Recommendation T/SF 31-04 (Cannes 1983, revised in Odense 1986)

INTERCOMMUNICATION ASPECTS OF AN INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

Content

GENERAL INTERCOMMUNICATION ASPECTS

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GENERAL INTERCOMMUNICATION ASPECTS

Requirements between ISDN Bearer Services

— that the ISDN offers customers a range of Bearer Services to satisfy particular requirements. The range of Bearer Services offered by one particular ISDN may not completely correspond with that offered by another ISDN;

— that intercommunication between the same or similar ISDN Bearer Services must therefore be provided in order to satisfy customer needs. This intercommunication should take account of the capabilities of the Bearer concerned and the likely customer applications.

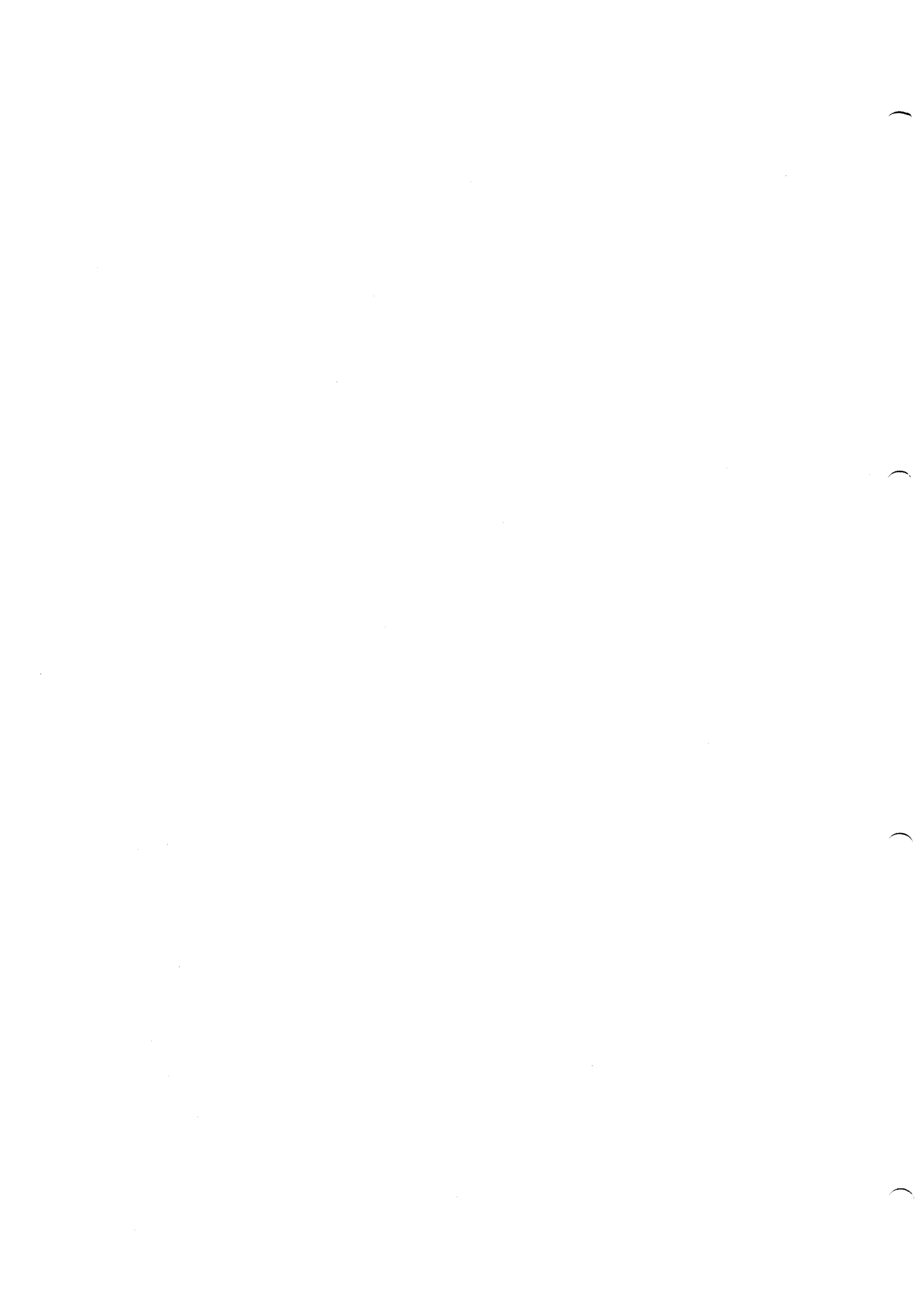### Requirements between ISDN and non-ISDN Bearer Services

— that customers using ISDN Bearer Services will require the ability to communicate with other customers on other networks. Intercommunication must therefore be provided between certain ISDN Bearer Services and Bearer Services on other networks particularly in the early stages of the introduction of the ISDN.

Requirements for Teleservices

— customers using existing Teleservices provided by the ISDN will require to communicate with customers on the same Teleservices provided by other networks;

— that in a similar manner, customer using new Teleservices provided by ISDN will benefit from the ability to communicate with customers on similar existing Teleservices.

Detailed Requirements for Intercommunication

— that the detailed requirements for intercommunication of ISDN services with other services are shown in Annex 1 of 3.

Annex 1

Interworking of ISDN Bearer Services

SUBSCRIBER A ISDN BEARER SERVICES \ SUBSCRIBER B ISDN BEARER SERVICES	1.1.1. Circuit Mode, 64 kbit/s unrestricted, Demand	1.2.1. Circuit Mode, 64 kbit/s for speech, Demand	1.3.1. Circuit Mode, 64 kbit/s for 3.1 kHz audio, Demand	1.1.2. Circuit Mode, 64 kbit/s unrestricted, Permanent	1.3.2. Circuit Mode, 64 kbit/s for 3.1 kHz audio, Permanent	1.7.2. Circuit Mode, 1,920 kbit/s, Permanent	2.1.1. Packet Mode, Virtual Circuit, B Channel	2.2. Packet Mode, Connectionless, D Channel
1.1.1. Circuit Mode, 64 kbit/s unrestricted, Demand	YES	YES	YES	NO	NO	NO	NO	NO
1.2.1. Circuit Mode, 64 kbit/s for speech, Demand	YES	YES	YES	NO	NO	NO	NO	NO
1.3.1. Circuit Mode, 64 kbit/s for 3.1. kHz audio, Demand	YES	YES	YES	NO	NO	NO	NO	NO
1.1.2. Circuit Mode, 64 kbit/s unrestricted, Permanent	NO	NO	NO	YES	YES	NO	NO	NO
1.3.2. Circuit Mode, 64 kbit/s for 3.1 kHz audio, Permanent	NO	NO	NO	YES	YES	NO	NO	NO
1.7.2. Circuit Mode, 1,920 kbit/s, Permanent	NO	NO	NO	NO	NO	YES	YES	NO
2.1.1. Packet Mode, Virtual Circuit, B Channel	NO	NO	NO	NO	NO	YES	YES	?
2.2. Packet Mode, Connectionless, D Channel	NO	NO	NO	NO	NO	NO	?	YES

KEY:

YES – Standardized Interworking possible.

NO – Standardized Interworking not possible.

? – Further Study.

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Annex 2

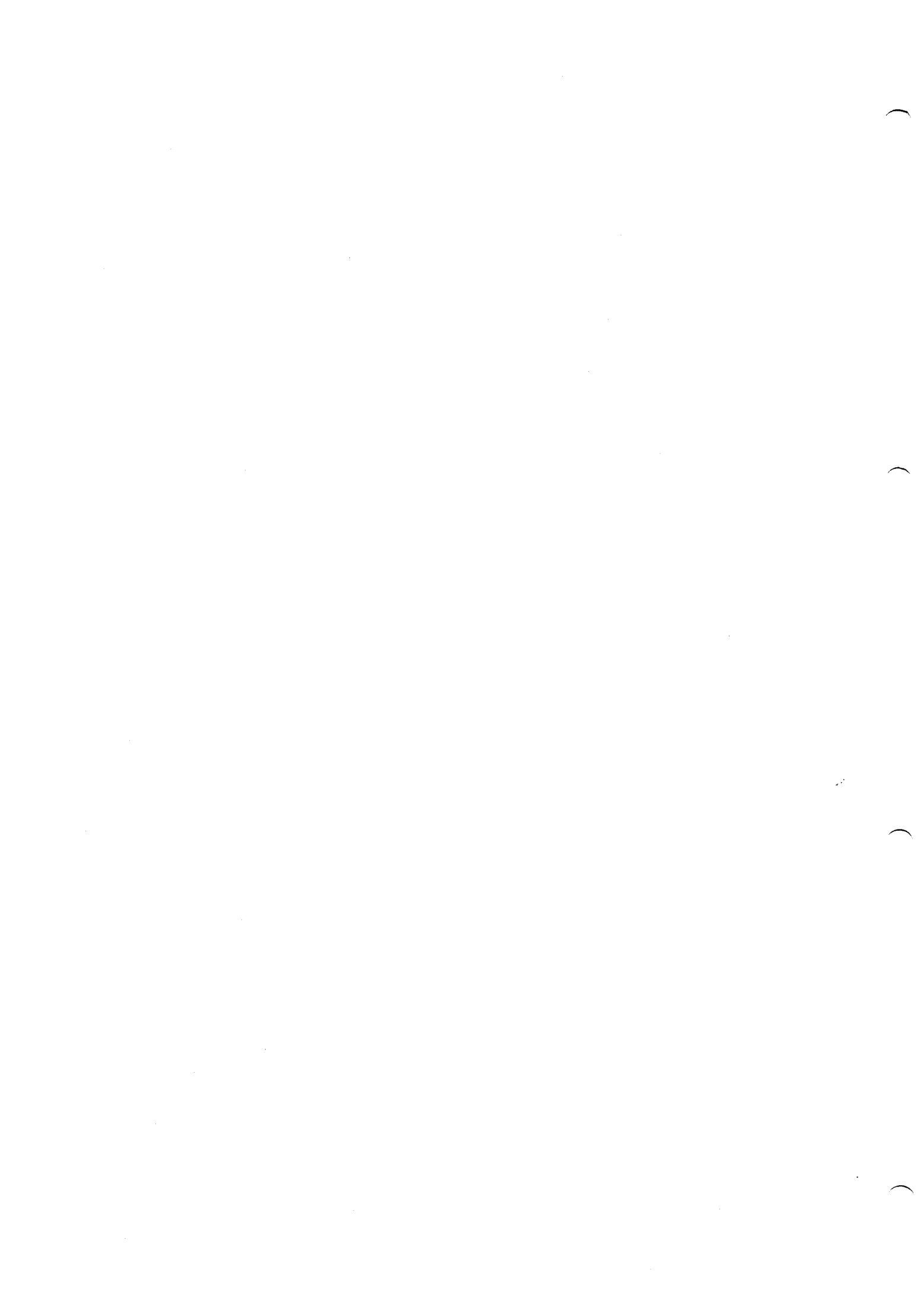### Service Interworking Requirements, ISDN Bearer Services with other Bearer Services

SUBSCRIBER A ISDN BEARER SERVICES	1. PSTN Bearer Service	2. Telex Bearer Service	3. Circuit Switched Digital Bearer Service 2	4. Packet Switched Digital Bearer Service 3	5. Unswitched 1 way Wideband Bearer Service	6. 2 way Mobile Bearer Service	7. 1 way Mobile Bearer Service	8. Maritime Mobile Bearer Service	9. Unswitched Analogue Bearer Service	10. Unswitched Digital Bearer Service	11. Private Bearer Services
1.1.1. Circuit Mode, 64 kbit/s unrestricted, Demand	YES	YES	YES	NO	NO	YES	NO	YES	NO	NO	?
1.2.1. Circuit Mode, 64 kbit/s for speech, Demand	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO	?
1.3.1. Circuit Mode, 64 kbit/s for 3.1. kHz audio, Demand	YES	?	NO	NO	NO	YES	NO	YES	NO	NO	?
1.1.2. Circuit Mode, 64 kbit/s unrestricted, Permanent	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	?
1.3.2. Circuit Mode, 64 kbit/s for 3.1 kHz audio, Permanent	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	?
1.7.2. Circuit Mode, 1,920 kbit/s, Permanent	NO	NO	NO	NO	?	NO	NO	NO	?	?	?
2.1.1. Packet Mode, Virtual Circuit, B Channel	YES	YES	YES	YES	NO	YES	NO	YES	NO	NO	?
2.2. Packet Mode, Connectionless, D Channel	NO	?	NO	YES	NO	?	NO	NO	NO	NO	?

SUBSCRIBER B
NON ISDN BEARER SERVICES

KEY:

YES – Standardized Interworking possible.

NO – Standardized Interworking not possible.

? – Requires further Study.

Annex 3

Teleservice intercommunication requirements due to the introduction of ISDN

A. Existing teleservices to be provided in the ISDN to intercommunicate with same services on present networks including existing conversion:

1. Telephone . . . . . . Telephone (PSTN)
2. Videotex . . . . Videotex (PSTN) #
3. Telefax Gr 2/3 . . . . Telefax Gr 2/3 (PSTN, CSPDN)
4. Teletex . . . . Teletex (PSTN, CSPDN, PSDN)
   Telex
5. MHSS★ . . . . . . MHSS (PSTN, CSPDN, PSPDN)

★ Only electronic mailbox services.

May involve access via PSPDN for information provided.

B. New Services that can be provided in the ISDN with minimum intercommunication requirements to other services on present networks and the ISDN:

1. Textfax . . . . Teletex (PSTN, CSPDN, PSPDN, ISDN)
   (prov. name)   Telefax Gr 2/3 (PSTN, CSPDN)
                        Telefax Gr 4 (ISDN, CSPDN)
                        Telex
2. Telefax Gr 4 . . . . . Telefax Gr 2/3 (PSTN)
                        Telefax Gr 4 (CSPDN)
3. Telephone 7 kHz . . . Telephone (PSTN, ISDN)
4. Video telephone . . . Telephone (PSTN, ISDN, ISDN 7 kHz)

This list is not comprehensive and other services may be included.

Note: Intercommunication between different services is a separate item of study.

Legend:
ISDN   Integrated Services Digital Network.
PSTN   Public Switched Telephone Network.
CSPDN   Circuit Switched Public Data Network.
PSPDN   Packet Switched Public Data Network.
MHSS   Message Handling System Service.