Video Encoding At Netflix
Panel Discussion on Future Video Coding

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Introduction

Netflix is a global video streaming service

Digital Supply Chain

Video Algorithms
Guiding Principles

- Wide Device Support
- Designing for Scale
- Best User Experience
Wide Device Support
Designing for Scale: Encoding

MPEG-2
ProRes
DPX
IMF

Netflix Media Cloud (AWS)

VC-1
H.264/AVC
H.265/HEVC
Designing for Scale: Open Connect

Open Connect appliances deployed to our ISP partners
Caches our content to reduce peering and transit
Best User Experience

8K UHD

4K UHD

1080p HD

SD

High Frame Rate
Is 25% Enough?

Probably not

• How will this 25% in the lab translate to our use case?

• We will significantly increase our storage footprint.
Codec Wish List

• Gains targeted towards
  – High frame rate
  – Larger color gamut
  – Higher dynamic range

• Visual quality, not just signal fidelity
  – Shorter time-to-mature

• Scalable coding
  – Save storage
  – Adaptive streaming
Royalty-free?

Royalty cost not a significant cost to us

But if it speeds up device adoption, that’s very good