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Ohkita

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(54) **RELAY DEVICE AND RELAY METHOD**

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(51) **Int. Cl.**
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G06F 15/16   (2006.01)
H04L 12/28   (2006.01)
H04L 12/56   (2006.01)

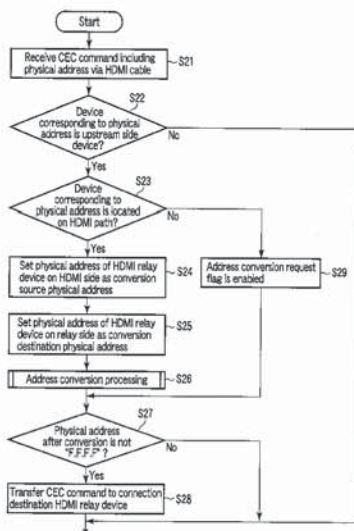(52) **U.S. Cl.** **725/74**; 725/78; 725/80; 709/245; 370/402

(58) **Field of Classification Search** 370/402; 709/245; 725/74, 78, 80–82, 85
See application file for complete search history.

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(57) **ABSTRACT**

According to one embodiment, a relay device includes an address management module which executes processing of acquiring a first physical address assigned to the relay device based on a sink device, processing of acquiring a second physical address assigned to the relay device based on another sink device, determination processing of determining, in the case where it is determined that the command needs to be transmitted to the other sink device, whether to perform conversion of the physical address included in a parameter in the other sink device, and conversion processing of converting, in the case where it is determined that the conversion of the physical address is not performed in the other sink device, the physical address included in the parameter into a physical address based on the other sink device using the first and second physical addresses.
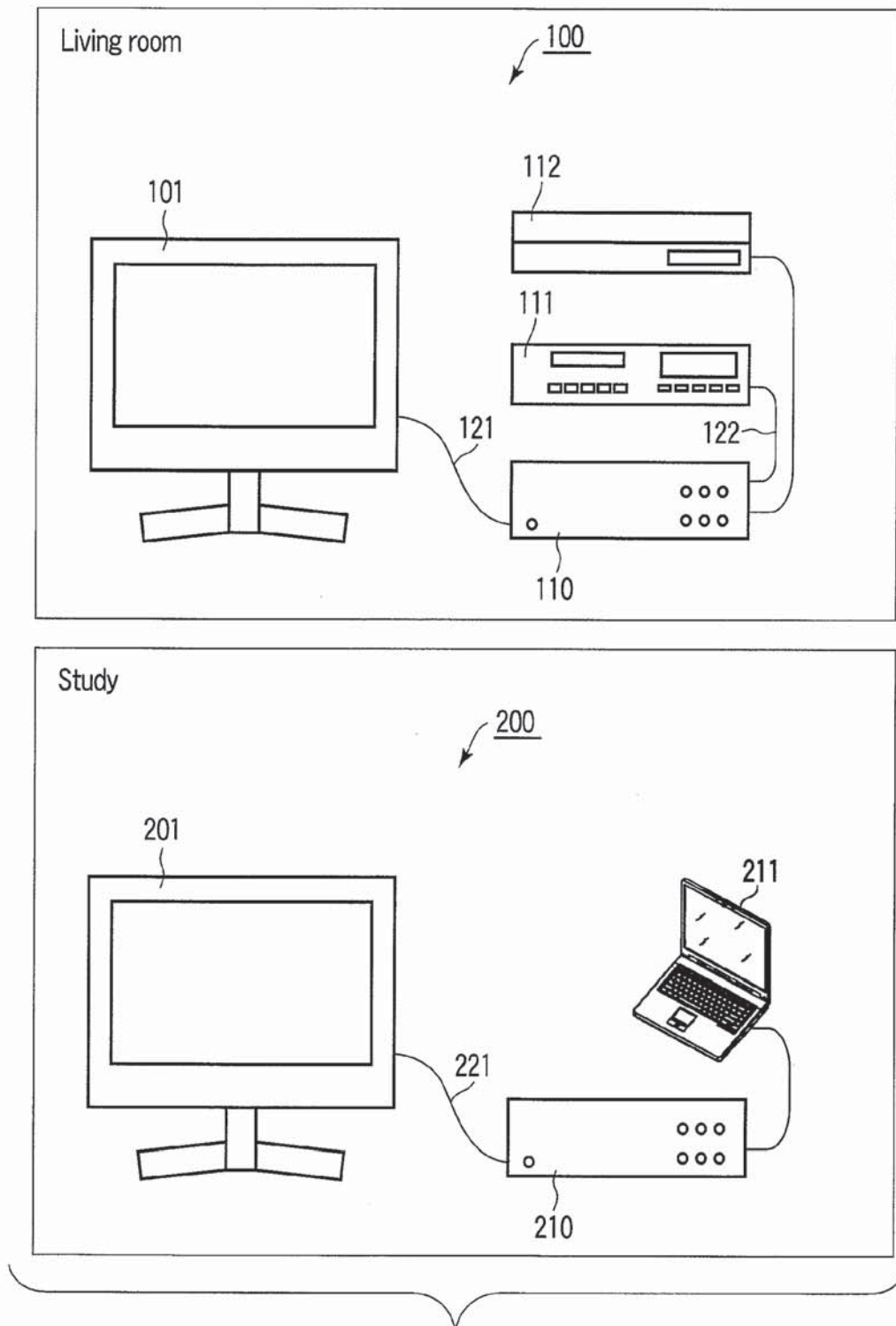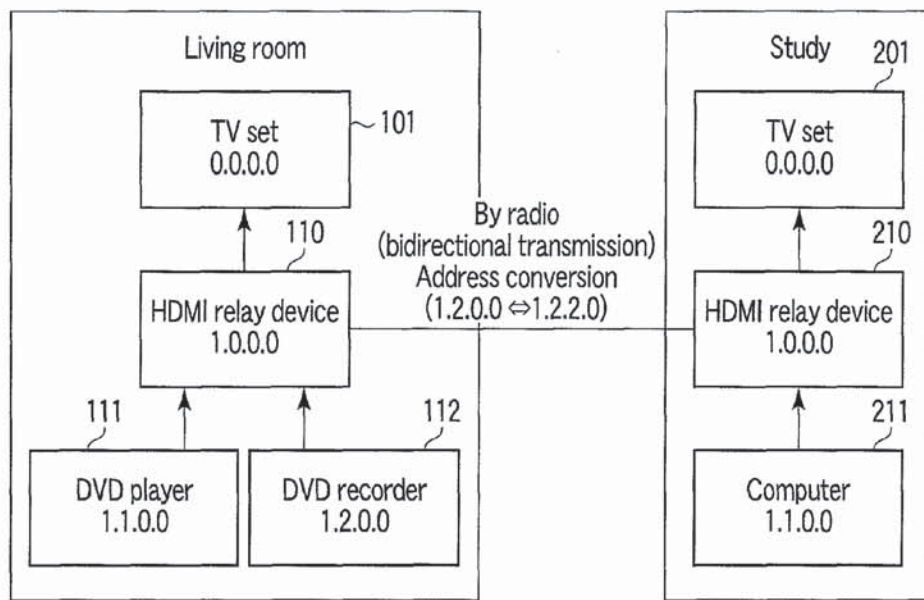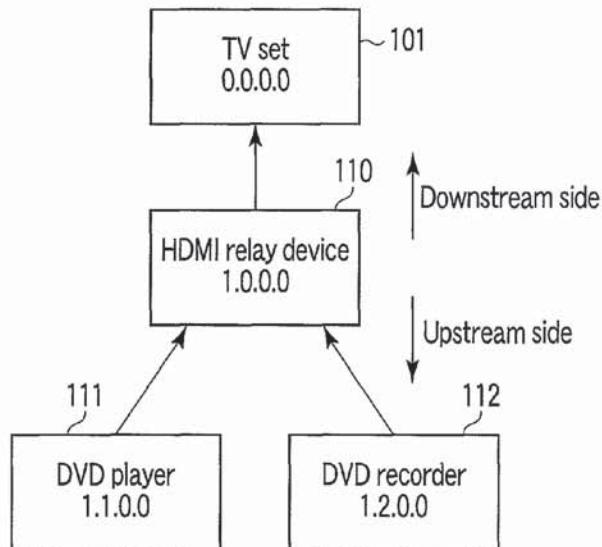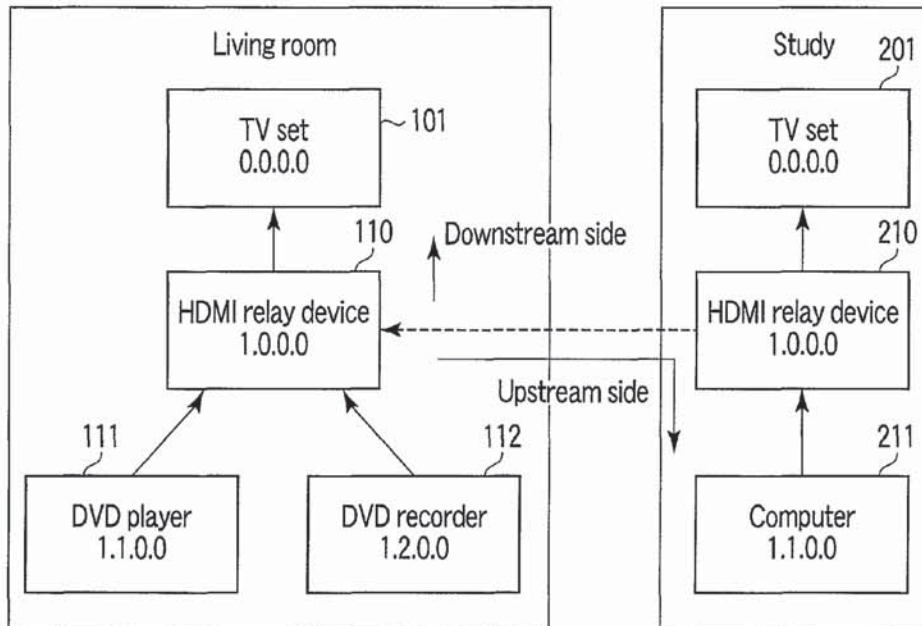
14 Claims, 14 Drawing Sheets

FIG.1

FIG. 2

FIG. 3

FIG. 4
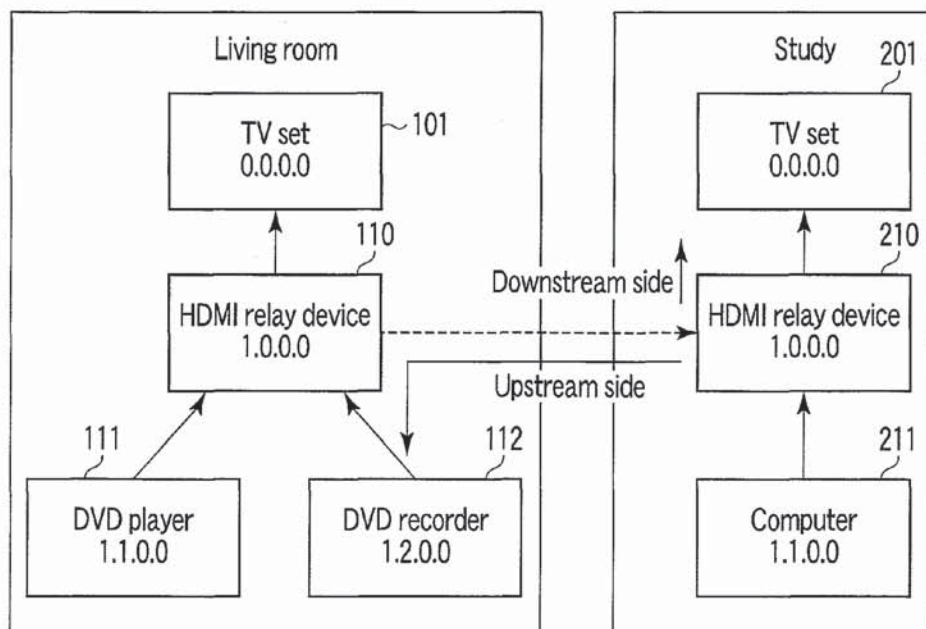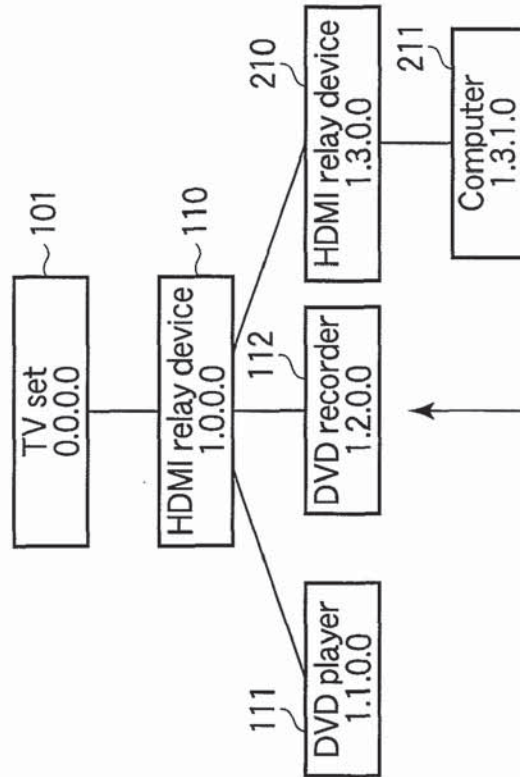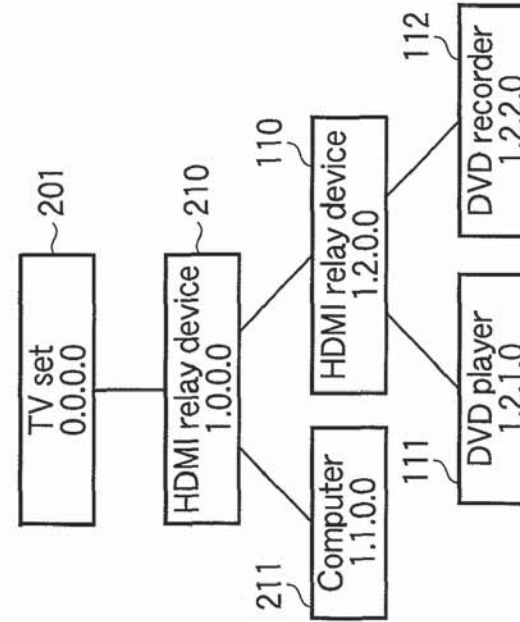

FIG. 5

FIG. 6A

Hierarchy as viewed from TV in living room

TV set 0.0.0.0 — 101
HDMI relay device 1.0.0.0 — 110
DVD player 1.1.0.0 — 111
DVD recorder 1.2.0.0 — 112
HDMI relay device 1.3.0.0 — 210
Computer 1.3.1.0 — 211

FIG. 6B

Hierarchy as viewed from TV in study

TV set 0.0.0.0 — 201
HDMI relay device 1.0.0.0 — 210
Computer 1.1.0.0 — 211
HDMI relay device 1.2.0.0 — 110
DVD player 1.2.1.0 — 111
DVD recorder 1.2.2.0 — 112

Physical address differs → Physical address needs to be converted (1.2.0.0 ⇔ 1.2.2.0)

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