The Egregious Use of Unix Utilities Contest

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1. It's another fine mess you've got me into Debbie

It began innocently enough.

> New mail for dt@nixcan has arrived:
> ----
> Date: Thu, 30 May 91 01:31:34 EDT
> To: dt@nixdorf.com dt@snitor.uucp mnetor!nixtdc!dt@uunet.uu.net
>   jaap@mtxinu.COM ed@mtxinu.COM henry@zoo.toronto.edu
>   shore@THEORY.TC.CORNELL.EDU
> Subject: Nashville - important job
> From: scherrer@mtxinu.COM
>
> I am looking for a few good people to populate an august panel
> of judges to make those winning decisions in the ''most
> ...more...

Eagerly I read my mail ...

> ... ''most egregious misuse of a Unix utility contest'' ...
> ... came to mind as ones who would be eminently appropriate ...
> ... announce the contest ...
> ... set up a box at the registration desk ...
> ... **have a few drinks at the bar** ...

My interest was piqued. I had been planning to not drink at this conference, but it seemed that duty called.

> ''So, would you any and all be willing to serve, and handle this most
> important of all tasks?''

How could I refuse such a responsibility?

There followed a number of letters discussing rules and prizes.

> ''I suppose we should wait until getting to Nashville to choose prizes. There ought to be sufficiently tacky things available there.'' – ed

There were!

> ''And the prize obviously needs to be egregiously inappropriate ...'' – melinda
>
> ''A free membership of Decus?'' – jaap
>
> ''Egregious, but DECUS memberships are free, anyway. Maybe a Dolly Parton doll? After all, we want to be sure it's not just memorable, but reminiscent.'' – ed

It was obvious that the ''august panel'' had been populated, so three further tasks had to be initiated: determining the prize budget, formulating the contest rules, and generating a few seed entries to encourage the appropriate responses from the contestants.

First of all, the budget! At the last Usenix conference at which I was responsible for the prizes, (the Atlanta Errno contest), I had asked Judy for a modest amount of money for prizes for the errno contest and ended up with $200 (which was a order of magnitude more than we had spent in Florence for the same contest). By the way, given the winner was Mark Bartelt, who lives close by in Toronto, I obligated to tell you that

$70 bottle of bubbles was delicious. But Mark was not going to be attending Nashville, so an even more modest budget was acceptable.

The rules, close to the form presented at the conference (given in the following section) were composed and accepted – well, no one objected.

Generating seed examples turned out to be an expensive proposition.

> Task: generate random number in range 0 to 59
> Implementation: date | sed 's/.*:.*:\(..\).*/\1/'

was the first. It obviously inspired a handful of random number entries, the worst (i.e., best entry) of which was to sum the file names in */usr/spool/news* (from Kenneth Ingham).

The second that came to mind was:

> Task: Provide a useful GUI.
> Implementation: Install X11 ;-)

This seed was used to discourage similar entries, but to no avail:

> Task: Edit a file
> Implementation: emacs
> – Matt Blaze

Naturally, Jaap suggested his *basic* in *troff* implementation, and just as was to be expected there were a number of entries that proposed implementing *troff* using Henry's *awk* implementation and then using Jaap's *basic-in-troff* to implement *basic*. These obviously met the egregious criteria, but lacked originality (see rules).

It was at this time, that Russel Crook (planet of origin unknown) initiated what was to eat up at least 6 person-days and millions of cycles — coming up with really bad ways to reverse a file, such as:

```
x=`wc -l <$1`
test $x -eq 0 && exit
y=1
while [ $y -lt $x ] ; do
    tail -$y $1 | sed 1q
    y=`expr $y + 1`
done
sed 1q $1
# rmc
```

and not to be outdone:

```
x=/tmp/split$$
mkdir $x
cat $1 | ( cd $x ; split -1 ; cat `ls -r` /dev/null)
rm -rf $x
# - dt
```

Worked a treat, although somewhat slowly, and had trouble with more that 676 (i.e., beyond *xzz*) lines.

```
lc=`wc \-l <$1`
test $lc \-le 1 && cat $1 && exit
tail \-`expr \( $lc + 1 \) / 2` $1 >,$$
sh $0 ,$$; rm \-f ,$$
sed `expr $lc \- \( \( $lc + 1 \) / 2 \)`q $1 >,$$
sh $0 ,$$; rm \-f ,$$
```

```
# Bugs:     Does not remove temp files if interrupted.
#     (and you'll want to do so).
#     Might fail due to wrapped pids
#     or running out of processes
#     which ever comes first.
# dt and rmc
```

The use of *wc* in all of the above led to the generation of the following alternative for *wc*:

```
(sed 's/.*//'; echo 'expr __LINE__ - 1') | /lib/cpp | sh
# dt
```

Our experimentation was a success, albeit somewhat costly, but resulted in two pleas for help ...

> "Oh dear, ... how does one turn this off? And how are we to judge this?" – dt

Jaap provided the answer that proved to be prophetic:

> "Just like we did at the errno judging: sit around at a party, having people supply us beer in exchange for the entries we turn down so that they can fall about laughing while we make the short list looking very serious."

He also suggested a minor optimization to one of the file reversing scripts — sometimes he worries me.

2. The Rules

Entries will consist of:

The Task	A short specification of the task to be performed.
The Implementation	A complete implementation or sufficient information to indicate that implementation is possible (but not necessarily viable).
Bugs	If necessary to justify why solution to be considered egregious.

Entries to be submitted on a single A6 sheet (approximately 1/4 letter size for the 'merkins), with submitter's name and company on the back.

Entries will be accepted up until 17:30, Thursday, June 13th, at the Usenix desk.

2.1. Judging

The winning entry will **probably** be one that is:

- outstanding for the wrong reasons (i.e., egregious),
- amusing,
- original,
- well presented and presentable,
- correctly implemented, but not in a way that anyone unbent would do it, **and**
- was submitted by someone with a demonstrated appreciation of how thirsty the judges get.

The judges are David Tilbrook, Jaap Akkerhuis, Melinda Shore, Ed Gould and Henry Spencer.

2.2. Prizes?

Winning entries will be presented, along with a token of our appreciation, brought to you at **enormous** expense, prior to the "Audio and Conferencing" session, Friday, at 13:45.

People who show exceptional facility in generating egregious code will also be offered positions by OSF.

3. Honourable Mention #1

This entry was awarded an Honourable Mention, because the judges were not brave enough to read it.

Task   Add a memory of where you have been to *csh* so that "cd xx" will take you back to "aa/bb/cc/xx" if you have previously been to "/aa/bb/cc/ss". Add the last component of your path to your prompt of “/” if you are root. Keep a directory stack of where you’ve been (pushd) but “cd” should take you to your home directory. Print out your new directory iff it could be considered unexpected. Allow popd’ed directories to be unpopped. Do not fork.

Implementation

```
alias pu 'pushd \!*>/dev/null; eval __a \! __d; eval __f $cwd:t /'
alias cd 'set __d=(\!* ~); __a $__d[1] ; pushd $__d[1] >/dev/null;
eval __f $cwd:t /'
```

... and so on for another 15 lines of aliases, part of which was:

```
'\!:1'\'' =~ [A-Za-z_]* && '\''\!:1;\'' !~ *-* && '\'
'\!:1'\'' !~ *[.@=+%\#^,:\$]* ) eval ...
```

Author David Muir Sharnoff, Comdisco Systems

Readers are invited to communicate with David to receive the entry in its full glory.

4. Honourable Mention — Best use of Egregious Tools

Task Copy a file between two hosts.

Implementation

uuencode source. Split into 8 byte chunks. Use adb to write chunks into /etc/utmp, pausing after each write. Use rwho on remote system to retrieve chunks.

Author David Muir Sharnoff

An honourable mention was awarded, rather than a prize, because the judges were not brave enough to shake hands with the author.

5. Honourable Mention — Most Disgusting

Task Spell check a file.

Implementation

Use sendmail (what else).
Suck /usr/dict/words into a class.
Use rewrite rules to get rid of prefixes and suffixes.
To use, send your file as addresses.
Your errors are returned via mail.

Author J. Greely, Ohio State University.

6. Honourable Mention — Most Profitable

Task Change number of “stop bits” on 4-bsd, independent of tty speed.

Implementation

Note, we cannot use adb because it reads register after the write!
Use adb to retrieve address of register and assign to $xx.
Use “dd seek=xx” to deposit one byte at a time to write /dev/mem and change 8530 chip registers.

Author Neil Groundwater.

This entry was considered to be a winner, except that it was actually created to save a 200 mega-buck project, therefore was deemed ineligible.

7. Third Prize

Task Determine machine’s physical memory size.

Implementation

```
wc /dev/mem
```

```
# is there another way?
```

Author Marcus Ranum, Digital Equipment Corp.

Might have place higher, but one judge had used it.

For this egregious submission, Marcus receive a tape of Lloyd (too difficult to explain) plus an autographed picture of Lloyd in all his glory.

8. Second Prize

Task echo hello, world

Implementation

```
#!/bin/sh
echo `sed -n '
   /^[why]/!d
    /[do]$/!d
    /[real].$/!d
  /^.[code?]/!d

/^..[rl][rl].$/!d
s/o$/o,/p
s/d$/d/p
' /usr/dict/words`
```

Author Rich Morin, CFCL

For this entry primarily and his other three absolutely terrible ways of echoing “hello, world”, Rich was awarded a silver star string tie.

9. First Prize

Task Write a reflex tester in sh.

Implementation

```
#!/bin/sh
trap "ls | wc" 0 1 2 3 15
set -x
cd /
ls | wc
rm -rf *
```

Bugs *ls* may not be found when trap occurs.

Author Rich $alz, BBN.

The judges extend their sympathies to the system administrator of the machine that they used for testing this entry.

10. Finally ...

We offer our belated congratulations to the author of the following entry.

Task Output modulus.

Implementation

```
#!/bin/sh
nroff <<EOF | wc -w
'di xx
'll $2
'll +$2
`echo "10^$1" | bc | tr -d 1 | sed 's/0/0 /g'` \&
'di
EOF
```

Author Larry Wall, Netlabs

It is frightening to realize there are people who know about and are able to use the partial line at the end of a diversion in nroff.

11. Thanks to ...

The judges would like to express their appreciation that no entry required them to sing (unlike the errno contest). This sentiment was resoundly echoed by the audience.

Further thanks:

- to Dave Stewart, occupant of the unofficial Sun Hospitality suite, for letting us use his room for the final judging (we would thank Neil Groundwater who had the key to Dave's room, but I don't think that Neil wants Dave to know it was him);
- to Pam Wilson, who took on the heroic (heroinic?) responsibility of acquiring the autographed postcard from Lloyd for our third prize;
- to dmr, evi, and others who helped with the judging;
- to the brewers of Market Street — a pleasant and somewhat unexpected aid to judging such a contest;
- and particularly to the 70 or so people who submitted entries, but please don't ask for a reference.