A departmental home page that has a section about the map library is at: http://www.geog.uwo.ca

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The Map Room at Oregon State University has a new address—not that is has moved, yet. For the past five years Kerr Library has been fund raising to expand the 33-year old building. In April, 1996, it was announced that the Wayne and Gladys Valley Foundation had donated $10 million dollars to the cause and the "new" library would be known as The Valley Library. Hence a new address on the letterhead and business cards.

The actual construction for the expansion began on June 17th with the sealing of the north entrance to the library and the blackening and boarding up of the first floor windows.Completion of the building project will take nearly three years as the older portion of the library will undergo considerable renovation after the newer portion is completed.

The Map Room, currently on the first floor, will eventually move to the third floor and be merged with the government documents area. Administratively, this occurred a number of years ago with the designation of the Special References Area which is now known as the Government Information and Maps Team(GIST) but physically the areas have remained distinct. Over the next twelve to eighteen months, many collection development, and cataloging decisions will need to be made in order to ensure a smooth transition to the new location. Luckily, many of the collection's maps are already in Ulrich

Planfiles which should be easy to move as they come equipped with their own wheels.

Typical of the types of pre-moving projects is the inventory being done for the USGS 15 minute scale topographic maps.These maps had multiple filing locations and are now being reorganized into two Ulrich Planfiles. The superseded 7.5-minute Oregon topographic maps will also be inventoried and filed within one of these cases so that all of the historic large scale topographic maps will be in one, easily controlled, location. Additional projects will include recataloging and encapsulation of historic local maps and assessing the cataloging backlog to identify materials which are not to be added to the collection.

The Kerr name hasn't been lost to campus however; it moved across the street to reside at the Kerr Administration Building. Mailing Services is going to have a significant amount of work delivering mail to the right place for sometime to come.

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reviews

SOFTWARE REVIEW
Netscape Navigator 4.0
reviewed by Rex G. Cammack
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Netscape Communication Inc. is distributing Netscape Navigator 4.0 Preview as a component to Netscape Communicator Standard Preview via the internet. The software can be downloaded from Netscape Communication Corporation at http://www.netscape.com/comprod/mirror/client_download.html through the use of a World Wide Web browser. The preview version of Communicator Standard is free. At the time of writing this review, Communicator was only available for the

Intel platform using Windows 95 or Windows NT operating system. Netscape's Communicator Standard is a suite of software designed to integrate numerous desktop functions into one software suite. Netscape Communicator Standard is made up of five integrated parts:

• Netscape Navigator - Browser software
• Netscape Messenger - Email software
• Netscape Collabra - Newsgroups interface software
• Netscape Composer - Integrated HTML editor and text editor
• Netscape Conference - Real time audio and data collaboration software.

All five of these products are of interest for daily computing but this review will focus solely on Navigator 4.0 and will consist of five parts: (1) Condition for review, (2) What is Navigator 4.0, (3) Functions of Navigator 4.0, (4) Functions being developed for official release, and (5) Conclusions.

Condition for Review

Before reviewing Navigator 4.0, it is important to understand the hardware and software configuration used during the evaluation. Netscape Communicator Standard Preview was installed on Intel Pentium/133 platform running Windows 95 and connected to the internet using TCP/IP ethernet connect. The computer has 32 megabytes of RAM memory and a graphic color capability of millions of colors. In addition to the hardware environment the following software components came with Netscape Communicator Standard Preview: JAVA, JAVAScript, Live Audio, Live 3D, Quicktime, and Netscape Defaults Plugins. Software performance is not examined in terms of data processing speed.

Performance based evaluation is important, however, since several key components are not yet fully functional. Performance could change significantly between the preview version and the final release of Navigator 4.0.

Navigator utilizes the advantages of plugin technology which can greatly increase the capabilities of Navigator to handle and display robust multimedia data. Many third party developers have created plugins that are compatible with earlier versions of Navigator. Plugins (e.g., Macromedia Shockware, VRML) are an important part in the software solution for presenting interactive maps. Because of the sheer number of available plugins and the differences in their functionality, a review of them falls outside the scope of this review. The attention here is focused on the core capabilities of Netscape 4.0.

What is Netscape Navigator 4.0?

Netscape Navigator 4.0 is the newest version of Netscape's popular internet and intranet browsing software based on HyperText Transport Protocol (HTTP) and Hyper Text Markup Language (HTML). Navigator facilitates the accessing of information and network applications on the World Wide Web (WWW), local area networks, File Transfer Protocol (FTP) sites among other network protocols. Navigator 4.0 utilizes a Graphical User Interface (GUI) for browsing media enriched documents passed across computer networks.

The primary format of these enriched documents is HTML. HTML was devised as a standardized language so both creator and user can display documents in a timely manner. As this computer application has grown in recent years, HTML evolved to meet the changing needs of the user community. With each update of the

HTML standard (see http://www.w3.org/), Navigator has adjustments to handle these new formatting standards.

This review focuses on the new interface, new HTML standard, JAVAScript, and JAVA. All four of these items are being updated with this release of Navigator 4.0. The preview version of Navigator includes many new features although some are not yet functional. To simplify this review, new features that work will be addressed, first then the proposed new features.

Functions of Navigator 4.0

In this version of Navigator, the interface between the software and the user has been significantly altered. Many of the new features are intended to make repetitive tasks easier to perform. One such new feature is the forward and backward listing. In the previous version of Navigator, users blindly worked with the forward and backward buttons not knowing where the buttons were pointed. In this version, the backward and forward button contain a pop up menu from which to select a location. Users can still click on the forward and backward buttons and move to the next location, but the list increases the user's control of movement at the icon level. Netscape has also replaced the old forward and backward icons with new icons.

Another user interface issue addressed in this version of Navigator, is the customizable toolbars. One aspect of this improvement, which cartographers will find useful, is the collapsible toolbars and location feature. The amount of screen space the user has is limited and often an HTML document will spill over the bottom of the screen. With the collapsible toolbar and location field, the user can increase screen space with a click of the mouse button. This feature is a

significant improvement. Navigator has many other interface enhancements but the majority are related to the other components of Communicator so will not be included in this review.

One of the most important aspects of this version of Navigator is the inclusion of the new HTML standard. The last version of Navigator was HTML 2.0 savvy, while the current version works with HTML standard 3.2 (http://www.w3.org/). HTML standards are proposed and formalized by an international commission. In late 1996, HTML 3.0 was proposed, but, like many commissions on standards, total agreement by the commission and the user committee fell apart. In this case, HTML 3.0 basically dissolved. In the aftermath of this collapse, the commission started working on a new version of the HTML standards. The result is HTML 3.2 which many have mislabeled as HTML 3.0. Some of the documents from Netscape Communication Inc. have stated that Navigator is HTML 3.0 savvy when, in fact, it is HTML 3.2 savvy. This is confusing because the commission on HTML is constantly issuing new standards for review. During the review process, important changes are suggested and consequently, the new improved standard is then released for further review. The whole process can take months to years before a new standard is finally reached.

Of all the new HTML standards, Navigator 4.0 supports two that are particularly important to cartographers: layering and absolute positioning. When a WWW document with layers is transferred to your computer, Navigator can show all or some of the layers depending on the users interaction. The interaction expands the usefulness of the document and the exploratory actions of the user. Layers do increase the amount of data transferred but it consolidates

them into one transfer action instead of the old work-around of transiting more data after each interaction. By embedding layering into HTML, designers and users can steer clear of other more complex solutions such as JAVA, and JAVAScript.

The other feature already available in Navigator is absolute positioning. A WWW document can be organized using a pseudo Cartesian coordinated system. The location of individual elements on the document can be specified in terms of X and Y screen position. As in cartography, the ability to place elements in exact locations will increase the quality of WWW documents. The current methods of placing information on the page is vague and difficult to work with. The absolute positioning increases the designer control of document formation and display that will increase the effectiveness of the documents.

JAVA is a programming language that can be transmitted across the WWW more efficiently with Navigator 4.0 through the increased ability of JAVA program (applets). When users browse the WWW, they run across documents that are constructed with the JAVA programming language. In some cases, JAVA defines the format of the document while, in other cases, small programs (applets) will be downloaded to your computer and run. Early on, the developers of JAVA saw that applets could be viruses so they restricted its ability to read or write to the hard disk and controlled its action in RAM memory. In the new version of Navigator, the JAVA applets can be granted 4 different types of permission on your system:

- limited disk access
- limited disc access and network usage
- limited disk read access, unlimited disk write access
- unrestricted access

Permission is set prior to downloading and executing of the applet. In doing this, Navigator has increased the power of applets. In cartography, an example would be choropleth mapping. A computer would have a set of tab delimited tables of census data for Wyoming counties with one of columns being the FIPS code. An applet that is given read permission can read the data and map it. If write access is given to the applet the resulting graphic could be stored on your computer. Once stored, the graphic can be imported into any program that can read the format. Other improvements in JAVA have been made, but the access feature will expand the limits of the WWW more than any others.

In between HTML and JAVA is a scripting language called JAVAScript.

JAVAScript is a set of functions that can be embedded inside HTML documents thereby increasing the available functions. With JAVA, developers would need to become more involved in programming than they would like. So to simplify some of these functions, JAVAScript was developed. JAVAScript, like JAVA, is constantly being updated. Navigator 4.0 will support the latest version of JAVAScript, but since JAVA has been promoted more than JAVAScript, many users still know little about JAVAScript.

Many of the functions in JAVAScript can be used by cartographers to increase map interactions. Though they are not new to this version of Navigator, they are still important. A function that was designed to improve interactions and design appearance is the MouseOver function. This function is designed to change the appearance of the document depending on where the mouse is located on the page. Most of the time, MouseOver is used to show active elements in a content list. In map

interaction, MouseOver could be used to add specific information to the map. An example can be seen at: http://maps.unomaha.edu/Peterson/methods/Interact/Swanson/Swanson/html.

Functions Being Developed for Official Release

This version of Navigator 4.0 is a prerelease version therefore many new features are not yet working. The following are features not currently available but should be included in the official release of Navigator 4.0. First, the HTML 3.2 standard has cascading style sheets (http://www.w3.org/pub/WWW/TR/WD-css1.html). Style sheets are intended to store preferences for displays within the WWW document. When Navigator includes these style sheets designers, users will be able to customize the document more independently. In addition to the style sheets are WebFonts and OBJECT tags. WebFonts will allow a browser to see a document in a font included in the Navigator package. This will eliminate font substitution when desired fonts are missing from the users computer. The OBJECT tag will allow the designer to include different types of media under one central tag instead of having a special tag for each separately.

The monitoring of keyboard interactions is inherent to Navigator. Currently, most of the keyboard interactions go unnoticed so by including them, the designer increases the amount of interaction with the user. Many times users get started on WWW documents with long animation sequences embedded in them. Often these animations can be skipped and the stop animation and applet feature will make this possible. Also planned for inclusion in Navigator is CrytoAPI. CrytoAPI will make it possible to send secure information over the WWW. Netscape
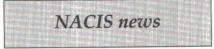
Communication Inc. is attempting to add this feature in hopes of developing more commercial transactions on the WWW. Many users of the WWW are reluctant to send financial information over the WWW. By implementing CrytoAPI more commerce will hopefully follow.

Conclusions

In the current preview version, Navigator 4.0 provides increased functionality not available in the current Navigator 3.0. The change to the graphical user interfaces are well justified and will not cause major retooling for experienced users. The upgrading of its compliance to the HTML 3.2 standards offers new design concepts which are of great value to cartographers. If Netscape Communication Inc. can deliver on the many other promises, Navigator 4.0 will open many new routes of exploration for users. Users on the leading edge of content creation will need the preview of Navigator 4.0 in order to develop future WWW documents. Currently, I have both Navigator 3.0 and Navigator 4.0 preview installed. I have been experimenting with the new features in the preview version but I realize that the majority of users can not view these new pages. Interaction over the WWW will increase once the official release comes but even then a short lag period will occur as users upgrade to the new version.

This review of Netscape Communication Inc. preview version of Navigator 4.0 is mixed. The working features will increase the ability of cartographers to develop WWW context. The content of a WWW document can be more interactive if the developers use the new functions. If the proposed features are added, Navigator will have moved significantly forward, however, until that happens the user has no real need to get the preview version of Navigator 4.0. Content developers should take a look at the preview version and see what is possible and begin to develop new WWW document that will take advantage of the new functional power of Navigator. To conclude, the current and proposed future of Navigator will enhance map-makers and map readers' interactions if the map-makers choose to utilize the new tools within Navigator 4.0.

NACIS *news*

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