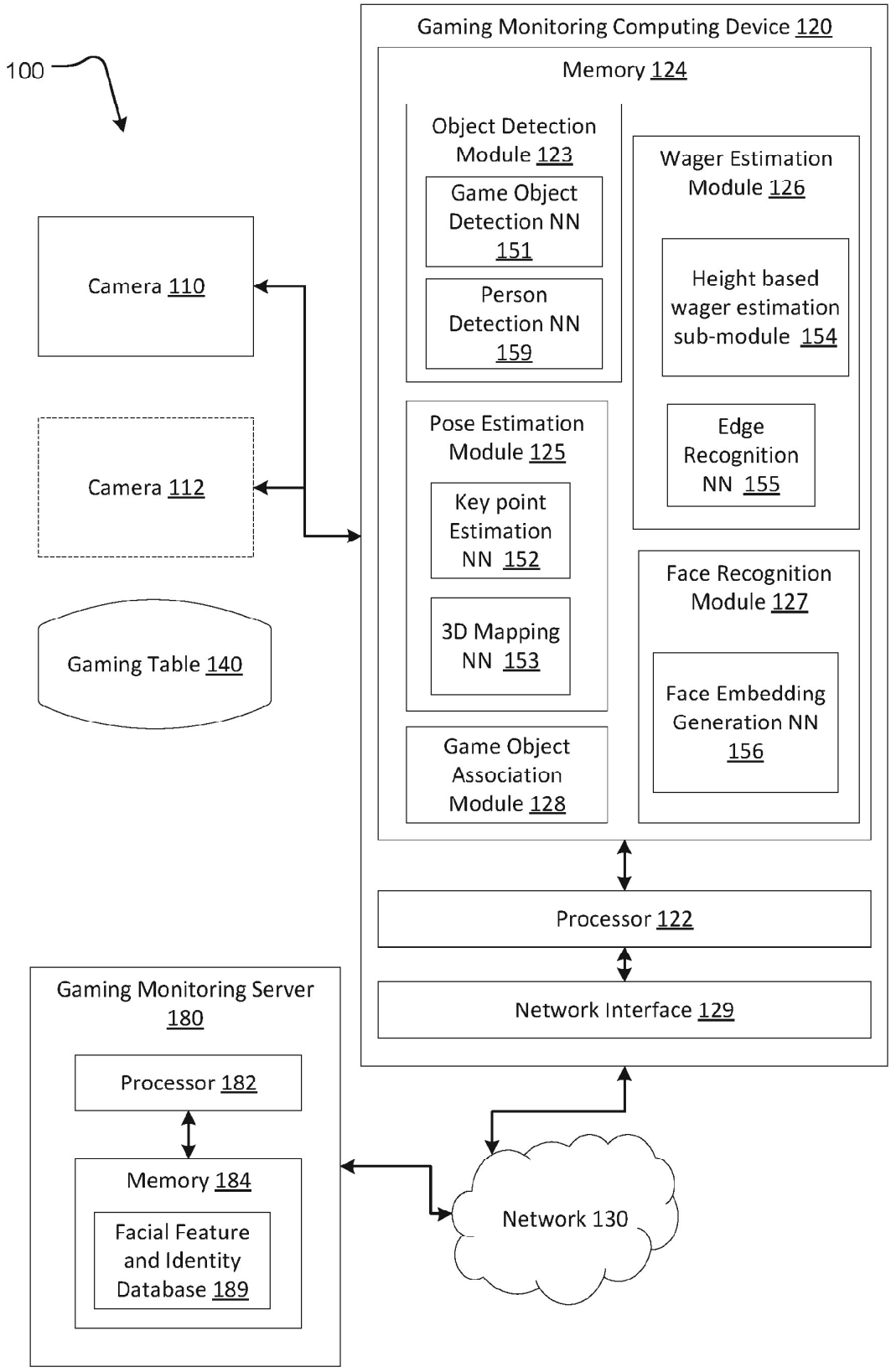
100
Gaming Monitoring Computing Device 120
Memory 124
Object Detection Module 123
Game Object Detection NN 151
Person Detection NN 159
Wager Estimation Module 126
Height based wager estimation sub-module 154
Edge Recognition NN 155
Pose Estimation Module 125
Key point Estimation NN 152
3D Mapping NN 153
Face Recognition Module 127
Face Embedding Generation NN 156
Game Object Association Module 128
Camera 110
Camera 112
Gaming Table 140
Processor 122
Network Interface 129
Gaming Monitoring Server 180
Processor 182
Memory 184
Facial Feature and Identity Database 189
Network 130

Figure 1

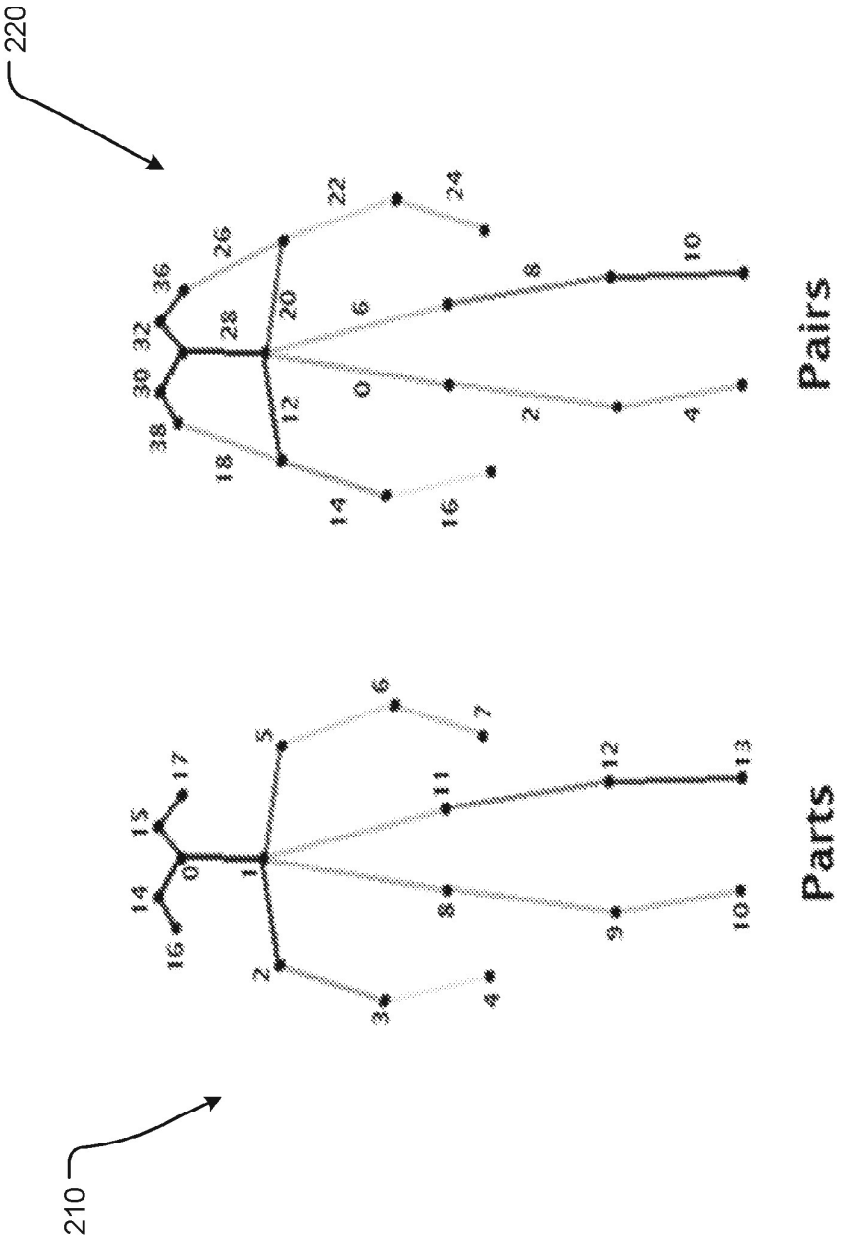

Figure 2

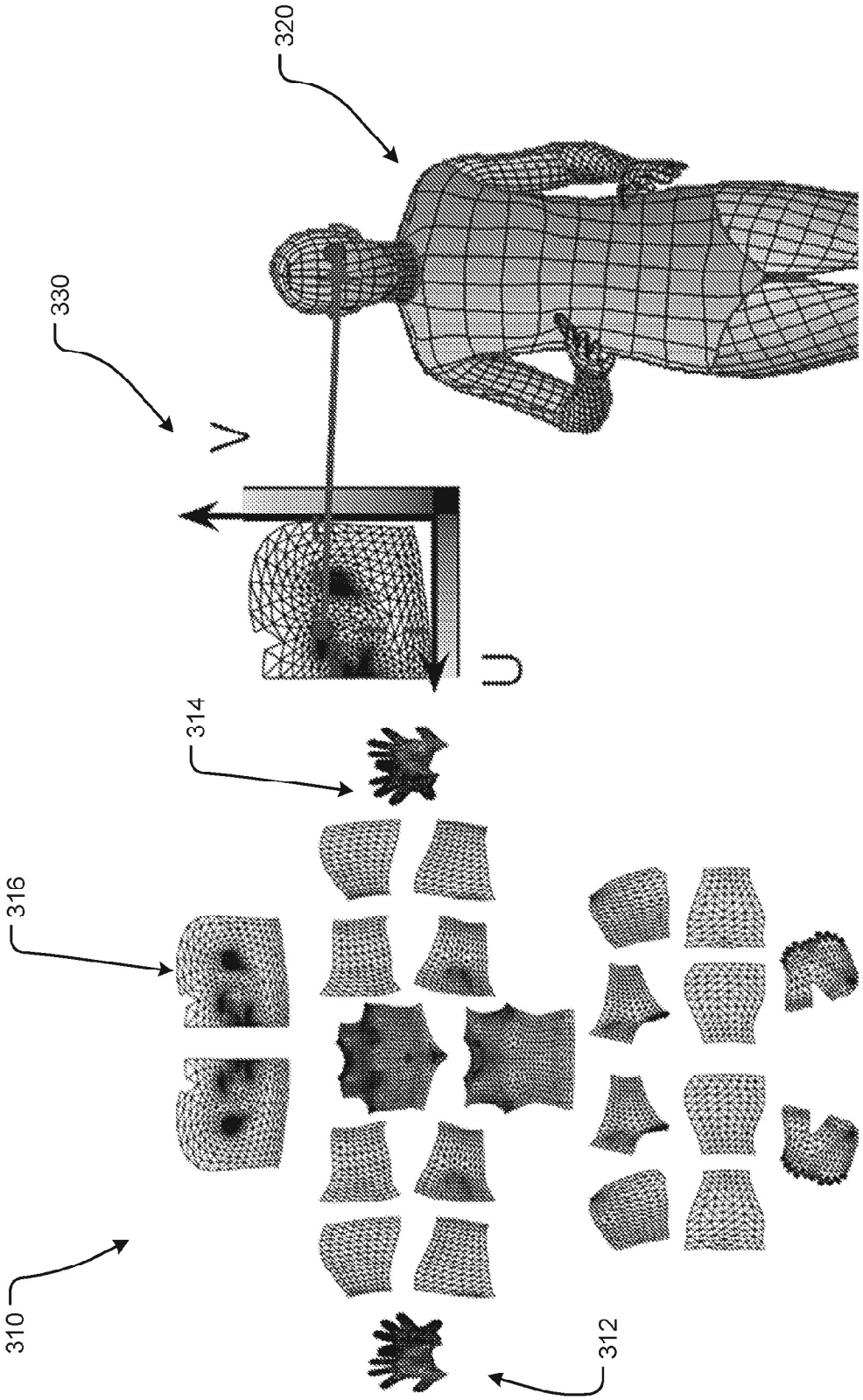

Figure 3

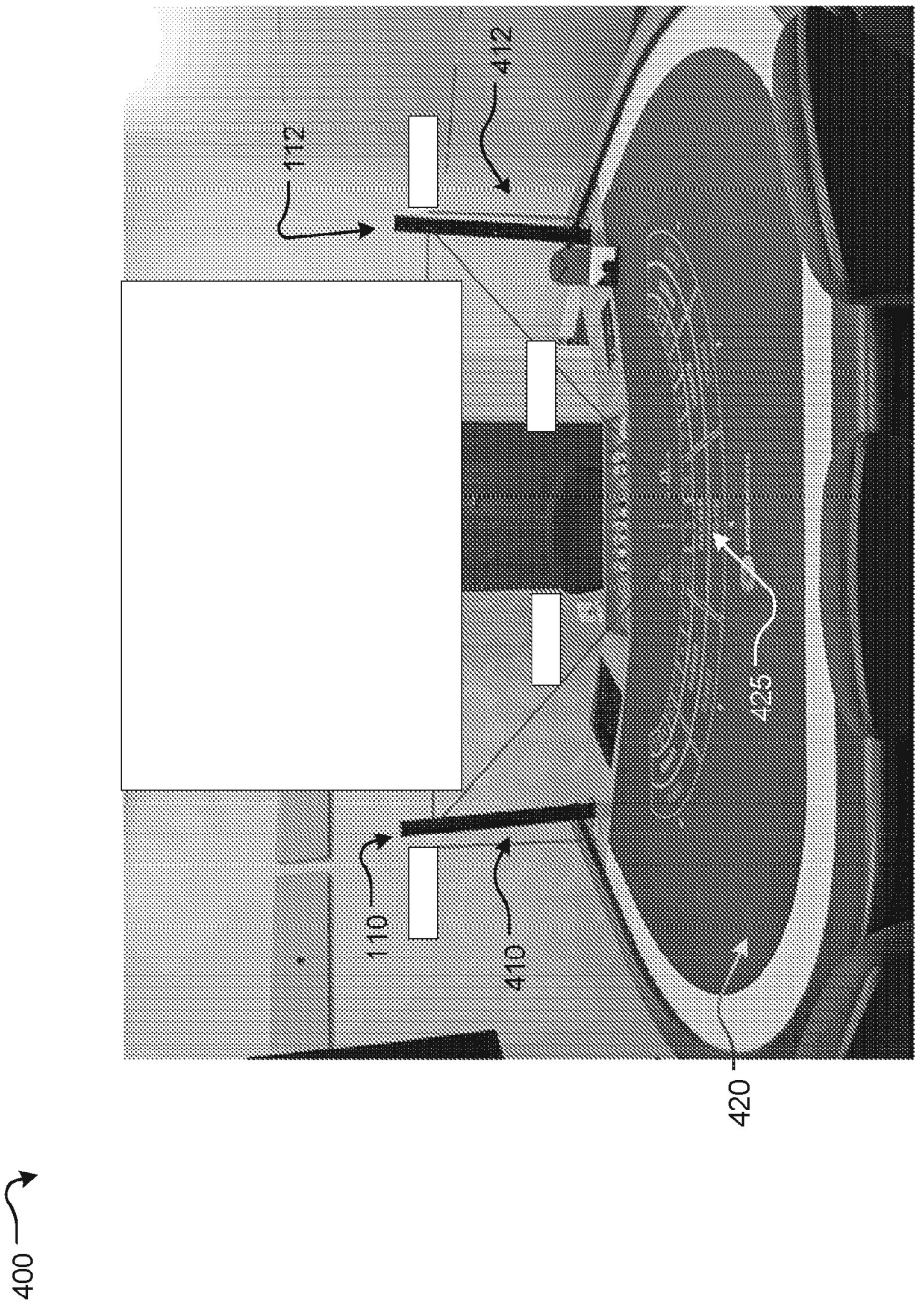

Figure 4

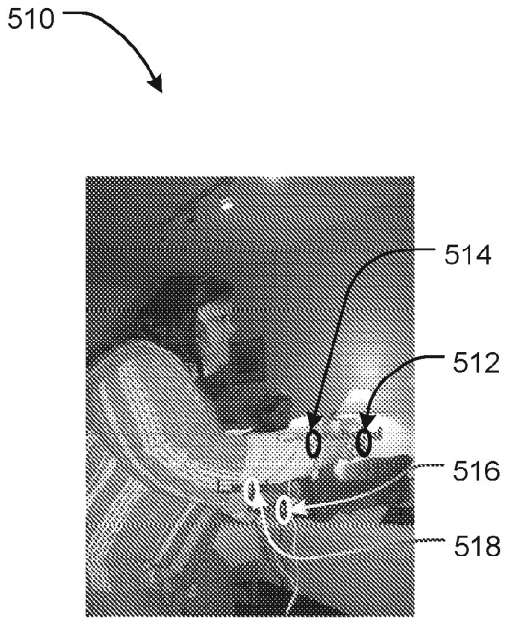

Figure 5A

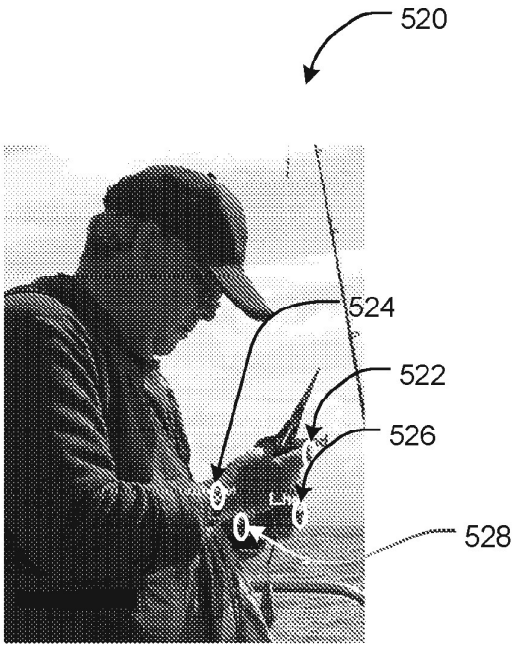

Figure 5B

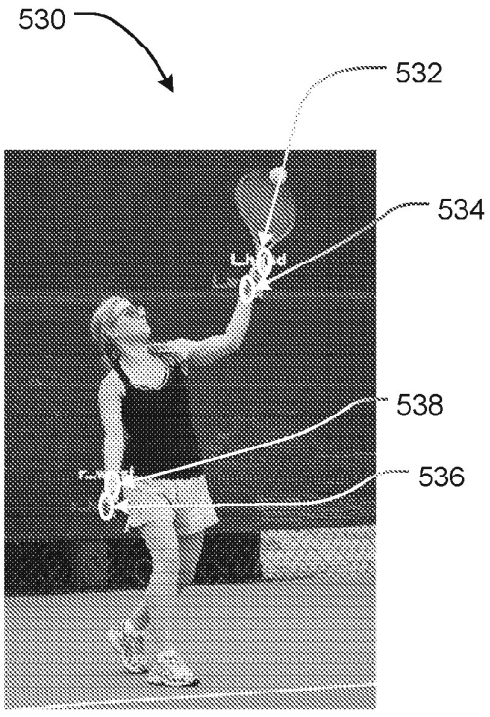

Figure 5C

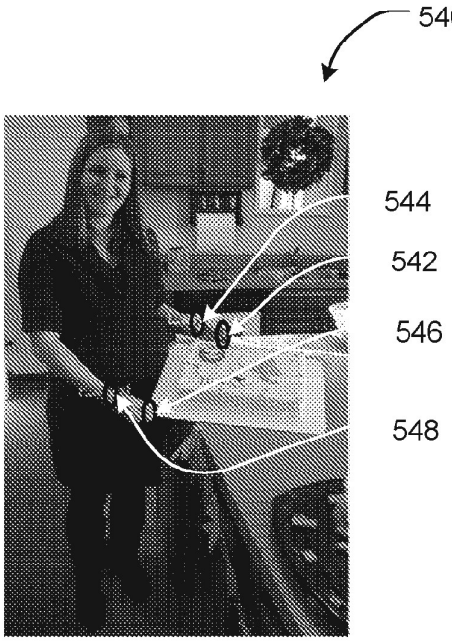

Figure 5D

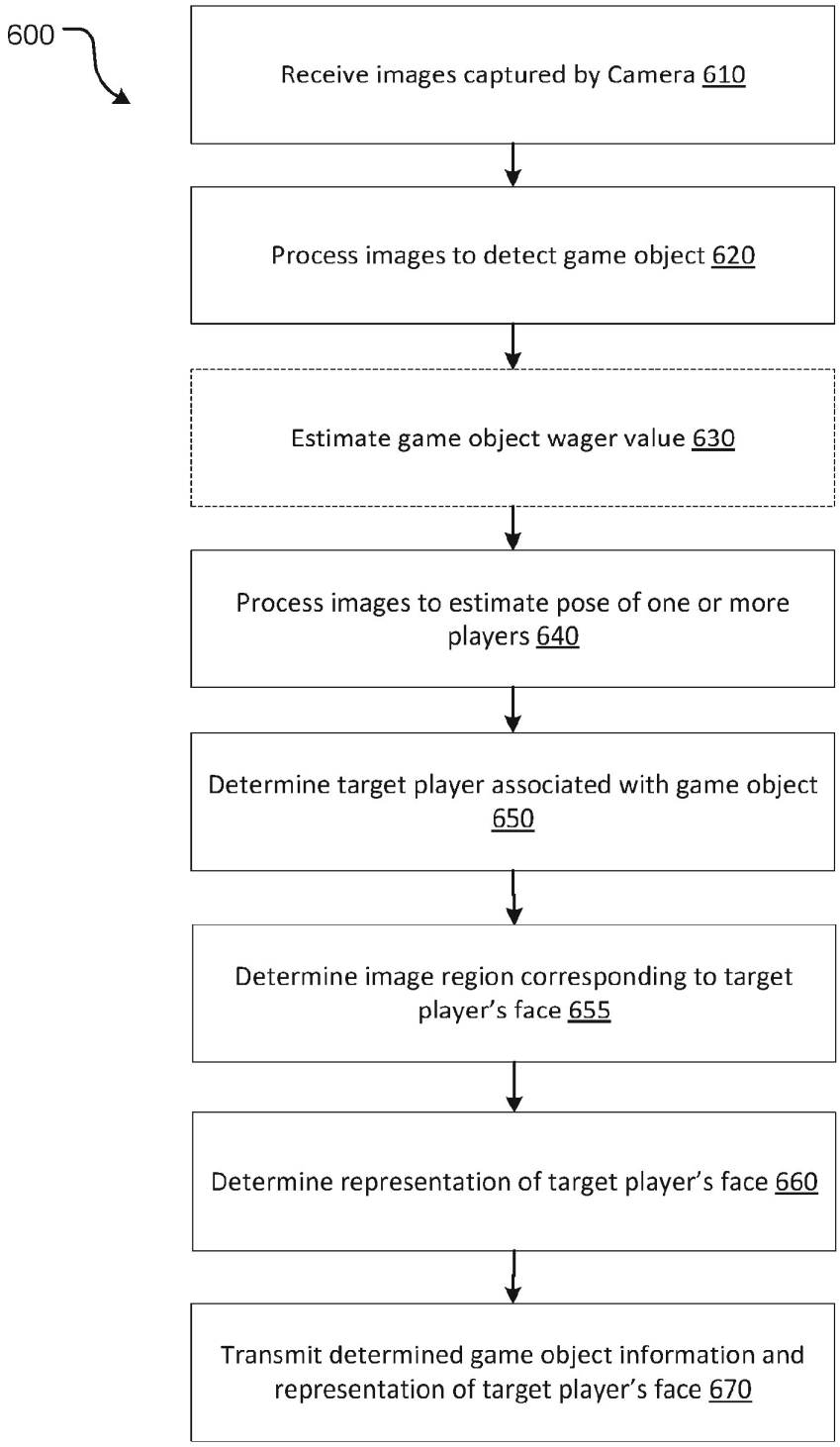
600
Receive images captured by Camera 610
Process images to detect game object 620
Estimate game object wager value 630
Process images to estimate pose of one or more players 640
Determine target player associated with game object 650
Determine image region corresponding to target player's face 655
Determine representation of target player's face 660
Transmit determined game object information and representation of target player's face 670

Figure 6

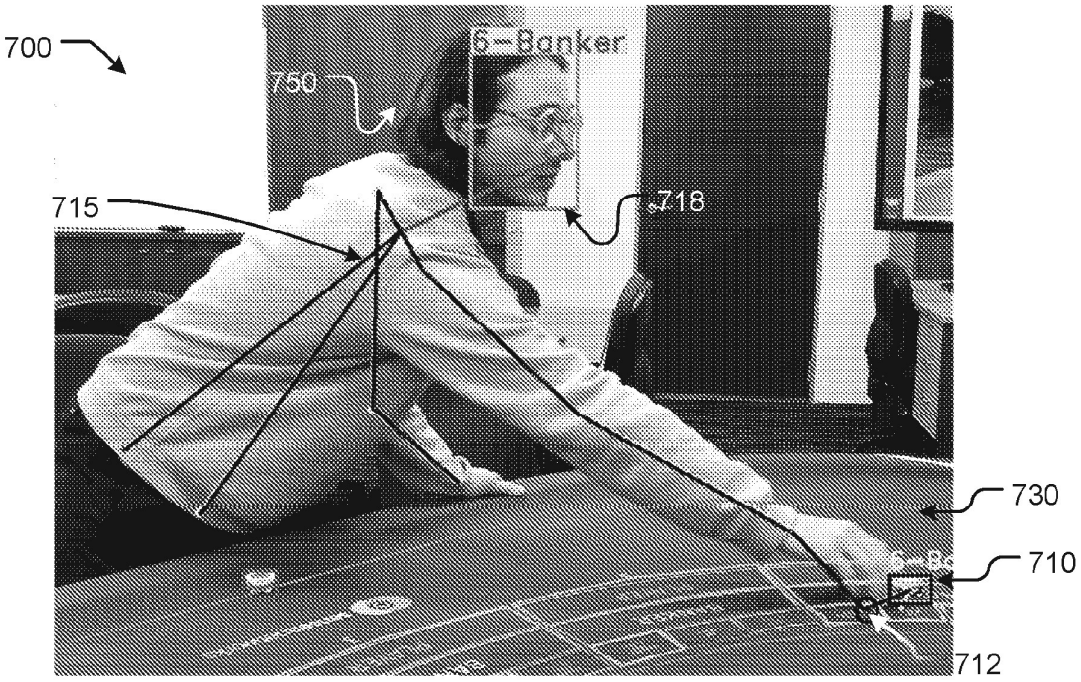

Figure 7

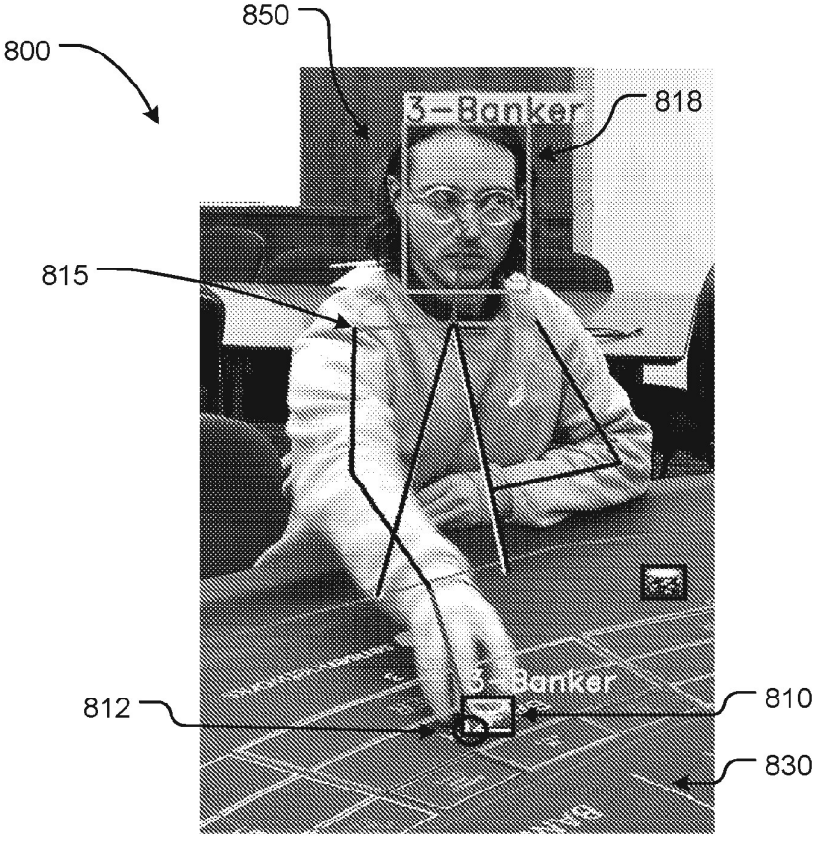

Figure 8

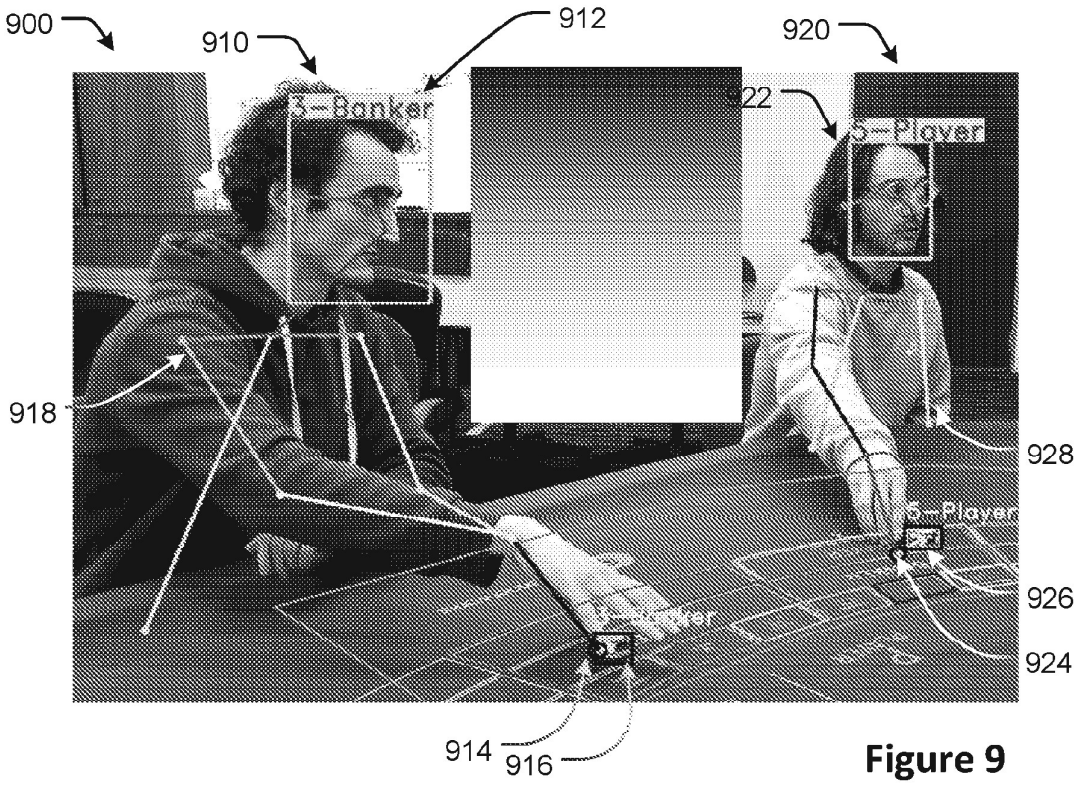

Figure 9

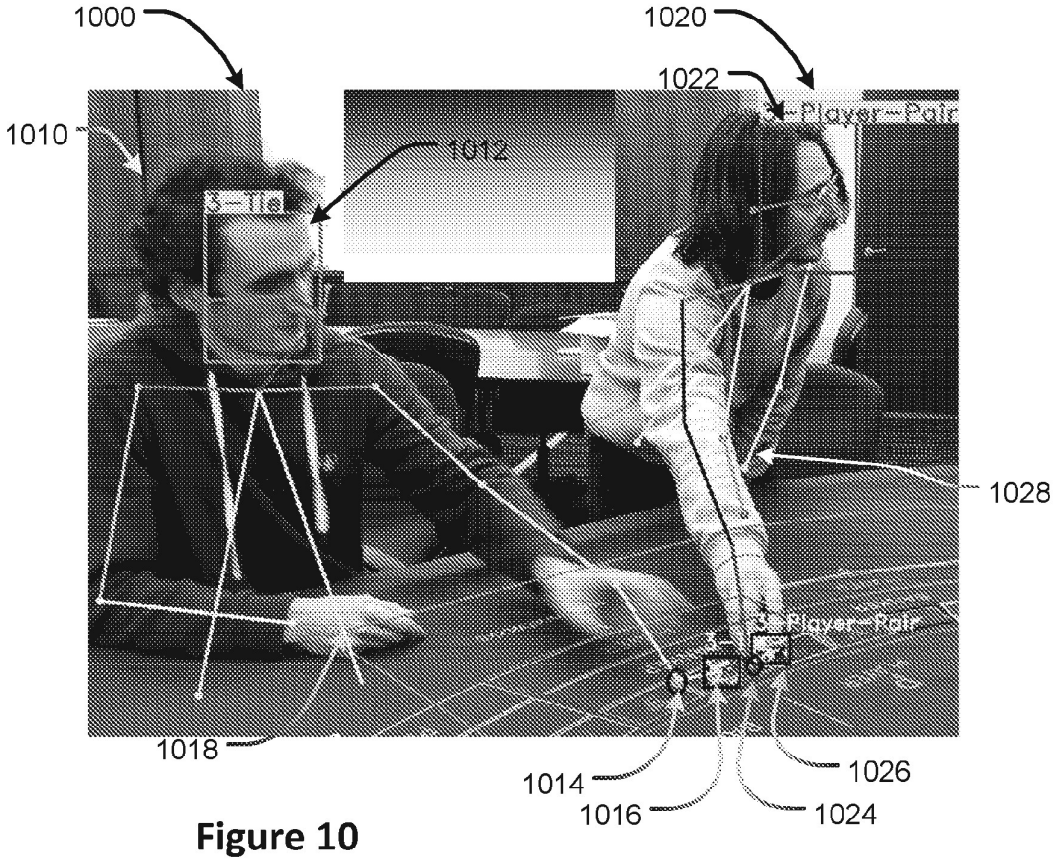

Figure 10

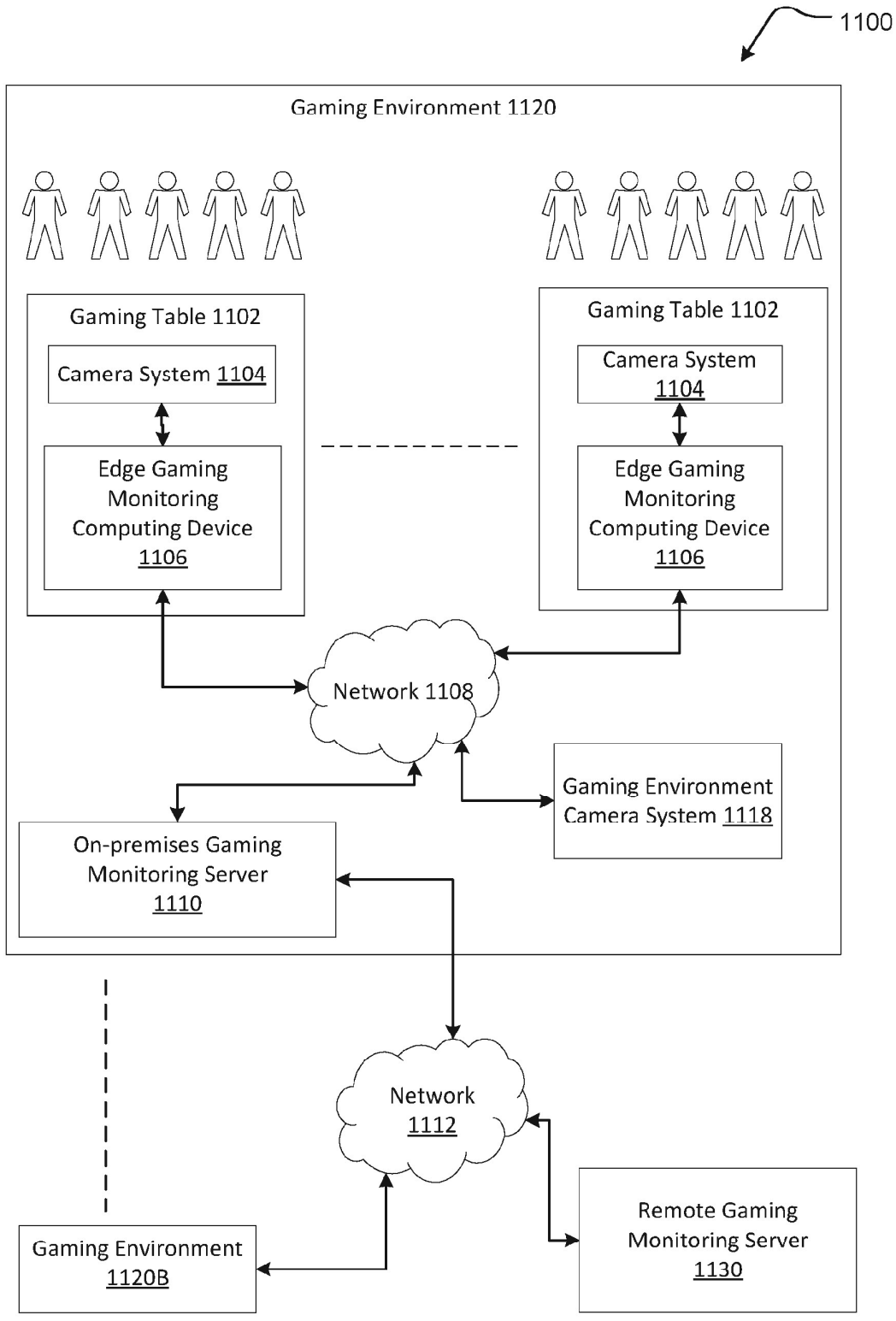
1100
Gaming Environment 1120
Gaming Table 1102
Camera System 1104
Edge Gaming Monitoring Computing Device 1106
Gaming Table 1102
Camera System 1104
Edge Gaming Monitoring Computing Device 1106
Network 1108
Gaming Environment Camera System 1118
On-premises Gaming Monitoring Server 1110
Network 1112
Remote Gaming Monitoring Server 1130
Gaming Environment 1120B

Figure 11

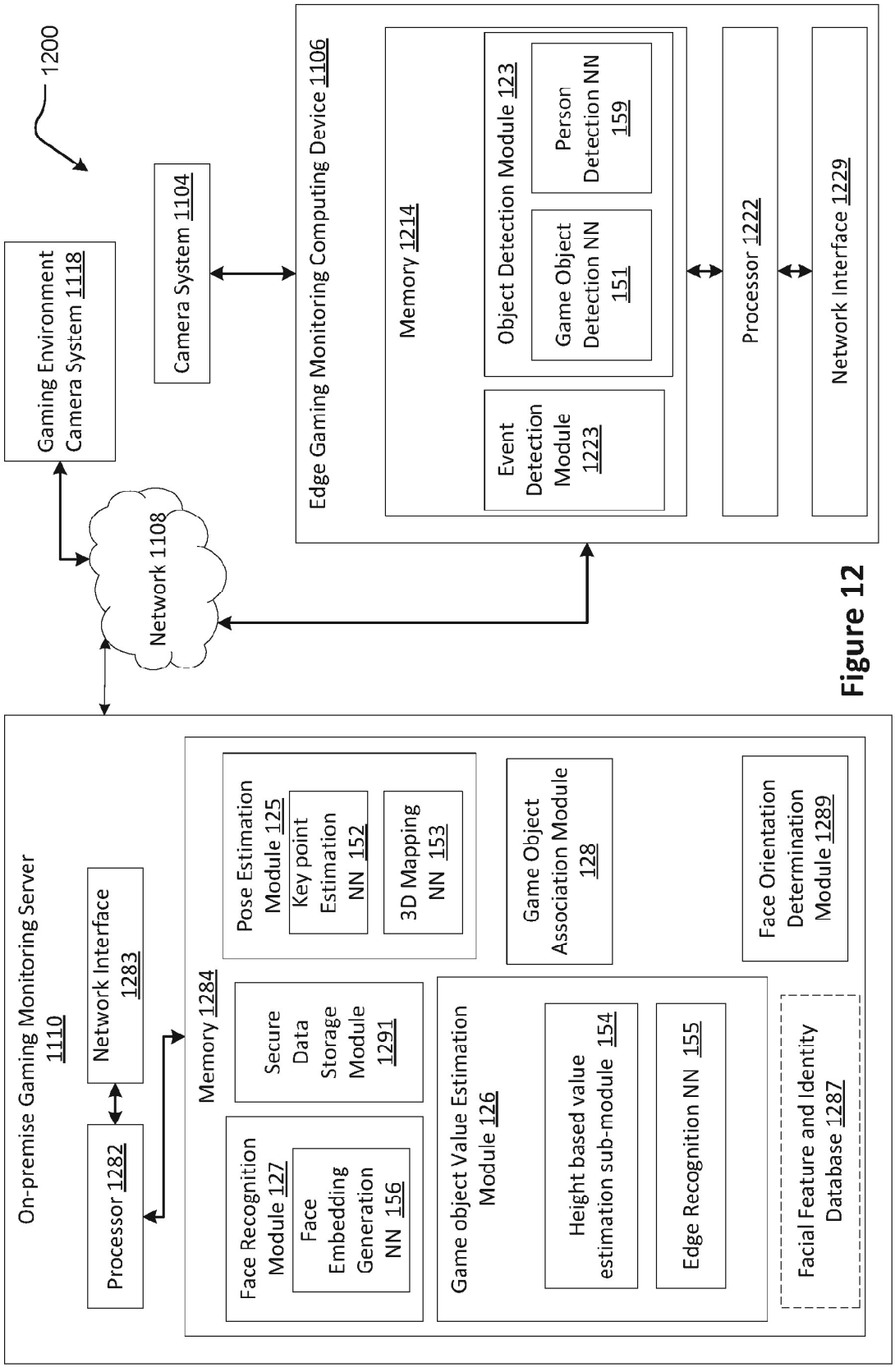
1200
Gaming Environment Camera System 1118
Camera System 1104
Edge Gaming Monitoring Computing Device 1106
Memory 1214
Object Detection Module 123
Person Detection NN 159
Game Object Detection NN 151
Event Detection Module 1223
Processor 1222
Network Interface 1229
Network 1108
On-premise Gaming Monitoring Server 1110
Network Interface 1283
Processor 1282
Memory 1284
Pose Estimation Module 125
Key point Estimation NN 152
3D Mapping NN 153
Game Object Association Module 128
Face Orientation Determination Module 1289
Face Recognition Module 127
Face Embedding Generation NN 156
Secure Data Storage Module 1291
Game object Value Estimation Module 126
Height based value estimation sub-module 154
Edge Recognition NN 155
Facial Feature and Identity Database 1287

Figure 12

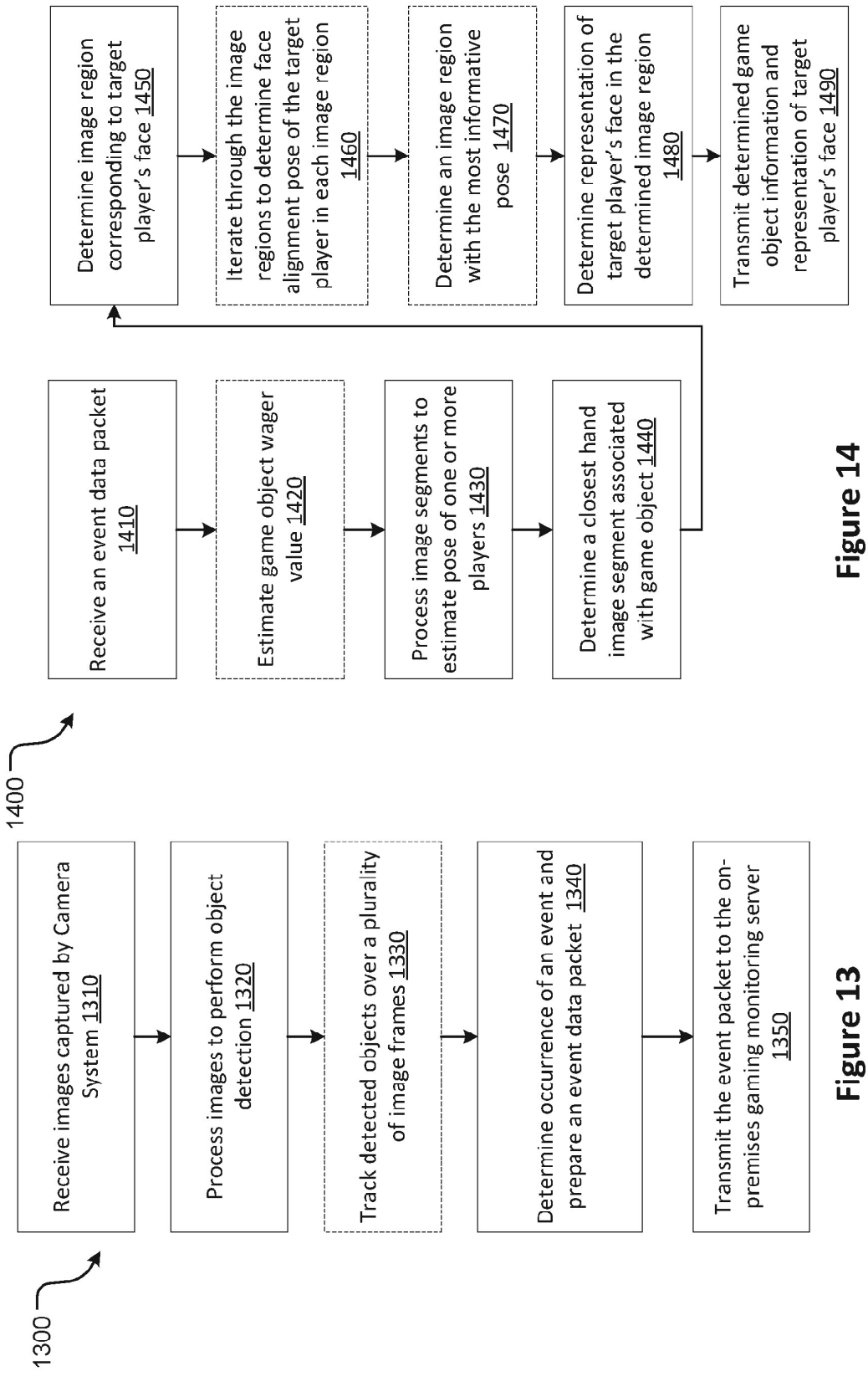

Figure 13

Figure 14

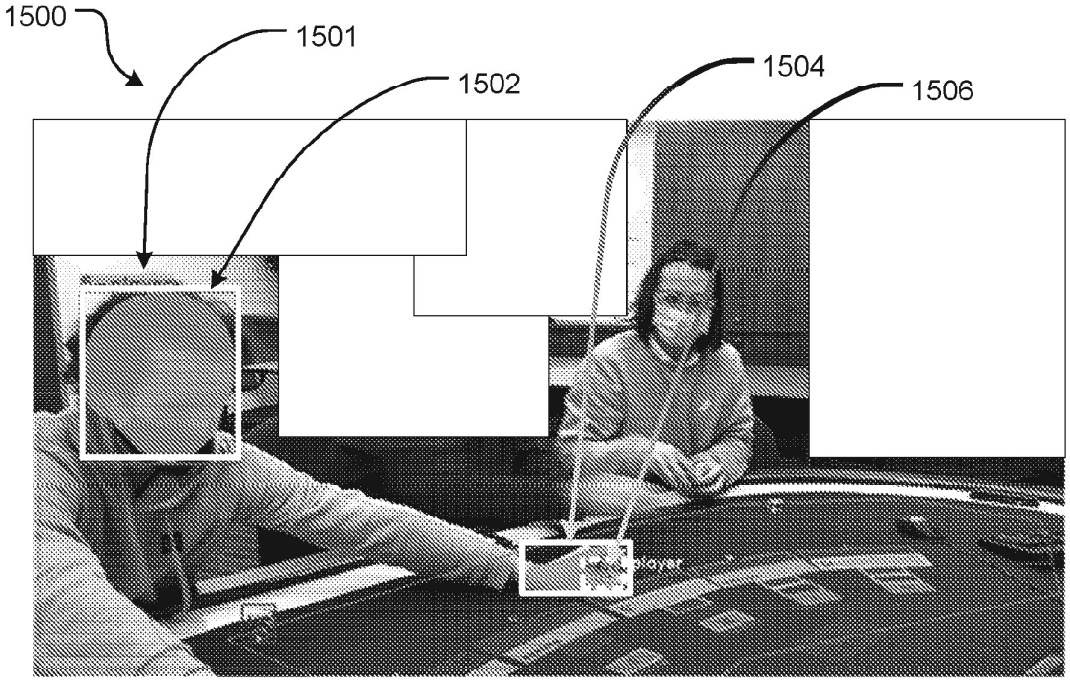

Figure 15

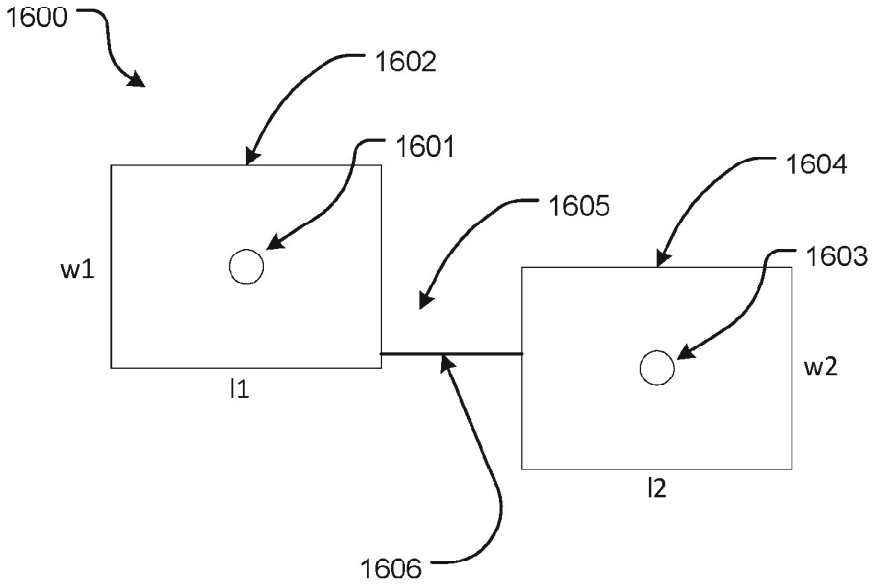

Figure 16

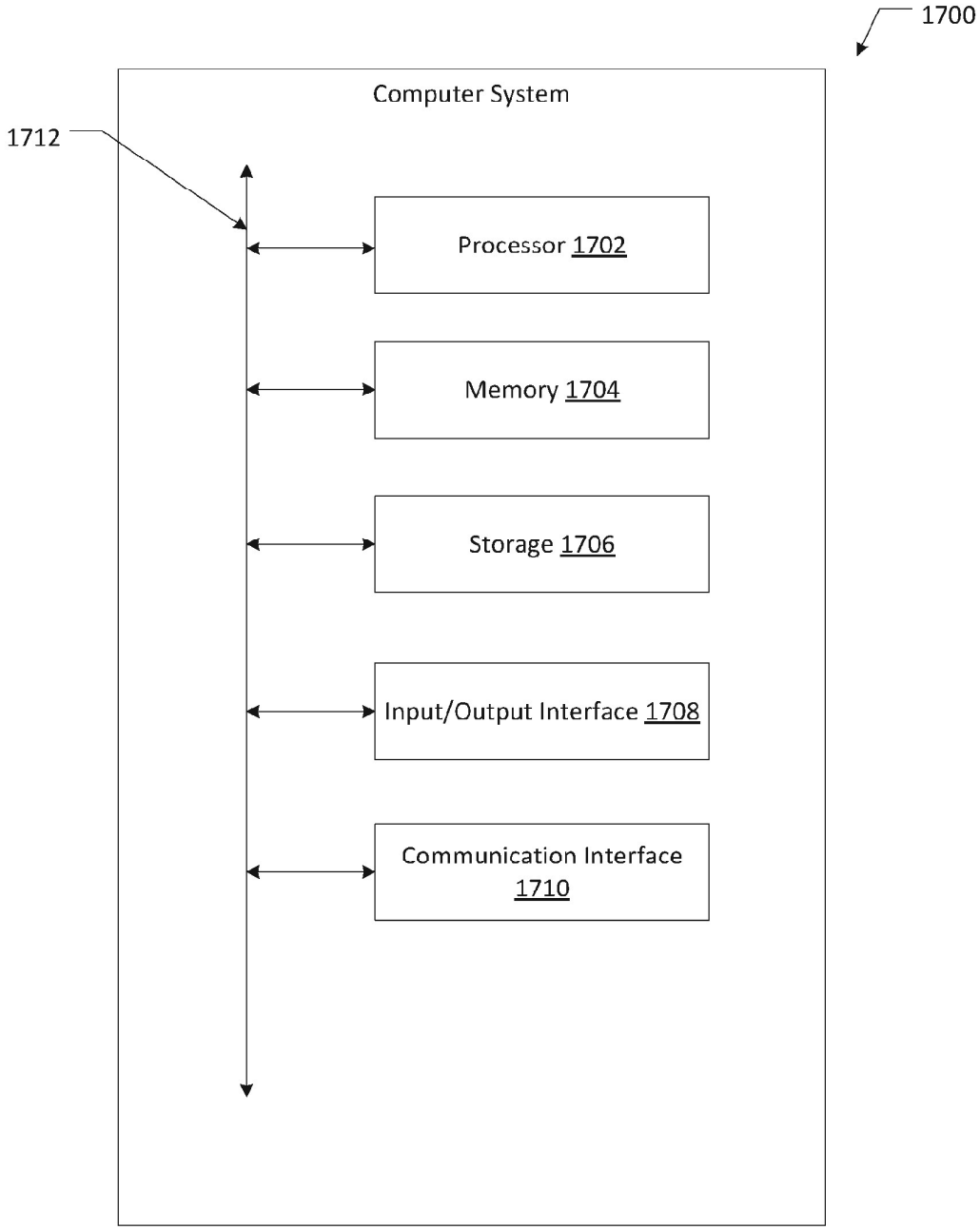
1700
Computer System
1712
Processor 1702
Memory 1704
Storage 1706
Input/Output Interface 1708
Communication Interface 1710

Figure 17