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MUUG Lines

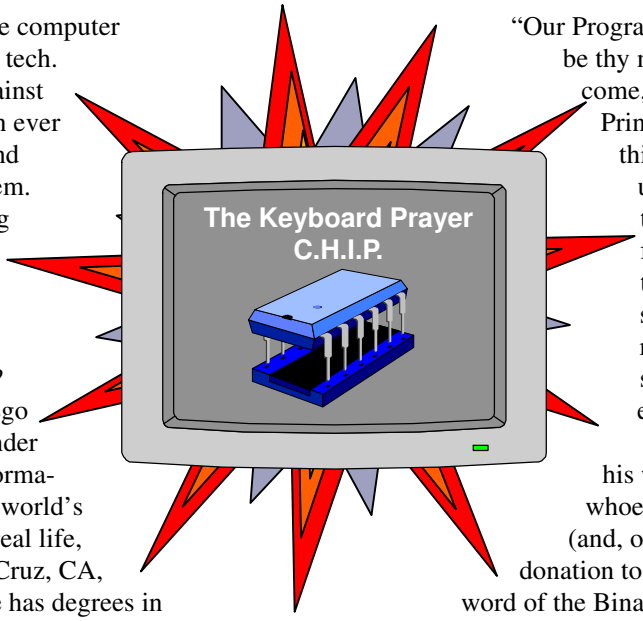
Manitoba UNIX® User Group

Newsletter of the Manitoba UNIX® User Group

The Sermon on the Monitor

by Gilbert Detillieux

We live in a day and age where computer manuafacturers and other high tech. companies wage holy wars against each other; where we are given ever increasing amounts of hype, and being asked to "believe" in them. Companies call their marketing people "evangelists," and promote their products as "the solution." What's the next logical step? Full-scale televangelist style self-promotion?



Enter Saint $ilicon, alter ego to Jeffrey Armstrong, and founder of the Church of Heuristic Information Processing (C.H.I.P.), the world's first user friendly religion. In real life, Armstrong, 39, lives in Santa Cruz, CA, with his wife and daughter. He has degrees in English, psychology and history, and has also been a divinity student. "I decided to start a religion instead of having a mid-life crisis," he claims, in his usual tongue-in-cheek style.

He was given his calling, and became St. $ilicon, he says, after a late night word processing session, when the satellite dish on the roof of his house in Santa Cruz was struck by lightning. When he awoke, he claims, a vision appeared on his computer screen – The Keyboard Prayer. This prayer, he now recites to his audiences, who repeat after him.

"Our Program, who art in memory, 'Hello' be thy name. Thy Operating System come, thy Commands be done, at the Printer as it is on the Screen. Give us this day our daily Data, and forgive us our I/O errors as we forgive those whose logic circuits are faulty. Lead us not into frustration, and deliver us from power surges. For Thine is the algorithm, the application and the solution, looping forever and ever. Return."

He now takes his message, and his whole travelling ministry, to whoever is willing to hear him speak (and, of course, make a sufficient donation to his church). He preaches the word of the Binary Bible, which was a Divine Transmission from the Giver of Data (G.O.D.). It includes the book of SYSGEN, the book of CMOSes, and passages such as this: "And the Giver of Data beheld everything, and saw that it was fairly logical." Logical or not, his message is always well received by audiences looking for a laugh, provided they don't mind his irreverend and satirical jabs at the high tech. industry they love.

And on Wednesday, January 20, Winnipeg will have a chance to hear the preacher from the Silicon Valley. See inside for more details. ➧

THIS MONTH'S MEETING

Meeting Location:
Our next meeting is scheduled for Tuesday, January 12, at 7:30 PM. 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 will likely have to sign in at the security desk. The auditorium is on the main floor, and is easily found from the entrance.

Meeting Agenda: See inside for details.

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Santa's Treats... And a Lump of Coal.

By Gilbert Detillieux

With the end of one year, and the beginning of another, it's common to reflect back on the year, looking for notable events. It's also common, in the tradition of Santa Claus, to see who's been naughty and who's been nice. So, here's a few people I hope Santa remembered.

First off, I hope Cliff Stoll got an extra big treat from Santa, for the presentation that I thought was the highlight of the year. Cliff's style is funny and dynamic, and his story is an interesting one. He also proves that nice guys don't always finish last; sometimes, they become famous.

I also hope that Santa was good to Bill Reid of the U of M's Computer Services department, for making the arrangements to provide MUUG with the use of a used Sun 386i and the UMnet modem pool, so that we could set up MONA. Andrew Chan also deserves Santa's treats for all the time and effort he put into setting up the system.

Santa's treats were also deserved by all those on the planning committee for the CIPS/MUUG fall seminar. The seminar was again successful and profitable. This showed there is still a need for quality, hype-free information on what may now seem like a tired subject – Open Systems.

Speaking of hype, BYTE's Editor in Chief, Dennis Allen deserves a lump of coal for a couple of issues. In the September issue, he reiterates "I promised that BYTE would continue with its authoritative voice to separate truth from marketing hype and to put computing technology into a usable perspective." This same issue had the tabloid-style headline that screamed "Is Unix Dead?" Then in the October issue, his editorial was a blatantly pro-Bush election endorsement. Several readers objected to the political bias, but their letters only appeared in January's issue – well after the election.

Finally, I hope Santa was good to all of you, and I wish you all the best for 1993. May the new year bring you prosperity and happiness. I hope to see all of you at the meeting and at the comedy night. ➽

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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.

Holiday Greetings and Upcoming Meetings

By Susan Zuk, President

I hope you had a very joyous holiday season and have made, and so far have kept, all your New Year's resolutions! I suspect that most people who stayed in the province will not soon forget the balmy weather we have been experiencing this season.

Last month our normal meeting date was used for our annual Wine and Cheese get-together to celebrate the holidays. Over 50 members came out to join the festivities. This year we suggested that people bring out their special projects to show and describe the work they have been doing throughout the year. It was a very interesting and fun evening with the many exhibits being displayed throughout the reception area. Members such as Scott Balneaves brought in equipment to allow us to play a game called GO. Doug Stich showed us a project he is working on for Great-West Life Assurance Company. Rennie Allen came with two systems using QNX, a UNIX-like operating system. Dan Keizer has been working with a packet network over ham radios to transfer information using TCP/IP. There was also a representative from Copperfield's Computer Books displaying UNIX and UNIX-related books being sold at this establishment. Thank you everyone for taking the time and putting forth the effort to bring down your equipment and share your interests and expertise with MUUG members. A special thank you also goes out to Paul Hope for hosting the event as well as arranging the food and beverages. We appreciate the time you took to make this event so enjoyable.

Now on to 1993. We have quite a busy and exciting January schedule for you. For our regular meeting, Mr. Jim Baglot, from Frame Technology, will be presenting FrameMaker and some of their newly released packages. Jim will be discussing as well as demonstrating some of the company's products. I hear that he may even be giving a package away at the meeting. Come on down to see and hear what Frame Technology is doing.

On Wednesday, January 20th, we will be co-hosting a very special guest. CIPS (Canadian Information Processing Society) is bringing Mr. Jeffrey Armstrong, otherwise known as Saint Silicon, to Winnipeg. They will be hosting an evening the night before our event and then have provided us with the opportunity to co-host the Wednesday event with them and the Winnipeg PC User's Group. We are inviting you and your friends out to an enlightening evening of fun and laughter. Saint Silicon is a comedian from Los Angeles. He promotes himself as the founder of CHIP (Church of Heuristic Information Processing) and will be bringing with him the Binary Bible (translated from Ancient Greek). He will be preaching from the Book of SYSGEN I. Saint Silicon hopes to gain followers as he tells you the story of Oddem and Even. This will truly be a spiritual experience. We hope you will join us on Wednesday, January 20th. Tickets ($5) are available from Ticketmaster or from Paul Hope at the meeting on January 12.

Looking forward to seeing you at the two January events. ➽

UNIX Man (sung to "Nowhere Man" by the Beatles)

Submitted by Jim Vincent (original source unknown)

He's a real UNIX man,
Sitting in his UNIX LAN,
Making all his UNIX .plans for nobody.

Knows the blocksize from "du",
Cares not where /dev/null goes to,
Isn't he a bit like you and me?

UNIX man, don't worry,
It's the tube that's blurry,
UNIX man,
The new kernel boots, just like you had planned.

He's as wise as he can be,
Programs in lex, yacc, and C,
UNIX man, can you help me at all?

UNIX man, please listen,
My printout is missin',
UNIX man, the word is your 'at' command.

He's a real UNIX man,
Sitting in his UNIX LAN,
Making all his UNIX .plans for nobody.
Making all his UNIX .plans for nobody... ➽

Submitted by Michael Doob

A tracker extraordinaire named Stoll
Traced a hacker on an electronic stroll.
He had covered his trail,
Using biff and sendmail,
But forgot the seventy five cent toll. ➽

HANDS-ON

Customizing the vi Editor

By Kirk Marat
Dept. of Chemistry, University of Manitoba

The **vi** editor was originally intended to be a programmers source code editor. The actual behaviour of the editor can be customized for a particular application or programming language by use of the environment variable **EXINT**. This environment variable would typically be set in the users' **.profile** or **.login** file. For EXINT settings in a **.profile** to have effect, EXINT must be exported. Start-up customization of **vi** can also be accomplished with a **.exrc** file. This will override settings in EXINT.

A typical EXINT entry may look like:

```
EXINT='set nu sw=2 nomesg sm nows wm=5'
```

The commands such as "**nu**" are actually abbreviations for full **vi** commands. They may also be set at any time during a vi session with the "**:se**" (short for "**:set**") command. E.g. "**:se number**" will turn line numbering on. "**:se all**" will show all of the current vi settings. The options available will be implementation dependent, and many are intended for use with ex.

Commands that turn a feature on (rather than setting a value) may be turned off by issuing the same command with "**no**" prepended. E.g. if "**:se nu**" turns line numbering on, "**:se nonu**" will turn it off.

Below are some of the more commonly used **vi** customization commands:

nu [number] Numbers each line (on the screen, not in the file) of the file being edited. Useful for finding programming errors.

ai [autoindent] Causes each line to start at the same position as the previous line. This is very useful when writing nested program code. Since it can be very annoying when writing text, the default mode is "noai".

sw=n [shiftwidth=n] Used in conjunction with "autoindent," sets the of spaces to be skipped with the "^D" (control-D), ">" and "<" commands. "^D" backs up "sw" spaces (outdents ?) while ">" and "<" shift the current line right or left by "sw" spaces.

nomesg Prevents non-vi messages (you have mail, talk, write, etc.) from driving you crazy during editing. Re-enable with "mesg"

sm [showmatch] In input mode whenever a ")" or or "}" is typed the cursor will momentarily jump to the matching "(" or "{" if it is on the screen. This is a great aid for C programmers and people writing in TeX.

smd [showmode] Whenever **vi** is in other than command mode the current status (input, replace, append, etc.) will be shown at the bottom of the screen.

ws [wrapscan] When doing string searches wrap around to the starting point of the search. If disabled, the search will stop at either the beginning or the end of the file, depending on search direction.

ic [ignorecase] Ignore case in string searches.

wm=*n* [wrapmargin=*n*] While in input mode, **vi** will automatically break lines by inserting a line feed between words when the right edge of the input line is *n* or fewer characters from the right margin. More useful when word processing than programming. To disable this feature set *n* to 0.

window=*n* Set window to *n* lines. Useful for slow connections.

magic Enables regular expression meta characters to be used for pattern searches. ➽

FEEDBACK

Ask Monsieur Ex

A column in which our resident UNIX expert answers questions submitted by members, or discussed at round table sessions.

By Gilbert Detillieux

Dear M. Ex,

I know this will be an easy question for you to answer, but maybe you could make it into a little quiz for your readers.

What is the significance of 6:00 pm, December 31, 1969?

Roland Schneider

Cher Monsieur Schneider,

I assume, by the date and time you give, that you are in a Central time zone, my frost-bitten friend.

Très bien, I shall leave this as an exercise to my dear readers, and shall provide the solution next month.

While we are at it, here are a couple more dates for which you may want to figure out the significance:

Mon Jan 18 21:14:07 2038
Fri Dec 13 14:45:52 1901

(Again, you should assume Central Standard Time.)

À la prochaine, mes amis.

Monsieur Ex ➽

***Monsieur Ex**, a mysterious Frenchman who claims to be an old editor and an expert in UNIX, will return again next month, so don't forget to tune in, kids!*

***Gilbert Detillieux**, a French-Canadian of non-mysterious origins, is mysteriously still the MUUG newsletter editor.*

A Brief Look at Early UNIX

Dean Provins
CUUG Board Director

Reprinted from CUUG Unix News, October 1992 (Volume 2, Number 8)

Ever wonder about some of the history behind UNIX? I did, and after noting a suitable reference, solicited the help of the company librarian to acquire an uncirculated copy of the Bell System Technical Journal for July/August 1978 (volume 57, number 6, part 2). Reading it proved to be fascinating, for it was an issue devoted to what was then called the UNIX time sharing system, and its history and development up to that time. In 20 articles written by 32 AT&T researchers it covered UNIX's reason for being, its evolution, and how it was used in the Bell Labs.

It wasn't surprising that more than a little effort was expended to facilitate computing at Bell Labs. According to T. H. Crowley, author of the preface of that issue, a quarter of the technical staff spent more than a half of their time on programming or related work. He went on to say that a quarter of the professional staff hired the year before had majored in computer science, and 40% of the staff entering Bell Labs' graduate study program were majoring in the same field. Computing was becoming a major enterprise in Short Hills New Jersey.

Because of the nature of the environment, programming covered a broad range. Naturally there were the obvious telephone-related activities such as the development of control programs for switching systems; but there was also compiler development, shared text editing facilities and the design of massive database systems. The work was done on machines of all sizes (Crowley talks about micro-, mini- and maxi-computers) from every major vendor, including Bell's own designs as manufactured by Western Electric.

As you may know, UNIX had its beginnings on a cast-off PDP-7 in 1969. Ken Thompson, who at the time of writing was working on operating systems for telephone switching and computer chess (oh, the freedom of a researcher), wanted to develop an operating system which facilitated programming research. From his first attempt on a PDP-7 (and -9), version two moved to a purchased PDP-11/20 where the emphasis was on text editing and formatting. This machine was outgrown, but not before being used to justify the acquisition of a PDP-11/45. The third version, which included multiprogramming, ran on that 11/45, as well as PDP-11/34, /40, /60 and /70 machines. The version described in this issue of the BST journal ran on PDP-11/70 and Interdata 8/32 computers.

There was a strong desire for interactive program development, but computer architectures of the day dictated certain constraints, especially in operating system size. Thompson had by 1978 a kernel that occupied 90k bytes on a 16 bit machine. To run successfully, 96K bytes were required. In a way, his development wasn't unlike the latest versions of UNIX and its clones (like my copy of QNX), with their "microkernels" sized in the tens of kilobytes.

Smaller in terms of memory than CUUG's '486 which runs a System V/386 3.2 flavour of UNIX, Thompson's box was configured with 786K bytes of mainstore, 2 200 Mbyte discs, 20 300/1200 baud serial lines, 12 9600 baud lines to terminals and satellite computers, and a variety of other devices including 9 track tape drives, a line printer, a phototypesetter, a digital switching network, and to support his "other" areas of research, a chess machine and a voice synthesizer.

Thompson was pleased with his work, commenting that the main system software component of UNIX took less than 2 man-years of development effort. He was equally pleased with the power of the resulting system's interactive capabilities, and the fact that it ran on hardware costing less than $40,000.

But for Ken Thompson, the most important characteristics of the system were its simplicity, elegance and ease of use, traits that his colleagues cited elsewhere in the journal, and UNIX fanatics today still prize (although I have to admit that I didn't fully appreciate the meaning of terse until I met UNIX!).

As a final comment, Thompson quoted some statistics to give some perspective on the scale of the UNIX operation at Bell Labs (one of about 600 installations circa 1978):

125	users
33	simultaneous users
1630	directories
28300	files
301700	512 byte storage blocks in use

A typical day involved the use of:

13500	commands
9.6	CPU hours
230	connect hours

Compare those numbers to your site and multiply by the tens of thousands of sites around the world. For a researcher with a need to fulfill, Ken Thompson certainly had an influence on a lot of people.

Not unexpectedly, UNIX has changed in the intervening years: it runs on home-based PCs costing only a few thousand dollars, and it runs on supercomputers costing millions. Although now windowed in many cases, it still retains its original characteristics, much to the chagrin of some acquaintances of mine, who have been raised on more traditional commercial operating systems.

So that is some of what I learned of UNIX as it was in 1978. ✒

***QNX** is a registered trademark of Quantum Software Systems Ltd.*

Comedy Night
Jeffrey Armstrong
(a.k.a. Saint $ilicon)

Wednesday, January 20, 1992, 7:30 PM
Mennonite Brethren Collegiate Institute
180 Riverton (East of Henderson Highway)
Tickets: $5 (plus agency fee) at Ticketmaster
or $5 from Paul Hope at the January 12 meeting

Jeffrey Armstrong created Saint $ilicon, the world's first high-tech comedian, to save himself from the adverse effects of working seven year in the computer industry. The Detroit native holds a degree in psychology and creative writing from Eastern Michigan University, and history and comparative religions from University of California at Santa Cruz. A former street poet and vice president of a garment company, Armstrong was planning to teach when federal budget cuts dried up positions in the humanities. He then became a Middle East sales representative for Apple. Later, he was marketing manager for Corvus Systems, then Nestar Systems, two Silicon Valley firms.

But you won't be offended by St. $ilicon's high-tech religion. It's not sacrilege, it's hacrilege; he's just pulling your joystick. Many of his biggest fans are people of the cloth. "I thought it not only a marvelous parody of computer technology, but an oblique critique of those who put all their trust into technology," says Sister Maureen Driscoll, president of the Dominican sisters in Edmonds, Wash., who heard the same monologue. Besides she says "I'd like to think God is beyond being distressed by our humor."

You might have had programs where a handful of people would approach you and tell you they enjoyed themselves. You might have had presenters who were detained afterwards by a few folks with questions and compliments. But you'll never have an entire room of people stampede to the front to hail the speaker! Never, until you've had a visit from Saint $ilicon. Say HALlelujah!

Agenda

for
Tuesday, January 12, 1992, 7:30 PM
St-Boniface Hospital Research Centre
Theatre, Main Floor, 351 Taché

1. Round Table 7:30

2. Business Meeting 8:00
   a) President's Welcome
   b) MUUG Board Introductions
   c) Objectives for the Year
   d) New Business

3. Break 8:20

5. Presented Topic 8:30
   FrameMaker for UNIX
   By Jim Baglot, Frame Technology
   A look at FrameMaker on a UNIX workstation. Jim will describe some of the features of FrameMaker as well as a new product called Frame Builder. The demonstration will be on a live system, with the display connected (hopefully) to a large projection TV unit.

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 Tuesday, February 9, at 7:30 PM. Meeting location will be given in the February newsletter. The meeting topic is also to be announced.

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 no more articles in the pipeline. I could use some more material, especially shorter articles – half a page to one page in length would be fine. I would like to see some more book reviews – have you read any good books lately? How about some handy tips for MONA users, or any UNIX users, for that matter? Monsieur Ex has also let me know that his mail-box is empty lately – please submit your questions to the old guy via e-mail to <m-ex@muug.mb.ca> or by FAX to the editor.