Digital Simultaneous Voice/Data (DSVD)

- V.70: System Recommendaion
- V.75: DSVD terminal-terminal control
- V.76: Multiplexing for end-end voice/data calls
- G.729/Annex A: Voice Coding

V.70: SYSTEM REC.

- Overall requirements
- Specifies applicable Recommendations
  - V.75, V.76, G.729 Annex A
  - Modem: V.32bis, V.34
  - Mode Control: V.8bis
- Transitions into/out of telephony mode

V.75: DSVD Control

- Subset of H.245 for data and voice
- Additional headers for multiple audio frames
- Additional headers for segmenting data frames ala V.120

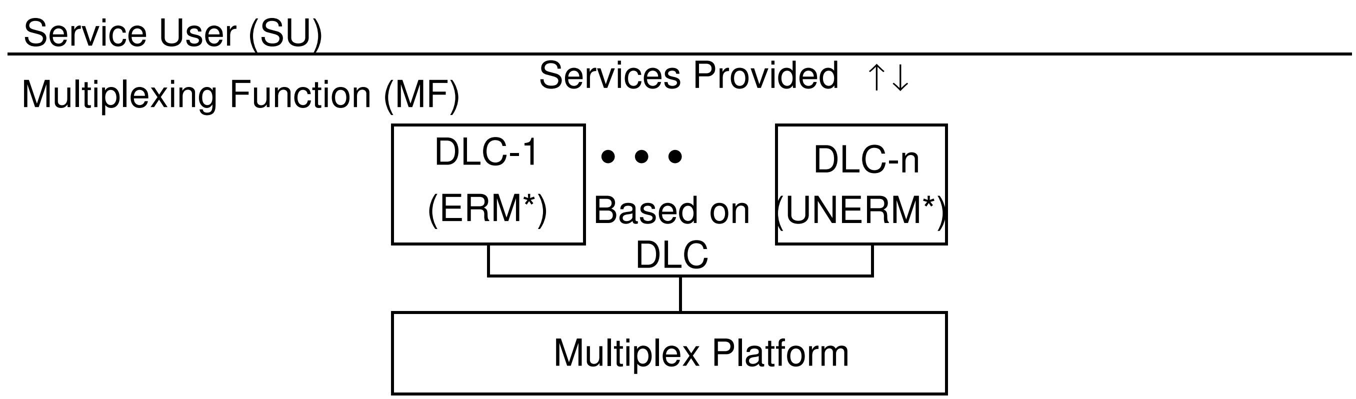
G.729 Annex A Voice Coder

- G.729 Decoder can receive Annex A frames
- 10 msec delay
- 8 kbps
- about 10 MIPS

V.76: DSVD Multiplex

- HDLC-based
- Error-correcting mode: similar to V.42; adds multi-selective reject
- Non-error correcting mode: UI frames, similar to PPP
- Link setup with information
- Multiple simultaneous channels
- Provision for real-time traffic
- 8-bit CRC

DSVD Multiplex Architecture



* Selection of an operational mode for one DLC is independent of other selections on other DLCs

Division of multiplexing operation

DSVD REAL TIME CAPABILITY

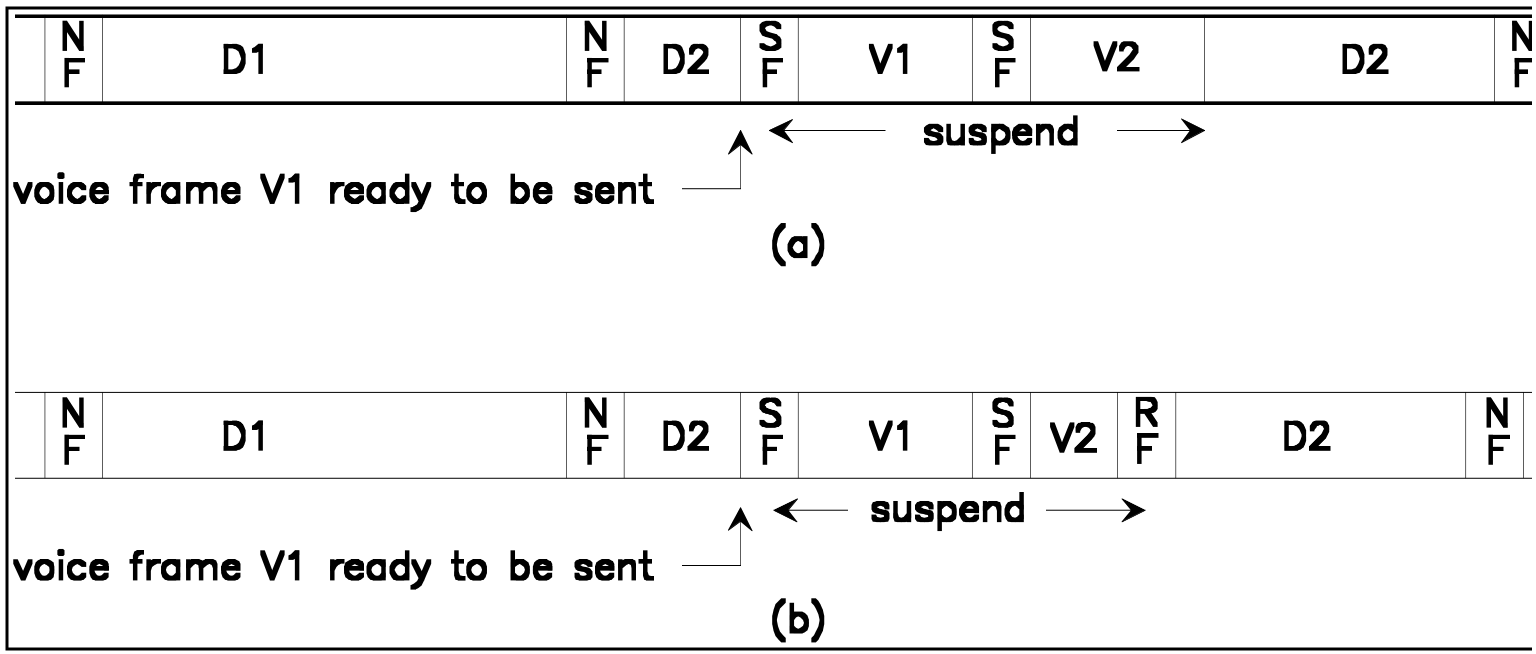
NRT (DATA) FRAME	NF	A	C	C	I (max $N401_{NRT}$)	FCS	FCS
RT (VOICE) FRAME (TALKSPURT)	SF	A	I (max $N401_{RT}$)	FCS			
RT (VOICE) FRAME (SILENCE)	SF	A	I	FCS	RF		

NOTE 1 – The use of an address field is optional and made known to the S/R entity

NOTE 2 – The RT frames are shown using an 8-bit FCS.

NOTE 3 – The RT frames do not have an explicit control field; the treatment of RT frames is as if they were UI frames.

SUSPEND/RESUME: EXAMPLES



Two simple suspend/resume examples: Data frames D1 and D2 are NRT frames. Voice frames V1 and V2 are RT frames. "NF" is a normal flag, "SF" is a suspend flag, and "RF" is a resume flag. In (a), frame V2 is a maximum-length RT frame. In (b), frame V2 is not a maximum-length RT frame. In both cases, frame V2 is ready to be sent before transmission of frame V1 is complete.