ETSI TS 132 334 V6.2.0 (2006-12)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Notification Log (NL) Integration Reference Point (IRP):
Common Management Information Protocol (CMIP)
Solution Set (SS)
(3GPP TS 32.334 version 6.2.0 Release 6)**

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Foreword

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Contents

Foreword

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

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where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
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Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

TS 32.331 "Notification Log (NL) Integration Reference Point (IRP): Requirements".

TS 32.332 "Notification Log (NL) (NL) Integration Reference Point (IRP): Information Service (IS)".

TS 32.333 "Notification Log (NL) Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

TS 32.334 "Notification Log (NL) Integration Reference Point (IRP): Common Management Information Protocol (CMIP) Solution Set (SS)".

TS 32.335 "Notification Log (NL) Integration Reference Point (IRP): eXtensible Markup Language (XML) solution definitions".

A 3G 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, accounting management and security management.

A management function assisting in different high level management areas such as fault management and performance management is the function to log notification. The purpose of notification logging is to keep the content of the notification stored and safe for later access.

The present document is part of a TS-family defining the Telecommunication Management (TM) of 3G systems. The TM principles are described in 3GPP TS 32.101 [1]. The TM architecture is described in 3GPP 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 Notification Log IRP.

Each IRP is specified by the requirements part, the Information Service part, the CORBA SS and the CMIP SS.

1 Scope

The present document specifies the CMIP SS for the Notification Log IRP IS defined in 3GPP TS 32.332 [8].
In detail:

- Clause 4 provides the basic architectural concept of the CMIP SS and the mapping between the IOCs, operations and notifications defined in 3GPP TS 32.332 [8] to the corresponding CMIP SS equivalents.
- Clause 5 contains the GDMO definitions for the Notification Log IRP over the CMIP interfaces.
- Clause 6 contains the ASN.1 definitions supporting the GDMO definitions provided in clause 5.

This Solution Set specification is related to 3GPP TS 32.332 (V6.2.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 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Information Service".

[4] ITU-T Recommendation X.733: " Information Technology - Open Systems Interconnection - Systems Management: Alarm Reporting Function'

[5] 3GPP TS 32.342: "Telecommunication management; File Transfer (FT) Integration Reference Point (IRP): Information Service (IS)"

[6] 3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".

[7] 3GPP TS 32.331: "Telecommunication management; Notification Log Integration Reference Point (IRP): Requirements".

[8] 3GPP TS 32.332: "Telecommunication management; Notification Log Integration Reference Point (IRP): Information Service (IS)".

[9] ITU-T Recommendation X.735: "Information Technology - Open Systems Interconnection – Log Control Function".

[10] ITU-T Recommendation X.710: "Information Technology – Open Systems Interconnection – Common Management Information Service'.

[11] ITU-T Recommendation X.721: "Information Technology - Open Systems Interconnection - Structure of Management Information: Definition of Management Information'

[12] 3GPP TS 32.314: "Telecommunication management; Generic Integration Reference Point (IRP) management; Common Management Information Protocol (CMIP) Solution Set (SS)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.331 [7] apply.

3.2 Abbreviations

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

ASN.1	Abstract Syntax Notation One
CMISE	Common Management Information Service
CMIP	Common Management Information Protocol
CORBA	Common Object Request Broker Architecture
EM	Element Manager
GDMO	Guidelines for the Definition of Managed Objects
IOC	Information Object Class
IRP	Integration Reference Point
IS	Information Service
MOC	Managed Object Class
NE	Network Element
NL	Notification Log
NM	Network Manager
OID	Object Identifier
SS	Solution Set
TM	Telecommunication Management

4 Basic aspects

4.1 General

The present document provides all the GDMO definitions necessary to implement the Notification Log IRP Information Service (3GPP TS 32.332 [8]) for the CMIP interface.

4.2 Mapping

The semantics of the Notification Log IRP are defined in 3GPP TS 32.332 [8]. The definitions of the management information defined there are independent of any implementation technology and protocol. This clause maps these protocol independent definitions onto their equivalents of the CMIP SS of the Notification Log IRP.

4.2.1 Mapping of Information Object Classes (IOCs)

Table 1 maps the IOCs defined in 3GPP TS 32.332 [8] to the corresponding Managed Object Classes (MOCs) defined in this CMIP SS. The MOCs are qualified either as Mandatory (M) or Optional (O).

Table 1: Mapping of IOCs

IS IOC	MOC of the CMIP SS	Qualifier
NLIRP	nlIRP	M
Log	log (ITU-T Recommendation X.735 [9])	M
LogRecord	logRecord (ITU-T Recommendation X.735 [9])	M

4.2.2 Mapping of Attributes

This clause depicts the mapping of the attributes defined in 3GPP TS 32.332 [8] and 3GPP TS 32.312 [6] on the corresponding attributes of the CMIP Solution Set.

4.2.2.1 Attribute Mapping of the IOC *NLIRP*

Table 2: Attribute mapping of the IOC *NLIRP*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
iRPId	irpId	M	M	-
maxLogs	maxLog	O	M	-

4.2.2.1 Attribute Mapping of the IOC *Log*

Table 3 Attribute mapping of the IOC *Log*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
LogSubscriptionId	logId (X.721)	M	M	-
loggingEndTime	--	O	M	-
logManagerToken	--	O	-	-
maxSize	maxLogSize (X.721)	O	M	-
currentSize	currentLogSize (X.721)	O	M	-
creationTime	--	O	M	-
logState	availabilityStatus (X.721) - see Note)	M	M	-
logRecordCount	numberOfRecords (X.721)	O	M	-
notificationCategories	discriminatorConstruct (X.721)	O	M	-
Filter	discriminatorConstruct (X.721)	O	M	-
logFullAction	logFullAction (X.721)	M	M	-
occupancyLevels	capacityAlarmThreshold (X.721)	M	M	-
NOTE: The individual values of logState are mapped as follows: logState logging = availabilityStatus={ } (empty set), logState logFull = availabilityStatus={ logFull }, logState stopped = availabilityStatus={ offLine }.				

4.2.2.1 Attribute Mapping of the IOC *LogRecord*

Table 4: Attribute mapping of the IOC *LogRecord*

IS Attribute *): inherited from TS 32.312	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
logRecordId	logRecordId (X.721)	M	M	-
logRecordContent	Content depends on the type of event which is logged.	O	M	-

4.2.3 Mapping of operations

Tables 5 and table 6 map the operations defined in 3GPP TS 32.322 [8] and 3GPP TS 32.312 [6] to corresponding GDMO actions and CMISE services. The operations are qualified either as Mandatory (M) or Optional (O).

The CMISE services are defined in ITU-T Recommendation X.710 [10].

Table 5: Mapping of operations of the Notification Log IRP: IS

Interface	Qualifier	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
NIIRPOperations1	O	logSubscribe	M-CREATE (CMISE), creation of an EFD, or M-SET (CMISE), change of an EFD	M
		logUnsubscribe	M-DELETE (CMISE), deletion of an EFD, or M-SET (CMISE), change of an EFD	M
		exportLogRecords	Action exportLogRecords	O
		getLogRecords	M-GET (CMISE) to MOC logRecord	O
NIIRPOperations2	O	getLogSubscriptionIds	M-GET (CMISE) to MOC log	M
		getLogSubscriptionStatus	M-GET (CMISE) to MOC log	M

Table 6: Mapping of operations inherited from the Generic IRP Management: IS

Interface	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
GenericIRPVersionsOperations	getIRPVersion	getVersion	M
GenericIRPProfileOperations	getOperationProfile	getOperationProfile	O
	getNotificationProfile	getNotificationProfile	O

4.2.4 Mapping of Operation Parameters

The tables in the following clauses list the parameters of each operation defined in 3GPP TS 32.322 [8] and their equivalents in the CMIP SS.

4.2.4.1 Parameter Mapping of the Operation *notifyLogSubscribed*

The operation *notifyLogSubscribed* is mapped to a CMISE M-CREATE of MOC log defined in ITU-T Recommendation X.735 [9].

Table 7: Parameter mapping of the operation 'notifyLogSubscribed'

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionId	IN	M	logId of MOC log	M
loggingEndTime	IN	O	--	--
notificationCategories	IN	O	discriminatorConstruct of MOC log	O
filter	IN	O	discriminatorConstruct of MOC log	O
logSubscriptionId	OUT	M	M-CREATE/SET success confirmation parameter 'Managed object instance'	M
logManagerToken	OUT	O	--	--
loggingEndTime	OUT	O	--	--
status	OUT	M	status = OperationSucceeded The semantics of this status are conveyed by the emission of an M-CREATE/SET success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M-CREATE/SET failure confirmation.	M

4.2.4.2 Parameter Mapping of the Operation *notifyLogUnsubscribed*

The operation *notifyLogUnsubscribed* is mapped to a CMISE M-DELETE of MOC log defined in ITU-T Recommendation X.735 [9].

Table 8: Parameter mapping of the operation 'notifyLogUnsubscribed'

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionId	IN	M	logId of MOC log	M
logManagerToken	IN	O	--	--
status	OUT	M	status = OperationSucceeded The semantics of this status are conveyed by the emission of an M- DELETE /SET success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M- DELETE failure confirmation.	M

4.2.4.3 Parameter Mapping of the Operation *exportLogRecords*

The operation *exportLogRecords* is mapped to a CMISE M- ACTION service of the nlIRP MOC.

Table 9: Parameter mapping of the operation "exportLogRecords"

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionId	IN	M	ExportLogRecordInfo.logSubscriptionId	M
notificationCategories	IN	O	ExportLogRecordInfo.notificationCategories	O
filter	IN	O	ExportLogRecordInfo.filter	O
invocationId	OUT	M	ExportLogRecordInfo.invocationId	M
status	OUT	M	ExportLogRecordReply.status status = OperationSucceeded The semantics of this status are conveyed by the emission of an M-ACTION success confirmation. status = NoMatchingLogRecordFound The semantics of this status are conveyed by the emission of an M-ACTION success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M-ACTION failure confirmation.	M

4.2.4.4 Parameter Mapping of the Operation *getLogSubscriptionIds*

The operation *getLogSubscriptionIds* is mapped to a CMISE M-GET of MOC log defined in ITU-T Recommendation X.735 [9]. For the purpose of this operation the CMIS service M-GET is used with scoping on all log instances.

Table 10: Parameter mapping of the operation 'getLogSubscriptionIds'

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionIds	OUT	M	Parameter "Managed object instance" of all log instances delivered by the scoped M-GET request	M
Status	OUT	M	status = OperationSucceeded The semantics of this status are conveyed by the emission of an M-GET success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M-GET failure confirmation.	M

4.2.4.5 Parameter Mapping of the Operation *getLogSubscriptionStatus*

The operation *getLogSubscriptionStatus* is mapped to a CMISE M-GET to one instance of MOC log defined in ITU-T Recommendation X.735 [9].

Table 11: Parameter mapping of the operation 'getLogSubscriptionStatus'

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionId	IN	M	Parameter "Managed object instance" in the M-GET request to MOC log	M
logAttr	OUT	M	Parameter "attributeList" of M-GET reply	M
Status	OUT	M	status = OperationSucceeded The semantics of this status are conveyed by the emission of an M-GET success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M-GET failure confirmation.	M

4.2.4.6 Parameter mapping of the Operation *getLogRecords*

The operation *getLogRecords* is mapped to a CMISE M-GET of MOC log defined in ITU-T Recommendation X.735 [9]. The content of all MOC logRecord instances of one MOC log instance is retrieved by the IRPManager by using the CMIS service M-GET with scoping one level down from the specified MOC log instance and filtering on objectClass logRecord. Further filtering can be applied to retrieve only logRecords from specific notificationCategories or fulfilling specific filter conditions.

Table 12: Parameter mapping of the operation 'getLogRecords"

IS Parameter Name	IN/OUT	Qualifier	CMIP SS Equivalent	Qualifier
logSubscriptionId	IN	M	M-GET parameter 'Base object instance' (M-GET request parameter 'Base object class' refers to MOC log)	M
notificationCategories	IN	O	Part of the "Filter" parameter in the M-GET request	O
Filter	IN	O	Part of the "Filter" parameter in the M-GET request	O
getLogRecordsResult	OUT	M	attributeList"s of the logRecord instances delivered in the reply to the scoped M-GET request	M
Status	OUT	M	status = OperationSucceeded The semantics of this status are conveyed by the emission of an M-SET success confirmation. status = OperationFailed The semantics of this status are conveyed by the emission of an M-SET failure confirmation.	M

Parameter mapping of the Operation *getIRPVersion*

See TS 32.314 [12]

Parameter mapping of the Operation *getOperationProfile*

See TS 32.314 [12]

Parameter mapping of the Operation *getNotificationProfile*

See TS 32.314 [12]

4.2.5 Mapping of Notifications

Table 13: Mapping of notifications of the Notification Log IRP: IS

Interface	Qualifier	IS Notification	GDMO Action or CMISE of CMIP SS	Qualifier
NIIRPNotifications1	O	notifyLogSubscribed	objectCreation of MOC log	M
		notifyLogUnsubscribed	objectDeletion or MOC log	M
NIIRPNotifications2	O	notifyOccupancyLevelCrossed	processingErrorAlarm (X.733 [4]) of MOC log	M
		notifyLoggingResumed	stateChange notification of availabilityStatus issued by MOC log	O

4.2.6 Mapping of the notification header

The following table gives the mapping between the parameters of the notification header specified in 3GPP TS 32.302 [3] onto the M-EVENT-REPORT request parameters. The notification header contains those parameters that shall be present in every notification.

Table 14: Mapping of common notification parameters

IS Parameters of the Notification Header	M-EVENT-REPORT Request Parameters	Qualifier
(see note 1)	Invoke identifier	M
objectClass	M-EVENT REPORT parameter 'Managed object class'	M
objectInstance	M-EVENT REPORT parameter 'Managed object instance'	M
notificationId	(see note 2)	O
eventTime	Event time	M
systemDN	(see note 3)	--
notificationType	M-EVENT REPORT parameter 'Event type'	M

NOTE 1: There is no common parameter in IRP Notification that corresponds to Invoke Identifier defined in ITU-T Recommendation X.710 [10].
NOTE 2: The common parameter NotificationId is mapped onto notificationIdentifier (ITU-T Recommendation X.721 [11] and X.733 [4]) which is no explicit M-EVENT-REPORT parameter. Instead, it is included in the M-EVENT-REPORT request parameter 'Event information'.
NOTE 3: The common parameter SystemDN is conditional in 3GPP TS 32.302 [3] and is not used on the CMIP interfaces.

4.2.7 Mapping of Notification Parameters

The tables in the following subclauses show the parameters of each notification defined in 3GPP TS 32.332 [8] and their equivalents in the CMIP Solution Set.

4.2.7.1 Parameter Mapping of the Notification *notifyLogSubscribed*

The notification *notifyLogSubscribed* is mapped to an objectCreation notification issued by MOC log defined in ITU-T Recommendation X.735 [9].

Table 15: Parameter mapping of the notification "notifyLogSubscribed"

IS Parameter	CMIP SS Equivalent	Qualifier
logSubscriptionId	Parameter "objectInstance" in notificationHeader of notification objectCreation	M
loggingEndTime	--	--
notificationCategory	Part of attribute "discriminatorConstruct" in parameter attributeList of notification objectCreation	O
Filter	Part of attribute "discriminatorConstruct" in parameter attributeList of notification objectCreation	O

4.2.7.2 Parameter Mapping of the Notification *notifyLogUnsubscribed*

The notification *notifyLogUnSubscribed* is mapped to an objectDeletion notification issued by MOC log defined in ITU-T Recommendation X.735 [9].

Table 16: Parameter mapping of the notification "notifyLogUnsubscribed"

IS Parameter	CMIP SS Equivalent	Qualifier
logSubscriptionId	Parameter "objectInstance" in notificationHeader of notification objectDeletion	M

4.2.7.3 Parameter Mapping of the Notification *notifyOccupancyLevelCrossed*

The notification *notifyOccupancyLevelCrossed* is mapped to an processing alarm notification, defined in ITU-T Recommendation X.735 [9]., issued by MOC log defined in ITU-T Recommendation X.735 [9].

Table 17: Parameter mapping of the notification "notifyOccupancyLevelCrossed"

IS Parameter	CMIP SS Equivalent	Qualifier
logSubscriptionId	Parameter "objectInstance" of the alarm report issued by MOC log	M
currentOccupancyLevel	Parameter "thresholdInfo" of the alarm report	M
logFullAction	To be read from IOC log via operation getLogSubscriptionStatus or to be conveyed in parameter "additionalInformation" of the alarmReport	O

4.2.7.4 Parameter Mapping of the Notification *notifyLoggingResumed*

The notification *notifyLoggingResumed* is mapped to a stateChange notification issued by MOC log defined in ITU-T Recommendation X.735 [9]. The state change refers to availablityStatus changing from a set containing value "offDuty" to an empty set.

Table 18: Parameter mapping of the notification "notifyLoggingResumed"

IS Parameter	CMIP SS Equivalent	Qualifier
logSubscriptionId	Parameter "managed object instance" of stateChange notification	M

5 GDMO Definitions

```
--Please do not remove the '—' in front of the headline numbering, as it is the CMIP code
--for a comment. This way the whole chapter can be put directly into a compiler.
```

--5.1 Managed Object Classes

--5.1.1 nlIRP

```
nlIRP MANAGED OBJECT CLASS
   DERIVED FROM
      "3GPP TS 32.314":managedGenericIRP;
   CHARACTERIZED BY
      nlIRPBasicPackage;
   CONDITIONAL PACKAGES
      maxLogPackage PRESENT IF "an instance supports it",
      exportLogRecordsPackage PRESENT IF "an instance supports it";
REGISTERED AS {ts32-334NotificationLogObjectClass 10610};
```

--5.2 Packages

--5.2.1 nlIRPBasicPackage

```
nlIRPBasicPackage PACKAGE
   BEHAVIOUR
      nlIRPBasicPackageBehaviour;
   REGISTERED AS {ts32-334NotificationLogPackage 10600};

nlIRPBasicPackageBehaviour BEHAVIOUR
DEFINED AS
"The notification log IRP represents the capabilities to manage the logging of notifications as
defined in 3GPP TS 32.332.";
```

--5.2.2 maxLogPackage

```
maxLogPackage PACKAGE
   BEHAVIOUR
      maxLogPackageBehaviour;
   ATTRIBUTES
      maxLog;
   REGISTERED AS {ts32-334NotificationLogPackage 20600};

maxLogPackageBehaviour BEHAVIOUR
DEFINED AS
"This package contains the attribute maxLog.";
```

--5.2.3 exportLogRecordsPackage

```
exportLogRecordsPackage PACKAGE
   BEHAVIOUR
      exportLogRecordsPackageBehaviour;
   ACTIONS
      exportLogRecords;
REGISTERED AS {ts32-334NotificationLogPackage 30610};

exportLogRecordsPackageBehaviour BEHAVIOUR
DEFINED AS
"This package has been defined to allow the IRPManager to transform logRecords into a file for later
upload.";
```

--5.3 Parameters

```
--None.
```

--5.4 Name Bindings

```
--None.
```

--5.5 Attributes

--5.5.1 maxLog

```
maxLog ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-334NotificationLogTypeModule.MaxLog;
   BEHAVIOUR
      maxLogBehaviour;
REGISTERED AS {ts32-334NotificationLogAttribute 10600};

maxLogBehaviour BEHAVIOUR
DEFINED AS
"This attribute specifies the maximum number of logs that can be supported by a given Notification
Log IRP. Its value is a non-zero, positive whole number ";
```

--5.6 Actions

--5.6.1 exportLogRecords

```
   exportLogRecords ACTION
   BEHAVIOUR
      exportLogRecordsBehaviour;
   MODE
      CONFIRMED;
   WITH INFORMATION SYNTAX
      TS32-334NotificationLogTypeModule.ExportLogRecordsInfo;
   WITH REPLY SYNTAX
      TS32-334NotificationLogTypeModule.ExportLogRecordsReply;
REGISTERED AS {ts32-334NotificationLogAction 10610};

exportLogRecordsBehaviour BEHAVIOUR
DEFINED AS
"The behaviour of this functionality is defined within 32.332 – below provides an overview and CMIP
specific semantics.
The Manager invokes this action to export all or part of a log into file. If the action is
performing successfully, this file then is transferred to the IRPManager using the File Transfer IRP
defined in TS 32.342 (note: also the FT IRP is providing the file location to the IRP Manager)
The M-ACTION request parameter 'Action information' is composed of the following data:
- logSubscriptionId
- notificationCategories (optional)
- filter (optional)
The M-ACTION response parameter 'Action reply' is composed of the following data:
-  invocationId
   This parameter carries an identifier that NLIRP assigns to identify the request if the status is
   noError. This parameter carries no information if the status is not noError.
-  status
   The parameter status contains the results of the Manager action.
   Possible values:
      noError (0),
      error (the value indicates the reason of the error).
";
```

--5.7 Notifications

```
-- none
```

6 ASN.1 Definitions

```
TS32-334NotificationLogTypeModule {
   itu-t(0)
   identified-organization(4)
   etsi(0)
   mobileDomain(0)
   umts-Operation-Maintenance(3)
   ts32-334(334)
   informationModel(0)
   asn1Module(2)
   version10600(10600)
   }

DEFINITIONS IMPLICIT TAGS ::=
BEGIN
--EXPORTS everything

IMPORTS

SimpleNameType
   FROM Attribute-ASN1Module {joint-iso-ccitt ms(9) smi(3) part2(2) asn1Module(2) 1} --X.721


NotificationCategoryList
   FROM TS32-304TypeModule {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
        umts-Operation-Maintenance(3) ts-32-304(304) informationModel(0) asn1Module(2) version1(1)}


CMISFilter
   FROM CMIP-1 {joint-iso-ccitt ms(9) cmip(1) modules(0) protocol(3)} --X.711
;


-- 3GPP TS 32.354 related Object Identifiers

baseNodeUMTS           OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4)
                                             etsi(0) mobileDomain(0)
                                             umts-Operation-Maintenance(3)}

ts32-334NotificationLogPrefix       OBJECT IDENTIFIER ::=
                                          {baseNodeUMTS
                                           ts32-334          (334)}
ts32-334NotificationLogInfoModel    OBJECT IDENTIFIER ::=
                                           {ts32-334NotificationLogPrefix
                                           informationModel   (  0)}
ts32-334NotificationLogObjectClass  OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           managedObjectClass (  3)}
ts32-334NotificationLogPackage      OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           package            (  4)}
ts32-334NotificationLogParameter    OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           parameter          (  5)}
ts32-334NotificationLogNameBinding  OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           nameBinding        (  6)}
ts32-334NotificationLogAttribute    OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           attribute          (  7)}
ts32-334NotificationLogAction       OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           action             (  9)}
ts32-334NotificationLogNotification OBJECT IDENTIFIER ::=
                                          {ts32-334NotificationLogInfoModel
                                           notification       ( 10)}


-- Start of 3GPP SA5 own definitions


ErrorCausesExportLogRecord ::= ENUMERATED
{
noError                       (  0),  -- operation / notification successfully performed
```

```
noMatchingLogRecordFound       (  1),  -- operation successful, but no matching logRecord was found
unspecifiedErrorReason         (255)   -- operation failed, specific error unknown
}


ExportLogRecordInfo ::= SEQUENCE
                        {
                        logSusbcriptionId      [1]  SimpleNameType,
                        notificationCategories [2]  NotificationCategoryList OPTIONAL,
                        filter                 [3]  CMISFilter OPTIONAL
                        }

ExportLogRecordReply ::= SEQUENCE
                        {
                        invocationId               [1]  SimpleNameType,
                        errorCausesExportLogRecord [2]  ErrorCausesExportLogRecord
                        }

MaxLog ::= INTEGER

END –- of module TS32-334NotificationLogTypeModule
```

Annex A (informative): List of assigned Object Identifiers

This annex provides a list with all object identifiers that have been assigned in TS 32.334. These object identifiers shall not be assigned to new objects (also not in new versions of this document).

Basic Name	Name and OID of the current TS Version	Name and OIDs of previous TS Versions
Managed Object Classes		
nIIRP	Name: nIIRP OID: ts32-334notificationLogObjectClass 10610	Name: nIIRP OID: ts32-334notificationLogObjectClass 10600
--		
Packages		
nIIRPBasicPackage	Name: nIIRPIdPackage OID: ts32-334notificationLogPackage 10600	--
maxLogPackage	Name: nIIRPIdPackage OID: ts32-334notificationLogPackage 20600	--
exportLogRecordsPackage	Name: exportLogRecordsPackage OID: ts32-334NotificationLogPackage 30610	Name: exportLogRecordsPackage OID: ts32-334NotificationLogPackage 30600
--		
Parameters		
--		
Name Bindings		
--		
Attributes		
maxLog	Name: maxLog OID: ts32-354NotificationLogAttribute 10600	--
--		
Actions		
exportLogRecords	Name: exportLogRecords OID : ts32-334NotificationLogAction 10610	Name: exportLogRecords OID : ts32-334NotificationLogAction 10600
--		
Notifications		
--		
Type Module		

TS32-334notificationLogTypeModule	Name: TS32-334NotificationLogTypeModule
	OID:
	{
	itu-t(0)
	identified-organization(4)
	etsi(0)
	mobileDomain(0)
	umts-Operation-Maintenance(3)
	ts32-334(334)
	informationModel(0)
	asn1Module(2)
	Version10600(10600)
	}	

--		

Annex B (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Cat**	**Old**	**New**
Dec 2004	S_26	SP-040799	--	--	Submitted to SA#26 for Approval	--	1.0.0	6.0.0
Jun 2005	--	--	--	--	Introduction update : added 32.335 new TS-family member	--	6.0.0	6.0.1
Jun 2006	SA_32	SP-060431	0001	1	Add invocationId output parameter to exportLogRecords operation - Align with 32.332	F	6.0.1	6.1.0
Dec 2006	SA_34	SP-060709	0002	--	Correct reference to IS version	F	6.1.0	6.2.0

History

Document history		
V6.0.0	December 2004	Publication
V6.0.1	June 2005	Publication
V6.1.0	June 2006	Publication
V6.2.0	December 2006	Publication