

M Memo

To: Bill Gates, Brad Silverberg, Craig Mundie, Dave Levinweber, Dave Macdonald, Jabe Blumenthal, James 'J' Allard, Jeff Raikes, Jim Allchin, John Ludwig, Nathan Myhrvold, Pat Bellamah, Peter Neupert, Peter Pathe, Rob Shurtieff, Ron Souza, Russell Siegelman, Steven Sinofsky, Steve Wilson, Tom Evslin

From: Bill Gates

Subject: Internet Strategy and Technical Goals

Date: April 16, 1994

cc: Mike Maples, Steve Ballmer, Paul Maritz, Roger Heinen, Pete Higgins, Deborah Willingham, Darryl Rubin

Introduction

I enjoyed the Internet retreat. I was pleased with the discussion and ideas that were presented. Even in the few weeks since the retreat the Internet phenomena has given new evidence of its high activity level with announcements like *CommerceNet*.

A key point that I made in my introduction is that Microsoft has decided to bet that the Internet will be very important. This is part of our strategy and an important part of it. Product groups do not have to spend time studying the future of the Internet, or researching this phenomenon. We want to, and will, invest resources to be a leader Internet support, fully understanding that if we are wrong about this it will have been a mistake.

In this memo I want to outline various groups that will be following up with specific action plans. I have highlighted the key person responsible for each of these missions. Since in many ways, J Allard is our public face on Internet services, I am asking him to act as a focal point for our Internet plans until we are ready to begin to publicize our on-line service, *Marvel*.

Transport

The current plans to provide TCP/IP, DHCP, WINS, PPP, TELNET, FTP, FTPD (NT only), and TELNETD (later, NT only) in Chicago and Daytona are excellent. We believe these are very high quality implementations. Both groups have excellent plans to involve a lot of beta testers in using these facilities. The only outstanding area seems to be understanding the support plans and policies for these pieces.

Mail

Tom Evslin's group needs to make sure we have high quality gateways for SMTP and NNTP for both EMS and SFS. We will come up with a low priced plan for offering these products for our mail customers. Tom needs to publish and communicate a plan for these activities.

Publishing Tools

As part of the Word groups charge to align our "publishing tools" including MSDN, Viewer, Help, Media Viewer, and Blackbird (MOS group) we need to embrace HTML authoring. We want to make it seamless for customers to use our authoring tools and publish the same content easily either in plain HTML on Internet or CD or in an enhanced form where we provide viewers that work for CDs or over the Internet. Peter Pathe needs to work with Chris Peters, the MOS group, and Rick Segal to publish and communicate a plan for these activities. One challenge is that today's Word is not a good on-line viewer so its not a superset of the on-line tools like it will be over time. This imposes a *batch* process of preparing on-line text today and force separate "forms" packages to be used for rich publishing like Blackbird. This plan needs to fit into Chris Peter's overall text sharing plan.

EXHIBIT
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attached 9-6-01

Internet Strategy and Technical Goals

Encapsulating Internet Links

We want to be able to encapsulate all of the URLs, *universal resource locators* which are akin to UNC names for the Internet, into OLE objects. This will let on-line Internet links be on the desktop and in all of our documents and folders. This is a lot like packages today that allows us to put file references into OLE objects. The basic idea is that as you browse the Internet you should be able to ask that a URL to the location you are at be placed into the clipboard as an OLE object so that it can be pasted into any OLE enabled application. Perhaps for efficiency there needs to be a way of creating a lot of these all at once. We want to support the case that the object is viewed in-line (activated as soon as it is viewed) and the case where you pick an image for the link and only when you click on it is the object activated, in order to support slow links or links to very large objects (images, sound, video, etc.). When these objects are activated they will look into the registry to decide what "viewer" code should run for each URL type. If the network times out we will have to be clever about what we display. There are around 15 URL types. The registry will give a user flexibility in choosing a viewer for each of these but the system should include very capable defaults. For Gopher menus the ideal would be to write a Chicago shell extension. For Web I think we want to support both Word and the Chicago edit control. We need to consider when it makes sense for these objects to be drop targets, or dropable. This includes making the creation of these links more reasonable than it is today. The low level code, such as for FTP and TELNET, is already present in the work systems is doing and it just needs to be exposed. The viewers involve some user-interface polish although I believe there is very cheap code we can start with. J Allard in the TCP/IP team along with Steven Sinofsky will propose an architecture and plan for accomplishing this goal and integrating these services. J Allard's and the networking team will also implement this, and if additional resources are required this will be part of the plan.

Publishing

We want to take all of the information in InfoBase and KnowledgeBase and publish those in Web and Gopher format on a public server. We want to take the content of the MSDN and TechNet CDs and publish those in Web and Gopher format on a server which only allows subscribers to log onto, perhaps creating a convention to implement this authentication. It should be easy to mechanically take our current FTP layout for KnowledgeBase and download files and convert it into a far more accessible set of Gopher menus. For KnowledgeBase David Macdonald in PSS is already doing this work. Pat Bellamah needs to drive the MSDN and TechNet part of this. InfoBase is potentially the most interesting of all of these services, since it is richer in content and more universally interesting. I assume there is a form of InfoBase which we subset for external distribution. Jeff Raikes needs to let me know who manages InfoBase and who should work on this. We will need to add a Web home page so that users have a guide to finding their way through our different content databases and so users will have an obvious way of connecting to Microsoft, ie www.microsoft.com.

Secure Internet Server and Services

There was a lot of discussion at the retreat about corporations wanting to let their users out onto the Internet without exposing themselves to arbitrary Internet traffic coming back into their corporate networks. Microsoft had a contractor create one of these for FTP but there was a feeling that to generalize this to the new protocols it might be easier to start from scratch. We all agreed that having a server like this would help NT a great deal and that we were willing to pay to get someone to do the work. This server basically looks at all of the requests coming in, classifies them and checks the permission of the person connected to determine if its allowed. Jim Allchin agreed to follow up on this staying in contact with Dave Leinweber from ITG. I think this is worth getting an outside company started on soon.

Closely related to the security issues, is making sure that our Internet service providers, such as Web, Gopher, and FTP, are integrated into this architecture. It is also part of this mission to make sure that we have first rate service providers. We also want to be sure to leverage the fact that if a Microsoft client is running against the Microsoft service, we will have enhanced functionality. This architecture is closely tied to J Allard's service provider work above.

Internet Strategy and Technical Goals

On-line and Internet

There was a consensus that connecting our own on-line service, Marvel, to the Internet in a number of ways would be valuable. Most important was the idea that our front ends should be supersets of the popular Internet protocols so that gatewaying through to content still stored on the Internet could be seamless and that our pitch to information providers is an *Internet Plus* approach fitting into our authoring plan discussed above. Russ Siegelman will incorporate this into his overall plan. A very interesting element of this is the idea of creating gateways into the Internet in many locations around the country either by building, contracting or buying them. This will be evaluated in Russ' group.

Secure Mail/WWW, CommerceNet

We are deficient in not using our RSA license to provide security in mail. Apparently there are hooks in EMS to allow this. Tom Evslin needs to work with Nathan, Russ and Nathan's security group to work out what we should do in these areas.