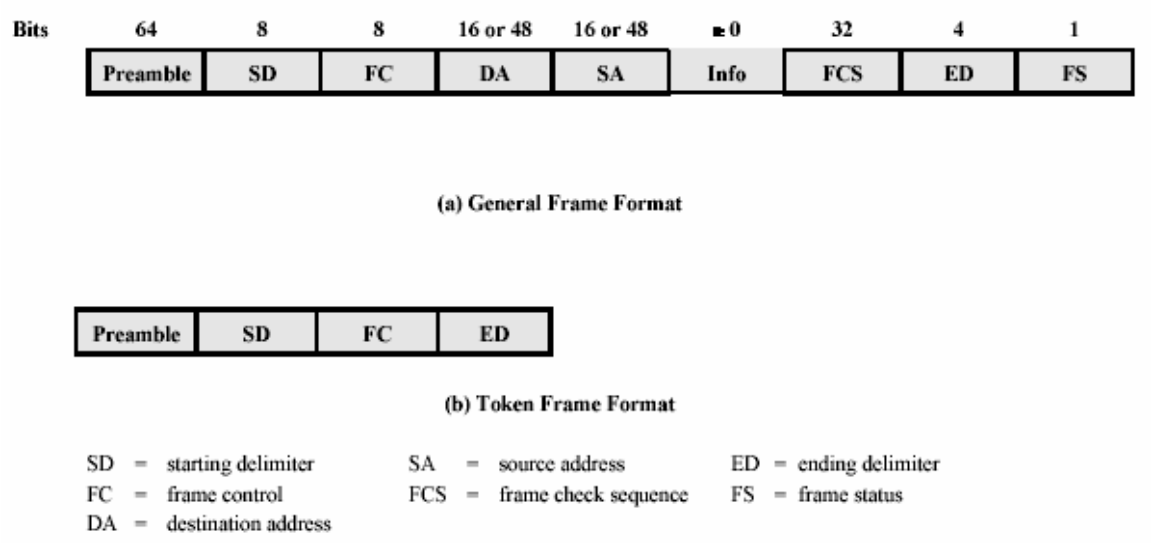
Lecture 7

FDDI Medium Access Control

FDDI is a token ring scheme similar to IEEE 802.5 specification, which is designed for both LAN and MAN applications. FDDI is specifically designed for higher data rate of 100 Mbps.

Below is the frame format for FDDI



Preamble: This field is meant for synchronizing the frame with station clock of the receiver.

Start Delimiter: Indicates the start of the frame. It's coded as JK, where J and K are non data symbols.

Frame Control: This field has the format CLFFZZZ, where C indicates whether this is synchronous or asynchronous frame. L indicates the use of 16 bit or 48 bit addresses. FF indicates that this is an LLC or MAC control or reserved frame. The remaining bits are needed in case it is a control frame, and they describe the type of control frame.

Destination Address: This is the address of the recipient, and is a unique physical address.

Source Address: This is the address of the sender or the source and is again a unique physical address.

Information: Contains the LLC data unit.

FCS: This designates the error-control field, actually a CRC based on FC, DA, SA, and information fields.

Ending Delimiter: It contains a non-data symbol (T) that marks the end of the frame.

Frame Status: Contains the error detected (E), address recognized (A), and frame copies (F) indicators. Each indicator is represented by a symbol which is R for “reset” and S for “set”.

A token consist of the following fields
Preamble
Starting Delimiter
Frame Control: Has the bit format 10000000 or 11000000 to indicate that this is a token.
Ending Delimiter: Contains a pair of non-data symbols (T) that indicates the termination of data frame.