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Contents

Foreword

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1 Scope

The present document defines Management Objects (MO) that are used to configure the ProSe-enabled UE.

The MOs are compatible with the OMA Device Management (DM) protocol specifications, version 1.2 and upwards, and are defined using the OMA DM Device Description Framework (DDF) as described in the Enabler Release Definition OMA-ERELD-DM-V1_2 [3].

The MOs consist of relevant parameters for provisioning and authorisation of ProSe at the ProSe-enabled UE.

The protocol aspects for ProSe are described in 3GPP TS 24.334 [4].

In this release of the specification, ProSe direct discovery is supported only when the UE is served by E-UTRAN.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.303: "Proximity-based Services (ProSe); Stage 2".

[3] OMA-ERELD-DM-V1_2: "Enabler Release Definition for OMA Device Management".

[4] 3GPP TS 24.334: "Proximity-services (ProSe) User Equipment (UE) to Proximity-services (ProSe) Function Protocol aspects; Stage 3".

[5] OMA-TS-DM_Protocol-V1_2: "OMA Device Management Protocol".

[6] 3GPP TS 23.003: "Numbering, addressing and identification".

[7] 3GPP TS 33.303: "Proximity-based Services (ProSe); Security aspects".

[8] IETF RFC 3927: "Dynamic Configuration of IPv4 Link-Local Addresses".

[9] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[10] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC) protocol specification".

[11] OMA-DDS-DM_ConnMO-V1_0-20081107-A: "Standardized Connectivity Management Objects".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.303 [2] apply:

ProSe Direct Discovery
ProSe-enabled UE

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.334 [4] apply:

Not served by E-UTRAN

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

DDF	Device Description Framework
DPF	Direct Services Provisioning Function
FQDN	Fully Qualified Domain Name
MO	Management Object
MSISDN	MS International PSTN/ISDN Number
NAP	Network Access Point
ProSe	Proximity-based Services

4 ProSe Direct Services Provisioning MO

4.1 Overview

The ProSe Direct Services Provisioning MO is used to manage ProSe direct discovery authorisation and provisioning information for a ProSe-enabled non-public safety UE.

The MO identifier is: urn:oma:mo:ext-3gpp-prose-direct-provisioning:1.0.

The UE may initiate the provision of all available information from the DPF, using a client-initiated session Alert message of code "Generic Alert" (see OMA-TS-DM_Protocol-V1_2 [5]). When requesting all available information from the DPF, the "Type" element of the OMA DM generic alert message shall be set to "urn:oma:mo:ext-3gpp-prose-direct-provisioning:1.0:provision", the "LocURI" element (inside the "Source" element) shall be set to the address of the DPF as specified by OMA-TS-DM_Protocol-V1_2 [5] and the "Data" element is not included.

The OMA DM Access Control List (ACL) property mechanism (see OMA-ERELD-DM-V1_2 [3]) may be used to grant or deny access rights to OMA DM servers in order to modify nodes and leaf objects of the ProSe Direct Services Provisioning MO.

The following nodes and leaf objects are possible in the ProSe Direct Services Provisioning MO as described in figure 4.1.1:

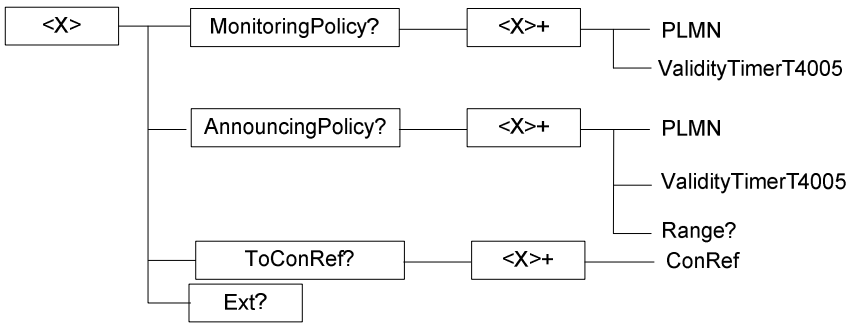

Figure 4.1.1: The ProSe Direct Services Provisioning Management Object

4.2 ProSe Direct Services Provisioning MO parameters

4.2.1 General

This subclause describes the parameters for the ProSe Direct Services Provisioning MO.

4.2.2 Node: <*X*>

This interior node acts as a placeholder for zero or one account for a fixed node.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

4.2.3 <*X*>/MonitoringPolicy

The MonitoringPolicy node acts as a placeholder for monitoring authorisation policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

4.2.4 <*X*>/MonitoringPolicy/<*X*>

This interior node acts as a placeholder for one or more monitoring authorisation policies.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

4.2.5 <*X*>/MonitoringPolicy/<*X*>/PLMN

The PLMN leaf indicates the PLMN code of the operator in which the UE is authorised to use ProSe direct discovery monitoring.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN>

The format of the PLMN is defined by 3GPP TS 23.003 [6].

NOTE: The UE is prohibited from performing ProSe direct discovery monitoring in any PLMN for which no monitoring authorisation policy is available.

4.2.6 <*X*>/MonitoringPolicy/<*X*>/ValidityTimerT4005

The ValidityTimerT4005 leaf indicates in unit of minutes for how long this monitoring authorisation policy is valid.

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: 1-525600

4.2.7 <*X*>/AnnouncingPolicy

The AnnouncingPolicy node acts as a placeholder for announcing authorisation policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

4.2.8 <*X*>/AnnouncingPolicy/<*X*>

This interior node acts as a placeholder for one or more announcing authorisation policies.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

4.2.9 <*X*>/AnnouncingPolicy/<*X*>/PLMN

The PLMN leaf indicates the PLMN code of the operator in which the UE is authorised to use ProSe direct discovery announcing.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN>

The format of the PLMN is defined by 3GPP TS 23.003 [6].

NOTE: The UE is prohibited from performing ProSe direct discovery announcing in any PLMN for which no announcing authorisation policy is available.

4.2.10 <*X*>/AnnouncingPolicy/<*X*>/ValidityTimerT4005

The ValidityTimerT4005 leaf indicates in unit of minutes for how long this announcing authorisation policy is valid.

- Occurrence: One
- Format: int
- Access Types: Get, Replace

- Values: 1-525600

4.2.11 <*X*>/AnnouncingPolicy/<*X*>/Range

The Range leaf indicates the authorised announcing range for ProSe direct discovery in the PLMN in which this announcing authorisation policy applies.

- Occurrence: ZeroOrOne
- Format: int
- Access Types: Get, Replace
- Values: <Range>

Possible values for the Range are specified in table 4.2.11.1.

Table 4.2.11.1: Values of Range leaf

Value	Description
0	Reserved
1	The authorised announcing rangeis set to: Short.
2	The authorised announcing rangeis set to: Medium.
3	The authorised announcing rangeis set to: Long.
4-255	Reserved

4.2.12 <*X*>/ToConRef

The ToConRef interior node is used to allow application to refer to a collection of connectivity definitions. Several connectivity parameters can be listed for a given application under this interior node.

This interior node contains configuration parameters for establishment of the PDN connection for reaching the HPLMN ProSe Function.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

4.2.13 <*X*>/ToConRef/<X>

This run-time node acts as a placeholder for each reference to connectivity parameters.

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get, Replace
- Values: N/A

4.2.14 <*X*>/ToConRef/<X>/ConRef

The ConRef specifies a specific linkage to connectivity parameters.

- Occurrence: One
- Format: Chr
- Access Types: Get, Replace

- Values: <A network access point object>

4.2.15 <*X*>/Ext

The Ext is an interior node for where the vendor specific information about the ProSe Direct Services Provisioning MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identifier is not defined and can therefore include one or more un-standardized sub-trees.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

5 ProSe Public Safety Direct Services Provisioning MO

5.1 Overview

The ProSe Public Safety Direct Services Provisioning MO is used to manage ProSe direct discovery and ProSe direct communication authorisation and provisioning information for a ProSe-enabled public safety UE.

The MO identifier is: urn:oma:mo:ext-3gpp-prose-public-safety-direct-provisioning:1.0.

The UE may initiate the provision of all available information from the DPF, using a client-initiated session Alert message of code "Generic Alert" (see OMA-TS-DM_Protocol-V1_2 [5]). When requesting all available information from the DPF, the "Type" element of the OMA DM generic alert message shall be set to "urn:oma:mo:ext-3gpp-prose-public-safety-direct-provisioning:1.0:provision", the "LocURI" element (inside the "Source" element) shall be set to the address of the DPF as specified by OMA-TS-DM_Protocol-V1_2 [5] and the "Data" element is not included.

The OMA DM Access Control List (ACL) property mechanism (see OMA-ERELD-DM-V1_2 [3]) may be used to grant or deny access rights to OMA DM servers in order to modify nodes and leaf objects of the ProSe Public Safety Direct Services Provisioning MO.

The following nodes and leaf objects are possible in the ProSe Public Safety Direct Services Provisioning MO as described in figure 5.1.1 and figure 5.1.2:

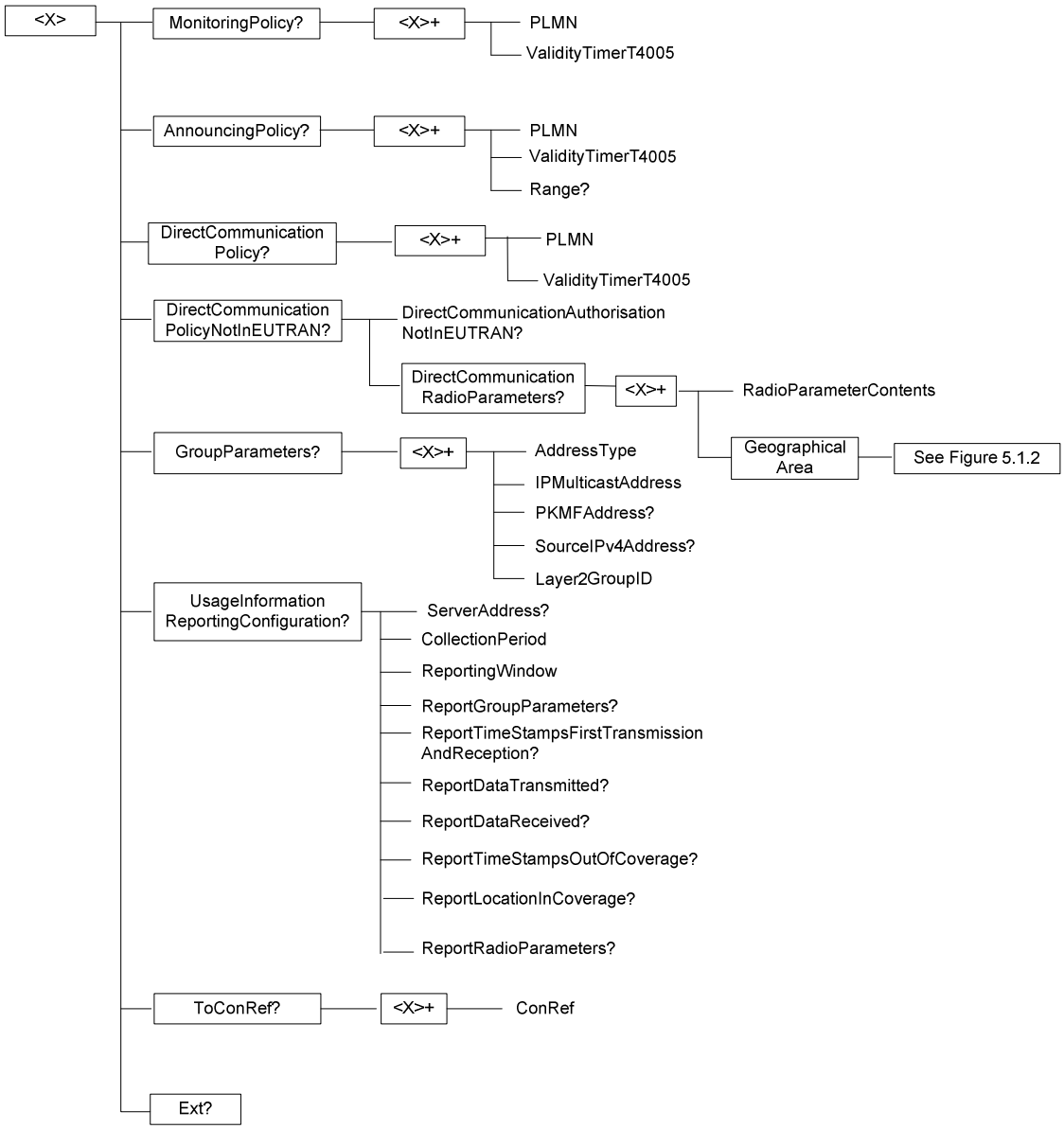

Figure 5.1.1: The ProSe Public Safety Direct Services Provisioning Management Object (1 of 2)

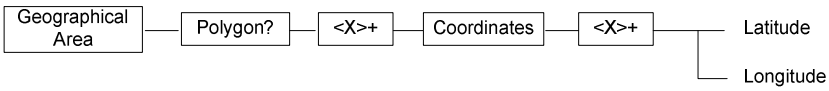

Figure 5.1.2: The ProSe Public Safety Direct Services Provisioning Management Object (2 of 2)

5.2 ProSe Public Safety Direct Services Provisioning MO parameters

5.2.1 General

This clause describes the parameters for the ProSe Public Safety Direct Services Provisioning MO.

5.2.2 Node: <*X*>

This interior node acts as a placeholder for zero or one account for a fixed node.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

5.2.3 <*X*>/MonitoringPolicy

The MonitoringPolicy node acts as a placeholder for monitoring authorisation policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.4 <*X*>/MonitoringPolicy/<*X*>

This interior node acts as a placeholder for one or more monitoring authorisation policies.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.5 <*X*>/MonitoringPolicy/<*X*>/PLMN

The PLMN leaf indicates the PLMN code of the operator in which the UE is authorised to use ProSe direct discovery monitoring.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN>

The format of the PLMN is defined by 3GPP TS 23.003 [6].

NOTE: The UE is prohibited from performing ProSe direct discovery monitoring in any PLMN for which no monitoring authorisation policy is available.

5.2.6 <*X*>/MonitoringPolicy/<*X*>/ValidityTimerT4005

The ValidityTimerT4005 leaf indicates in unit of minutes for how long this monitoring authorisation policy is valid.

- Occurrence: One
- Format: int
- Access Types: Get, Replace

- Values: 1-525600

5.2.7 <*X*>/AnnouncingPolicy

The AnnouncingPolicy node acts as a placeholder for announcing authorisation policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.8 <*X*>/AnnouncingPolicy/<*X*>

This interior node acts as a placeholder for one or more announcing authorisation policies.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.9 <*X*>/AnnouncingPolicy/<*X*>/PLMN

The PLMN leaf indicates the PLMN code of the operator in which the UE is authorised to use ProSe direct discovery announcing.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN>

The format of the PLMN is defined by 3GPP TS 23.003 [6].

NOTE: The UE is prohibited from performing ProSe direct discovery announcing in any PLMN for which no announcing authorisation policy is available.

5.2.10 <*X*>/AnnouncingPolicy/<*X*>/ValidityTimerT4005

The ValidityTimerT4005 leaf indicates in unit of minutes for how long this announcing authorisation policy is valid.

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: 1-525600

5.2.11 <*X*>/AnnouncingPolicy/<*X*>/Range

The Range leaf indicates the authorised announcing range for ProSe direct discovery in the PLMN in which this announcing authorisation policy applies.

- Occurrence: ZeroOrOne
- Format: int

- Access Types: Get, Replace
- Values: <Range>

Possible values for the Range are specified in table 5.2.11.1.

Table 5.2.11.1: Values of Range leaf

Value	Description
0	Reserved
1	The authorised announcing range is set to: Short.
2	The authorised announcing range is set to: Medium.
3	The authorised announcing range is set to: Long.
4-255	Reserved

5.2.12 Void

5.2.13 Void

5.2.14 Void

5.2.15 Void

5.2.16 Void

5.2.17 Void

5.2.18 Void

5.2.19 Void

5.2.20 Void

5.2.21 Void

5.2.22 Void

5.2.23 Void

5.2.24 Void

5.2.25 Void

5.2.26 Void

5.2.27 Void

5.2.28 Void

5.2.29 Void

5.2.30 Void

5.2.31 Void

5.2.32 Void

5.2.33 Void

5.2.34 Void

5.2.35 <*X*>/DirectCommunicationPolicy

The DirectCommunicationPolicy node acts as a placeholder for ProSe direct communciation authorisation policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.36 <*X*>/DirectCommunicationPolicy/<*X*>

This interior node acts as a placeholder for one or more ProSe direct communication authorisation policies.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.37 <*X*>/DirectCommunicationPolicy/<*X*>/PLMN

The PLMN leaf indicates the PLMN code of the operator in which the UE is authorised to use ProSe direct communication.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN>

The format of the PLMN is defined by 3GPP TS 23.003 [6].

NOTE: The UE is prohibited from performing ProSe direct communication in any PLMN for which no monitoring authorisation policy is available.

5.2.38 <*X*>/DirectCommunicationPolicy/<*X*>/ValidityTimerT4005

The ValidityTimerT4005 leaf indicates in unit of minutes for how long this authorisation policy is valid.

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: 1-525600

5.2.39 <*X*>/DirectCommunicationPolicyNotInEUTRAN

The DirectCommunicationPolicyNotInEUTRAN node acts as a placeholder for the description of the direct communication authorisation when the UE is not served by E-UTRAN.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace

- Values: N/A

5.2.40 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationAuthorisationNotInEUTRAN

The DirectCommunicationAuthorisationNotInEUTRAN leaf indicates whether the UE is authorised to perform ProSe direct communication when not served by E-UTRAN.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

  0 Indicates that the UE is not authorised to perform ProSe direct communication when not served by E-UTRAN.

  1 Indicates that the UE is authorised to perform ProSe direct communication when not served by E-UTRAN.

5.2.41 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters

The DirectCommunicationRadioParameters node acts as a placeholder for the radio parameter information needed for the UE to perform ProSe direct communication when the UE is not served by E-UTRAN.

- Occurrence: ZeroOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.42 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>

This interior node acts as a place holder for one or more set of radio parameters needed for the UE to perform ProSe direct communication when the UE is not served by E-UTRAN.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: <N/A>

5.2.43 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<*X*>/ RadioParametersContents

The RadioParametersContents leaf contains the radio parameters to be used to perform ProSe direct communication when the UE is not served by E-UTRAN and the UE determines itself to be located in a geographical area associated with these radio parameters.

- Occurrence: One
- Format: bin

- Access Types: Get, Replace
- Values: <RadioParametersContents>

The RadioParameterContents is defined as *SL-Preconfiguration* in clause 9 of 3GPP TS 36.331 [10].

5.2.44 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<*X*>/ GeographicalArea

The GeographicalArea node acts as a placeholder for one or more geographical areas associated with a set of radio parameters. The radio parameters are used by the UE for ProSe direct communication when the UE is not served by E-UTRAN and within an associated geographical area.

- Occurrence: One
- Format: Node
- Access Types: Get, Replace
- Values: N/A

5.2.45 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<*X*>/ GeographicalArea/Polygon

The Polygon node acts as a placeholder for polygon geographical area descriptions.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.46 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>/ GeographicalArea/Polygon/<X>

This interior node acts as a placeholder for one or more polygon geographical area descriptions.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: <N/A >

5.2.47 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>/ GeographicalArea/Polygon/<*X*>/Coordinates

The Coordinates node acts as a placeholder for geographical coordinates outlining the borders of a polygon geographical area.

- Occurrence: One
- Format: node

- Access Types: Get, Replace
- Values: N/A

5.2.48 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>/ GeographicalArea/Polygon/<*X*>/Coordinates/<*X*>

This interior node acts as a placeholder for one or more geographical coordinates.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: <N/A>

5.2.49 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>/ GeographicalArea/Polygon/<*X*>/Coordinates/<*X*>/Latitude

The Latitude leaf contains the latitude of a geographical coordinate outlining the border of the polygon geographical area.

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: <Latitude>

The Latitude is defined in subclause 6.1 of 3GPP TS 23.032 [9].

5.2.50 <*X*>/DirectCommunicationPolicyNotInEUTRAN/ DirectCommunicationRadioParameters/<X>/ GeographicalArea/Polygon/<*X*>/Coordinates/<*X*>/Longitude

The Longitude leaf contains the longitude of a geographical coordinate outlining the border of the polygon geographical area.

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: <Longitude>

The Longitude is defined in subclause 6.1 of 3GPP TS 23.032 [9].

5.2.51 <*X*>/GroupParameters

The GroupParameters node acts as a placeholder for ProSe direct communciation group parameters.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace

- Values: N/A

5.2.52 <*X*>/GroupParameters/<*X*>

This interior node acts as a placeholder for one or more set of group parameters for ProSe direct communication.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.53 <*X*>/GroupParameters/<*X*>/ AddressType

The AddressType leaf indicates the IP version of the addresses described by the IPMulticastAddress leaf.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: 'IPv4', 'IPv6'

5.2.54 <*X*>/GroupParameters/<*X*>/ IPMulticastAddress

The IPMulticastAddress leaf indicates the IP multicast address to be used for performing ProSe direct communication.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <an IPv4 address>, <an IPv6 address>.

The value of this leaf is an IPv4 address if the AddressType leaf value of the same rule is equal to "IPv4". The value of this leaf is an IPv6 address if the AddressType leaf value of the same rule is equal to "IPv6".

5.2.55 <*X*>/GroupParameters/<*X*>/PKMFAddress

The PKMFAddress leaf contains the address of the ProSe Key Management Function that the UE uses to obtain the group security related contents (see 3GPP TS 33.303 [7]).

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <an IPv4 address>, <an IPv6 address>.

The UE shall use the IP address of the HPLMN ProSe Function if this leaf is not provisioned.

5.2.56 <*X*>/GroupParameters/<*X*>/SourceIPv4address

The SourceIPv4address leaf indicates the IP source address of the IP address to be used by the UE as a source address. If none is provisioned, then the UE shall use Dynamic Configuration of IPv4 Link-Local Addresses IETF RFC 3927 [8]

to obtain a link local address for the Group. The source address refers to the IP address of the data packets destined for the UE.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <an IPv4 address>, <an IPv6 address>.

The value of this leaf is an IPv4 address.

The absence of this leaf indicates that the UE shall use Dynamic Configuration of IPv4 Link-Local Addresses IETF RFC 3927 [8] to obtain a link local address for the group.

5.2.57 <*X*>/GroupParameters/<*X*>/Layer2GroupID

The Layer2GroupID leaf indicates the group ID to be used at layer 2 for performing ProSe direct communication.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <Group ID>

5.2.58 <*X*>/UsageInformationReportingConfiguration

The UsageInformationReportingConfiguration node acts as a placeholder for the description of the configuration to be used by the UE for reporting of usage information.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.59 <*X*>/UsageInformationReportingConfiguration/ServerAddress

The ServerAddress leaf contains the address of the server to which the UE shall upload the usageinformation reports.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <an IPv4 address>, <an IPv6 address>.

The UE shall upload the usage information reports to the IP address of the HPLMN ProSe Function if this leaf is not provisioned.

5.2.60 <*X*>/UsageInformationReportingConfiguration/CollectionPeriod

The CollectionPeriod leaf contains the time interval, in unit of minutes, at which the UE shall generate the usage information reports.

- Occurrence: One
- Format: int

- Access Types: Get, Replace
- Values: 0-129600.

Setting the CollectionPeriod leaf to a value of 0 disables generation of usage information reports at the UE.

5.2.61 <*X*>/UsageInformationReportingConfiguration/ReportingWindow

The ReportingWindow contains the time window, in units of minutes, during which the UE shall upload the usage information report to the server.

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: 0-129600

Setting the ReportingWindow leaf to a value of 0 disables upload of the usage information reports by the UE.

5.2.62 <*X*>/UsageInformationReportingConfiguration/ReportGroupParameters

The ReportGroupParameters leaf indicates whether or not the UE shall report the group parameters in the usage information.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

  0 Indicates that the UE shall not report the group parameters in the usage information.

  1 Indicates that the UE shall report the group parameters in the usage information.

The default value 0 applies if this leaf is not provisioned.

5.2.63 <*X*>/UsageInformationReportingConfiguration/ReportTimeStampsFirstTransmissionAndReception

The ReportTimeStampsFirstTransmissionAndReception leaf indicates whether or not the UE shall report the time stamps of the first transmission/reception during the collection period in the usage information.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

  0 Indicates that the UE shall not report the time stamps of the first transmission/reception during the collection period in the usage information.

  1 Indicates that the UE shall report the time stamps of the first transmission/reception during the collection period in the usage information.

The default value 0 applies if this leaf is not provisioned.

5.2.64 <*X*>/UsageInformationReportingConfiguration/ReportDataTransmitted

The ReportDataTransmitted leaf indicates whether or not the UE shall report the amount of data transmitted during the collection period in the usage information, and whether with location information.

- Occurrence: ZeroOrOne
- Format: int
- Access Types: Get, Replace
- Values: <ReportDataTransmitted>

Possible values for the ReportDataTransmitted are specified in table 5.2.64.1.

Table 5.2.64.1: Values of ReportDataTransmitted leaf

Value	Description
0	Reserved
1	The UE shall not report the amount of data transmitted during the collection period in the usage information.
2	The UE shall report the amount of data transmitted during the collection period in the usage information without location information.
3	The UE shall report the amount of data transmitted during the collection period in the usage information with location information.
4-255	Reserved

The default value 1 applies if this leaf is not provisioned.

5.2.65 <*X*>/UsageInformationReportingConfiguration/ReportDataReceived

The ReportDataReceived leaf indicates whether or not the UE shall report the amount of data received during the collection period in the usage information, and whether with location information.

- Occurrence: ZeroOrOne
- Format: int
- Access Types: Get, Replace
- Values: <ReportDataReceived>

Possible values for the ReportDataReceived are specified in table 5.2.65.1.

Table 5.2.65.1: Values of ReportDataReceived leaf

Value	Description
0	Reserved
1	The UE shall not report the amount of data received during the collection period in the usage information.
2	The UE shall report the amount of data received during the collection period in the usage information without location information.
3	The UE shall report the amount of data received during the collection period in the usage information with location information.
4-255	Reserved

The default value 1 applies if this leaf is not provisioned.

5.2.66 <*X*>/UsageInformationReportingConfiguration/ReportTimeStampsOutOfCoverage

The ReportTimeStampsOutOfCoverage leaf indicates whether or not the UE shall report the time stamps when it went in and out of E-UTRAN coverage during the collection period in the usage information.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

  0 Indicates that the UE shall not report the time stamps when it went in and out of E-UTRAN coverage during the collection period in the usage information.

  1 Indicates that the UE shall report the time stamps when it went in and out of E-UTRAN coverage during the collection period in the usage information.

The default value 0 applies if this leaf is not provisioned.

5.2.66A <*X*>/UsageInformationReportingConfiguration/ReportLocationInCoverage

The ReportLocationInCoverage leaf indicates whether or not the UE shall report the list of locations of the UE when in E-UTRAN coverage during the collection period in the usage information.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

  0 Indicates that the UE shall not report the list of locations of the UE when in E-UTRAN coverage during the collection period in the usage information.

  1 Indicates that the UE shall report the list of locations of the UE when in E-UTRAN coverage during the collection period in the usage information.

The default value 0 applies if this leaf is not provisioned.

5.2.66B <*X*>/UsageInformationReportingConfiguration/ReportRadioParameters

The ReportRadioParameters leaf indicates whether or not the UE shall report the radio parameters used for ProSe direct communication (i.e. indicator of which radio resources used and radio frequency used) during the reporting period in the usage information.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get, Replace

- Values: 0, 1

  0 Indicates that the UE shall not report the radio parameters used for ProSe direct communication (i.e. indicator of which radio resources used and radio frequency used) during the reporting period in the usage information.

  1 Indicates that the UE shall report the radio parameters used for ProSe direct communication (i.e. indicator of which radio resources used and radio frequency used) during the reporting period in the usage information.

The default value 0 applies if this leaf is not provisioned.

5.2.67 <*X*>/ToConRef

The ToConRef interior node is used to allow application to refer to a collection of connectivity definitions. Several connectivity parameters can be listed for a given application under this interior node.

This interior node contains configuration parameters for establishment of the PDN connection for reaching the HPLMN ProSe Function.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.2.68 <*X*>/ToConRef/<X>

This run-time node acts as a placeholder for each reference to connectivity parameters.

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get, Replace
- Values: N/A

5.2.69 <*X*>/ToConRef/<X>/ConRef

The ConRef specifies a specific linkage to connectivity parameters.

- Occurrence: One
- Format: Chr
- Access Types: Get, Replace
- Values: <A network access point object>

5.2.70 <*X*>/Ext

The Ext is an interior node for where the vendor specific information about the ProSe Public Safety Direct Services Provisioning MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identifier is not defined and can therefore include one or more un-standardized sub-trees.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

6 EPC-level ProSe discovery Provisioning MO

6.1 Overview

The EPC-level ProSe discovery Provisioning MO is used to manage configuration parameters related to the EPC-level ProSe discovery.

The MO identifier is: urn:oma:mo:ext-3gpp-EPC-level-prose-discovery-provisioning:1.0.

The UE may initiate the provision of all available information from the DPF, using a client-initiated session Alert message of code "Generic Alert" (see OMA-TS-DM_Protocol-V1_2 [5]). When requesting all available information from the DPF, the "Type" element of the OMA DM generic alert message shall be set to "urn:oma:mo:ext-3gpp-EPC-level-prose-discovery-provisioning:1.0:provision", the "LocURI" element (inside the "Source" element) shall be set to the address of the DPF as specified by OMA-TS-DM_Protocol-V1_2 [5] and the "Data" element is not included.

The OMA DM Access Control List (ACL) property mechanism (see OMA-ERELD-DM-V1_2 [3]) may be used to grant or deny access rights to OMA DM servers in order to modify nodes and leaf objects of the EPC-level ProSe discovery Provisioning MO.

The following nodes and leaf objects are possible in the EPC-level ProSe discovery Provisioning MO as described in figure 6.1.1:

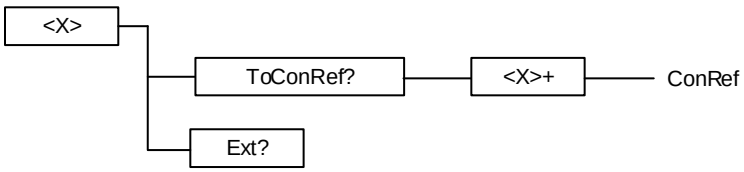

Figure 6.1.1: EPC-level ProSe discovery Provisioning MO

6.2 EPC-level ProSe discovery Provisioning MO parameters

6.2.1 General

This clause describes the parameters for the EPC-level ProSe discovery Provisioning MO.

6.2.2 <*X*>/ToConRef

The ToConRef interior node is used to allow application to refer to a collection of connectivity definitions. Several connectivity parameters can be listed for a given application under this interior node.

This interior node contains configuration parameters for establishment of the PDN connection for reaching the HPLMN ProSe Function.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

6.2.3 <*X*>/ToConRef/<X>

This run-time node acts as a placeholder for each reference to connectivity parameters.

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get, Replace
- Values: N/A

6.2.4 <*X*>/ToConRef/<X>/ConRef

The ConRef specifies a specific linkage to connectivity parameters.

- Occurrence: One
- Format: Chr
- Access Types: Get, Replace
- Values: <A network access point object>

6.2.5 <*X*>/Ext

The Ext is an interior node for where the vendor specific information about the EPC-level ProSe discovery Provisioning MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identifier is not defined and can therefore include one or more un-standardized sub-trees.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

Annex A (informative): ProSe Direct Services Provisioning MO DDF

This DDF is the standardized minimal set. A vendor can define its own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD-DM-DDF 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/dm_ddf-v1_2.dtd">

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName/>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>ProSe Direct Services Provisioning</Description>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <DFTitle>The ProSe Direct Services Provisioning Management Object.</DFTitle>
            <DFType>
                <DDFName/>urn:oma:mo:ext-3gpp-prose-direct-provisioning:1.0<DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>MonitoringPolicy</NodeName>
            <!-- The MonitoringPolicy node starts here. -->
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>Monitoring authorisation policies for ProSe Direct Services.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>

            <Node>
                <NodeName></NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <DFType>
                        <DDFName></DDFName>
                    </DFType>
                </DFProperties>

                <Node>
                    <NodeName>PLMN</NodeName>
                    <DFProperties>
```

```
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>PLMN code.</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
                <NodeName>ValidityTimerT4005</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <int/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>Validity Timer T4005 for monitoring policy.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

        </Node>
    </Node>

    <Node>
        <NodeName>AnnouncingPolicy</NodeName>
        <!-- The AnnouncingPolicy node starts here. -->
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <DFTitle>Announcing authorisation policies for ProSe Direct Services.</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName></NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
```

```
            <Node>
                <NodeName>PLMN</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>PLMN code.</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
                <NodeName>ValidityTimerT4005</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <int/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>Validity Timer T4005 for announcing policy.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>


            <Node>
                <NodeName>Range</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <int/>
                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <DFTitle>Authorised range for announcing.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

        </Node>
    </Node>

    <Node>
        <NodeName>ToConRef</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <DFTitle>collection of connectivity definitions</DFTitle>
            <DFType>
```

```
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <DFTitle>The name node for one or more connectivity parameters</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
                <Node>
                    <NodeName>ConRef</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <chr/>
                        </DFFormat>
                        <Occurrence>
                            <One/>
                        </Occurrence>
                        <DFTitle>Linkage to connectivity parameters</DFTitle>
                        <DFType>
                            <MIME>text/plain</MIME>
                        </DFType>
                    </DFProperties>
                </Node>
            </Node>
        </Node>

        <Node>
            <NodeName>Ext</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>A collection of all extension objects.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
        </Node>
    </Node>
</MgmtTree>
```

Annex B (informative): ProSe Public Safety Direct Services Provisioning MO DDF

This DDF is the standardized minimal set. A vendor can define its own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD-DM-DDF 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/dm_ddf-v1_2.dtd">

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName/>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>ProSe Public Safety Direct Services Provisioning</Description>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <DFTitle>The ProSe Public Safety Direct Services Provisioning Management
Object.</DFTitle>
            <DFType>
                <DDFName/>urn:oma:mo:ext-3gpp-prose-public-safety-direct-provisioning:1.0<DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>MonitoringPolicy</NodeName>
            <!-- The MonitoringPolicy node starts here. -->
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>Monitoring authorisation policies for ProSe Public Safety Direct
Services.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>

            <Node>
                <NodeName></NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <DFType>
                        <DDFName></DDFName>
                    </DFType>
                </DFProperties>

                <Node>
```

```
                    <NodeName>PLMN</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <chr/>
                        </DFFormat>
                        <Occurrence>
                            <One/>
                        </Occurrence>
                        <DFTitle>PLMN code.</DFTitle>
                        <DFType>
                            <MIME>text/plain</MIME>
                        </DFType>
                    </DFProperties>
                </Node>

                <Node>
                    <NodeName>ValidityTimerT4005</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <int/>
                        </DFFormat>
                        <Occurrence>
                            <One/>
                        </Occurrence>
                        <DFTitle>Validity Timer T4005 for monitoring policy.</DFTitle>
                        <DFType>
                            <DDFName/>
                        </DFType>
                    </DFProperties>
                </Node>

            </Node>
        </Node>

        <Node>
            <NodeName>AnnouncingPolicy</NodeName>
            <!-- The AnnouncingPolicy node starts here. -->
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>Announcing authorisation policies for ProSe Public Safety Direct
Services.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>

            <Node>
                <NodeName></NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <DFType>
                        <DDFName></DDFName>
```

```
                </DFType>
            </DFProperties>

            <Node>
                <NodeName>PLMN</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>PLMN code.</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
                <NodeName>ValidityTimerT4005</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <int/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <DFTitle>Validity Timer T4005 for announcing policy.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>


            <Node>
                <NodeName>Range</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <int/>
                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <DFTitle>Authorised range for announcing.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

        </Node>
    </Node>

    <Node>
        <NodeName>DirectCommunicationPolicy</NodeName>
        <!-- The DirectCommunicationPolicy node starts here. -->
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
```

```
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>Direct communication policies for ProSe Public Safety Direct
Services.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>

            <Node>
                <NodeName></NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <DFType>
                        <DDFName></DDFName>
                    </DFType>
                </DFProperties>

                <Node>
                    <NodeName>PLMN</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <chr/>
                        </DFFormat>
                        <Occurrence>
                            <One/>
                        </Occurrence>
                        <DFTitle>PLMN code.</DFTitle>
                        <DFType>
                            <MIME>text/plain</MIME>
                        </DFType>
                    </DFProperties>
                </Node>

                <Node>
                    <NodeName>ValidityTimerT4005</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <int/>
                        </DFFormat>
                        <Occurrence>
                            <One/>
                        </Occurrence>
                        <DFTitle>Validity Timer T4005 for direct communication policy.</DFTitle>
                        <DFType>
                            <DDFName/>
                        </DFType>
                    </DFProperties>
                </Node>


            </Node>
        </Node>

        <Node>
            <NodeName>DirectCommunicationPolicyNotInEUTRAN</NodeName>
            <!-- The DirectCommunicationPolicyNotInEUTRAN node starts here. -->
            <DFProperties>
                <AccessType>
                    <Get/>
```

```
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>DirectCommunication policy when the UE is not  in E-UTRAN policies direct
communication of ProSe Public Safety Direct Services.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>

            <Node>
                <NodeName>DirectCommunicationAuthorisationNotInEUTRAN</NodeName>
                <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <int/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>Authorisation for direct communication when not in E-UTRAN.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            </Node>

            <Node>
                <NodeName>DirectCommunicationRadioParameters</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
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                    </DFFormat>
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                    </Occurrence>
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UTRAN.</DFTitle>
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                </DFProperties>

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                <NodeName></NodeName>
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                            <Replace/>
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```
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                    <DDFName/>
                </DFType>
            </DFProperties>

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```

```
                                    <DFFormat>
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                                    </Occurrence>
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                                    </DFType>
                                </DFProperties>

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                                            <OneOrMore/>
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                                    </DFProperties>


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                                    <Node>
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                                                <Replace/>
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                                                <chr/>
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                                            <Occurrence>
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                                            </Occurrence>
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                                            </DFType>
                                        </DFProperties>
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                                </Node>
                            </Node>
                        </Node>
                    </Node>
                </Node>
            </Node>
        </Node>
    </Node>
</Node>
```

```
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    <!-- The GroupParameters node starts here. -->
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            <Replace/>
        </AccessType>
        <DFFormat>
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        </DFFormat>
        <Occurrence>
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        </Occurrence>
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        <DFType>
            <DDFName/>
        </DFType>
    </DFProperties>

    <Node>
        <NodeName></NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
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            </DFFormat>
            <Occurrence>
                <OneOrMore/>
            </Occurrence>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>AddressType</NodeName>
            <DFProperties>
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                    <Replace/>
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                <DFFormat>
                    <chr/>
                </DFFormat>
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                <DFTitle>IP version of the IP address.</DFTitle>
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        <Node>
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                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
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                </Occurrence>
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                </DFType>
            </DFProperties>
        </Node>
```

```
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                        <Replace/>
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                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <DFTitle>Address of the ProSe Key Management Function.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>


            <Node>
                <NodeName>SourceIPv4Address</NodeName>
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                    </DFFormat>
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                    </Occurrence>
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                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
                <NodeName>Layer2GroupID</NodeName>
                <DFProperties>
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                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
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                    </Occurrence>
                    <DFTitle>The Layer 2 group ID.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

        </Node>
    </Node>

    <Node>
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        <!-- The UsageInformatinReportingConfiguration node starts here. -->
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                <Replace/>
            </AccessType>
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            </DFFormat>
            <Occurrence>
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```

```
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Services.</DFTitle>
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                    <DDFName/>
                </DFType>
            </DFProperties>

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                        <Replace/>
                    </AccessType>
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                        <chr/>
                    </DFFormat>
                    <Occurrence>
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                    </Occurrence>
                    <DFTitle>Server address for reporting charging data.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>


            <Node>
                <NodeName>CollectionPeriod</NodeName>
                <DFProperties>
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                    <DFFormat>
                        <int/>
                    </DFFormat>
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                    </Occurrence>
                    <DFTitle>Collection period.</DFTitle>
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                    </DFType>
                </DFProperties>
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            <Node>
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                    </DFFormat>
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                        <One/>
                    </Occurrence>
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                        <DDFName/>
                    </DFType>
                </DFProperties>
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            <Node>
                <NodeName>ReportGroupParameters</NodeName>
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                        <Replace/>
                    </AccessType>
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```

```
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                    <DFTitle>Whether to report group parameters.</DFTitle>
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            <Node>
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                        <Replace/>
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                    </DFFormat>
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reception.</DFTitle>
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                </DFProperties>
            </Node>

            <Node>
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                        <Get/>
                        <Replace/>
                    </AccessType>
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                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
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                    <DFTitle>Whether to report data transmitted.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
                <NodeName>ReporDataReceived</NodeName>
                <DFProperties>
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                        <Get/>
                        <Replace/>
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                    <DFFormat>
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                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <DFTitle>Whether to report data received.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
            </Node>

            <Node>
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```
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                    </DFFormat>
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                    </Occurrence>
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            <Node>
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                    </DFFormat>
                    <Occurrence>
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                    </Occurrence>
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communication.</DFTitle>
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                        <DDFName/>
                    </DFType>
                </DFProperties>
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        </Node>

        <Node>
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                </DFType>
            </DFProperties>
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                <NodeName/>
                <DFProperties>
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```

```
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                    </Occurrence>
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                        <DDFName/>
                    </DFType>
                </DFProperties>
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                    <NodeName>ConRef</NodeName>
                    <DFProperties>
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                            <Get/>
                            <Replace/>
                        </AccessType>
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                            <chr/>
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                            <One/>
                        </Occurrence>
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                        </DFType>
                    </DFProperties>
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            </Node>
        </Node>

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            <DFProperties>
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                </AccessType>
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                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
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                    <DDFName/>
                </DFType>
            </DFProperties>
        </Node>

    </Node>
</MgmtTree>
```

Annex C (informative): EPC-level ProSe discovery Provisioning MO DDF

This DDF is the standardized minimal set. A vendor can define its own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD-DM-DDF 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/dm_ddf-v1_2.dtd">

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
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        <DFProperties>
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                <Get/>
            </AccessType>
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            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
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            <DFType>
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            </DFType>
        </DFProperties>


        <Node>
            <NodeName>ToConRef</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <DFTitle>collection of connectivity definitions</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
                <DFProperties>
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                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
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                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
                <Node>
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                    <DFProperties>
                        <AccessType>
                            <Get/>
```

```
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                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
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                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>

    <Node>
        <NodeName>Ext</NodeName>
        <DFProperties>
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                <Get/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <DFTitle>A collection of all extension objects.</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
    </Node>

</Node>
</MgmtTree>
```

Annex D (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2014-03					TS skeleton generated for submission at CT1#86bis	-	0.0.0
2014-04	CT1#86bis				Implementation of C1-141571 and C1-141572. Editorial and formatting fixes.	0.0.0	0.1.0
2014-05	CT1#87				Implementation of C1-142200	0.1.0	0.2.0
2014-06	CT-64	CP-140278			Version 1.0.0 submitted to CT-64 for information	0.2.0	1.0.0
2014-07	CT1#88				Implementation of C1-142855, C1-143024, C1-143244, C1-143252 and C1-143318. Fix for Annex B DDF compilation error.	1.0.0	1.1.0
2014-09	CT-65	CP-140629			Version 2.0.0 submitted to CT-65 for approval	1.1.0	2.0.0
2014-09	CT-65	CP-140716			Plenary tdoc revised to include missing cover sheet	1.1.0	2.0.0
2014-09	Post CT-65				Version 12.0.0 created after approval	2.0.0	12.0.0
2014-12	CT-66	CP-140847	0001	1	Announcing range parameter	12.0.0	12.1.0
2014-12	CT-66	CP-140847	0002	3	Update of provisioning parameters for charging reporting configuration in ProSe Public Safety Direct Services Provisioning MO	12.0.0	12.1.0
2014-12	CT-66	CP-140847	0003	1	Update of provisioning parameters for direct communication security in ProSe Public Safety Direct Services Provisioning MO	12.0.0	12.1.0
2014-12	CT-66	CP-140847	0004		Update of range for validity timer T4005 in ProSe MOs	12.0.0	12.1.0
2014-12	CT-66	CP-140847	0005		Prose Service authorisation for MO	12.0.0	12.1.0
2014-12	CT-66	CP-140847	0007		Update of MOs related to radio parameters provisioned for ProSe	12.0.0	12.1.0
2015-03	CT-67	CP-150071	0006	3	Parameters of PDN connection to be used to reach HPLMN ProSe Function	12.1.0	12.2.0
2015-03	CT-67	CP-150071	0013	2	Correction on conditions for activating ProSe direct discovery features	12.1.0	12.2.0
2015-03	CT-67	CP-150071	0014		Removal of Editor's notes on MO identifiers in TS 24.333	12.1.0	12.2.0
2015-03	CT-67	CP-150178	0015	2	Update of RadioParameterContents leaves in ProSe MOs	12.1.0	12.2.0
2015-03	CT-67	CP-150071	0016	3	Update of provisioning parameters for usage information reporting configuration in ProSe Public Safety Direct Services Provisioning MO	12.1.0	12.2.0
2015-03	CT-67	CP-150071	0017		Scope clarification for ProSe direct discovery in TS 24.333 – alternative 1	12.1.0	12.2.0
2015-06	CT-68	CP-150316	0019	1	Correcting titles of configuration parameters carrying NAP object	12.2.0	12.3.0
2015-06	CT-68	CP-150316	0020		GeographicalArea in DirectCommunicationRadioParameters	12.2.0	12.3.0
2015-06	CT-68	CP-150316	0022	1	Correction of ToConRef leaf in ProSe MO	12.2.0	12.3.0
2015-06	CT-68	CP-150316	0024		Correction of 'Not served by E-UTRAN'	12.2.0	12.3.0
2015-12	CT-70	CP-150692	0030		Provisioning MO for ProSe Public Safety Dierct Services	12.3.0	12.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2017-03	CT-75	CP-170108	0046		F	Removal of Editor's note on MO identifier	12.5.0

History

Document history		
V12.0.0	October 2014	Publication
V12.1.0	January 2015	Publication
V12.2.0	April 2015	Publication
V12.3.0	July 2015	Publication
V12.4.0	January 2016	Publication
V12.5.0	April 2017	Publication