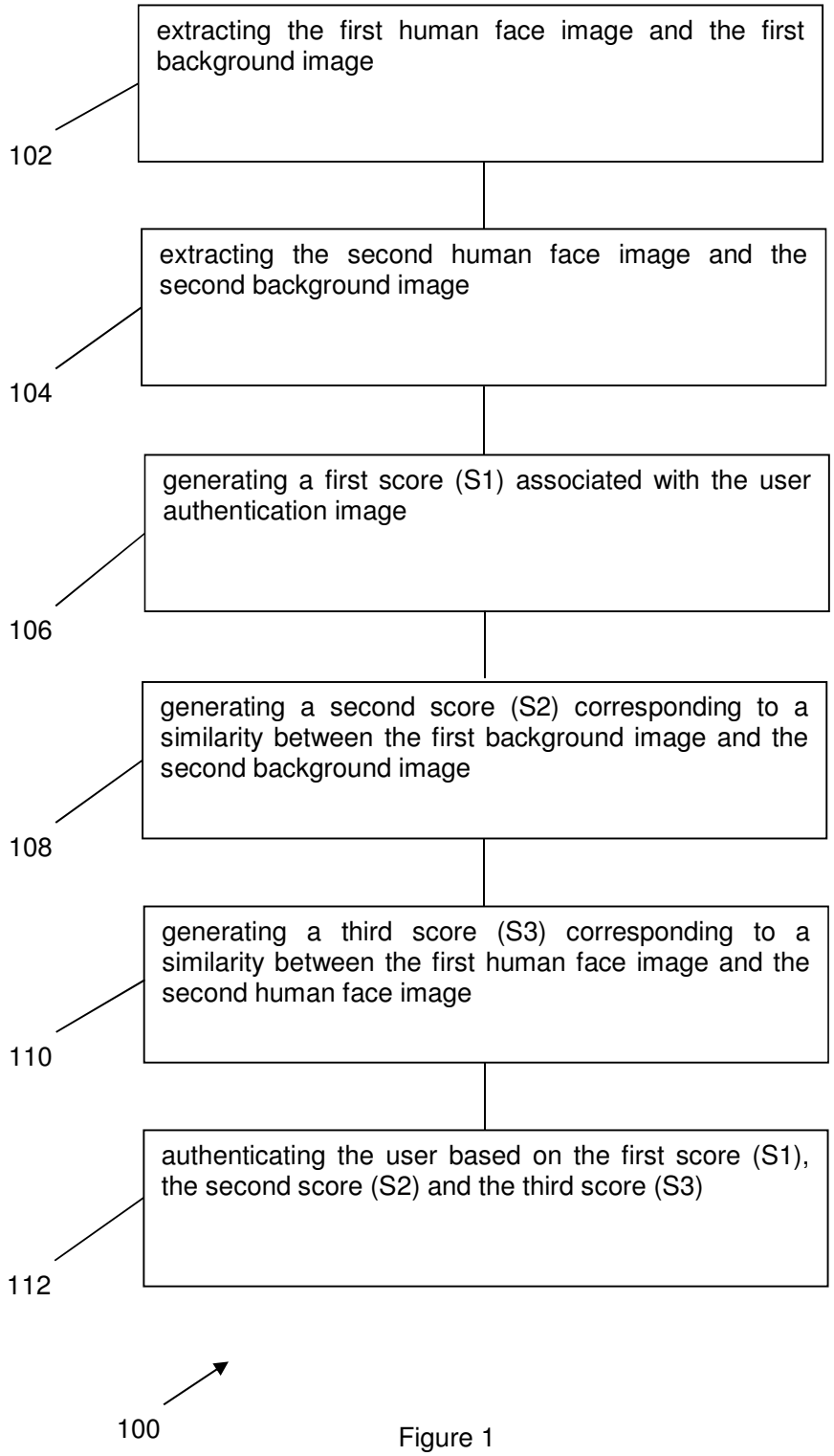
extracting the first human face image and the first background image
102
extracting the second human face image and the second background image
104
generating a first score (S1) associated with the user authentication image
106
generating a second score (S2) corresponding to a similarity between the first background image and the second background image
108
generating a third score (S3) corresponding to a similarity between the first human face image and the second human face image
110
authenticating the user based on the first score (S1), the second score (S2) and the third score (S3)
112
100

Figure 1

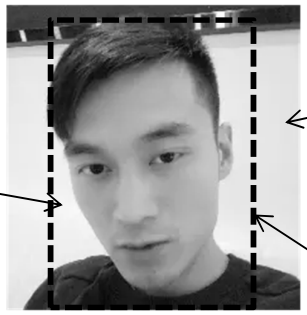
202
Human face image is detected using face-detection method
204
Background image
206
Face bounding box
200

Figure 2

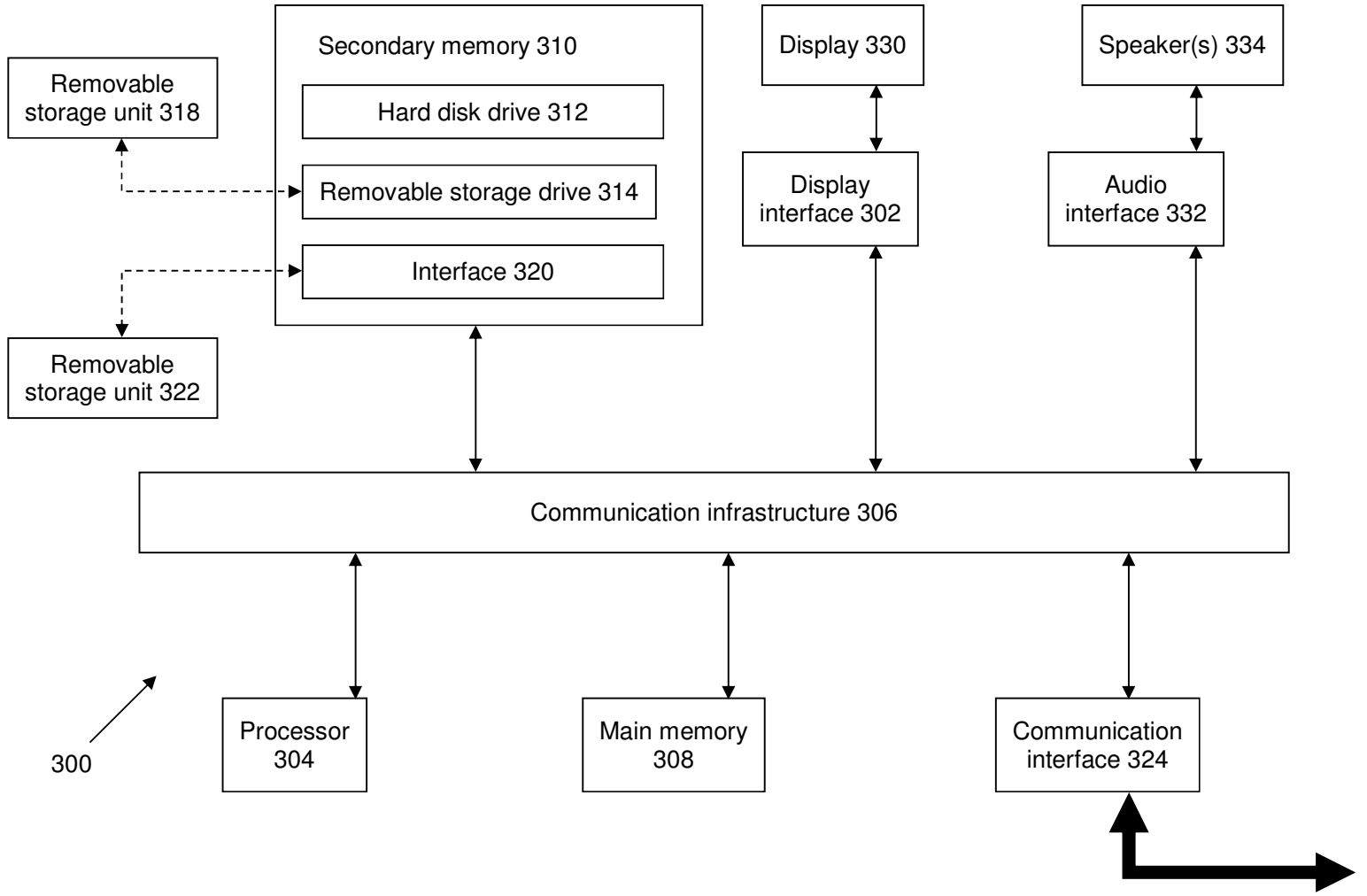
Secondary memory 310
Hard disk drive 312
Removable storage drive 314
Interface 320
Removable storage unit 318
Removable storage unit 322
Display 330
Display interface 302
Speaker(s) 334
Audio interface 332
Communication infrastructure 306
300
Processor 304
Main memory 308
Communication interface 324
Communication path 326

Figure 3

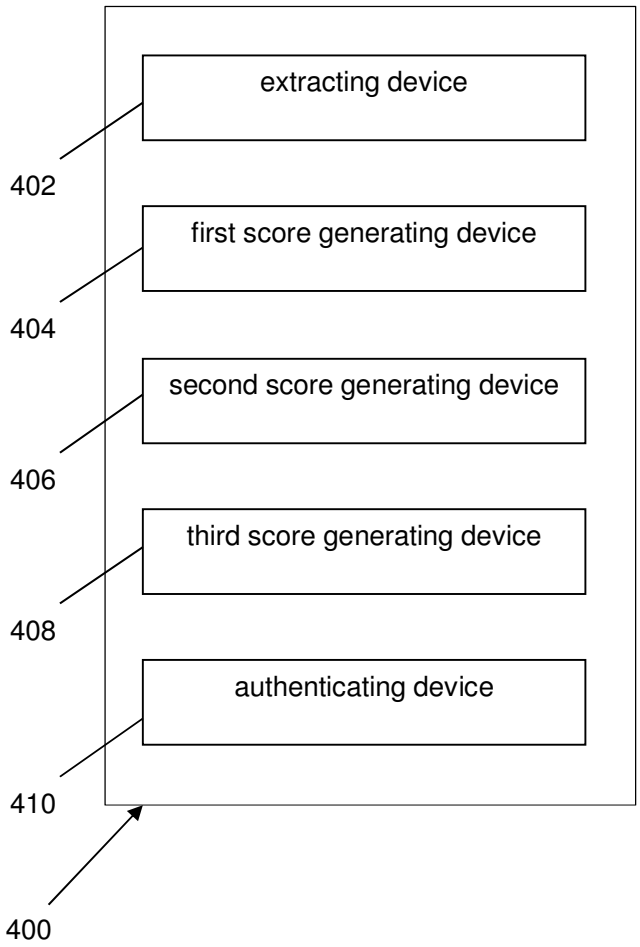
extracting device
402
first score generating device
404
second score generating device
406
third score generating device
408
authenticating device
410
400

Figure 4