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**ITU-T**

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STANDARDIZATION SECTOR  
OF ITU

**I.257.1**

(10/95)

**INTEGRATED SERVICES DIGITAL  
NETWORK (ISDN)**

**SERVICE CAPABILITIES**

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**USER-TO-USER SIGNALLING (UUS)**

**ITU-T Recommendation I.257.1**

(Previously "CCITT Recommendation")

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## 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 I.257.1 was revised by ITU-T Study Group 1 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 3rd of October 1995.

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## 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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## **USER-TO-USER SIGNALLING (UUS)**

*(revised 1995)*

### **1 Definition**

The **user-to-user (UUS) supplementary service** allows an ISDN user to send/receive a limited amount of information to/from another ISDN user over the signalling channel in association with a call to the other ISDN user.

NOTE – These procedures are applicable to User-to-User Information (UUI) transfer in association with a circuit-switched telecommunication service only. Procedures to permit UUI transfer in association with other types of calls (e.g. packet bearer services) need to be investigated.

### **2 Description**

#### **2.1 General description**

The UUS supplementary service is applicable to users who are connected to a network via a basic access or a primary rate access.

The UUS supplementary service allows the user to send/receive a limited amount of user-generated information to/from another user-network interface. This information is passed transparently (i.e. without modification of contents) through the network. Normally, the network will not interpret or act upon this information.

The user can transfer UUI in different phases of the call depending on the service(s) to which the user subscribes. These services are:

– *Service 1*

UUI can be sent and received during the origination and termination of calls.

In the case of a point-to-multipoint configuration at the called user, the following restrictions shall apply to the transfer of UUI:

- in the forward direction, UUI can be sent by the calling user only as part of the request for the origination of a call, or as part of the request to terminate the call. If the calling user terminates the call prior to the connection being established, UUI shall only be delivered to those terminals which have indicated that the user has been informed of the call;
- in the backward direction, UUI can be sent from the called user to the calling user with the indication that the called user is being informed of the call. It shall be the called user's responsibility to avoid contention. UUI can also be sent from the called user when answering the call;
- if the called user rejects the call and the network receives a single rejection from the called user, then the reason for rejection and the accompanying UUI (if any) shall be sent to the calling user;
- if the network receives multiple rejections from the called user, with the same or differing reasons for rejection, then the network shall select the first received, highest priority rejection, based on the reason(s) for rejection. The reason for rejection and the accompanying UUI (if any) of the selected rejection shall be sent to the calling user.

– *Service 2*

UUI can be sent and received after the calling user has received an indication that the called user is being informed of the call and prior to the establishment of the connection. UUI sent by the calling user prior to receiving the acceptance of the call by the called user shall, as a service provider option, be delivered to the called user after the call has been established.

Service is only applicable if a point-to-point configuration exists at the called user's side.

- *Service 3*

UUI can be sent and received only while the connection is established.

Service 1, service 2 and service 3 allow the transmission of 128 octets per message.

NOTE – During an interim period of time, some service providers may support the transfer of only 32 octets of UUI on service 1.

Limitations are also placed on the number of messages per time for service 3. The flow control of each direction shall operate independently.

## 2.2 Specific terminology

**2.2.1 user-to-user information (UUI):** The information transferred by the service UUS.

**2.2.2 point-to-point arrangement:** A situation where multiple responses to an incoming call cannot occur.

**2.2.3 point-to-multipoint arrangement:** A situation where multiple responses to an incoming call can occur.

**2.2.4 served user:** The user to whom the UUS supplementary service is provided and who requests the activation of the UUS supplementary service .

**2.2.5 remote user:** The user who receives a request for activation of the UUS supplementary service.

**2.2.6 explicit request:** The UUS supplementary service is considered as explicitly requested when a user requests the activation of the UUS supplementary service.

**2.2.7 implicit request:** The UUS supplementary service is considered as implicitly requested when no explicit request for the UUS supplementary service is made and UUI is sent by the user when originating a call.

**2.2.8 “UUS not required” request:** A request where originating a call shall continue even if the request for the UUS supplementary service cannot be accepted.

**2.2.9 “UUS required” request:** A request where originating a call shall be rejected if the request for the UUS supplementary cannot be accepted.

**2.2.10 basic access:** See Recommendation Q.9, definition 1551.

**2.2.11 called user:** The user who received an incoming call (originated by the calling user).

**2.2.12 calling user:** The user who originates, or originated, the call.

**2.2.13 integrated services digital network (ISDN):** See 2.3/I.112, definition 308.

**2.2.14 service 1:** A form of the UUS supplementary service where UUI can be sent and received during the origination and termination of calls.

**2.2.15 service 2:** A form of the UUS supplementary service where UUI can be sent and received after the calling user has received an indication that the called user is being informed of the call and prior to the establishment of the connection.

**2.2.16 service 3:** A form of the UUS supplementary service where UUI can be sent and received only while the connection is established.

**2.2.17 supplementary service:** See 2.4/I.210.

## 2.3 Qualification of the applicability to telecommunication services

Restrictions can only be identified for telecommunication services which are based on the X.31 packet mode bearer services and their future enhancement.

## **3 Procedures**

### **3.1 Provision/withdrawal**

The UUS supplementary service shall be provided to the user after prior arrangement with the service provider. No subscription is required for the remote user.

As a service provider option, one or any combination of the following can be provided:

- service 1 implicit request, or service 1 implicit request together with service 1 explicit request;
- service 2;
- service 3.

The UUS supplementary service shall be withdrawn by the service provider upon request of the subscriber or for service provider reasons.

As a service provider option, withdrawal can be done separately per service provided, or globally for all services provided to the served user.

### **3.2 Normal procedures**

#### **3.2.1 Activation/deactivation/registration**

The UUS supplementary service is activated when:

- it is implicitly requested (for service 1); or
- it is explicitly requested (for service 1, service 2 and service 3) and accepted by the remote user.

Depending on the served user's subscription to the UUS supplementary service and the provision of the UUS supplementary service by the service provider, service 1 implicit, service 1 explicit, service 2 and service 3 can be activated individually or in combination. Service 1 implicit and service 1 explicit cannot be simultaneously active.

Once a service is activated (i.e. service 1 and/or service 2 and/or service 3) the network shall accept UUI from either user in the call, according to the service that has been activated.

The UUS supplementary service requires no registration.

##### **3.2.1.1 Service 1**

Service 1 shall be requested by the calling user when originating a call, if UUI transfer is desired in either direction.

Service 1 can be activated by means of an implicit request or an explicit request. Service 1 is implicitly requested when UUI is included when originating a call. The served user shall be given an explicit response (acceptance or rejection) to an explicit request. An explicit request can include UUI.

When service 1 is explicitly requested, the network shall inform the remote user of the request. The network shall interrogate for the availability of the UUS supplementary service of the remote user. No response from the remote user shall be taken by the network as a rejection of the request for the UUS supplementary service. The network shall explicitly indicate to the served user whether or not the requested service has been successfully activated.

When service 1 is explicitly requested, the remote user can include UUI when accepting the request for the UUS supplementary service.

When service 1 is implicitly requested, service 1 is active for the call, i.e. the remote user is not required to send a response to the implicit request. However, the remote user can include UUI in the call response (e.g. for user-to-user negotiation).

Service 1 is automatically deactivated when the call is terminated.

##### **3.2.1.2 Service 2**

Service 2 shall be requested by the calling user when originating a call, if UUI transfer is desired in either direction.

Service 2 shall be explicitly requested. The served user shall be given an explicit response (acceptance or rejection) to an explicit request.

For service 2 the network shall confirm the request for the UUS supplementary service. This confirmation shall be preceded by an end-to-end check by the network for service availability. The network shall interrogate for the availability of the UUS supplementary service of the remote user. The absence of a response from the remote user shall be taken by the network as a rejection of the request for the UUS supplementary service. The network shall explicitly indicate to the served user whether or not the requested service has been successfully activated.

Service 2 is automatically deactivated when the called user is no longer being informed of the call.

### **3.2.1.3 Service 3**

The calling user can request the activation of service 3 when a call is originated or after the connection has been established. As a service provider option, the called user can request the activation of service 3 after the connection has been established. The calling user shall accept this request for the UUS supplementary service from the called user in order to activate the UUS supplementary service.

NOTE – Depending on the network connection selected when originating a call, the request for service 3 while the call is being originated or when the call has been established may fail.

Service 3 shall be explicitly requested. The served user shall be given an explicit response (acceptance or rejection) to an explicit request.

For service 3 the network shall confirm the request for the UUS supplementary service. This confirmation shall be preceded by an end-to-end check by the network for service availability. The network shall interrogate for the availability of the UUS supplementary service of the remote user. No response from the remote user shall be taken by the network as a rejection of the request for the UUS supplementary service. The network shall explicitly indicate to the served user whether or not the requested service has been successfully activated.

Service 3 is automatically deactivated when the call is no longer established.

### **3.2.1.4 “UUS required” request**

When a call is originated, the calling user can specify whether the requested service(s) is(are) required for the call, i.e. if the call shall be completed or not, if UUI cannot be passed. If the “UUS required” request is given by the user, then the call shall not be completed if UUI cannot be passed to the remote user. If the “UUS not required” request is given by the user the call shall be completed even if UUI cannot be passed. If service 1 is implicitly requested or if service 3 is requested during the call, it cannot be requested as “UUS required”.

## **3.2.2 Invocation and operation**

The UUS supplementary service shall be invoked when UUI is sent by the user to the network.

When a user sends UUI, the network shall not confirm its delivery to the user. The network shall not expect any confirmation from the destination of acceptance of UUI delivered to the user.

For service 2 and service 3, when sending a UUI message, the user can indicate that the user will send further UUI associated with this UUI message. This indication shall be given to the receiving user.

When sending a UUI message, the user may indicate the use of a particular user protocol associated with the UUI message. This indication shall be given to the receiving user. The identification of, and the use of, user protocols is outside the scope of this Recommendation.

### **3.2.2.1 Service 1**

A user can transfer UUI when originating a call. When service 1 has been activated, either user can include UUI when accepting, rejecting and terminating a call.

NOTE – A calling user can request UUI transfer when originating a call and terminate the call before a connection is established.

### **3.2.2.2 Service 2**

Any time between activation of service 2 and connection is established, a user can transfer up to 2 UUI messages in each direction to the other user involved in the call.

### **3.2.2.3 Service 3**

After service 3 has been activated, a user can transfer UUI to the other user on the call after the connection has been established.

Network flow control mechanisms shall exist after the connection has been established in order to restrict the amount of UUI sent in each direction. A burst capability of sending N messages shall immediately be available to each user, where N initially equals the value of the burst parameter X. The value of N shall be decremented by one for every message sent by the user and incremented by Y at regular intervals of T (T = 10 seconds). The value of N shall be limited to a maximum of X.

The value of the burst parameter X shall be 16.

The value of the replenishment parameter Y shall be 8.

Network flow control shall be performed only by sending the user's network. The receiving user's network shall not perform flow control on UUI messages received from the sending user's network.

If UUI messages are received at a rate which exceeds the flow control limit set by the network, the network shall discard the UUI messages that cannot be handled and respond to the first discarded UUI message with a control indication.

When the flow control restrictions are removed, and a UUI message has been discarded due to that restriction, an indication that further UUI messages can be accepted shall be given. Otherwise no indication shall be given.

### **3.3 Exceptional procedures**

#### **3.3.1 Activation/deactivation/registration**

If the service provider cannot accept an implicit request for the activation of service 1, no notification shall be given to the user.

In all other cases, if the service provider cannot accept a request for the activation of the UUS supplementary service, the service provider shall reject the request. In addition, the service provider shall indicate which of service 1, service 2 and/or service 3 have been rejected. Possible reasons for rejection are:

- 1) the specific UUS supplementary service is not subscribed to;
- 2) the remote user is not an ISDN user;
- 3) the necessary signalling connectivity between sending and receiving users does not exist;
- 4) user constraints prohibit activation of the UUS supplementary service between calling and called users (e.g. the closed user group supplementary service);
- 5) network congestion.

NOTE – If UUI cannot be transferred for reasons 2) or 4) above, when originating a call, notification will not be provided until after the network has received a response to the origination of the call, since the network does not know in advance whether UUI can be transferred or not.

#### **3.3.2 Invocation and operation**

The user may not be able to interpret incoming UUI. In such a situation, the user should discard this information without disrupting normal call handling. The network will not provide any indication to the sending user to indicate this occurrence.

NOTE 1 – UUI sent near or at the end of a call may not reach its destination, e.g. if the called user initiates disconnection procedures prior to the arrival of the UUI.

Under circumstances of network congestion, failure or if the authorized amount of user-generated information has been reached, the network may discard service 2 and service 3 UUI.

NOTE 2 – Users desiring to have confirmed UUI delivery should employ their own end-to-end protocols (i.e. acknowledgements of receipt by another UUI).

In case of excessive UUI length, no truncation shall be performed by the network. UUI shall be discarded and, as a service provider option, the sending user shall be informed.

### **3.4 Alternative procedures**

#### **3.4.1 Activation/deactivation/registration**

None identified.

#### **3.4.2 Invocation and operation**

None identified.

## **4 Network capabilities for charging**

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information.

It shall be possible to charge the subscriber accurately for the service.

## **5 Interworking requirements**

UUI can be delivered only when both users are ISDN subscribers or when a non-ISDN network provides a means of conveying the UUI.

Only those UUS supplementary service requests for service(s) supported on both the served user's network and the remote user's network/interconnecting network(s) shall be transferred. If a UUS supplementary service request for a service is received which cannot be transferred, then that UUS supplementary service request shall be rejected.

For service 1, if UUI with a length exceeding 32 octets is received by a network supporting a maximum length of 32 octets, then the receiving network shall discard the UUI. No notification shall be given to the sending user.

The value of X and Y (see 3.2.2.3) for internetwork calls shall be  $X = 16$  and  $Y = 8$ .

The UUS supplementary service can be provided to private ISDNs. When the UUS supplementary service is activated on calls between users, one attached to a public ISDN, and one attached to a private ISDN, the public network shall consider its task complete once UUI is delivered to the private ISDN.

## **6 Interaction with other supplementary services**

### **6.1 Advice Of Charge services**

#### **6.1.1 Charging information at call set-up time (AOC-S)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

#### **6.1.2 Charging information during the call (AOC-D)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

#### **6.1.3 Charging information at the end of the call (AOC-E)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.2 Call Hold (HOLD)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.3 Call transfer services**

#### **6.3.1 Explicit Call Transfer (ECT)**

When explicit call transfer is invoked, any UUS service that has previously been activated on either leg, shall be cancelled by the network.

NOTE – No specific notification will be sent to the users of the resulting call when an activated UUS service is no longer available.

It shall be the responsibility of the users on the resulting call to renegotiate service 3, if required.

#### **6.3.2 Normal call transfer**

When normal call transfer is completed, any UUS service that has previously been activated on either leg, shall be cancelled by the network.

NOTE – No specific notification will be sent to the users of the resulting call when an activated UUS service is no longer available.

It shall be the responsibility of the users on the resulting call to renegotiate service 3, if required.

#### **6.4 Call Waiting (CW)**

UUI (for the operation of service 1) included in the call request shall be delivered to the called user with the call waiting indication.

UUI (for the operation of service 2) sent from the calling user to the called user during the alerting phase can be sent when a point-to-point configuration exists at the called side.

There is no interaction with service 3 of the UUS supplementary service.

#### **6.5 Closed User Group (CUG)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

#### **6.6 Completion of calls services**

##### **6.6.1 Completion of Calls on No Reply (CCNR)**

For further study.

##### **6.6.2 Completion of Calls to Busy Subscriber (CCBS)**

For further study.

#### **6.7 Conference services**

##### **6.7.1 Conference Calling (CONF)**

For a conference, only service 3 shall be available.

NOTE 1 – However, on calls which are set up to potential conferees outside the conference, service 1 and/or service 2 may be available.

In the following paragraphs, references to the UUS supplementary service refer only to service 3.

The UUS supplementary service cannot be activated by the conference controller, nor by a conferee, for communication between the participants in the conference.

When a user is added to the conference and the UUS supplementary service has been activated on the call between the conference controller and that user, the UUS supplementary service shall remain activated for communication between the conference controller and that conferee.

If the UUS supplementary service has been activated for communication between the conference controller and a conferee, then when a private communication is created with that party, the UUS supplementary service shall remain activated for the private communication.

NOTE 2 – Once this private communication is created, it is considered as a separate call and therefore the normal procedures for the UUS supplementary service apply.

UUI can be sent by the conference controller to conferees individually, or broadcast to all conferees. UUI can be received by the conference controller from any of the conferees. The network shall identify the conferee sending the UUI to the conference controller.

The same limitations on the amount of UUI which can be transferred between two users shall apply to communications between the conference controller and the conference.

Conferees can send UUI to and receive UUI from the conference controller. UUI shall not be transferred between the conferees in association with the conference.

##### **6.7.2 Three-Party (3PTY)**

During the three-way conversation, the served user of the three party supplementary service can send UUI separately to each remote party of the three party supplementary service, and the served user of the three party supplementary service can receive UUI separately from each remote party of the three party supplementary service. UUI shall not be transferred between the remote parties of the three party supplementary service.

## **6.8 Diversion services**

See also Annex A.

### **6.8.1 Call Deflection (CD)**

Call deflection before alerting: see call forwarding busy (the call shall be treated as if the user determined user busy condition exists).

Call deflection after alerting: see call forwarding no reply.

### **6.8.2 Call Forwarding Busy (CFB)**

See interaction with call forwarding unconditional. However, if a user determined user busy condition exists, any UUI and/or request for UUS shall also be delivered to the forwarding user when the call is offered.

### **6.8.3 Call Forwarding No Reply (CFNR)**

Calls originated by a user with call forwarding no reply activated:

Since call forwarding no reply does not affect the forwarding user's ability to make outgoing calls, a user with call forwarding no reply activated can send UUI in association with an ongoing call or at the set-up of a new call.

Calls incoming to a user with call forwarding no reply activated:

UUS service 1: If the UUS service is explicitly requested and the forwarding user explicitly rejects the request, the UUS request and the UUI (if any) shall not be forwarded with the call. However, if the request was indicated as "UUI required" and either the forwarding or forwarded-to-user explicitly rejects the request, the call shall be rejected. In all other cases the UUS request and/or UUI shall be forwarded or delivered with the call.

UUS service 2: If the UUS service is requested as "UUI not required", the call will be forwarded without the UUS request. If the UUS service is requested as "UUI required", call forwarding no reply shall be overridden (i.e. the call is treated as if call forwarding no reply was not activated).

UUS service 3: Any request for UUS service 3 that accompanies the set-up request shall be forwarded with the call.

NOTE – As a network provider option, the forwarding of UUI and/or UUS requests can be restricted to forwarding users who subscribe to the relevant UUS supplementary service.

After forwarding:

UUS Service 3 may be requested during the active phase of the call.

### **6.8.4 Call Forwarding Unconditional (CFU)**

Calls originated by a user with call forwarding unconditional activated:

Since call forwarding unconditional does not affect the forwarding user's ability to make outgoing calls, a user with call forwarding unconditional activated can send and receive UUI in association with an ongoing call or at the set-up of a new call.

Calls incoming to a user with call forwarding unconditional activated:

Any UUI or request for UUS that accompanies the set-up request shall be forwarded with the call.

NOTE – As a network provider option, the forwarding of UUI and/or UUS requests can be restricted to forwarding users who subscribe to the relevant UUS supplementary service.

After forwarding:

UUS service 3 may be requested during the active phase of the call.

## **6.9 Direct-Dialling-In (DDI)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.10 In-call-Modification (IM)**

Only service 3 (UUS during the active phase of the call) applies. Services 1 and 2 are not applicable as the In-call modification supplementary service can only occur during an active call.

## **6.11 ISDN freephone Service (IFS)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.12 Line Hunting (LH)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.13 Malicious Call Identification (MCID)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.14 Multi-Level Precedence and Preemption (MLPP)**

When a connection is preempted, the service provider should make certain that User-to-User Information (UUI) of the preempted connection is not delivered to the users of the new connection.

## **6.15 Multiple Subscriber Number (MSN)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.16 Name identification services**

### **6.16.1 Calling Name Identification Presentation (CNIP)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.16.2 Calling Name Identification Restriction (CNIR)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.17 Number identification services**

### **6.17.1 Calling Line Identification Presentation (CLIP)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.17.2 Calling Line Identification Restriction (CLIR)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.17.3 Connected Line Identification Presentation (COLP)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

### **6.17.4 Connected Line Identification Restriction (COLR)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.18 Outgoing Call Barring (OCB)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

## **6.19 Reverse Charging (REV)**

**REV Case A:** UUI is charged to the called user, if reverse charging is accepted. If the request for reverse charging is rejected, charging should be according to the UUS supplementary service.

**REV Case B:** Before the reverse charging acceptance, UUI is charged based on normal charging principles. After the acceptance, UUI is charged to the called user.

**REV Case C:** UUI is charged to the called user.

**REV Case D:** UUI is charged to the called user.

#### **6.20 Sub-addressing (SUB)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

#### **6.21 Support of Private Numbering Plans (SPNP)**

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

#### **6.22 Terminal Portability (TP)**

Not compatible, i.e. while a call is suspended UUI cannot be transferred between the two users.

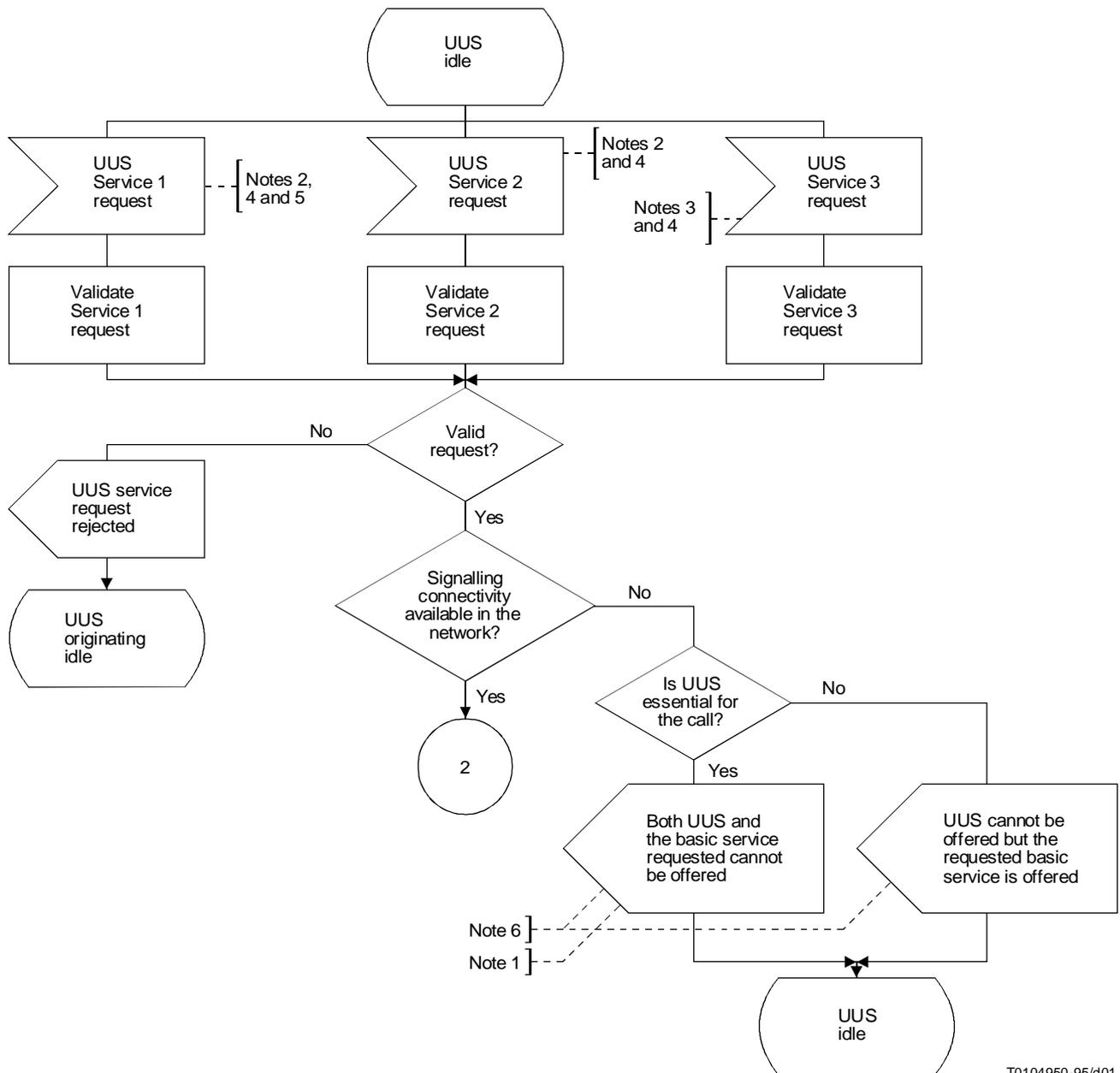
NOTE – The network shall not store any UUI while the call is suspended.

#### **6.23 User-to-User signalling**

Not applicable.

### **7 Dynamic description**

The dynamic description of this service is shown in Figure 1.



T0104950-95/d01

**NOTES**

- 1 The call is cleared.
- 2 This service must be requested as call set-up by the calling user.
- 3 This service 3 may be requested at call set-up or during the active phase of the call by the calling user and during the active phase of the call by the called user.
- 4 As an option, at call set-up, users should be able to specify whether the requested UUS service is essential or non-essential for the call.
- 5 Service 1 may be explicitly or implicitly requested.
- 6 The reasons for rejections are given in § 3.3.

FIGURE 1/I.257.1 (sheet 1 of 3)

**User-to-User Signalling**

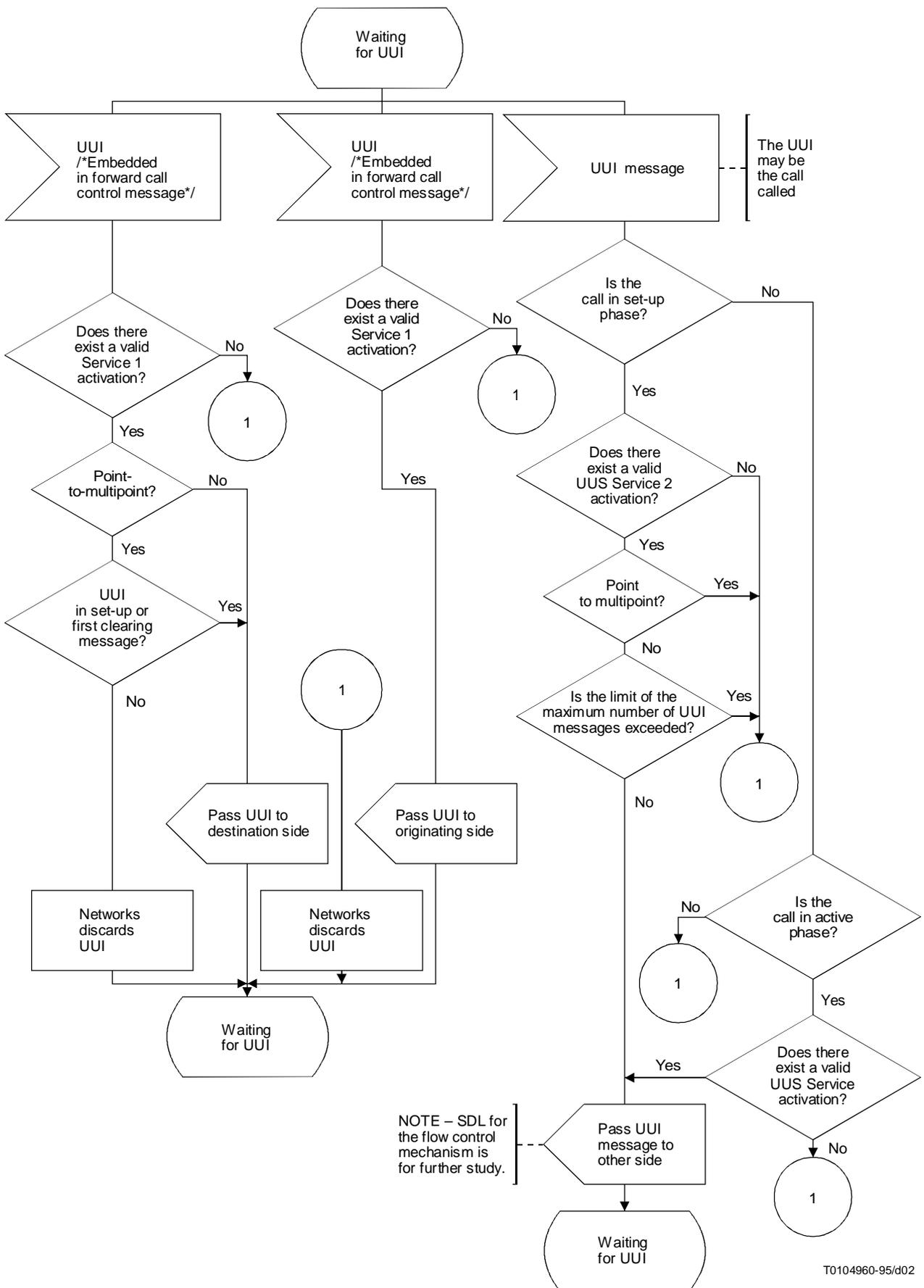
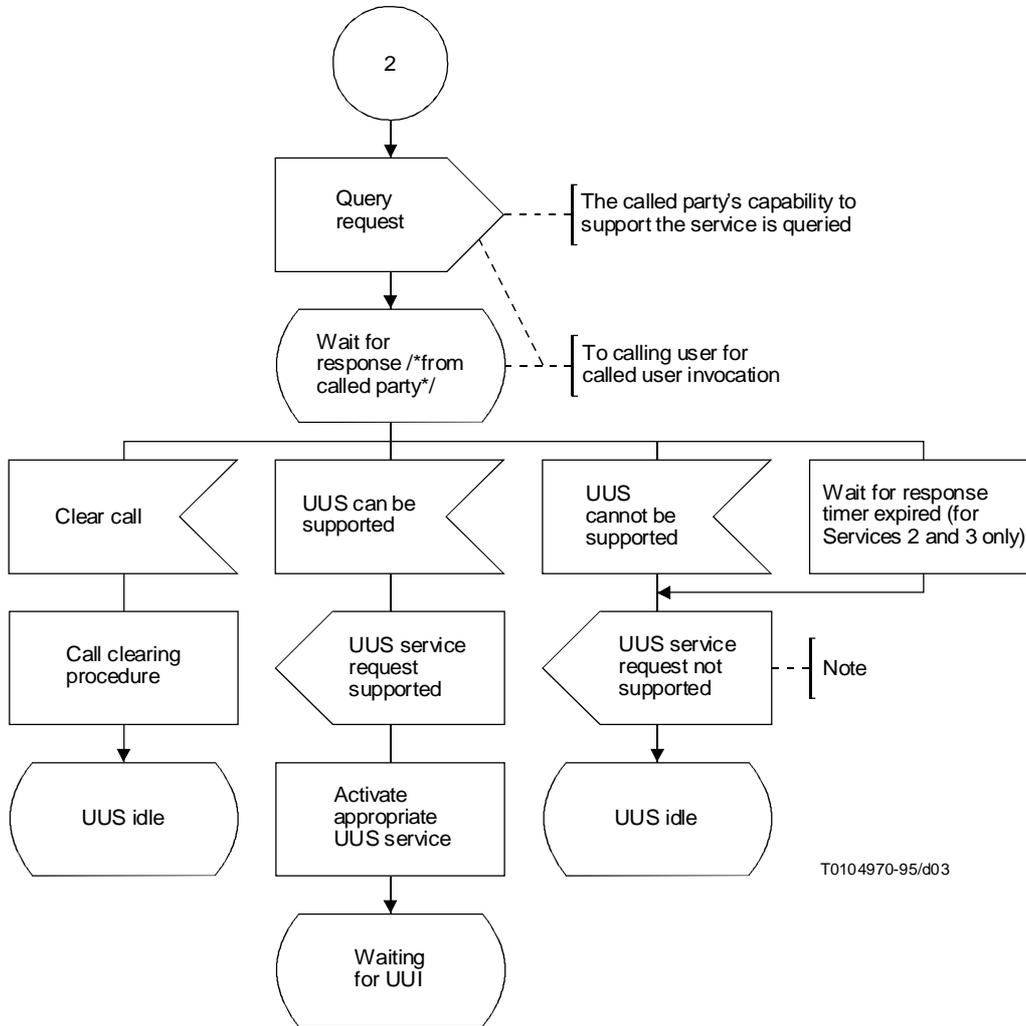


FIGURE 1/I.257.1 (sheet 2 of 3)

User-to-User Signalling



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NOTE – The reasons for rejections are given in 3.3.

FIGURE 1/I.257.1 (sheet 3 of 3)

**User-to-User Signalling**

## Annex A

### Interaction between User-to-User Signalling and call diversion services

(This annex forms an integral part of this Recommendation)

TABLE A.1/I.257.1

#### Interaction between UUS and:

- Call forwarding unconditional
- Call forwarding busy
- Call deflection (before alerting)

Calling user		Forwarding user	
UUS Service	Type of request	Call is forwarded	UUS request and/or UUI forwarded
1	Implicit	Yes	Yes
1	Explicit, not required	Yes	Yes
1	Explicit, required	Yes	Yes
2	Explicit, not required	Yes	Yes
2	Explicit, required	Yes	Yes
3	Explicit, not required, requested during in call set-up	Yes	Yes
3	Explicit, required, requested during in call set-up	Yes	Yes
3	Explicit, requested during the call	Not applicable	Yes

**NOTES**

1 In case of call forwarding unconditional or call forwarding busy (network determined user busy), the UUS request and/or UUI will not be given to the forwarding user. In case of call forwarding busy (user determined user busy), the UUS request and/or UUI will be given to the forwarding user.

2 As a network option, the forwarding of UUI and/or UUS requests can be restricted to forwarding users who subscribe to the relevant UUS supplementary service.

TABLE A.2/I.257.1

**Interaction between UUS and:**

- Call forwarding no reply
- Call deflection (after alerting)

Calling user		Forwarding user		
Service UUS	Type of request	UUS request and/or UUI given to diverting user	Call is forwarded	UUS request and/or UUI forwarded
1	Implicit	Yes	Yes	Yes
1	Explicit, not required	Yes (Acceptance) Yes (No response) Yes (Rejection)	Yes Yes Yes	Yes Yes No
1	Explicit, required	Yes (Acceptance) Yes (No response) Yes (Rejection)	Yes Yes Not applicable (Rejection)	Yes Yes Not applicable
2	Explicit, not required	Yes	Yes	No
2	Explicit, required	Yes (Acceptance) Yes (Rejection)	No (Maintain) Not applicable (Rejection)	No Not applicable
3	Explicit, not required requested during in call set-up	Yes	Yes	Yes
3-B	Explicit, required requested during in call set-up	Yes	Yes	Yes
3	Explicit, requested during the call	Not applicable	Not applicable	Yes

NOTE – As a network option, the forwarding of UUI and/or UUS requests can be restricted to forwarding users who subscribe to the relevant UUS supplementary service.