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Bill Gates

From: Nathan Myhrvold
Sent: Monday, April 24, 1995 8:10 AM
To: Bill Gates
Subject: FW: Internet strategy

FYI - feedback from Blackbird group on my email.

Nathan

From: John Shewchuk
To: nathanm; patter; russ
Subject: FW: Internet strategy
Date: Thursday, April 20, 1995 7:50AM

Very interesting memo - the Blackbird MSN/Internet/CorporateNet issue has been widely discussed on the Blackbird PM team for some time and there is a general consensus with the overall technical direction described here.

A couple of observations

* Regarding integration between O'Hare and Blackbird. BenS is unwilling to consider development of an OLE control wrapper for O'Hare until September. So the plan of record is to enable Blackbird to contain URLs that will start up the O'Hare browser in a separate window. More generally, BenS is adamantly opposed to any use of OLE. He has stated that rather than using OLE, he intends to create a new lightweight OLE-like interface based on windows controls for O'Hare. This is highly random and I suspect that when he thinks this through he may reconsider this point of view. However, in the interim it makes it difficult to make progress with them. Finally, the VB team is now also interested in an OLE web control so our combined request may carry more weight.

* With regard to others establishing a non-MS Windows internet platform. This may be happening faster than we think. Already Netscape and Adobe are defining a new "metafile" format in Acrobat, First Virtual and others are establishing useful payment system, BenS wants to work on an OLE replacement and I hear various rumblings about groups playing with creating OpenDoc based-browser (whatever that means), Sun is placing the Hot Java programming language out there instead of VB, QuickTime for Windows is becoming a de facto internet movie format. However, Nathan is correct in that all of these things have to be "patched" together now but a player like Netscape might be able to focus this effort.

* We do not have the ISV community on our side. Unfortunately, right now, the vast ISV community is focusing their considerable development resources and expertise on this non-MS platform. By releasing Blackbird and evangelizing elements like OLE we may be able to offer ISVs the chance to add value to the MS platform. Furthermore, if ten sharp programmers without an existing business wanted to do something cool with MSN, we would tell them to go develop for the Web because they do not appear on the MSN radar screen. That makes me nervous. We

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would much rather have them develop OLE controls and use our "Server-Kit".

* Oracle (or Oracle and Netscape) may be the company to watch out for regarding the server kit. I will forward some information we collected on Oracle — they have an extensive collection of server side development tools for the Web ranging from automatic hypertext link creation tools to a system that combines Perl, C, and their database to make a Web-server programming environment with components for customer usage tracking and registration as well as automatic creation of web-based interfaces to the database. If I were thinking about creating a custom Web server with new data types, that would sound pretty interesting...

If we wanted to move forward on this, in addition to the obvious issues that we have been thinking about such as moving Blackbird objects across TCP/IP networks, creating a server SDK and so on; there are some other technologies that outside our group that would be very helpful. In particular, for OLE controls, we probably should be able to digitally sign and identify valid vendors and I still claim that we need a much stronger notion of identify that can work in a turnkey manner in a distributed environment. Even better would be a mechanism for selectively providing OS rights to an execution environment based on this identify.

-John

From: Pat Ferrel
To: John Shewchuk
Subject: FW: Internet strategy
Date: Tuesday, April 18, 1995 6:29PM

From: Nathan Myhrvold
To: Bill Gates; Russell Siegelman; Craig Mundie; Dan Rosen; Pat Ferrel;
Paul Maritz; Peter Neupert
Subject: Internet strategy
Date: Tuesday, April 18, 1995 6:02PM

There has been a flurry of email about Netscape and our general Internet development strategy. This email is my contribution to this topic.

My assumptions going into this, as discussed in my previous Internet memo, are that:

- "Internet standards" in the sense of the current public domain committee driven standards are a red herring and are not a competitive threat. One reason is that most of the key people behind the public domain projects are busy writing business plans so they can cash in. This is true of the Netscape team, but also the many other rapidly commercializing services. The big issue to be concerned about is the same issue that we have faced in the past - proprietary standards coming from competing software companies. Netscape is certainly one of the many companies who will try to promote their proprietary extensions (and entirely new protocols) on the world.

- Cross platform data only protocols like HTML are very important at the

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moment. I do not expect this to continue with the same degree of emphasis. Custom protocols, downloaded front end code and platform specific development are bound to occur. Some content (particularly that with low value) will continue in generic, cross platform tools, but a lot of compelling things will start to dip into custom code and platform specific features. This trend has always occurred in similar situations in the past. When you get two competitors making a product, and you have some platforms that are more popular than others, then one of the competitors is going to succumb to the temptation to abandon cross platform approaches, limit themselves to the most popular platform, but be able to do things that can't be done in a cross platform manner.

- The world of the Internet is rapidly becoming Windows centric, because Windows will be the most popular client operating system by a wide margin. This is a 180 degree shift from the historical traditions of the Internet, which happened to grow up in one of the few communities which is platform-diverse - namely academic computing.

I expect that there may be a lot of common agreement with these points at one level, but I have seen a lot of email that implicitly seems to have a different set of assumptions, so I wanted to make my assumptions explicit.

Given this, our natural strategy is to try achieve a number of goals:

- Superset Internet protocols and standards with our own value added extensions. As platform specific work is done on the Internet, we want it to be done on our platform. As proprietary technology and protocols are used, we want them to be ours - in as many broad mainstream areas as is reasonably possible. We don't need to own every protocol in every area, but we want to be an important player. There certainly is a danger that Netscape, or another company, could establish enough APIs and proprietary protocol extensions that they would wind up owning the "Windows internet platform". PaulMa is quite correct in comparing this situation to Novell, which successfully established a "sub-platform" (for a set of network services) within the context of our client operating system. This does not mean that Netscape needs to be a direct competitor - I am optimistic that we can have a positive relationship with them - but out of the many possible future directions for them and us, if we are not careful they will evolve toward being a direct competitor in this manner.

- The natural way for us to do this superseting is using our current technological agenda in PC computing. This means using monickers, OLE objects, Forms3 forms and every other Windows technology that is applicable as part of our extensions to the current Internet world. In addition we also have to look at developing some new things that have no equivalents in the PC world, such as security and billing, so it is not all about reworking existing stuff.

- We need to have technology at both ends of the system to make this work - i.e. both front end and server, and have them be very popular.

Again, I don't think that there is a lot of disagreement with this. Here is the part which is more controversial.

One key technology to accomplish this is Blackbird. One confusing fact is that the term "Blackbird" includes both front end and server components, as well as having an authoring environment. Blackbird uses an HTML superset and is extending it with OLE, Forms3 and other Windows assets. It also

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includes security and billing.

Ideally, the Blackbird front end would include a great Web browser, and it would seamlessly integrate access to servers on the Internet using a plain vanilla HTML/HTTP as well as Blackbird servers. This is our current strategy, but tactically we are not there yet. Blackbird technology will not be generally available for a few months after MSN 1.0 ships. So our current plan has been to integrate the O'hare Web browser, with Blackbird and the rest of the MSN front end. I view this as step to the fully integrated front end.

There is a great deal of confusion generated by the fact that Blackbird is not something that we currently plan on selling as a standalone tool. In the past week I have had some conversations with people who thought that this means that Blackbird is "not an Internet authoring tool" and that it is "proprietary to MSN". I've had people tell me that the O'hare people either are (or should be) working on their own plan to superset Internet protocols. I'm not sure that anything is actually happening in this direction already, but this sort of duplication is an ENORMOUS danger. We should be working toward a single integrated front end, which supports ONE set of extensions to Internet protocols.

A diversity of projects in this area is also death to our ISV and IP message. We really need to be consistent, and I am very afraid that we are going down a path where we will be anything but consistent.

Another confusing issue is how to think of MSN versus various information services on the Internet. I regard MSN as yet another Internet service - no different in principle than any other information service on the Internet.

It happens to be one which ALSO can access customers who don't have access to the Internet, via X.25, but that is a nit. MSN is an Internet service.

Given the current state of the Internet, and given our size and resource level, we are going to bootstrap our Internet service by leapfrogging the current front end technology and distributing our own front end. This is unusual, since most Internet services just accept the constraints of the existing protocols and software. Given our size, and our software skill there is no reason to accept these constraints, and in fact every reason for us to break the mold by doing something really different for the bootstrap.

Over time (like within 3 months) we will be using more of the Internet infrastructure.

This may seem like an odd way to view things, but in fact it is completely consistent our model and what we have been saying for quite a while now.

The key things which make this a valid way to position ourselves are:

- We will move to using TCP/IP, and thus will benefit from the ever cheaper connectivity which is a central part of the Internet.
- We will allow access to any Internet service.
- Our position is to superset both in terms of technology (with Blackbird and Windows-centric extensions) and content/service (providing great browsing, indexing, navigational content)

The Front End Strategy

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The front end which supports these services is basically the union of the MSN front end with Blackbird and O'hare. At some point this is very smoothly integrated, but at first they are separate pieces of code stuck together at the end user level.

This front end should be given away as widely as possible, including:

- Put into Windows. I agree with PaulMa's comment that we should distribute the front end very broadly by having it Windows, at least at some point down the line.
- Distributed free on the Internet.
- Distributed free with MSN.

The front end should have a variety of connectivity options:

Case 1. You're already on the Internet (i.e. your company has a T1 line etc., or you choose to use a Non-MS third party dial up provider), and don't want to subscribe to MSN. In this case do not see MSN content, and you do not need to pay a monthly fee. In this case the front end is (in effect) going to be the greatest Web browser for existing Internet protocols. MSN would have a free home page that advertises MSN. We would also enable some other free services which use the full Blackbird technology to show people how cool it is.

Case 2. If you are a case 1 person with your own way onto the Internet, we will allow you to subscribe to MSN very cheaply. Ideally this is priced so as not to be a barrier so that most people will go ahead and subscribe. In this case you get everything on MSN and Internet.

Case 3. We will offer dial Internet connectivity (via UUNET). MSN access is included for one low fee, so again you get everything on MSN and Internet. Our goal is to price this to be very competitive and become the most attractive dial up Internet provider. One way to view MSN content is that it is the a lot of value added services you get to aid and suppiiment Internet access. Other users will view the managed community of MSN as the central thing, and they get access to the Internet as a bonus.

Case 4. In some geographies, and for some users, X.25 access may be cheaper (i.e. there is a local POP so they have a local phone call) and be sufficient. We will have some Internet content mirrored for these users, but not everything. Over time we expect to migrate more and more people to TCP/IP connections rather than X.25, because it is cheaper, more scalable and.

In all cases the difference between services offering Blackbird and services created with plain vanilla HTML is transparent to the user. Some servers and services are just very cool. There is a question as to what business model allowed a service provider to create a Blackbird service, but this is discussed below.

The difference between several of these cases will go away if we can price the MSN base content at zero. We would still ask for an account relationship for billing and security, and in case 3 or 4 there would still be access charges, but we could make the price of MSN content zero incremental over access (eliminating the difference between case 1 and case

2). One way to justify this would be if we can get sufficient advertising and related revenue this is certainly possible. We have some very interesting work on advertising, but it is too early to say how significant this will be. There is an alternative view that charging for the MSN base will allow us to invest enough in content to keep this a strong asset, which we would not be able to do if it was free. This entire area is so new and so dynamic that we will have to be very quick on our feet to adapt to the market. We won't change anything for MSN 1.0, but within the next 18 months we will have to monitor this issue.

Initially we give away the front end, but over time I want to have features in the front end be a continued reason for people to pay us a subscription charge. The free aspects of the front end would be kept competitive, but once you get into content that uses the extended stuff it should be a lot more cool.

One way to view this, which is how I have looked at it in some previous email, is that people "rent" the front end from us. We have the world's coolest front end, and to get access to it people will subscribe to MSN, or equivalently will use our Internet dial up access. This is the software-centric view. You could equally say that the front end is a give away, and the subscription is there to pay for great content.

In truth, we want to use BOTH sources of value - we should have the best software and try to have the best service and content. We can have our cake and eat it too. Far fewer competitors will be able to match us on both counts than if we separate and sell the front end and service separately.

The Business Model

Netscape gives clients away, and charges a flat fee for server software. This is certainly a possible model for Blackbird technology in the future. In fact, my original memos on the online service strategy were PRECISELY this model - I called this the server kit. In the case of individuals or small businesses, I believe then, and I believe now, that selling a kit which allows people a "do it yourself" way to connect is a very effective means to collect revenue from a large class of service providers.

Of course, Netscape has little choice but to take this business model today. Their competition is public domain code that the principles of the company wrote themselves a short time ago. There is no billing or security infrastructure which would let them charge for servers in another fashion.

It is possible to impute great wisdom to their choice, however it also happens to be the only thing possible for them at the moment.

I predict that if they are successful, that down the line they will introduce high end products that are more expensive (for large users), they will make version changes quickly to get more revenue from upgrades, and they will use every bit of cleverness to get additional revenue. This can include "navigational content" (in the sense of the term we use in MSN), and transactional or other service revenue. You can see the start of this trend in what they are doing, and in what various Internet dial up providers are doing.

Everybody in this business is going to wind up trying to leverage three different sources of value:

- Software features (in front end and back end).
- Content and (particularly navigational content like index, directory, yellow pages, browsing)
- Service relationship (including basic access and other services).

Over time anybody who starts in one place will try to add others incrementally to create an integrated value proposition. The Netscape server kit approach is very strongly biased today towards the first issue - creating a server.

Although I believe in the server kit approach, our MSN strategy has put a higher priority on deploying the service component, and attracting a set of information and service providers who are willing to get online via a different model - annual fee and/or % of revenue. One way to look at this is that we have a very different model for pricing the server - we charge the user a subscription and charge IPs by the space and % of revenue. There is a set of IPs for whom this is a perfectly viable proposition, today in 1995.

Another way to look at this is that we are going to prioritize pushing momentum in the service and content areas versus a pure software approach.

Many pieces of email and many conversations speculate into the future and ask whether we will be able to maintain the service model for pricing. Won't we lose out to Netscape charging a flat fee? I'm even asked why haven't we already lost.

The answer is that many IPs really DO want what we are offering. The combination of us doing billing, promotion of the service, ease of connectivity, and getting lots of content in the base is very attractive to companies. Over time there are a very specific set of things we have to accomplish to keep this proposition alive - keep customer interest high, have a great set of "navigational content" and base content, have a strong brand presence etc.. We also have to keep the software features in the front end and back end best of breed. In short, we have to provide a value proposition that makes it worthwhile for somebody to access services via our front end.

I think that we have an excellent chance of keeping the service model going. Nevertheless I am certain that at some point we will add the "server kit" so that IN ADDITION to our service based approach we have something like a Netscape business model, to capture revenue from a set of IPs who will not find our current offer attractive. There are two kinds of these IPs - very big companies who think they have sufficient presence without us, and very small ones that are logistically hard for us to market to. The server kit is ideal for the small ones.

Right now, in the spring of 1995, I think that the key priority is to make our MSN launch successful and focus our priorities on the IPs in the middle who are very interested in the offering that we are putting together. As a result, we currently have focused Blackbird on being an MSN tool, and we will not be selling it as a general server kit by itself. Doing so at the moment would be a big distraction from the goal of shipping MSN.

This means that we are taking a risk that Netscape or others can get established in the interim with their different model. So be it - we have finite resources and thus we cannot hedge every possible alternative. Given where we are with MSN, we are best putting our energy there, then

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coming after the remainder of the market second. I am not sympathetic to the notion that we have to try to be all things to all people all at once. Over time - yes - but not instantly.

One example of the "do it all now" approach above would be having the O'hare people working in a competitive way to our MSN/Blackbird strategy rather than aligning the two. This also play very well with the strong cultural trait at Microsoft in having each group be masters of their own fate, but if we succumb to this temptation it will KILL US in this area. We cannot afford to be divided and dissipate momentum in how we approach the Internet.

I would rather have one strong strategy, rather than two weak ones which have no synergy.

The Server

Initially our server strategy is constrained to be in the MSN data center. This is an expedient thing for a variety of reasons, but we have to move quickly away from it. Once we are able to use TCP/IP and the Internet, with its low cost communications it is much easier to distribute things.

Some services do not make a lot of sense to distribute, or at any rate the issues are different. We will make intelligent choices on a case by case basis. Mail has a very different set of issues around distributing it than Blackbird or other services.

The first step in distribution is to have the capability to have a Blackbird server kit which has a billing connection which we can manage. This kit would allow us to deploy Blackbird servers anywhere on the Internet, and it would even allow people to buy their own machine, put the server on the Internet, yet still be able to get billing and subscription services via the MSN infrastructure. The server would be technically capable of supplying full Blackbird with extensions, or simply the plain vanilla HTML via HTTP to arbitrary front ends.

We would have to decide how much functionality to expose and what the business model is. This product would beat Netscape as a server because Blackbird is far more sophisticated for authoring and in the extensions.

My current thinking is that we would not simply offer this on the current Netscape model to all comers, because it would leave value on the table. However, if we do decide to panic about Netscape, we would have the option of selling on that model.

My expectation is that we would enable individuals and small scale servers (perhaps with a capacity limit) to be sold for a flat fee, or an annual fee.

Large scale commercial servers should be strongly incented to have an annual fee and % of revenue model to be consistent with our current MSN model. We would still offer the option of having the server managed in our data center (here or new data centers abroad), and I expect that this will still be a necessary component of the service for many IPs.

I would like to have this available at some point next year, and I think this is technically possible given the progress being made in the Blackbird group. This would solve the single biggest problem in distributed servers, and it would also have a big advantage over Netscape and others that are unable to offer the billing aspect and authoring environment as part of their product offering.

Blackbird servers are only one part of this. Another key component is the

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Exchange integration, MSN on a Lan work, and the Catapult work be part of this strategy as well. Once again, I view the sensible thing to do is to put these components together as part of ONE strategy, not have the separate.

A corporation should be able to get ONE product offering which gives them:

- Firewall safe access to the Internet, including MSN.
- A way to exchange email from their local Exchange servers to other orgs with Exchange.
- Access to navigational content to help them use the Internet.
- Admin tools to disallow access to some areas of the Internet, or some protocols.
- An attractive way to allow group purchasing of MSN subscriptions for every desktop.
- Publishing suite for internal docs and tools (authored with Blackbird tools).

Once again the three key sources of value - software features, content and services have an interesting interplay. A company which wants to offer Internet to all employees needs the Catapult firewall, but they may also want to be able to block sexually explicit stuff or entertainment. The "no-no" list of what is blocked can be positioned as a service that they subscribe to. They also might like to have local indexes downloaded, and get MSN content for local redistribution. Our product offering in this area should make use of all three sorts of value by combining them.

Although Catapult, Exchange etc are "server" pieces in one sense, in many ways the issues around them are more closely related to front ends. Logically speaking they go at the END of the Internet, between it and the LAN.

The use of Blackbird for internal documents is an interesting issue. This has come up in multiple contexts - notably SteveB always asks why we can't do this. Why not? The immediate priority for Blackbird is, as stated above, the MSN 1.0 goals but very soon I can imagine making it available for internal use in a company. This is just some work in the front end and the server kit to allow it to happen. In particular, it should be possible to allow this without undercutting Blackbird as a more general publishing tool on MSN and Internet.

Netscape Relationship

Finally, I would like to comment on how we work with or against Netscape. The Internet is a powerful phenomenon, and it is the potential to make Netscape a formidable competitor. On the other hand, I hate the notion that every up and coming dynamic company must be our blood enemy. Our own paranoia sometimes makes this happen more acutely than it would have to otherwise.

Given the right scenario, they could really hurt us, and in that case we are direct competitors. I have not met with them and don't know the degree to which they are committed to that path. If there is a chance that we could co-opt their energy to be as positive or neutral as possible toward MS that would be very good.

In other scenarios they could be a successful company that has some conflicting strategies, but is not a virulent direct competitor. I am

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have enough at the moment to think that the die is not totally cast and that we might be able to influence them toward a degree of mutual cooperation.

I have seen conflicting mail on this topic - some suggests that they are willing to do things like license us technology and have us license them some. Even if we ultimately are competitors, I see some value in us doing this and trying to cultivate them as quasi-partners. We and they can each get some technical initiatives accomplished. The market is big enough at the moment that it is not zero sum. AOL, Prodigy, AT&T, Nets and many others are not friends of either us or Netscape so there may be a lot of room for rational cooperation, even if we agree to disagree on some points and wind up being competitors.

I have seen other mail that is more along the lines that they are already enemy number one. I think that we should try to be creative to see if there is way we can moderate this.

This is not everything about internet strategy, but it is enough for now.

Nathan