Microsoft Confidential
QuickTime / DirectX Convergence Proposal

Migration to MOV file format

- Microsoft adopts MOV files
  - Phase out WAV, AVI, MID files
  - Re-vector our ASF 2 work into MOV
- MOV becomes the media container for Windows and Mac
- Collaboration between Apple and Microsoft on MOV going forward

Codec Détente

- Cross license all of the codecs that we own between the two companies
  - Most of these codecs are old codecs that just cause our mutual customers pain
  - MPEG4 is our newest streaming video codec
- Collaboration on all future codecs
  - We have a substantia. .odec group and are hiring aggressively in this space
- Codec plug in model is native to platform

Internet Co-operation

- Enhancing DHTML for multimedia
  - Co-operation on synchronization tags
  - VML+ tags (Vector Graphics)
- Codecs central
- Chrome?

Run-Time

- Run-Time is DirectX on Windows, QuickTime on the Mac
- Microsoft streaming media client for the Mac is branded QuickTime
  - Built on QuickTime run-time
  - Supports Microsoft streaming media server
  - Ships with the Mac OS as the exclusive streaming media client
- We will license DirectX to Apple for the Mac if desired

QuickTime Author

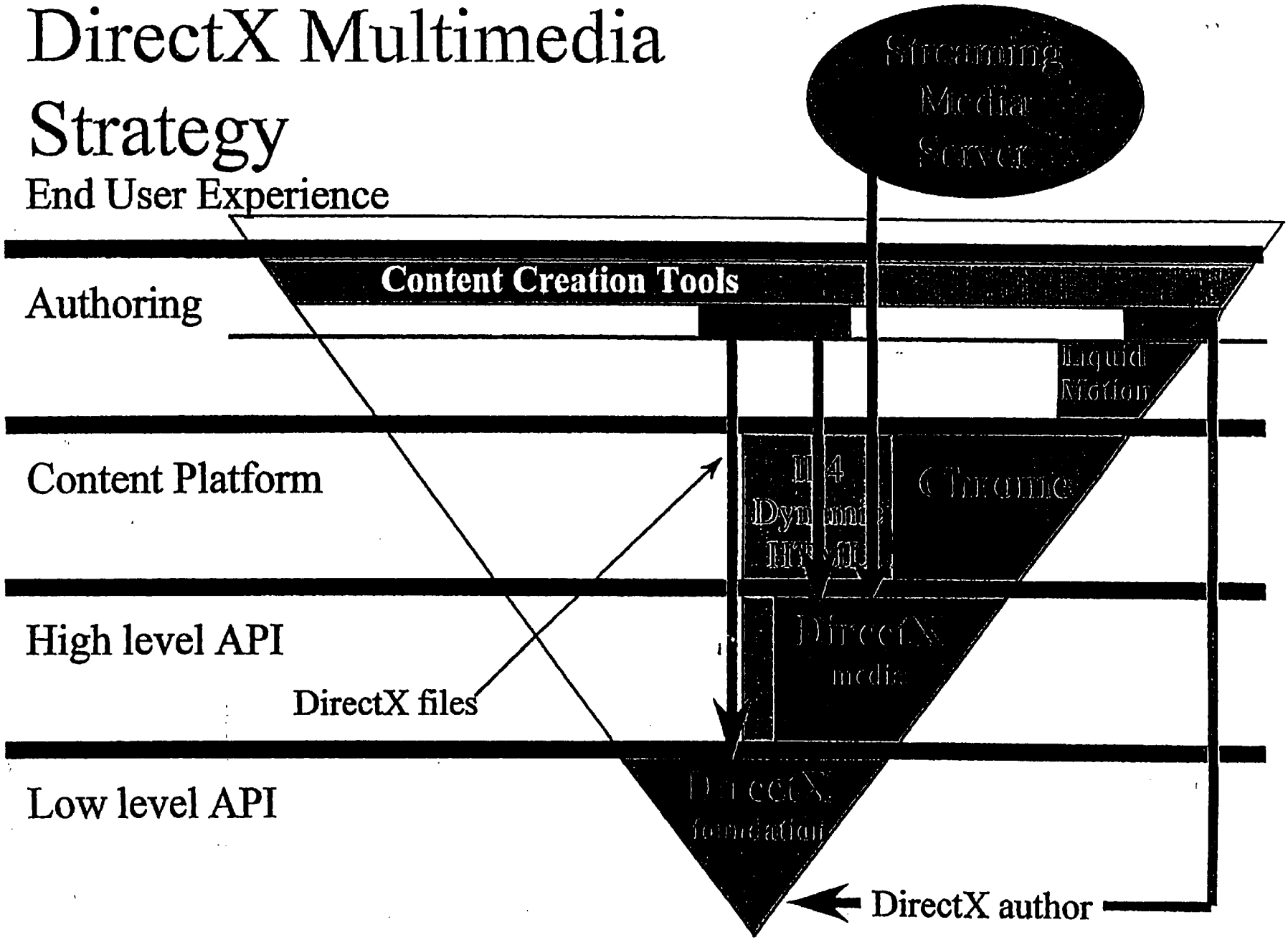
- We adopt QT video editing APIs
  - On Windows must use DirectX media run-time
- Apple adopts AAF
  - We will work with the other promoters to make Apple a promoter (we do not believe this will be hard at all)
- Apple and Microsoft work together on MPEG4 and SMPTE standards bodies
  - Get adoption of MOV and AAF technologies

GOVERNMENT EXHIBIT 912

PR & Attribution

- Microsoft announcements
  - Adoption of MOV as the Windows file format
  - Adoption of QT Authoring services
- Joint announcements
  - Adoption of AAF
  - Joint MPEG4 and SMPTE standards efforts
  - Collaboration/Co development of ASF2 as MOV streaming
- Display the QT logo on the Windows Media Player whenever a MOV file is playing
- SDK attribution for QT Author

DirectX Multimedia Strategy



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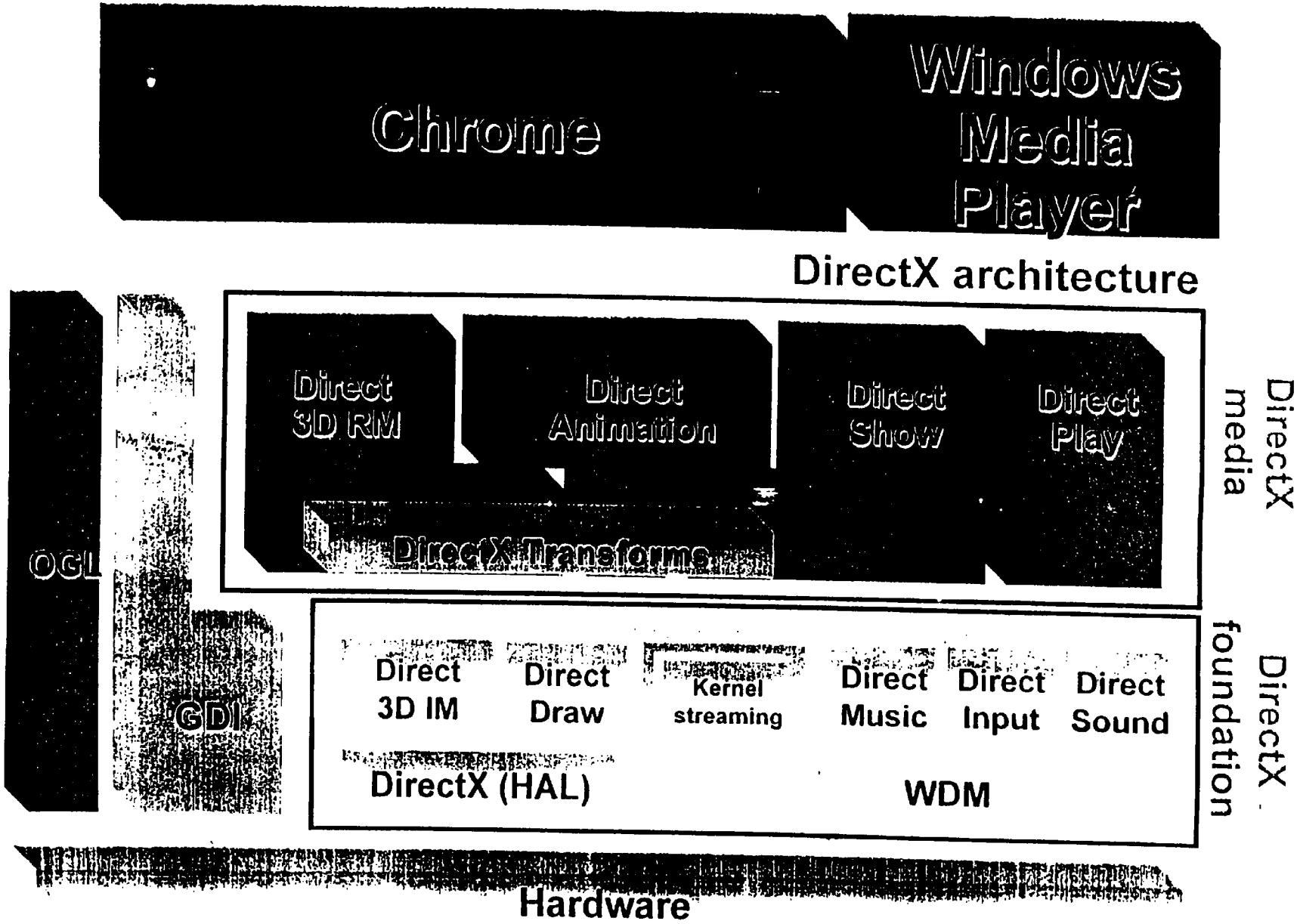
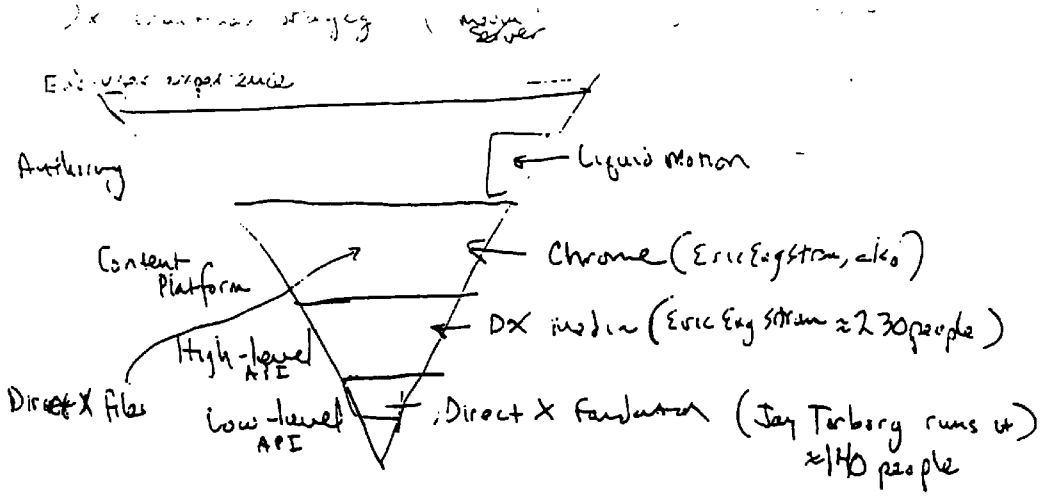

Chrome
Windows Media Player
DirectX architecture
Direct 3D RM
Direct Animation
Direct Show
Direct Play
DirectX Transforms
DirectX media
OGL
GDI
Direct 3D IM
Direct Draw
Kernel streaming
Direct Music
Direct Input
Direct Sound
DirectX (HAL)
WDM
DirectX foundation
Hardware

A 258

DX Overview
Chrome Demo
QT Convergence



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20 people working on codecs ⟶ 40 people soon

Want Apple client to work well with MS Netshow server

[150 people working on streaming server]

- Adopt QT File Format
- Resolve codec mess
- Can we agree on streaming formats + protocols ?

[MS claims they have 70% of IP pool for MPEG-4 codec]

{ - Protocols
- Codecs
- XML tags }

"Build a unified run-time for Windows; use it in Office, IE, Windows." - Engstrom

~~If MS is to strip QT apis, then~~

Eric Engstrom
Chris Philips
Cristiano Pierry

Phil Schiller
Avie
Steve Jobs
Peter Hoddie

Monday, June 15, 1998 -
Ceo Conf. Room

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