Broadband-ISDN

Presented by:-

Shiva Krishna

Murali Krishnan

Rohit Mundra

Varun Kumar

H V S K DORA

INTRODUCTION

- **ISDN is an acronym, which means Integrated Services Digital Network.**
- BISDN **is an extension of ISDN in terms of capabilities, i.e. it not only has the narrowband capability of ISDN but also the broadband capability.**
- **It is a set of CCITT / ITU standards for digital transmission over ordinary telephone copper wire as well as over other media.**
- **ISDN is the integration of both analogue or voice data, together with digital data over the same network.**

DEFINITION

- **“A service requiring transmission channels capable of supporting rates greater than the primary rate.” →ITU-T.**
- **Any service inquiry with a speed greater than 1.544 Mbps is defined as broad band,and any communications based on this speed are called broadband communications.**

BROWNY POINTS

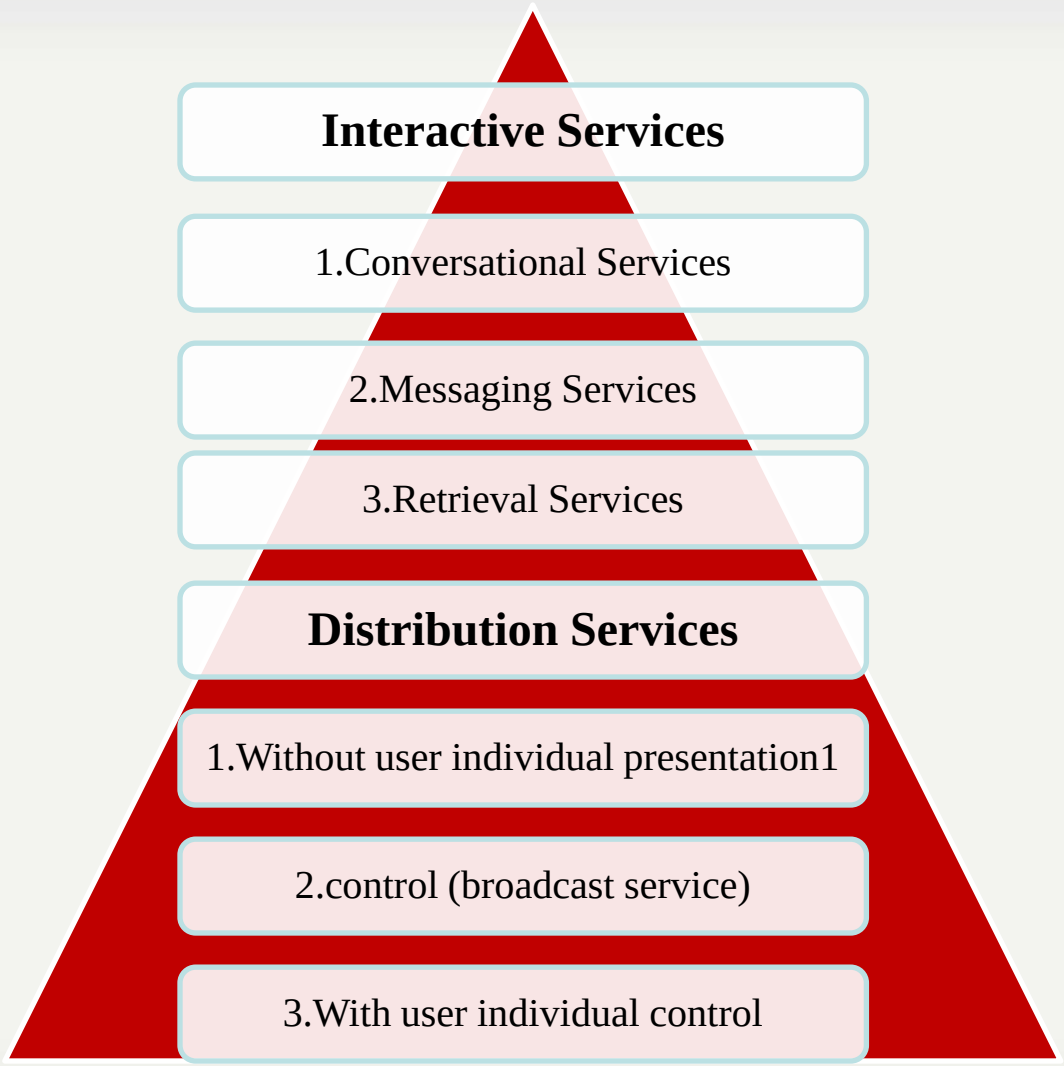
- BISDN is an extension of ISDN only in term of the name. Everything is different including protocol, architecture, transmission, and switching technology.
- Designed to exploit the advances in technology.
- Provides for integration of wide range of communications facilities and the support of universal communications with the following characteristics.

  - 3***Worldwide exchange between any two subscribers in any***
  - ***medium.***
  - 3***Retrieval and sharing of information from multiple***
  - ***sources, in multiple media.***
  - 3***Distribution of a wide variety of materials to home or***
  - ***office, on demand.***

GOAL

"The Goal of BISDN is to achieve complete integration of services, ranging from low-bit--rate bursty signals to high-bit-rate continuous real-time signals".

BROAD BAND SERVICE



BROAD BAND SERVICE

Interactive Services

- Two-way exchange of information (other than control signaling (information) between two subscribers or between a subscriber and a service provider.

Distribution Services

- Primarily one way transfer of information, from service provider to B-ISDN subscriber.

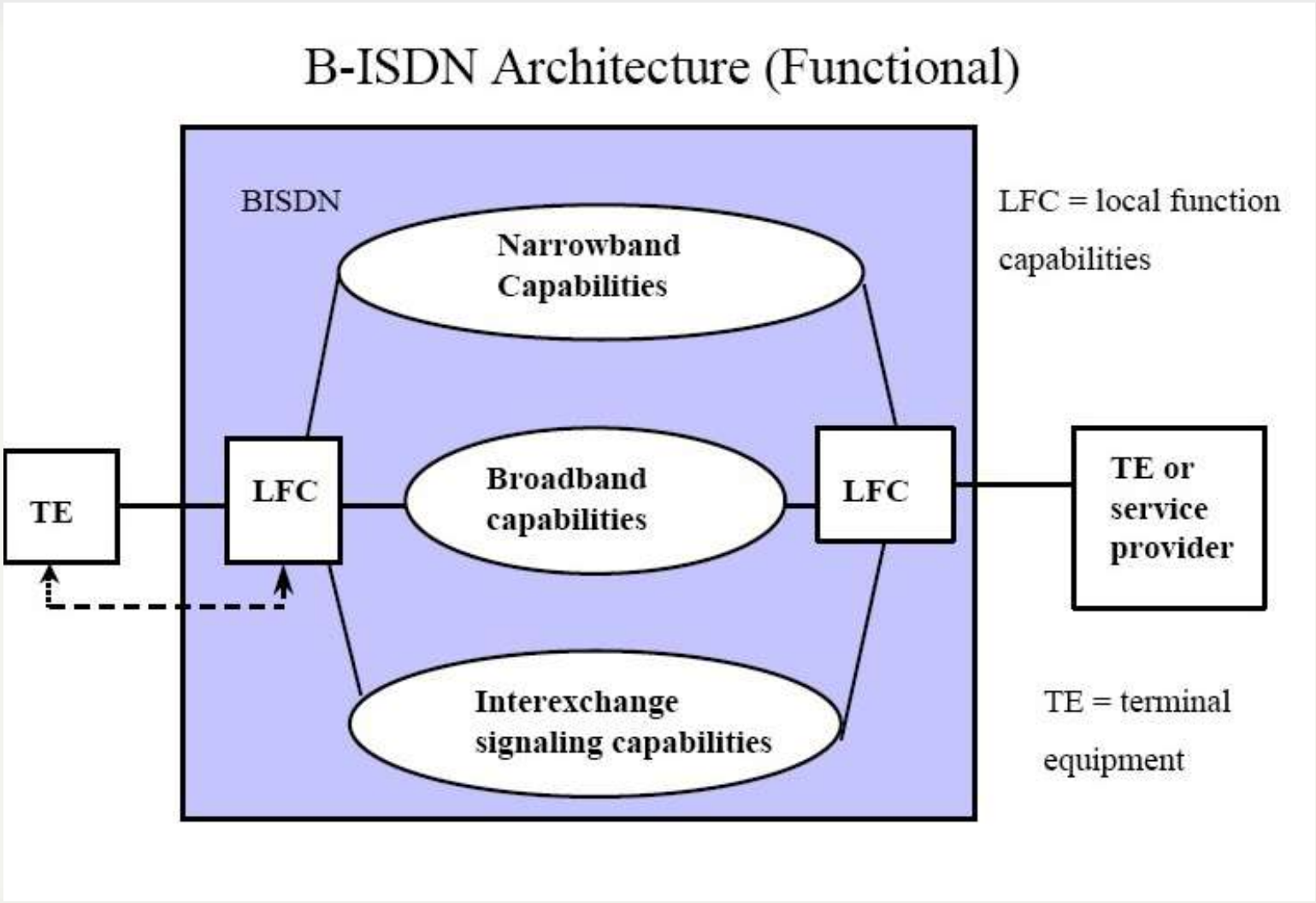
BROAD BAND SERVICES

- **Distribution Services Without User Presentation Control**
- Referred also as broadcast services
- Provide a continuos flow of information, which is distributed from a central source to an unlimited number of authorized receivers connected to the network.
- User can access this flow of information but has no control over it.
- **Example: High definition television (HDTV)**

BROAD BAND SERVICES

- **Distribution Services With User Presentation Control**
- Distribute information from a central source to a large number of users.
- Information is provided as a sequence of information entities (e.g. , frames) with cyclical repetition.
- User has the ability of individual access to the cyclical distributed information and can control start and order of presentation.
- **Example: cable text**

ARCHITECTURE

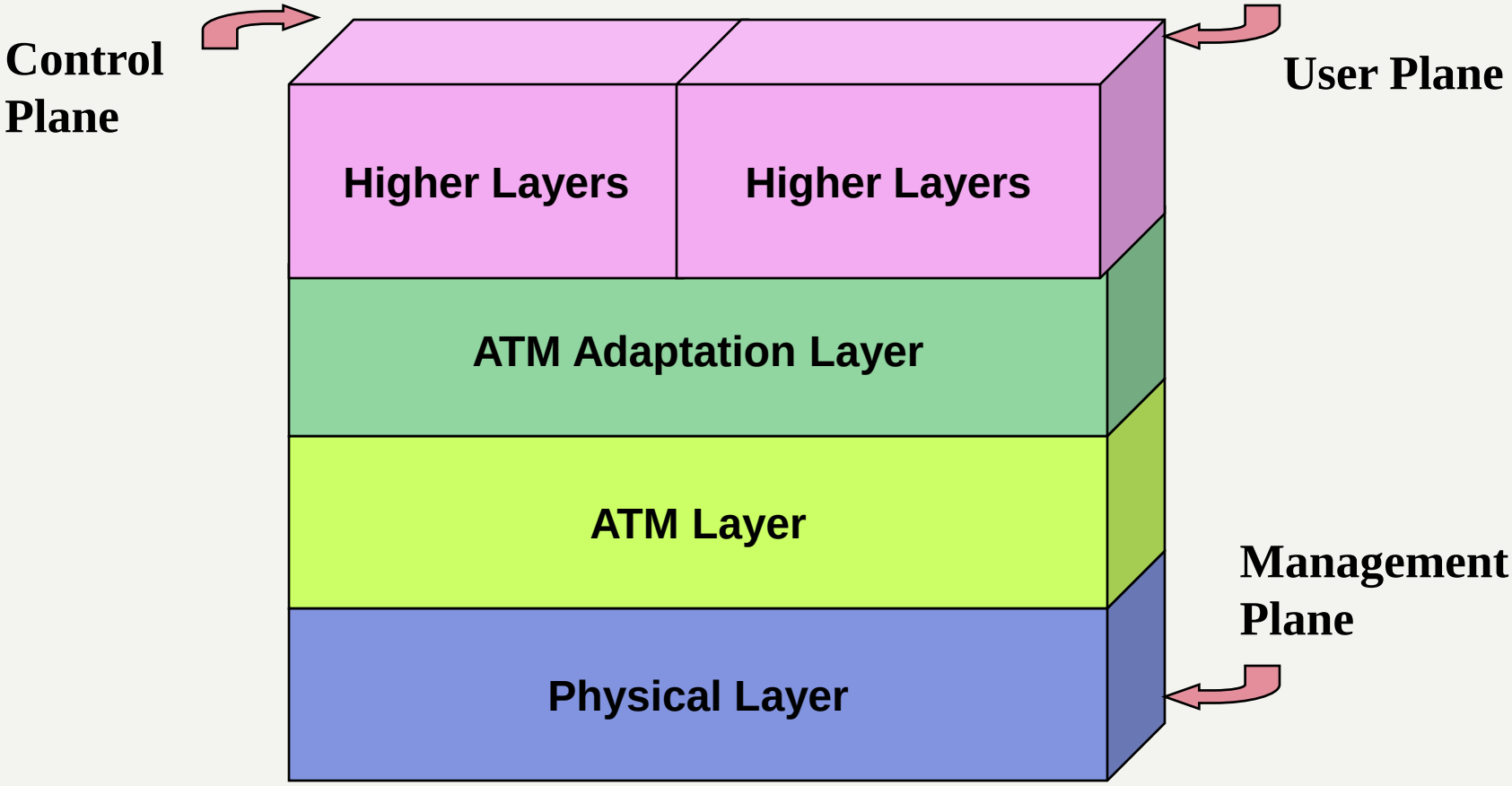


TRANSMISSION STRUCTURE

Three new transmission services

- Full-duplex 155 Mbps
- Asymmetrical 155 Mbps (subscriber to the network), and 622 Mbps (network to subscriber)
- Full duplex 622 Mbps - for multiple video

PROTOCOL REFERENCE MODEL

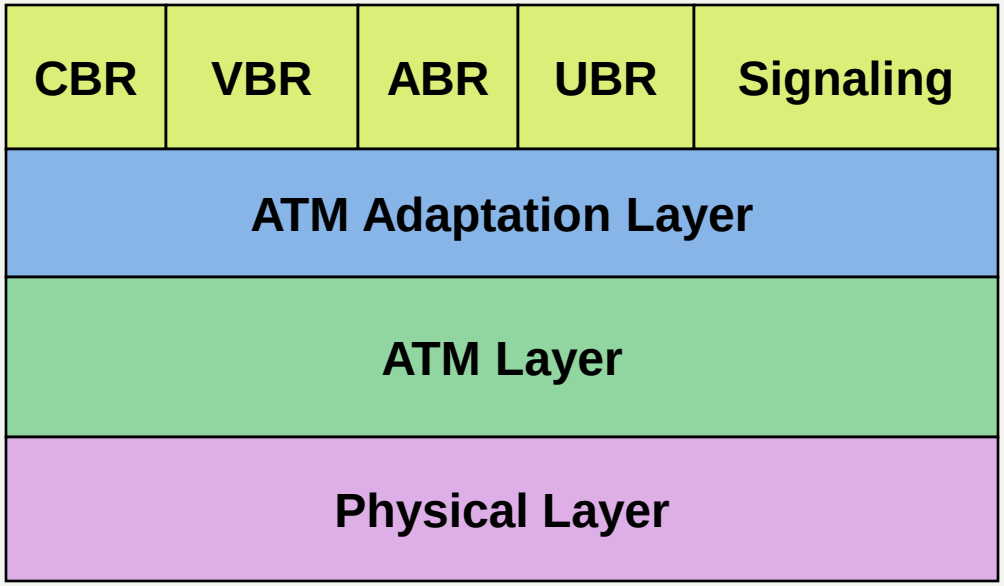


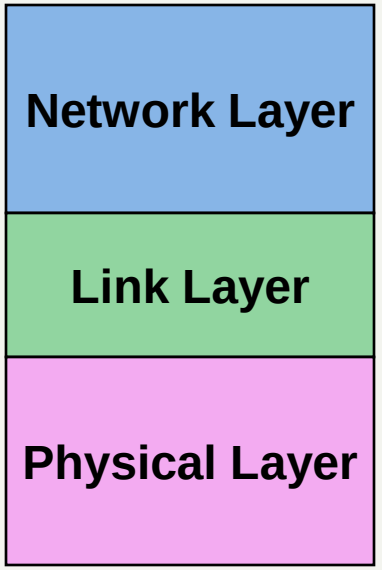
REFERENCE MODEL

The B-ISDN reference protocol model consists of three planes:

- Management Plane
- User Plane
- Control Plane

B-ISDN COMPARED WITH OSI MODEL





B-ISDN SERVICES

- **Interactive Services**
  - **Conversational Services**
  - **Messaging Services**
  - **Retrieval Services**
- **Distributive Services**
  - **No User Control of Presentation**
  - **User Controlled Presentation**

APPLICATIONS

- **Enhanced Phone Services**
- **Customer Premise Equipment**
- **High Speed Data Transfers**
- **Telemessaging**
- **Videotex**
- **Tele-conferencing**
- **Telecontrol, Telepolling**
- **Tele-financing**
- **Online Services**
- **Remote Video Surveillance**

CONCLUSION

- **ISDN is an underlying technology, which provides cost-effective networking through the public telephone networks.**
- **ISDN is an important step forward in the adaptation of the network to handle the increasing global demand for computer-to computer data communications.**
- **ISDN brings us closer to the goal of a ubiquitous multi-service network, integrating voice, data, video and image.**

THANK YOU