Recommendation T/SF 62 (Edinburgh 1988)

SUPPLEMENTARY SERVICE DIGITAL CONNECTIVITY FOR TELESERVICES

Recommendation proposed by Working Group T/WG 7 "Services and facilities" (SF)

Text of the Recommendation adopted by "Telecommunications" Commission:

"The European Conference of Posts and Telecommunications Administrations,

considering

— that both conventional analog networks and digital IDN/ISDN networks will exist simultaneously for a long period of time,

— that a great demand is envisaged for Teleservices using 64 kbit/s connections in the early phase of IDN and ISDN introduction,

— that public networks will provide a competitive and cost-effective means of providing Teleservices operating on 64 kbit/s,

recommends

— that a supplementary service Digital Connectivity for Teleservices should be standardized on the bases of user and operational requirements as presented in this document."

A SERVICE PROSE DEFINITION AND DESCRIPTION

1. DEFINITION

The digital connectivity is a user facility that enables user to establish a fully digital path at 64 kbit/s user-to-user(s).

2. DESCRIPTION

Supplementary service Digital Connectivity is an optional facility assigned to the user and provided on a call request basis (version a) or by specific subscriber category (version b).

A natural condition is that both A- and B-subscribers have a digital subscriber line.

3. OPERATIONAL REQUIREMENTS

3.1. General requirements

3.1.1. *Provision*

The Administration provides the service on a subscription base. This applies for the both two cases of the service, i.e. the service applies for all calls or the service is activated on a call-based request.

3.1.2. *Withdrawal*

The Administration will withdraw the service at the request of the subscriber or for administrative reasons.

3.1.3. *Invocation*

When the service is provided for all calls it will automatically be invoked by the network at the call set up. For on a call based request it will be invoked at the activation of the service by the user using a service code as described in paragraph 4.

3.1.4. *Normal operation with successful outcome*

At a call set up when the network identifies a digital connectivity request, an attempt on the possibility to route the call on a digital path is made by the network:

If the attempt is successful, the call is routed on 64 kbit/s routes.

3.1.5. *Exceptional operation or unsuccessful outcome*

At a call setup when the network identifies a digital connectivity request, an attempt on the possibility to route the call on a digital path is made by the network:

If the attempt is unsuccessful, the call is rejected and the subscriber will receive an appropriate indication:
— an appropriate announcement and/or a visual indication, e.g. "digital path not provided" in case where a routing that allows a complete digital path doesn't exist, or
— a congestion tone in case where a digital path exists but it is not possible to complete the call due to congestion or failure.

3.1.6. *Quality of service*

Quality of service requirements are the same as set for the Teleservice(s) provided to the concerned subscriber lines. Important quality of service character at the early provision of the service is the number of unsuccessful calls due to lack of digital path, and certain measures should be set to be a threshold of the marketing of the service. This is for further study.

3.2. **Controlling subscriber requirements**

3.2.1. *Activation/deactivation*

In version a), activation occurs together with invocation; the service is automatically deactivated after each call.

In version b), the supplementary service is activated on provision by the Administration, using the operation and maintenance interface and the service remains continuously activated until withdrawal.

3.2.2. *Invocation*

In version a), the service is invoked by means of control procedure which includes a call request.

In version b), the service is automatically invoked on each call set up.

3.2.3. *Testing*

The subscriber may test the service by using it.

3.2.4. *Interrogation*

Interrogation of the registered information may be provided.

3.3. **Service operation requirements**

Advanced signalling systems such as CCITT SS No. 7 makes it possible to select a 64 kbit/s path and to inform the concerned subscribers accordingly.

However, some digital 64 kbit/s connections may use conventional signalling systems with limitations in this respect. Therefore, a handshaking operation is necessary between the originating subscriber's and destinating subscriber's connection in order to verify an end-to-end 64 kbit/s connectivity.

3.4. **Interaction with other supplementary services**

The service relates to call set-up phase. Compatibility with supplementary services such as abbreviated dialling where a subscriber control procedure for use of the service is necessary at the call set-up phase should be resolved for the on a call-based request case of the service. The following is recommended for a simultaneous use of abbreviated dialling and digital connectivity call set-up:
LH DT★ 32★★ AN ... for prefix method
LH DT★ 32★ AN # ... for suffix method
when procedures harmonized for the 12-button terminal are used.

3.5. **Interworking considerations**

When the service is invoked and a call has been set-up, call waiting and operator intrusion or any other form of supervisory tones and announcements applied after answer are not allowed either to the A-subscriber or to the B-subscriber if these interrupt the 64 kbit/s channel. This applies to teleservices other than telephony. Problems of interworking between networks require further study.

3.6. Administration requirements

The service is provided by the Administration on a subscription base. At provision the specific subscriber category and the type of service required is registered into the network by the Administration.

The Administration erasures the service at the withdrawal of the service.

3.7. Charging requirements

A charge for the registration of the service together with a rental charge for, and provision period of, the service should apply. It shall be possible to charge as for normal call, or at a higher rate. An additional charge for the use of the service at each call may apply.

Interrogation may be charged if provided.

4. CONTROL POSSIBILITIES

4.1. General

Service code 32 is allocated for the on a call-based request case of the service.

4.2. Registration/Erasure

Not applicable.

4.3. Activation/Deactivation

There are no separate control procedures for activation/deactivation (see paragraph 3.2.1.).

4.4. Invocation

For version a) the recommended control procedure for the standard 12-button terminal.

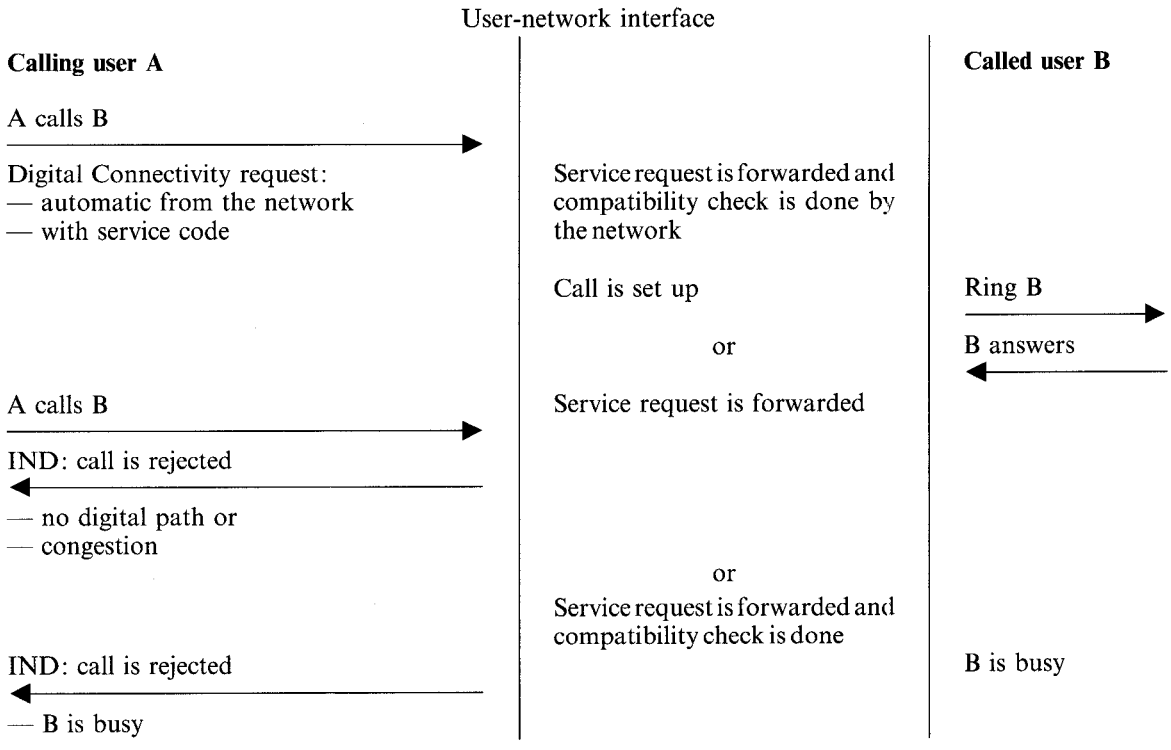
LH DT ★ 32 (★) TN (#)

For version b) there is no specific invocation procedure (see paragraph 3.2.2.). The service is automatically invoked on each normal call set-up procedure.

4.5. Interrogation

Not applicable.

A′ DYNAMIC DESCRIPTION



B′ TABLE OF ATTRIBUTES AND THEIR POSSIBLE VALUES

Attribute name	Possible values
1. Means of subscription/provision (MS)	N
2. Supplementary service specific parameters (SSP)	I
3. Service activation/deactivation (SA/D)	CC, S
4. Means of specified period activation/deactivation (MSA)	N
5. Means of parameter registration, interrogation and modification (PRM)	N, L
6. Means of service invocation (MSI)	N, L
7. Applicability to telecommunication services (AT)	UNR, SP, VBD, ASD, AVD, TEL, TTX, TTF Videophone
8. Charging	For further study
9. Compatibility	For further study

Legends:

ASD	64 kbit/s unrestricted, alternate speech, data
AVD	64 kbit/s alternate speech, 3.1 kHz
CC	Call-by-call
I	ISDN address
L	User controlled, local
MSS	Maximum service size
N	Network controlled
R	User controlled, remote
S	Specified periods
SP	64 kbit/s speech
TEL	Telephony
TI	Time related information
TTX	Teletex
U	User identification
UNR	64 kbit/s unrestricted
VBD	64 kbit/s voiceband data, 3.1 kHz audio
TTF	Telefax