Technical Specification Group Services and System Aspects **TSGS#13(01)0476**

Meeting #13, Beijing, China, 24-27 September 2001

Source: **SA5**

Title: **Rel-4 CR32.602, 32.603 & 32.604 on Correction of invokeIdentifier usage**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version-New	Workitem
SP-010476	S5-010584	32.602	001		Rel-4	Replace the current parameter invokeIdentifier with the two parameters invokeIdentifierIn and invokeIdentifierOut in the operations getMoAttributes() and getContainment()	F	4.0.0	4.1.0	OAM-CM
SP-010476	S5-010582	32.603	001		Rel-4	Correction of invokeIdentifier usage	F	4.0.0	4.1.0	OAM-CM
SP-010476	S5-010565	32.604	002		Rel-4	Correction of invokeIdentifier usage	F	4.0.0	4.1.0	OAM-CM

3GPP TSG-SA5 Meeting #22 **S5-010584**
Paris, France, 3-7 Sept. 2001 **S5C010375**

CR-Form-v4

CHANGE REQUEST

⌘ **32.602** **CR** **001** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network **X**

Title:	⌘	Replace the current parameter invokeIdentifier with the two parameters invokeIdentifierIn and invokeIdentifierOut in the operations getMoAttributes() and getContainment()
Source:	⌘	SA5
Work item code:	⌘	OAM-CM
Date:	⌘	07/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The invokeIdentifier parameter should be defined as two separate parameters: invokeIdentifierIn (Input, C) and invokeIdentifierOut (Output, M), to get consistency between TS 32.602 (Configuration Management IRP: Information Service) on one hand, and TS 32.603 (CORBA) and TS 32.604 (CMIP) on the other hand.
Summary of change:	⌘	Define two separate parameters (invokeIdentifierIn (Input, C) and invokeIdentifierOut (Output, M)) for the operations getMoAttributes() and getContainment() instead of invokeIdentifier. Renumber sub-clause 6.2.2.3
Consequences if not approved:	⌘	32.602 (Basic CM IS) not aligned with the SSs in 32.603 (CORBA) and 32.604 (CMIP)

Clauses affected:	⌘	Sub-clause 6.2		
Other specs affected:	⌘	☐ Other core specifications	⌘	
		☐ Test specifications		
		X O&M Specifications		32.603, 32.604
Other comments:	⌘	"Children"CR32.603-001_S5-010582 and CR32.604-002_S5-010565 are provided to this "Parent" CR32.602-001_S5-010584		

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.2 Operations

6.2.1 Operation `getMoAttributes` (M)

This operation is invoked by IRPManager to request the retrieval of management information (Managed Object attribute names and values) from the MIB maintained by IRPAgent. One or several Managed Objects may be retrieved - based on the containment hierarchy. The operation corresponds to the M-GET service defined by CMIS (ITU-T X.710 [7]).
A Solution Set may choose to split this operation in several operations (e.g. operations to get "handlers" or "iterators" to Managed Objects fulfilling the scope/filter criteria and other operations to retrieve attribute names/values from these "handlers").

Table 1: Parameters of `getMoAttributes`

Name	Qualifier	Description
`invokeIdentifierIn`	In~~Out~~put, C~~O~~	This parameter identifies the current invocation in both IRPManager and IRPAgent. This parameter can be used together with the 'cancelOperation' operation to cancel an on-going 'getMOAttributes' operation.
`baseObjectInstance`	Input, M	The MO where the search starts. This is a full Distinguished Name according to 3GPP TS 32.300 [13].
`scope`	Input, M	This parameter defines how many levels of the containment hierarchy to search (i.e. apply the filter defined below). The search starts from the MO given by the `baseObjectInstance` parameter. The levels of search that may be performed are: • the base object alone (default); • the n-th level subordinates of the base object; • the base object and all of its subordinates down to and including the n-th level; • the base object and all of its subordinates.
`filter`	Input, M	This parameter defines a filter test to be applied to the scoped Managed Object(s). If the filter is empty, all of the managed objects included by the scope are selected. The actual syntax and capabilities of the filter is Solution Set specific. However, each Solution Set should support a filter consisting of one or several assertions that may be grouped using the logical operators AND, OR and NOT. Each assertion is a logical expression of attribute existence, attribute value comparison ("equal to X, less than Y" etc.) and MO Class.
`attributeListIn`	Input, M	This parameter identifies the attributes to be returned by this operation. In the current version, only the semantics "Return all attributes" shall be supported. An empty list means "Return all attributes". For future releases the possibility to specify a list of attributes is expected.
`invokeIdentifierOut`	Output, M	This parameter identifies the current invocation in both IRPManager and IRPAgent. This parameter can be used together with the 'cancelOperation' operation to cancel an on-going 'getMOAttributes' operation.
`managedObjectClass`	Output, M	For each returned MO: The class of the MO.
`managedObjectInstance`	Output, M	For each returned MO: The name of the MO. This is a full Distinguished Name according to 3GPP TS 32.300 [13].
`attributeListOut`	Output, M	For each returned MO: A list of name/value pairs for the MO attributes.
`status`	Output, M	(a) Operation succeeded, or (b) Operation failed because of specified or unspecified reason.

6.2.2 Operation `getContainment` (O)

This (optional) operation is only intended for retrieval of the containment relations from the MIB.

The output parameter 'containment' of the operation shall contain a list of all Managed Object instances in the MIB maintained by IRPAgent (or a subset starting from a given base object) including containment information (naming tree).

The structure and format of the output parameter 'containment' are Solution Set dependent.

Table 2: Parameters of `getContainment`

Name	Qualifier	Description
`invokeIdentifierIn`	In~~Out~~put, C~~O~~	This parameter identifies the current invocation in both IRPManager and IRPAgent. This parameter can be used together with the 'cancelOperation' operation to cancel an on-going 'getContainment' operation.
`baseObjectInstance`	Input, M	The MO where the search starts. This is a full Distinguished Name according to 3GPP TS 32.300 [13].
`scope`	Input, O	This parameter gives a value N defining how many levels of the containment hierarchy from the baseObjectInstance to include in the result. The levels of inclusion that may be performed are: • the base object alone (default); • the n-th level subordinates of the base object; • the base object and all of its subordinates down to and including the n-th level; • the base object and all of its subordinates.
`invokeIdentifierOut`	Output, M	This parameter identifies the current invocation in both IRPManager and IRPAgent. This parameter can be used together with the 'cancelOperation' operation to cancel an on-going 'getContainment' operation.
`containment`	Output, M	A list of DN of all Managed Object instances that satisfy the scope.
`status`	Output, M	(a) Operation succeeded, or (b) Operation failed because of specified or unspecified reason.

6.2.3 Operation `getBasicCmIRPVersion` (M)

IRPManager wishes to find out the Basic CM IRP SS version(s) supported by IRPAgent. IRPAgent shall respond with a list of supported Basic CM IRP SS versions. Since the present document defines the first IRP version, implementation of IRPAgent in compliance to this version shall return with one version number in the list.

Table 3: Parameters of `getBasicCmIRPVersion`

Name	Qualifier	Description
`versionNumberList`	Output, M	It indicates one or more SS version numbers supported by the IRPAgent. The IRP document version number (sometimes called "IRPVersion" or "version number") string is used to identify which specification version(s) an implementation is conformant to. Each string in this set is derived using a rule described in the "Generic IRP" [4].
`status`	Output, M	(a) Operation succeeded in that `versionNumberList` contains valid result. (b) Operation failed. Output parameter `versionNumberList` may contain invalid result.

6.2.4~~2.3~~ Operation `cancelOperation` (O)

IRPManager invokes this operation to cancel an on-going Basic CM IRP operation it issued before. Presently the Basic CM IRP operations that can be cancelled by invoking 'cancelOperation' are 'getMOAttributes' and 'getContainment'.

Table 4: Parameters of `cancelOperation`

Name	Qualifier	Description
`invokeIdentifier`	Input, M	This parameter identifies an on-going Basic CM IRP operation to be cancelled.
`status`	Output, M	(a) Operation succeeded. (b) Operation failed because of specified or unspecified reason.

3GPP TSG-SA5 (Telecom Management) **S5-010582**
Meeting #22, Paris, FRANCE, 3 – 7 September 2001 **S5C010332**

CR-Form-v4

CHANGE REQUEST

⌘ **32.603** **CR** **001** ⌘ **-** ⌘ Current version: **4.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Consistency of "invokeIdentifier" Basic CM parameter between IS and CORBA SS
Source:	⌘	SA5
Work item code:	⌘	OAM-CM
Date:	⌘	07/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Inconsistency between Basic CM IS and Solution Set documents regarding the qualifiers of the "invokeIdentifier" parameter in the operations getMoAttributes() and getContainment().This shall be reflected also in the 32.603 (CORBA SS)
Summary of change:	⌘	Changed "invokeIdentifier" to "invokeIdentifierOut" in operations getMoAttributes and getContainment. Added new parameter "invokeIdentifierIn" to the same operations, not mapped to anything.
Consequences if not approved:	⌘	32.602 (Basic CM IS) not aligned with the SSs in 32.603 (CORBA SS) and 32.604 (CMIP SS)

Clauses affected:	⌘	6.3		
Other specs Affected:	⌘	☐ Other core specifications ☐ Test specifications ☒ O&M Specifications	⌘	 32.602, 32.604
Other comments:	⌘	The present CR32.603-001_S5-010582 and CR32.604-002_S5-010565 are "Children" of the "Parent" CR32.602-001_S5-010584, and can be approved only if the "Parent" was approved.		

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6.3 Operation parameter mapping

The Basic CM IRP: IS (see 3GPP TS 32.602 [4]) defines semantics of parameters carried in operations across the Basic Configuration Management IRP. Tables 2, 3 and 4 indicate the mapping of these parameters, as per operation, to their equivalents defined in this SS.

The SS operation `find_managed_objects` is equivalent to the IS operation `getMoAttributes` when called with `ResultContents` set to `NAMES_AND_ATTRIBUTES`. Iterating the `BasicCmInformationIterator` is used to fetch the result.

Table 2: Mapping from IS `getMoAttributes` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
invokeIdentifierIn	no equivalence	-
invokeIdentifierOut	The iterator returned from the call (BasicCmInformationIterator) identifies the request.	M
baseObjectInstance	in DN baseObject	M
Scope	in searchControl (SearchControl.scope and SearchControl.level)	M
Filter	in searchControl (SearchControl.filter)	M
attributeListIn	in requestedAttributes	M
managedObjectClass managedObjectInstance attributeListOut	parameter fetchedElements in the next_basicCmInformations in the BasicCmInformationIterator interface.	M
Status	exception UndefinedMOException, exception IllegalDNFormatException, exception UndefinedScopeException, exception IllegalScopeTypeException, exception IllegalScopeLevelException, exception IllegalFilterFormatException, exception FilterComplexityLimit	M

The SS operation `find_managed_objects` is equivalent to the IS operation `getContainment` when called with `ResultContents` set to `NAMES`. Iterating the `BasicCmInformationIterator` is used to fetch the result.

Table 3: Mapping from IS `getContainment` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
invokeIdentifierIn	no equivalence	-
invokeIdentifierOut	The iterator returned from the call (BasicCmInformationIterator) identifies the request.	M
baseObjectInstance	in DN baseObject	M
Scope	in searchControl (SearchControl.scope and SearchControl.level)	O
Not specified in IS	in searchControl (SearchControl.filter)	M
Containment	parameter fetchedElements in the next_basicCmInformations in the BasicCmInformationIterator interface.	M
Status	exception UndefinedMOException, exception IllegalDNFormatException, exception UndefinedScopeException, exception IllegalScopeTypeException, exception IllegalScopeLevelException, exception IllegalFilterFormatException, exception FilterComplexityLimit	M

3GPP TSG-SA5 Meeting #22 **S5-010565**
Paris, France, 3 - 7 September 2001 ***S5C010333***

CR-Form-v4

CHANGE REQUEST

⌘ **32.604** **CR** **002** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM [ ] ME/UE [ ] Radio Access Network [X] Core Network [X]

Title:	⌘	Correction of invokeIdentifier usage
Source:	⌘	SA5
Work item code:	⌘	OAM-CM
Date:	⌘	07/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
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Use one of the following releases:
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R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The parameter invokeIdentifier in the operations getMoAttributes and getContainment have been split in invokeIdentifierIn and invokeIdentifierOut in CR32.602-001_S5-010584. This shall be reflected also in the 32.604 (CMIP SS).
Summary of change:	⌘	The mapping of invokeIdentifierIn and invokeIdentifierOut have been clarified in the operations getMoAttributes and getContainment. These changes reflect the changes described in CR32.602-001_S5-010584.
Consequences if not approved:	⌘	32.602 (Basic CM IS) not aligned with the SSs in 32.603 (CORBA SS) and 32.604 (CMIP SS)

Clauses affected:	⌘	4.2.2.1, 4.2.2.2		
Other specs affected:	⌘	[ ] Other core specifications [ ] Test specifications [X] O&M Specifications	⌘	 32.602, 32.603
Other comments:	⌘	The present CR32.603-001_S5-010582 and CR32.604-002_S5-010565 are "Children" of the "Parent" CR32.602-001_S5-010584, and can be approved only if the "Parent" was approved.		

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4.2.2.1 Mapping of Parameters of 'getMoAttributes'

Table 1: Mapping of parameters of 'getMoAttributes'

Parameters of the operation 'getMoAttributes' defined in 3GPP TS 32.602	CMISE M-GET parameters	Qualifier
invokeIdentifierIn	Invoke identifier (used in the Req/Ind primitives of M-GET)	M
baseObjectInstance	Base object instance	M
scope	Scope	M
filter	Filter	M
~~no equivalence~~invokeIdentifierOut	Invoker identifier, if this is the last M-GET response during a Get procedure. Linked identifier, if this is not the last M-GET response during a Get procedure. (These parameters are used in the Rsp/Conf primitives of M-GET). ~~This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.~~	~~O~~M
no equivalence	Basic object class This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	M
no equivalence	Access Control This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	O
no equivalence	Synchronisation This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	O
attributeListIn	Attribute identifier list	M
managedObjectClass	Managed object class	M
managedObjectInstance	Managed object instance	M
attributeListOut	Attribute list	M
status	Errors	M
no equivalence	Current time This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getMoAttributes'.	O

4.2.2.2 Mapping of Parameters of 'getContainment'

Table 2: Mapping of parameters of 'getContainment'

Parameters of the operation 'getContainment' defined in 3GPP TS 32.602	CMISE M-GET parameter	Qualifier
invokeIdentifierIn	Invoke identifier	M
baseObjectInstance	Base object instance	M
scope	Scope	O
no equivalence	filter This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'. The value of this parameter shall be 'empty'.	O
~~no equivalence~~invokeIdentifierOut	Invoker identifier, if this is the last M-GET response during a Get procedure. Linked identifier, if this is not the last M-GET response during a Get procedure. (These parameters are used in the Rsp/Conf primitives of M-GET). ~~This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.~~	~~O~~M
no equivalence	Basic object class This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	M
no equivalence	Access Control This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	O
no equivalence	Synchronisation This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	O
no equivalence	Attribute identifier list This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getContainment'. It is recommended to use 'objectClass' or/and 'nameBinding' defined in X.721 for the MOC top as the value of this input parameter.	O
containment	Managed object class	M
	Managed object instance	M
	Attribute list	M
status	Errors	M
no equivalence	Current time This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getMoAttributes'.	O