As most of you know, we had a review with Bill last Friday. Along with Bill, SteveB and PaulMa were there. We covered where we are in the market today, where we are with V4, where we are going, and the kinds of things we were proposing in the biz dev and marketing area. I've included an abbreviated version of the slides that we presented at the end of the mail. I've deleted the proposals because a number of them are highly confidential.

This was one of the best reviews I have ever seen with Bill. He is pleased with the progress we have made since the last review we did with him, and is very excited about V4 and the potential that MS Audio has. Overall, Bill is very interested in this space and really gets the importance of digital media to the company. He wants to engage to help us think through the tough problems we face going forward.

Some highlights:
- Bill was blown away by our MS Audio codec, and sees that we have a huge opportunity with it.
- After seeing our 300kbps and 700kbps MPEG4 demos, Bill said that he had dismissed ADSL too quickly.
- Bill understood the importance of DRM and supports our efforts in this space.
- Bill said that Windows Media needs to be one of Microsoft's "most aggressive areas".

The key takeaway is that our executive staff is behind us, is excited about the work we are doing, and wants to engage to work with us to win. We are going to be going back to see Bill in May for 4 hours to update him on the technology in V4 and V5, and our thoughts for beyond V5. In addition, we are going to be meeting with JimAll every couple of weeks to update him on the technology and to brainstorm with him.

You have all done an awesome job. The review with Bill was successful because of the great job that the entire team has done. The work on v4 and v5 is awesome. Business development, marketing, deployment, and DRG have done an outstanding job of driving adoption of Version 3. The hard work everyone has done is noticed and appreciated by our senior management.

craig
Windows Media Technologies

BillG Review
2-26-99
Agenda

- Digital Media mission and landscape
- What it means to lose, to win, and a proposed game plan
- Where we are today
- What it takes to win
- Next steps
  - Follow the Challenge Team process
  - Follow-up BillG/SteveB review
Digital Media Mission

- To make Microsoft technology the premier platform for networked and standalone PC and Consumer Electronics digital media systems
- To make Microsoft content formats the premier formats for storing, editing, protecting, distributing, and rendering digital media
Digital Media Landscape

- Availability of unique content drives technology adoption by users and producers, not the other way around
- Content ::= file format + codecs
- Content formats spectrum

A  Proprietary to Real, Apple, others
B  Open standard
C  Proprietary, Microsoft
Platform Battle is Similar to Netscape, But Different Playbook

- No entrenched open standards (HTML, HTTP)
- No acceptable least-common-denominator
- Rapid changes in technical quality of content
  - Creating radically new business opportunities
  - Driving fast adoption of new technology
- Consumer use model differs
  - Some use two browsers, lots use only one
  - Nearly all use two multimedia players, many use 3
- Consumer Electronics devices are potential king-makers
What It Means to Lose

- Real, Apple, and MP3 phenomenon provide the required multimedia runtime on Windows and WinCE
  - Content runtime will drive innovation and standards for tools, consumer app's, and server app's
  - Windows multimedia APIs are no longer the focus of the development community
  - Potential COGS hit to license proprietary technology to get access to content
  - Opening for competing formats in OEM hardware
  - There is no concept of down-level content degradation like with HTML--it's one or the other

  Real's player becomes the browser of choice
What It Means To Win

Windows at center of digital media innovation
- Increased consumer relevance for PC
- Maintain PC value vs. "Portal PC" (AOL web PC)
- Not dependent on 3rd party runtimes or APIs

New business opportunities for MSFT and 3rd parties
- New business models for content and services
- Advantage WinCE for digital appliances
- Broadband client and server platform

Enhanced Office/BackOffice functionality for knowledge workers
- Corporate training
- Business communications
- Synchronized multimedia applications
Where We Are Today
Market Review

Player Distribution

- 22MM WMP distributed since July
  - Jul'97 – NetShow 2M; Real 10M
  - Jul'98 – WMP/NetShow 5M; Real 30M
  - Jan'99 – WMP 22M; Real 50M (G2 20M)
- WMP and G2 run-rates comparable – 130K to 150K/day
- WinAmp 10MM players; 34K/day
- QuickTime -- on 11,500 CD-ROM titles; 24 MM Windows players
Market Review
Multimedia Content Use on I/Pro Sites

- Media Use from I/Pro (233 Base)
  - Have streaming: 62%
  - Downloadable: only 10%

- WMT use (Base 143)
  - Won >50% WM: 7%
  - Winning 31-60%: 1%
  - Winning 21-30%: 12%
  - Winning 1-20%: 12%
  - Losing 81%
Market Review

ICP Biz-Dev Status and Progress (1 of 2)

- WMT Progress w/ "Top Streamers"
  - 32 deals; 7 ASF-only
  - 19% of streaming content on top 100 sites
  - 74% of recorded referrals come from ICP deals
  - Top news agencies stream share grown to 42-50%
  - Have completed 7 ASF-only ICP deals; ~25 parity deals
Market Review

ICP Biz-Dev Status and Progress (2 of 2)

- WMT biz-dev challenges
  - Real content portfolio is 5+ times WMT -- closes deals
  - Real has us way out-gunned in BizDev/sales resources
  - Enso needs CE & WebTV players; only Real has these
  - Apple - Jobs offered CNN ~$1.1M to add QuickTime

- Real's biz-dev accomplishments
  - Exclusives: Broadcast, GeoCities, Excite, M2, SonicNet, NBA, Spinner (on AOL CD, but not exclusive)
  - JVs: RollingStone, Film.com
  - 107 compelling sites listed on real.com
  - Momentum and leadership forces us to “catch up”

- Real challenges
  - ICP dislike Real's invasive branding, poor follow through, and conflict between Real's technology and portal biz
Adoption Inflection Points

Volume & Quality

Codecs / Bandwidth
Modem era
Audio Content
DSL/Cable era
Video Content

\[ \times = \text{Max Opportunity} \]
Digital Media Value Chain

- Same as web value chain
  - ICPs
  - SPs
  - ISPs/hosting
  - Corporate .com sites and Intranets
  - Portals

- More unique to Digital Media
  - Media content owners
  - Aggregation and hosting sites (broadcast.com)
  - Rights management clearinghouses
  - Encoding shops
Market Review

Corporate

- Good news -- untapped opportunity
  - Most corps only beginning to think about streaming solutions
  - US Web-based training market exceeds $5.5B by 2002
    (source: IDC)

- Bad news
  - ICU & Msft field/subs not engaged
  - Real reaching accounts first with 30+ dedicated corp sales force
  - Real relationship with Lotus; distribution & future integration
  - Real integration with PPT minimizes PPT 2K

- Example Wins: SAS, SAP, PeopleSoft, Stanford
- Example Losses: Morgan Stanley, United Healthcare & Gap, Boeing
Market Review

RealNetworks

- Market cap: 12/97 $308M, 2/99 $2.2B
- Revenue growth: $33M to $65M (80% US)
  - Services: $5M '97, $15M '98
  - Software: $25M '97 ($4.8M from MS), $47M '98 ($9.7M from MS)
  - Advertising: $2.2M '97, $3.1 '98
- Headcount: 450 Real, 267 MS
  - Sales, Mkt, Biz Dev: 175 Real, 27 MS
- Real family of sites ranked 15th on MediaMetrix
Windows Media Technologies

Release Timeline

- Q2 '99 WMT 4.0
- Q2 '00 WMT 5.0
  - Platform: completely re-architected and fully extensible client and server
  - Synchronized multimedia: superior real-time and off-line authoring tools
  - Digital Rights Management v3
  - Enhance support for Knowledge Worker
  - Complete midband/broadband solution
WMT 4.0

Major Features

- Branded Windows Media end-to-end
- Windows Media Player 6.1
- Multi-bitrate single-file video
- Digital Rights Management v1
- Synchronized multimedia (preliminary implementation of HTML+TIME)
- Windows Media Tools (ODP, Author)
- Enhanced WebEvents
WMT 4.0

Major Features (cont'd)

- MS Audio codec w/user-adjustable EQ
- Improved MPEG-4 codec, w/user-adjustable saturation, contrast, and brightness
- PowerPoint 2000 broadcast server-side support
- Pay-per-view solution
- Windows Media Event Guide solution (corporates)
WMT 4.0

MS Audio Codec

- Proprietary codec w/seven filed patents
  - Range of 6 to 128 Kbps, mono and stereo
  - Stereo 44 kHz sampling at 20 Kbps+ data rates
  - Equivalent quality to MP3 and G2 at 50% of bitrate

- Quality
  - Quantum leap improvement over RN G2 codec and our own Voxware
  - Far better frequency response results in much richer sound

- Speed
  - Up to 10 times faster encode than Voxware codec
WMT 4.0

MPEG-4 Video Codec

- 12 Kbps to 10 Mbps data rate
- Improved playback quality using post-processing filters
  - Removes blockiness and "ringing"
- Highest encoding speed in the industry
  - 33% faster than Intel codecs in RN encoder
- Filed 15 patents on base algorithm
WMT 4.0 vs G2

- **We Win**
  - Digital rights management
  - Server admin, scale, multicast, reliability
  - Player programmability, playlists
  - High-bandwidth video
  - Solutions
    - Commerce integration
    - Event guide template
  - Radio toolbar in IE 5
  - PowerPoint integration
  - Audio quality & range
  - Multi-processor encoding

- **Tie**
  - Quality of low-bitrate video
  - Bandwidth management
  - Multiple data rates in single file (video)
  - Encoding performance
  - Encoder ease of use (templates)

- **We lose**
  - X-platform players (late & less functional)
  - Synchronized multimedia (IE5 dependency, Win32 only)
  - Audio/video editing
  - Multiple data rates in single file (audio)
  - Client user interface & extensibility
WMT 4.0 vs. Apple QuickTime

- We Win
  - Mature streaming platform
  - Server
  - Network protocols
  - Streaming file format
  - Digital rights management
  - Solutions
    - Commerce integration
    - Event guide template
  - PowerPoint integration
  - Audio range
  - Video quality and range
  - Synchronized multimedia
  - Client user interface & extensibility

- Tie
  - Internet audio quality
  - X-platform players

- We lose
  - Mature audio/video platform SDK (API, x-platform)
  - Mature audio/video editors (e.g., Premier)
  - Content on the web in their format
  - Mindshare of the media authors
WMT 4.0 vs. MP3

- **We Win**
  - Audio quality < 128 Kbps
  - Equivalent quality at ~50% data rate
  - Streaming
  - Potential lower-cost codec licensing model
  - Mature File Format
  - Mature streaming platform

- **Tie**
  - Audio quality >= 128 Kbps

- **We lose**
  - Consumer momentum
  - Developer mind-share
    - Large number of encoders & players
  - Quantity of music in MP3
  - Client UI & extensibility
  - CD Rippers
  - H/W Devices (e.g. Rio)
  - Perceived to be an "open" standard
Plan to Win

Deliver competitive product, focus company
- Ship 4.0
- Communicate imperative to win
- Engage Microsoft Sales
- Execute a winning product strategy
  - Cool UI
  - Secure content (DRM+InterTrust)
  - Competitive codecs
  - Ride the audio wave (including MP3)
  - Own the video wave (midband/broadband inflection)
  - Acquire/build powerful tools
  - Best client/server multimedia platform
- Invest in content providers, infrastructure, and Marketing
  - Providers: record labels, artists, radio stations, encoding houses
  - Infrastructure: Broadcast.com, cable/telcos, Qwest
- Figure out Consumer Electronics plan and partnerships