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Dear Fraser

Official Information Act Request

We refer to your email of 9 November requesting details on the capabilities of TVNZ+.

The information below is from our Technical Specifications and Service Description in which TVNZ supplies to distributors. The other important piece of information is that TVNZ+ currently has a bit rate cap in place of 2,600 kbp/s which means typically 1080P is never available to end consumers. This was put in place in 2020 as a cost saving measure and also in preparation if TVNZ was asked to lower its internet footprint during Covid.

Encoding Profiles - VOD

TVNZ+ content utilises Brightcove's Context Aware Encoding (CAE) which dynamically alters output renditions numbers, resolutions and bit rates within specified minimum and maximum ranges. The below table shows the resolutions that are used within the transcode profile. The profile creates a minimum of three renditions and a maximum of eight renditions and varies for piece of content.

Video					Audio			
Resolution	Frame Rate	Codec	Profile	Bitrate (kbp/s)	Channels	Codec	Bitrate (kbit/s)	Sampling
512 x 288	25fps	MPEG-4 AVC	Baseline	Low 400	Stereo	AAC	64	48 kHz
640 x 360	25fps	MPEG-4 AVC	Main	Variable	Stereo	AAC	128	48 kHz
960 x 540	25fps	MPEG-4 AVC	Main	Variable	Stereo	AAC	128	48 kHz
1024 x 576	25fps	MPEG-4 AVC	Main	Variable	Stereo	AAC	128	48 kHz
1280 x 720	25fps	MPEG-4 AVC	Main	Variable	Stereo	AAC	128	48 kHz
1920 x 1080	25fps	MPEG-4 AVC	High	Max 4,800	Stereo	AAC	128	48 kHz

NOTE:

- All resolutions are in 16:9 aspect ratio. Source files received in 4:3 are pillar-boxed to the 16:9 format.
- High Definition (720P and 1080P) resolutions are only used where rights permit



Encoding Profiles - Simulcast (HLS)

Video					Audio			
Resolution	Frame Rate	Codec	Profile	Bitrate (kbp/s)	Channels	Codec	Bitrate	Sampling
480 x 270	25 fps	MPEG-4 AVC	Baseline	400	Stereo	AAC	64	48 kHz
640 x 360	25 fps	MPEG-4 AVC	Baseline	700	Stereo	AAC	128	48 kHz
960 x 540	25 fps	MPEG-4 AVC	Main	1,100	Stereo	AAC	128	48 kHz
1024 x 576	25 fps	MPEG-4 AVC	Main	1,500	Stereo	AAC	128	48 kHz
1280 x 720	25 fps	MPEG-4 AVC	Main	2,400	Stereo	AAC	128	48 kHz

And how does a viewer find out what resolution. Bitrate. Audio formats for the content they are viewing?

Currently TVNZ+ does not provide a method for showcasing which quality is currently being used for both video and audio. We hope to have a quality selector function in the future for TVNZ+.

Yours sincerely

OIA Team