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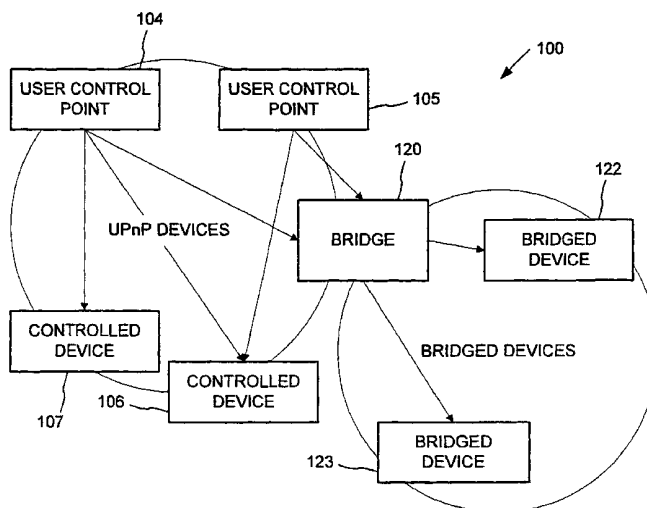
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[Continued on next page]

(54) Title: GENERAL API FOR REMOTE CONTROL OF DEVICES



(57) Abstract: A general programmatic interface-to-network messaging adapter exposes a suitable object integration interface or application programming interface to applications on a controller device and sends network data messages to invoke services or query status of a controlled device. The adapter maps application calls to the interface into network data messages according to service protocols of the controlled device. The general adapter provides the interface suitable to any specific service of a controlled device based on a data description of the interface, and converts the application calls to network data messages based on a data description of a protocol and format for network data messages to interact with the specific service. Once the interface/messaging description is obtained, applications on the controller device can programmatically interact with the adapter, and the adapter then handles appropriate message exchanges with the service of the controlled device. The general adapter allows controller device applications to be written using object-oriented programming, while avoiding code download.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

In ☐ national Application No
PCT/US 00/15690

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06

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 H04L

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, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 491 800 A (GOLDSMITH AMY M ET AL) 13 February 1996 (1996-02-13) abstract; figure 7 page 4 -page 5 page 17 -page 18; figures 14,15 ---	1,2
X	"The HAVi Specification: Specification of the Home Audio/Video Interoperability (HAVi) Architecture" HAVI SPECIFICATION,XX,XX, 19 November 1998 (1998-11-19), pages 1-384, XP002116332 page 11 -page 33 ---	1,2
P,X	WO 99 35856 A (SONY ELECTRONICS INC) 15 July 1999 (1999-07-15) abstract page 19 -page 47 ---	1,2
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- *G* document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>VERSION 1.0: "Home Plug & Play: CAL-based Interoperability for Home Systems" HOME PNP SPECIFICATION, 9 April 1998 (1998-04-09), pages 1-111, XP002162756 page 11 -page 17</p> <p style="text-align: center;">-----</p>	1,2

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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		CA 2169625 A	29-06-1995
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