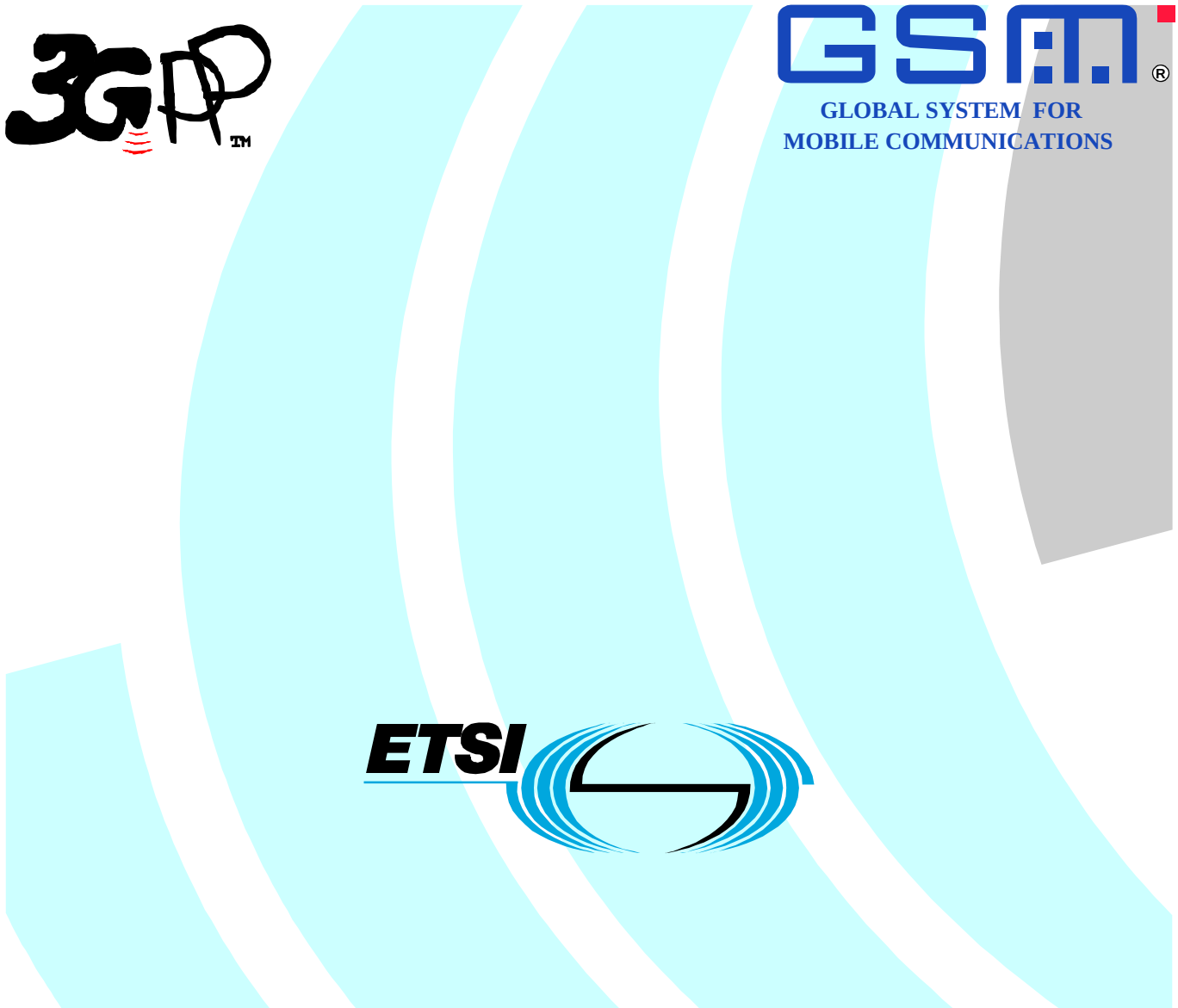
ETSI TS 132 604 V6.0.0 (2004-03)

Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management (CM);
Basic CM Integration Reference Point (IRP)
Common Management Information Protocol (CMIP)
Solution Set (SS)
(3GPP TS 32.604 version 6.0.0 Release 6)



Reference
RTS/TSGS-0532604v600

Keywords
GSM, UMTS

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Foreword

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The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

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Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document belongs to the 32.600-series covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects; Configuration Management (CM); as identified below:

32.601: "Basic CM Integration Reference Point (IRP): Requirements";

32.602: "Basic CM Integration Reference Point (IRP): Information Service (IS)";

32.603: "Basic CM Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)";

32.604: "Basic CM Integration Reference Point (IRP): Common Management Information Protocol (CMIP) Solution Set (SS)".

A third generation telecommunication network is composed of a multitude of different network elements (NE). For a successful operation of the network the operator must be provided with mechanisms allowing him to manage the network. These management activities can be grouped into several areas: configuration management, fault management, performance management, and accounting management and security management.

The present document is part of a set of technical specifications defining the telecommunication management (TM) of 3G systems. The TM principles are described in TS 32.101 [1]. The TM architecture is described in TS 32.102 [2]. The other specifications define the interface (ITf-N) between the managing system (manager), which is in general the network manager (NM) and the managed system (agent), which is either an element manager (EM) or the managed NE itself. The Itf-N is composed of a number of integration reference points (IRPs) defining the information in the agent that is visible for the manager, the operations that the manager may perform on this information and the notifications that are sent from the agent to the manager. One of these IRPs is the Basic Configuration Management IRP.

Each IRP is specified by four TSs: the requirements part, the Information Service (IS) part, the CORBA SS and the CMIP SS.

1 Scope

The present document specifies the Common Management Information Protocol (CMIP) Solution Set (SS) for the Basic CM Integration Reference Point (IRP): Information Service defined in TS 32.602 [6]. In detail:

- Clause 4 provides the basic concept of the CMIP SS and the mapping between the IOCs, operations and notifications defined in TS 32.602 (Basic Configuration Management IRP: Information Service) [6] to the corresponding CMIP SS equivalents.
- Clause 5 contains the GDMO definitions for the Basic Configuration Management IRP over the CMIPinterfaces,
- Clause 6 contains the ASN.1 definitions supporting the GDMO definitions provided in clause 5.

This Solution Set specification is related to 3GPP TS 32.602 V6.0.X.

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 TS 32.101: "Telecommunication management; Principles and high level requirements".

[2] 3GPP TS 32.102: "Telecommunication management; Architecture".

[3] 3GPP TS 32.304: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Common Management Information Protocol (CMIP) Solution Set (SS)".

[4] 3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".

[5] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".

[6] 3GPP TS 32.602: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP): Information Service (IS)".

[7] ITU-T Recommendation X.710 (1991): "Common Management Information Service Definition for CCITT Applications".

[8] ITU-T Recommendation X.721 (02/92): "Information Technology - Open Systems Interconnection – Structure of Management Information: Definition of Management Information".

[9] ITU-T Recommendation X.730 (01/92): "Information Technology - Open Systems Interconnection – Systems Management: Object Management Function".

[10] ITU-T Recommendation X.733 (02/92): "Information Technology - Open Systems Interconnection - Alarm Reporting Function".

[11] ITU-T Recommendation M.3100 (07/95): "Maintenance Telecommunications Management Network – Generic Network Information Model".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 32.101 [1], TS 32.102 [2] and TS 32.600 [5] apply.

3.2 Abbreviations

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

ASN.1	Abstract Syntax Notation 1
CMIP	Common Management Information Protocol
DN	Distinguished Name
GDMO	Guidelines for the Definition of Managed Objects
IOC	Information Object Class
IRP	Integration Reference Point
IS	Information Service
ISO	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
MIB	Management Information Base
NE	Network Element
NRM	Network Resource Model
TMN	Telecommunications Management Network
SS	Solution Set

4 Basic aspects

4.1 CMIP specific aspects

This clause describes some technical details specific to CMIP technology, which are not easy to be handled in the related GDMO definitions.

4.1.1 About Associations

In the GDMO definitions, except the containment relations, all associations among different object classes and object instances are modelled with dedicated pointers of the concerned objects, i.e. various relation role attributes. These pointers are normal object attributes and don't require any special treatment. The service operation *getMoAttributes* defined in TS 32.602 [6] and mapped on M-GET in this CMIP solution set is applied for managers to retrieve the values of these association pointers and the notification *attributeValueChang*e is applied for agents to report any change of the values of these association pointers.

4.1.2 About getContainment

In the GDMO definition the containment relations of the Managed Object Classes and those of the managed object instances are described by the name bindings. The service operation *getContainment* is defined in TS 32.602 [6] to enable managers to retrieve the management information about the containment tree of the local MIB of an agent. This service operation is mapped to CMISE *M-GET* in this CMIP solution set. The information about the containment relation of a local MIB consists of all MOIs abstracted from the output parameter *AttributeList* of a *M-GET* operation.

4.1.3 About getMoAttributes

The service operation *getMoAttributes* defined in the Basic CM IRP IS (TS 32.602 [6]) provides the basic functionality required to retrieve managed objects and their attributes, which is a subset of the functionality provided by the corresponding CMISE service operation *M-GET. getMoAttributes* is mapped to *M-GET* in this standard. This doesn't

mean any limitation for using *M-GET*. Users of this standard are encouraged to use the whole functionality provided by *M-Get*, especially the input parameter "Attribute Identifier List" (see ITU-T X.710 [7]).

4.1.4 About cancelOperation

The service operation *cancelOperation* defined in the Basic CM IRP IS (TS 32.602 [6]) provides the basic functionality required to cancel an on-going getContainment or getMoAttributes operation, which is a subset of the functionality provided by the corresponding CMISE service operation *M-CANCEL-GET*. *cancelOperation* is mapped to *M-CANCEL-GET* in this standard. This doesn't mean any limitation for using *M-Cancel*. Users of this standard are encouraged to use the whole functionality provided by *M-CANCEL-GET*.

4.1.5 About createMoOperation

The service operation *createMoOperation* defined in the Basic CM IRP IS (TS 32.602 [6]) provides the basic functionality to create a Managed Object instance within the MIB. This operation creates only one Managed Object instance and is a subset of the functionality provided by the corresponding CMISE service operation *M-CREATE* (see ITU-T X.710 [7]). *createMoOperation* is mapped to *M-CREATE* in this standard.

4.1.6 About deleteMoOperation

The service operation *deleteMoOperation* defined in the Basic CM IRP IS (TS 32.602 [6]) provides the basic functionality to delete one or more Managed Object instances within the MIB and is a subset of the functionality provided by the corresponding CMISE service operation *M-DELETE* (see ITU-T X.710 [7]). *deleteMoOperation* is mapped to *M-DELETE* in this standard.

4.1.7 About setMoAttributeOperation

The service operation *setMoAttributes* defined in the Basic CM IRP IS (TS 32.602 [6]) provides the basic functionality required to modify management information (Managed Object attribute values) in the MIB. Attributes of one or several Managed Objects may be modified – based on the containment hierarchy. This operation is a subset of the functionality provided by the corresponding CMISE service operation *M-SET* (see ITU-T X.710 [7]). *getMoAttributes* is mapped to *M-GET* in this standard.

4.2 Mapping

The semantics of the Basic CM IRP IS is defined in 3GPP TS 32.602 [6]. The definitions of the management services and management information defined there are independent of any implementation technology and protocol.
This subclause maps these technology and protocol independent definitions onto the equivalencies of the CMIP Solution Set of the Basic CM IRP.

4.2.1 Mapping of Information Object Classes

Table 1 maps the IOCs defined in TS 32.602 Basic Configuration Management IRP: Information Service [6] onto the corresponding managed object classes (MOCs) defined in this CMIP Solution Set. The MOCs are qualified either as mandatory (M) or optional (O).

Table 1: Mapping of IOCs

IS IOC	CMIP SS MOC	Qualifier
basicCmIRP	basicCmIRP	M

4.2.2 Mapping of Operations

Table 2 and Table 3 map the operations defined in TS 32.602 (Basic Configuration Management IRP: Information Service) [6] and TS 32.312 (Generic IRP Management: Information Service) [4] onto the equivalent Actions/Services of the CMIP Solution Set. The CMIP Actions/Services are qualified as Mandatory (M) or Optional (O).

Table 2: Mapping of operations of the Basic Configuration Management IRP: IS

IS Interface	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
PassiveCmOperations#1	getMoAttributes	M-GET(CMISE)	M
PassiveCmOperations#2	getContainment	M-GET(CMISE)	O
BasicCmOperations	cancelOperation	M-CANCEL-GET(CMISE)	O
ActiveCmOperations	createMo	M-CREATE (CMISE)	O
	deleteMo	M-DELETE (CMISE)	O
	setMoAttribute	M-SET (CMISE)	O

Table 3: Mapping of operations inherited from the Generic IRP Management: IS

IS Interface	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
GenericIRPVersionOperations	getIRPVersion	getBasicCmIRPVersion	M
GenericIRPProfileOperations	getOperationProfile	getBasicCmIRPOperationProfile	O
	getNotificationProfile	getBasicCmIRPNotificationProfile	O

4.2.3 Mapping of Operation Parameters

The tables in the following subclauses show the parameters of each operation defined in the Information Service described in TS 32.602 [6] and their equivalences in the CMIP Solution Set.

4.2.3.1 Parameter Mapping of the Operation *getMoAttributes*

Table 4: Parameter mapping of the operation *getMoAttributes*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-GET Req/Ind parameter 'Invoke identifier'	M
baseObjectInstance	IN	M-GET Req/Ind parameter 'Base object instance'	M
scope	IN	M-GET Req/Ind parameter 'Scope'	M
filter	IN	M-GET Req/Ind parameter 'Filter'	M
attributeListIn	IN	M-GET Req/Ind 'Attribute identifier list'	M
invokeIdentifierOut	OUT	M-GET Rsp/Conf parameter 'Invoke identifier', if this is the last M-GET response during a Get procedure. M-GET Rsp/Conf parameter 'Linked identifier', if this is not the last M-GET response during a Get procedure.	M
managedObjectClass	OUT	M-GET Rsp/Conf parameter 'Managed object class'	M
managedObjectInstance	OUT	M-GET Rsp/Conf parameter 'Managed object instance'	M
attributeListOut	OUT	M-GET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-GET Rsp/Conf parameter 'Errors'	M

4.2.3.2 Parameter Mapping of the Operation *getContainment*

Table 5: Parameter mapping of the operation *getContainment*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-GET Req/Ind parameter 'Invoke identifier'	M
baseObjectInstance	IN	M-GET Req/Ind parameter 'Base object instance'	M
scope	IN	M-GET Req/Ind parameter 'Scope'	O
invokeIdentifierOut	OUT	M-GET Rsp/Conf parameter 'Invoke identifier', if this is the last M-GET response during a Get procedure. M-GET Rsp/Conf parameter 'Linked identifier', if this is not the last M-GET response during a Get procedure.	M
containment	OUT	M-GET Rsp/Conf parameter 'Managed object class'	M
		M-GET Rsp/Conf parameter 'Managed object instance'	M
		M-GET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-GET Rsp/Conf parameter 'Errors'	M

4.2.3.3 Parameter Mapping of the Operation *cancelOperation*

Table 5: Parameter mapping of the operation *cancelOperation*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-CANCEL-GET Req/Ind parameter 'Get invoke identifier'	M
status	OUT	M-CANCEL-GET Rsp/Conf parameter 'Errors'	M

4.2.3.4 Parameter Mapping of the Operation *createMo*

Table 6: Parameter mapping of the operation *createMo*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
managedObjectClass	IN	M-CREATE Req/Ind parameter 'Managed object class'	M
managedObjectInstance	IN	M-CREATE Req/Ind parameter 'Managed object instance'	M
referenceObjectInstance	IN	M-CREATE Req/Ind parameter 'Reference object instance'	O
attributeListIn	IN	M-CREATE Req/Ind parameter 'Attribute list'	M
attributeListOut	OUT	M-CREATE Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-CREATE Rsp/Conf parameter 'Errors'	M

4.2.3.5 Parameter Mapping of the Operation *deleteMo*

Table 7: Parameter mapping of the operation *deleteMo*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
baseObjectInstance	IN	M-DELETE Req/Ind parameter 'Base object instance'	M
scope	IN	M-DELETE Req/Ind parameter 'Scope'	M
filter	IN	M-DELETE Req/Ind parameter 'Filter'	M
deletionList	OUT	M-DELETE Rsp/Conf parameter 'Managed object class'	M
		M-DELETE Rsp/Conf parameter 'Managed object instance'	M
status	OUT	M-DELETE Rsp/Conf parameter 'Errors'	M

4.2.3.6 Parameter Mapping of the Operation *setMoAttribute*

Table 8: Parameter mapping of the operation *setMoAttribute*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
baseObjectInstance	IN	M-SET Req/Ind parameter 'Base object instance'	M
scope	IN	M-SET Req/Ind parameter 'Scope'	M
filter	IN	M-SET Req/Ind parameter 'Filter'	M
modificationList	IN	M-SET Req/Ind parameter 'Modification list'	M
modificationListOut	OUT	M-SET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-SET Rsp/Conf parameter 'Errors'	M

4.2.3.7 Parameter Mapping of the Operation *getBasicCmIRPVersion*

Table 9: Parameter mapping of the operation *getBasicCmIRPVersion*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
versionNumberSet	OUT	versionNumberSet	M
status	OUT	status	M

4.2.3.8 Parameter Mapping of the Operation *getBasicCmIRPOperationProfile*

Table 10: Parameter mapping of the operation *getBasicCmIRPOperationProfile*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
irpVersion	IN	irpVersion	M
operationNameProfile	OUT	operationNameProfile	M
operationParameterProfile	OUT	operationParameterProfile	M
status	OUT	status	M

4.2.3.9 Parameter Mapping of the Operation *getBasicCmIRPNotificationProfile*

Table 11: Parameter mapping of the operation *getBasicCmIRPNotificationProfile*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
irpVersion	IN	irpVersion	M
notificationNameProfile	OUT	notificationNameProfile	M
notificationParameterProfile	OUT	notificationParameterProfile	M
status	OUT	status	M

5 GDMO Definitions

5.1 Information Object Classes

5.1.1 basicCmIRP

```
basicCmIRP MANAGED OBJECT CLASS
        DERIVED FROM
            "Rec. X.721 | ISO/IEC 10165-2 : 1992":top;
        CHARACTERIZED BY
            basicCmIRPIdPackage,
            basicCmIRPVersionPackage;
        CONDITIONAL PACKAGES
            basicCmIRPProfilePackage PRESENT IF "an instance supports it";
REGISTERED AS { ts32-604ObjectClass 1};
```

5.2 Packages

5.2.1 basicCmIRPIdPackage

```
basicCmIRPIdPackage PACKAGE
        BEHAVIOUR
            basicCmIRPIdPackageBehaviour;
        ATTRIBUTES
            basicCmIRPId;
        REGISTERED AS { ts32-604Package 1};

basicCmIRPIdPackageBehaviour BEHAVIOUR
        DEFINED AS
    "An instance of the IOC basicCmIRP is identified by the value of the attribute basicCmIRPId.";
```

5.2.2 basicCmIRPVersionPackage

```
basicCmIRPVersionPackage PACKAGE
        BEHAVIOUR
            basicCmIRPVersionPackageBehaviour;
        ATTRIBUTES
            supportedBasicCmIRPVersions      GET;
        ACTIONS
            getBasicCmIRPVersion;
REGISTERED AS { ts32-604Package 2};

basicCmIRPVersionPackageBehaviour BEHAVIOUR
        DEFINED AS
    "This package has been defined to allow the IRPManager to get information about the Basic Configuration
    Management IRP versions supported by the IRPAgent.

    The attribute supportedBasicCmIRPVersions indicates all versions of the Basic Configuration Management IRP
    currently supported by the IRPAgent.

    The action getBasicCmIRPVersion is invoked by the IRPManager to get information about the Basic
    Configuration Management IRP versions supported by the IRPAgent.";
```

5.2.3 basicCmIRPProfilePackage

```
basicCmIRPProfilePackage PACKAGE
        BEHAVIOUR
            basicCmIRPProfilePackageBehaviour;
        ACTIONS
            getBasicCmIRPOperationProfile,
```

getBasicCmIRPNotificationProfile;
REGISTERED AS { ts32-604Package 3};

basicCmIRPProfilePackageBehaviour **BEHAVIOUR**
DEFINED AS
"This package has been defined to allow the IRPManager to get detailed information about the profile of the Basic Configuration Management IRP.

The action *getBasicCmIRPOperationProfile* is invoked by the IRPManager to get detailed information about the operations supported by the Basic Configuration Management IRP.

The action *getBasicCmIRPNotificationProfile* is invoked by the IRPManager to get detailed information about the notifications supported by the Basic Configuration Management IRP.";

5.3 Actions

5.3.1 getBasicCmIRPVersion (M)

getBasicCmIRPVersion **ACTION**
BEHAVIOUR
getBasicCmIRPVersionBehaviour;
MODE
CONFIRMED;
WITH REPLY SYNTAX
TS32-604TypeModule.GetBasicCmIRPVersionReply;
REGISTERED AS { ts32-604Action 1};

getBasicCmIRPVersionBehaviour **BEHAVIOUR**
DEFINED AS
"The IRPManager invokes this action to get information about the Basic Configuration Management IRP versions supported by the Agent. The 'Action information' field contains no data. The 'Action reply' is composed of the following data:

- *versionNumbersList*
- *status*

The parameter *versionNumbersList* defines a list of Basic Configuration Management IRP versions supported by the Agent. A list containing no element, i.e. a NULL list, means that the concerned Agent doesn't support any version of the Basic Configuration Management IRP. The parameter *status* contains the results of the IRPManager action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.3.2 getBasicCmIRPNotificationProfile (O)

getBasicCmIRPNotificationProfile **ACTION**
BEHAVIOUR
getBasicCmIRPNotificationProfileBehaviour;
MODE
CONFIRMED;
WITH INFORMATION SYNTAX
TS32-604TypeModule.IRPVersionNumber;
WITH REPLY SYNTAX
TS32-604TypeModule.GetBasicCmIRPNotificationProfileReply;
REGISTERED AS { ts32-604Action 2};

getBasicCmIRPNotificationProfileBehaviour **BEHAVIOUR**
DEFINED AS
"A IRPManager invokes this action to enquiry about the notification profile (supported notifications and supported parameters) for this specific Basic Configuration Management IRP version.

The 'Action information' contains the following data:

- *irpVersionNumber*

This mandatory parameter identifies the Basic Configuration Managemnt IRP version.

The 'Action reply' is composed of the following data:

- *notificationNameProfile*
- *notificationParameterProfile*

- *status*

The parameter *notificationNameProfile* contains a list of notification names, i.e. a NULL list means that the Basic Configuration Management IRP doesn't support any notification. The parameter *notificationParameterProfile* contains a set of elements, each element corresponds to a notification name and is composed by a set of parameter names. The parameter *status* contains the results of this action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.3.3 getBasicCmIRPOperationProfile (O)

getBasicCmIRPOperationProfile **ACTION**
BEHAVIOUR
getBasicCmIRPOperationProfileBehaviour;
MODE
CONFIRMED;
WITH INFORMATION SYNTAX
TS32-604TypeModule.IRPVersionNumber;
WITH REPLY SYNTAX
TS32-604TypeModule.GetBasicCmIRPOperationProfileReply;
REGISTERED AS { ts32-604Action 3};

getBasicCmIRPOperationProfileBehaviour **BEHAVIOUR**
DEFINED AS
"A IRPManager invokes this action to enquiry about the operation profile (supported operations and supported parameters) for this specific Basic Configuration Management IRP version.

The 'Action information' contains the following data:

- *irpVersionNumber*

This mandatory parameter identifies the Basic Configuration Management IRP version.

The 'Action reply' is composed of the following data:

- *operationNameProfile*
- *operationParameterProfile*
- *status*

The parameter *operationNameProfile* contains a list of operation names. The parameter *operationParameterProfile* contains a set of elements, each element corresponds to an operation name and is composed by a set of parameter names. The parameter *status* contains the results of this action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.4 Attributes

5.4.1 basicCmIRPId

basicCmIRPId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-604TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
basicCmIRPIdBehaviour;
REGISTERED AS { ts32-604Attribute 1};

basicCmIRPIdBehaviour **BEHAVIOUR**
DEFINED AS
"This attribute names an instance of the IOC *basicCmIRP*.";

5.4.2 supportedBasicCmIRPVersions

supportedBasicCmIRPVersions **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-604TypeModule.SupportedBasicCmIRPVersions;
MATCHES FOR EQUALITY;
BEHAVIOUR
supportedBasicCmIRPVersionsBehaviour;
REGISTERED AS { ts32-604Attribute 2};

supportedBasicCmIRPVersionsBehaviour **BEHAVIOUR**
DEFINED AS
"This attribute provides the information concerning the Basic Configuration Management IRP versions currently supported by the Agent.";

5.5 Parameters

none

6 ASN.1 Definitions

```
TS32-604TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-
Maintenance (3) ts32-604 (604) informationModel (0) asn1Module (2) version1 (1)}

DEFINITIONS IMPLICIT TAGS ::=
BEGIN

--EXPORTS everything
--IMPORTS nothing

-- 3GPP TS 32.604 related Object Identifiers

baseNodeUMTS           OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0)
                                               mobileDomain(0) umts-Operation-Maintenance(3)}
ts32-604               OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-604                (604)}
ts32-604InfoModel      OBJECT IDENTIFIER ::= { ts32-604 informationModel            (  0)}
ts32-604ObjectClass    OBJECT IDENTIFIER ::= { ts32-604InfoModel managedObjectClass (  3)}
ts32-604Package        OBJECT IDENTIFIER ::= { ts32-604InfoModel package            (  4)}
ts32-604Parameter      OBJECT IDENTIFIER ::= { ts32-604InfoModel parameter          (  5)}
ts32-604NameBinding    OBJECT IDENTIFIER ::= { ts32-604InfoModel nameBinding        (  6)}
ts32-604Attribute      OBJECT IDENTIFIER ::= { ts32-604InfoModel attribute          (  7)}
ts32-604Action         OBJECT IDENTIFIER ::= { ts32-604InfoModel action             (  9)}
ts32-604Notification   OBJECT IDENTIFIER ::= { ts32-604InfoModel notification       ( 10)}

-- Start of 3GPP SA5 own definitions

ErrorCauses ::= ENUMERATED
{
noError (0),                 -- operation / notification successfully performed
unspecifiedErrorReason (255) -- operation failed, specific error unknown
}

GetBasicCmIRPVersionReply ::= SEQUENCE
{
versionNumberList            SupportedBasicCmIRPVersions,
status                       ErrorCauses
}

GetBasicCmIRPNotificationProfileReply ::= SEQUENCE
{
notificationNameProfile      NotificationList,
notificationParameterProfile ParameterListOfList,
status                       ErrorCauses
}

GetBasicCmIRPOperationProfileReply ::= SEQUENCE
{
operationNameProfile         OperationList,
operationParameterProfile    ParameterListOfList,
status                       ErrorCauses
}

GeneralObjectId ::= INTEGER

SupportedBasicCmIRPVersions ::= SET OF IRPVersionNumber

IRPVersionNumber ::= GraphicString

NotificationList ::= SET OF NotificationName

NotificationName ::= GraphicString

OperationList ::= SET OF OperationName

OperationName ::= GraphicString

ParameterListOfList ::= SET OF ParameterList
```

```
ParameterList ::= SET OF ParameterName

ParameterName ::= GraphicString


END   -- of TS32-604TypeModule
```

Annex A (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Sep 2001	S_13	SP-010478	001	--	Correction due to TS renumbering	4.0.0	4.1.0
Sep 2001	S_13	SP-010476	002	--	Correction of invokeIdentifier usage	4.0.0	4.1.0
Dec 2001	S_14	SP-010643	003	--	Alignment with ITU-T Rec. X.710 (CMISE) 1997	4.1.0	4.2.0
Dec 2002	S_18	SP-020749	004	--	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.602	4.2.0	5.0.0
Mar 2004	S_23	SP-040105	--	--	Automatic upgrade to Rel-6 (no CR)	5.0.0	6.0.0

History

Document history		
V6.0.0	March 2004	Publication