How to write a CGI Program for the DNP/5280 Embedded Web server
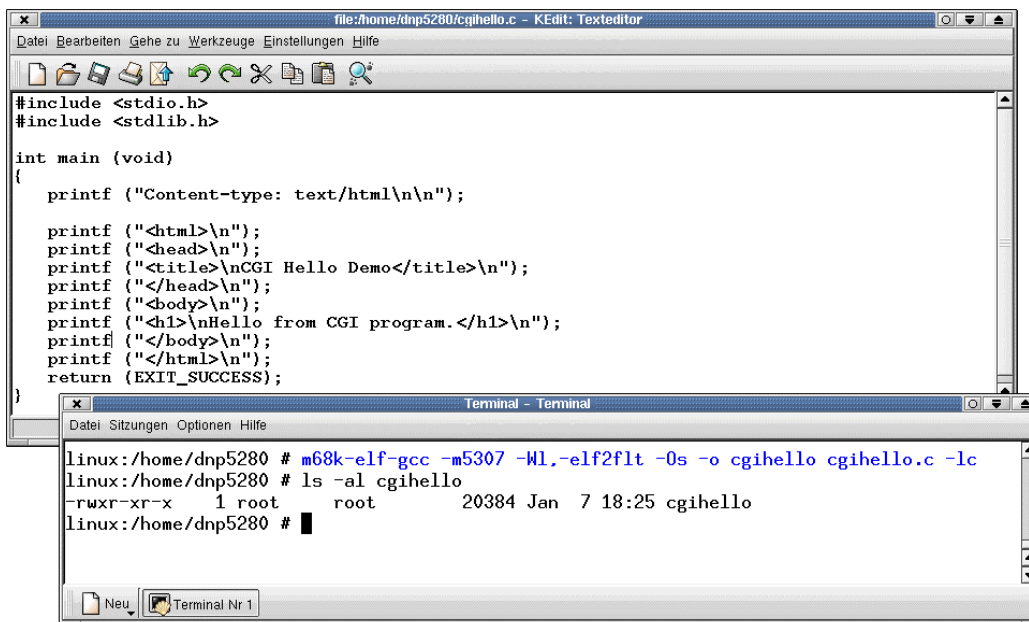
The DIL/NetPC DNP/5280 default Linux configuration comes with a pre-installed embedded Web server. The object storage space for HTML pages, pictures, CGI programs and other objects of this Web server is located within the DNP/5280 flash memory.

- **1. Step**: Enter the following C source code lines with a text editor program and save these lines to a file with the name `cgihello.c` on your Linux-based PC.

```c
#include <stdio.h>
#include <stdlib.h>

int main (void)
{
    printf ("Content-type: text/html\n\n");

    printf ("<html>\n");
    printf ("<head>\n");
    printf ("<title>\nCGI Hello Demo</title>\n");
    printf ("</head>\n");
    printf ("<body>\n");
    printf ("<h1>\nHello from CGI program.</h1>\n");
    printf ("</body>\n");
    printf ("</html>\n");
    return (EXIT_SUCCESS);
}
```


- **2. Step**: Run your GNU C cross compiler and linker for `cgihello.c`. Then transfer the
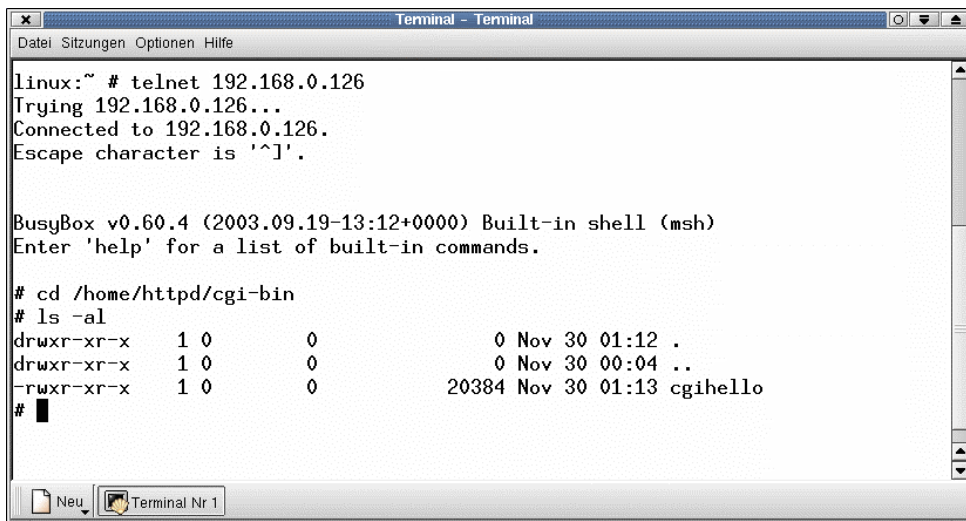
executable with TFTP to the DIL/NetPC DNP/5280. Make sure, that the executable is stored to the directory `/home/httpd/cgi-bin` within the DNP/5280 flash memory. Create this directory if necessary. The command line for the GNU C cross compiler is:

```
m68k-elf-gcc –m5307 –Wl,-elf2flt –Os –o cgihello cgihello.c –lc
```

Use a Telnet session for the TFTP file transfer command. Make sure that the file with the CGI executable owns the necessary attributes. The commands for the DNP/5280 Telnet session are:

```
cd /home/httpd/cgi-bin
tftp –g –l cgihello 192.168.0.1
chmod +x cgihello
```

With this command lines we assumes, that your Linux-based PC is using the IP address 192.168.0.1.

- **3. Step**: Run your PC Web browser and access the CGI program with your browser. Use the URL `http://192.168.0.126/cgi-bin/cgihello`. This URL assumes, that your DNP/5280 is using the IP address 192.168.0.126.