [ IUT sends T1 Transmission
                 containing a Header_Frame
```

```
containing CI_information with the format_coding set to '0010b' }
TP id : TP PMR 0834 01
summary : 'Group short file transfer using T1 Data'
RQ ref : RQ 001 0834
TP type : conformance
Role
      : ISF
config : CF_dPMR_ISF_02_C -- ISF IUT, TESTER CSF & User
TC ref : TC_PMR_0834_01 with { IUT in standby
ensure that
 when { IUT is requested to make a T1_Short_File Transfer }
 then
      { IUT sends T1 Transmission
                 containing a Header Frame
                   containing CI information with the format coding set to '0011b' }
: TP_PMR_0834_02
summary : 'Group short file transfer using T1 Data'
RQ ref : RQ_001_0834
TP type : conformance
Role
      : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0834_02
with {    IUT in standby
ensure that {
 when { IUT is requested to make a T1_Short_File_Transfer to a wildcard_group_address or
numeric_group_address
 then { IUT sends T1 Transmission
                 containing a Header Frame
                   containing CI_information with the format_coding set to '0011b' }
End group 1.3.4.1
5.1.3.4.2
               type 2 data
Group 1.3.4.2 'Type 2 data'
TP id
      : TP_PMR_0806_01
summary : 'T2 data transmission'
RQ ref : RQ_001_0806
TP type : conformance
      : ISF, CSF
Role
config : CF_dPMR_01
TC ref
      : TC_PMR_0806_01
        IUT in standby
with {
ensure that {
 when { IUT is requested to send a T2_Transmission }
       { IUT sends T2_Transmission
                  containing a Header Frame
                    containing Communications_Mode
    set to '011b' }
```

```
TP id : TP_PMR_0825_01
summary : 'Group status message using T2 Data'
RQ ref : RQ_001_0825
TP type : conformance
Role
       : ISF
config
      : CF dPMR 01
TC ref : TC PMR 0825 01 with { IUT in standby
ensure that
 when { IUT is requested to send a T2_Status_Message }
       { IUT sends T2 Transmission
  then
                  containing a Header Frame
                     containing CI information with the format coding set to '0000b' }
: TP PMR 0825 02
summary : 'Group status message using T2 Data'
RQ ref : RQ_001 0825
TP type : conformance
Role
       : CSF
config
      : CF_dPMR_01
TC ref : TC_PMR_0825_02
with { IUT in standby
ensure that
 when { IUT is requested to send a T2_Status_Message to a wildcard_group_address or
numeric_group_address
 then
       { IUT sends T2 Transmission
                  containing a Header Frame
                     containing CI information with the format coding set to '0000b' }
TP id : TP_PMR_0827_01
summary : 'Group precoded message using T2 Data'
RQ ref : RQ 001 0827
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0827_01
with {    IUT in standby
ensure that
 when { IUT is requested to send a T2_Precoded_Data_Message }
then { IUT sends T2_Transmission
                  containing a Header_Frame
                     containing CI information with the format coding set to '0001b'
TP id
      : TP PMR 0827 02
summary : 'Group precoded message using T2 Data'
RQ ref : RQ 001 0827
TP type : conformance
       : CSF
Role
       : CF_dPMR_01
: TC_PMR_0827_02
config
TC ref
       IUT in standby
ensure that
 when { IUT is requested to send a T2 Precoded Data Message to a wildcard group address or
numeric_group_address ]
 then { IUT sends T2 Transmission
                  containing a Header Frame
                     containing CI_information with the format_coding set to '0001b'}
```

```
TP id : TP_PMR_0829_01
summary : 'Group free text message using T2 Data'
RQ ref : RQ_001_0829
TP type : conformance
Role
       : ISF
config
       : CF dPMR 01
TC ref : TC PMR 0829 01 with { IUT in standby
ensure that
 when { IUT is requested to send a T2_Freetext_Data_Message }
       { IUT sends T2 Transmission
  then
                  containing a Header_Frame
                     containing CI information with the format coding set to '0010b'
: TP PMR 0829 02
summary : 'Group free text message using T2 Data'
RQ ref : RQ_001 0829
TP type : conformance
Role
       : CSF
config
      : CF_dPMR_01
TC ref : TC_PMR_0829_02
with { IUT in standby
ensure that
 when { IUT is requested to send a T2_Freetext_Data_Message to a wildcard_group_address or
numeric_group_address
 then
       { IUT sends T2 Transmission
                   containing a Header Frame
                     containing CI information with the format coding set to '0010b' }
TP id : TP_PMR_0830_01
summary : 'Group short file transfer using T2 Data'
RQ ref : RQ 001 0830
TP type : conformance
Role
      : ISF
config : CF_dPMR_01
TC ref : TC_PMR_0830_01
with {    IUT in standby
ensure that
 when { IUT is requested to make a T2_Short_File_Transfer }
then { IUT sends T2_Transmission
                  containing a Header_Frame
                     containing CI information with the format coding set to '0011b' }
TP id
      : TP PMR 0830 02
summary : 'Group short file transfer using T2 Data'
RQ ref : RQ_001_0830
TP type : conformance
       : CSF
Role
       : CF_dPMR_01
: TC_PMR_0830_02
config
TC ref
       IUT in standby
ensure that
 when { IUT is requested to make a T2 Short File Transfer to a wildcard group address or
numeric_group_address
 then { IUT sends T2 Transmission
                   containing a Header Frame
                     containing CI_information with the format_coding set to '0011b' }
End group 1.3.4.2
```

```
5.1.3.4.3 voice
```

Group 1.3.4.3 'Voice'

```
: TP_PMR_0801_01
summary : 'PTT Call'
RQ ref : RQ_001_0801
TP type : conformance
Role
      : ISF, CSF
      : CF_dPMR_01
: TC_PMR_0801_01
config
TC ref
with {
      IUT in standby
ensure that {
        IUT is requested to make PTT_Call }
 when
 then
        IUT sends a Voice_Transmission containing a Header_Frame
                  followed by an integral number of Superframes
                  followed by an End Frame }
End group 1.3.4.3
End group 1.3.4
End group 1.3
5.1.4
          late entry
Group 1.4 'Late Entry'
: TP PMR 0802 01
summary : 'Late Entry - Transmit Called Station Id'
RQ ref : RQ_001_0802
TP type : conformance
Role
      : ISF, CSF
      : CF_dPMR_01
: TC_PMR_0802_01
config
TC ref
with {
       IUT in standby
ensure that {
 when { IUT is requested to make PTT Call }
       { IUT sends a Voice Transmission
 then
             with each first Payload Frame
                containing ID0
                 set to upper 12 bits 'of Called_Station_ID specified in Header_Frame' and
             with each second Payload_Frame
                containing ID2
                 set to lower 12 bits 'of Called_Station_ID specified in Header_Frame'
  TP id : TP PMR 0802 02
summary : 'Late Entry - Transmit Own ID'
RQ ref : RQ 001 0802
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0802_02
      IUT in standby
with {
ensure that
 when { IUT is requested to make PTT_Call }
 then
       { IUT sends a Voice Transmission
            with each third Payload Frame
               containing ID1
                 set to upper 12 bits 'of Own_Station_ID specified in Header_Frame' and
             with each third Payload_Frame
                 set to lower 12 bits 'of Own Station ID specified in Header Frame' and
```

```
TP id : TP_PMR_0802_03
summary : 'Late Entry - Communications mode and format'
RQ ref : RQ_001_0802
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0802_03
with {    IUT in standby
ensure that
 when { IUT is requested to make PTT_Call }
then { IUT sends a Voice_Transmission
               with each Payload_Frame
                  containing same Communications Mode and Communications Format 'as specified in
Header Frame'
  TP id
       : TP PMR 0802 04
summary : 'Late Entry - Receive'
RQ ref : RQ_001_0802
TP type : conformance
       : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_0802_04
with {
       IUT in standby
ensure that {
  when { IUT receives Voice Transmission
                         containing no Header Frame and
                         containing an 'audible test tone as payload' }
  then { IUT outputs the 'audible test tone' after a 'short delay' }
End group 1.4
```

5.1.5 powersave

```
Group 1.5 'Powersave'
TP id : TP PMR 1101 01
summary : 'Powersave preamble'
RQ ref : RQ_001_1101
TP type : conformance
     : ISF, CSF
config : CF_dPMR_01
TC ref : TC_PMR_1101_01
with {
       IUT in standby and powersave_enabled
ensure that {
 when { IUT is requested to send a Voice_Transmission to TESTER }
then { IUT sends Voice_Transmission
                  with each Header Frame
                    : TP PMR 1102 01
TP id
summary : 'Powersave call information'
RQ ref : RQ 001 1102
TP type : conformance
Role
      : ISF, CSF
config : CF_dPMR_01
TC ref
      : TC_PMR_1102_01
       IUT in standby and powersave_enabled
ensure that {
  when { IUT is requested to send a Voice Transmission to TESTER }
       { IUT sends Voice Transmission with
  then
            each Header Frame containing CI type set to '111b'
             except for the last Header_Frame containing CI_type not set to '111b' }
}
```

```
TP id
      : TP PMR 1103 01
summary : 'Powersave preamble'
RQ ref : RQ 001 1103
TP type : conformance
Role
       : ISF, CSF
config
      : CF dPMR 01
TC ref : TC_PMR_1103_01
with {
         IUT in standby and powersave enabled using '15 Extended Headers'
ensure that
       { IUT is requested to send a Voice Transmission to TESTER }
 when
 then
       { IUT sends Voice Transmission with
             Header_Frame 1 containing CI_information set to '0000 1111b'
             Header Frame 2 containing CI information set to '0000 1110b'
             Header_Frame 3 containing CI_information set to '0000 1101b'
             Header Frame 4 containing CI information set to '0000 1100b'
             Header Frame 5 containing CI information set to '0000 1011b'
             Header Frame 6 containing CI information set to '0000 1010b'
             Header Frame 7 containing CI information set to '0000 1001b'
             Header_Frame 8 containing CI_information set to '0000 1000b'
             Header_Frame 9 containing CI_information set to '0000 0111b'
             Header Frame 10 containing CI information set to '0000 0110b'
             Header Frame 11 containing CI information set to '0000 0101b' Header Frame 12 containing CI information set to '0000 0100b'
             Header_Frame 13 containing CI_information set to '0000 0011b'
             Header_Frame 14 containing CI_information set to '0000 0010b'
             Header Frame 15 containing CI information set to '0000 0001b'
             Header_Frame 16 containing CI_information set to '0000 0000b' }
```

5.1.6 talking party ID

End group 1.5

```
Group 1.6 'Talking Party ID'
      : TP PMR 0803 01
TP id
summary : 'Talking Party ID'
RQ ref : RQ 001 0803
TP type : conformance
      : ISF, CSF
Role
      : CF_dPMR_01
config
TC ref
      : TC_PMR_0803_01
        IUT in standby and TPID is enabled
with {
ensure that {
 when { IUT receives a Voice_Transmission from TESTER
       { IUT notifies the Own Station ID of the TESTER
-- No TP specified for RQ_001_0845
End group 1.6
End group 1
```

5.1.7 Slow User Data

```
Group 1.7 'Slow User Data'
TP id : TP PMR 0836 01
summary : 'CSF Slow User Data group calls'
RQ ref : RQ_001_0836
TP type : conformance
Role
       : CSF
       : CF dPMR 01
config
TC ref : TC_PMR_0836_01
with {    IUT in standby and preset_with_SLD_test_data
ensure that
 when { IUT is requested to make a Group_SLD_Call }
  then { IUT sends Voice Transmission
                   containing a Header Frame
                      containing the Communications_Mode
                        set to '001b' and
                   containing first Payload Frame
                      containing CCH_data
                        set to first 2 bytes of SLD_test_data and
                   containing second Payload Frame
                     containing CCH data
                      set to second 2 bytes of SLD_test_data }
}
: TP PMR 0836 02
summary : 'ISF Slow User Data calls'
RQ ref : RQ_001_0836
TP type : conformance
Role
       : ISF
config
       : CF_dPMR_01
TC ref : TC PMR 0836 02
with {
       IUT in standby and preset_with_SLD_test_data
ensure that
  when { IUT is requested to make a PTT Call }
       IUT sends Voice Transmission
  then
                   containing a Header_Frame
                     containing the Communications_Mode
                        set to '001b' and
                   containing first Payload Frame
                     containing CCH data
                        set to first 2 bytes of SLD_test data and
                   containing second Payload_Frame
                     containing CCH data
                      set to second 2 bytes of SLD test data }
```

5.2 CSF

```
Group 2 'CSF'
```

5.2.1 broadcast call

```
Group 2.1 'Broadcast Call'
      : TP_PMR_0838 01
TP id
summary : 'CSF Broadcast calls'
RQ ref : RQ 001 0838
TP type : conformance
      : CSF
Role
      : CF_dPMR_01
: TC_PMR_0838_01
config
TC ref
      IUT in standby
with {
ensure that {
 when { IUT is requested to make a Broadcast_Call }
      { IUT sends Voice Transmission with Header Frame
                 containing Communications Format set to '0000b'
```

5.2.2 dialling plan

End group 2.1

```
Group 2.2 'Dialling Plan'
TP id : TP PMR 1310 01
summary : 'Transmitting individual call'
RQ ref : RQ_001_1310
{f TP} type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_1310_01
       IUT configured_for_Standard_User_Interface and in standby
ensure that
 when { IUT is requested to send a Voice_Transmission to an individual_address }
       { IUT sends a Voice Transmission
            containing a Header Frame
               containing Called_Station_ID
                  set to the Tx_B2_conversion of the individual_address
: TP_PMR_1310_02
summary : 'Receiving individual call'
RQ ref : RQ 001 1310
TP type : conformance
Role
      : CSF
config : CF_dPMR_01
TC ref : TC_PMR_1310_02
with {
       IUT and configured_for_Standard_User_Interface in standby
ensure that {
 when { IUT receives a Voice_Transmission
              containing Called_Station_ID
                set to Tx_B2_conversion of the IUT individual_address }
 then { IUT outputs the 'audible test tone'
```

```
TP id : TP_PMR_1310_03
summary : 'Transmitting group call with wildcards '
RQ ref : RQ_001_1310
TP type : conformance
Role
       : CSF
and in standby
ensure that {
 when { IUT is requested to send a Voice_Transmission to a wildcard_group_address }
then { IUT sends a Voice_Transmission with Header_Frame
              containing Called Station ID set to the Tx B2 conversion of that
wildcard_group_address }
: TP PMR 1310 04
summary : 'Receiving group call with wildcards'
RQ ref : RQ_001_1310
TP type : conformance
       : CSF
Role
      : CF_dPMR_01
: TC_PMR_1310_04
config
TC ref
with {
       IUT configured for Standard User Interface
             and in standby
ensure that
 when { IUT receives a Voice Transmission with Header Frame
              containing Called_Station_ID
                set to the Tx B2 conversion of a wildcard group address valid for the
individual_address of the IUT and
              containing 'audible test tone as payload'}
  then { IUT outputs 'the audible test tone'
: TP PMR 1403 01
summary : 'Call not initiated without using no hash or send key'
RQ ref : RQ_001 1403
TP type : conformance
Role : CSF
config : CF_dPMR_01
TC ref : TC_PMR_1403_01
with {
       IUT configured_for_Standard_User_Interface and in standby
ensure that {
  when { IUT has seven_digit_address entered or selected }
  then { IUT does not transmit }
TP id
      : TP_PMR_1403_02
{\color{red} summary}: {^tCall} initiated when using hash or send key' RQ ref : RQ_001_1403
TP type : conformance
       : CSF
Role
config
       : CF_dPMR_01
TC ref : TC PMR 1403 02
       IUT configured_for_Standard User Interface
with {
             and in standby
ensure that {
 when { IUT has a seven_digit_address entered or selected
         before the hash_key or dedicated_send_key pressed }
  then { IUT sends a Voice_Transmission }
```

```
TP id : TP_PMR_1416_01
summary : 'Call initiated when using 7 digit dialing string'
RQ ref : RQ_001_1403
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1416 01
with {
       IUT configured for Standard User Interface
             and in standby
ensure that {
 when { IUT has a seven_digit_address entered or selected
          before the hash_key or dedicated_send_key pressed }
       { IUT sends a Voice_Transmission
               with Header Frame
                 containing Called Station ID set to the Tx B2 conversion of the
seven digit address }
: TP PMR_1417_01
TP id
summary : 'Abbreviated dialling for individual calls'
RQ ref : RQ_001_1417
TP type : conformance
       : CSF
Role
       : CF_dPMR_01
config
TC ref
       : TC_PMR_1417_01
with {
         IUT configured for Standard User Interface
             and in standby and
             and configured for abbreviated dialling
ensure that {
 when { IUT has a valid abbreviated_dialling_string entered or selected -- valid means here
agreeing with the MS specific abbreviated address configuration
          before IUT hash_key or dedicated_send_key is pressed }
       { IUT sends a Voice Transmission with Header Frame
               containing Called_Station_ID set to the Tx_B2_conversion of the
                          'address resulting from substituting the abbreviated_dialling_string for
the least significant digits of the IUT individual address' }
TP id : TP_PMR_1417_02
summary : 'Abbreviated dialling works for group call'
RQ ref : RQ_001_1417
TP type : conformance
       : CSF
Role
config
       : CF_dPMR_01
TC ref
       : TC PMR 1417 02
with {
         IUT configured_for_Standard_User_Interface
            and in standby and configured for wildcards
            and configured for abbreviated dialling
ensure that
 when { IUT has a valid abbreviated_dialling_string containing a wildcard entered or selected --
valid means here agreeing with the MS specific abbreviated address configuration
          before the hash key or dedicated send key is pressed }
 then { IUT sends a Voice Transmission
               with Header_Frame
                 containing Called_Station_ID set to the Tx_B2_conversion of the
                    'address resulting from substituting the abbreviated dialling string for the
least significant digits of the IUT individual address'
```

```
TP id : TP PMR 1418 01
summary : 'Masked dialling works for individual calls'
RQ ref : RQ_001_1418
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1418 01
with {
         IUT configured for Standard User Interface
             and in standby
             and 'a dialling string input mask enabled'
ensure that
  when { IUT has a valid masked dialling string entered or selected -- valid means the exact number
of digits as in mask
          before IUT hash_key or dedicated_send_key is pressed }
       { IUT sends a Voice Transmission
               with Header Frame
                  containing Called Station ID set to the Tx B2 conversion of the
                           'address resulting from substituting the masked dialling string for
those digits of the IUT individual address that fall within the input mask
: TP_PMR 1418 02
TP id
summary : 'Masked dialling for group'
RQ ref : RQ_001_1418
TP type : conformance
Role
       : CSF
       : CF_dPMR_01
: TC_PMR_1418_02
config
TC ref
with {
         IUT configured_for_Standard_User_Interface
             and in standby
             and configured for wildcards
             and 'a dialling string input mask enabled'
ensure that {
when { IUT has a valid masked_dialling_string containing a wildcard entered or selected --
valid means the exact number of digits as in mask
          before IUT hash_key or dedicated_send_key is pressed }
       { IUT sends a Voice Transmission
                    with Header Frame
                       containing Called Station ID set to the Tx B2 conversion of the
                           'address resulting from substituting the masked_dialling_string for
those digits of the IUT individual address that fall within the input mask ]
TP id : TP_PMR_1418_03
summary : 'Abbreviated masked dialling works for individual calls'
RQ ref : RQ_001_1418
TP type : conformance
        : CSF
Role
       : CF dPMR 01
config
TC ref : TC_PMR_1418_03
with {
         IUT configured_for_Standard_User_Interface
             and in standby
             and 'a dialling string input mask enabled'
             and configured_for_abbreviated_dialling
ensure that
  when { IUT has a valid abbreviated masked dialling string entered or selected
          before IUT hash key or dedicated send key is pressed }
  then { IUT sends a Voice_Transmission
               with Header Frame
                  containing Called Station ID set to the Tx B2 conversion of the
                          'address resulting from substituting the
abbreviated_masked_dialling_string for those digits of the IUT individual address that fall within
the least significant digits of the input mask'
```

```
TP id : TP PMR 1418 04
summary : 'Abbreviated masked dialling for group'
RQ ref : RQ_001_1418
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1418 04
with {
         IUT configured for Standard User Interface
             and in standby
             and configured for wildcards
             and configured for abbreviated dialling
             and 'a dialling string input mask enabled'
ensure that {
 when { IUT has a valid abbreviated_masked_dialling_string containing a wildcard entered or
selected
          before IUT hash key or dedicated send key is pressed }
 then { IUT sends a Voice Transmission
                   with Header Frame
                      containing Called Station ID set to the Tx B2 conversion of the
        'address resulting from substituting the abbreviated masked dialling string for those
digits of the IUT individual address that fall within the least significant digits of the input
mask' }
TP id : TP_PMR_1420_01
summary : 'Broadcast with wildcard group address'
RQ ref : RQ 001 1420
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1420 01
with {
       IUT configured_for_Standard_User_Interface
             and in standby and
             configured for wildcards
ensure that {
       { IUT has a broadcast command and valid wildcard group address entered or selected
        before hash key or dedicated send key is pressed
      { IUT sends a Voice_Transmission
 then
               with Header Frame
                 containing Called Station ID set to the Tx B2 conversion of that
wildcard group address and
                 containing Communications Format set to '0000b' }
}
: TP PMR 1420 02
TP id
summary : 'Broadcast with abbreviated wildcard group address'
RQ ref : RQ 001 1420
TP type : conformance
Role
       : CSF
config
       : CF_dPMR_01
       : TC_PMR_1420_02
TC ref
         IUT configured for Standard User Interface
with {
             and in standby and
             configured for wildcards
             and configured_for_abbreviated_dialling
ensure that
 when { IUT has a broadcast command and a valid abbreviated dialling string containing a wildcard
entered or selected
    before IUT hash key or dedicated send key is pressed }
  then { IUT sends a Voice Transmission
                   with Header Frame
                     containing Called_Station_ID set to the Tx_B2_conversion of the
                     'address resulting from substituting the abbreviated dialling string for the
least significant digits of the IUT individual address' and
                     containing Communications Format set to '0000b' }
```

```
TP id : TP PMR 1420 03
summary : 'Broadcast with abbreviated masked wildcard group address'
RQ ref : RQ_001_1420
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1420 03
with {
         IUT configured for Standard User Interface
             and in standby and
             configured for wildcards
             and configured for abbreviated dialling
             and 'a dialling string input mask enabled'
ensure that
 when { IUT has a broadcast_command and a valid abbreviated_masked_dialling_string containing a
wildcard entered or selected
    before IUT hash_key or dedicated_send_key is pressed }
  then { IUT sends a Voice Transmission
                   with Header Frame
                     containing Called Station ID set the Tx B2 conversion of the
            'address resulting from substituting the abbreviated_masked_dialling_string for those
digits of the IUT individual address that fall within the least significant digits of the input
mask' and
                     containing Communications Format set to '0000b' }
TP id
      : TP PMR 1420 04
summary : 'Broadcast with numeric group address'
RQ ref : RQ 001 1420
TP type : conformance
Role
       : CSF
config
       : CF_dPMR_01
TC ref : TC_PMR_1420_04
with {
        IUT configured for Standard User Interface and
             in standby and
             programmed_with_a_numeric_group_address
ensure that {
       { IUT has a broadcast command and the numeric_group_address entered or selected
 when
        before hash_key or dedicated_send_key is pressed
  then
       { IUT sends a Voice_Transmission
              with Header Frame
                 containing Called Station ID set to the Tx_B2 conversion of that
numeric_group_address and
                 containing Communications Format set to '0000b' }
TP id
      : TP PMR 1420 05
summary : 'Broadcast with abbreviated numeric group address'
RQ ref : RQ 001 1420
TP type : conformance
Role
       : CSF
config
       : CF_dPMR_01
       : TC PMR 1420 05
TC ref
         IUT configured for Standard User Interface and
with {
             in standby and
             programmed with a numeric group address and
             configured for abbreviated dialling
ensure that {
 when { IUT has a broadcast_command and a valid abbreviated_dialling_string 'for the
numeric group address' entered or selected
    before IUT hash_key or dedicated_send_key is pressed }
 then { IUT sends a Voice Transmission
                   with Header Frame
                     containing Called Station ID set to the Tx B2 conversion of that
{\tt numeric\_group\_address~and}
                     containing Communications Format set to '0000b' }
```

```
TP id : TP PMR 1420 06
summary : 'Broadcast with abbreviated masked numeric group address'
RQ ref : RQ_001_1420
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1420 06
         IUT configured_for_Standard_User_Interface
with {
             and in standby and
             programmed_with_a_numeric_group_address and
             configured for abbreviated dialling and
             'a dialling string input mask enabled'
ensure that {
  when { IUT has a broadcast_command and a valid abbreviated_masked_dialling_string 'for the
numeric group address' entered or selected
    before IUT hash key or dedicated send key is pressed }
  then { IUT sends a Voice Transmission
                   with Header Frame
                     containing Called Station ID set to the Tx B2 conversion of the
{\tt numeric\_group\_address} \ \ {\tt and}
                     containing Communications Format set to '0000b' }
TP id
      : TP_PMR_1420_07
summary : 'Broadcast with invalid numeric group address'
RQ ref : RQ 001 1420
TP type : conformance
Role
       : CSF
config
       : CF_dPMR_01
TC ref : TC PMR 1420 07
with {
         IUT configured_for_Standard_User_Interface and
             in standby and
             programmed_with_a_numeric_group_address
ensure that {
  when { IUT has a broadcast command and a seven digit address different from the
numeric_group_address entered or selected
        before hash key or dedicated send key is pressed }
  then { IUT notifies Call_Fail }
TP id : TP PMR 1421 01
summary : 'Status call with specific address'
RQ ref : RQ 001 1421
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1421 01
with {
       IUT configured for Standard User Interface and
             in standby
ensure that {
 when { IUT has a status command, a status code set to '09' and a valid seven digit address
entered or selected
        before IUT hash_key or dedicated_send_key is pressed }
  then { IUT sends a Status Call
               with Header Frame
                 containing Called Station ID set to the Tx B2 conversion of the
seven digit address and
                  containing Header_Type set to '0111b'and
               with End Frame
                  containing End_Type set to '01b'and
                  containing ARQ set to '00b' and
                  containing STAT set to '01001b'}
```

```
TP id : TP_PMR_1423_01
summary : 'Forced talkgroup call with specific address'
RQ ref : RQ_001_1423
TP type : conformance
Role
       : CSF
config
       : CF dPMR 01
TC ref : TC PMR 1423 01
with {
         IUT configured for Standard User Interface and
             not_programmed_with_a_numeric_group_address and
             in standby
ensure that
       { IUT has a talkgroup_command and a seven_digit_address entered or selected
  when
        before IUT hash_key or dedicated_send_key is pressed }
       { IUT sends a Voice Transmission
                   with a Header Frame
                     containing Called Station ID set to the Tx B2 conversion of the
seven digit address }
: TP PMR 1424 01
summary : 'Call cancel
RQ ref : RQ_001_1424
TP type : conformance
       : CSF
Role
config
       : CF dPMR 01
TC ref : TC_PMR_1424 01
       IUT configured for Standard User Interface and
with {
             in standby and
             configured for polite to own CC
ensure that
  when
       { TESTER sends a continuous Voice_Transmission using 'a signal level of >-102 dBm' and
         IUT is requested to make a Voice Transmission }
         IUT does not transmit
  then
       { IUT hash_key is pressed twice -- call only cancelled here!
  when
         before the TESTER terminates the continuous Voice Transmission }
  then
       { IUT does not transmit }
```

5.2.3 individual short data message

Group 2.3 'Individual Short Data Message'

End group 2.2

5.2.3.1 ISDM free text message

```
Group 2.3.1 'ISDM Free Text Message'
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      : TP PMR 0852 01
summary : 'Individual free text message using T2 Data'
RQ ref : RQ 001 0852
TP type : conformance
      : CSF
Role
config
      : CF_dPMR_01
      : TC_PMR_0852_01
TC ref
with {
      IUT in standby
ensure that
 when { IUT is requested to send a T2_Freetext_Data_Message to an individual_address }
      { IUT sends T2 Transmission
 then
                 containing Payload_Frames
                   containing format coding set to '0010b' }
```

```
TP id : TP_PMR_0853_01
summary : 'Individual free text message using T1 Data'
RQ ref : RQ_001_0853
TP type : conformance
Role
       : CSF
config : CF dPMR 01
TC ref : TC_PMR_0853_01 with { IUT in standby
ensure that
 when { IUT is requested to send a T1_Freetext_Data_Message to an individual_address }
       { IUT sends T1 Transmission
  then
                  containing Payload_Frames
                     containing format coding set to '0010b' }
End group 2.3.1
5.2.3.2
              ISDM precoded message
Group 2.3.2 'ISDM Precoded Message'
TP id
       : TP PMR 0850 01
summary : 'Individual precoded message using T1 Data'
RQ ref : RQ_001_0850
TP type : conformance
Role
     : CSF
config : CF_dPMR_01
TC ref : TC_PMR 0850 01
with {
       IUT in standby
ensure that {
         IUT is requested to send a T1_Precoded_Data_Message to an individual_address }
  when {
       { IUT sends T1 Transmission
  then
                  containing Payload Frames
                     containing format coding set to '0001b'}
TP id : TP PMR 0851 01
summary : 'Individual precoded message using T2 Data'
RQ ref : RQ_001_0851
TP type : conformance
Role
       : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0851_01
       IUT in standby
with {
ensure that {
 when { IUT is requested to send a T2_Precoded_Data_Message to an individual_address }
then { IUT sends T2_Transmission
                  containing Payload Frames
                      containing format_coding set to '0001b'}
```

End group 2.3.2

5.2.3.3 ISDM short file transfer

```
Group 2.3.3 'ISDM Short File Transfer'
TP id
      : TP_PMR_0855_01
summary : 'Short file transfer using T3 Data'
RQ ref : RQ 001 0855
TP type : conformance
      : CSF
Role
config
      : CF_dPMR_01
TC ref
      : TC_PMR_0855_01
      IUT in standby
with {
ensure that
 when { IUT is requested to send a T3 Transmission to an individual address }
       \{ IUT sends a T3 Transmission \}
: TP_PMR 0856 01
TP id
summary : 'Individual short file transfer using T2 Data'
RQ ref : RQ_001_0856
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0856_01
with {
      IUT in standby
ensure that
 when { IUT is requested to make a T2_Short_File_Transfer to an individual_address }
 then
       { IUT sends T2_Transmission
               with Payload Frames
                  containing format_coding set to '0011b' }
TP id : TP_PMR_0857_01
summary : 'Individual short file transfer using T1 Data'
RQ ref : RQ_001_0857
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0857_01
with {    IUT in standby
ensure that {
 when { IUT is requested to make a T1_Short_File_Transfer to an individual_address }
 then
       { IUT sends T1 Transmission with Payload Frames
                  containing format coding set to '0011b' }
End group 2.3.3
```

5.2.3.4 ISDM status message

```
Group 2.3.4 'ISDM Status Message'
: TP_PMR_0846_01
summary : 'Individual status message using T2 Data'
RQ ref : RQ 001 0846
TP type : conformance
      : CSF
Role
config
      : CF_dPMR_01
TC ref
      : TC_PMR_0846_01
      IUT in standby
with {
ensure that {
 when { IUT is requested to send a T2 Status Message to an individual address }
       { IUT sends T2 Transmission
                 containing Payload Frames
                   containing format_coding set to '0000b'}
TP id
     : TP_PMR_0847_01
summary : 'Individual status message using T1 Data'
RQ ref : RQ_001_0847
TP type : conformance
Role
       : CSF
config
      : CF_dPMR_01
TC ref : TC_PMR_0847_01 with { IUT in standby
ensure that
 when { IUT is requested to send a T1_Status_Message to an individual address }
       { IUT sends T1 Transmission
                 containing Payload_Frames
                   containing format_coding set to '0000b'}
End group 2.3.4
End group 2.3
524
          OACSU
Group 2.4 'OACSU'
TP id
      : TP PMR 0840 01
summary : 'CSF OACSU'
RQ ref : RQ_001_0840
TP type : conformance
      : CSF
Role
      : CF_dPMR_01
: TC_PMR_0840_01
config
TC ref
with {
      IUT in standby and
           OACSU enabled
ensure that
 when \{ IUT is requested to send a OACSU_Call \}
 then
       { IUT sends a Connection_Request
             containing Header Frame
               containing Header Type set to '0001b' and
             containing End_Frame
               containing End_Type set to '00b' and
               containing ARQ set to '01b' }
```

```
TP id : TP_PMR_0840_02
summary : 'CSF OACSU'
RQ ref : RQ_001_0840
TP type : conformance
Role
      : CSF
config
      : CF dPMR 01
TC ref : TC_PMR_0840_02
with {    IUT has sent OACSU Connection Request
ensure that
 when { IUT receives an ACK_Frame
                       containing Header_Type set to '0011b' and
                       containing CI_information set to '001b' }
 then { IUT notifies 'that Voice_Transmission can start' }
: TP PMR 0840 03
summary : 'CSF OACSU'
RQ ref : RQ_001_0840
TP type : conformance
Role
      : CSF
config
      : CF dPMR 01
ensure that {
 when { IUT receives an Ack Frame
                       containing Header_Type set to '0011b' and
                       containing CI information not set to '001b' }
 then { IUT notifies Call_Fail }
End group 2.4
```

5.2.5 short appended data

```
Group 2.5 'Short Appended Data'
      : TP PMR 0837 01
summary : 'CSF Appended Data group calls'
RQ ref : RQ_001_0837
TP type : conformance
       : CSF
Role
config : CF dPMR 01
TC ref : TC_PMR_0837_01
with {    IUT in standby and preset_with_AD_test_data
ensure that
 when { IUT is requested to make a Group_AD_Call }
       IUT sends Voice Transmission
  then
                      with Header Frame
                         containing Communications Mode set to '101b' }
  when { IUT is requested to terminate the Group_AD_Call during the first Payload_Frame of a
Superframe
  then { IUT sends 'AD_test_data in penultimate and last Payload_Frames'}
```

```
TP id : TP_PMR_0844_01
summary : 'CSF Appended Data individual calls'
RQ ref : RQ_001_0844
TP type : conformance
Role
       : CSF
config : CF dPMR 01
TC ref : TC PMR_0844_01
with { IUT is preset_with_AD_test_data
ensure that
 when { IUT is requested to send a Individual_AD_Call }
then { IUT sends Voice_Transmission
                      containing Header_Frame
                        containing Communications Mode set to '101b' }
  when { IUT is requested to terminate the Individual_AD_Call during the first Payload_Frame of a
Superframe
  then { IUT sends 'AD_test_data in penultimate and last Payload_Frames'}
End group 2.5
5.2.6
            slow user data
```

```
Group 2.6 'Slow User Data'
: TP PMR 0843 01
summary : 'CSF Slow User Data individual calls'
RQ ref : RQ 001 0843
TP type : conformance
      : CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0843_01
with {    IUT in standby and preset_with_SLD_test_data
ensure that {
 when { IUT is requested to make a Individual_SLD_Call }
 then { IUT sends Voice_Transmission
                  containing a Header Frame
                     containing Communications Mode set to '001b' and
                 containing first Payload Frame
                   containing CCH_data
                      set to first 2 bytes of SLD_test_data and
                 containing second Payload_Frame
                   containing CCH data
                      set to second 2 bytes of SLD test data }
```

End group 2.6

5.2.7 type 3 data

```
Group 2.7 'Type 3 data'
      : TP PMR 0808 01
TP id
summary : 'T3 data transmission'
RQ ref : RQ_001_0808
TP type : conformance
     : CSF
config : CF_dPMR_01
TC ref : TC_PMR_0808_01
with {
       IUT in standby
ensure that {
      { IUT is requested to send a T3_Transmission }
  when
  then { IUT sends T3 Transmission
                     containing a Header Frame
                       containing Communications_Mode
set to '100b' }
TP id : TP_PMR_0817_01
summary : 'Type 3 Data positive acknowledgement'
RQ ref : RQ_001_0817
TP type : conformance
Role
       : CSF
config : CF_dPMR_CSF_01_C -- CSF IUT, TESTER CSF
TC ref : TC_PMR_0817_01
       IUT in standby
with {
ensure that {
 when { IUT receives a T3_Transmission }
then { IUT sends a Ack_Frame containing Ack_type set to '001b'}
TP id : TP PMR 0818 01
summary : 'Type 3 Data negative acknowledgement'
RQ ref : RQ 001 0818
TP type : conformance
       : CSF
Role
config : CF_dPMR_CSF_01_C -- CSF IUT, TESTER CSF
TC ref : TC_PMR_0818_01
       IUT in standby
ensure that
 when { IUT receives a T3 Transmission with a packet data frame containing a data checksum set to
an invalid CRC D value}
 then { IUT sends a Ack Frame containing Ack type set to '010b' and
          CI information set to 'the number of the packet data frame containing the invalid CRC'}
TP id : TP_PMR_0819_01
summary : 'Type 3 Data call completion'
RQ ref : RQ 001 0819
TP type : conformance
       : CSF
Role
config : CF_dPMR_01
TC ref
      : TC_PMR_0819_01
with {
       IUT is 'sending a T3 Transmission'
ensure that {
  when { IUT receives a Ack_Frame containing Ack_type set to '001b' }
  then { IUT sends a Disconnection Request}
TP id
       : TP PMR 0820 01
summary : 'Type 3 Data negative acknowledgement'
RQ ref : RQ_001_0820
TP type : conformance
```

```
: CSF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0820_01
       IUT is 'sending a T3_Transmission'
ensure that {
 when { IUT receives a Ack Frame containing Ack type set to '010b' and CI information set to a
packet_data frame number}
 then { IUT sends 'the previous T3_Transmission starting with the packet_data_frame following that
packet_data_frame number'
: TP_PMR_0821_01
summary : 'Type 3 Data unused bytes'
RQ ref : RQ_001_0821
TP type : conformance
      : CSF
Role
config
       : CF dPMR 01
TC ref : TC PMR 0821 01
       IUT in standby
with {
ensure that
 when { IUT is requested to send a T3 Transmission 'with a payload of 1400 bytes' }
       { IUT sends T3_Transmission
 then
               with the eighth packet_data_frame
                     containing data length set to 140 and
                     last 40 data bytes set to '00h'}
: TP_PMR_0822_01
TP id
summary : 'Type 3 Data CRC'
RQ ref : RQ_001_0822
TP type : conformance
Role
       : CSF
config
      : CF_dPMR_01
TC ref : TC PMR 0822 01
with {
        IUT in standby
ensure that {
 when { IUT is requested to send a T3_Transmission }
 then { IUT sends a T3 Transmission
                     with every packet_data_frame
                        containing data_checksum set to the valid CRC_D value }
End group 2.7
End group 2
          ISF
5.3
Group 3 'ISF'
TP id : TP PMR 0804 01
summary : 'Selectable Common_IDs'
RQ ref : RQ_001_0804
TP type : conformance
      : ISF
Role
config : CF_dPMR_01
TC ref : TC_PMR_0804_01
with {
        IUT in standby
ensure that
      { IUT is requested to send a Voice_Transmission using a Common_ID between 1 and 255 }
 when
 then
        IUT sends a Voice_Transmission
              containing a Header Frame
                 containing Own Station ID and Called Station ID
                     set to the Common_ID in their upper 8 bits }
```

End group 3

Annex A (normative): dPMR conformance test configurations

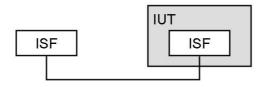


Figure A.1: Configuration CF_dPMR_ISF_01_C

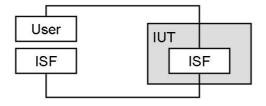


Figure A.2: Configuration CF_dPMR_ISF_02_C

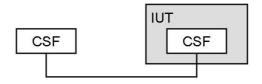


Figure A.3: Configuration CF_dPMR_CSF_01_C

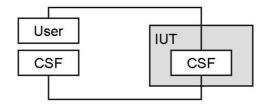


Figure A.4: Configuration CF_dPMR_CSF_02_C

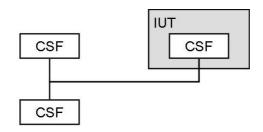


Figure A.5: Configuration CF_dPMR_CSF_03_C

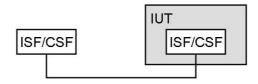


Figure A.6: Configuration CF_dPMR_ISF/CSF_01_C

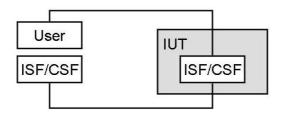


Figure A.7: Configuration CF_dPMR_ISF/CSF_02_C

In the configuration CF_dPMR_ISF/CSF_01_C and CF_dPMR_ISF/CSF_01_C either all entities are ISF or all are CSF.

Annex B (normative): dPMR TPLan conformance testing user definitions

```
--***Cross references***
xref PICS doc
                    {DTS/ERM-TGDMR-066-1}
-- Configurations
xref CF dPMR 01
                   {DTS-ERM-TGDMR-066-3}
--***Definitions***
def header type -- as in "TP type"
-- Entities
-- Messages or signals
def event PTT Call -- voice transmission directly initiated by the PTT switch
def event Header_Frame {header_type, format_coding } -- alias HF
def event End Frame {Ack Request, ARQ, End Type} -- alias EF
                     {Ack_Request, ARQ, End_Type}
def event Ack Frame {Ack type}
def event Ack Frames -- Up to 4 Ack frames repeated with 300-500ms intervals
def event Payload_Frame { CCH_data, ID0, ID1, ID2, ID3 }
def event Payload Frames
def event Superframe { Payload_Frames
def event Superframes { Payload_Frames
def event Voice Transmission -- directly following sequence of HF, SFs, EF with audible tone as
payload
def event T1 Transmission
                              -- directly following sequence of HF, SFs, EF with Type 1 data in
payload
def event T2 Transmission
                              -- directly following sequence of HF, SFs, EF with Type 2 data in
pavload
                              -- directly following sequence of HF, 8 PDFs, EF with Type 3 data in
def event T3 Transmission
def event Connection_Request { HeaderFrame, EndFrame } -- Manually initiated, e.g., PTT double
click.
                                                          -- Status request, etc
def event Disconnection_Request { HeaderFrame1, EndFrame1, HeaderFrame2, EndFrame2 }
def event Status Response { HeaderFrame, EndFrame }
def event T2 Status Message
def event T2 Precoded Data Message
def event T2_Freetext_Data_Message
def event T2 Short File Transfer
def event T1 Status Message
def event T1_Precoded_Data_Message
def event T1 Freetext Data Message
def event T1 Short File Transfer
def event Individual_SLD_Call
def event Group SLD Call
def event Broadcast_Call
def event Individual AD Call
def event Group AD Call
def event OACSU Call
def event Status Call { HeaderFrame, EndFrame}
def event Call_Fail
                      -- non-specified kind of user notification in case of a call failure
def event hash key
def event dedicated send key
def event broadcast command
def event talkgroup command
-- Values
def value bit
def value integral number
def value individual_address
def value Call_Data -- Comms Mode, Comms Format, Caller, Callee IDs, Common_ID
                       -- ... appearing in header well as payload frames of CCH
def value Header Type { Status Request }
def value Own Station ID
def value Called Station ID
def value Communications_Mode
def value Communications Format
def value format coding
def value Common ID
```

```
def value CRC_D
def value colour code
def value ISF colour code
def value CSF_colour_code
def value Frame Sync
def value Status Request
def value status code
                                  -- a value from 0 to 31
def value Ack Request
def value error
def value packet_data_frame { data_bytes, data_length, data_checksum }
def value CI type
def value CI information
                                  -- only the information part of CI (=call information)
def value wildcard group_address -- a 7 digit group address containing a wildcard in the last four
digits
def value SLD test data
                                  -- 4 bytes of data to be buffered in the IUT
def value AD test data
                                 -- 40 bytes of data to be buffered in the IUT
def value wildcards
def value STAT
def value preamble
def value Tx WAIT
def value T Ack
def value all_call_address
                                           -- ****** (7 wildcard symbols)
def value all call within a prefix address -- n***** (6 wildcard symbols)
def value seven digit address
def value abbreviated_dialling_string
def value number
def value wildcard
def value masked dialling string
def value dialling_string
def value abbreviated masked dialling string
def unit bits
def unit bytes
def unit MHz
def unit seconds
-- Conditions
def condition standby
def condition transmit
def condition OACSU enabled -- radio configured for Off Air Call Set-up
def condition has received an End Frame with Acknowledge Request
def condition TPID_is_enabled
def condition has_sent_OACSU_Connection_Request
def condition configured for abbreviated dialling
def condition masked dialling
def condition configured for Standard_User_Interface
def condition preset_with_SLD_test_data
def condition preset with AD test data
def condition invalid CRC
def condition configured for impolite channel access
def condition configured_for_polite_to_own_CC
def condition configured_for_polite_to_own_group
def condition configured for multiple acks
def condition configured to use Tack
def condition powersave enabled
def condition programmed_with_a_numeric_group_address
def condition not programmed with a numeric group address
-- Keywords - (Pre)conditions
-- Keywords - (Pre)conditions
def word configured
def word entered
def word selected
def word Tx_B2_conversion     -- B2 Algorythm forward conversion
def word Rx_B2_conversion     -- B2 Algorythm reverse conversion
-- Keywords - Stimuli
def word start
def word make
def word requested
def context {is ~requested to}
def word completes
def word cancel
def word terminate
def word terminates
def word pressed
```

```
-- Keywords - Responses
def word outputs
def word output
def word notifies
def word returns
def word send
-- Keywords - other
def word set
def context {~set to}
def word up
def context {~up to}
def word same
def word their
def word upper
def word lower
def word each
def word every
def word first
def word second
def word third
def word fourth
def word eighth
def word last
def word except
def word for
def word followed
def word by
def context {~followed by}
def word using
def word part
def word between
def word twice
def word does
def word has
def word non zero
def word time
def word during
def word continuous
def word valid
def word invalid
def word different
```

History

Document history		
V1.1.1	April 2007	Publication
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V1.3.1	September 2010	Publication