

**in**

Fergus Duniho

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# Chapter 1

## in

### 1.1 Rand.guide

Rand v1.00

by

Fergus Duniho

7 January 1995

Introduction

Copyright

Copying

Usage

Examples

Source code

Requirements

About the Author

History

### 1.2 Introduction

Rand is a program that will perform randomly selected actions for you. For example, it can perform an operation on a randomly selected file, or it can run a randomly selected program, or it can run a program with randomly selected arguments. It is quite useful at boot time. It can select random backdrops, pointers, background patterns, screen blankers,

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default icons, etc. And its uses don't end there. It could be used to display random pictures, to play random modules, to display random quips to the screen, etc. And don't let my imagination stop you. You might be able to find other uses for it.

## 1.3 Copyright

```
Rand v1.00 Copyright © 1995
Fergus Duniho
    Rand is freeware.  If you feel a need to reward me for ←
    this useful
gem of a program, just let me know how useful and indispensable it is to
you.
```

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Version 2, June 1991

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```
<one line to give the program's name and a brief idea of what it does.>
Copyright (C) 19yy <name of author>
```

```
This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.
```

```
You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.
```

Also add information on how to contact you by electronic and paper mail.

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```
Gnomovision version 69, Copyright (C) 19yy name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate

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```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
'Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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## 1.5 Usage

Rand requires at least two arguments to work. The first should be the name of a list file, and the second should be a format string. Rand does three things. First, it selects a line from the list file. Second, it replaces every occurrence of [] in the format string with the line it has chosen. Finally, it send the modified line to the command parser, which runs it as though you typed it on the CLI.

The list file should begin with an integer, which indicates how many lines are in it. Each line that you want Rand to select from should appear on a separate line. There should be no blank lines or extraneous text in the file.

If you make a list of filenames, it is best to include the full path. You can quickly generate lists of files with some program, such as NewList, that will display files with their full paths.

The format string should give you an expression that you could run from the CLI, once you have replaced [] with something. It may contain any number of []'s. These will all be replaced with the same string. You should enclose the format string in quotation marks. If you want to include quotation marks in the format string, you should precede a quotation mark with a backslash.

If you put semicolons in a format string, rand will parse the string at the semicolon(s) and perform multiple operation on the same randomly selected file, text, whatever.

Rand will accept any number of arguments. Odd numbered arguments should always be names of list files, and even numbered arguments should always be format strings. Rand will pair each odd numbered argument with the argument that immediately follows it.

---

## 1.6 Examples

In these examples, I will just make up appropriate file names. You would have to create the files yourself. I have included example files, but odds are they won't match what you have. Many of the examples are files I use myself. Although each example has only two arguments, you could append multiple arguments onto the same line. That is what I have done in my startup-sequence.

1. To display random selected quips:

```
rand
      S:Quips
      "echo \"[[]\]"
```

2. To run a randomly selected blanker and record which one it selected:

```
rand
      S:Blankers
      "runback wbrun [];echo >>T:Blanker \"[[]\]"
```

WBRUN is required to access the tooltypes of the icons. WBStarter won't do here, because it won't work with GarshneBlanker. Runback, or something like it, is required here, because BlitzBlank won't detach itself from the shell WBRUN runs it from. If BlitzBlank is run with just WBRUN, it will stop working once you get rid of the shell it was run from.

3. To select a random background pattern for windows:

```
rand
      S:Patterns
      "copy [] env:sys/win.pat"
```

4. To select a random pointer:

```
rand
      S:Pointers
      "copy [] env:sys/pointer.ilbm"
```

5. To select a random busy pointer for NickPrefs:

```
rand
      S:Busypointers
      "copy [] env:sys/busypointer.prefs"
```

6. To select a random backdrop:

```
rand
      S:Backdrops
      "c:makelink FROM SYS:Prefs/Presets/Backdrop TO [] SOFT"
```

This use requires Roland Mainz's improved version of makelink, which allows for soft links to files. These are links across volumes. In this example, the file SYS:Prefs/Presets/Backdrop is what I have NickPref's WBPicture set

to. Rather than copy over what may sometimes be a large picture, I just make a link to a backdrop. For this to work right, you should precede it in your startup-sequence with something like:

```
if exists SYS:Prefs/Presets/Backdrop
  delete >NIL: SYS:Prefs/Presets/Backdrop
endif
```

You should also temporarily put a real backdrop in its place, so that you can set NickPrefs to it. The requester in its WBPicture program won't recognize links.

7. To play russian roulette with your startup-sequence:

```
rand
  S:Commands
  "[] s:startup-sequence"
```

S:Commands could contain "delete" on one line.

8. To listen to a random MEditation, a la some short repetitive modules I once released for meditating with:

```
rand
  S:MEDitations
  "octamedplayer []"
```

9. To select a random default drawer icon:

```
rand
  S:Drawer_Icons
  "copy [] env:sys/def_drawer"
```

10. To append a random tagline to a letter:

```
rand
  S:Taglines
  "echo >>T:BlueEdit \"[]\\""
```

11. To randomly choose between a random Workbench pattern with WBPatter or a random backdrop with NickPref's WBPicture.

```
rand
  S:Actions
  "rand []"
```

For this to work, you need something in your startup-sequence like:

```
if exists SYS:Prefs/Presets/Backdrop
  delete >NIL: SYS:Prefs/Presets/Backdrop
endif
```

If rand opts to select a background pattern, it won't select a backdrop, and there will no default backdrop left around to show up in place of the pattern. In this way, rand can select between patterns and backdrops. What I said about backdrops in an earlier example holds for this example too.

## 1.7 Quips

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Behind every successful man stands a surprised mother-in-law.  
Always borrow from a pessimist--he never expects to get it back.  
A rich man is either a scoundrel or heir to a scoundrel.  
Kelptomaniacs help themselves because they can't help themselves.  
When business interferes with pleasure, give up business.

## 1.8 Blankers

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Work:Blankers/ASwarm3  
Work:Blankers/BlitzBlank  
Work:Blankers/BServer  
Work:Blankers/FracBlank\_881  
Work:Blankers/Garshneblanker  
Work:Blankers/Rotor  
Work:Blankers/Spliner  
Work:Blankers/StarBlank  
Work:Blankers/superdark

## 1.9 Patterns

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Data:Patterns/BerryPatch  
Data:Patterns/BioWeave  
Data:Patterns/Bricks.pre  
Data:Patterns/Crosses.pre  
Data:Patterns/DeepBlueField.8c  
Data:Patterns/Moebius.pre  
Data:Patterns/Pattern.AdobeShingles  
Data:Patterns/Pattern.ArtDeco  
Data:Patterns/Pattern.ArtDeco10  
Data:Patterns/Pattern.ArtDeco11  
Data:Patterns/Pattern.ArtDeco12  
Data:Patterns/Pattern.ArtDeco2  
Data:Patterns/Pattern.ArtDeco3  
Data:Patterns/Pattern.ArtDeco4  
Data:Patterns/Pattern.ArtDeco5  
Data:Patterns/Pattern.ArtDeco6  
Data:Patterns/Pattern.ArtDeco7  
Data:Patterns/Pattern.ArtDeco7.B  
Data:Patterns/Pattern.ArtDeco7.C  
Data:Patterns/Pattern.ArtDeco8  
Data:Patterns/Pattern.ArtDeco9  
Data:Patterns/Pattern.CrossHatch  
Data:Patterns/Pattern.CrossHatch2

---

Data:Patterns/Pattern.CrossHatch3  
Data:Patterns/Pattern.CrossHatch4  
Data:Patterns/Pattern.Flower2  
Data:Patterns/Pattern.Flowers  
Data:Patterns/ShadowDots  
Data:Patterns/waves  
Data:Patterns/waves2  
Data:Patterns/Wriggle  
Data:Patterns/Wriggle.8c  
Data:Patterns/Ziqqurat

## 1.10 Pointers

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Data:Pointers/1988  
Data:Pointers/1988a  
Data:Pointers/3dArrow  
Data:Pointers/AceHearts  
Data:Pointers/adisk  
Data:Pointers/Amigaball  
Data:Pointers/amigachk  
Data:Pointers/Arrow  
Data:Pointers/arrow-3d  
Data:Pointers/arrow01  
Data:Pointers/Arrow02  
Data:Pointers/Arrow03  
Data:Pointers/artbrush  
Data:Pointers/Balloon  
Data:Pointers/basket  
Data:Pointers/bass  
Data:Pointers/Beachboy  
Data:Pointers/BeachGirl  
Data:Pointers/Bev  
Data:Pointers/BluePencil  
Data:Pointers/boat1  
Data:Pointers/book  
Data:Pointers/bottle  
Data:Pointers/bugel  
Data:Pointers/candle  
Data:Pointers/candycane  
Data:Pointers/captshook  
Data:Pointers/cartoon  
Data:Pointers/cassette  
Data:Pointers/cbm  
Data:Pointers/Chest  
Data:Pointers/circles  
Data:Pointers/clarinet  
Data:Pointers/computer  
Data:Pointers/Conductor  
Data:Pointers/copper  
Data:Pointers/cordless  
Data:Pointers/corno  
Data:Pointers/CryptKeeper.pointer  
Data:Pointers/dairy-queen  
Data:Pointers/dancer1

---

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Data:Pointers/dancer2  
Data:Pointers/desert  
Data:Pointers/Disc  
Data:Pointers/disk.pointer  
Data:Pointers/exclaim  
Data:Pointers/eyeglass  
Data:Pointers/face1  
Data:Pointers/finger-watch  
Data:Pointers/finger1  
Data:Pointers/finger2  
Data:Pointers/finger3  
Data:Pointers/finger4  
Data:Pointers/fish  
Data:Pointers/flake  
Data:Pointers/Flirt  
Data:Pointers/floppydisk  
Data:Pointers/flower  
Data:Pointers/fool1  
Data:Pointers/fool2  
Data:Pointers/fool3  
Data:Pointers/foot  
Data:Pointers/fork  
Data:Pointers/frog  
Data:Pointers/funylady  
Data:Pointers/Garfield  
Data:Pointers/ghost  
Data:Pointers/ghost2  
Data:Pointers/greenmnts  
Data:Pointers/HallowsCat  
Data:Pointers/Hand  
Data:Pointers/HandPointer  
Data:Pointers/handrill  
Data:Pointers/handset  
Data:Pointers/happy  
Data:Pointers/Heart  
Data:Pointers/indian  
Data:Pointers/Iris  
Data:Pointers/jacko  
Data:Pointers/jet\_fighter  
Data:Pointers/jollyroger  
Data:Pointers/joystick1  
Data:Pointers/joystick2  
Data:Pointers/joystick3  
Data:Pointers/joystk  
Data:Pointers/key  
Data:Pointers/Kitten  
Data:Pointers/light-bulb  
Data:Pointers/lightbulb  
Data:Pointers/Lips  
Data:Pointers/Lips2  
Data:Pointers/magnify  
Data:Pointers/match  
Data:Pointers/mickymouse  
Data:Pointers/Mouse  
Data:Pointers/Mouse1  
Data:Pointers/MTV  
Data:Pointers/needle01

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Data:Pointers/needle02  
Data:Pointers/NibPointer  
Data:Pointers/No2\_lead  
Data:Pointers/NoST  
Data:Pointers/Oliver  
Data:Pointers/opus  
Data:Pointers/OpusFace  
Data:Pointers/opusfrnt  
Data:Pointers/PalmTree  
Data:Pointers/pencil  
Data:Pointers/pencil2  
Data:Pointers/pilgrim  
Data:Pointers/pilgrim2  
Data:Pointers/pilgrim3  
Data:Pointers/pliers  
Data:Pointers/plug  
Data:Pointers/Pointer.1.3  
Data:Pointers/Pointer.3D  
Data:Pointers/Pointer.Arrow  
Data:Pointers/Pointer.Arrow1  
Data:Pointers/Pointer.Arrow2  
Data:Pointers/Pointer.Hand  
Data:Pointers/Pointer.LeftArrow  
Data:Pointers/pumpkin  
Data:Pointers/question  
Data:Pointers/quill  
Data:Pointers/rabbit1  
Data:Pointers/raquet  
Data:Pointers/RedBall  
Data:Pointers/RedPencil  
Data:Pointers/RobinH  
Data:Pointers/Robot  
Data:Pointers/rocket  
Data:Pointers/ruler  
Data:Pointers/sailboat  
Data:Pointers/Santa  
Data:Pointers/Sc3Dpnt  
Data:Pointers/Security  
Data:Pointers/ShadowPointer  
Data:Pointers/silver-ware  
Data:Pointers/Skull.pointer  
Data:Pointers/skull2  
Data:Pointers/Snowman  
Data:Pointers/snowman2  
Data:Pointers/snowmnts  
Data:Pointers/spaceShip  
Data:Pointers/spoon&fork  
Data:Pointers/spraycan  
Data:Pointers/SteveD  
Data:Pointers/stop  
Data:Pointers/superman  
Data:Pointers/sword  
Data:Pointers/SystemArrow  
Data:Pointers/TanChest  
Data:Pointers/tank  
Data:Pointers/TanLines  
Data:Pointers/tbolt

---

Data:Pointers/television  
Data:Pointers/tetons  
Data:Pointers/thrifty-cone  
Data:Pointers/Tree  
Data:Pointers/trump  
Data:Pointers/turkey  
Data:Pointers/ufo  
Data:Pointers/UKFlag  
Data:Pointers/USFlag  
Data:Pointers/vader  
Data:Pointers/wand  
Data:Pointers/wface  
Data:Pointers/window  
Data:Pointers/Witch  
Data:Pointers/xmastree  
Data:Pointers/Yield  
Data:Pointers/yingyang

## 1.11 Busypointers

10  
Data:Busy/BOING.pre  
Data:Busy/D-Harp  
Data:Busy/Elevator  
Data:Busy/Piston.pre  
Data:Busy/RedHourGlass  
Data:Busy/Ricochet  
Data:Busy/Shade  
Data:Busy/SpinBall  
Data:Busy/TwoPiston.pre  
Data:Busy/WatchaMaCallit

## 1.12 Backdrops

23  
Data:Backdrops/cobblestone  
Data:Backdrops/cobblestone-1  
Data:Backdrops/Fancy\_Stone  
Data:Backdrops/HangOnArkaden  
Data:Backdrops/HangOnBlätter2  
Data:Backdrops/HangOnEscher  
Data:Backdrops/HangOnEscher1  
Data:Backdrops/HangOnRelief3  
Data:Backdrops/HangOnStruktur1  
Data:Backdrops/HangOnStukko  
Data:Backdrops/HerringBone  
Data:Backdrops/Lyapunov3  
Data:Backdrops/Lyapunov4  
Data:Backdrops/Lyapunov5  
Data:Backdrops/Mandelbrot1  
Data:Backdrops/Mandelbrot2  
Data:Backdrops/Mandelbrot3

---

Data:Backdrops/Mandelbrot4  
Data:Backdrops/nagel-01.bru  
Data:Backdrops/nagel-06.bru  
Data:Backdrops/nagel-12.bru  
Data:Backdrops/Nagel-47.bru  
Data:Backdrops/Stonewall

## 1.13 Commands

6  
list  
list  
list  
delete  
list  
list

## 1.14 MEDitations

8  
Music:MEDitations/MEDitation1  
Music:MEDitations/MEDitation2  
Music:MEDitations/MEDitation3  
Music:MEDitations/MEDitation4  
Music:MEDitations/MEDitation5  
Music:MEDitations/MEDitation6  
Music:MEDitations/MEDitation7  
Music:MEDitations/MEDitation8

## 1.15 Drawers\_Icons

2  
ICONS:Drawer1.info  
ICONS:Drawer2.info

## 1.16 4.10.

44  
"Suck gas, evil doer!" -- Darkwing Duck  
"Don't worry; I'm in total control." -- Bonkers  
"It never hurts to help." -- Eek! the Cat  
"For you, anything my Fawn Deer." -- Bonkers  
"We should talk, dear; something supernatural is going on."  
"Meow." -- Eek! the Cat  
"My very own Squishy Bearz inflatable termite farm!" -- Wendy Elizabeth  
"I've always wanted to learn Spangalese--in case I'm in Spanga."  
"Kumbuyah!" -- Eek! the Cat

"I've never met a real live ghost before." -- Eek! the Cat  
 "Maybe he's lost termite farmers of his own once." -- Eek! the Cat  
 "All little creatures should live in harmony." -- Eek! the Cat  
 "Gee, it's best when people help others in difficult times." -- Eek!  
 "Aaaaaaaaahhhhhhhhhhh!" Eek! the Cat  
 "I obey." -- A Dalek  
 My sister's name is ELIZA.  
 "A lobster for me, and for the lady too." "That's 3 lobsters."  
 Sing Ho! for a Bear! Sing Ho! for a Pooh!  
 The world didn't turn color until sometime in the 1930s.  
 A clear plastic binder! Pretty professional looking, eh?  
 Bats: The Big Bug Scourge of the Skies  
 "Miserable miscreant! Question my integrity, will you?" -- Calvin  
 "I'm writing a fictional autobiography." -- Calvin  
 Calvin? I'm not Calvin. I'm his duplicate. Calvin's in his room.  
 "Another day, another mind-boggling adventure!" -- Spaceman Spiff  
 Your "parents" are really bug-eyed aliens from Neptune!  
 A bolt of fiery crimson streaks across the sky! It's Stupendous Man!  
 I'll show 'em! I REFUSE to learn a lesson! -- Calvin  
 Another planet, another sweeping panorama of indescribable grandeur!  
 "Great moons of Neptune! A fool mortal female!" -- Stupendous Man  
 Blessed are the assimilated, for they shall be Borg.  
 For the Borg so loved the world, they assimilated it.  
 A pox on your first born, you ugly wart on a salamander's tongue!  
 My math minute is up! Set the clock for my spelling assignment, ok?  
 THANK YOU FOR NOT SMOKING!! -- Opus the penguin with a fire hose.  
 I OBJECT! I OBJECT! I OBJECT! I OBJECT! BY GOLLY, I OBJECT! -- Opus  
 Bill, here, is a former missionary. I am studying to be the Pope.  
 Libel!! Pphfft! Take that! PPPFPT! -- Opus.  
 NO! I'M NOT LISTENING! PHPTFPH! PPHTPH! -- Opus  
 Everything and everyone serves history's single purpose. -- Calvin  
 I'm the end result of history. -- Calvin  
 Now I'm here, and history is vindicated. -- Calvin  
 I'm glad I'm a man. The tampon I probably use was made by one.  
 Mea culpa, mea culpa, Mia Sara, oops, mea culpa, mea culpa.

## 1.17 Actions

2

```
S:Patterns
"copy [] env:sys/wb.pat"

S:Backdrops
"c:makelink FROM SYS:Prefs/Presets/Backdrop TO [] SOFT"
```

## 1.18 Source code

Rand is a C program compiled with GNU CC. During ↔  
 compilation, I  
 linked it with a function library that I am currently developing. It is

called libfpd.a, and I plan to eventually release it under the GNU LIBRARY GENERAL PUBLIC LICENSE. But I am not ready to release it yet. Here is the main source code.

```
/*
   rand.c - A program that sends random system commands.
   Copyright (C) 1995 Fergus Duniho

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   it under the terms of the GNU General Public License as published by
   the Free Software Foundation; version 2 of the License.

   This program is distributed in the hope that it will be useful,
   but WITHOUT ANY WARRANTY; without even the implied warranty of
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   GNU General Public License for more details.

   You should have received a copy of the GNU General Public License
   along with this program; if not, write to the Free Software
   Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.
*/

#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include
        <fpd/fpdio.h>
        #include
        <fpd/fpdstrm.h>
        void setseed ();

int main (int argc, char **argv) {
    unsigned int i, j, which, maximum;
    char lines[256], line[256], fname[256];
    FILE *fptr;

    if (argc < 2)
        fprintf (stderr,
            "Usage: rand <file> <format_string> [<file> <format> ...]\n"
            "$VER: rand v1.00 (7 Jan 1995)\n"
            "Copyright 1995 Fergus Duniho\n");

    setseed();
    for (i = 1; i < argc; i+=2) {
        if ((fptr = fopen(argv[i], "r")) == NULL) {
            fprintf (stderr, "Couldn't find %s.\n", argv[i]);
            continue;
        }
        maximum =
            fgetp
            (fptr);
        which = rand() % maximum;
        for (j = 0; j < which; j++)

            next
            (fptr, '\n');
```

```

        getline
        (fptr, fname, 256);
fclose (fptr);

        repstr
        (lines, argv[i+1], "[", fname, -1);
while ((j = strchr(lines, ";")) != 0) {

        restring
        (line, lines, lines, "", 0, j, 1);
        system (line);
    }
}

void setseed () {
    FILE *fptr;
    int seed;

    if ((fptr = fopen("SYS:Prefs/randseed", "r")) != NULL) {
        seed = fgetp(fptr);
        fclose (fptr);
    }
    else
        seed = 1;
    srand (seed);
    if ((fptr = fopen("SYS:Prefs/randseed", "w")) != NULL) {
        fprintf (fptr, "%d", rand());
        fclose (fptr);
    }
}

```

## 1.19 fgetp()

Fgetp() reads and returns the next positive base 10 integer in ← a file.

```

#include
    <fpd/fpdio.h>
    int fgetp (FILE *fptr) {
int c, tot = 0;

while (!isdigit(c = getc(fptr)))
    if (c == EOF)
        return EOF;
do {
    tot *= 10;
    tot += (c - '0');
} while (isdigit(c = getc(fptr)));
if (c != '\n')
    ungetc (c, fptr);
return tot;
}

```

## 1.20 5.2.

Getline() is an improvement on fgets().

```
#include
    <fpd/fpdio.h>
    int getline (FILE *fptr, char *line, long max) {
short int flag;

while (max--) {
    *line = fgetc(fptr);
    if (*line == '\n' || *line == '\f' || *line == EOF)
        break;
    line++;
}
flag = (*line != EOF) ? *line : 0;
if (flag && (*line != '\n') && (*line != '\f'))
    ungetc (*line, fptr);
*line = '\0';
return flag;
}
```

## 1.21 repstr()

```
#include
<fpd/fpdstrm.h>
/* This function, whose name is an abbreviation of REPlace STRing, ←
    sends
* to dest a copy of str with the first n occurrences of srch replaced by
* rplc. If (n < 0), repstr replaces every occurrence of srch with rplc.
* If (n == 0), repstr merely does a string copy. */

int repstr (char *dest, char *str, char *srch, char *rplc, int n) {
char *srchloc, *original_rplc;
int i;
size_t srchlen;

original_rplc = rplc;
srchlen = strlen(srch);

for (i = 0; i != n; i++) {
    if ((srchloc = strstr(str, srch)) == 0)
        break;
    while (str < srchloc)
        *dest++ = *str++;
    while ((*dest++ = *rplc++) != 0);
    --dest;
    str += srchlen;
    rplc = original_rplc;
}
```

```

    }
    while ((*dest++ = *str++) != 0);
    return (i);
}

```

## 1.22 restring()

```

/* Restring.c by Fergus Duniho */

#include <fpd/fpdstrm.h>
/* This function copies an initial segment of s1 to d1, and it ←
copies a
* later segment of s1 to d2. It appends s2 to d1 after it copies the
* first segment of s1 to it. If NULL is passed to d2, the text that
* would be copied to d2 gets appended to d1 instead.

* The text which it copies from s1 to d1 starts at n0 and continues for
* n1 characters. The text which it copies from s1 to d2 starts with
* (n0 + n2) and continues for the remainder of s1.

* This function is awfully versatile, and many different string
* operations are defined as macros based on this single function.
* Read fpdstrm.h for details.

* d1 = the first destination string
* d2 = the second destination string
* s1 = the first source string
* s2 = the second source string
* n0 = the location in s1 to begin copying to d1
* n1 = how much of s1 to initially copy to d1
* n2 = how much of s1 to skip before copying the rest to d2

* if n0 < 0, none of s1 gets copied.
* if n1 < 0, all of s1 gets copied before s2 gets copied.
* if n1 == 0, s2 gets copied before any of s1 does.
* if n2 < 0, restring neglects to copy the remainder of s1.
* if (n0 == 0) and (n2 == 0), all of s1 gets copied.
* if (d2 == NULL), everything gets copied to d1.

* The string passed to d2 may safely be the same as the string passed
* to either s1 or to s2. The same string may be safely passed to both
* s1 and s2. Generally, the same string should not be passed to both
* d1 and s2. The same string should not be passed to both d1 and s1.
* This would cause the text in s1 to change before it gets copied. */

void restring (char *d1, char *d2, char *s1, char *s2, size_t n0, size_t n1, ←
size_t n2) {

    /* Skips over initial part of s1. */
    while (n0--)
        if (*s1++ == 0) {
            s1--;
            break;

```



```

    }

    /* Begins to copy s1 to d1. */
    while (n1--)
        if ((*d1++ = *s1++) == 0) {
            d1--;
            s1--;
            break;
        }

    /* Appends s2 to d1. */
    while ((*d1++ = *s2++) != '\0');

    /* Skips text in s1. */
    while (n2--)
        if (*s1++ == 0) {
            s1--;
            break;
        }

    if (d2 == NULL)
        d2 = d1 - 1;

    /* Copies remainder of s1 to d2. */
    while ((*d2++ = *s1++) != 0);
}

```

## 1.23 fpdio.h

```

        /* FPDIO.H Copyright (C) 1994 Fergus Patrick Duniho */

#ifndef _FPDIO_H
#define _FPDIO_H

#include <ctype.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <stdarg.h>

#define RdOpen(X,Y) X=FDOpen(Y, "r")
#define WrOpen(X,Y) X=FDOpen(Y, "w")
#define ApOpen(X,Y) X=FDOpen(Y, "a")
#define nextline(X) next(X, '\n')

void wrapwrite (FILE *fptr, int ind, int lm, int rm, char *s, ...);
int
        fgetp
        (FILE *fptr);
unsigned int getp (unsigned int min, unsigned int max);
FILE *FDOpen (const char *fn, const char *mode);
int HowMany (char *fname, char c0);
char *clone_line (FILE *fptr);
int

```

---

```

        getline
            (FILE *fptr, char *line, long max);
int yes ();
int find (FILE *fptr, char *str);
long flinelen (FILE *fptr);
int
        next
            (FILE *fptr, char c0);
int nextnon (FILE *fptr, char c0);

#endif /* _FPDIO_H */

```

## 1.24 fpdstrm.h

```

/* FPDSTRM.H Copyright (C) 1995 Fergus Patrick Duniho */

#ifndef __fpdstrm_h_
#define __fpdstrm_h_

#include <ctype.h>
#include <string.h>
#include <stdlib.h>

#define delphrase(d, X, Y, Z) rephrase (d, X, "", Y, Z)
#define insphrase(d, X, Y, Z) rephrase (d, X, Y, Z, 0)
#define lefphrase(d, Y, Z) rephrase (d, Y, "", 0, Z)

#define catstr(d, s1, s2) restrng (d, NULL, s1, s2, 0, -1, 0)
#define delstr(d, s, n, len) restrng (d, NULL, s, "", 0, n, len)
#define insstr(d, s1, s2, n) restrng (d, NULL, s1, s2, 0, n, 0)
#define overlay(d, s1, s2, n) restrng (d, NULL, s1, s2, 0, n, strlen(s2))
#define lefstr(d, s, n) restrng (d, NULL, s, "", 0, n, -1)
#define rgtstr(d, s, n) restrng (d, NULL, s, "", strlen(s)-n, -1, 0)
#define substr(d, s, n, len) restrng (d, NULL, s, "", n, len, -1)
#define divstr(d1, d2, s, n) restrng (d1, d2, s, "", 0, n, 0)

#define trim(d, Z) strip (d, Z, " ", 'T')

void cparse (char *source, char *dest1, char *dest2, char c, int flag);
void delsubstr (char *dest, char *source, char c0, char c1, int flag);
int extract (char *dest, char *source, char l, char r, int flag);
void rephrase (char *dest, char *source, char *nstr, size_t n, size_t len);
int
        repstr
            (char *dest, char *str, char *srch, char *rplc, int n);
void
        restrng
            (char *d1, char *d2, char *s1, char *s2, size_t n0, size_t n1, ←
                size_t n2);
void revstr (char *dst, char *src);
void strip (char *dst, char *src, char *bad, char mode);
void subphrase (char *s0, char *s1, size_t n, size_t w, int flag);
void translate (char *dst, char *src, char *output, char *input, char pad);
void wparse (char *first, char *rest, char *source, int wrdnum);

```

```
#endif /* __fpdstrm_h_ */
```

## 1.25 next ()

```
        #include
        <fpd/fpdio.h>
        int next (FILE *fptr, char c0) {
int c1;
while ((c1 = fgetc(fptr)) != c0)
    if (c1 == EOF)
        return 0;
return 1;
}
```

## 1.26 Requirements

Rand requires "at least version 40 of ixemul.library." That is a direct quotation from the binary. I compiled it with GNU CC, and it takes advantage of the Unix-like facilities of ixemul.library for parsing arguments. I also tried libnix and DICE, but they didn't recognize something in quotation marks as a single argument. This made the libnix and DICE compiled versions of rand malfunction.

IxEmul.library is freely available on the Aminet, and it is distributed under the GNU LIBRARY GENERAL PUBLIC LICENSE Version 2.

Rand requires other programs to do anything useful. Rand is powerful because it knows how to delegate. See the examples for programs you can use with Rand.

## 1.27 About the Author

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Other things I've done include:

ddli341.lha - The Duniho and Duniho Life Pattern Indicator.  
A computerized personality questionnaire.  
MEDitate.lha - Short repetitive MED modules for meditating.  
harmonix.lha - An Amigaguide file on creating realistic sounding  
synthsounds in MED or OctaMED.  
RNDBlank.lha - An ARexx script for selecting a random blanker.

Rand supercedes this.

ShowPics.lha - An ARexx script for using PicBoot to display random pictures for use with GarshneBlanker's Executor blanker.

XES131.lha - ARexx scripts and other stuff for use with XDME.

Paginate.lha - A program for paginating text files. Similar to GNU's nl, but it offers more versatile headers and footers.

AlphaSpell - A fast spelling checker with a large dictionary.

Search for these in the Aminet INDEX, or seek them out elsewhere.

## 1.28 History

v1.00

## 1.29 Rand v1.00

Released 7 January 1995. First release. The history begins here.

---