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**Source:** SA5 (Telecom Management)  
**Title:** Rel-4 CR 32.652 (GERAN network resources Integration  
Reference Point (IRP): Network Resource Model)  
**Document for:** Approval  
**Agenda Item:** 7.5.3

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Doc-1st-	Spec	CR	Rev	Phase	Subject	Cat	Version-	Doc-2nd-	Workitem
SP-020494	32.652	006	-	Rel-4	<b>UML corrections</b>	F	4.3.0	S5-026708	OAM-CM



## 4.2 Compliance rules

For general definitions of compliance rules related to qualifiers (Mandatory/Optional/Conditional) for *operations*, *notifications* and *parameters* (of operations and notifications) please refer to 3GPP TS 32.102 [2].

The following defines the meaning of Mandatory and Optional MOC attributes and associations between MOCs, in Solution Sets to the IRP defined by the present [specification document](#):

- The IRPManager shall support all mandatory attributes/associations. The IRPManager shall be prepared to receive information related to mandatory as well as optional attributes/associations without failure; however the IRPManager does not have to support handling of the optional attributes/associations.
- The IRPAgent shall support all mandatory attributes/associations. It may support optional attributes/associations.

An IRPAgent that incorporates vendor-specific extensions shall support normal communication with a 3GPP SA5-compliant IRPManager with respect to all Mandatory and Optional managed object classes, attributes, associations, operations, parameters and notifications without requiring the IRPManager to have any knowledge of the extensions.

Given that

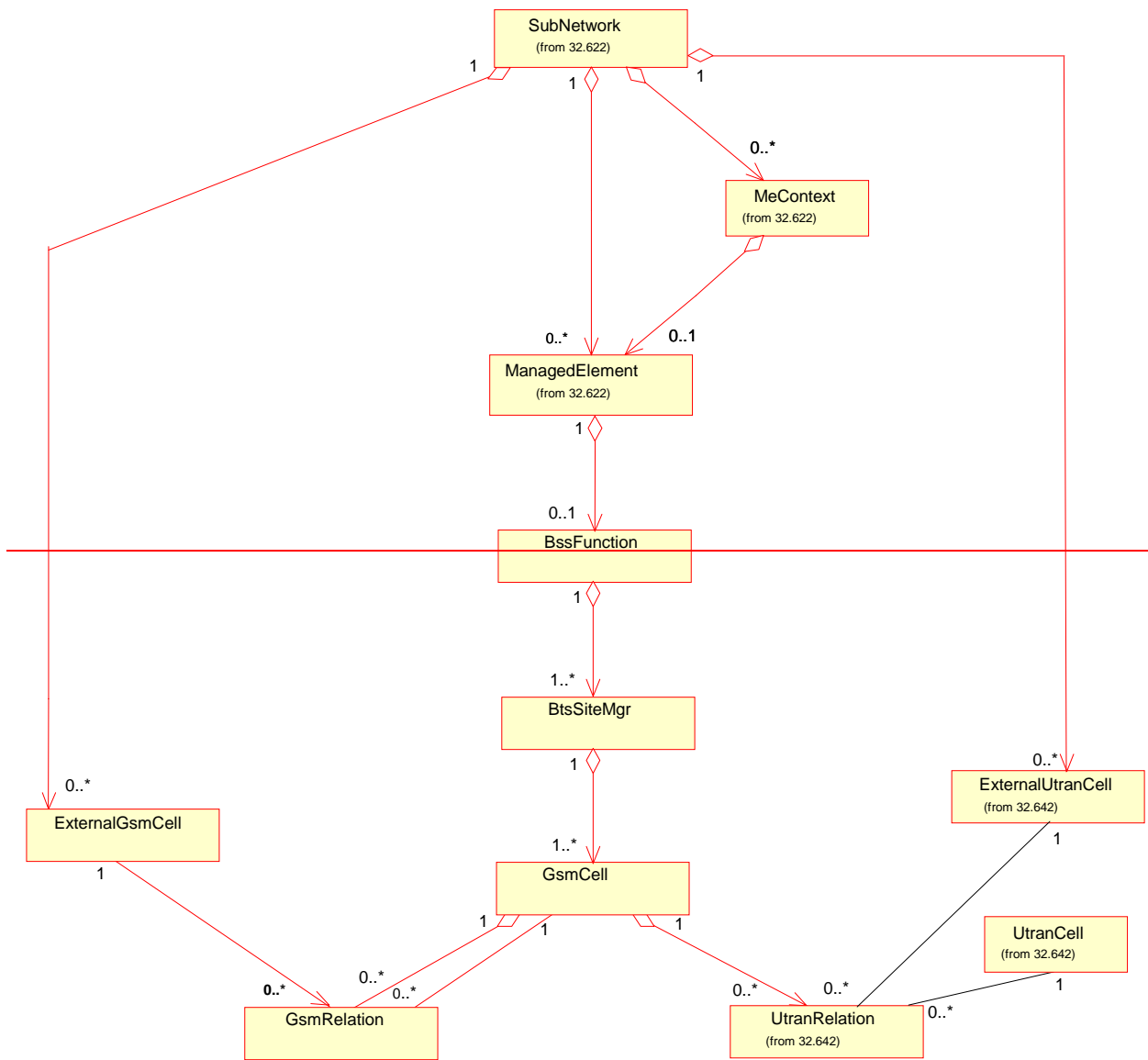
- rules for vendor-specific extensions remain to be fully specified, and
- many scenarios under which IRPManager and IRPAgent interwork may exist,

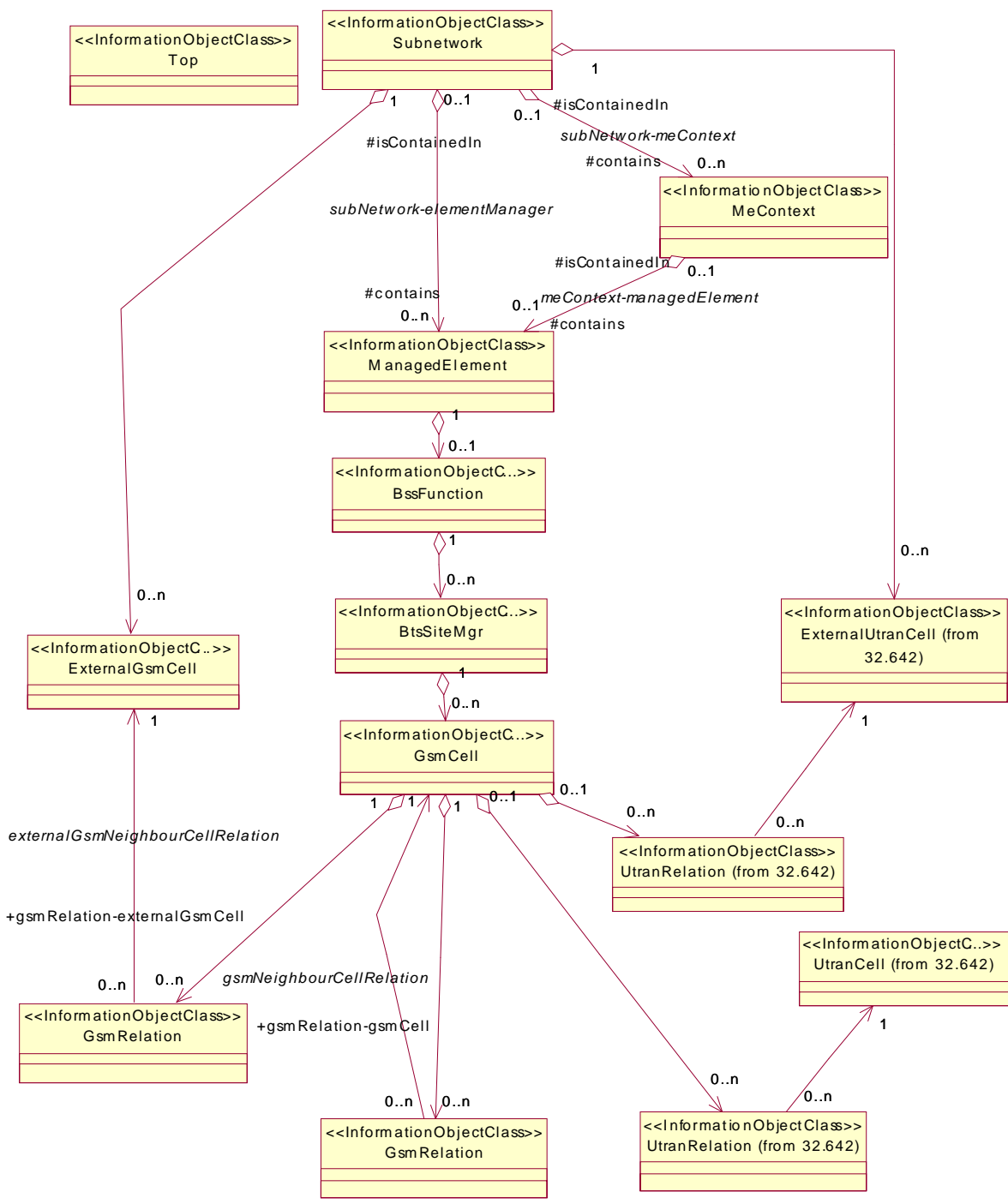
it is recognised that in Release 4/5 the IRPManager, even though it is not required to have knowledge of vendor-specific extensions, may be required to be implemented with an awareness that extensions can exist and behave accordingly.

## 6.2.2 Containment/Naming and Association diagrams

Figure 6.2 show the containment/naming hierarchy and the associations of the GERAN NRM.

NOTE: The Managed Object containment/naming relationships are in the diagram(s) below indicated by UML “Aggregation by reference” (“hollow diamonds”).





- NOTE 1: ManagedElement may be contained in either a SubNetwork or an MeContext instance, or have no parent instance at all. See also [16].
- NOTE 2: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.
- NOTE 3: The association between UtranRelation and UranCell is optional. It may be valid if both the UtranCell and the GsmCell are managed by the same management node.
- NOTE 4: The GeranRelation and UtranRelation can be contained under MOCs defined in other NRMs.

**Figure 6.2: GERAN NRM Containment/Naming and Association diagram**

Each Managed Object is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [13] that expresses its containment hierarchy. As an example, the DN of a Managed Object representing a cell could have a format like:

```
SubNetwork=Sweden,MeContext=MEC-Gbg-1,ManagedElement=RNC-Gbg-1,  
BssFunction=BSS1.
```