HTML5 Premium Video Extensions

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Why?

The industry is on the cusp of a new mechanism for deploying DRM. (Until now, browsers have enabled DRM indirectly via Adobe's Flash and Microsoft's Silverlight products.)

Mitchell Baker – Mozilla Foundation Chair

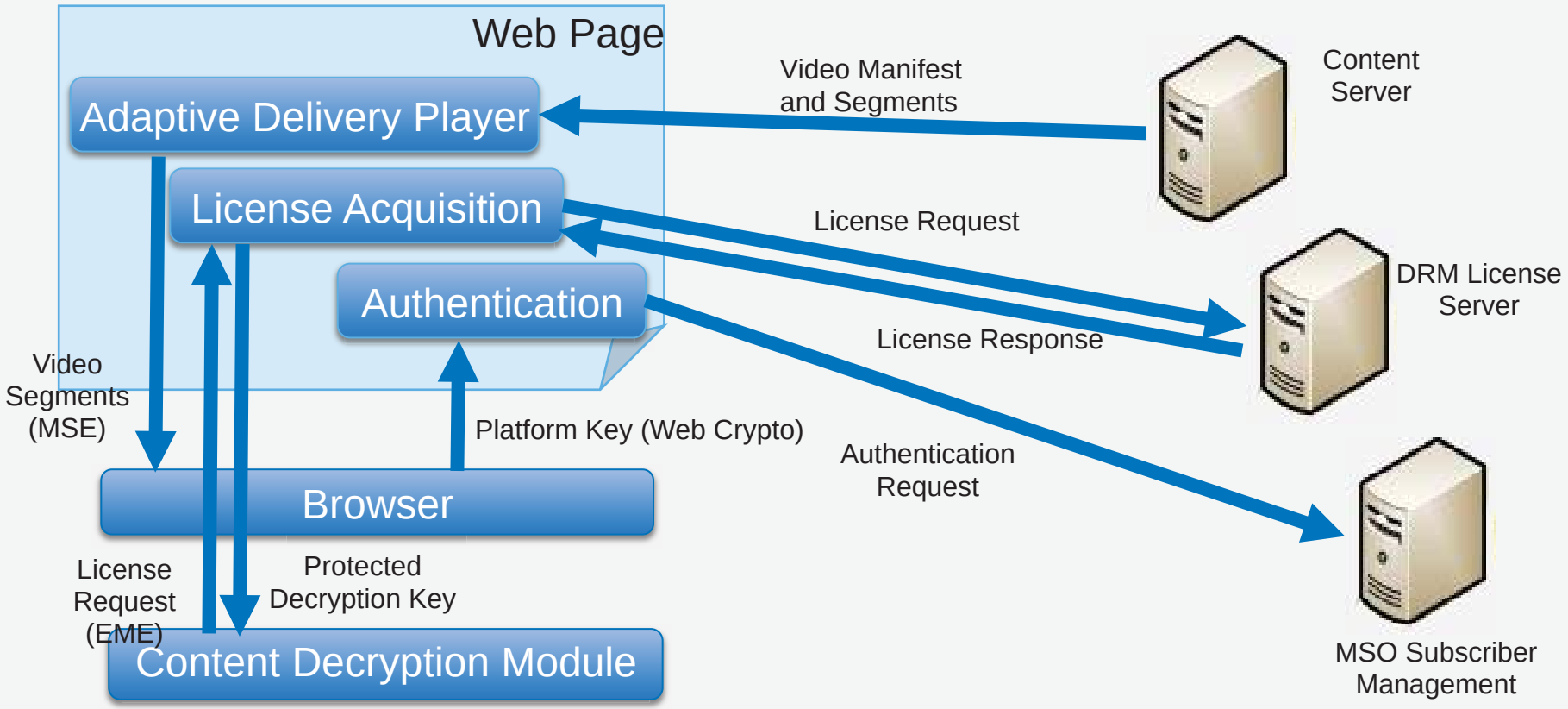
Google, Microsoft and Apple have already implemented the new system. … the old system will be retired shortly … the new implementation will soon become the only way browsers can provide access to DRM-controlled content.

Mitchell Baker

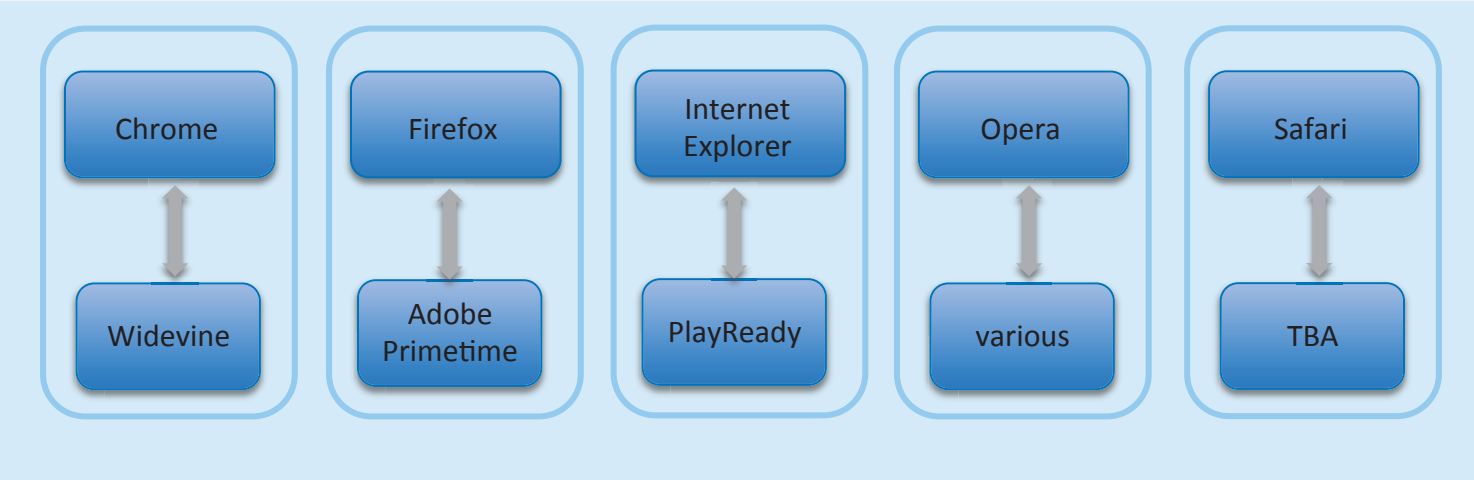
What?

- Encrypted Media Extensions - DRM-agnostic premium video playback
- Media Source Extensions - Use any adaptive delivery protocol
- Web Cryptography API - Basic tools for service authentication, document or code signing, and the confidentiality and integrity of communications
- Integrated with all of the other Web features

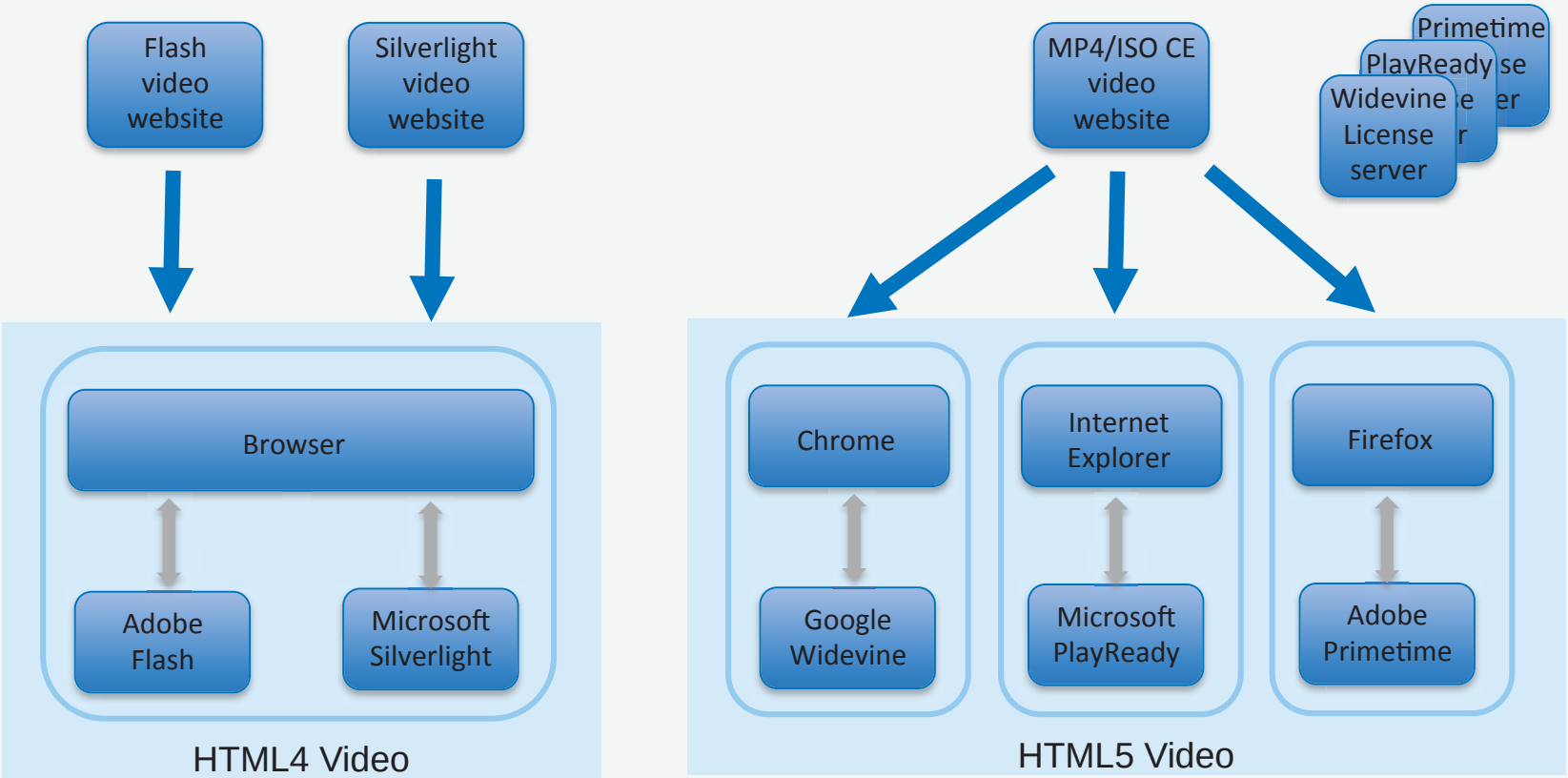
How?


Web Page
Adaptive Delivery Player
License Acquisition
Authentication
Browser
Content Decryption Module
Video Manifest and Segments
Content Server
License Request
License Response
DRM License Server
Authentication Request
MSO Subscriber Management
Video Segments (MSE)
Platform Key (Web Crypto)
License Request (EME)
Protected Decryption Key

Browser EME Adoption



EME with MP4 & ISO Common Encryption



Key Takeaways

- Premium video support has come to the Web with standard interfaces for DRM, adaptive delivery and security features.
- You can use them now on some platforms.
- Supported (or will be) by major desktop & mobile browsers.
- Supported by major Web video sites (e.g. Netflix, YouTube)
- Eventually will replace the existing proprietary Web premium video packages.
- Model can be used outside of browsers (e.g. native apps)

W3C Specifications

- HTML5
- Encrypted Media Extensions Spec
- Media Source Extensions Spec
- Web Cryptography API Spec
- ISO Common Encryption EME Stream Format and Initialization Data