



TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

INTERWORKING BETWEEN NETWORKS

MOBILE DATA TRANSMISSION SYSTEMS

INTERWORKING BETWEEN PACKET SWITCHED PUBLIC DATA NETWORKS AND PUBLIC MARITIME MOBILE SATELLITE DATA TRANSMISSION SYSTEMS

ITU-T Recommendation X.352

(Extract from the *Blue Book*)

NOTES

- 1 ITU-T Recommendation X.352 was published in Fascicle VIII.6 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).
- 2 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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Recommendation X.352

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(Malaga-Torremolinos, 1984; amended at Melbourne, 1988)

The CCITT,

considering

- (a) that the Maritime Satellite is now being operated by the International Maritime Satellite Organization (INMARSAT);
- (b) that interworking between the Maritime Satellite Service and public data networks is required;
- (c) that Recommendation X.350 specifies general interworking requirements for data transmission in Public Mobile Satellite Systems and Recommendation X.353 outlines the routing principles for interconnecting Public Mobile Satellite Systems with public data networks;
- (d) that Recommendation X.25 specifies the interface between data terminals and data circuit-terminating equipment for terminals operating in the packet mode on public data networks, and that Recommendation X.75 specifies detailed procedures applicable to call control between public networks providing data transmission services;
- (e) that the physical link between a mobile earth station and a data switching exchange (DSE) will only exist on a temporary basis, i.e. so long as a virtual call exists between the ship and the DSE;
- (f) that Recommendation X.141 provides guidance with respect to general principles for the detection and correction of errors in public data networks,

unanimously recommends

that the following interworking principles and interface conditions should apply for operations at the network layer in the packet mode between a mobile DTE and a public data network.

1 Definitions

For definitions of terms used in relation with data transmission in public mobile satellite systems, see Recommendation X.350.

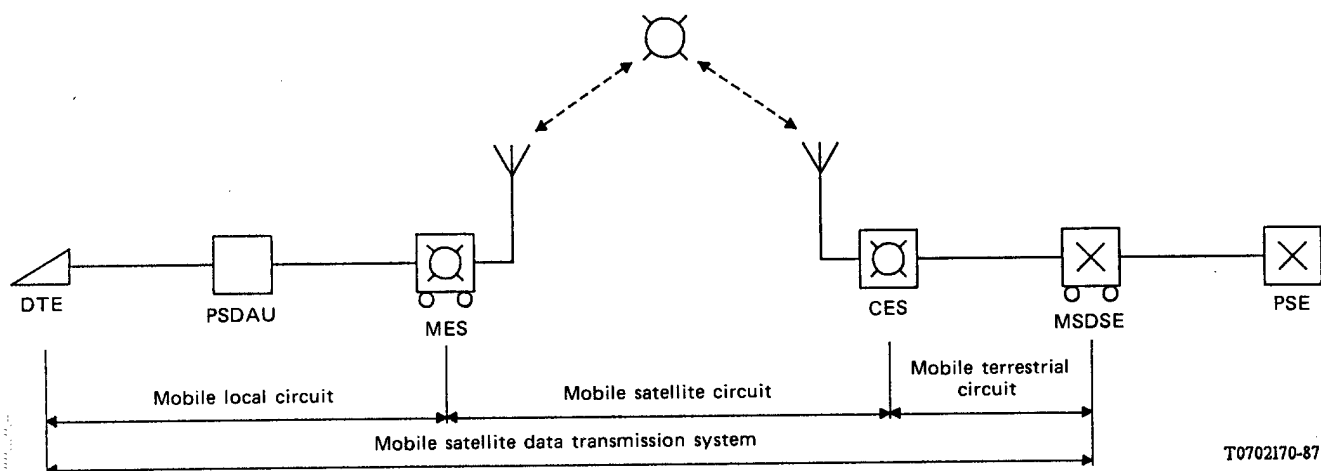
For the purpose of this Recommendation the **mobile satellite data switching exchange (MSDSE)** is defined as the functional interface between the public mobile satellite data transmission system and a packet switched public data network.

The MSDSE provides the following functions:

- interworking between the signalling systems used in the public mobile satellite data transmission system and the PSPDN;
- routing and call control for calls to and from mobile earth stations;
- charging.

The composition of the public maritime mobile satellite data transmission system for interconnection with packet switched PDN is shown in Figure 1/X.352.

The Packet Switched Data Access Unit (PSDAU) provides a means of interconnecting a mobile DTE with the terrestrial packet switched public data network, through a mobile earth station and coast earth station equipped with packet switched data facility.

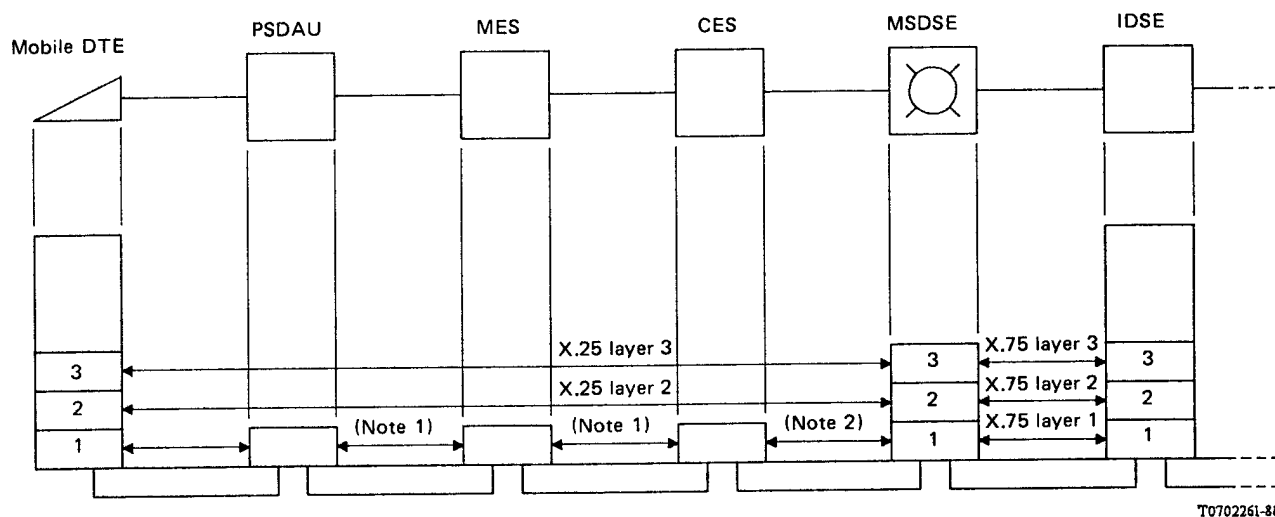


MES = Mobile earth station
 CES = Coast earth station
 MSDSE = Mobile satellite data switching exchange
 PSDAU = Packet switched data access unit
 PSE = Packet switching exchange

Note – See Recommendation X.350 for definitions.

FIGURE 1/X.352

**Composition of the public maritime mobile satellite data transmission system
for interconnection with a packet switched network**



Note 1 – Signalling system and physical link as defined by the service provider.

Note 2 – Interworking between the CES and layer 3 of the protocol defined in Recommendation X.75.

FIGURE 2/X.352

Interfaces to be defined in the public maritime mobile satellite system