Title: A WEB BROWSER

Abstract: A control system includes an Internet web interface to a network of at least one programmable logic control system running an application program for controlling output devices in response to status of input devices. The Web interface runs Web pages from an Ethernet board coupled directly to the PLC back plane and includes an HTTP protocol interpreter, a PLC back plane drive, a TCP/IP stack, and an Ethernet board kernel. The Web interface provides access to the PLC back plane by a user at a remote location through the Internet. The interface translates the industry standard Ethernet, TCP/IP and HTTP protocols used on the Internet into data recognizable to the PLC. Residing in the PLC is a programming package accessible to a user through this interface which will allow the user to edit programs controlling the operation of the programmable logic controller system.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 G05B19/05 G05B19/418 G06F9/44

According to International Patent Classification (IPC) or to both national classification and IPC.

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G05B G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<th>Relevant to claim No.</th>
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<tr>
<td>Y</td>
<td>EP 0 917 034 A (ENGEL GMBH MASCHBAU)&lt;br&gt;19 May 1999 (1999-05-19)&lt;br&gt;the whole document&lt;br&gt;---</td>
<td>1-4, 11-14</td>
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|        | Patent family members are listed in annex. | Further documents are listed in the continuation of box C. |

- Special categories of cited documents:
  - *A* document defining the general state of the art which is not considered to be of particular relevance
  - *E* earlier document but published on or after the international filing date
  - *L* document which may throw doubts on priority claims or which is cited to establish the publication date of another citation or other special reason (as specified)
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- **S** document member of the same patent family

**Date of the actual completion of the international search**

1 November 2001

**Date of mailing of the international search report**

08/11/2001

**Name and mailing address of the ISA**

European Patent Office<br>P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.<br>Fax (+31-70) 340-3016

**Authorized officer**

Hauser, L
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>QUINNELL R A: &quot;WEB SERVERS IN EMBEDDED SYSTEMS ENHANCE USER INTERACTION&quot; EDN ELECTRICAL DESIGN NEWS, CAHNER'S PUBLISHING CO. NEWTON, MASSACHUSETTS, US, vol. 42, no. 8, 10 April 1997 (1997-04-10), pages 61-64,66,68, XP000754835 ISSN: 0012-7515 the whole document</td>
<td>5-10, 15-20</td>
</tr>
<tr>
<td>E</td>
<td>WO 01 14963 A (NAT INSTR CORP) 1 March 2001 (2001-03-01) the whole document</td>
<td>1,11</td>
</tr>
<tr>
<td>P,X</td>
<td>FR 2 785 122 A (FAUGERAS PHILIPPE) 28 April 2000 (2000-04-28) the whole document</td>
<td>1,11</td>
</tr>
<tr>
<td>A</td>
<td>DE 196 15 190 A (FRITZ ELECTRONIC GMBH) 23 October 1997 (1997-10-23) the whole document</td>
<td>1,11</td>
</tr>
<tr>
<td>A</td>
<td>EP 0 982 644 A (KAWASAKI HEAVY IND LTD) 1 March 2000 (2000-03-01) the whole document</td>
<td>1,11</td>
</tr>
<tr>
<td>Patent document cited in search report</td>
<td>Publication date</td>
<td>Patent family member(s)</td>
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<tr>
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<tr>
<td>JP 11085224 A</td>
<td>30-03-1999</td>
<td>NONE</td>
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<td>AT 206655 T</td>
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<tr>
<td>US 6268853 B1</td>
<td>31-07-2001</td>
<td>NONE</td>
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<tr>
<td>WO 0114963 A</td>
<td>01-03-2001</td>
<td>WO 0114963 A1</td>
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<tr>
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<td>WO 9739393 A1</td>
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<td>JP 10315171 A</td>
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<td>EP 0982644 A1</td>
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<td>US 6175206 B1</td>
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