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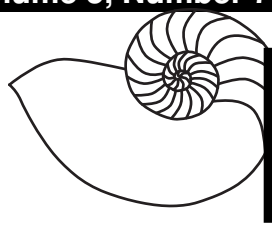

MUUG Lines

Manitoba UNIX® User Group

Newsletter of the Manitoba UNIX® User Group

Books Worth Reading

By Royce Howland

Reprinted from edm.announce (the monthly newsletter of /usr/group/edmonton, Edmonton's UNIX user group), January, 1993

Two issues ago, I presented a review of *The Whole Internet User's Guide & Catalog* ("*TWI*"), by Ed Krol. I recently read another new book on the same subject, *Zen and the Art of the Internet* ("*Zen*"), by Brendan Kehoe, published by Prentice Hall.

At 110 pages, *Zen* is a lot smaller than *TWI*, so I was not sure if it would say anything new. While a lot of the material is duplicated, I still found it contained some interesting material not covered by Krol's book, or written about from a different perspective. I also found Kehoe's writing to be less verbose, which contributes to the smaller size of the book, while still remaining very clear and understandable.

Like Krol, Kehoe first wrote a document (titled the same as the book) that floats around the Internet, and which formed the core of *Zen*. The book supposedly adds about 30 pages of new material compared to the Internet version, and so might be worth getting even if you've seen the Internet file.

Kehoe covers network basics like domains and IP addressing in the first chapter, and then presents a short overview of mail in chapter 2, followed by a short tutorial on using anonymous ftp and archie, in chapter 3.

Chapter 4 deals with Usenet in some depth, presenting what Usenet is and isn't, some Usenet history, how Usenet and its news groups work, a selection of net etiquette ("netiquette") guidelines for people who post to Usenet, and a variety of other bits of information. If you or your organization are thinking about getting Usenet access in some form, but aren't quite sure what the implications would be, this chapter alone might justify purchasing the book, although *TWI* probably goes further towards addressing why you'd want to do it in the first place.

Chapter 5 covers the use of telnet to access directories, databases, and other resources, a topic that is dealt with in considerable detail by Krol in *TWI*. Chapter 6 covers some miscellaneous network tools like finger, ping and talk. Chapter 7 deals with commercial Internet services like Clarinet News, and is very brief. (Neither Krol nor Kehoe really address the aspect of commercial Internet services in much depth, which is unfortunate, since I think it might be an area of major growth; it is definitely an area of legal, ethical and technical challenge.)

Things get interesting again with Chapter 8, where Kehoe presents "Things You'll Hear About." In this chapter is a recounting of the infamous Internet Worm created by Robert Morris, and a reference to Clifford Stoll and his book, *The Cuckoo's Egg*, which covers another famous Internet incident. Then there are several computing groups covered, such as the Association for Computing Machinery (ACM) and the Free Software Foundation (FSF), which many of us have heard of before, and others that may be less familiar, such as Computer Professionals for Social Responsibility (CPSR), the Electronic Frontier Foundation (EFF) and the League for Programming Freedom (LPF).

Continued on page 3

This Month's Meeting

Meeting Location:
Our next meeting is scheduled for Tuesday, May 11, at 7:30 PM. Once again, the meeting will be held in the auditorium of the St-Boniface Hospital Research Centre, just south of the hospital itself, at 351 Taché. You don't have to sign in at the security desk – just say you're attending the meeting of the Manitoba UNIX User Group. The auditorium is on the main floor, and is easily found from the entrance.

Meeting Agenda: See inside for details.

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From Where Will Tomorrow's Innovations Come?

By Gilbert Detillieux

Quite recently, I had the opportunity to visit a research centre of one of the industry's most well known computer companies. (I won't drop names, but let's just say they've had a lot of reasons to sing the blues lately.) Coming from an academic background, it was interesting for me to see some leading edge computer science research being done outside of a university. However, it was discouraging to see that they too are faced with some of the same problems.

The current recession, which has resulted in deep funding cuts to universities, has also dealt a serious blow to corporate-funded research. Many computer companies, caught up in the current trend toward down-sizing, and more concerned about the bottom line, have either cut out research all together, or have decided to concentrate only on research that will have a short-term payoff. As a result, pure research, which may only bear fruit in the long term, if at all, is being neglected.

In an industry that evolves so rapidly, and that thrives on rapid evolution, this approach is very short-sighted, and can lead to failure in the long term. If we ignore basic research, if we avoid taking a chance on the long shots, how will we be prepared for the next technological revolution? We got to where we are now only as a result of decades of expensive, but beneficial, research and development. We can only continue relying on this current technology for so long before it too must give way to new ideas. If we aren't prepared to pay the price of research, we will lose control of the technology on which we rely. Who will benefit? Those who have the vision and dedication to pay that price. From where will the new technology come? If North America continues on its present course, it's quite likely that it won't come from here.

Companies here are becoming increasingly concerned about competition from Europe and the Pacific Rim. As our economy continues to become increasingly global, those concerns aren't likely to go away. However, if we aren't willing to pay the price to stay ahead in the long term, the current competition is nothing compared to what the future will bring. Viewed that way, can we afford not to support basic research? ➽

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Group Information

The Manitoba UNIX User Group meets at 7:30 PM the second Tuesday of every month, except July and August. Meeting locations vary. The newsletter is mailed to all paid-up members one week prior to the meeting. Membership dues are $25 annually and are due as indicated by the renewal date on your newsletter's mailing label. Membership dues are accepted by mail, or at any meeting.

PRESIDENT'S CORNER

Moving On to Better Things...

By Susan Zuk, President

Well, taxes are completed and now it's time to move on to BETTER THINGS!

A few weeks ago I was in Toronto chairing UniForum Canada's National Council Meeting. The National Council is comprised of representatives from each of the Canadian affiliates or groups. The National Council allows for the exchange of information and also provides the Board of UniForum Canada with suggestions. These suggestions are provided to help the association to grow as well as to help with the evaluation of programs and services for its members.

At this time the National Council is comprised of 10 members representing groups from Calgary, Edmonton, 2 Toronto groups, London, Ottawa, Montreal, Quebec, Halifax and Winnipeg. We also had 2 new people join our meeting, from Vancouver and Windsor. These individuals are coordinating activities for groups in their locations. We wish them all the best and welcome them to the realm of the UNIX User Groups.

Before I continue I would like to announce the new President of UniForum Canada. You may have seen him at the UNIX Symposium we organized in Winnipeg in 1991. He is from Ottawa and his name is Mr. Gerry Jolicoeur. We at MUUG wish you all the best in your new position.

I am just going to provide you with some insight into the meeting. The meeting began with reports from each of the affiliates. I was able to collect some excellent ideas from the other affiliates. I hope we can take advantage of this exchange of information.

The next portion of the meeting was focused on items which were accomplished and new items to be tackled in the future. The following is a short excerpt of the main points:

1. By the end of May, we will have our own UniForum Canada Internet node and some national distribution lists. To send e-mail to each affiliate representative, mail to the address <national@uniforum.ca>.

2. The responsibilities between the affiliates and the UniForum Canada Board are being redefined. This will clarify the duties of the affiliates and the Board. An outline was presented by Carol Smith of the Edmonton affiliate. The outline was accepted by the National Council and was given to the board for discussion at their next meeting.

3. There may be an opportunity for UniForum Canada and its affiliates to obtain a standard database platform. This is being investigated and a standard structure is to be discussed to allow for an easier interchange of membership data between UniForum Canada and the affiliates.

4. A National Survey was presented and modifications were discussed. This survey will probably be distributed in the near future and will help UniForum Canada identify current and future membership needs and service requirements.

5. There was discussion on UniForum Canada's Superuser Award. Remember that the nomination deadline is May 10th. If anyone is interested in nominating that exceptional someone, please get in touch with me.

6. A very informative discussion was held on the topic of conferences. This meeting provided attendees with insight into the type of conferences and speakers people are interested in. The discussion also confirmed that the recession is affecting us all. We also realized that the various cities require different types of marketing and conferences, depending on their own distinct cultural flavour.

This meeting was quite intensive and included many important and interesting topics. These sessions help us to realize that we do not live in a vacuum, and that other groups have many of the same questions, concerns and goals. This is what makes the meetings invaluable. The next meeting will probably be extended to 2 days to allow for more discussion and planning.

Now to change to Winnipeg activities. I would like to take this opportunity to thank Greg Brezinski from Microsoft for his presentation last month on Windows NT. He did a very good job of demonstrating the product. We made sure he left with a few special UNIX mementos to remember us by. Thanks again, Greg, for taking the time to show us Windows NT.

On Saturday May 8th and Sunday May 9th, MUUG will be participating in Computer Expo '93 at the Winnipeg Convention Centre. We are renting space to promote the group and UNIX. Our booth will be filled with UNIX magazines and information as well as a LINUX system. Come on down to visit us and take the opportunity to see what LINUX is like. We will also be providing people with the opportunity of joining the group right at the show. See you there!

On Tuesday, May 11th, Bob Kapac will be speaking on the database product Sybase. Many Winnipeg companies are either purchasing or already using this product. This will give you the chance to see what the excitement is all about. Join us at 7:30 PM at the St. Boniface Research Centre.

I will close my column by informing you of the upcoming fall event. MUUG and CIPS are again joining forces to organize a UNIX Software Symposium which will be held in November. If you are interested in being on the committee, call me at 631-2530. We will be holding our first meeting in the next few weeks. If you have any suggestions as to what type of software products or specific speakers you are interested in, let me know.

Bye for now, and I hope to see you at the Computer Expo '93 and at our meeting on Tuesday, May 11th. ➽

REVIEW

Books Worth Reading

Continued From Page 1

The book winds up with a short chapter 9 and several appendices that cover other small topics, like how to find out more information about Internet things, how to get mail to other networks, retrieving files by mail (for those lacking ftp access), and so on. There is also a bibliography that lists quite a number of books and other materials that can provide additional information. This was something conspicuously absent in *TWI*; I always like to find out what authors consider to be other important books on the subjects they're writing about. (Neither Krol nor Kehoe reference the other's book, although Kehoe does reference Krol's Internet document, *The Hitchhiker's Guide to the Internet*.)

In summary, *Zen and the Art of the Internet* is worth acquiring if you're interested in learning some basics about the Internet and things associated with it. If you already have access to net resources such as the Internet version of *Zen* or the Request For Comments (RFC) documents, or if you have *The Whole Internet User's Guide & Catalog*, then a lot of *Zen* will not be new to you. Still, there are some things it presents in a concise format that might be of value, and the book is cheap, I believe around $13 locally. This makes it a pretty good buy. ➽

PostScript

By Roland Schneider, Niche Technology Inc.

Most people who work with computers these days have heard of PostScript, and many use PostScript laser printers, but relatively few have actually worked with the PostScript language directly. In this article, I'll describe PostScript in general, show how it's used, and give a few examples of interesting things you can do with it.

PostScript is a true general purpose computer language — it has variables, conditionals, loops, procedure definitions, I/O functions, and so on. What makes it interesting is that it has a rich assortment of graphics operators in addition to multiplication, division, etc.

PostScript is a stack based language, so to add the variable "x" and the number "3", you would use the statement

```
x 3 add
```

This places the value of "x" on the stack, then the number 3, adds the result, and leaves it on the stack. To assign the variable "y" with the above result, you would use

```
/y x 3 add def
```

The slash before the "y" means put the name "y" on the stack instead of treating it as a variable. After the addition operator executes, the stack contains "/y 7" (if x=4). The "def" operator then assigns the value 7 to the name "y" and leaves the stack empty. The stack can hold many items, and there are a host of operators which manipulate the stack. For example, the above operation could also have been written

```
x 3 add /y exch def
```

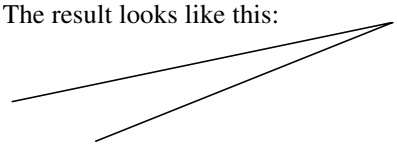
The "exch" operator exchanges the top two items on the stack.

Some Graphics

Enough about the basic language — how does it do graphics? Well, the basic operators are very simple. To draw a couple of lines, we use something like this:

```
125 100 moveto
500 250 lineto
20  150 lineto
2 setlinewidth
stroke
```

The first statement moves the current point to 125 points (1 point = 1/72 inch) from the left side of the page and 100 points from the bottom of the page. The next two statements add lines to the *path,* "setlinewidth" sets the width of the line to be drawn to 2 points, and "stroke" actually draws the lines. The result looks like this:

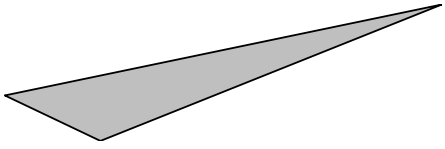


The "lineto" statements don't actually draw anything, they just build a path. This path can be used for a number of things, like stroking, filling, and clipping. If "stroke" is replaced with "fill", the result is a filled triangle. The "fill" operator implicitly connects the last point in the path with the first. This can be done explicitly with the "closepath" operator. Of course, lines and fills can be any color or shade of gray, or any user-defined pattern you like.

The current path (actually the whole *graphics state*) can be saved and restored using the "gsave" and "grestore" operators. To make an outlined gray triangle without repeating the coordinates, we could use

```
125 100 moveto
500 250 lineto
20  150 lineto
closepath
gsave                   % saves the path
.75 setgray fill        % fills triangle, empties path
grestore                % restores the path
2 setlinewidth stroke   % strokes path, empties path
```

Notice that newlines and spaces are equivalent, so we can put as many operators on a single line as we like. The "setgray" operator sets the current gray level to any value from zero (black) to one (white). The line created by "stroke" is black (and not gray) because the gray level is part of the graphics state which was saved by "gsave". This is the result:



Drawing Text

Drawing text is one of the most troublesome aspects of graphics. Unlike lines, arcs, and polygons, characters are normally available only in certain fixed sizes and are often difficult to fit in the required space. In PostScript, most characters are described by their outlines and are filled as polygons (with certain optimizations) when they are required. This allows characters to be scaled, stretched, rotated and skewed in any way imaginable. To draw some 10 point high text in the Helvetica font, you can use:

```
/Helvetica findfont 10 scalefont setfont
200 100 moveto
(The quick brown fox jumped ...) show
```

The parentheses delimit a character string and the "show" operator draws the characters at the current drawing position. To right justify the text at the current position, you could define your own operator, called "rshow" as follows:

```
/rshow
{  dup              % duplicate the string on top of the stack
   stringwidth pop  % find width of the string, discard the height
   neg 0 rmoveto    % relative move the negative width of string
   show             % draw the string at the new point
} def               % define the operator
```

The new "rshow" operator can be used exactly like the built-in "show", except that it right justifies the text. (Everything after a "%" is a comment to the PostScript interpreter.)

Transformations

What I've described so far lets you write programs which draw graphics and text on a page in a flexible way, independent of the output resolution of the printing device. The real beauty of PostScript, however, is in its coordinate transformation capabilities. Let's say we wanted to work in millimeters instead of in points. The statement

```
2.835 2.835 scale
```

will cause all coordinates to be scaled to millimeters (there are 2.835 points in one millimeter). If I then wanted to move the origin (coordinate 0, 0) to 15mm from the left side of the page and 10mm from the bottom, I would use "15 10 translate". These transformation operations (scale, translate, and rotate) superimpose on each other, so I can now switch to working in inches by using "25.4 25.4 scale". My origin remains at (15mm, 10mm).

Why is it so useful to be able to superimpose transformations? Consider the problem of pasting a graphic into a word processing document like this one. The graphic is described by a PostScript program generated by some other software package. I want to be able to size and position the graphic to fit my document without having to worry about drawing it with the correct size or position. How can this be accomplished? It turns out that the *only* information I need about the graphic is its bounding box, described by the coordinates of its lower left and upper right corners. This is what the "%%BoundingBox" comment in an Encapsulated PostScript file provides. My word processor reads the comment and calculates what combination of scale and translate operations are required to size and position the image. Consider an image with a bounding box from (llx, lly) to (urx, ury) in its coordinate system that I want to place from (LLx, LLy) to (URx, URy) in my document, in my document's coordinate system. The following code will accomplish this:

```
gsave                 % (1) save the current transformation, etc.
LLx LLy translate     % (2) set origin for image
URx LLx sub           % (3) scale the image by the ratio of
   urx llx sub div    %     the desired size to its size
URy LLy sub
   ury lly sub div
scale
llx neg lly neg translate   % (4) translate image to (0, 0)
% include graphic here...   % (5) draw the image
grestore              % (6) restore the graphics state
```

There are a few more details to including an EPSF (Encapsulated PostScript) file, but this gives the general idea. The important thing to understand about the series of transformations is that each transformation is working in a different coordinate system. The inner translate (4) is expressed in the graphic's coordinates, while the outer translate (2) is in the document's coordinate system.

Redefining Operators

You aren't limited to creating definitions for your own operators — you can also reassign the built-in operators. The "showpage" operator, which causes the current page to be printed, is usually redefined to do nothing when an EPSF file is inserted. This prevents a "showpage" in the inserted graphic from ejecting the current page. You can also redefine "showpage" to change the transformation instead of printing the page and produce multiple small logical pages on one physical page (who says technology isn't environmentally friendly?). The code for this is too long to include here, but is available from the author on request.

The same technique can be used to do other things like drawing a decorative frame around overhead transparencies. If these procedures are written properly, they can be nested just like transformations:

```
% code to print N pages per page (redef. showpage)
% code to draw frame around page (redef. showpage)
% word processor output to draw the pages
```

This produces N logical pages per page, each bordered with the decorative frame (which may include a page number, etc.). By removing the N page printing code, we get full sized pages instead.

Hello World!

No discussion of a language or graphics system would be complete without the following example. (The "%!" is needed on UNIX systems to tell the print filter that this is a PostScript file.)

```
%!
%%BoundingBox: 150 250 450 550
300 400 150 0 360 arc stroke
300 400 moveto
/ZapfChancery-MediumItalic findfont
   50 scalefont setfont
(Hello world!)
dup stringwidth pop 2 div neg 0 rmoveto
show showpage
```

Going Further

A good way to play with PostScript is to get the "ghostscript" program (free, distributed by GNU). The new version is a good implementation of PostScript, can handle standard Type 1 PostScript fonts, runs under X windows, Linux, MS Windows, and DOS, and supports screen displays as well as many laser, ink jet, and dot matrix printers.

The standard PostScript reference is the *PostScript Language Reference Manual, 2nd Ed.*, by Adobe Systems Inc., Addison-Wesley. ISBN 0-201-18127-4 (764 pages). ➧

Common Open Software Environment

HP, IBM, SCO, SunSoft, Univel, and USL, March, 1993

(Ed. note: The following is a press release issued by the above companies regarding COSE. It is reproduced as is because we feel it contains important information on future industry standards.)

Worldwide UNIX system leaders Hewlett-Packard Company, IBM Corporation, The Santa Cruz Operation Inc., SunSoft, Inc., Univel, and UNIX System Laboratories, Inc., today announced their intent to deliver a common open software environment across their UNIX system platforms. This announcement is in response to increased customer demand for consistent technologies across multiple platforms, greater technology choice, increased cost savings and quicker time to market.

The UNIX system has long been regarded as one of the premier application development platforms. During the past decade, an explosion of new tools and applications has rapidly advanced the state of the art in a number of technology areas. This advancement, however, has led to some inconsistent implementations for similar problems.

Today, HP, IBM, SCO, SunSoft, Univel and USL are taking a major step to address this challenge with the announcement of a common open software environment and the intent to adopt the same specifications in key product areas, to eliminate arbitrary differences between specific vendor product implementations and to cooperatively evolve specifications for key emerging technologies.

In addition, the companies are committed to supporting open standards. To extend the benefits of their activities to the marketplace, they will submit their specifications to the X/Open standards organization, which will provide certification and branding programs. The companies are adopting specifications and standards in the following areas: Common Desktop Environment, Networking, Graphics, Multimedia, Distributed Object Technology, and Systems Management.

Common Desktop Environment

The companies have defined a specification for a common desktop environment providing end users with a consistent computing experience and software developers with a single set of programming interfaces for the HP, IBM, SCO, SunSoft, Univel, and USL platforms. In this advanced environment, users will be able to transparently access data and applications from anywhere in the network.

The common desktop specification incorporates existing technology from participating vendors and has been designed to support distributed enterprise computing applications. As such, it will scale across a range of client/server platforms, support small work groups to large enterprises, and support simple text and data uses as well as advanced collaborative multimedia applications. It will incorporate elements from HP's Visual User Environment (VUE), IBM's Common User Access model Workplace Shell, SunSoft's Open Windows and DeskSet productivity tools, USL's UNIX SVR4.2 Desktop Manager, OSF's Motif toolkit and window manager with modifications to support users familiar with Open Look applications, and SunSoft's ToolTalk inter-application communication extended to support encapsulation capabilities.

The common desktop environment specification will support these capabilities:

- Electronic mail, group calendering, text editing, audio and other productivity tools
- Task/window management and on-line help
- Procedural and object-oriented application integration with drag-and-drop, linking, embedding and data interchange capabilities
- Dialog and forms building with icon editing
- Graphical object/file management
- Security features including start-up, login, locking and authentication
- End user installation automation and run-time configuration

The environment is demonstrable today, and the companies plan to publish a preliminary specification for the environment by the end of June, 1993. The specification will be submitted to X/Open for incorporation into the X/Open portability guide. Initial implementations of the common desktop, based on these X/Open specifications, will be available in the first half of 1994. In addition, the companies will hold a developers conference in October 1993 to provide details on products and directions.

Networking

Distributed networking technology provides the fundamental infrastructure that allows information and computing resources to be shared across an enterprise. It includes the services necessary to ensure that the information is transmitted in a secure and efficient manner and that resources, such as storage subsystems, specialized servers and printers, can be transparently accessed over the network. It also provides the necessary tools to enable developers to build distributed applications.

The three leading technologies used by customers today are OSF's Distributed Computing Environment (DCE) , SunSoft's Open Network Computing Environment (ONC+), and Novell's NetWare. All three technologies offer services and tools that support the creation, use and maintenance of distributed applications in a heterogenous, distributed computing environment.

To offer customers greater choice in heterogenous, distributed computing, HP, IBM, SCO, SunSoft, Univel, and USL will sell, deliver and support SunSoft's ONC+, OSF's DCE, and Novell's NetWare UNIX client support to allow integration of UNIX desktops with NetWare services. This approach will provide increased inter-operability across multiple platforms while continuing to protect current technology investments. In addition, customers will have a choice of base technologies for future evolution.

Specific vendor availability and pricing terms are individually available or will be announced at a future date.

Graphics

Graphics technologies, when combined with the common desktop environment, provide the fundamental programming utilities needed to help developers more rapidly produce graphic-intensive applications while shielding them from specific hardware dependencies.

The widespread availability and diversity of high performance desktop systems and the increasing usage of sophisticated graphics in applications has led to increased

demand for a consistent set of graphics software utilities and protocols. To address this need, HP, IBM, SCO, SunSoft, Univel, and USL intend to continue investing in the evolution of common graphics interfaces to maximize application portability and inter-operability.

The six companies plan to provide a consistent graphics application environment across their platforms through common APIs and inter-operability protocols. Specifically they intend to support the X Consortium's imaging and graphics facilities as follows:

- Xlib/X for basic 2D pixel graphics
- PEXlib/PEX for 2D/3D geometry graphics
- XIElib/XIE for advanced imaging

The companies also plan to extend their consistency to the areas of programming documentation, validation testing, and test suites. Additionally, the companies intend to work together on specific implementations, or share detailed information where this would accelerate the delivery of common components to offer the broadest range of graphics functionality in the industry.

Specific vendor availability and pricing terms are individually available or will be announced at a future date.

Multimedia

Multimedia encompasses the creation, editing, playback and synchronization of distributed audio, video, graphics, image, speech and telephony. It allows users to work intuitively with information, and it contributes to enhanced productivity and ease-of-use. In a distributed UNIX environment, multimedia is an even more powerful productivity tool that allows companies to take advantage of collaborative work group computing.

HP, IBM, SCO, SunSoft, Univel and USL will apply their expertise in networked systems, collaborative computing, and distributed multimedia to establish a distributed multimedia infrastructure and associated standards specification that will provide users with consistent access to multimedia tools in a heterogenous environment. For developers, this work will make it easier for them to build mission-critical, distributed multimedia applications and to access time-critical media data transparently throughout the network.

Specifically, the companies are jointly defining an infrastructure, called Distributed Media Services (DMS) and multimedia access and collaboration tools for the user called the Desktop Integrated Media Environment (DIME). DMS is network independent and supports an integrated API and data stream protocol. Supported on DMS, DIME will support at least one basic tool for each data type such as audio, video, supported by the DMS infrastructure.

These specifications will be delivered as a single submission to the IMA's Request for Technology. The companies will then build implementations and ensure compliance with the IMA's "best practices" when those are established. Additionally, the multimedia desktop tools will be integrated into the common desktop environment the companies are developing.

Distributed Object Technology

With rapidly changing global business environments and increasing user sophistication, developers face significant challenges in developing applications that meet complex user requirements in a timely manner. Distributed object technology presents a new paradigm and will provide several significant benefits including: allowing application development teams to develop more complex solutions by integrating new and previously developed objects; increase software quality through enforced modularization and the reuse of tested objects; improves ease-of-use and ease-of-development by making network and location transparent; and drive down the overall cost of development, extension and maintenance of distributed enterprise software solutions.

HP, IBM, SCO, SunSoft, Univel, and USL are working together to accelerate the development and delivery of object-based technology. The companies are supporting the efforts of the Object Management Group (OMG), an industry standards organization that has developed the Common Object Request Broker Architecture (CORBA) specification. CORBA is a specification that provides a stable foundation for independently developed objects to plug-and-play in a heterogenous, distributed environment. In addition, they have adopted the CORBA specification and have committed to provide CORBA-compliant implementations of future products.

The open standards being established by the Object Management Group and its CORBA specification will foster application inter-operability, define a common mechanism for managing objects across multiple platforms, enable multiple interfaces and promote wider availability of distributed object technology.

In addition to support for CORBA, the companies will work to establish common style guidelines to simplify developer transition, specify common core capabilities for object construction and development, and further the adoption of common testing and certification practices through industry standards organizations.

Systems Management

HP, IBM, SCO, SunSoft, Univel, and USL view distributed systems management as a critical requirement to the successful deployment of distributed, heterogenous computing networks. Systems management involves such tasks as performance monitoring, data backup and restore, configuration management, security, fault determination, and recovery. The proliferation of distributed networks has led to an increased demand for more consistent systems management tools across heterogenous platforms.

Today, there are existing products and emerging specifications which address some aspects of systems management. Through a working group, the companies will focus on defining a systems management framework and associated tools to support improved inter-operability and management of distributed systems. Initial efforts will key on the following application areas:

- User and group management including security
- Software installation and distributed management
- Software license management
- Storage management (backup/restore)
- Print spooling and management
- Distributed file system management

The goal is to have these application inter-operate among all supported platforms. The companies will also address the need for standards for systems management by working with appropriate standards bodies and technologies. The working group will present a road map explaining their plans in more detail in the third quarter of 1993. ➽

Canadian Open Systems Superuser

Sponsored by UniForum Canada

UniForum Canada is currently calling for nominations for its annual Canadian Open Systems Superuser award. This award is given each year to individuals who have made extraordinary contributions, in any field, to the Canadian UNIX and Open Systems Community. The award need not recognize achievements for a single calendar year, but can be more broad in scope. An award recipient need not be a member of UniForum Canada or an affiliate body. Organizations or incorporated bodies are not eligible.

Nominations for this award must be made, and seconded by members of UniForum Canada or an affiliate group. Nominations must be received by the Award Coordinator, Susan Zuk, by May 10, 1993. Anyone who would like to submit a nomination (or more) or would like more information, please call Susan at 788-7312.

The award will be presented to the recipient(s) at a future date, most likely at one of UniForum Canada's annual UNIX shows.

Agenda

for
Tuesday, May 11, 1992, 7:30 PM
St-Boniface Hospital Research Centre
Theatre, Main Floor, 351 Taché

1.	President's Welcome	7:30
2.	Round Table	7:40
3.	Business Meeting a) Old Business b) New Business	8:00
4.	Break	8:15
5.	Presented Topic Client/Server Computing Using Sybase By Bob Kapac *The presentation will give a user's perspective on developing client/server database applications in general, using Sybase as an example of how these can be implemented.*	8:30
6.	Adjourn	9:30

Note: Please try to arrive at the meeting between 7:15 and 7:30 pm. Thank You.

Coming Up

Meeting:
Next month's meeting is scheduled for the evening of Tuesday, June 8. Meeting location will be given in the June newsletter. The June meeting topic is still to be announced, but will most likely be the traditional BBQ.

Got any ideas for meeting topics? Any particular speaker or company you'd like to see at one of our meetings? Just let our meeting coordinator, Paul Hope, know. You can e-mail him at <phope@muug.mb.ca>.

Newsletter:
There are a few articles that should be on the way, including the long awaited part 2 on UUCP setup and configuration. Of course, I can always use some more material, especially shorter articles – half a page to one page (400 to 1000 words) would be fine. Monsieur Ex has also let me know that his mail-box is empty once again – please submit your questions to the old guy via e-mail to <m-ex@muug.mb.ca> or by FAX to the MUUG Lines editor.