EEE415 Multimedia Communications:
Lab – Decodable Frame Rate

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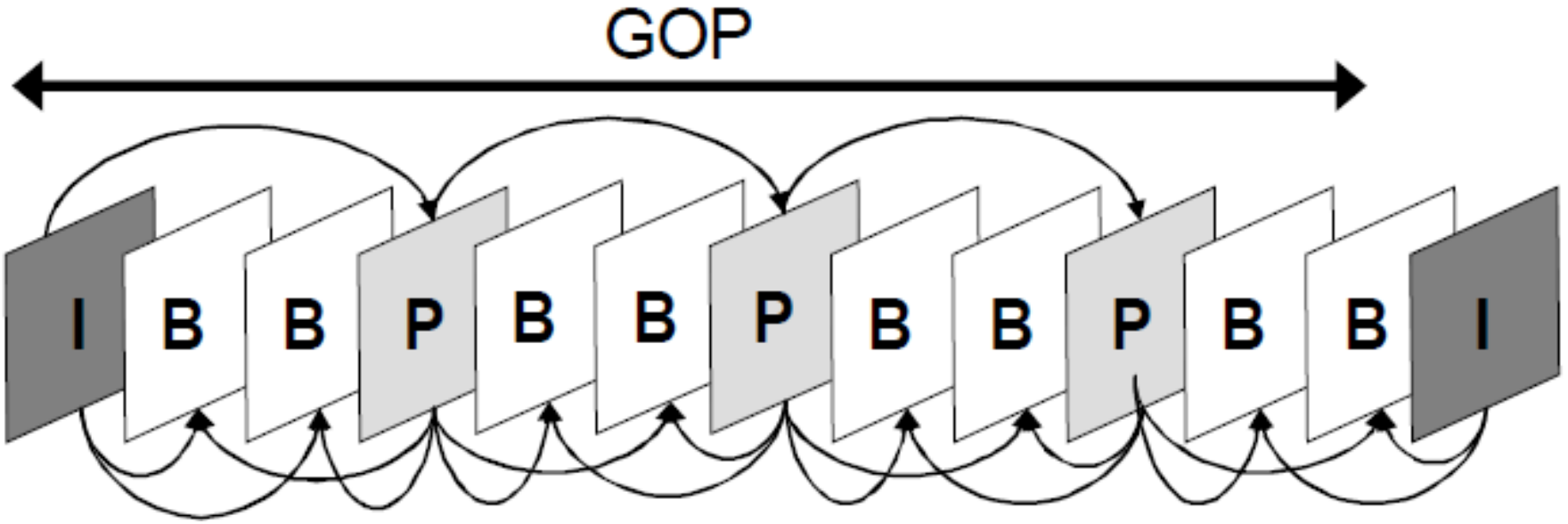
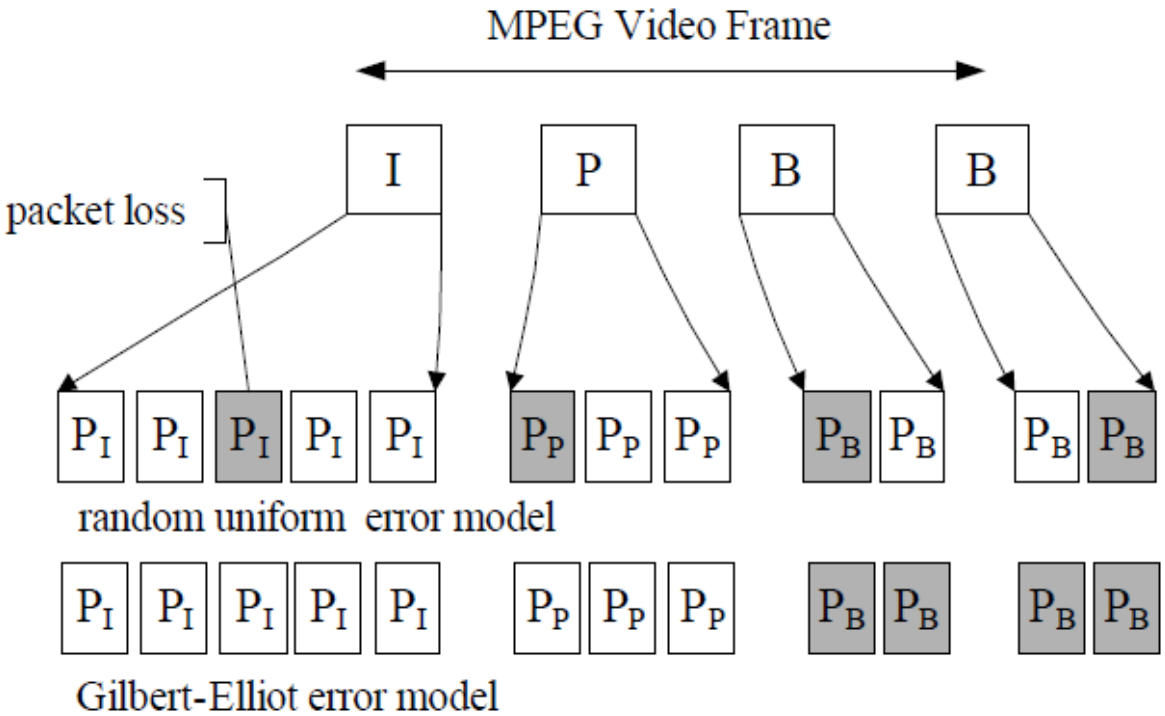
A Sample of MPEG GOP (N=12, M=3)



- ***GOP: Group of Pictures***
- ***I: Intra-coded***
- ***P: Predicted***
- ***B: Bi-predictive***

Decodable Frame Rate (Q)

- For evaluation of the packet loss impact on the video quality, we need an objective measure.
- Decodable frame rate (Q) is one of objective measures and defined as $Q = \frac{N_{dec}}{N_I + N_P + N_B}$.



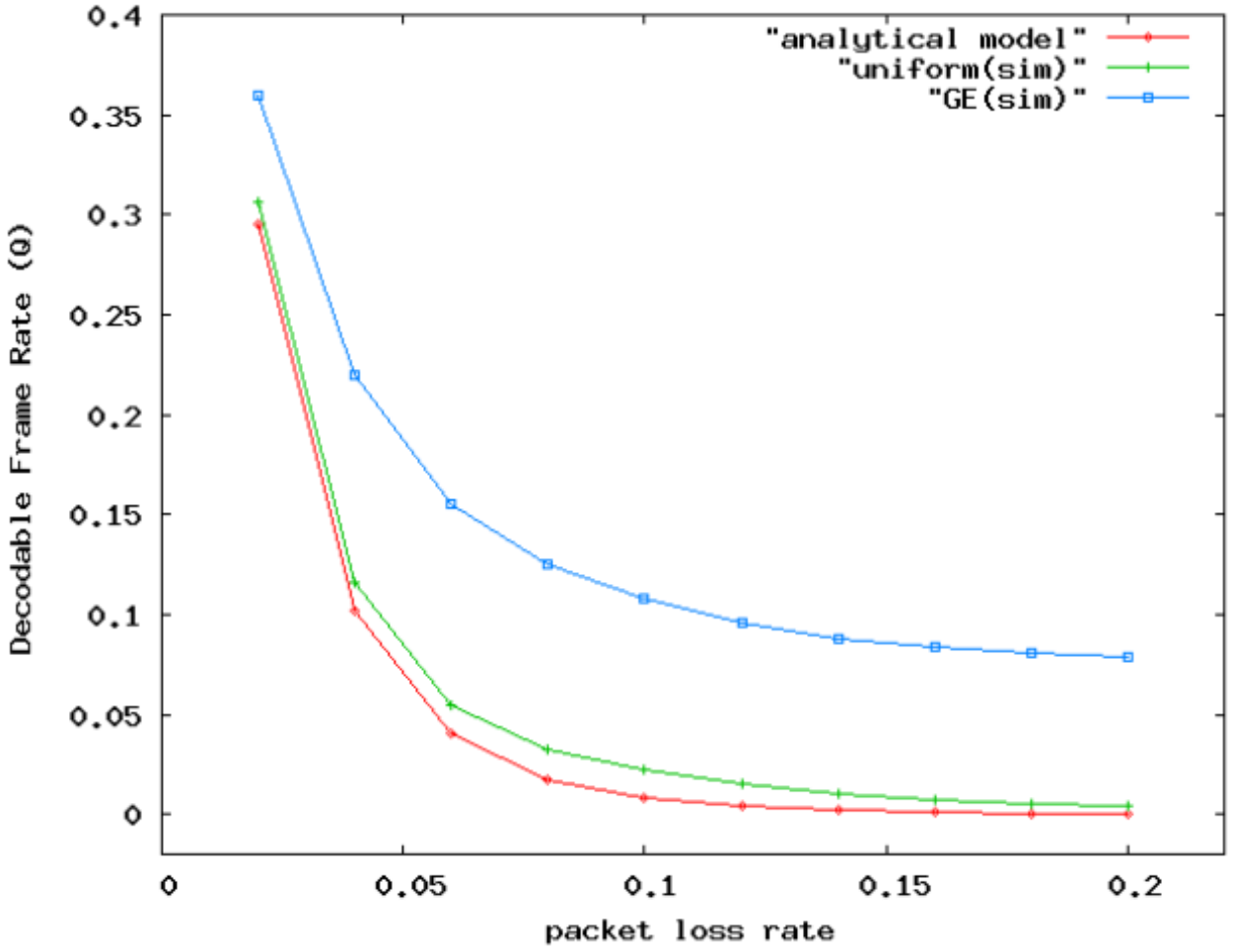
A Sample Video Trace*

# Frame	Time [ms]	Type	Size [Bit]	PSNR-Y [dB]	PSNR-U [dB]	PSNR-V [dB]
0	0.00000	IDR**	1290616	53.117	53.060	53.536
3	100.00000	P	914160	51.824	52.463	52.930
1	33.33333	B	420536	50.546	51.803	52.365
2	66.66667	B	439072	50.518	51.799	52.324
6	200.00000	P	918848	51.832	52.495	52.935
4	133.33333	B	439512	50.501	51.789	52.294
5	166.66667	B	458384	50.417	51.756	52.227
9	300.00000	P	952960	51.788	52.389	52.923
7	233.33333	B	459096	50.435	51.677	52.185
8	266.66667	B	455344	50.405	51.628	52.227
12	400.00000	I	1296440	53.109	53.024	53.582

- IDR: Instantaneous Decoder Refresh

**** H.264/AVC video trace library (http://trace.eas.asu.edu/h264/)***
***** IDR: Instantaneous Decoder Refresh***

A Sample Analysis*



** H. Koumaras et al., International Journal On Advances in Networks and Services, vol 1 no 1, pp. 19-29, year 2008.*