ITU

INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU Series Q Supplement 6 (03/99)

# SERIES Q: SWITCHING AND SIGNALLING

# Technical report TRQ.2000: Roadmap for the TRQ.2xxx-series technical reports

ITU-T Q-series Recommendations – Supplement 6

(Previously CCITT Recommendations)

#### ITU-T Q-SERIES RECOMMENDATIONS

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For further details, please refer to ITU-T List of Recommendations.

# SUPPLEMENT 6 TO ITU-T Q-SERIES RECOMMENDATIONS

#### TECHNICAL REPORT TRQ.2000: ROADMAP FOR THE TRQ.2xxx-SERIES TECHNICAL REPORTS

#### Summary

This supplement specifies the index for the TRQ.2xxx series of supplements.

#### Source

Supplement 6 to ITU-T Q-series Recommendations was prepared by ITU-T Study Group 11 (1997-2000) and was approved under the WTSC Resolution No. 5 procedure on the 15th of March 1999.

#### FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The 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 Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 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 term *recognized operating agency* (*ROA*) includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration, ROA* and *public correspondence* are defined in the *Constitution of the ITU* (*Geneva, 1992*).

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As of the date of approval of this Recommendation, the 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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#### **Supplement 6 to Q-series Recommendations**

#### TECHNICAL REPORT TRQ.2000: ROADMAP FOR THE TRQ.2xxx-SERIES TECHNICAL REPORTS

(Geneva, 1999)

#### 1 Scope

This Supplement provides an overall index for the TRQ.2000 series of technical reports, which will be published as supplements to the Q-series Recommendations.

#### 2 References

- Supplement 7 to Q-series Recommendations (1999), *Technical report TRQ.2001: General aspects for the development of unified signalling requirements.* 

#### **3** Definitions

This Supplement defines the following terms:

**3.1** call: An end-to-end communications service between two or more call party end points, or between one call party end point and its serving node.

**3.2 network connection**: An ATM network connection of topology types 1 to 6 as defined in Table A.1 contained in Annex A of Supplement 7 to Q-series Recommendations (Technical report TRQ.2001: General aspects for the development of unified signalling requirements).

**3.3 transport connection**: An AAL type 2 connection of topology type 1 as defined in Table A.1 contained in Annex A of Supplement 7 to Q-series Recommendations (Technical report TRQ.2001: General aspects for the development of unified signalling requirements).

#### 4 Abbreviations

This Supplement uses the following abbreviations:

AAL ATM Adaptation Layer

ATM Asynchronous Transfer Mode

#### 5 Overview

This Supplement acts as an index or roadmap for the TRQ.2xxx series of technical reports. In addition, this Supplement provides a cross-index of supported capabilities against signalling requirement supplements.

#### 6 Roadmap

The organization of the technical report supplements within the scope of the TRQ.2xxx series are as follows:

- TRQ.200x General documents that are used to specify the common signalling requirement elements that are referenced in other TRQ-series reports.
- TRQ.201x Interworking requirements between various signalling applications.
- TRQ.21xx Coordinated call control and bearer control signalling requirements.
- TRQ.22xx Call control signalling requirements.
- TRQ.23xx Bearer control signalling requirements.
- TRQ.24xx Transport control signalling requirements.

The detailed roadmap of TRQ supplements series is given in Table 6-1.

TRQ-series No.	Title of supplement	Status (published supplement No.)
TRQ.2000	Roadmap for the TRQ.2000-series Technical Reports	6
TRQ.2001	General aspects for the development of unified signalling requirements	7
TRQ.2002	Information flow elements	
TRQ.2010	B-ISDN signalling interworking requirements	
TRQ.2100	Coordinated call control and bearer control signalling requirements – Root-party coordinated call and bearer control	
TRQ.2110	Coordinated call control and bearer control signalling requirements – Leaf-party coordinated call and bearer control	
TRQ.2120	Coordinated call control and bearer control signalling requirements – Third-party coordinated call and bearer control	
TRQ.2130	Coordinated call control and bearer control signalling requirements – Leaf-initiated join coordinated call and bearer control	
TRQ.2200	Call control signalling requirements – Party call control	
TRQ.2300	Bearer control signalling requirements – Root-party bearer control	
TRQ.2310	Bearer control signalling requirements – Leaf-party bearer control	
TRQ.2320	Bearer control signalling requirements – Third-party bearer control	
TRQ.2400	Transport control signalling requirements – Signalling requirements for AAL type 2 link control capability set 1	8

#### Table 6-1 – Roadmap of technical reports

### 7 Signalling capabilities to supplement cross-reference

Mapping of signalling capabilities to TRQ supplements of the 2000-series technical reports is as follows:

# 7.1 Coordinated call control and bearer control signalling requirements – Root-party coordinated call and bearer control

Table 7-1 describes the signalling capabilities that are contained in TRQ.2100.

	Network connection
Coordinated call and network connection establishment	
Two-party call establishment with one or more network connections	Types 1, 2, 3 and 5
Three- or more-party call establishment with one or more network connections	Types 2, 3 and 5
Multicast address establishment with one or more network connections	Types 2, 3 and 5
Any cast address establishment with one or more network connections	Type 1
Addition of one or more new parties to an existing call with attachment to existing or new network connections	
Addition of one or more new parties with attachment to one or more existing connections	Types 2, 3 and 5
Addition of one or more new parties with attachment to one or more new network connections	Types 2, 3 and 5
Release one or more parties and their associated network connection branches from the call	
Release a party and its associated network connection branches from a two-party call	Types 1, 2, 3 and 5
Release one or more parties and their associated network connection branches from a three- or more-party call	Types 1, 2, 3 and 5
Call release with one or more parties and their associated network	
connection	
Release of a single-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections requested by a non-call owner party	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by a non-call owner party	Types 1, 2, 3 and 5

<b>Table 7-1</b> –	<b>Root-party</b>	call control	capabilities

# 7.2 Coordinated call control and bearer control signalling requirements – Leaf-party coordinated call and bearer control

Table 7-2 describes the signalling capabilities that are contained in TRQ.2110.

	Network connection
Coordinated call and network connection establishment	
Two-party call establishment with one or more network connections	Types 1, 2, 3 and 5
Three- or more-party call establishment with one or more network connections	Types 2, 3 and 5
Multicast address establishment with one or more network connections	Types 2, 3 and 5
Addition of one or more new parties to an existing call with attachment to existing or new network connections	
Addition of one or more new parties with attachment to one or more existing connections	Types 2, 3 and 5
Addition of one or more new parties with attachment to one or more new network connections	Types 2, 3 and 5
Release one or more parties and their associated network connection branches from the call	
Release a party and its associated network connection branches from a two-party call	Types 1, 2, 3 and 5
Release one or more parties and their associated network connection branches from a three- or more-party call	Types 1, 2, 3 and 5
Call release with one or more parties and their associated network	
connection	
Release of a single-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections, requested by a non-call owner party	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by a non-call owner party	Types 1, 2, 3 and 5

# Table 7-2 – Leaf-party call control capabilities

# 7.3 Coordinated call control and bearer control signalling requirements – Third-party coordinated call and bearer control

Table 7-3 describes the signalling capabilities that are contained in TRQ.2120.

	Network connection
Coordinated call and network connection establishment	
Two-party call establishment with one or more network connections	Types 1, 2, 3 and 5
Three- or more-party call establishment with one or more network connections	Types 2, 3 and 5
Multicast address establishment with one or more network connections	Types 2, 3 and 5
Addition of one or more new parties to an existing call with attachment to existing or new network connections	
Addition of one or more new parties with attachment to one or more existing connections	Types 2, 3 and 5
Addition of one or more new parties with attachment to one or more new network connections	Types 2, 3 and 5
Release one or more parties and their associated network connection branches from the call	
Release a party and its associated network connection branches from a two-party call	Types 1, 2, 3 and 5
Release one or more parties and their associated network connection branches from a three- or more-party call	Types 1, 2, 3 and 5
Call release with one or more parties and their associated network connection	
Release of a single-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by the call owner	Types 1, 2, 3 and 5
Release of a two-party call and its associated connections, requested by a non-call owner party	Types 1, 2, 3 and 5
Release of a multiparty call and its associated connections, requested by a non-call owner party	Types 1, 2, 3 and 5

# Table 7-3 – Third-party call control capabilities

# 7.4 Coordinated call control and bearer control signalling requirements – Leaf-initiated join coordinated call and bearer control

Table 7-4 describes the signalling capabilities that are contained in TRQ.2130.

	Network connection
Coordinated call and network connection establishment	
Leaf-initiated call registration	Types 1, 2, 3 and 5
Leaf-initiated call creation	Types 2, 3 and 5
Addition of one or more new parties to an existing call with attachment to existing connections	
Leaf-party request to join active LIJ call and bearer	Types 2, 3 and 5
Release one or more parties and their associated network connection branches from the call	
Removal of leaf party requested by root party	Types 1, 2, 3 and 5
Leaf-party requests to be released from the LIJ call	Types 1, 2, 3 and 5
Call release with one or more parties and their associated network connection	
LIJ call and bearer clearing by root party	Types 1, 2, 3 and 5

#### Table 7-4 – Leaf-initiated join call control capabilities

# 7.5 Call control signalling requirements – Party call control

Table 7-5 describes the signalling capabilities that are contained in TRQ.2200.

	Network connection
Call establishment without any network connections	
Establish a call with two parties	NA
Establish a call with three or more parties	NA
Addition of one or more parties without network connections to an existing call	
Add one new party to an existing call requested by any party already associated with that call	NA
Add two or more new parties to an existing call requested by any party already associated with that call	NA
Release of a party without network connections from an existing call	
Release of a party from an existing two-party call	NA
Release of a party from an existing three- or more-party call	NA
Release of a call without network connections	
Release of a single-party call requested by the call owner	NA
Release of a two-party call requested by the call owner	NA
Release of a multiparty call requested by the call owner	NA
Release of a two-party call requested by a non-call owner party	NA
Release of a multiparty call requested by a non-call owner party	NA

## Table 7-5 – Party call control capability

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# 7.6 Bearer control signalling requirements – Root-party bearer control

Table 7-6 describes the signalling capabilities that are contained in TRQ.2300.

	Network connection
Addition of one or more new network connections to an existing call requested by the party that will be the root of the new network connection(s)	
Addition of one new network connection to an existing call	Types 1, 2, 3 and 5
Addition of one or more new network connections to an existing call	Types 1, 2, 3 and 5
Attachment of one or more existing parties to one or more existing network connections requested by the party associated with the root of the existing network connection	
Attach one or more existing parties to one or more existing connections	Types 1, 2, 3 and 5
Attach one or more existing parties to one or more new connections	Types 1, 2, 3 and 5
Detachment of one or more parties from one or more connections by either the call owner, network connection owner or the party owner	
Detach a party from its associated network connection branches in a two party call	Types 1, 2, 3 and 5
Detach one or more parties from their associated network connection branches in a three- or more-party call	Types 1, 2, 3 and 5
Removal of one or more connections from a call requested by the network requested by either the connection owner or the call owner	
Removal of one or more network connections from a two-party call	Types 1, 2, 3 and 5
Removal of one or more network connections from a three- or more-party call	Types 1, 2, 3 and 5

#### Table 7-6 – Root-party call control capabilities

#### 7.7 Bearer control signalling requirements – Leaf-party bearer control

Table 7-7 describes the signalling capabilities that are contained in TRQ.2310.

#### Table 7-7 – Leaf-party call control capabilities

	Network connection
Addition of one or more new network connections to an existing call requested by the party that will be the leaf of the new network connection(s)	
Addition of one new network connection to an existing call	Types 1, 2, 3 and 5
Addition of one or more new network connections to an existing call	Types 1, 2, 3 and 5
Attachment of one or more existing parties to one or more existing network connections requested by the party associated with a leaf of the existing network connection	
Attach one or more existing parties to one or more existing connections	Types 1, 2, 3 and 5
Attach one or more existing parties to one or more new connections	Types 1, 2, 3 and 5

	Network connection
Detachment of one or more parties from one or more connections by either the call owner, the network connection owner or the party owner	
Detach a party from its associated network connection branches in a two-party call	Types 1, 2, 3 and 5
Detach one or more parties from their associated network connection branches in a three- or more-party call	Types 1, 2, 3 and 5
Removal of one or more connections from a call requested by the network requested by either the connection owner or the call owner	
Removal of one or more network connections from a two-party call	Types 1, 2, 3 and 5
Removal of one or more network connections from a three- or more-party call	Types 1, 2, 3 and 5

#### Table 7-7 – Leaf-party call control capabilities (concluded)

# 7.8 Bearer control signalling requirements – Third-party bearer control

Table 7-8 describes the signalling capabilities that are contained in TRQ.2320.

	Network connection
Addition of one or more new network connections to an existing call requested by a party that will not be attached to the new network connection(s)	
Addition of one new network connection to an existing call	Types 1, 2, 3 and 5
Addition of one or more new network connections to an existing call	Types 1, 2, 3 and 5
Attachment of one or more existing parties to one or more existing network connections requested by a party that is not attached to the existing network connection	
Attach one or more existing parties to one or more existing connections	Types 1, 2, 3 and 5
Attach one or more existing parties to one or more new connections	Types 1, 2, 3 and 5
Detachment of one or more parties from one or more connections by either the call owner, the network connection owner or the party owner	
Detach a party from its associated network connection branches in a two-party call	Types 1, 2, 3 and 5
Detach one or more parties from their associated network connection branches in a three- or more-party call	Types 1, 2, 3 and 5
Removal of one or more connections from a call requested by the network requested by either the connection owner or the call owner	
Removal of one or more network connections from a two-party call	Types 1, 2, 3 and 5
Removal of one or more network connections from a three- or more-party call	Types 1, 2, 3 and 5

### Table 7-8 – Third-party call control capabilities

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### 7.9 Transport control signalling requirements – Signalling requirements for AAL type 2 link control capability set 1

Table 7-9 describes the signalling capabilities that are contained in TRQ.2400.

	Transport connection
AAL type 2 connection establishment	
AAL type 2 connection establishment	Type 1
AAL type 2 connection release	
AAL type 2 connection release	Type 1

# Table 7-9 – AAL type 2 link control capabilities

# **ITU-T RECOMMENDATIONS SERIES**

- Series A Organization of the work of the ITU-T
- Series B Means of expression: definitions, symbols, classification
- Series C General telecommunication statistics
- Series D General tariff principles
- Series E Overall network operation, telephone service, service operation and human factors
- Series F Non-telephone telecommunication services
- Series G Transmission systems and media, digital systems and networks
- Series H Audiovisual and multimedia systems
- Series I Integrated services digital network
- Series J Transmission of television, sound programme and other multimedia signals
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- Series L Construction, installation and protection of cables and other elements of outside plant
- Series M TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
- Series N Maintenance: international sound programme and television transmission circuits
- Series O Specifications of measuring equipment
- Series P Telephone transmission quality, telephone installations, local line networks
- Series Q Switching and signalling
- Series R Telegraph transmission
- Series S Telegraph services terminal equipment
- Series T Terminals for telematic services
- Series U Telegraph switching
- Series V Data communication over the telephone network
- Series X Data networks and open system communications
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- Series Z Languages and general software aspects for telecommunication systems