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**GENERAL RECOMMENDATIONS ON TELEPHONE
SWITCHING AND SIGNALLING**

**FUNCTIONS AND INFORMATION FLOWS
FOR SERVICES IN THE ISDN**

**STAGE 2 DESCRIPTION FOR MULTIPARTY
SUPPLEMENTARY SERVICES**

CLAUSE 2 – THREE-PARTY SERVICE

ITU-T Recommendation Q.84

(Previously “CCITT Recommendation”)

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (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 (Helsinki, March 1-12, 1993).

ITU-T Recommendation Q.84, clause 2, was revised by ITU-T Study Group 11 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 17th of October 1995.

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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SUMMARY

This Recommendation provides the stage 2 service description of the Three-Party supplementary service. This service enables a user who is involved in at least two calls (one active call and at least one call on hold) to join the two calls together into a three-way conversation, i.e. a simultaneous communication between the served user and two other parties.

STAGE 2 DESCRIPTION FOR MULTIPARTY SUPPLEMENTARY SERVICES

(revised in 1995)

2 Three-Party Service (3 PTY)

2.1 Scope

This Recommendation defines the stage 2 of the Three-Party supplementary service. Stage 2 identifies the functional capabilities and the information flows needed to support the service as described in stage 1. The stage 2 description also identifies user operations not directly associated with a call (see Recommendation I.130 [1]).

This Recommendation is specified according to the methodology specified in Recommendation Q.65 [2].

In addition, this Recommendation does not specify the requirements where the service is provided to the user via a private ISDN. This Recommendation does not specify the requirements for the allocation of defined functional entities within a private ISDN, it does however define which functional entities may be allocated to a private ISDN.

This Recommendation does not specify the additional requirements where the service is provided to the user via a telecommunication network that is not an ISDN.

The Three-Party supplementary service enables a user who is involved in at least two calls (one active call and at least one call on hold) to join the two calls together into a three-way conversation, i.e. a simultaneous communication between the served user and two other parties.

This supplementary service is not applicable to non-voice services.

NOTE – This Recommendation is derived from the service description specified in Recommendation I.254.2 (1992): “Three-Party supplementary service”.

This Recommendation is applicable to the stage 3 standards for the Integrated Services Digital Network.

2.2 References

The following Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision: all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- [1] CCITT Recommendation I.130 (1988), *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN*.
- [2] CCITT Recommendation Q.65 (1988), *Stage 2 of the method for the characterization of services supported by an ISDN*.
- [3] ITU-T Recommendation I.112 (1993), *Vocabulary of terms for ISDNs*.
- [4] ITU-T Recommendation Q.71 (1993), *ISDN circuit mode switched bearer services*.
- [5] ITU-T Recommendation Z.100 (1993), *CCITT specification and description language (SDL)*.

2.3 Definitions

For the purposes of this Recommendation, the following definitions apply:

2.3.1 integrated services digital network (ISDN): See definition 308 of 2.3/I.112 [3].

2.3.2 service; telecommunications service: See definition 201 of 2.2/I.112 [3].

2.3.3 three-way conversation: Communication between all three user's agents, i.e. the served users agent and the two remote users agents.

2.4 Symbols and abbreviations

For the purposes of this Recommendation, the following abbreviations apply:

3PTY	Three-Party Service
CC	Call Control
CCA	Call Control Agent
FE	Functional Entity
FEA	Functional Entity Action
ISDN	Integrated Services Digital Network
LE	Local Exchange
PTNX	Private Telecommunication Network Exchange
SDL	Specification and Description Language
TE	Terminal Equipment

2.5 Description

Not applicable.

2.6 Derivation of the functional model

2.6.1 Functional model description

The functional model for the 3PTY supplementary service is shown in Figure 2-1.

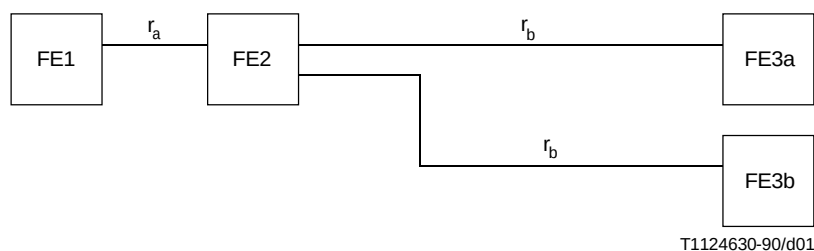


FIGURE 2-1/Q.84
Functional model

2.6.2 Description of functional entities

The Functional Entities (FEs) required for the 3PTY supplementary service above those of the basic call are:

- FE1: Served user's agent;
- FE2: 3PTY control entity;
- FE3: Remote user's agent.

2.6.3 Relationship with a basic service

The relationship of the 3PTY supplementary service with the basic service is shown in Figure 2-2.

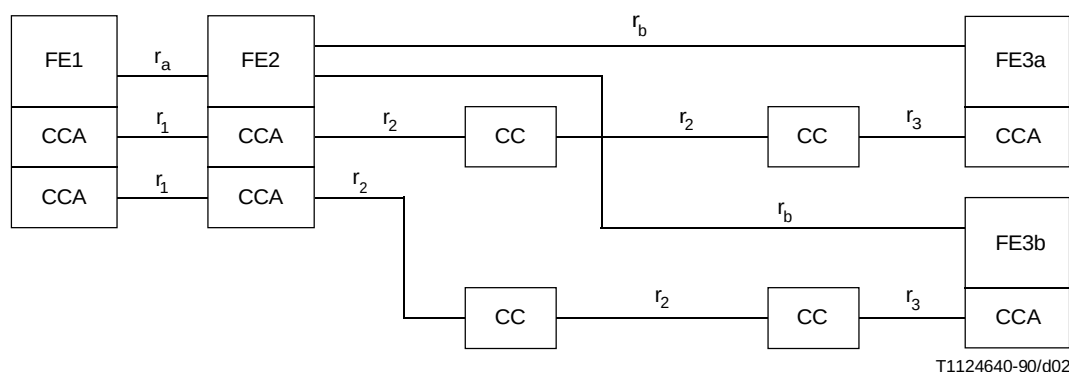


FIGURE 2-2/Q.84
Relationship with a basic service

2.7 Information flows

2.7.1 Information flow diagrams

The information flows for the 3PTY supplementary service are shown in Figures 2-3 to 2-7 for the following procedures:

- Figure 2-3: Begin three-way conversation;
- Figure 2-4: End the three-way conversation;
- Figure 2-5: Disconnect call by remote user whilst in three-way conversation mode;
- Figure 2-6: Disconnect call by served user whilst in three-way conversation mode;
- Figure 2-7: Disconnect entire call by served user whilst in three-way conversation mode.

NOTE – The information flow diagrams for the clearing of connections are provided in Recommendation Q.71 [5].

2.7.2 Definition of individual information flows

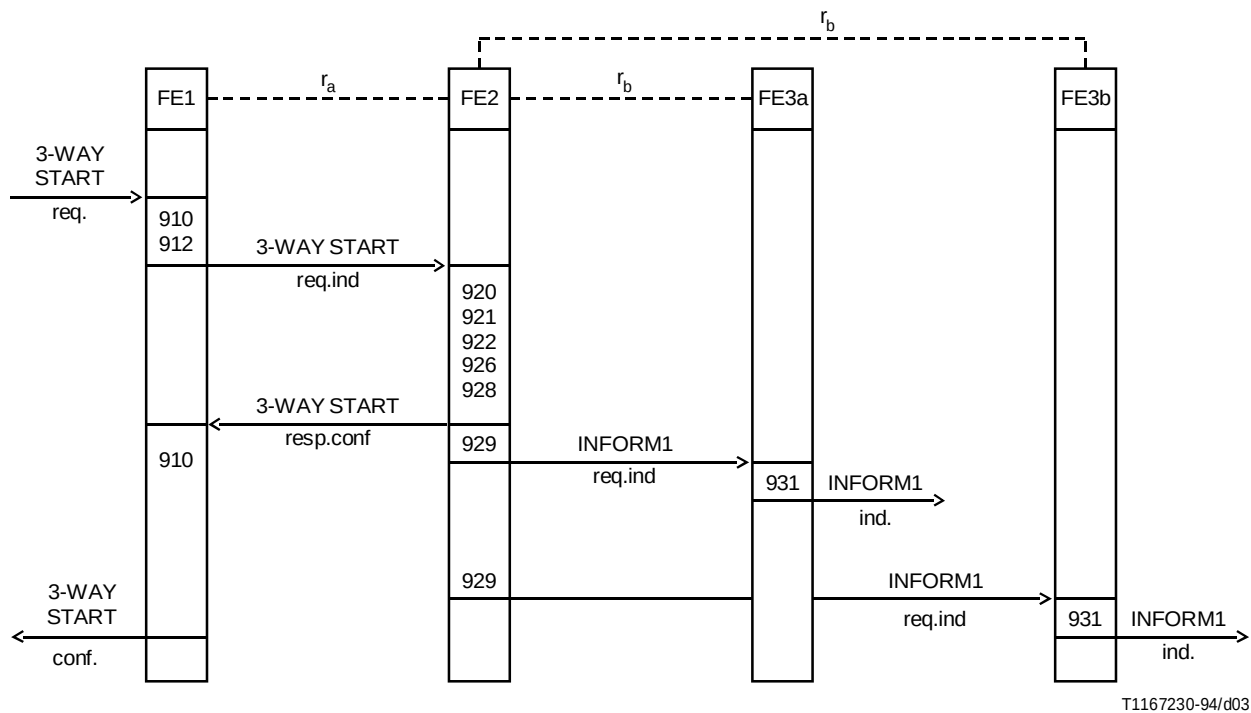
2.7.2.1 Relationship r_a

The contents of the information flows (see Figures 2-3 and 2-4) via relationship r_a and specific to the 3PTY supplementary service are given in the subclauses below.

2.7.2.1.1 Contents of 3-WAY START

This confirmed information flow initiates the bridging of the two calls into a three-way conversation mode, the request shall be sent in the context of the held call.

There are no contents of the 3-WAY START information flow.



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FIGURE 2-3/Q.84
Begin three-way conversation