

From: Chris Phillips
Sent: Monday, January 04, 1999 6:43 PM
To: Bill Gates; Steve Ballmer
Cc: Paul Maritz; Jim Allchin (Exchange); David Cole; Will Poole; Brad Chase; Deborah Black
Subject: MS Digital Media Strategy as it applies to exciting Consumer experience for Win98 update for '00

I put this together over the Holidays to present to management and after listening today felt that it is completely appropriate to share earlier than later.

Much of this thinking is shared amongst a lot of people in the teams touching MM and this was part of a vision that we had tried to start in past years but for various reasons couldn't get it the attention or push it deserves. After today, I am convinced that the timing is right as it covers much of what you all brought up today.

There is more here than your notion of a "killer" app or functionality for Win2KC (Win98 refresh for Xmas00) as I have attempted to bring in scenarios for Digital Media that affect multiple teams efforts. I feel that everything in this plan is possible if we start immediately (waiting until April 98 for a decision is too late) as many of the pieces are already under way or need to run in parallel. The content management piece is the only one that I am not sure where to go within MS but I know that we probably have multiple ones to chose from.



WDMS Prelim
Plan.ppt (50 KB)

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**Microsoft® Digital Media
Strategy
Plan**

DRAFT - 12/29

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Opportunity

- establish Windows as THE consumer digital media platform
- differentiate Windows MM functionality against competition
- enable Windows users to easily capture, edit, publish and organize digital assets
- supports holistic Windows MM strategy (DRM, Imaging, Streaming, Codecs, WMP, DirectX, Netmeeting, Netshow)
- support and leverage hardware innovation
- create new market opportunities for our partners

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Threats

- We must win the "glass" or Windows will become irrelevant
 - Content War - "Three Keys to the MM Kingdom"
 - ~ Codecs - the scribe
 - ~ DRM - the gatekeeper
 - ~ Protocols/File formats - the caravan
 - Another 3rd party situation - someone else emerges as the standard
 - ~ we are too slow to improve and innovate so proprietary approach is picked, our quality is too low, IP is the issue
- Every modern Consumer OS has or will have MM services inherent and most are pushing the envelope (Apple, BeOS, Linux (via 3rd parties), Sony)
- Convergence will highlight MM as CE manufacturers will use to differentiate (Sony, MEI, etc.)

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Strategy

- Leverages company's MM investments in a holistic approach
 - Hit on all fronts (the three keys) for Windows solution or drive them "free"
 - Enhance capture, organize, playback, edit (COPE) capabilities in Windows
 - Exposed thru simple and consistent UI
 - Component based to support CE thru NT
 - Windows Media Player - raise the quality bar, change the rules
- Raise the tide for Windows based products
- Open mechanism to support innovations
- PC Windows as the "Uber" MM device

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Tactics for the 3 Keys*

- **General Tactic = MS standard wins or non-MS is neutral**
- **Codecs (see Paulo for details)**
 - drive a MSAudio and MSVideo standard
 - scaled bitrates, high quality, IP unencumbered, DRM leveraged
 - provided to the industries for "free"
- **DRM (Digital Rights Management) (see Bena for details)**
 - drive a MS DRM standard that the majority of content providers across a broad range of industries will adopt
 - leverage Trusted Windows (see Petarbi for details)
- **Protocols and File formats (see Ramiroc and Nclay)**
 - drive to industry standard for streaming, publishing, and interchange
 - no competitive advantage but needs to be IP neutral, open and free

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Tactics for COPE

- 3 step approach
 - Step 1 - Xmas99
 - finally put decent image support in Windows by Xmas 99
 - ship many of the underlying services and APIs for COPE (A/VC)
 - Step 2 - Provide COPE in Win2KC (Win98 update for Xmas 00) as services and solutions which support most scenarios
 - UI will not be fully realized (point functionality approach)
 - might be delivered as Plus?
 - Step 3 - Full COPE delivered as part of Neptune
 - complete UI realized
- Acquire A/V UI for basis of COPE to sit on top of Dexter
- Not sure what to do about Library (O=content management system) - this is important
- End User Marketing of COPE for Win2KC

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Windows Media Player = Winner

- Raise the quality bar
 - Ships every 6-9 months with added functionality
 - Good consumer UI by default
 - Designed for developers as a platform = "Have it your way"
 - Better integration of media playback in Windows
- Change the rules
 - interactive DVD = better on PC than dedicated Consumer device
 - WebDVD initiative - designed for Win98
 - Distribution of Windows media technologies by Hollywood
 - Leverage Windows Update
 - Abandon brand to customers = "Have it your way" campaign
 - DRM leverage
 - Codec leverage
 - ASP2 = Windows media generic file format everywhere

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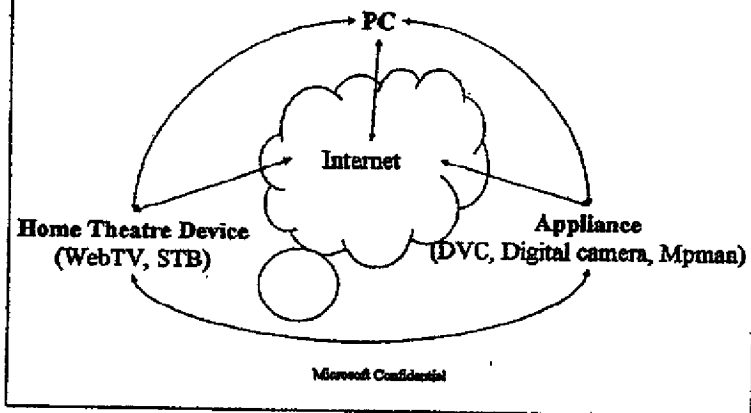
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Situation (PCs)

- Most Home PCs are shipping with Consumer image and some A/V editing applications
 - major quality and functionality differences
 - many do not use WDM and Dx
 - Windows is behind providing holistic solution
- Too many ISVs very few are making money
- Consumer PCs (1999+) are able to do "realtime" COPE
- Low end Videdit apps will follow imaging apps life cycle
- PC will feel pressure from limited purpose devices
- Windows needs full COPE services to differentiate PC from other devices

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The Future for WDMS



Categories of PC Scenarios

- Consumer - COPE applies to all
 - Imaging = Photobooks, slideshows, cards
 - Audio = "Virtual" Jukebox, use with slideshow/video, streams
 - Video = Home movies, streams, music videos/slideshows
 - School Presentations, MM scrapbooks
 - Purchase collections in Windows CMS format
- Business - COPE applies to all
 - Communication - Presentations, collaborations, data exchange
 - E-Commerce - Identification, cataloging
 - Workflow (combined with forms, imaging)
 - Promotional - Kiosk, promoCDs

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COPE Functionality

- Easy, consistent UI and functionality for planning, capturing, editing, playback, and organizing assets
- Preproduction planning (scripts)
- Capture of still and/or A/V frames from multiple external sources via multiple interfaces (1394, USB, serial, rf, net)
 - plug-in model for adding additional interfaces (compression cards)
- Non-linear editing (timeline based)
 - Multi Video/Image tracks
 - Audio tracks
 - Voice track
 - Titling
 - Transition effects with plug-in model

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COPE Functionality (Cont)

- File saving in various formats
 - ASF2 (rendered for publishing)
 - AAF (non rendered for interchange with other authoring tools)
 - Codec, bitrate?, in batch?
 - DRM support
- MS MM Library Support (Digital Asset Management)
 - Need to standardize content management system for asset organization - support buying commercial libraries
 - ~ CDs, DVDs, user generated, genres, Codes, etc.
 - API for jukebox playing (serial, random, pre-ordered) - temporal optimization

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Critical Success Factors

- Ship in time for Xmas 2000 (May' 2000 or earlier)
- End User Marketing
- Proven consumer UI
- Significant OEM engagement for H/W support
- Significant IHV engagement
 - Camera
 - Peripherals (drivers) - storage, capture cards, etc.
- Predicated on various O/S support
 - A/V Control, DD alpha channel support, multi-channel audio mixing, robust set of video transitions and effects
 - AAF and ASF2 support
 - MS audio and video codec support
 - WIA, WMP+, library, DMusic

Make vs Buy vs Both

- Make from scratch is out due to limited resources, subject matter expertise, amount of work, tight schedule
- A pure buy is out because no product completely fits our requirements
 - Must be built on top of Windows MM technology some of which does not exist
 - Must be designed to allow plug-in of H/W, transitions, effects
- Both licensing a proven product from a company that we can start from is the least risky if it is based on Dshow, has good UI, can provide NRE, and fits business model

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Company Matrix

	Asymetric	Avrd	Chax	MGI	Franch	Ulad
Consumer UI	XX	XXXX	X	XXXX	XXXX	XXXX
Deliver Support	XXXX	X	XXXX	XXX	XXXX	XXX
Business Model	XX	XXXX	XX	X	XXXX	X
Restrictions*	XXXXX	X	XX	XX	XXXX	XX
IRV	X	XX	XXX	X	XXXXX	X
Librating 3 (C = better)	XXX	XXX	XXXXX	X	XXXX	X
IRV 5 (C = Better)	XXX	XXXXX	XXX	XXX	XX	XX
Development Record	XX	X	XXX	XX	XXXX	XXXX

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Pinnacle Deal

- \$4M for source with \$500K NRE
 - host using dexter APIs
 - limit titling engine
 - Open transition/effects and capture for plug-in
 - GUI change support
 - Replace Music engine with DirectMusic
- Pinnacle Provides various H/W solutions

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TimeLine

- Feb' 99 Consumate Deal
- Mar' 99 WinHec (Announcement of COPE initiative)
- Apr' 99 Start evangeism of MS MM Strategy to ISVs (Hollywood, Music, Game, etc.)
- May' 99 OSR1 with DV and WIA support
- Mar' 00 Demo COPE at WinHec
- May' 00 Win2KC ship COPE
- Sept' 00 Win2KC COPE marketing campaign

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WinHec '99

- **WDMS Keynote Presentation**
 - COPE Initiative announcement
- **Partners**
 - Imaging = Kodak
 - Audio = Philips
 - Video = MEI or Sony
 - A/V Editing = Pinnacle
 - CE devices = ?

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System Requirements

- Required
 - Intel Pentium II or AMD K6 - 3DNow
 - Windows 90
 - Implies Dx7+
- Minimal Recommended
 - 300MHz+ Processor
 - 64 MB of Memory
 - 2D/3D AGP Graphics Accelerator w/MinComp
 - 88x800, 16bit color space
 - 4MB RAM
 - 1394, USB
 - BIG HARD DRIVE 6+GB

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These are the minimum requirements

the more powerful the machine, the better the experience