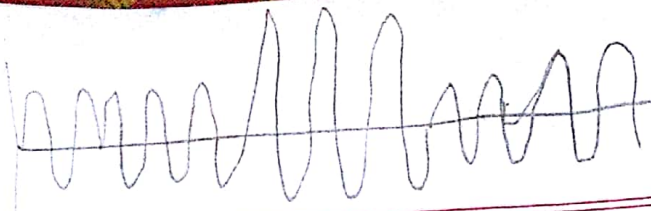
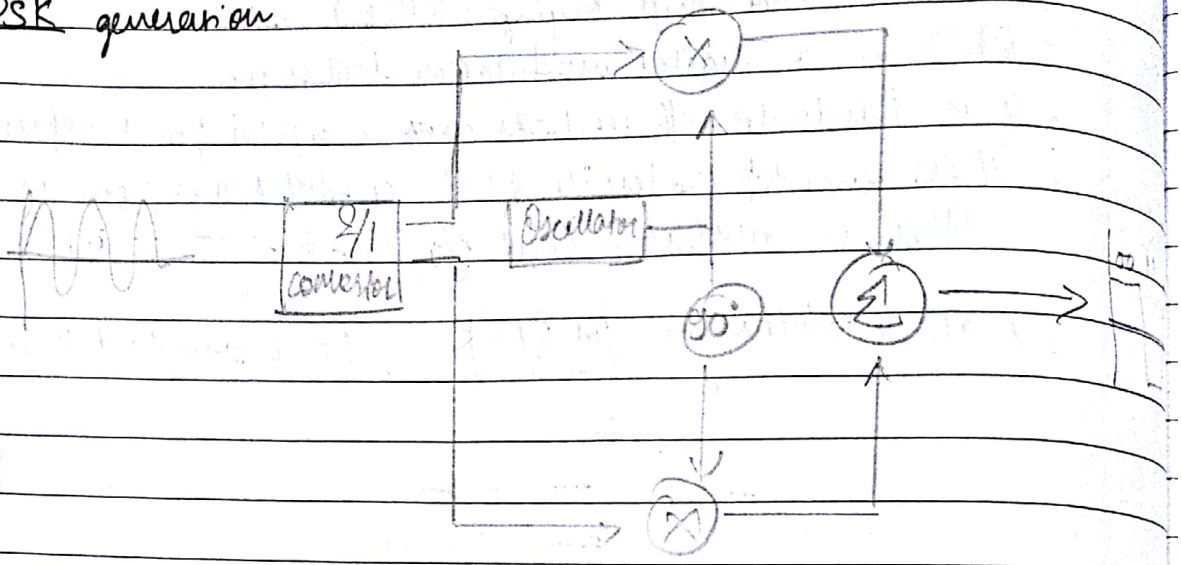
Lecture-10
SDR

classmate
Date 08/02/18
Page



QPSK generation



Bitrate / baud rate

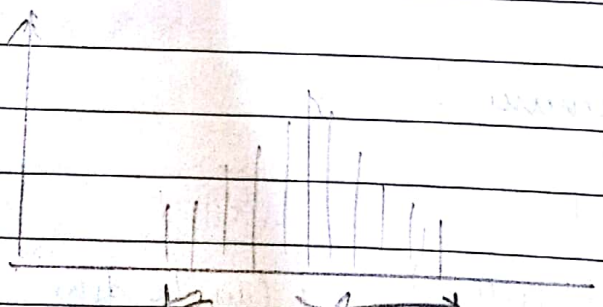
Bitrate = N Baud rate = N

0	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0

Bit rate = N Baud rate = 2N

00	10	10	00	10	10	11	10

AM bandwidth



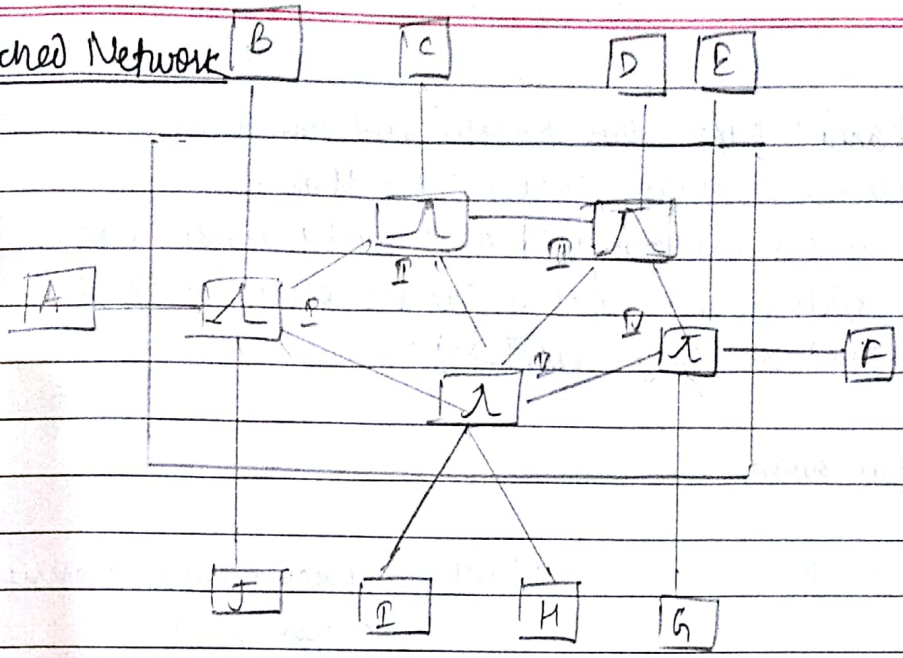
BW_m BW_m → bandwidth of modulating signal

$BW_t = 2 \times BW_m$

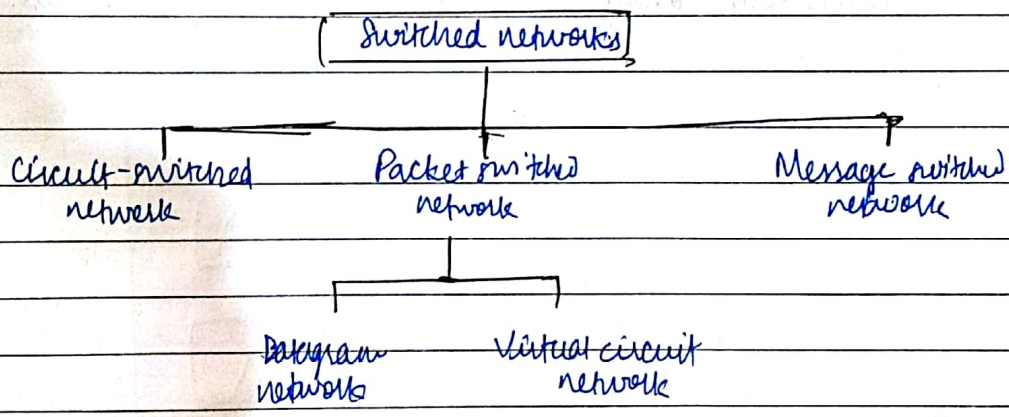
↓

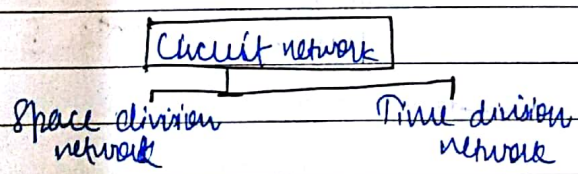
Total band

Switched Network

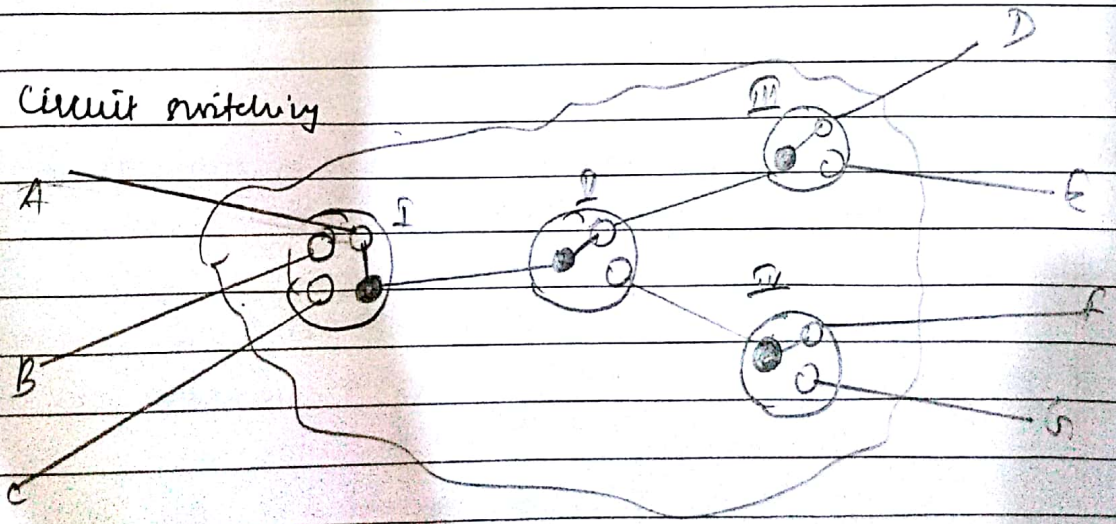


- Cost efficient structure
- Interlinked nodes / switches creating temporary connections
- Switches connected to end system (telephones or PC)



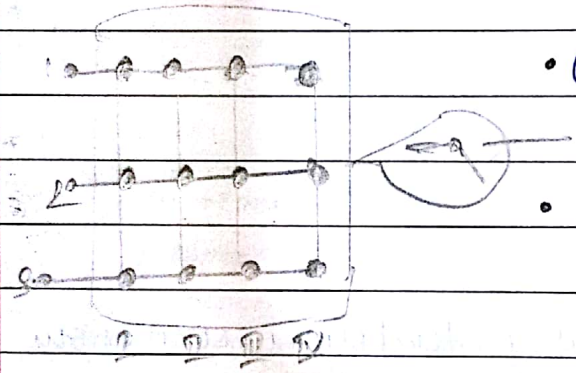


Circuit switching



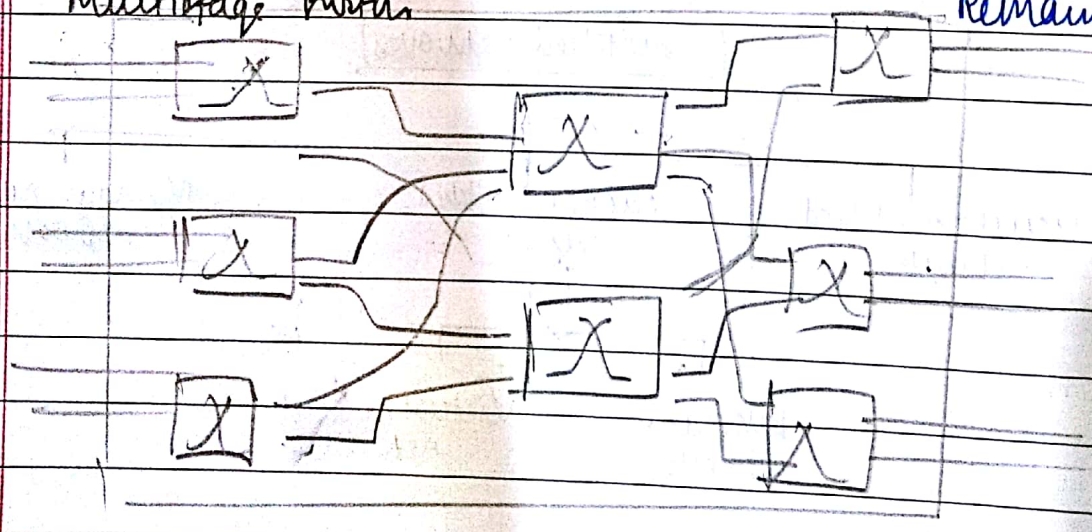
- 3 phases : setup, data transfer and tear down
- Resources reserved during setup phase
- Resources remain dedicated until teardown phase.
- No addressing & routing as per occupied band (FDM) or time slot (TDM)

Crossbar switch



- Electronic microswitches (transistors) at each cross point
- Limitations : too many crosspoints required to connect n inputs to n outputs.
- Few crosspoints use at any time. Remain stay idle.

Multistage switch



Stage 1 Stage 2 Stage 3