

**Electromagnetic compatibility  
and Radio spectrum Matters (ERM);  
Conformance testing for Mode 1 of  
the digital Private Mobile Radio (dPMR);  
Part 2: Test Suite Structure and  
Test Purposes (TSS&TP) specification**

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Reference

DTS/ERM-TGDMR-279-2

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Keywords

digital, mobile, radio, testing, TSS&TP

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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. Full details of the entire series can be found in part 1 [i.2].

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# 1 Scope

The present document specifies the conformance Test Purposes (TPs) for the Peer-to-Peer Digital Private Mobile Radio (dPMR) standard, TS 102 658 [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].

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# 2 References

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## 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ETSI TS 102 658 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Digital Private Mobile Radio (dPMR) using FDMA with a channel spacing of 6,25 kHz".
- [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 essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

- [i.1] ETSI ES 202 553: "Methods for testing and Specification (MTS); TPLan: A notation for expressing test Purposes".
- [i.2] ETSI TS 102 762-1: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Conformance testing for Mode 1 of the digital Private Mobile Radio (dPMR) Part 1: Protocol Conformance Implementation Statement (PICS) proforma".

- [i.3] ETSI TS 102 762-3: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Conformance testing for Mode 1 of the digital Private Mobile Radio (dPMR); Part 3: Interoperability Test Suite Structure and Test Purposes (TSS&TP) specification".

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## 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
ISF	Initial Services and Facilities
IUT	Implementation Under Test
M1	Mode 1
M2	Mode 2
M3	Mode 3
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 four groups:

Group 1: Common requirements.

Group 2: Services.

Group 3: Channel access.

Group 4: Addressing

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:	Common requirements
5.1.1	Framing
5.1.1.1	Framing functions
5.1.1.2	Packet data framing format
5.1.2	Coding
5.1.2.1	Message frames
5.1.2.1.1	Message frames, Message Information field
5.1.2.2	End frames
5.1.2.3	Packet data coding
5.1.2.4	Short data delivery
Group 2:	Services
5.2.1	Mode 1
Group 3:	Channel access
5.3.1	Physical layer
5.3.2	Powersave
Group 4:	Addressing
5.4.1	Address defined functions

## 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 Common requirements

#### 5.1.1 Framing

```

TP id      : TP_PMR_0401_01
summary    : 'Payload frame length with voice data'
RQ ref     : RQ_001_0401
TP type    : conformance
Role       : M1, M2, M3
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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0401_02
summary    : 'Payload frame length with Type 1 data'
RQ ref     : RQ_001_0401
TP type    : conformance
Role       : M1, M2, M3
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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0401_03
summary    : 'Payload frame length with Type 2 data'
RQ ref     : RQ_001_0401
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0401_03
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to start a T2_Transmission }
  then {   : IUT sends T2_Transmission containing 384 bit Payload_Frames }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0401_04
summary    : 'Message frame length'
RQ ref     : RQ_001_0401
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0401_04
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to start a Voice_Transmission }
  then {   : IUT sends Voice_Transmission starting with a 384 bit Message_Frame }
}

```





```

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
Role : M1, M2, M3
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 Message_Frame
        followed by an integral_number of Superframes
        followed by an End_Frame }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id : TP_PMR_0404_02
summary : 'A Type 1 data transmission is composed of header frame, integral superframes, end frame'
RQ ref : RQ_001_0404
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0404_02
with { IUT in standby }

ensure that {
  when { IUT is requested to start a T1_Transmission }
  then { IUT sends a T1_Transmission containing a Message_Frame
        followed by an integral_number of Superframes
        followed by an End_Frame }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

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 : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0404_03
with { IUT in standby }

ensure that {
  when { IUT is requested to start a T2_Transmission }
  then { IUT sends a T2_Transmission containing a Message_Frame
        followed by an integral_number of Superframes
        followed by an End_Frame }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id : TP_PMR_0405_01
summary : 'Header and end frame in manual connection request'
RQ ref : RQ_001_0405
TP type : conformance
Role : M1, M2
config : CF_dPMR_01
TC ref : TC_PMR_0405_01
with { IUT in standby }

ensure that {
  when { IUT is requested to send Connection_Request }
  then { IUT sends a Connection_Request }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```



```
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
Role : M1, M2, M3
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 }
}
```

```
-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

```
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 : M1, M2
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 }
}
```

```
-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

```
TP id : TP_PMR_0407_02
summary : 'Header and end frame pairs in automatic disconnection request'
RQ ref : RQ_001_0407
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0407_02
with { IUT is 'sending T1_Transmission' to TESTER
}
ensure that {
  when { IUT completes T1_Transmission }
  then { IUT sends a Disconnection_Request }
}
```

```
-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

```
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 : M1, M2, M3
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 }
}
```

```
-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```



```

TP id   : TP_PMR_0503_01
summary : 'Short data delivery'
RQ ref  : RQ_001_0503
TP type : conformance
Role    : M1, M2
config  : CF_dPMR_01
TC ref  : TC_PMR_0503_01
with {   IUT in standby
}
ensure that {
  when { IUT is requested to send a bcd SDD_Call to TESTER }
  then { IUT sends SDD_Call with the first byte
        each UDT_Frame containing 11110010b }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id   : TP_PMR_0504_01
summary : 'Short data delivery'
RQ ref  : RQ_001_0504
TP type : conformance
Role    : M1, M2
config  : CF_dPMR_01
TC ref  : TC_PMR_0504_01
with {   IUT in standby
}
ensure that {
  when { IUT is requested to send an ISO7 SDD_Call to TESTER }
  then { IUT sends SDD_Call with the first byte
        each UDT_Frame containing 11110011b }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id   : TP_PMR_0505_01
summary : 'Short data delivery'
RQ ref  : RQ_001_0505
TP type : conformance
Role    : M1, M2
config  : CF_dPMR_01
TC ref  : TC_PMR_0505_01
with {   IUT in standby
}
ensure that {
  when { IUT is requested to send an ISO8 SDD_Call to TESTER }
  then { IUT sends SDD_Call with the first byte
        each UDT_Frame containing 11110100b }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id   : TP_PMR_0506_01
summary : 'Short data delivery'
RQ ref  : RQ_001_0506
TP type : conformance
Role    : M1, M2
config  : CF_dPMR_01
TC ref  : TC_PMR_0506_01
with {   IUT in standby
}
ensure that {
  when { IUT is requested to send an NMEA SDD_Call to TESTER }
  then { IUT sends SDD_Call with the first byte
        each UDT_Frame containing 11110101b }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

```

TP id   : TP_PMR_0601_01
summary : 'Colour Codes'
RQ ref  : RQ_001_0601
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_0601_01
with {
    IUT in standby and configured with a valid CC_value
}
ensure that {
    when { IUT is requested to send a Voice_Transmission }
    then { IUT sends a Voice_Transmission with colour_code set to the CC_value }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id   : TP_PMR_0601_02
summary : 'Colour Codes'
RQ ref  : RQ_001_0601
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_0601_02
with {
    IUT in standby and not configured with a CC_value
}
ensure that {
    when { IUT is requested to send a Voice_Transmission }
    then { IUT sends a Voice_Transmission with colour_code set to the CC_value determined from
    CC_algorithm }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

### 5.1.1.2 Packet data framing format

Void.

## 5.1.2 Coding

```

TP id   : TP_PMR_1101_01
summary : 'Traffic channel superframe'
RQ ref  : RQ_001_1101
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_1101_01
with {
    IUT in standby
}
ensure that {
    when { IUT is requested to make a Voice_Transmission }
    then { IUT sends a Voice_Transmission
            with each Payload_Frame
            containing PM set to 0b
        }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1103_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1103
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1103_01
with {
    IUT in standby
}
ensure that {
    when { IUT is requested to make a Voice_Transmission }
    then { IUT sends a Voice_Transmission
           with each first Payload_Frame
             containing FS2
             set to 5F F7 7Dh and
           with each third Payload_Frame
             containing FS2
             set to 5F F7 7Dh
         }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1104_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1104
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1104_01
with {
    IUT in standby and configured with a CC_value of 32
}
ensure that {
    when { IUT is requested to make a Voice_Transmission }
    then { IUT sends a Voice_Transmission
           with each second Payload_Frame
             containing colour_code
             set to D7 55 F7h and
           with each fourth Payload_Frame
             containing colour_code
             set to D7 55 F7h
         }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1105_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1105
TP type    : conformance
Role       : M1
config     : CF_dPMR_01
TC ref     : TC_PMR_1106_01
with {
    IUT in standby
}
ensure that {
    when { IUT is requested to make a Voice_Transmission }
    then { IUT sends a Voice_Transmission
           with each Payload_Frame
             containing PM set to '0b'
         }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1106_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1106
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1106_01
with {     : IUT in standby
}

ensure that {
  when { IUT is requested to make a Voice_Transmission }
  then { IUT sends a Voice_Transmission
        with each Payload_Frame
          containing V set to 00b
        }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1107_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1107
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1107_01
with {     : IUT in standby
}

ensure that {
  when { IUT is requested to make a Voice_Transmission }
  then { IUT sends a Voice_Transmission
        with each first Payload_Frame
          containing FN
          set to 00b and
        with each second Payload_Frame
          containing FN
          set to 01b
        with each third Payload_Frame
          containing FN
          set to 10b and
        with each fourth Payload_Frame
          containing FN
          set to 11b
        }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1109_01
summary    : 'Traffic channel superframe'
RQ ref     : RQ_001_1109
TP type    : conformance
Role       : M1
config     : CF_dPMR_01
TC ref     : TC_PMR_1109_01
with {     : IUT in standby
}

ensure that {
  when { IUT is requested to make a Voice_Transmission }
  then { IUT sends a Voice_Transmission
        with each Payload_Frame
          containing F set to 01b
        }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```





```

TP id   : TP_PMR_1113_02
summary : 'Slow User Data individual calls'
RQ ref  : RQ_001_1113
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_1113_02
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 Message_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 }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id   : TP_PMR_1129_01
summary : 'Packet data frame'
RQ ref  : RQ_001_1129
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_1129_01
with {   IUT in standby and configured with T3_test_data
}
ensure that {
  when { IUT is requested to make a T3_Transmission }
  then { IUT sends a T3_Transmission
        with each packet
        containing N
        set to sequentially from 000b for the first packet to 111b for the last packet
}
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id   : TP_PMR_1130_01
summary : 'Packet data frame'
RQ ref  : RQ_001_1130
TP type : conformance
Role    : M1, M2, M3
config  : CF_dPMR_01
TC ref  : TC_PMR_1130_01
with {   IUT in standby and configured with T3_test_data
}
ensure that {
  when { IUT is requested to make a T3_Transmission }
  then { IUT sends a T3_Transmission
        with each packet
        containing LEN
        set to 180
}
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

```

TP id      : TP_PMR_1133_01
summary    : 'Type 3 Data CRC'
RQ ref     : RQ_001_1133
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1133_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 }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

### 5.1.2.1 Message frames

```

TP id      : TP_PMR_1138_01
summary    : 'Message Frame Sync'
RQ ref     : RQ_001_1138
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1138_01
with {     : IUT in standby
}
ensure that {
    when { IUT requested to send a Voice_Transmission }
    then { IUT sends a Voice_Transmission
           containing Message_Frame
           containing Frame_Sync
           set to '57 FF 5F 75 D5 77h' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1138_02
summary    : 'Message Frame Sync'
RQ ref     : RQ_001_1138
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1138_02
with {     : IUT in standby
}
ensure that {
    when { IUT requested to send a T1_Transmission }
    then { IUT sends a T1_Transmission
           containing Message_Frame
           containing Frame_Sync
           set to '57 FF 5F 75 D5 77h' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1138_03
summary    : 'Message Frame Sync'
RQ ref     : RQ_001_1138
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1138_03
with {     : IUT in standby
}
ensure that {
    when { IUT requested to send a T2_Transmission }
    then { IUT sends a T2_Transmission
           containing Message_Frame
           containing Frame_Sync
           set to '57 FF 5F 75 D5 77h' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id    : TP_PMR_1140_01
summary  : 'Message Type'
RQ ref   : RQ_001_1140
TP type  : conformance
Role     : M1, M2, M3
config   : CF_dPMR_01
TC ref   : TC_PMR_1140_01
with {   : IUT in standby
}
ensure that {
  when { IUT requested to send a Connection_Request }
  then { IUT sends a Connection_Request
        containing Message_Frame
        containing Message_Type
        set to '0001b' }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id    : TP_PMR_1140_02
summary  : 'Message Type'
RQ ref   : RQ_001_1140
TP type  : conformance
Role     : M1, M2, M3
config   : CF_dPMR_01
TC ref   : TC_PMR_1140_02
with {   : IUT in standby
}
ensure that {
  when { IUT requested to send a Disconnection_Request }
  then { IUT sends a Disconnection_Request
        containing Message_Frame
        containing Message_Type
        set to '0010b' }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id    : TP_PMR_1140_03
summary  : 'Message Type'
RQ ref   : RQ_001_1140
TP type  : conformance
Role     : M1, M2, M3
config   : CF_dPMR_01
TC ref   : TC_PMR_1140_03
with {   : IUT in standby
}
ensure that {
  when { TESTER sends an Ack_Request }
  then { IUT sends a Ack_Frame
        containing Message_Type
        set to '0011b' }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id    : TP_PMR_1141_01
summary  : 'Called station ID'
RQ ref   : RQ_001_1141
TP type  : conformance
Role     : M1, M2, M3
config   : CF_dPMR_01
TC ref   : TC_PMR_1141_01
with {   : IUT in standby
}
ensure that {
  when { IUT requested to send a Connection_Request to a Valid_Address }
  then { IUT sends a Connection_Request
        containing Message_Frame
        containing Called_Station_ID
        set to the same Valid_Address }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

```

TP id : TP_PMR_1142_01
summary : 'Own station ID'
RQ ref : RQ_001_1142
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_1142_01
with { IUT in standby
}
ensure that {
  when { IUT requested to send a Connection_Request }
  then { IUT sends a Connection_Request
        containing Message_Frame
        containing Own_Station_ID
        set to Own_Station_ID }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id : TP_PMR_1144_01
summary : 'Communications format'
RQ ref : RQ_001_1144
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_1144_01
with { IUT in standby
}
ensure that {
  when { IUT requested to make an Individual_Call }
  then { IUT sends an Individual_Call
        containing Message_Frame
        containing Communications_Format
        set to '01b' }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

#### 5.1.2.1.1 Message frames, Message Information field

Void.

#### 5.1.2.2 End frames

```

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id : TP_PMR_1157_01
summary : 'End frame'
RQ ref : RQ_001_1157
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_1157_01
with { IUT in standby
}
ensure that {
  when { IUT is requested to make a Voice_Transmission }
  then { IUT sends a Voice_Transmission
        with the End_Frame
        containing Frame_Sync set to FD DF F5h
}
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

```

TP id      : TP_PMR_1159_01
summary    : 'End frame'
RQ ref     : RQ_001_1159
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1159_01
with {     : IUT in standby
}
ensure that {
  when { IUT is requested to make a Voice_Transmission to an individual_address with
'acknowledgement required' }
  then { IUT sends a Voice_Transmission
        with the End_Frame
        containing ARQ set to 01b
      }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id      : TP_PMR_1159_02
summary    : 'End frame'
RQ ref     : RQ_001_1159
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1159_02
with {     : IUT in standby
}
ensure that {
  when { IUT is requested to make a Voice_Transmission to a wildcard_group_address }
  then { IUT sends a Voice_Transmission
        with the End_Frame
        containing ARQ set to 00b
      }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

TP id      : TP_PMR_1159_03
summary    : 'End frame'
RQ ref     : RQ_001_1159
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1159_03
with {     : IUT in standby
}
ensure that {
  when { IUT is requested to make a Voice_Transmission to a numeric_group_address }
  then { IUT sends a Voice_Transmission
        with the End_Frame
        containing ARQ set to 00b
      }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

### 5.1.2.3 Packet data coding

```

TP id      : TP_PMR_0901_01
summary    : 'Type 3 Data positive acknowledgement'
RQ ref     : RQ_001_0901
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_CSF_01_C -- CSF IUT, TESTER CSF
TC ref     : TC_PMR_0901_01
with {     : IUT in standby
}
ensure that {
  when { IUT receives a T3_Transmission }
  then { IUT sends a Ack_Frame containing Ack_type set to '001b' }
}

-- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

```

TP id      : TP_PMR_0902_01
summary    : 'Type 3 Data negative acknowledgement'
RQ ref     : RQ_001_0902
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_CSF_01_C -- CSF IUT, TESTER CSF
TC ref     : TC_PMR_0902_01
with {     : 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
        MI_information set to 'the number of the packet data
frame before the one containing the invalid_CRC'}}
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0903_01
summary    : 'Type 3 Data call completion'
RQ ref     : RQ_001_0903
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0903_01
with {     : IUT is 'sending the last packet of a T3_Transmission'
}
ensure that {
  when { IUT receives a Ack_Frame containing Ack_type set to '001b' }
  then { IUT sends a Disconnection_Request}
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0904_01
summary    : 'Type 3 Data negative acknowledgement'
RQ ref     : RQ_001_0904
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0904_01
with {     : IUT is 'sending a T3_Transmission'
}
ensure that {
  when { IUT receives a Ack_Frame containing Ack_type set to '010b' and MI_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0905_01
summary    : 'Type 3 Data unused bytes'
RQ ref     : RQ_001_0905
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0905_01
with {     : IUT in standby
}
ensure that {
  when { IUT is requested to send a T3_Transmission 'with a payload of 1400 bytes' }
  then { IUT sends T3_Transmission
        with the eighth packet_data_frame
        containing data_length set to 140 and
        last 40 data_bytes set to '00h' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_0906_01
summary    : 'Packet data frame'
RQ ref     : RQ_001_0906
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0906_01
with {     : IUT in standby and configured with T3_test_data
}
ensure that {
  when {   : IUT is requested to make a T3_Transmission }
  then {   : IUT sends a T3_Transmission
           : with each packet
           : containing CRC
           : set to valid checksum
  }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_0907_01
summary    : 'Type 3 Data Frame Sync'
RQ ref     : RQ_001_0907
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0907_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT requested to send a T3_Transmission }
  then {   : IUT sends a T3_Transmission
           : containing Message_Frame
           : containing Frame_Sync
           : set to 'FD 55 F5 DF 7F DDh' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

5.1.2.4 Short data delivery

```

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1011_01
summary    : 'Short data delivery'
RQ ref     : RQ_001_1011
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1011_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to send a SDD_Call to TESTER }
  then {   : IUT sends SDD_Call with
           : the Message_Frame containing Message_Type set to '0001b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1012_01
summary    : 'Short data delivery'
RQ ref     : RQ_001_1012
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1012_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to send a SDD_Call to TESTER }
  then {   : IUT sends SDD_Call with
           : the Message_Frame containing Communications_Mode set to '110b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```



```

TP id      : TP_PMR_1013_01
summary    : 'Short data delivery'
RQ ref     : RQ_001_1013
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1013_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to send a SDD_Call to TESTER }
  then {   : IUT sends SDD_Call with
           : the Message_Frame containing MI_type set to '000b' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

## 5.2 Services

### 5.2.1 Mode 1

```

TP id      : TP_PMR_0801_01
summary    : 'PTT Call'
RQ ref     : RQ_001_0801
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_0801_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to make PTT_Call }
  then {   : IUT sends a Voice_Transmission containing a Message_Frame
           : followed by an integral_number of Superframes
           : followed by an End_Frame }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_0802_01
summary    : 'Late Entry - Transmit Called Station Id'
RQ ref     : RQ_001_0802
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_0802_01
with {     : IUT in standby
}
ensure that {
  when {   : IUT is requested to make PTT_Call }
  then {   : IUT sends a Voice_Transmission
           : with each first Payload_Frame
           : containing ID0
           : set to upper 12 bits 'of Called_Station_ID specified in Message_Frame' and
           : with each second Payload_Frame
           : containing ID2
           : set to lower 12 bits 'of Called_Station_ID specified in Message_Frame'
}
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id : TP_PMR_0802_02
summary : 'Late Entry - Transmit Own ID'
RQ ref : RQ_001_0802
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0802_02
with { IUT in standby }
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 Message_Frame' and
        with each third Payload_Frame
          containing ID3
            set to lower 12 bits 'of Own_Station_ID specified in Message_Frame' and
        }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id : TP_PMR_0802_03
summary : 'Late Entry - Communications mode and format'
RQ ref : RQ_001_0802
TP type : conformance
Role : M1, M2, M3
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
Message_Frame'
        }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id : TP_PMR_0802_04
summary : 'Late Entry - Receive'
RQ ref : RQ_001_0802
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0802_04
with { IUT in standby }
ensure that {
  when { IUT receives Voice_Transmission
        containing no Message_Frame and
        containing an 'audible test tone as payload' }
  then { IUT outputs the 'audible test tone' after a 'short delay' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id : TP_PMR_0803_01
summary : 'Talking Party ID'
RQ ref : RQ_001_0803
TP type : conformance
Role : M1, M2, M3
config : CF_dPMR_01
TC ref : TC_PMR_0803_01
with { IUT in standby and TPID_is_enabled }
ensure that {
  when { IUT receives a Voice_Transmission from TESTER }
  then { IUT notifies the Own_Station_ID of the TESTER }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```



```

TP id      : TP_PMR_0810_02
summary    : 'Attached Data individual calls'
RQ ref     : RQ_001_0810
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_0810_02
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 Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0811_01
summary    : 'OACSU'
RQ ref     : RQ_001_0811
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_0811_01
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 Message_Frame
            containing Message_Type set to '0001b' and
            containing End_Frame
            containing End_Type set to '00b' and
            containing ARQ set to '01b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_0811_02
summary    : 'OACSU'
RQ ref     : RQ_001_0811
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_0811_02
with {     : IUT has_sent_OACSU_Connection_Request
}
ensure that {
  when {   : IUT receives an ACK_Frame
            containing Message_Type set to '0011b' and
            containing MI_information set to '001b' }
  then {   : IUT notifies 'that Voice_Transmission can start' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_0811_03
summary    : 'OACSU'
RQ ref     : RQ_001_0811
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_0811_03
with { IUT has_sent_OACSU_Connection_Request
}
ensure that {
  when { IUT receives an Ack_Frame
           containing Message_Type set to '0011b' and
           containing MI_information not set to '001b' }
  then { IUT notifies Call_Fail }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

## 5.3 Channel access

### 5.3.1 Physical layer

```

TP id      : TP_PMR_1204_01
summary    : 'Interference on channel'
RQ ref     : RQ_001_1204
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1204_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 }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```

TP id      : TP_PMR_1205_01
summary    : 'Tx WAIT Time'
RQ ref     : RQ_001_1205
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1205_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 }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```

TP id      : TP_PMR_1207_01
summary    : 'Acknowledgement response time'
RQ ref     : RQ_001_1207
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1207_01
with {     : 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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1207_02
summary    : 'Acknowledgement response time'
RQ ref     : RQ_001_1207
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1207_02
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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1207_03
summary    : 'Acknowledgement response time'
RQ ref     : RQ_001_1207
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1207_03
with {     : IUT 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
          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}
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1208_01
summary    : 'Party to call'
RQ ref     : RQ_001_1208
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1208_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}
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1209_01
summary    : 'Polite to CC'
RQ ref     : RQ_001_1209
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1209_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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1210_01
summary    : 'Polite to CC'
RQ ref     : RQ_001_1210
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1210_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 }
    then { IUT sends that Voice_Transmission }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1211_01
summary    : 'Polite to own group'
RQ ref     : RQ_001_1211
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1211_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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1212_01
summary    : 'Multiple acknowledgements'
RQ ref     : RQ_001_1212
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1212_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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1212_02
summary    : 'Acknowledgement response time'
RQ ref     : RQ_001_1212
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1212_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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1212_03
summary    : 'Acknowledgement response time'
RQ ref     : RQ_001_1212
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1212_03
with {     : IUT in standby and configured_for_polite_to_own_CC 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 after the TESTER terminates the continuous
            Voice_Transmission }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

### 5.3.2 Powersave

```

TP id      : TP_PMR_1001_01
summary    : 'Powersave preamble'
RQ ref     : RQ_001_1001
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1001_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 Message_Frame
            containing preamble set to '5F 5F 5F 5F 5F 5F 5F 5F 5Fh' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1002_01
summary    : 'Powersave call information'
RQ ref     : RQ_001_1002
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1002_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 Message_Frame containing MI_type set to '111b'
            except for the last Message_Frame containing MI_type not set to '111b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```



```

TP id      : TP_PMR_1003_01
summary    : 'Powersave preamble'
RQ ref     : RQ_001_1003
TP type    : conformance
Role       : M1, M2
config     : CF_dPMR_01
TC ref     : TC_PMR_1003_01
with {
    IUT in standby and powersave_enabled using '15 Extended Headers'
}
ensure that {
    when { IUT is requested to send a Voice Transmission to TESTER }
    then { IUT sends Voice Transmission with
        Message_Frame 1 containing MI_information set to '0000 1111b'
        Message_Frame 2 containing MI_information set to '0000 1110b'
        Message_Frame 3 containing MI_information set to '0000 1101b'
        Message_Frame 4 containing MI_information set to '0000 1100b'
        Message_Frame 5 containing MI_information set to '0000 1011b'
        Message_Frame 6 containing MI_information set to '0000 1010b'
        Message_Frame 7 containing MI_information set to '0000 1001b'
        Message_Frame 8 containing MI_information set to '0000 1000b'
        Message_Frame 9 containing MI_information set to '0000 0111b'
        Message_Frame 10 containing MI_information set to '0000 0110b'
        Message_Frame 11 containing MI_information set to '0000 0101b'
        Message_Frame 12 containing MI_information set to '0000 0100b'
        Message_Frame 13 containing MI_information set to '0000 0011b'
        Message_Frame 14 containing MI_information set to '0000 0010b'
        Message_Frame 15 containing MI_information set to '0000 0001b'
        Message_Frame 16 containing MI_information set to '0000 0000b' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

## 5.4 Addressing

### 5.4.1 Address defined functions

```

TP id      : TP_PMR_1311_01
summary    : 'Transmitting individual call'
RQ ref     : RQ_001_1311
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1311_01
with {
    IUT configured_for_Standard_User_Interface and in standby
}
ensure that {
    when { IUT is requested to send a Voice Transmission to an individual_address }
    then { IUT sends a Voice Transmission
        containing a Message_Frame
        containing Called_Station_ID
        set to the Tx_B2_conversion of the individual_address
    }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1311_02
summary    : 'Receiving individual call'
RQ ref     : RQ_001_1311
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1311_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' }
}
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1311_03
summary    : 'Transmitting group call with wildcards '
RQ ref     : RQ_001_1311
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1311_03
with {     : IUT configured_for_Standard_User_Interface and wildcards
          : 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 Message_Frame
          : containing Called_Station_ID set to the Tx_B2_conversion of that
          : wildcard_group_address }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1311_04
summary    : 'Receiving group call with wildcards'
RQ ref     : RQ_001_1311
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1311_04
with {     : IUT configured_for_Standard_User_Interface
          : and in standby
        }
ensure that {
  when {   : IUT receives a Voice_Transmission with Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1318_01
summary    : 'Standard user interface transmitting All Call'
RQ ref     : RQ_001_1318
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1318_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 Message_Frame
          : containing Called_Station_ID set to 'F8 33 A6h' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1318_02
summary    : 'Standard user interface All Call within prefix'
RQ ref     : RQ_001_1318
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1318_02
with {     : IUT configured_for_Standard_User_Interface and in standby
        }
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 Message_Frame
          : containing Called_Station_ID set to the Tx_B2_conversion of the
          : all_call_within_a_prefix_address }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1318_03
summary    : 'Standard user interface Receiving All Call'
RQ ref     : RQ_001_1318
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1318_03
with {     : IUT configured_for_Standard_User_Interface
           : and in standby
        }
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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1318_04
summary    : 'Standard user interface receiving All Call within a prefix'
RQ ref     : RQ_001_1318
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1318_04
with {     : IUT configured_for_Standard_User_Interface
           : 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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

## 5.4.2 User defined functions

```

TP id      : TP_PMR_1403_01
summary    : 'Call not initiated without using no hash or send key'
RQ ref     : RQ_001_1403
TP type    : conformance
Role       : M1, M2, M3
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 }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1403_02
summary    : 'Call initiated when using hash or send key'
RQ ref     : RQ_001_1403
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1403_02
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 }
  then {   : IUT sends a Voice_Transmission }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1416_01
summary    : 'Call initiated when using 7 digit dialing string'
RQ ref     : RQ_001_1403
TP type    : conformance
Role       : M1, M2, M3
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 }
  then {   : IUT sends a Voice_Transmission
            : with Message_Frame
            : containing Called_Station_ID set to the Tx_B2_conversion of the
seven_digit_address }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1417_01
summary    : 'Abbreviated dialling for individual calls'
RQ ref     : RQ_001_1417
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
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 }
  then {   : IUT sends a Voice_Transmission with Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1417_02
summary    : 'Abbreviated dialling works for group call'
RQ ref     : RQ_001_1417
TP type    : conformance
Role       : M1, M2, M3
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 Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1418_01
summary    : 'Masked dialling works for individual calls'
RQ ref     : RQ_001_1418
TP type    : conformance
Role       : M1, M2, M3
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 }
  then {   : IUT sends a Voice_Transmission
           : with Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1418_02
summary    : 'Masked dialling for group'
RQ ref     : RQ_001_1418
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1418_02
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 }
  then {   : IUT sends a Voice_Transmission
           : with Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1418_03
summary    : 'Abbreviated masked dialling works for individual calls'
RQ ref     : RQ_001_1418
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
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 Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id       : TP_PMR_1418_04
summary    : 'Abbreviated masked dialling for group'
RQ ref     : RQ_001_1418
TP type    : conformance
Role       : M1, M2, M3
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 Message_Frame
            containing Called_Station_ID set to the Tx_B2_conversion of the
digits of the IUT individual address that fall within the least significant digits of the input
mask' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id       : TP_PMR_1419_01
summary    : 'Broadcast with wildcard group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_01
with {
    IUT configured_for_Standard_User_Interface
    and in standby and
    configured for wildcards
}
ensure that {
    when { IUT has a broadcast_command and valid wildcard_group_address entered or selected
        before hash_key or dedicated_send_key is pressed }
    then { IUT sends a Voice_Transmission
        with Message_Frame
            containing Called_Station_ID set to the Tx_B2_conversion of that
wildcard_group_address and
            containing Communications_Format set to '0000b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id       : TP_PMR_1419_02
summary    : 'Broadcast with abbreviated wildcard group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_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 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 Message_Frame
            containing Called_Station_ID set to the Tx_B2_conversion of the
least significant digits of the IUT individual address' and
            containing Communications_Format set to '0000b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1419_03
summary    : 'Broadcast with abbreviated masked wildcard group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_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 Message_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' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1419_04
summary    : 'Broadcast with numeric group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_04
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 the numeric_group_address entered or selected
        before hash_key or dedicated_send_key is pressed }
    then { IUT sends a Voice_Transmission
            with Message_Frame
                containing Called_Station_ID set to the Tx_B2_conversion of that
numeric_group_address and
                containing Communications_Format set to '0000b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

TP id      : TP_PMR_1419_05
summary    : 'Broadcast with abbreviated numeric group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_05
with {
    IUT configured_for_Standard_User_Interface and
        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 Message_Frame
                containing Called_Station_ID set to the Tx_B2_conversion of that
numeric_group_address and
                containing Communications_Format set to '0000b' }
}

-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

```

```

TP id      : TP_PMR_1419_06
summary    : 'Broadcast with abbreviated masked numeric group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_06
with {     : IUT configured_for_Standard_User_Interface
            : 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 Message_Frame
            : containing Called_Station_ID set to the Tx_B2_conversion of the
numeric_group_address and
            : containing Communications_Format set to '0000b' }
          }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```

TP id      : TP_PMR_1419_07
summary    : 'Broadcast with invalid numeric group address'
RQ ref     : RQ_001_1419
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1419_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 }
          }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```

TP id      : TP_PMR_1420_01
summary    : 'Status call with specific address'
RQ ref     : RQ_001_1420
TP type    : conformance
Role       : M1, M2, M3
config     : CF_dPMR_01
TC ref     : TC_PMR_1420_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 Message_Frame
            : containing Called_Station_ID set to the Tx_B2_conversion of the
seven_digit_address and
            : containing Message_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'}
          }
}

```

```
-- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```





## Annex A (normative): dPMR conformance test configurations

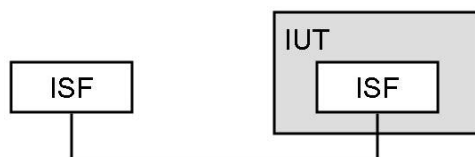


Figure A.1: Configuration CF\_dPMR\_ISF\_01\_C

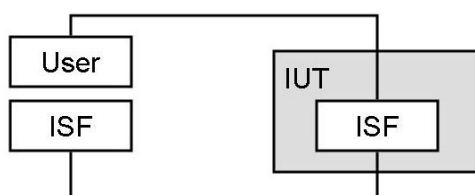


Figure A.2: Configuration CF\_dPMR\_ISF\_02\_C

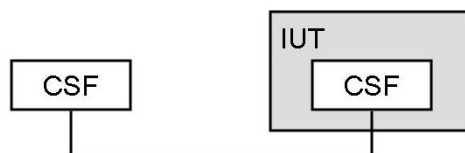


Figure A.3: Configuration CF\_dPMR\_CSF\_01\_C

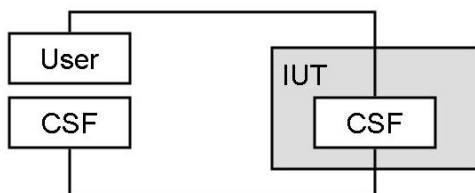


Figure A.4: Configuration CF\_dPMR\_CSF\_02\_C

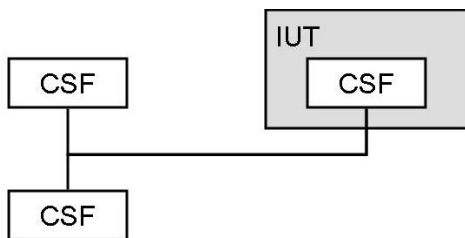


Figure A.5: Configuration CF\_dPMR\_CSF\_03\_C

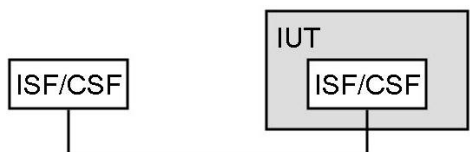
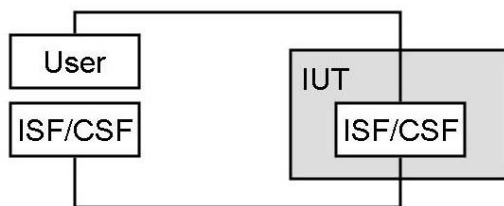


Figure A.6: Configuration CF\_dPMR\_ISF/CSF\_01\_C



**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-TGDMMR-279-1}

-- Configurations
xref CF_dPMR_01       {DTS/ERM-TGDMMR-279-3}

---**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 Message_Frame {message_type, format_coding } -- alias HF
def event End_Frame   {Ack_Request, ARQ, End_Type} -- alias EF
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 UDT_Frame
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
payload
def event T3_Transmission -- directly following sequence of HF, 8 PDFs, EF with Type 3 data in
payload
def event Connection_Request { MessageFrame, EndFrame } -- Manually initiated, e.g., PTT double
click,
-- Status request, etc
def event Disconnection_Request { MessageFrame1, EndFrame1, MessageFrame2, EndFrame2 }
def event Status_Response { MessageFrame, EndFrame }
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 { Messagerame, 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
def event packet

-- Values
def value bit
def value integral_number
def value individual_address
def value Valid_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 Message_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 CRC_D
def value colour_code
def value CC_value -- a value from 0 to 63
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 MI_type
def value MI_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 numeric_group_address -- a 7 digit talkgroup address
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 T3_test_data        -- 1440 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 byte
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
def condition Normal_Priority
def condition Emergency_Priority

-- 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
def word CC_algorithm     -- CC number = 64 x (f modulo 0,4) where f is the channel freq in MHz

-- 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

<b>Document history</b>		
V1.1.1	October 2009	Publication