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(12) **United States Patent**
Humpleman et al.

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(45) **Date of Patent:** ***May 9, 2006**

(54) **METHOD AND APPARATUS FOR UNIVERSALLY ACCESSIBLE COMMAND AND CONTROL INFORMATION IN A NETWORK**

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(73) Assignee: **Samsung Electronics Co., Ltd.**, Suwon (KR)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **09/307,004**

(22) Filed: **May 7, 1999**

(57) **ABSTRACT**

Related U.S. Application Data

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(51) **Int. Cl.**
G06F 15/173 (2006.01)
G06F 15/16 (2006.01)

(52) **U.S. Cl.** **709/208; 709/223**

(58) **Field of Classification Search** **709/223, 709/208, 328, 227; 345/329, 733, 734; 707/102; 715/733, 734; 719/317, 328**

See application file for complete search history.

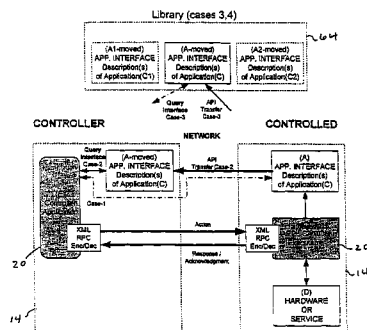
A method and system for performing a service on a home network, by: connecting a first and a second home device to the home network; providing a database including a plurality of application interface description data objects, where each application interface description data object includes information in a structured format for commanding and controlling of a home device by one or more other home devices connected to the network; the second home device accessing a first application interface description object for the first home device in the database; the first home device accessing a second application interface description object for the second home device in the database; sending control and command data from the first home device to the second home device utilizing the second application interface description object over the network; and sending control and command data from the second home device to the first home device utilizing the first application interface description object over the network. Whereby, the first and second home devices perform said service.

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27 Claims, 14 Drawing Sheets



Case 1. XML Application-C INTERFACE (A) for remote query by (E)
Case 2. Move XML Application-C INTERFACE (A) to controller for local query by (E)
Case 3. Move XML Application-C INTERFACE (A) to 3rd party device - a collecting place (library) for all interfaces for remote query by (E). The library would have to have the address (URI) of the associated application available for direct control action and responses.
Case 4. In case 3 but the "direct control action (and response)" is also directed at

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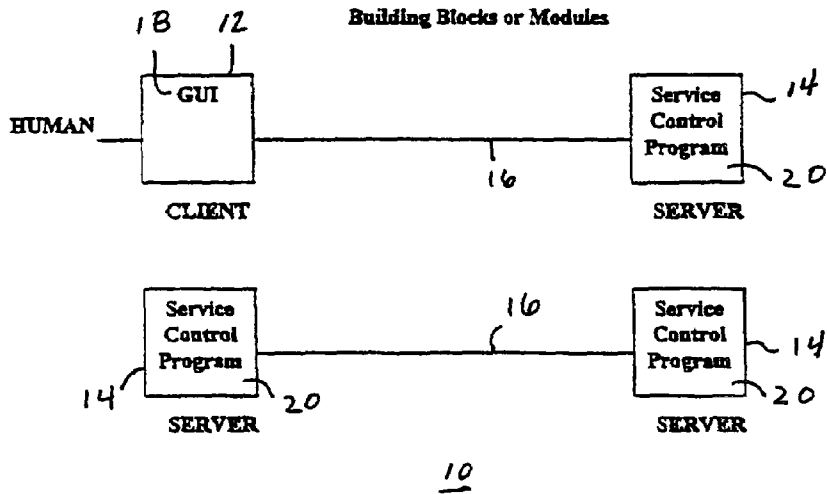


FIG. 1

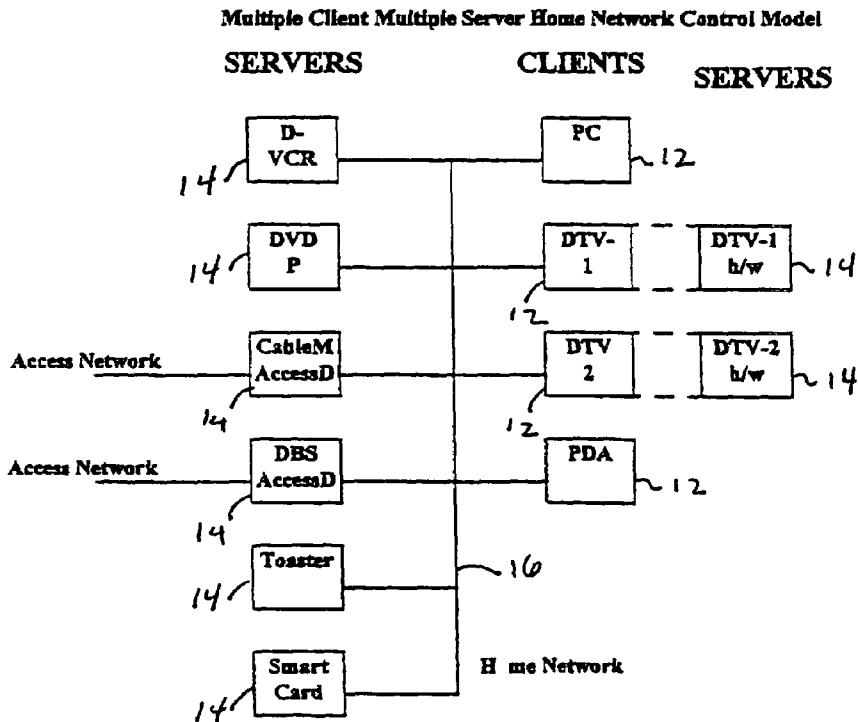


FIG. 3

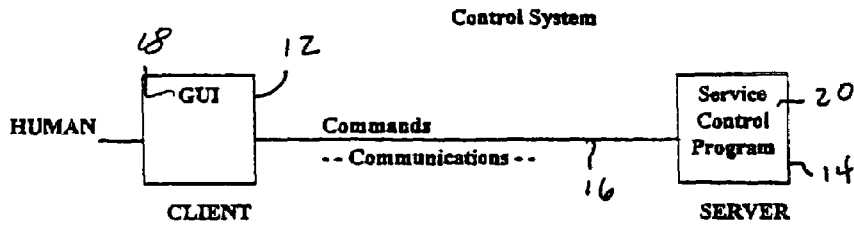
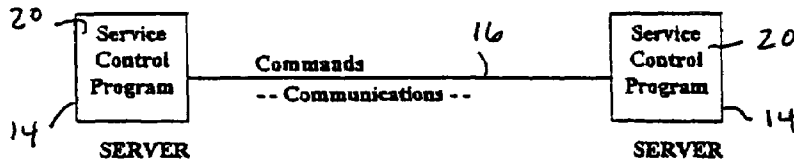


FIG. 2



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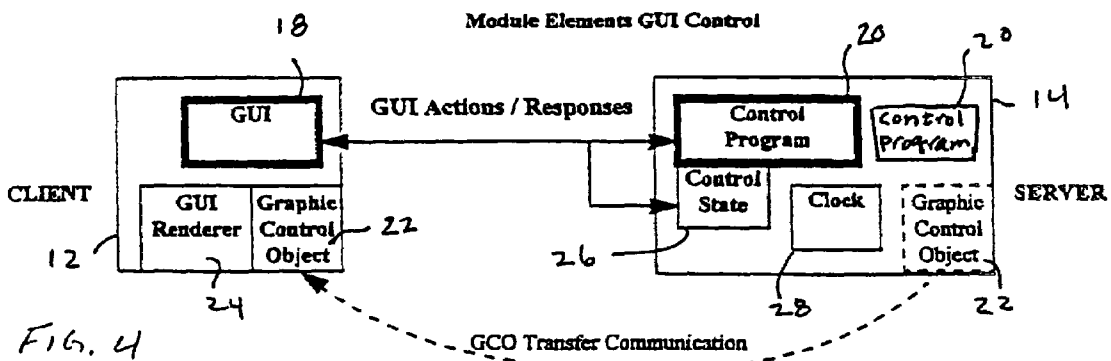


FIG. 4

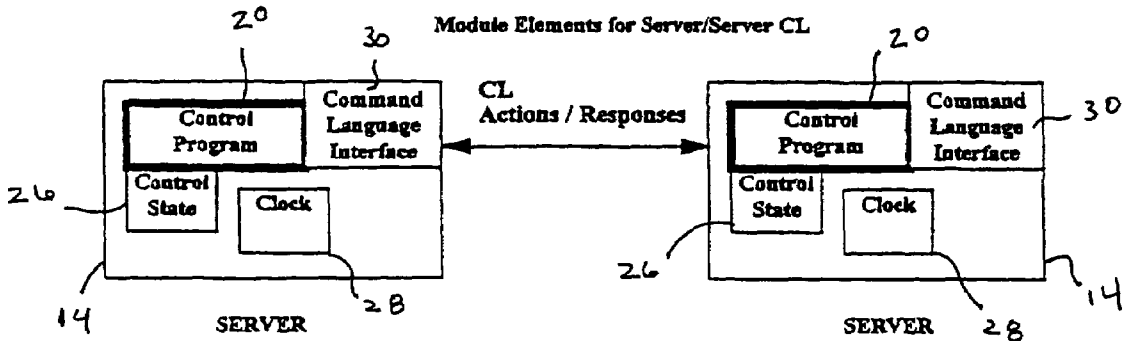
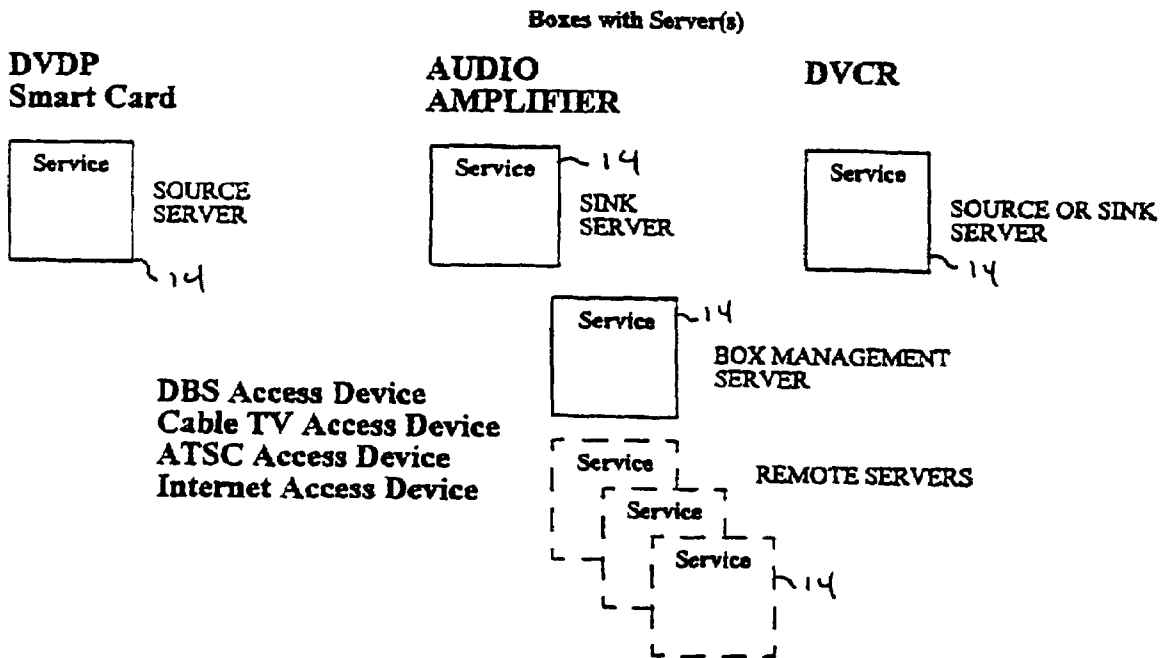
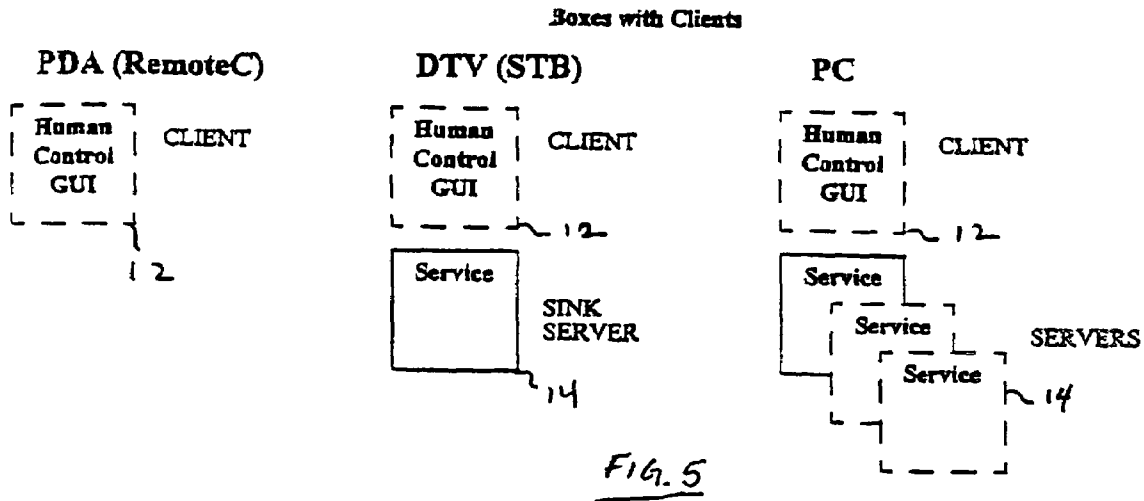


FIG. 7



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