EARN EXECUTIVE

Information on Turgut Kalfaoglu- CONFIDENTIAL to the EARN Executive

                                        issued by
                                        A Auroux
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The following three texts were supplied by Turgut Kalfaoglu who is interested in
a post with EARN.

Text 1

Hello. I have talked with both Dr. Sitki Aytac and Prof. Oguz Manas, and
I have their approval, although we shall get together again and talk again
on this topic. I believe that they would like both EARN programmers to work
at this site. Anyway, back to the concrete things:

Right now, I am on the second year of my Master's degree. My topic is the
Trickle software server, that you know about. It is basically a fairly
large piece of software, around 4500 rexx lines. This year, with the
addition of the AWIWUW11 and BANUFS11 servers, their operators have
contributed to the code development. As you can guess, I am mainly interested
in server design, and anything related to this is exciting to me.
Although I have only been working with EARN for a year, I have learned a
good deal about how things work. I first started out as a systems programmer
at this university, then later on became the head of the newly-formed
EARN support office. Right now, me and an undergraduate student are working
at this office.
My current job basically consists of maintaining the servers, being a nad,
a network country coordinator (when Dr. Aytac is busy), and a postmaster
that responds to user queries. Since I was a systems programmer, I often
assist the systems programmers, mainly on the utilities that I wrote for
the system, such as the interactive password changer (we don't have DIRMAINT),
old reader deletion program, and other various programs.

Of the servers, I used to spend most of my time debugging and enhancing
the TRICKLE software, but now I am spending more and more time with
LISTSERV, with the addition of new lists and new file lists. NETSERV,
which usually runs trouble-free, is used for the generation of the routing
tables for the RSCS, and for maintaining the information on the Turkish
nodes.

Here is my current resume:

                                Turgut Kalfaoglu
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                                 Izmir, Turkey
                                  (51)21-48-19

        JOB OBJECTIVE   Position as a member of the EARN technical staff.

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EDUCATION        B.S. Computer Information Systems, Elmira College,
                 Elmira, New York, May 1987. M.S. in Networking and Server
                 design, expected in Summer 1989. Experienced on IBM-PC
                 microcomputers, VM/CMS, and VAX/VMS systems.
                 M.S. project involved the design and implementation of
                 the Trickle software server. Currently six of these
                 servers access over 20,000 programs, process several
                 hundred requests daily, and are virtually the only source
                 of public domain software for MS-DOS and CP/M computers
                 in Europe.

                 M.S. Courses included:
                     Computer Graphics    Advanced Statistics
                     Operating Systems    Database Management

                 B.S. Courses included:
                     Operating Systems    Systems Dev. and Design
                     Data Structures      Operations Analysis
                     Robotics             Data Communications

                 B.S. Projects:
                     BASIC interpreter in C
                     Digital Watch Simulator
                     Text Encryption and Decryption
                     Operating System Shell (MS-DOS)
                     Virtual Memory Full Screen Editor

EMPLOYMENT       Working as Network Administrator/Researcher/Teaching
                 Assistant, Ege University Computer Dept. since Fall 1987.
                 Involved with maintaining network servers, including
                 RSCS, MAILER, LISTSERV, NETSERV, TRICKLE, and RELAY,
                 assisting the management of the Turkish nodes, writing
                 user documentation, and responding to user queries.

                 Previous jobs include: Analyst/programmer, EVAC, Izmir,
                 1986. Duties involved doing research, writing challenging
                 application programs and subroutines.

BULLETIN BOARD   Developer and system operator for four years of the most
                 successful electronic bulletin board system in Elmira.
                 Currently operating the first board in Turkey. Wrote 700
                 kilobytes of software and sold copies.

GENERAL          Member of American Field Service, and of Izmir
INFORMATION      model plane club. Certified advanced SCUBA diver, and an
                 avid biker. Have programs in public domain. Citizen of
                 Turkey and England, single.

LANGUAGES        Fluent in Turkish, English, French, and in the order of
                 fluency: QuickBASIC, Rexx, C, Pascal, FORTRAN and COBOL.

REFERENCES       Available on request.
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There is an exam that I must attend to, but I would like to send this
information to you as soon as possible, so I will be sending the rest
shortly.

Regards,
    -turgut

Text 2

Hello again, I guess I should also talk about my programming skills.
Like most others, I started with BASIC at the age of fourteen, (BTW:I am
23 now), and used BASIC for a long time. In fact, BASIC has been my
favorite until I learned the C language. Now I can program very well in
BASIC, C, and Rexx languages, although I know the other 'classical'
languages taught at school. My last year's graphics project, two
thousand lines of routines for graphics, was in C. My BBS program is
in Quick BASIC (A pascal-like version of the language, with functions,
sub-programs, and declarations), and TRICKLE is naturally in Rexx.

My experience with VAX is not as extensive as with VM/CMS, although
whenever I got into the computer center of Elmira College, people would not
leave me alone with questions. It is a nice feeling, but can get annoying
after a while. The college had a Microvax II for students, and I used
that system for about a year, before my graduation. Unlike my VM/CMS
experience, my work with VAX was on-and-off - sometimes I would not touch
it for weeks.

I expect that this job would be somewhat similar to my current job,
with perhaps more responsibility, and with a greater chance to learn
new techniques, and meet others.

As we talked before, I really do not have a location of preference. I have
visited France, Switzerland, Austria, and Belgium, and I liked them
very much.

I am not sure if I am missing anything, but please let me know if there are
other aspects that you would like me to talk about.. Best wishes, -turgut

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Text 3

                RED - Listserv Redirector
          (C)1988 Turgut Kalfaoglu <TURGUT@TREARN>

What is RED?
  RED provides the SIMTEL-20 files, and directory listings, with its
  own cache, where it keeps its most recently requested files. It
  reduces the network load by providing the cache, and by providing
  directory listings locally, instead of through a distant list
  server.. It is a machine (process) that runs disconnected from a
  terminal.

  Currently, the six sites that run this software are called:

  In Denmark: TRICKLE@DKTC11
  In Turkey: TRICKLE@TREARN

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  In Italy:      TRICKLE@IMIPOLI
  In Belgium:    TRICKLE@BANUFS11
  In Austria:    TRICKLE@AWIWUW11
  In Germany:    TRICKLE@DB0FUB11
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  You are urged to use the one that is closer to your location.

  In this tutorial, we will be using 'TELL TRICKLE AT TREARN',
  but this can be replaced with 'TELL TRICKLE AT <your
  location of preference>'

  We also will use the 'TELL' command to send a single line message.
  It should be replaced with whatever is appropriate for your system.
  (Like XMIT , SEND, etc.)

How does it work?
  It provides faster file delivery than LISTSERV@RPICICGE because it
  holds the most recently requested files, and it also asks its peers,
  to find out if any of them has the file.

  It has two major commands. /PDDIR and /PDGET.. As the names
  indicate, /PDDIR provides the names of the files, and /PDGET
  delivers files.

How to use /PDDIR:
  On IBM/VM systems, you can get a list of the 'major directory' names
  by simply typing this command:

          TELL TRICKLE AT TREARN /PDDIR

  RED should now send you a list of the major directory names. Now,
  you can obtain a list of the sub-directories of any of the displayed
  names by putting the name between less-than and greater-than
  symbols.. For example,

          TELL TRICKLE AT TREARN /PDDIR <MSDOS>

  RED will mail you a file containing the names of the
  sub-directories. Once you choose a subdirectory to examine, type in
  the main directory name, a period, then the name of the subdirectory
  name. For example, if you chose SYSUTL sub-directory of MSDOS, then
  you may type this:

          TELL TRICKLE AT TREARN /PDDIR <MSDOS.SYSUTL>

  RED will first notify you of the number of files found, then will go
  ahead and mail you this list.. Once you choose your file(s) to
  order, then read on..

How to use the /PDGET command:
  Once you have a filename in hand, then tell RED to send you this
  file by providing it with the full directory name, and the
  filename.. If you wish to order a game called MADMAX.ARC that
  resides in the <MSDOS.GAMES> directory, then you may type in this
  command:

        TELL TRICKLE AT TREARN /PDGET <MSDOS.GAMES>MADMAX.ARC

naturally, the above is only an example, and the file may or may not
  be present if you send the above command.

Receiving your file in a different format:

  Normally, SIMTEL files are sent AS-IS, meaning, ASCII. If you would
  like to receive your file in a different format, you may want to
  append any of the below to the end of your command:

  (EBC80 Converts the file to 80-Column EBCDIC format
  (EBC32 Converts the file to 132-Column EBCDIC format
  (UUE uuencodes the file
  (OLD Sends the file using DISK DUMP or PUNCH format
  (SF Supresses BITSEND, and forces SENDFILE to be used for the
      transfer.
  (MAIL Forces results to be sent via MAILER. (This is the default
      for MAIL command files)

  You may also wish to combine several options together. For example,
  to receive a directory listing in PUNCH format, and UUEncoded,
   TELL TRICKLE AT TREARN /PDDIR <MSDOS.C> (OLD UUE

  To receive a file in in EBCDIC format, you may enter a command that
  looks like this:

   TELL TRICKLE AT TREARN /PDGET <MSDOS.GAMES>MADMAX.ARC (EBC80

Other commands:
    /NEWS sends you our 2-page newsletter.
    /STAT provides you the statistics of usage.
    /HELP sends you this file.
    /IMDAT sends the Turkish version of   this help file.
    /CAC Sends you a list of the files that are stored on its
         disk right now. These files can be sent faster than
         the other files.
    /OPS   displays the RED operators
    /QUO Shows you the RED's quota, and how much of that quotait
         has used. Once RED exceeds its quota, it cannot
         order files, until it receives some of the requested
         files.
    /SUB <dirnam>
         Allows you to subscribe to a directory. Whenever
         a new listing comes in, RED will send you a file
         containing the names of the new files.
    /UNSUB <dirnam> is to stop RED from sending you the new files
         listings. Please issue this command if you will not use
         the server anymore.
    /NEW <dirnam> nnn
         This command, displays the files that have arrived within
         'nnn' days, in the 'dirnam' directory. If 'nnn' is
         omitted, it defaults to the last time you issued this
         command, for that directory. If you are issuing this
         command for the first time, then it simply looks for
         files that are at most a month old.
    /POLL forces RED to check its peer servers

Priviledged commands:
  (This is a subset of the actual RED administrator's command list)
  /STOP will stop RED's activity
  /OFFLINE Stops REDs interpretation of files and commands.
  /ONLINE   puts the server back online.
  /SEND fn ft TO userid AT nodeid Sends a local file to a user
  /RDR forces RED to examine its reader, and process those files.
  /QRDR displays RED's reader

Delay Periods:
  If the file that you requested already exists in the cache
  directory, then you may expect to receive your file within a few
  minutes.. However, the system that RED is running is often slowed
  down by the other processes that are running. This negatively
  affects the response time of RED. If the file requested does not
  existin the cache directory, then RED will have to order this file
  from its list server.. If this is the case, the response time of
  RED is dependent upon the list server. RED will give up waiting for
  a file after five to twelve days after its request.

Sending files to RED:

  RED now accepts command files in either MAIL or NOTE format. Use
  NOTE or MAIL utilities to prepare your command file. The files may
  contain any number of instructions, one per line. Note that RED
  will abort processing a file if it detects an invalid command within
  the file. RED does not necessarily mail back command requests - it
  may use single-line messages, when it is more appropriate to do so.

How to DONATE files to Simtel Archives:

  Files that you receive from here are sent from another network
  called ArpaNet. The person-in-charge for the programs can be
  contacted at: W8SDZ@SIMTEL20.ARMY.MIL. Since it's another network,
  you will need to use MAIL to send the message. He urges that you
  talk to him before you send in the file, so that he can check where
  it should be put, if it already exists, etc. After getting his
  approval, you need to UUENCODE your file (perhaps using PDUTIL),
  then MAIL it to him.

Format of the files that comes with /PDGET command:

  RED will send the files in a NETDATA format, -unless you use
  the (OLD option-. These files can be LOOKed, and RECEIVEd.
  Note that PEEK command   will not display NETDATA format
  properly. However, since most files are ASCII, it is of
  little use to LOOK at them.

  The files will mostly be either in Binary format, in ASCII format,
  or in EBCDIC format. The binary files are recognized by the
  '.BIN','.EXE', '.COM ', '.ARC', '.LBR' suffix in their names. These
  files are machine-specific.The files that are in ASCII format can be
  converted to EBCDIC (so that they can be used on an IBM system) by
  running a conversion program called PDUTIL. If your installation
  does not have either of these files, Either I, or the
  LISTSERV@RPICICGE can provide it. Simply say:

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        TELL LISTSERV AT RPICICGE GET PDUTIL PACKAGE
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The .ARC format:
  ARC is a special compression method that provides substential
  reduction on file size. There are one or more files contained
  within an .ARC archive. In order to extract the files from an
  archive, you will need a utility called ARC or PKXARC.These are
  available from <MSDOS.ARC-LBR> directory. The actual file names of
  these files vary, but you may
  try: TELL TRICKLE AT TREARN /PDGET <MSDOS.ARC-LBR>PK361.EXE
  or: TELL TRICKLE AT TREARN /PDGET <MSDOS.ARC-LBR>ARC512.EXE
  If these attempts fail, it will probably mean that the file version
  has changed, and so has the file name. You may wish to try
        TELL TRICKLE AT TREARN /PDDIR <MSDOS.ARC-LBR>
  and guess the new name of these files.

  Once you receive either ARC or PKXARC and an .ARC file, transmit
  them to your personal computer and issue the following command:

  ARC X <filename.arc>
     or
  PKUNPAK <filename>

  There is also a second utility called ARCUTIL, which runs on the VM
  systems, and extracts files. It also provides ASCII to EBCDIC
  conversion of the extracted files. To request ARCUTIL, enter:
      TELL TRICKLE AT   TREARN /PDGET <MISC.IBM-VM>ARCUTIL.LBR

  The directories of SIMTEL change often. So, the above files may or
  may not be in the same directories as I have indicated. So you may
  have to do some searching to find them.. A good place to check
  would be the <MSDOS.STARTER> directory, where additional help, and
  the mentioned archive managers can be found.

How to use the BITSEND/BITRCV:

  From now on, RED is sending its files in a special format called
  BITSEND - Unless you include the (SF option while issuing your
  command.

  In this format, the files that are sent are broken into smaller
  pieces, if the entire file is too big to be sent. (Too big: over
  300K Bytes)

  If the file you request is over 300K, then the server will first
  send you a file called <fn> BITCTRL - this is the control file,
  where BITSEND has written the protocol used, the number of pieces
  that make up that file, etc.

  (Important:)
  (You should NOT 'RECEIVE' any files that have BITCTRL or)
  (just numbers as filetype!)

  If you wait a little longer, the rest of the file will arrive, the
  filename will be the same as the <fn> BITCTRL file, but the filetype
  will consist of just numbers. Once you have all the pieces that

make up that file, you can then issue the BITRCV command. You must
also specify the 'spool ID' of the file that has BITCTRL as
filetype. From RDRList, you can simply type BITRCV in front of the
file that has BITCTRL as filetype.

If you get back an error message, saying "UNKNOWN CP/CMS COMMAND" it
simply states that your installation does not have the BITRCV
program. Contact your network manager/system operator.

Note: BITRCV EXEC can be obtained from your country NETSERV as well.
Simply send "GET BITRCV EXEC" to your NETSERV.

(VAX users:)
(There is also an identical file for your installation, however,)
(it is called 'BITRCV COM', and can be obtained from a NETSERV.)

If you get back an error saying that not all of the file is in the
reader, it simply means that you have to wait a little longer for
the rest of the file to arrive.

How to receive the file that arrives:

Once the file you requested arrives, and is stored on your disk,
you will most likely wish to 'download' this file to your personal
computer. There are many types of mainframe computers, many kinds
of personal computers, so it is impossible for me to give you
direct, and precise directions. However, here are some clues:
* If you have a PC with a 3270 Emulation program, and an IBM
  mainframe, you should request your files from the server
  without options, or with (SF option, and use the built-in
  transfer protocol of the emulation program, without any
  options again.
* If you have KERMIT at your installation, request your file
  without options, or with (SF option, then set the KERMIT's
  FILE-TYPE to BINARY before transferring your file.
* Remember that if you send a MAIL command file to the server
  to request your file, the file will arrive in UUENCODE format,
  since it's the only 'digestable' way for the mailer.

How Does the Cache Work?

Imagine that you ask for a file, and the server brings this file
from United States for you. Thinking that others may wish to have
this file as well, the server keeps this file in an area called
'cache.' When someone else requests this file, the server simply
uses the stored copy of the file, instead of asking for the file
again from overseas. All the servers that you see on top of this
document have different files in their caches. So, if you wish
to see the files they are holding right now, you will have to
issue '/CAC' to each one of them. Note that a file does not stay
in cache forever. As new files arrive, the older ones are deleted
to make room.

The Amazing Life of a /PDGET request:

Once you order your file via /PDGET, the server will first check
its local cache listings. If the file is not there, then it will

check the SIMTEL20 listings to ensure that a such file indeed
exists. After this, the server sends the request to all other
servers, asking them if they have your file in cache. If a server
replies 'YES!', then that server has to send you the file.
Everything fails: none of the servers have your file, or even
some servers don't respond. Your server will give up waiting
for a reply in a day, and order your file from the United
States. Once the file requested arrives from there, it will be
sent to you, and put into the cache directory. Quite a trip
for one /PDGET command.

Quotas, and Other Ugly Limitations
    You may be surprised that even though most TRICKLE servers have
    some kind of quota, we still get several hundred requests
    daily. Without them, this number may easily rise to thousands.
    The impact of a such usage rate on the local computer can be
    very 'tiring.' So, the following quota schemes have been
    implemented:
    1) Total outstanding bytes quota:
       This quota is not really put by the server's operators. It
       is the amount that a TRICKLE server can order from The
       United States. This is currently set at 10 megabytes for
       most servers.
    2) Prime times:
       Some of the servers, do not function during the day, they
       record the commands received, and process these commands
       later, when the load on the computer is low.
    3) User request limitations:
       Most TRICKLE servers have a limit on how many requests a
       user can make on the server per day. The request can be
       a simple /OPS command, or a file order via /PDGET. It
       still counts as one. The server will warn you that you are
       approaching the limit, once you have 3 more commands left.
    4) Outstanding files per user:
       This scheme is also employed by some servers, and it limits
       the number of files a user can order from The United States.
    5) Delayed Sendfile:
       This last scheme is simple: it delays sending your file until
       a specified time comes. Usually at night, when the network
       load is low. If a site uses delayed sendfile, you will see
       a '* Your file will be mailed' notice, instead of '* Your
       file is being mailed.'

Puzzled?
    Get in touch with your local TRICKLE operator. You can get his
    network address by using the /OPS command. We wish you great
    benefits from using TRICKLE..