UltraHD (4K)

Naeem Ramzan
University of West of Scotland
Future Business Trends

- 1080p@60
- Full HD 3D TV
- Ultra HD (4K)
Motivation

- HEVC
  - Full HD1080p

See Ref. 1

http://www.vanguardvideo.com/h265.php
Motivation

- HEVC
  - 4K (3840x2160)

See Ref. 1

\[ \text{PSNR (dB)} \]

\[ \text{Bitrate [mpbs]} \]

\[ \sim 53\% \]

Where are we

- Sony, LG, Samsung etc have launched 4K TV
- Japan has tested 4K internet streaming
- BBC produced new wild life series “Meerkat” in 4K

http://www.telegraph.co.uk/culture/tvandradio/9828573/BBC-films-meerkats-using-new-ultra-high-definition-4K.html
Where are we

- SONY and BBC had a plan to trail 4K broadcast during Wimbledon 2013.
- Japan has a plan to launch 4K TV in 214 (NTT is heavily involved)
Vittorio has 4K TV that can be exploited to do subjective evaluation
Closely follows HEVC activities for 4K
We can try to encode some sequences at 4K (Raw video sequence @4K http://medialab.sjtu.edu.cn/web4k/index.html)
Define the methodology for subjective evaluation for 4k
References

1. “AVC and HEVC: the future of encoding” by Mathew Goldman

Action items
- Raw 4K sequences
- Encoding material (definition of encoding parameter)
- Start defining subjective methodology