APPENDIX A: DETAIL OF HMPF AND HMFA

In this section, we provide the detailed information of HMPF and HMFA

bpp=4.7880	bpp=3.8197	bpp=3.8197	bpp=3.8836	bpp=3.7793
(1) JPEG	(2) Liu2010JPEG	(3) Wu2013JPEG	(4) Wu2017JPEG	(5) Chen2019JPEG
bpp=3.9372	bpp=3.8759	bpp=4.3763	bpp=3.6870	bpp=3.5486
(6) Shen2020JPEG	(7) Wang2022JPEG	(8) Jiang2022JPEG	(9) hmJND-NetJPEG	(10) itJND-NetJPEG
bpp=5.3765	bpp=3.9409	bpp=3.9428	bpp=3.8006	bpp=3.9150
(11) HEVC	(12) Liu2010HEVC	(13) Wu2013HEVC	(14) Wu2017HEVC	(15) Chen2019HEVC
bpp=3.9861	bpp=3.9185	bpp=4.5266	bpp=3.7013	bpp=3.4978
(16) Shen2020HEVC	(17) Wang2022HEVC	(18) Jiang2022HEVC	(19) hmJND-NetHEVC	(20) itJND-NetHEVC
bpp=4.8385	bpp=3.2311	bpp=3.2938	bpp=3.0926	bpp=3.2355
(21) VVC	(22) Liu2010VVC	(23) Wu2013VVC	(24) Wu2017VVC	(25) Chen2019VVC
bpp=3.1367	bpp=3.0120	bpp=3.1309	bpp=2.8383	bpp=2.6378
(26) Shen2020VVC	(27) Wang2022VVC	(28) Jiang2022VVC	(29) hmJND-NetVVC	(30) itJND-NetVVC

Figure 1: Bit-rate comparisons of nine state-of-the-art JND-guided methods on three different encoding platforms. With the similar visual quality, our hmJND-guided method saves the most bit-rate on three encoding platforms.
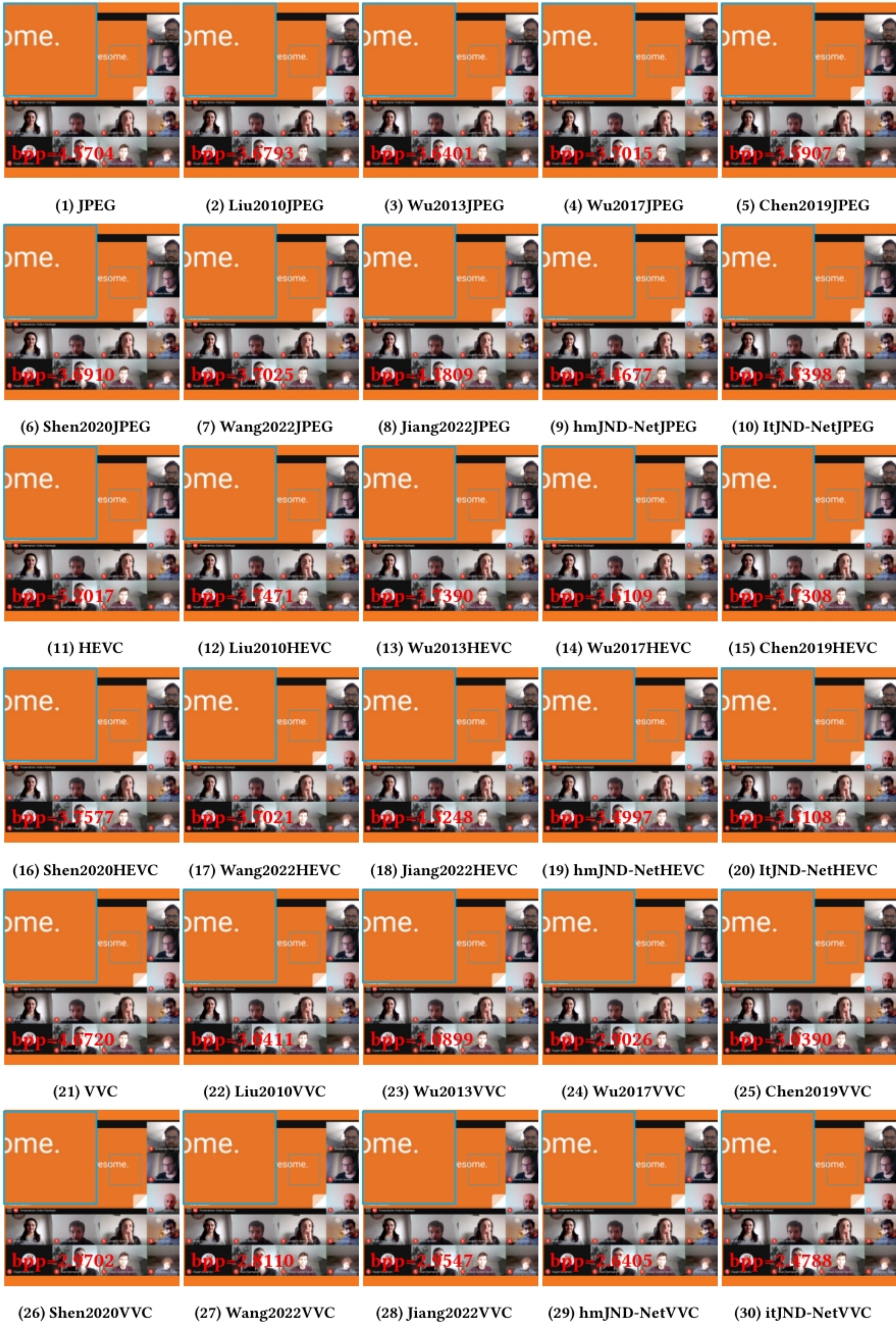
(1) JPEG	(2) Liu2010JPEG	(3) Wu2013JPEG	(4) Wu2017JPEG	(5) Chen2019JPEG
(6) Shen2020JPEG	(7) Wang2022JPEG	(8) Jiang2022JPEG	(9) hmJND-NetJPEG	(10) ItJND-NetJPEG
(11) HEVC	(12) Liu2010HEVC	(13) Wu2013HEVC	(14) Wu2017HEVC	(15) Chen2019HEVC
(16) Shen2020HEVC	(17) Wang2022HEVC	(18) Jiang2022HEVC	(19) hmJND-NetHEVC	(20) ItJND-NetHEVC
(21) VVC	(22) Liu2010VVC	(23) Wu2013VVC	(24) Wu2017VVC	(25) Chen2019VVC
(26) Shen2020VVC	(27) Wang2022VVC	(28) Jiang2022VVC	(29) hmJND-NetVVC	(30) itJND-NetVVC

Figure 2: Bit-rate comparisons of nine state-of-the-art JND-guided methods on three different encoding platforms. With the similar visual quality, our hmJND-guided method saves the most bit-rate on three encoding platforms.