

From: Anthony Bay (Exchange)
Sent: Friday, January 08, 1999 6:00 PM
To: Jim Allchin (Exchange)
Subject: RE: me : early warning

comments below. have fun in DC. :-) Kick some butt!

-----Original Message-----

From: Jim Allchin (Exchange)
Sent: Thursday, January 07, 1999 4:22 PM
To: Jim Allchin's Direct Reports
Subject: me : early warning

It appears the trial calendar has been moved up. Right now I will be leaving on the 14th and I may not be back until the 27th. (I hope this isn't true, but right now that is what I'm planning for.)

There is a lot of prep to do in DC -- starting next friday with paul and then me on Sat. There will be several days of this, but I still hope to be on mail a lot while in DC. With all that said though you shouldn't count on me until I return.

I think you all know what has to be done so I am not worried about that. Just to repeat for good measure though the key things on my mind:

1. Continued 3 year planning. I hope to send some more mail about this, but Davidcol has the helm on driving this forward. Please support him in his efforts here. I will do what I can, not sure how I can add tons of value though.
2. Driving windows 2000 out. Brian is on this. Please help him. We have so much money riding on getting this out.
3. Windows 9x updates. I have decided to move windows 9x work to davidcol. David and brian are working out what this means now. It is critical that we get focus on the SP right now before any more time slips by. I am counting on davidcol and brian to work out a plan which doesn't hurt w2k and yet gets a focused team able to deliver separately the windows 9x SP and future updates. very pleased to see you did this.
4. Reliability focus: Brian together with some owns ensuring we are all over this. However, brad's team needs to make progress on a plan (and execution) for how we can dig ourselves out of the perception problem we have. To mean this also covers reboots for configuration changes, etc. The new change to knowndlls that merid did should give us more flexibility to avoid reboots. Let's make sure we leverage this.
5. abey: I think you are making good progress on ecommerce. I do not know where you are at with streaming media. I continue to be VERY worried. You need to ensure that there is a review on my schedule immediately after I get back from this ordeal. I talked with andreasb the other day and he implied things were starting to happen finally outside of the US for us now (thanks to will), but he said REAL was everywhere. We need some big thoughts here and some great execution.

I sent a update memo on streaming last sunday nite. here it is again. it is helpful background... but there is more thinking to be done. would appreciate your comments.



Streaming media
update.doc (52...

we have a review scheduled with you on 2/4. it was the earliest time we could get. we'll be ready to cover all the major issues; some areas are working well and others not.

6. Bigger issues:

- storage. I am pushing on this issue, but it really is in billg's hands now. I know bill has committed to met with davidy on this topic. This needs to be resolved for us to direct the people. This can't wait for me to return. This must be decided hopefully next week. I will continue pushing on this one.

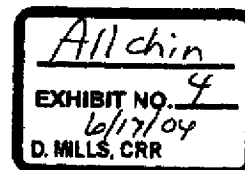
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- forms/trident: we should move the trident people into deb's team as soon as IE 5 is done. After talking with paulma last night I don't want to move deb to davidcol quite yet. We need a little bit more of the new org to be clearer before deciding what to do.

7. Finally, the org. There are some top level decisions that must be made before we can move ahead here. I think it is worthwhile that

- davidcol/brianv: continue their effort to detail how a consumer/home vs. business split could work in a detailed way. We still want to retain consistency to the degree possible. You should be able to make significant progress on this.
- brianv: how would you structure your org? You have already done thinking about this. You need to flesh out the names and the devil which is in the detail.
- davidv: what would a windna group look like? what would be moved to brianv? For example, what happens to something like EIG? Also, what pieces of IIS would move?
- davidcol: as we discussed if you could write down your thoughts about how you see the consumer windows effort fitting with the online stuff it would be great. To me there are top level issues that need to be sorted out, but this is an important action item that could influence what happens.
- abay: I am confused about whether ecommerce is conceptually part of the windna effort or not. Bill now sees this as fundamental to our efforts because of the XML translation engine. You should start laying out a position about how you see ecommerce fitting in the future. I encourage you exchange mail directly with bill on this.

saty and i have been thinking about this. we have started to engage with jallard and bobmu. i will send mail to bill, you, bob on our thinking.

also have some thoughts on org changes we might want to make related to streaming to improve execution.

thanks,
jim

Subject: Streaming media update

It has been about six months since we did a streaming media review. We have a billg review scheduled for february 26 (and steve we need to get this on your schedule if it isn't already), but I wanted to provide an update sooner to bring you up to date on how we are doing. We'll drill into more detail at the full review.

The good news

We launched Netshow 3 and the Windows Media player in July. At that time we had close to zero share in streaming sites and clients. Real was viewed as the clear and dominant leader with Microsoft a very very distant second.

Since then we have made significant progress in gaining momentum vs RN. Our efforts in last six months have in many ways helped to legitimize the streaming media category. This is now viewed as a two horse race, with many analysts beginning to question RN's long term ability to compete on streaming media platform. The divestiture of RN stock was much needed and made clear that we are competitors not partners. We still have a long way to go, but RobG hears our footsteps.

Version 3 made us much more competitive.

- We are now approximately at 50/50 player download run rate with RN - up from 5% six months ago. This is HUGE progress and generally not known by the media (or anyone else for that matter). Our player download runrate is now 150,000 per day - parity with RN's published numbers. 15M Windows media players have been downloaded since July launch - there are more copies of WMP out there than RN's G2 players. 25% of Win98 users have added media player via windows. This growing player installed base gives us the foundation to grow our server and format penetration.
- FYI... ranking of referrals for downloads is MSNBC, CNET, CNN, WWF (world wrestling federation), broadcast.com. CNET alone has downloaded over 600K media players.
- Our approach is to get parity or better in terms of client desktops and use this to get sites to offer both formats. We are now represented on 30% of top 300 media metrbc sites - up from 1 six months ago. 5% are Windows Media/Netshow only and 25% are offering both RN and us.
- On sites offering content in both formats, we range from 10% to over 50% of total streams. CNN is approx 38%, Fox is approx 50%



NetShow eating into RealPlayer's market share.urf

- According to Forrester, about a third of surveyed companies in October are now using Microsoft's NetShow servers, whereas a few months ago NetShow had barely made a dent in the market.
- Page views on WebEvents (our media portal channel in msn which is linked in player) soared 700% from 50,000 page views per day in Oct. to over 400,000 per day in Dec. This gives us valuable real estate for the first time.
- In breadth area, we have had 65,000 server downloads (we believe primarily by corporations for evaluation/trial)
- We are ahead in high bandwidth content on a feature basis due to Theater server and our MPEG 4 codec, but very few sites or companies have deployed this.

We are getting much better coverage from press and analysts. We were essentially viewed as a joke until 6 or 8 months ago. Although we are still viewed as behind, most analysts and press are impressed with the rapid progress we have made. In 7 of latest 10 reviews we have gotten neutral to positive results and are viewed as a credible choice for customers. We even won our

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first ever review vs RN. The view is that we are breathing down RN's neck and the talk has turned to comparisons to the Microsoft/Netscape battle. Many speculate as to what RN can learn from Netscape, and where RN will go. The belief is that their portal asset could become much more important to them over time than the revenue stream from server software.

We are in the process of rebranding our streaming media efforts in a consistent way under the "Windows Media" banner. Player was first, server is changing from Netshow to Windows Media Services (following IIS). The netshow brand will go away. We are also debating whether we should rebrand the file format and potentially codecs in the same manner. This has allowed us to begin to talk about Windows Media vs Real rather than Netshow vs Real.

The product team is in much better shape than ever before, we have strong managers in place and a much more effective organization. Morale is up across the board. We have good cross team effort between Davidcol's group and mine. We are making this work much better than in the past, but given that streaming media is an end to end system unlike http/html we have to ensure that goals, priorities and resources remain in sync across the teams. And we have been able to make this progress by being smart while keeping resources essentially flat year to year.

We have a focused marketing, business dev and evangelism effort going which has begun to pay real benefits. RN biz dev/DRG people cover 4-5X more sites than we do, but when we actually get to present our message we are achieving a high percentage of success. Our marketing coverage has allowed us to get the word out that Microsoft is serious about streaming media and has a compelling value proposition, and we beginning to combat RN FUD (eg they have < 85% share and have essentially already won).

The corporate market hasn't yet taken off, but anecdotal data is that we are beginning to make inroads. This is one area we should be able to do much better in given our existing account mgmt and channel coverage of business customers.

The bad news

1. RN is still significantly ahead of us and not slowing down. They have not yet made any major mistakes. G2 is beating our v3 in reviews and is ahead in a few key feature areas; audio quality, multirate streams from single file, SMIL for synchronization of different content types in the browser and overall ease of use. They are outinvesting us in business development coverage. They are also well ahead in the use and leverage of their portal sites.

Multi-bit rate streams: We have plans to update v3 by middle of this year to add multi-bit rate stream support for video.

High quality audio: Our strategy to date has been to license audio codecs and to develop our own video codecs. We have a video codec team in place and that has paid off. We need to follow the same approach with audio and invest in audio codec engineering, there just isn't any way to compete with RN via licensing that we can see. We had hoped to acquire a small audio codec company (Qdesign) which would have allowed us to catch up with RN this spring, but that fell thru. There is some audio codec work in MS Research that we can leverage but we need to put in place an audio codec dev team ASAP. We are feeling the impact of this issue in radio arena most acutely.

SMIL: With SMIL, RN is broadening their player to be another browser by including layout, support for multiple media types and other SMIL features. Rather than incorporate streaming as a feature of the browser, they are adding browser features to their player. Our response is two-fold. Our specific response to SMIL is that we aren't supporting it because Microsoft believes that this functionality is best provided via extensions to HTML (HTML + TIME) rather than a new format. We have proposed HTML

+ TIME to W3C along with Macromedia and others. Our more general response to RN's approach is that we believe that streaming media over time becomes a generalized browser/client feature just as other viewers (GIF, JPEG) have in the past. We question the need for another mainstream browser to compete with IE and Navigator. We encourage use of the media player on an embedded basis into web pages which retain the branding and presentation of the site that authored them, rather than bifurcating the presentation into a combination of a web page viewed in a browser and other content viewed in a separate player with separate UI. By introducing SMIL, RN has significantly broadened the competitive front with us to include not just the media player, but the combination of IE plus the media player. Long term this may turn out to be a major strategic mistake on their part, but if they can pull it off it gives them much more control of the user experience than they have today. Fighting SMIL and the standalone player approach are a key battleground for us.

Streaming media Portals: RN and broadcast.com are the top players. RN combined sites are now #15 on media metric top web sites. RN uses this more effectively than Netscape leveraged Netcenter. Traffic volumes, referrals and distribution deals are growing into a big asset for them. There has been speculation that they are an acquisition target for AOL. This could be a smart move for AOL and RN; as users move to higher speed connections streaming content becomes much more interesting and provides a number of ways to enhance the user experience and increase the amount of time users spend on sites. Yahoo is soon to launch streaming content (and we stand a good chance to get them to use Windows media). Microsoft's offer is called web events, is a channel on msn.com, and is managed in brad's org to help drive traffic to sites using Windows Media. We are doing OK given the level of investment we are making, but RN has much more focus on this area than we do. We need to get much more serious about this.. will poole has some suggestions.

2. Microsoft as a company is not focused on this area with anything close to the level of strategic seriousness we gave to the battle with Netscape 2-3 years ago. There is nothing equivalent to the IE and IIS push we had in the customer units, field and subs. Will Poole's team and DRG (montisb and naseem) are doing a great job but RN is out investing us in business development and evangelism and has 3-5X our account coverage. We lack market awareness and mind share among second and third-tier content providers. There is no work going on in Microsoft's authoring or tools groups to support streaming content. Very little top level Microsoft PR and advertising speaks to the importance of streaming media. The general perception is that streaming media (and therefore multimedia) are a sideline for Microsoft; at least in comparison with how we treated the web.
3. QuickTime is not dead and remains a wildcard threat. There is still a lot of Quicktime content on the net today, and Apple has not given up. They are expected to make a QT4 announcement at MacWorld this week that talks about QT as a streaming format for the first time. Unlike RN and Microsoft, Apple is not attempting to deploy a streaming system, rather they are promoting their format and working with other vendors to ship servers and integrate QT support into their clients. Apple's primary objective seems to be to preserve their high end authoring business (and consumer distribution) by not ceding control of multimedia formats. Apple is promoting the use of http servers as streaming servers as well as recruiting server ISVs to ship QT enabled media servers. They are saying there is no need for dedicated players and are trying to leverage public domain MBONE players. Their http streaming approach has clear tradeoffs in streaming quality; and the "no dedicated player" approach still requires their codecs to be installed on the client and common protocols to be supported on client and server.

We believe that the net effect will be that QT will remain a factor and provide a 3rd alternative to Microsoft and RN. QT will remain appealing to the anti Microsoft camp, more so in fact than RN. From an engineering point of view, Apple is not investing significantly in codecs,

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encoding or end to end streaming functionality and it is not clear what their long term competitive differentiation will be. Interestingly, QT could be more threatening to RN than to us. This will depend on the server ISV support Apple is able to line up. Oracle is one server vendor they are working with. SGJ we believe is another. And I wouldn't be surprised eventually to see an open source streaming server (say an add on to Apache) combined with MBONE client.

Combating QT requires us to focus on broad promotion of our format (asf potentially renamed windows media format), to support asf broadly within Microsoft's own authoring and dev tools, and also a strong evangelism/co marketing effort with high end tools vendors. None of this is funded today.

Our strategy

1. **Change the rules; reposition streaming media battle from Netshow vs Real to Windows vs Real - follow the IE/IIS strategy where ever appropriate**

We position streaming as a natural and native feature of our client and server operating systems. We say that streaming is becoming a more relevant and valuable feature for websites and is reaching maturity to become a standard part of corporate communications infrastructure. We say that our goal is to provide the best technology/capabilities for streaming just as we do with web platform (IE & IIS). We say that media player over time becomes a feature of the browser in the same way that GIF and JPEG players got integrated into the browser. Synchronizing media with other content we say should be done via extensions to HTML (HTML +TIME) rather than via a non HTML approach (SMIL). We argue that content providers want to control the user experience of their site when it uses streaming media just as they do on their web pages... meaning they should embed the media player control in their page rather than bringing up a separate UI. We say that corporations should deploy streaming media as an extension to their Intranets the way Microsoft uses the netshow network and this is a standard feature of our platform, not an added cost item.

Real says that streaming is an extra cost application that should run on multiple client and server operating systems. They say that multimedia is an experience separate from browsing or using the web and argue that extending their player with layout and presentation features via SMIL makes more sense than extending IE via media features. They say they are the experts and market leaders (in essence they say the battle is over and they have already won), that they are focused on streaming media while Microsoft has never been good at multimedia and this is a second tier area of focus for Microsoft. RN wants the user experience to be in their client (where they can stuff their links and their paid partners links) rather than in the browser.

Most of the content posted in Real format launches a standalone player - RN controls the UI. We are becoming more and more successful in convincing people that Real is competing with their brand by doing so. We pitch: 1) embed the WMP control in their web page 2) host the control in a custom application 3) use the WMP standalone player since it doesn't have any branding conflicts 4) distribute your own custom branded player using IEAK.

The net takeaway we want customers and analysts to have is that streaming media today is like the web a couple years ago; what is today the domain of specialized clients and servers will become a standard feature of client and server operating systems. Therefore the rebranding exercise, the integration between IE and WMP and the inclusion of Windows Media Services (aka Netshow) in Windows NT Server. We are also considering renaming asf (advanced streaming format) to windows media format and positioning it as the replacement for .avi and .wav files - and as Microsoft's alternative to Quicktime.

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2. Offer competitive streaming media features combined with deep integration across a number of areas of Microsoft product line.

V3 got us to feature parity in most areas and ahead in some. We jettisoned the dedicated Netshow client and rearchitected a new "universal player" around Directshow. But as outlined above we are still behind in several areas; none of these are mainstream deployment blockers but are competitive disadvantages. We have to address these and move ahead in other areas and plan to do this with some minor modifications to v3 along with a rearchitecture of server in v4. We will merge Netshow and Theater server (formerly known as Tiger). V4 will be a major focus of the February review. We are including v3 server as a feature of Windows 2000 Server and developing v4 in parallel. V4 will require Win2000 and we are trying to ship it as an update shortly after Win2000 RTM; eg Q1 CY2000. The effort of supporting these parallel efforts is pretty taxing and not something we are well resourced to do. Also, we need to update client and server concurrently to be able to leverage new features. Managing schedules, test matrices and other priorities cross teams adds complexity; although we are doing much better than in the past. We are reviewing the issues and tradeoffs with Jimail.

As outlined above, audio codecs is an area where we need to increase investment. Codecs (and encoders) are also something that we can rev out of cycle with the core client/server. We plan to build an audio codec team to complement the video team we have in place.

DRM (digital rights management) is an area which is not currently offered by RN (or Apple). But there is general belief that this will become an important feature in future, potentially in music industry first. Core DRM work is being done in commerce team with Windows media server/client as first content targets. Making this work will require some changes to Dshow and a new release of the player. Currently DRM effort RTM is linked to v4 of both Windows Media and Commerce.

Commerce server integration is another area we are working on. RN packages up their server in a number of bundles, one specifically offering subscription, advertising and pay per view. We are way ahead of them on Commerce features and are working to integrate them with Windows Media. We will show some of this in February. The leading non-porn pay per view service on the internet is World Wrestling Federation and they are using Windows media/netshow and Site Server Commerce edition. They are averaging approx 3000 users per pay per view event; each paying \$5.95 to watch 28.8 streams.

Powerpoint 2000 includes native ability to create and stream an audio or video annotated presentation. This is a very cool feature and one that should do a lot to drive corporate adoption.

Today WMP is only available via stand alone download. WMP will ship with IE 5, Office 2000, Win 98 CSR, Win 98 Retail beginning in March/April. IE5 has a radio bar feature (delivered via embedded WMP) which allows selecting and playing Internet radio within IE. We are also delivering v3 media player clients (asf only rather than universal players as on Win32) for Win16, Mac, WebTV, WinCE and Unix clients, although we are well behind schedule on v3 Unix player.

We are renaming the Netshow server to "Windows Media Services" in Windows 2000 to map to the overall Windows Media branding. Streaming media will be one of the configuration scenarios in Win2000 configure server wizard under web services (along with IIS).

Exchange Platinum will use Windows Media services to stream voice mail (or video mail) out of the store.

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Either we or proxy team want to ship media caching / proxy with Comet (Proxy v3). This is not yet committed plan. We are also working with Cisco and Inktomi in this area.

We will have some limited Netmeeting integration via NetMeeting support for Save and Send-To-Server. We are looking at ways to do more.

3. Push asf and a set of standard codecs as the defacto standard multimedia format for Windows

In addition to the battle with RN over clients and servers, we need to win the format battle for content creators. Content drives player usage, and streaming content creators choose a format and codecs. They do this based on quality of codecs, ease of encoding, availability of tools and player installed base. Ultimately formats will be a key battleground we must win. Today much of the content on the web is still in .avi or QT formats and much is being encoded in RN proprietary formats. Our approach is to push asf (again I will say that we are considering rebranding asf to windows media format) as the defacto Windows standard format and the successor to .wav and .avi, along with a set of core codecs. ASF works for local playback, progressive download via http servers or file servers and high quality playback via streaming media services. We have a long way to go to make this happen and are really gated by features which won't be delivered until the next version of asf; v2. As outlined above in the Apple section, QuickTime is and will remain a key format competitor for us.

We are beginning some limited efforts around promoting our formats. A campaign is being created call: "Got ASF?" focused at building interest around ASF from the developer community. This is a 3 phase campaign: 1) Get people to convert their AVI, WAV, etc. Files to ASF. 2) Get them to post them in ASF format on their web site for (progressive) download 3) Get them to stream the ASF from a Netshow Services server.

4. Get Microsoft behind Windows media.

We need to make Windows Media core to our internet platform strategy. We should extend our existing focus on gaining share and penetration for IE and IIS to include WMP and WMS. We have already begun the positioning that way, but customer unit and field metrics need to be put in place also. We should begin this in 2H99 and set clear aggressive metrics for FY2000.

We need to increase our business development effort to match RN's. We need to make Windows Media part of Microsoft's overall Internet technology advertising and PR, including exec speeches.

We need to get a rational tools strategy in place that supports asf and Windows Media as core technologies.

5. Attack key customer segments

Winning in streaming media is likely to follow a similar pattern to how the web evolved. We need to win high profile internet sites and developers as they are the leading edge technology adopters. Ultimately however we expect a huge volume of streaming to be on corporate intranets.

The streaming industry is rapidly maturing, with business models evolving for both Internet Radio and ISPs who offer streaming services. Spinner.com, the number-one Internet radio station, claims to make \$0.07 per listener per hour. Not strong, but still a profit. Internet Radio is an example of a market segment where Real has alienated loyal customers by enabling new competition in the marketplace by playing favorites: most recetly with Rolling Stone.

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Real went out and did Rollingstone radio for them, and the two other dominant Internet Radio stations (both loyal Real customers) came straight to Microsoft for discussions.

Real is heavily entrenched in the music industry, a highly strategic market segment because audio quality is more mature than video and internet users tend to listen to music while surfing. Real's tactic to date has been to offer encoding and hosting to major labels at no cost. This offer from Real, along with WMP playback of MP3 files, has made the record labels not very enthusiastic about working with Microsoft. DRM is one way we believe we can turn this, along with the strategies outlined above to show how RN competes with its customers brands.

Coverage efforts are focused on:

- the top 100 internet sites and developers via business development and DRG 1:1 evangelism. This includes music industry and media companies. We are being outgunned by RN.
- Breadth internet sites and sitebuilders via DRG SiteBuilder network. We still have limited mindshare and awareness due to lack of overall Microsoft push on streaming media.
- ISPs - not covered today. This is a big gap as streaming is a perfect service to be hosted.
- Corporate accts - limited coverage today, need to put in objectives for field per previous commentary. It appears that RN in fact has better coverage than us today due to dedicated corporate acct reps. This is particularly true in markets like NY.

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