

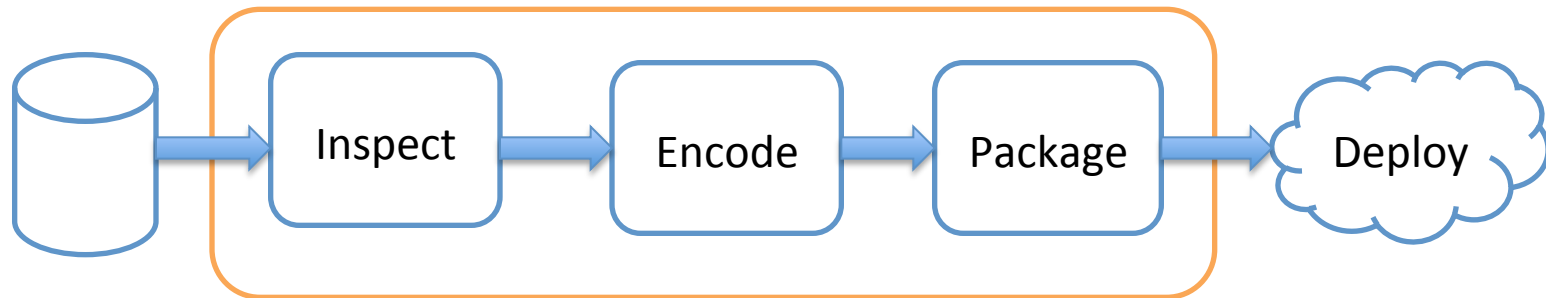
Video Encoding At Netflix
Panel Discussion on Future Video Coding
Anne Aaron

Introduction

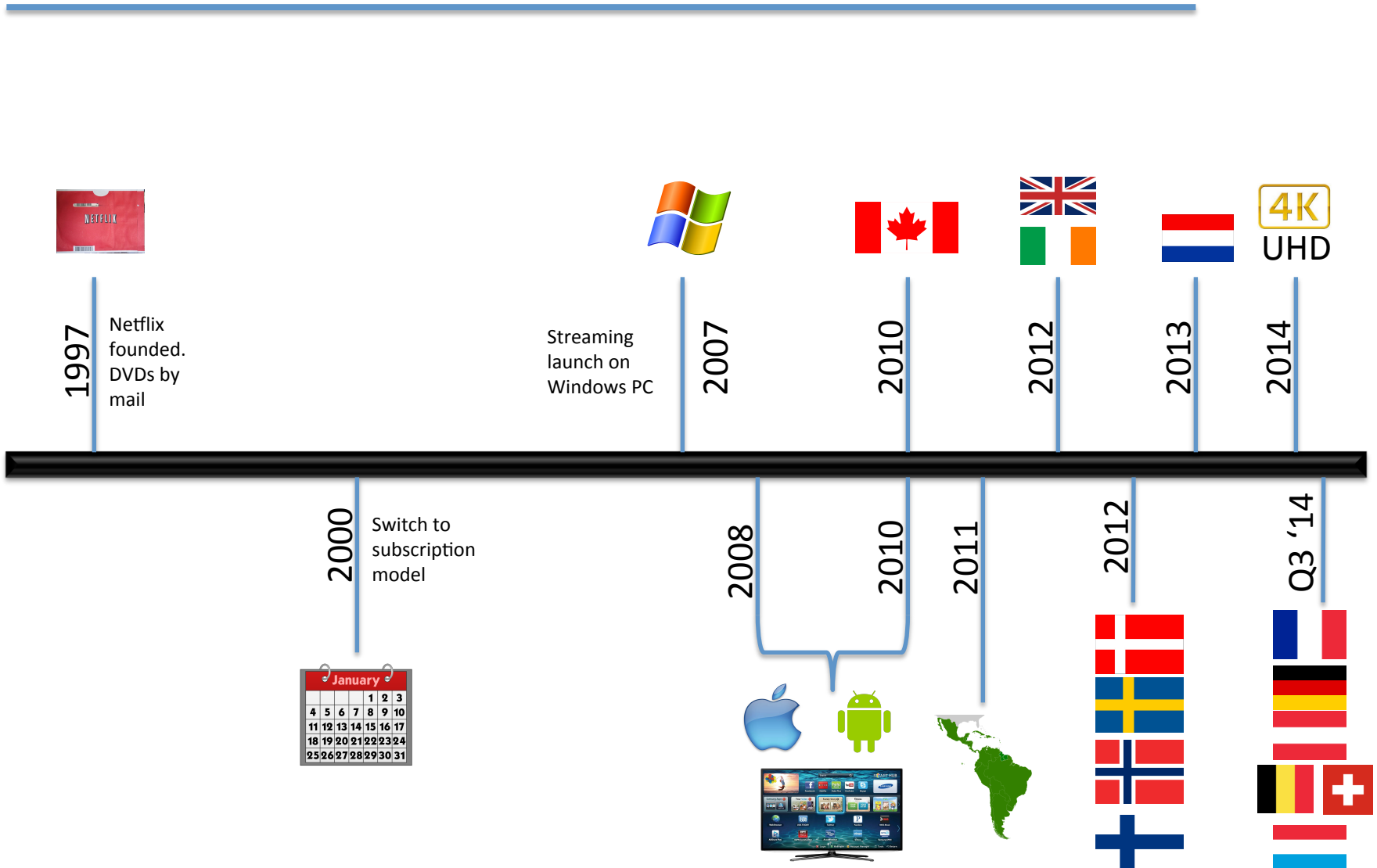
Netflix is a global video streaming service

Digital Supply Chain

Video Algorithms



Netflix Timeline



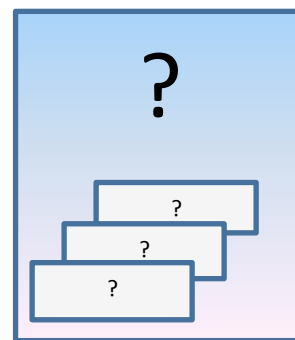
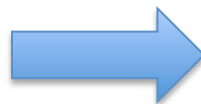
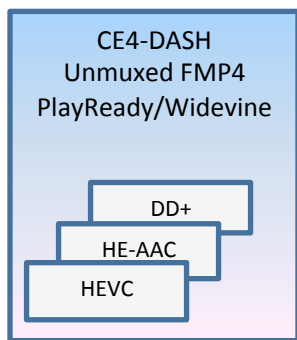
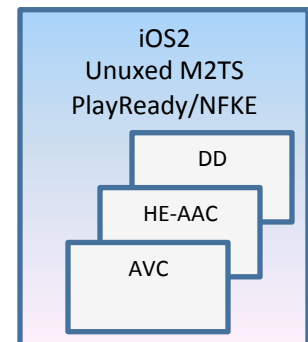
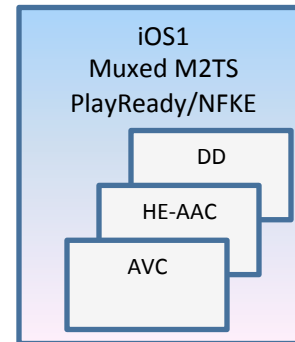
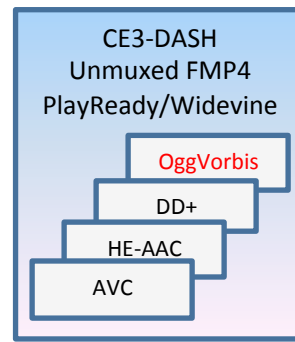
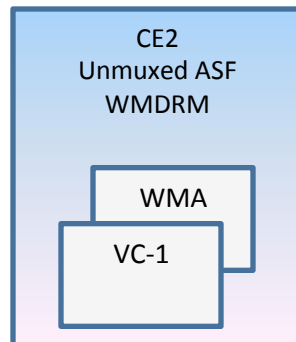
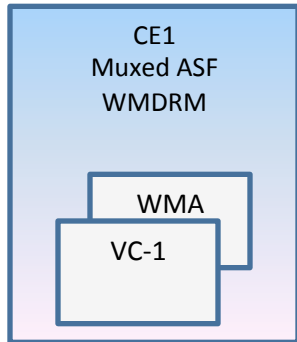
Guiding Principles

Wide Device
Support

Designing for
Scale

Best User
Experience

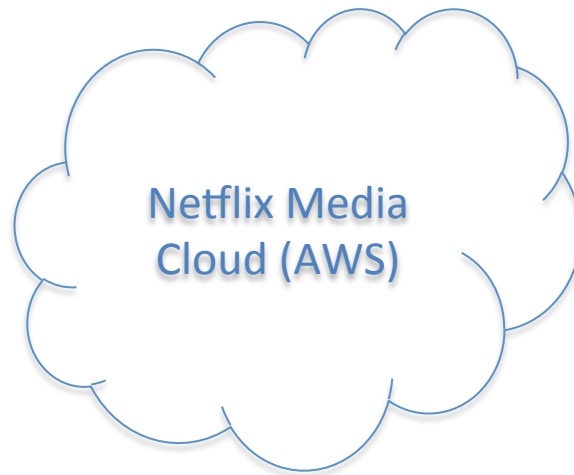
Wide Device Support



Designing for Scale: Encoding



MPEG-2
ProRes
DPX
IMF



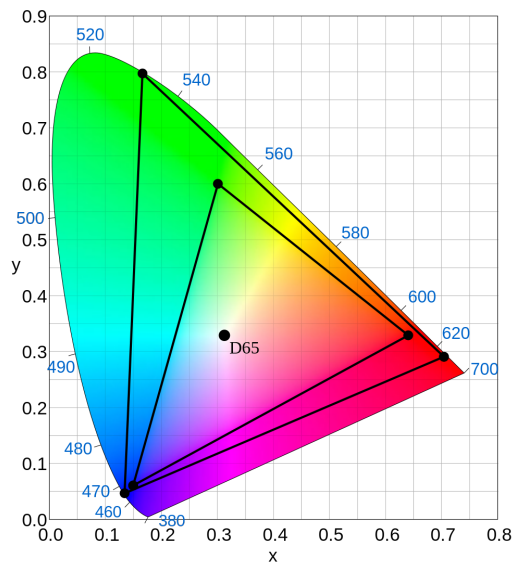
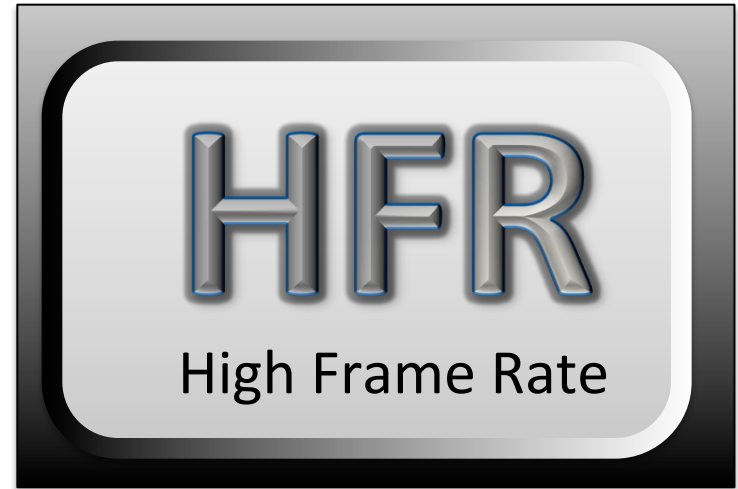
VC-1
H.264/AVC
H.265/HEVC

Designing for Scale: Open Connect



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

Best User Experience



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