

## 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 substantial codec 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

**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

End User Experience

Authoring

Content Creation Tools

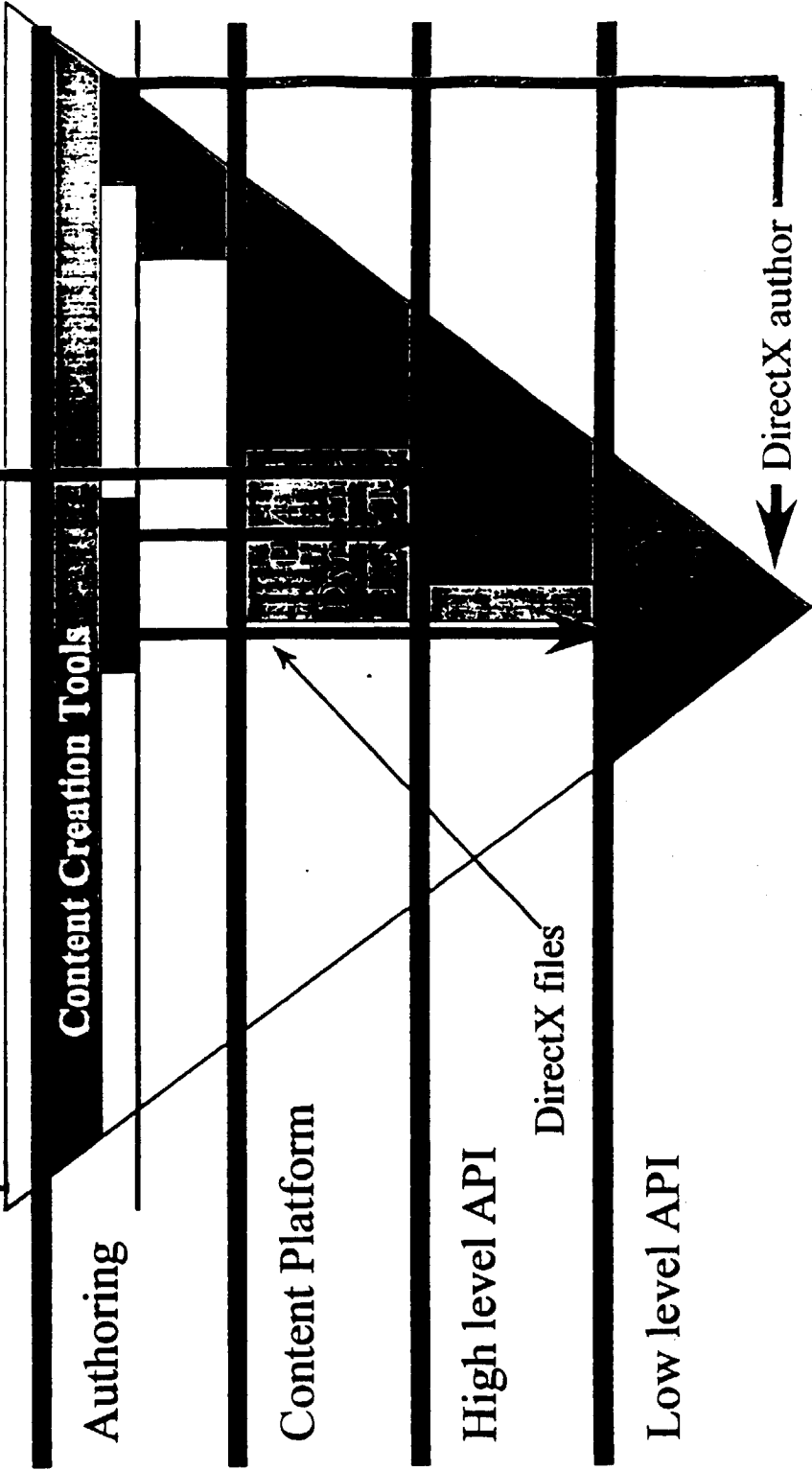
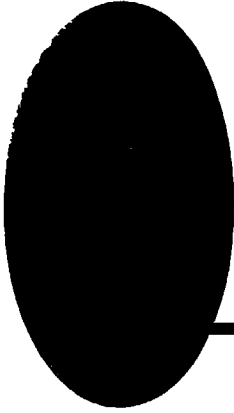
Content Platform

High level API

DirectX files

Low level API

DirectX author



A 258.

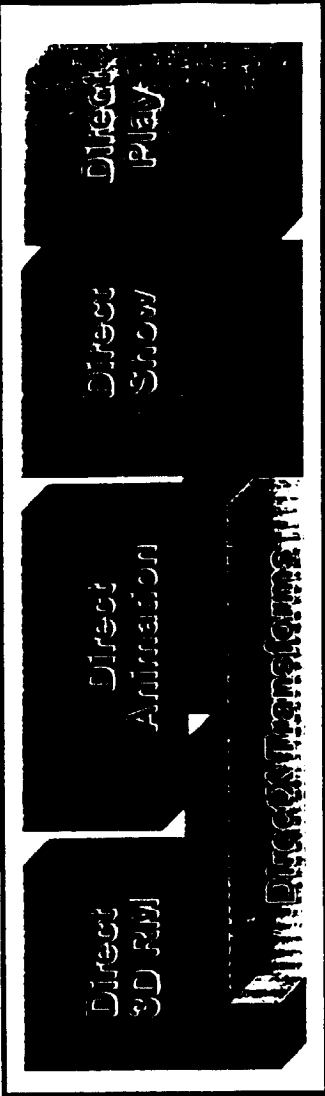
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**Chrome** | **Windows Media Player**

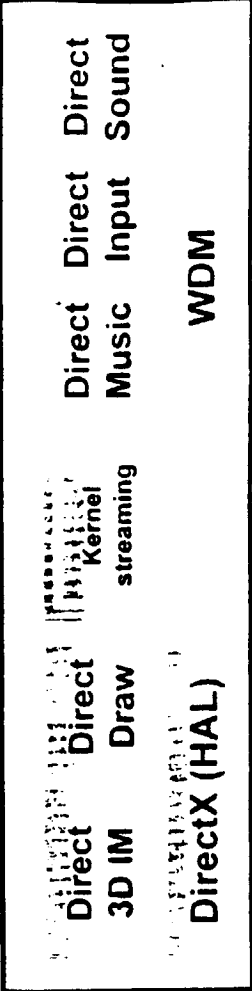
OSL

**DirectX architecture**



DirectX media

DirectX foundation



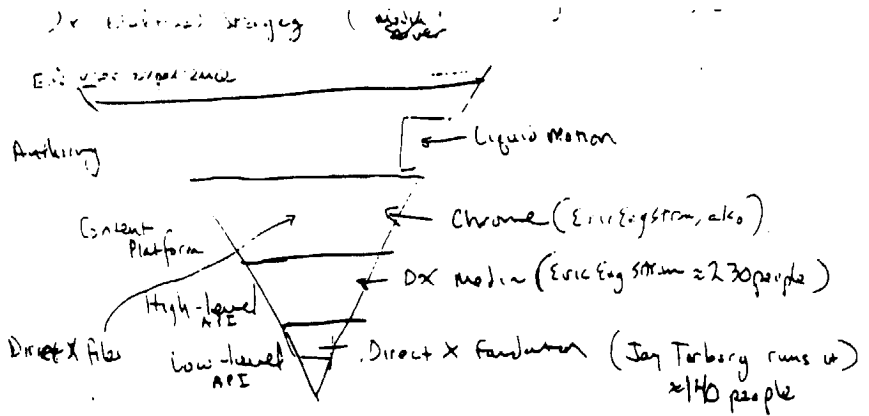
Hardware

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DX Review  
Chrome Dev  
QT Convergence



26 people working on codecs → 46 people soon

Want Apple client to work <sup>well</sup> with MS Netshow server

[ 150 people working on streaming server ]

- Accept 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 ship QT APIs, we~~

Monday, June 15, 1998 -  
Ceo Conf. Room

Eric Engstrom  
Chris Phillips  
Cristiano Pierry

Phil Schiller  
Alic  
Steve Jobs  
Peter Hobbie

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