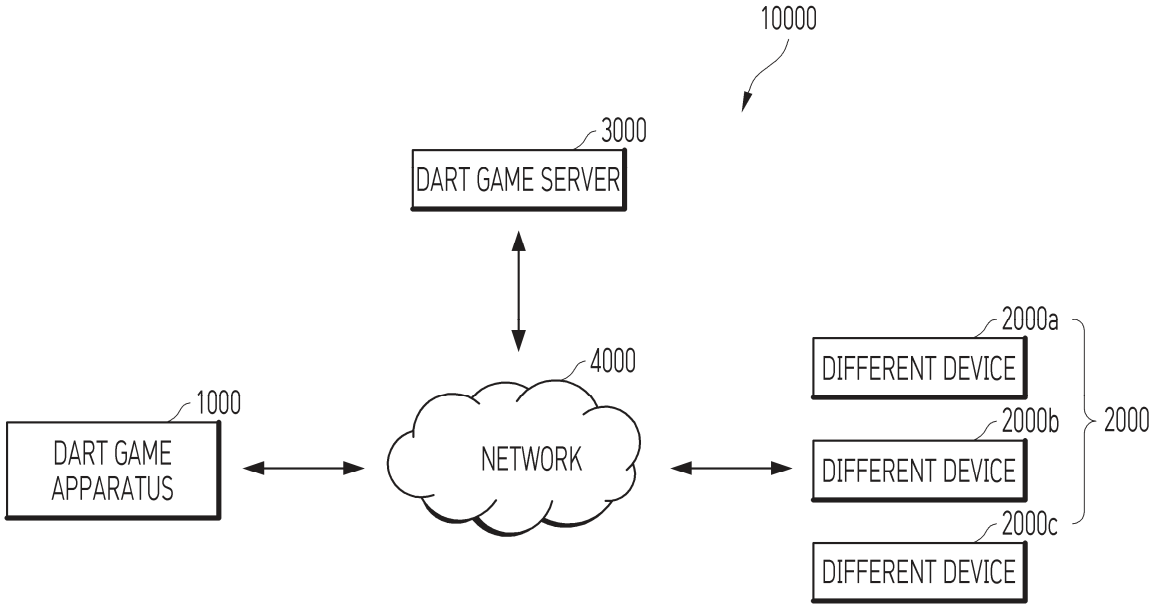

10000
3000
DART GAME SERVER
4000
NETWORK
1000
DART GAME APPARATUS
2000a
DIFFERENT DEVICE
2000b
DIFFERENT DEVICE
2000c
DIFFERENT DEVICE
2000

Fig. 1

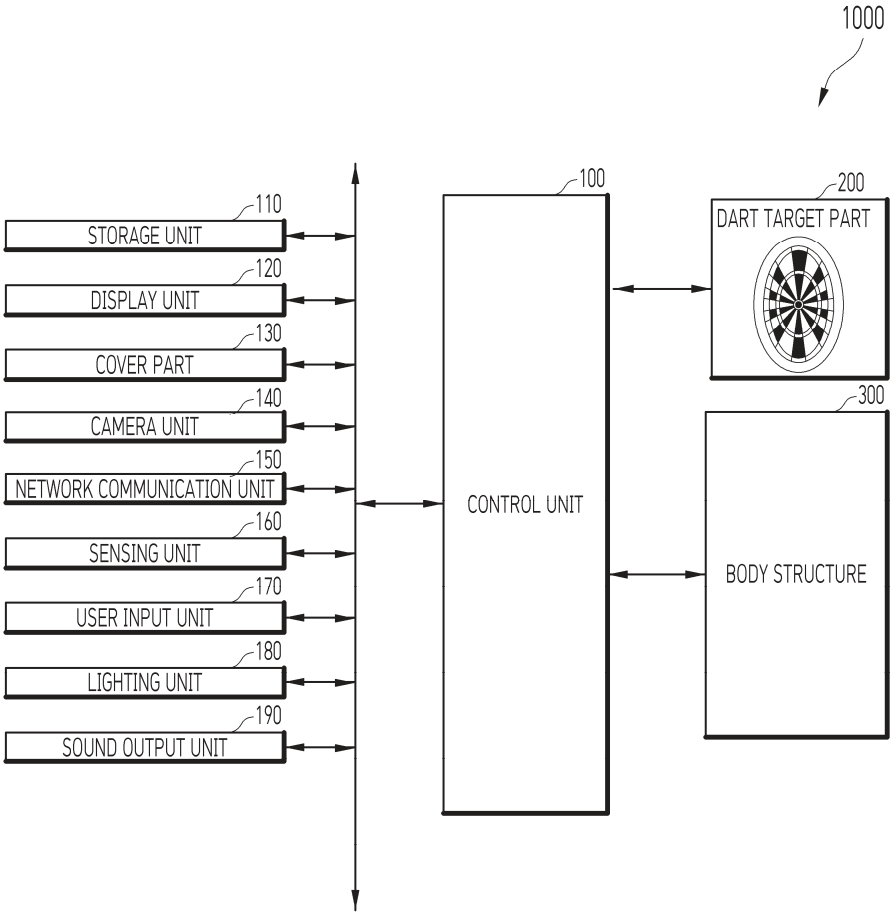

1000
100
200
DART TARGET PART
300
110
STORAGE UNIT
120
DISPLAY UNIT
130
COVER PART
140
CAMERA UNIT
150
NETWORK COMMUNICATION UNIT
160
SENSING UNIT
170
USER INPUT UNIT
180
LIGHTING UNIT
190
SOUND OUTPUT UNIT
CONTROL UNIT
BODY STRUCTURE

Fig. 2

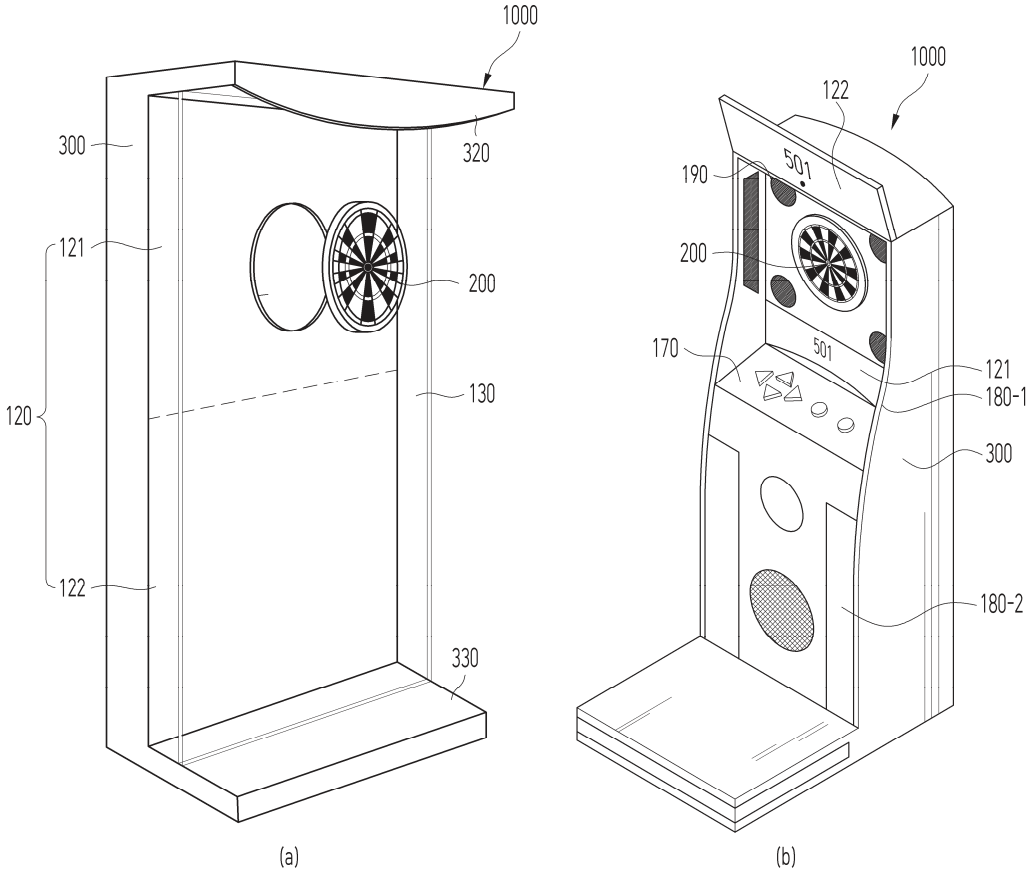

1000
300
320
121
200
120
130
122
330
(a)
1000
122
190
501
200
170
501
121
180-1
300
180-2
(b)

Fig. 3

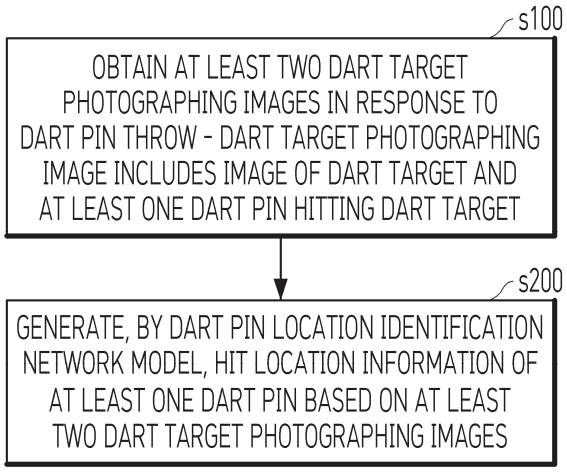

s100
OBTAIN AT LEAST TWO DART TARGET PHOTOGRAPHING IMAGES IN RESPONSE TO DART PIN THROW - DART TARGET PHOTOGRAPHING IMAGE INCLUDES IMAGE OF DART TARGET AND AT LEAST ONE DART PIN HITTING DART TARGET
s200
GENERATE, BY DART PIN LOCATION IDENTIFICATION NETWORK MODEL, HIT LOCATION INFORMATION OF AT LEAST ONE DART PIN BASED ON AT LEAST TWO DART TARGET PHOTOGRAPHING IMAGES

Fig. 4

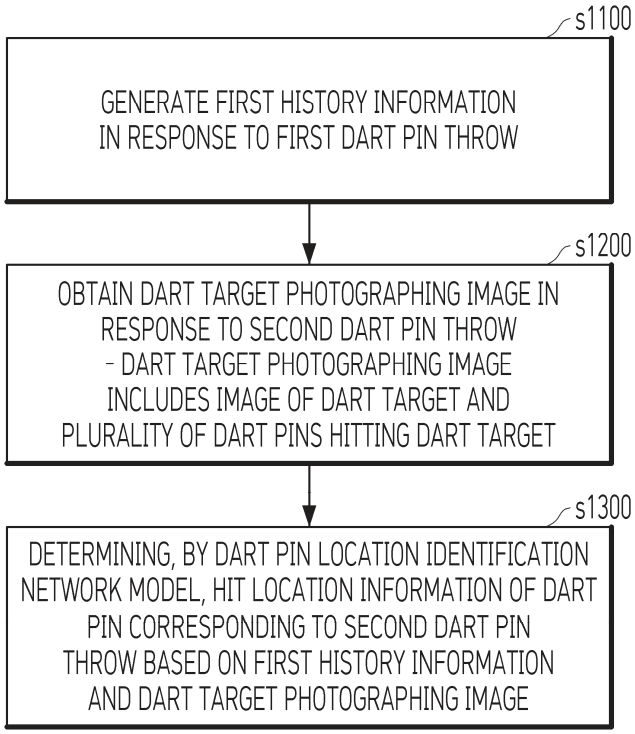

s1100
GENERATE FIRST HISTORY INFORMATION IN RESPONSE TO FIRST DART PIN THROW
s1200
OBTAIN DART TARGET PHOTOGRAPHING IMAGE IN RESPONSE TO SECOND DART PIN THROW - DART TARGET PHOTOGRAPHING IMAGE INCLUDES IMAGE OF DART TARGET AND PLURALITY OF DART PINS HITTING DART TARGET
s1300
DETERMINING, BY DART PIN LOCATION IDENTIFICATION NETWORK MODEL, HIT LOCATION INFORMATION OF DART PIN CORRESPONDING TO SECOND DART PIN THROW BASED ON FIRST HISTORY INFORMATION AND DART TARGET PHOTOGRAPHING IMAGE

Fig. 5

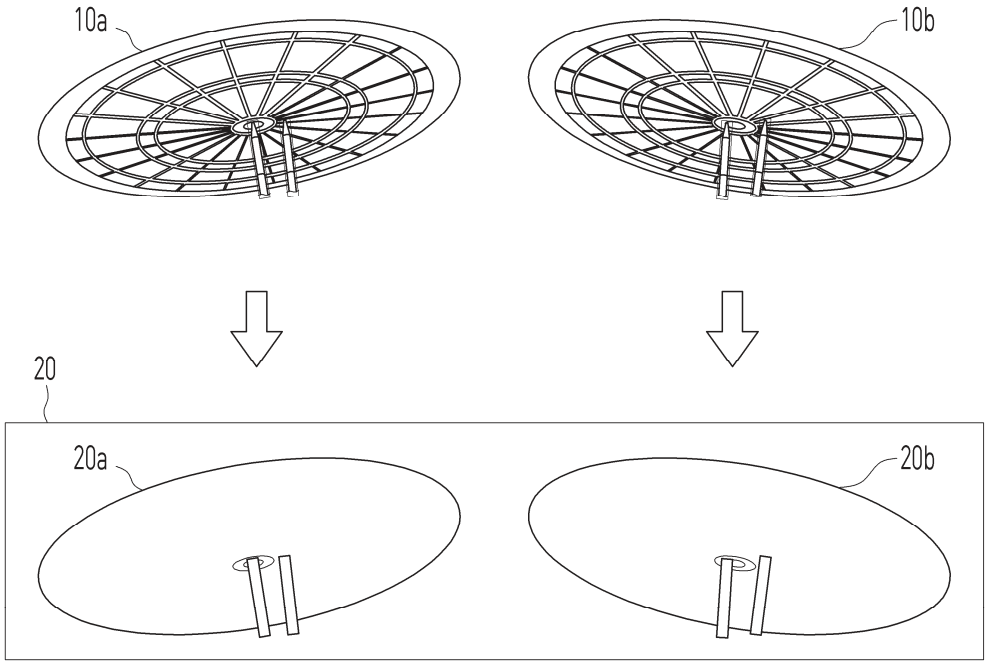


Fig. 6A

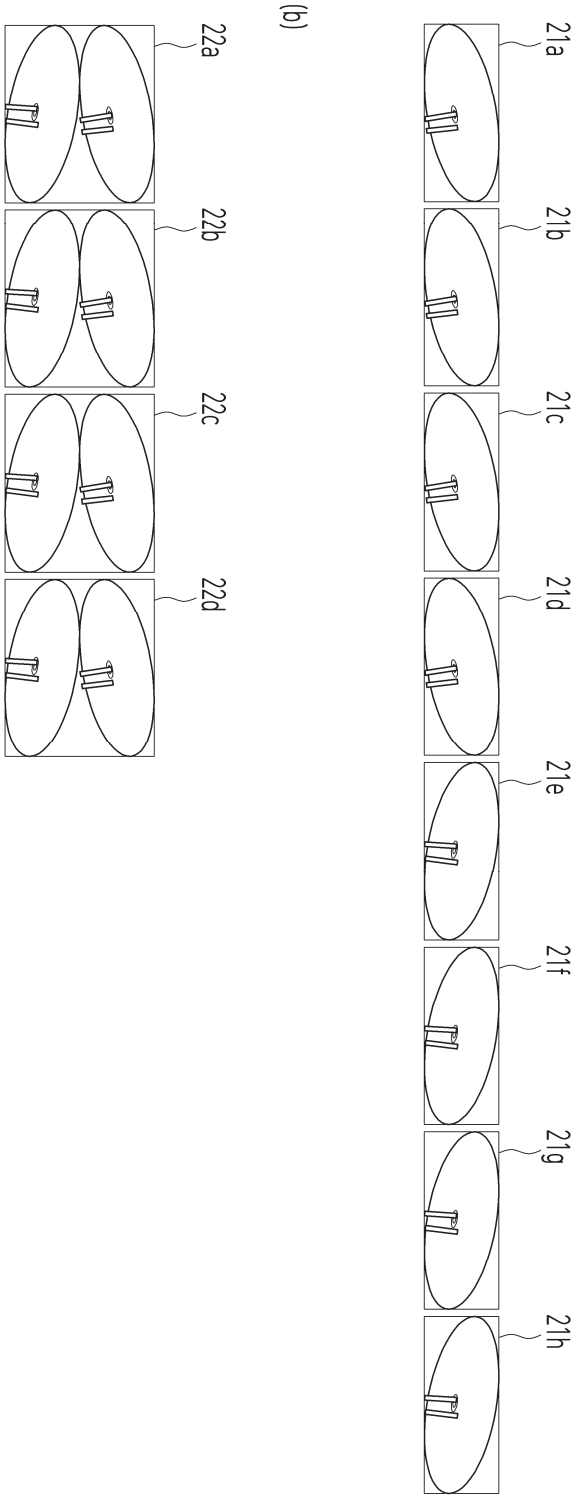


Fig. 6B

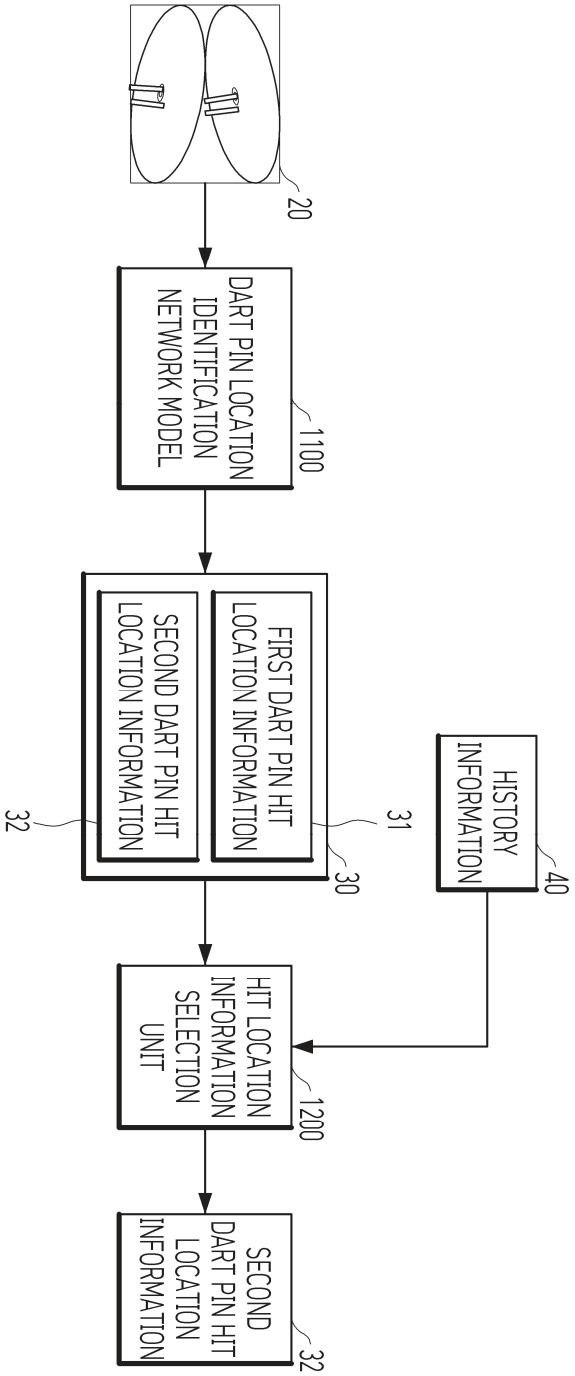

20
DART PIN LOCATION IDENTIFICATION NETWORK MODEL
1100
FIRST DART PIN HIT LOCATION INFORMATION
SECOND DART PIN HIT LOCATION INFORMATION
30
31
32
HISTORY INFORMATION
40
HIT LOCATION INFORMATION SELECTION UNIT
1200
SECOND DART PIN HIT LOCATION INFORMATION
32

Fig. 7A

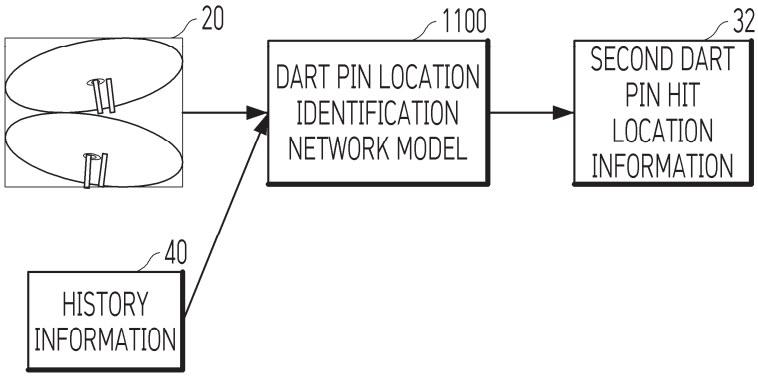

20
1100
32
DART PIN LOCATION IDENTIFICATION NETWORK MODEL
SECOND DART PIN HIT LOCATION INFORMATION
40
HISTORY INFORMATION

Fig. 7B

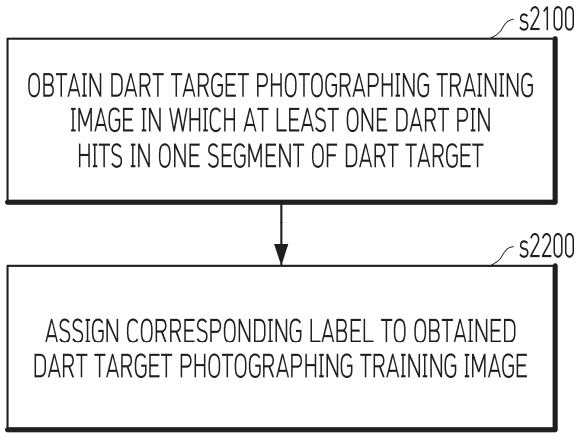

s2100
OBTAIN DART TARGET PHOTOGRAPHING TRAINING IMAGE IN WHICH AT LEAST ONE DART PIN HITS IN ONE SEGMENT OF DART TARGET
s2200
ASSIGN CORRESPONDING LABEL TO OBTAINED DART TARGET PHOTOGRAPHING TRAINING IMAGE

Fig. 8

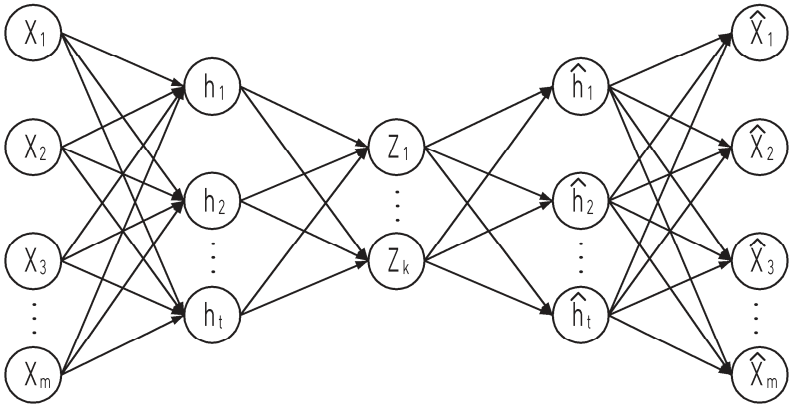


Fig. 9

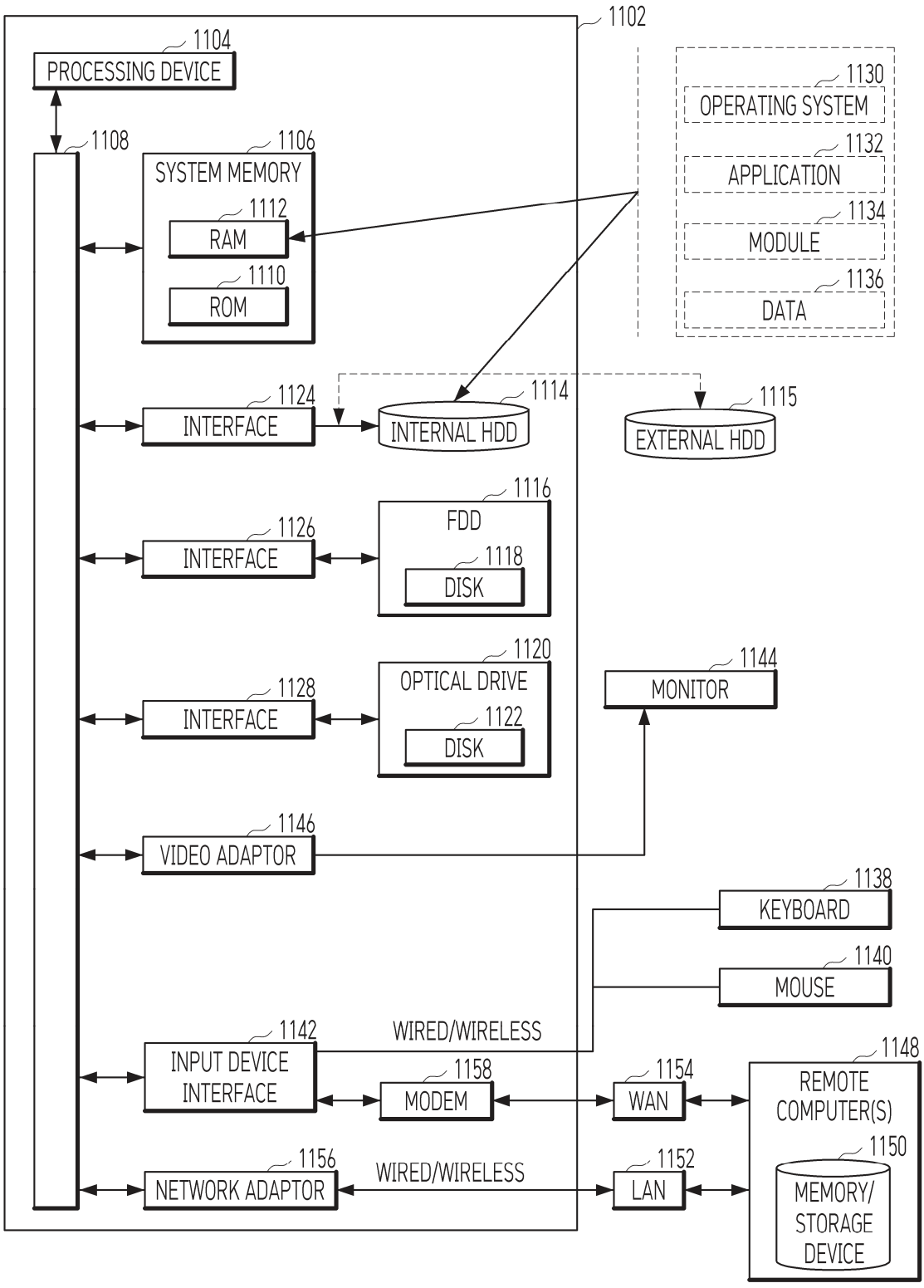

1102
1104
PROCESSING DEVICE
1108
1106
SYSTEM MEMORY
1112
RAM
1110
ROM
1130
OPERATING SYSTEM
1132
APPLICATION
1134
MODULE
1136
DATA
1124
INTERFACE
1114
INTERNAL HDD
1115
EXTERNAL HDD
1116
FDD
1118
DISK
1126
INTERFACE
1120
OPTICAL DRIVE
1122
DISK
1128
INTERFACE
1144
MONITOR
1146
VIDEO ADAPTOR
1138
KEYBOARD
1140
MOUSE
1142
INPUT DEVICE INTERFACE
WIRED/WIRELESS
1158
MODEM
1154
WAN
1148
REMOTE COMPUTER(S)
1150
MEMORY/ STORAGE DEVICE
1156
NETWORK ADAPTOR
WIRED/WIRELESS
1152
LAN

Fig. 10