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ITU-T

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STANDARDIZATION SECTOR
OF ITU

Q.816

Amendment 1
(08/2001)

SERIES Q: SWITCHING AND SIGNALLING
Q3 interface

COBRA-based TMN services
Amendment 1: OMG services profile

ITU-T Recommendation Q.816 – Amendment 1
(Formerly CCITT Recommendation)

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ITU-T Recommendation Q.816

COBRA-based TMN services

AMENDMENT 1

OMG services profile

Summary

This Amendment contains corrections to B.1.1 of ITU-T Q.816 (2001) as well as a new Annex C.

Source

Amendment 1 to ITU-T Recommendation Q.816 was prepared by ITU-T Study Group 4 (2001-2004) and approved under the WTSA Resolution 1 procedure on 13 August 2001.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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ITU-T Recommendation Q.816

CORBA-based TMN services

AMENDMENT 1

OMG services profile

1) Clause 8.1.1, Conformance points

Add the following bullet item to the bullet list under list item 1:

- support the Naming Service capabilities identified in detail in C.1.

Add the following bullet item to the bullet list under list item 2:

- If the OMG Notification Service is used, support the Notification Service capabilities identified in detail in C.2.

Also under list item 2, delete the note:

NOTE – Further study is required to identify a minimum subset of Notification Service capabilities that must be supported for compliance to the framework.

Add the following bullet item to the bullet list under list item 3:

- support the Telecom Log capabilities identified in detail in C.4.

2) New Annex C

Add the following new normative annex:

ANNEX C

OMG Naming, Notification, and Telecom Log Service profiles

The ITU-T TMN CORBA framework builds upon CORBA by not only using the basic communication capabilities of an ORB, but also by relying upon several of the Common Object Services defined by the OMG. In particular, support for three services is required: the Naming Service, the Notification Service, and the Telecom Log Service.

Only those interface types which need (or optionally need) to be used directly by the managing system to meet the requirements of this profile are presented in this annex. Interface types not discussed in this annex are not directly used by the managing system.

C.1 OMG Naming Service

Table C.1 lists the required capabilities that must be supported on the management interface by the Naming Service. Note that other capabilities may be required internally by the managed system, but only these capabilities need be used by managing systems.

Table C.1/Q.816 – OMG Naming Service required capabilities

CORBA object interface	Object interface element	Required
NamingContext	<i>Operations:</i> bind rebind bind_context rebind_context resolve unbind new_context bind_new_context destroy list	 X X

C.2 OMG Notification Service

Table C.2 lists the required capabilities that must be supported on the management interface by the Notification Service. Note that other capabilities may be required internally by the managed system, but only these capabilities shall be used by managing systems. Clause 6.2 specifies that the use of typed notifications is optional, but they are an intended direction. The 'O's in Table C.2 identify the capabilities required to support typed notifications and are currently optional.

Table C.2/Q.816 – OMG Notification Service Required Capabilities

No.	CORBA object interface	Object interface element	Required
1	CosNotifyChannelAdmin:: EventChannel Inherits from CosNotification:: QoSAdmin, CosNotification:: AdminPropertiesAdmin, CosEventChannelAdmin:: EventChannel	<i>Attributes:</i> MyFactory default_consumer_admin default_supplier_admin default_filter_factory <i>Operations:</i> new_for_consumers new_for_suppliers get_consumeradmin get_supplieradmin get_all_consumeradmins get_all_supplieradmins	 X X X X

Table C.2/Q.816 – OMG Notification Service Required Capabilities

No.	CORBA object interface	Object interface element	Required
2	CosNotification:: QoSAdmin	<i>Operations:</i> get_qos set_qos validate_qos <i>QoS Values:</i> EventReliability: BestEffort Persistent ConnectionReliability: BestEffort Persistent OrderPolicy: AnyOrder FifoOrder PriorityOrder DeadlineOrder DiscardPolicy: AnyOrder FifoOrder PriorityOrder DeadlineOrder LifoOrder RejectNewEvents	X X X c.1 c.1 X X o.2
3	CosNotification:: AdminPropertiesAdmin	<i>Operations:</i> get_admin set_admin	X X
4	CosNotifyChannelAdmin:: ConsumerAdmin Inherits from CosNotification:: QoSAdmin , CosNotifyComm:: NotifySubscribe , CosNotifyFilter:: FilterAdmin , CosEventChannelAdmin:: ConsumerAdmin	<i>Attributes:</i> MyID MyChannel MyOperator priority_filter lifetime_filter pull_suppliers push_suppliers <i>Operations:</i> get_proxy_supplier obtain_notification_pull_supplier obtain_notification_push_supplier destroy	X X X X X
5	CosNotifyChannelAdmin:: StructuredProxyPushSupplier Inherits from ProxySupplier , CosNotifyComm:: StructuredPushSupplier	<i>Operations:</i> connect_structured_push_consumer suspend_connection resume_connection	X X X

Table C.2/Q.816 – OMG Notification Service Required Capabilities

No.	CORBA object interface	Object interface element	Required
6	CosNotifyChannelAdmin:: SequenceProxyPushSupplier Inherits from ProxySupplier , CosNotifyComm:: SequencePushSupplier	<i>Operations:</i> connect_sequence_push_consumer suspend_connection resume_connection	
7	CosNotifyChannelAdmin:: ProxySupplier Inherits from CosNotification::QoSAdmin , CosNotifyFilter::FilterAdmin	<i>Attributes:</i> MyType MyAdmin priority_filter lifetime_filter <i>Operations:</i> obtain_offered_types validate_event_qos	X X X X
8	CosNotifyFilter:: FilterAdmin	<i>Operations:</i> add_filter remove_filter get_filter get_all_filters remove_all_filters	X X X X X
9	CosNotifyFilter:: Filter	<i>Attributes:</i> constraint_grammar <i>Operations:</i> add_constraints modify_constraints get_constraints get_all_constraints remove_all_constraint destroy match match_structured match_typed attach_callback detach_callback get_callbacks	X X X X X X X X X
10	CosNotifyFilter:: FilterFactory	<i>Operations:</i> create_filter create_mapping_filter	X
11	CosNotifyComm:: NotifySubscribe	<i>Operations:</i> subscription_change	X
12	CosNotifyComm:: StructuredPushSupplier Inherits from NotifySubscribe	<i>Operations:</i> disconnect_structured_push_supplier	X

Table C.2/Q.816 – OMG Notification Service Required Capabilities

No.	CORBA object interface	Object interface element	Required
13	CosNotifyComm:: SequencePushSupplier Inherits from NotifySubscribe	<i>Operations:</i> disconnect_sequence_push_supplier	X
14	CosTypedNotifyChannelAdmin:: TypedEventChannel Inherits from CosNotification::QoSAdmin , CosNotification:: AdminPropertiesAdmin , CosTypedEventChannelAdmin:: TypedEventChannel	<i>Attributes:</i> MyFactory default_consumer_admin default_supplier_admin default_filter_factory <i>Operations:</i> new_for_typed_notification_consumers new_for_typed_notification_suppliers get_consumeradmin get_supplieradmin get_all_consumeradmins get_all_supplieradmins	O O O O O
15	CosTypedNotifyChannelAdmin:: TypedConsumerAdmin Inherits from CosNotifyChannelAdmin:: ConsumerAdmin , CosTypedEventChannelAdmin:: TypedConsumerAdmin	<i>Operations:</i> obtain_typed_notification_pull_supplier obtain_typed_notification_push_supplier	O
16	CosTypedNotifyChannelAdmin:: TypedProxyPushSupplier Inherits from CosNotifyChannelAdmin:: ProxySupplier , CosNotifyComm:: PushSupplier	<i>Operations:</i> connect_typed_push_consumer suspend_connection resume_connection	O O O
17	CosNotifyComm:: PushSupplier Inherits from NotifySubscribe , CosEventComm:: PushSupplier	<i>Operations:</i>	
<p>c.1 – Either BestEffort or Persistent is to be supported. If only BestEffort is supported, then Q.821 CORBA Enhanced Current Alarm Summary shall also be supported.</p> <p>o.2 – Priority Order may also be supported. If it is supported, then it should not be selected when Correlated Notifications are used. Also, it should only be selected if message priority is used on a managed object instance basis (see NOTIF 10).</p>			

C.3 OMG Event Service

The OMG Notification Service inherits interface capabilities from the OMG Event Service. Table C.3 lists the required capabilities that must be supported on the management interface that are inherited from the Event Service. Note that other capabilities may be required internally by the managed system, but only these capabilities shall be used by managing systems. Clause 6.2 specifies that the use of typed notifications is optional, but they are an intended direction. The 'O's in Table C.3 identify the capabilities required to support typed notifications and are currently optional.

Table C.3/Q.816 – OMG Event Service required capabilities

No.	CORBA object interface	Object interface element	Required
1	CosEventChannelAdmin:: EventChannel	<i>Operations:</i> for_consumers for_suppliers destroy	
2	CosEventChannelAdmin:: ConsumerAdmin	<i>Operations:</i> obtain_push_supplier obtain_pull_supplier	
3	CosTypedEventChannelAdmin:: TypedEventChannel	<i>Operations:</i> for_consumers for_suppliers destroy	O
4	CosTypedEventChannelAdmin:: TypedConsumerAdmin Inherits from CosEventChannelAdmin:: ConsumerAdmin	<i>Operations:</i> obtain_typed_pull_supplier obtain_typed_push_supplier	
5	CosEventComm:: PushSupplier	<i>Operations:</i> disconnect_push_supplier	O
<p>c.1 – Either BestEffort or Persistent is to be supported. If only BestEffort is supported then Q.821 Corba Enhanced Current Alarm Summary shall also be supported.</p> <p>o.2 – Priority Order may also be supported. If it is supported, then it should not be selected when Correlated Notifications are used. Also, it should only be selected if message priority is used on a managed object instance basis (see NOTIF 10).</p>			

C.4 OMG Telecom Log Service

Table C.4 lists the required capabilities that must be supported on the management interface by the Telecom Log Service. Note that other capabilities may be required internally by the managed system, but only these capabilities shall be used by managing systems.

Table C.4/Q.816 – OMG Telecom Log Service required capabilities

No.	CORBA Object Interface	Object Interface Element	Required
1	Log	<i>Operations:</i> my_factory id get_qos set_qos get_max_record_life set_max_record_life get_max_size set_max_size get_current_size get_n_records get_log_full_action set_log_full_action get_administrative_state set_administrative_state get_forwarding_state set_forwarding_state get_operational_state get_interval set_interval get_availability_status get_capacity_alarm_thresholds set_capacity_alarm_thresholds get_week_mask set_week_mask query retrieve match delete_records delete_records_by_id write_records write_record_list set_record_attribute set_records_attribute get_record_attribute copy copy_with_id flush	 X X X X X X X X X X

Table C.4/Q.816 – OMG Telecom Log Service required capabilities

No.	CORBA Object Interface	Object Interface Element	Required
2	EventLog Inherits from Log , CosEventChannelAdmin::EventChannel	<i>Operations:</i> destroy	
3	NotifyLog Inherits from EventLog , CosNotifyChannelAdmin::EventChannel	<i>Operations:</i> get_filter set_filter	X X
4	TypedEventLog Inherits from Log , CosTypedEventChannelAdmin::TypedEventChannel	<i>Operations:</i> typed_query typed_retrieve	O O
5	TypedNotifyLog Inherits from TypedEventLog , CosTypedNotifyChannelAdmin::TypedEventChannel	<i>Operations:</i> get_filter set_filter	O O

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