



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.816

Corrigendum 2
(08/2002)

SERIES Q: SWITCHING AND SIGNALLING
Q3 interface

CORBA-based TMN services
Corrigendum 2

ITU-T Recommendation Q.816 (2001) – Corrigendum 2

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ITU-T Recommendation Q.816

CORBA-based TMN services

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Source

Corrigendum 2 to ITU-T Recommendation Q.816 (2001) was prepared by ITU-T Study Group 4 (2001-2004) and approved under the WTSA Resolution 1 procedure on 6 August 2002.

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

Corrigendum 2

1) Subclause 6.2

Replace the following paragraph:

(R) NOTIF-4 The Notification Service shall support structured events.

with this new paragraph:

(R) NOTIF-4 The Notification Service shall support either structured events or structured and typed events. The managed system application code, however, must generate only structured or only typed notifications, not both.

And immediately after add the following Note:

NOTE – Typed events do not rely upon the use of CORBA *any* data types, making them more efficient and, therefore, the preferred choice.

Add the following text after the Note:

Since managed systems may generate either structured or typed events, managing systems generally need to be able to receive both typed and structured events for best performance and interoperability. If a managing system does support both, it shall choose the most efficient way of receiving notifications. One way to do this is to initially subscribe to both structured and typed events and note what type of events are received. The managed system must generate heartbeat notifications, so the managing system should not have to wait long to receive a notification. Since an event channel that supports both structured and typed events can translate typed events to structured but not vice versa, the managing system can deduce how the notifications are originally being generated by the managed system application. First, if the event channel does not support typed notifications, the managing system will be prevented from subscribing to typed notifications. The managing system will then know that all notifications will be structured. If the managing system can subscribe to both and receives copies of notifications in both typed and structured format, it knows that the notifications are being generated by the managed system application as typed events and that the event channel is creating a copy and translating it to structured. The managing application should then unsubscribe to structured notifications to relieve the event channel from performing this duty. If the managing system can subscribe to both but receives only structured notifications, it knows that they are being originally generated as structured notifications and it may unsubscribe to the typed notifications.

Table 2 lists the possible permutations in the kinds of events supported by the managed system application itself, the managed system's notification channel and the managing system application. Comments on each combination are provided. The managed system application code may generate only structured notifications or only typed notifications, but not both. If managed systems were allowed to generate both, it would be impossible for a managing system to receive notifications in the most efficient manner while being assured of receiving all notifications. The event channel may support structured notifications only, or structured and typed notifications. An event channel that supports only typed notifications would not conform to the OMG's Notification Service specification [4].

Table 2/Q.816

Managed system application generates	Event channel supports	Managing system can receive	Comments
Structured	Structured only	Structured only	Straightforward compatibility. The managing system simply subscribes to and receives structured events.
Structured	Structured only	Typed only	Incompatible. When the managing system attempts to subscribe to typed events the channel will not support it. The managing system should report that it is incompatible with the managed system because the managing system does not support structured events.
Structured	Structured only	Both	Compatible. The managing system's attempt to subscribe to typed events will be rejected by the channel, but it will be able to receive structured events.
Structured	Both	Structured only	Straightforward compatibility. The managing system simply subscribes to and receives structured events.
Structured	Both	Typed only	Incompatible. The managing system will be able to successfully subscribe to typed events from the event channel, but since the channel cannot translate structured events to typed events, it will not receive any notifications. The managing system will detect a problem when it does not receive heartbeat notifications. It should report the problem and suggest as a likely cause, its incompatibility with systems that generate only structured events.
Structured	Both	Both	Compatible. The managing system will be able to successfully subscribe to both structured and typed events, but since the channel cannot translate structured events to typed events, it will receive only structured events. The managing system should unsubscribe to the typed events when it detects it is receiving only structured events.
Typed	Structured only	Structured only	Nonsensical. It does not make sense for a managed system supplier to provide application code that generates typed events if the system's event channel supports only structured events.
Typed	Structured only	Typed only	As above.
Typed	Structured only	Both	As above.
Typed	Both	Structured only	Compatible. The managing system subscribes to structured events and relies upon the channel to convert. Performance could be an issue.
Typed	Both	Typed only	Straightforward compatibility. The managing system simply subscribes to and receives typed events.
Typed	Both	Both	Compatible. The managing system will be able to successfully subscribe to both structured and typed events, and will receive notifications in both forms. The managing system should unsubscribe to the structured events as soon as it successfully receives a typed event.

The incompatibility problems listed in Table 2 result when a managing system is limited to only receiving typed events. If a managing system supports only typed events, an implementation agreement must be made with managed system suppliers to also support typed events.

Replace the following paragraph:

(O) NOTIF-6 The use of typed events is optional.

with this new paragraph:

(O) NOTIF-6 Null requirement, not deleted to maintain numbering.

Delete the Note following (O) NOTIF-6.

SERIES OF ITU-T RECOMMENDATIONS

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