

TSN: Lecture 27

SS7 Signalling

Topics Covered

- Types of signalling
- SS7 signalling
- SS7 protocol stack and architecture
- Components of SS7 Network
- Interconnection Among SS7 Components
- Basic call setup
- SS7 applications

Types of Signalling

- Signalling in telecommunication network
 - Channel Associated Signalling (CAS)
 - Common Channel Signalling (CCS)

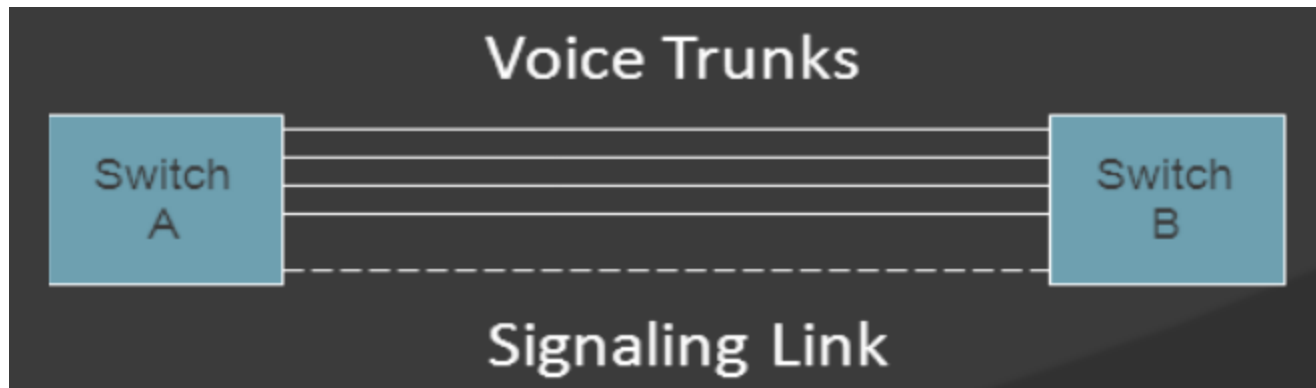
Signalling System Number 7 is a form of
Common Channel Signalling

Channel Associated Signalling

- Used for in-band signalling
- Signalling is transmitted in the same frequency band as used by voice
- Voice path is established when the call setup is complete, using the same path that the call setup signals used

Common Channel Signalling

- Out of band signalling
- Employs separate, dedicated path for signalling
- Voice trunks are used only when a connection is established, not before
- Faster call setup



Advantages of CCS over CAS

- Faster call setup
- No interference between signalling tones by network and frequency of human speech pattern
- **Greater Trunking Efficiency**- CCS has shorter call set up and tear down times that result in less call holding time, thereby reducing the traffic on the network
- **Information transfer**- CCS allows the transfer of additional information along with the signalling traffic providing facilities such as caller identification and voice on data identification

SS7 Signalling

- An advanced, digital signalling and control system, that is a set of telephony signalling protocols used to setup most of the world's telephone calls.
- High performance packet based communication protocols
- Standardized by ITU-TS
- 64 kbps
- 1980's