How to write a CGI program in C

The embedded Web server of the PNP/1110 supports CGI (Common Gateway Interface) for running external programs on request of a Web browser. It is easy to write a CGI programs direct in C. Such kind of CGI programs can access any PNP/1110 resource. This is very important for some applications within the embedded area.

- **1. Step:** Edit your C source code. Use the following example if it is your first C-based CGI program for the PNP/1110 Web server.

```c
// Simple CGI demo program. Use cross-gcc …
// Vers. 1.00 - 06.Nov.2002
// k.d.walter@t-online.de

// Includes

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

int main (int argc, char* argv[])
{
   // Build HTTP content-type...

   printf ("Content-type: text/html\n");
   printf ("\n");

   // Build HTML content...

   printf ("<HTML>\n");
   printf ("<HEAD>\n");
   printf ("<TITLE>Title Line</TITLE>\n");
   printf ("</HEAD>\n");
   printf ("<BODY>\n");
   printf ("Hello User.\n");
   printf ("</BODY>\n");
   printf ("</HTML>\n");
   return (EXIT_SUCCESS);
}
```

All output of the **printf** function calls goes direct to the Web browser. The basic idea is to generate standard HTML within the CGI program.

Please note: The two **printf** functions calls for building the HTTP content type are very important. Make sure that your CGI programs never missing these lines.

- **2. Step:** Build a executable form the source code. Use the **gcc** for this task.

- **3. Step:** Transfer the executable from your development system to the PNP/1110. You can use a FTP session for this file transfer. It is necessary to place the executable file to the following directory:

  /usr/local/www/cgi-bin

- **4. Step:** Make sure that the CGI executable file owns the executable rights.. Just enter the following command within a Telnet session for set this right:

  chmod +x name

- **5. Step:** Run the CGI program with the help of a Web browser. Point the browser of your PC to the following URL:

  http://192.168.0.126/cgi-bin/name

  Please note: We assume that the IP address of your PNP/1110 is 192.168.0.126. Modify the URL if you a using any other IP address.