

ASSIGNMENT

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ISDN.

=> ISDN [Integrated Services Digital Network] =

- * It is a set of communication standards for simultaneous digital transmission of voice, video, data and other network services over the traditional circuits of public switched telephone network.
- * It is a technical standard and design philosophy for digital networks.
- * Before ISDN, the telephone system was seen as a way to transmit voice, with some special services available for data.

→ ISDN channels, Access and Interfaces :-

- * ISDN standard divides a telephone ^{line} into following type of channels -
 - a) channel A : An analogue channel of 4 kHz.
 - b) channel B : 64 kbps digital channel that intended for the transport of user info.
 - c) channel C : 8 or 16 kbps digital channel.
 - d) channel D : Digital channel of 16 or 64 kbps intended primarily for the transmission of user-network.
 - e) channel E : 64 kbps digital channel.
 - f) channel F : digital channel of 384, 1536 or 1920 kbps.

* These channels can be combined differently giving rise to 2 types of access -

- a) Basic access
- b) primary access

* ISDN has several kinds of access interfaces -

- a) Basic Rate Interface (BRI)
- b) primary Rate Interface (PRI)
- c) Narrow band ISDN
- d) Broadband ISDN.

→ ISDN Services =

* An ISDN user device obtains a network connection by requesting service over the D-channel.

* The services are -

a) Bearer services :-

They are those which allow user to send info from one device on the network to another.

b) Teleservices :-

They are value added services provided by network, can provide end-to-end services and are characterised by their lower layer attributes & higher layer attributes.

c) Supplementary services :-

They are enhancements to bearer services or offer facilities before or after bearer services; they are considered call features.

→ ISDN Advantages :-

- * It is governed by a world-wide set of standards.
- * It offers multiple digital services.
- * Digital signals are broadcast through telephone lines.
- * They provide a higher data transfer rate.
- * ISDN takes only 2 seconds to launch a connection while other modems take 30 to 60 seconds for establishment.

→ ISDN Disadvantages :-

- * ISDN are very costly than other telephone systems.
- * Special digital phones are required to talk to the existing POTS devices.
- * It is very expensive to upgrade a central office switch to ISDN.