FIG. 1

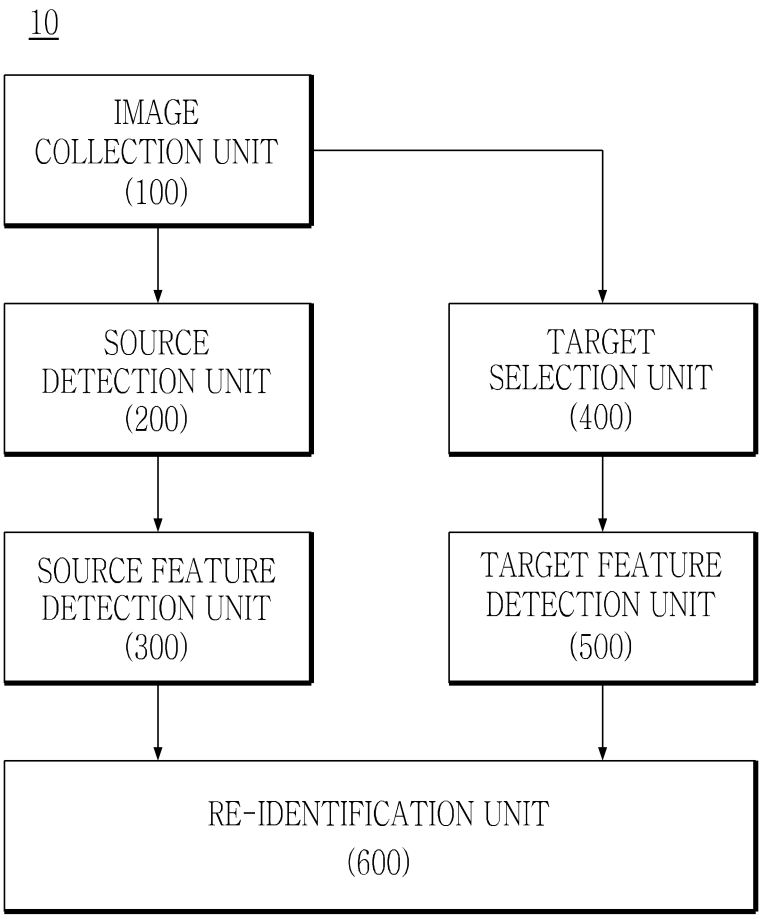

10
IMAGE COLLECTION UNIT (100)
SOURCE DETECTION UNIT (200)
TARGET SELECTION UNIT (400)
SOURCE FEATURE DETECTION UNIT (300)
TARGET FEATURE DETECTION UNIT (500)
RE-IDENTIFICATION UNIT (600)

FIG. 2

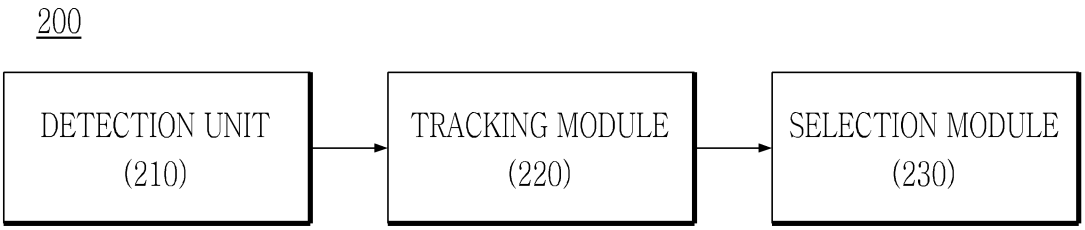

200
DETECTION UNIT
(210)
TRACKING MODULE
(220)
SELECTION MODULE
(230)

FIG. 3

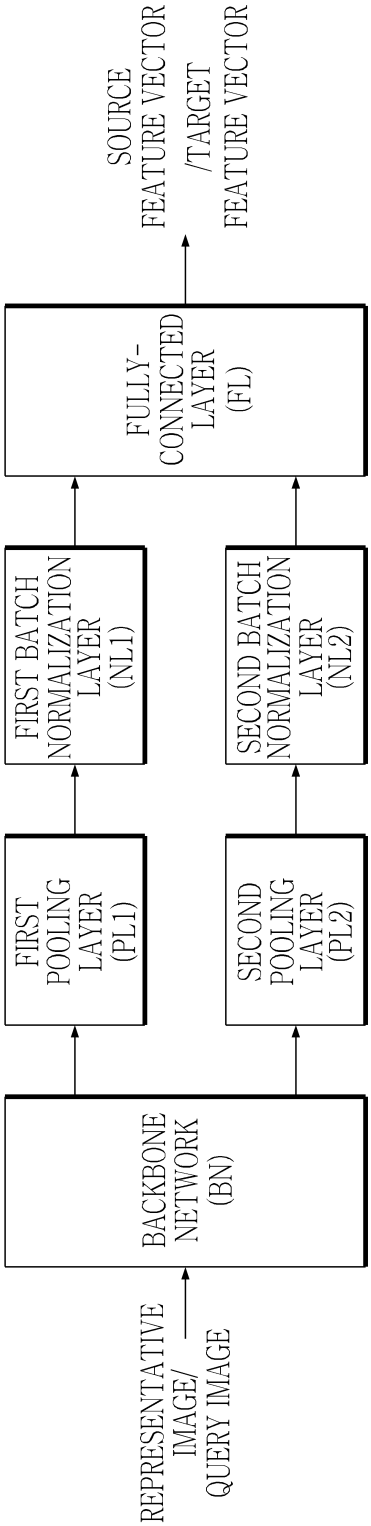

REPRESENTATIVE IMAGE/ QUERY IMAGE
BACKBONE NETWORK (BN)
FIRST POOLING LAYER (PL1)
SECOND POOLING LAYER (PL2)
FIRST BATCH NORMALIZATION LAYER (NL1)
SECOND BATCH NORMALIZATION LAYER (NL2)
FULLY-CONNECTED LAYER (FL)
SOURCE FEATURE VECTOR /TARGET FEATURE VECTOR

FIG. 4

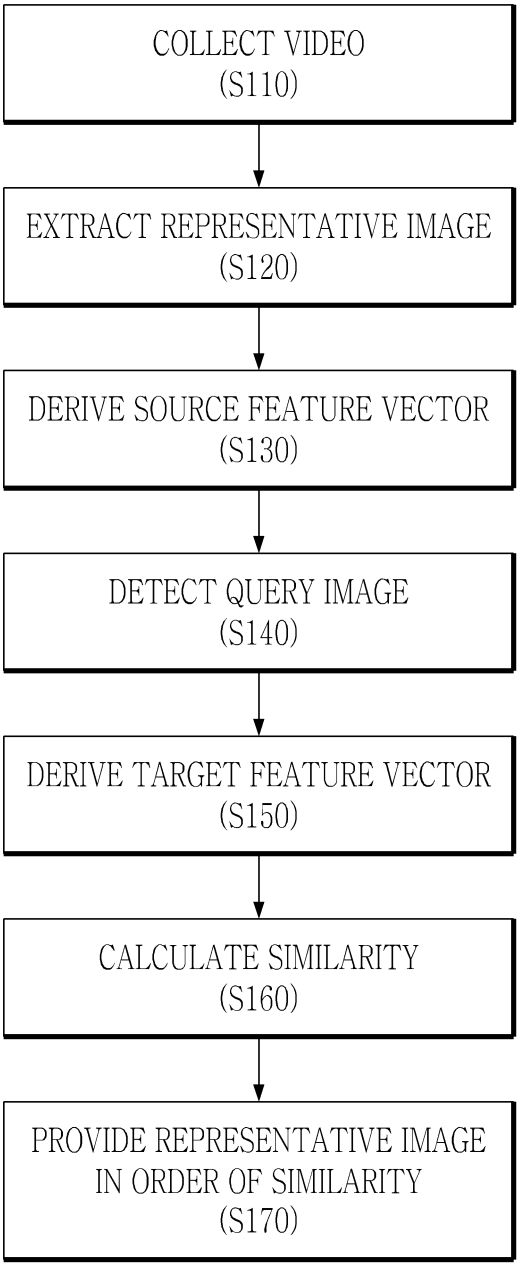

COLLECT VIDEO
(S110)
EXTRACT REPRESENTATIVE IMAGE
(S120)
DERIVE SOURCE FEATURE VECTOR
(S130)
DETECT QUERY IMAGE
(S140)
DERIVE TARGET FEATURE VECTOR
(S150)
CALCULATE SIMILARITY
(S160)
PROVIDE REPRESENTATIVE IMAGE
IN ORDER OF SIMILARITY
(S170)

FIG. 5

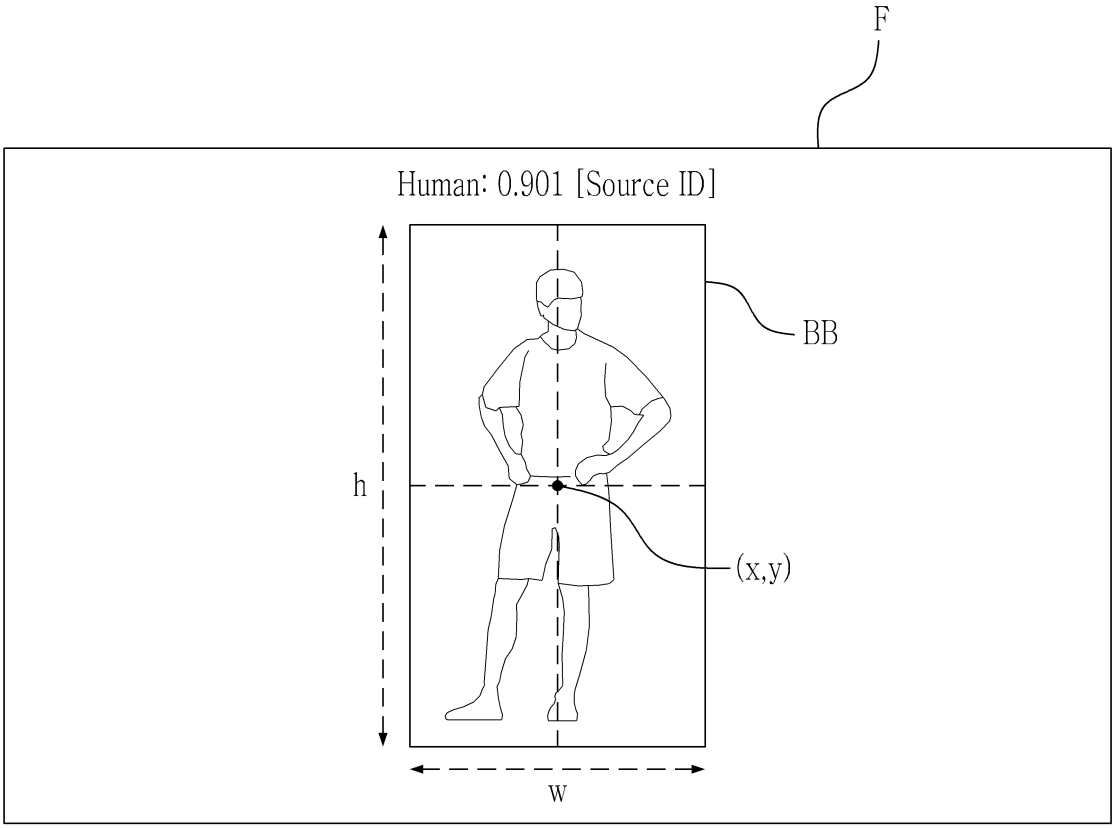


FIG. 6

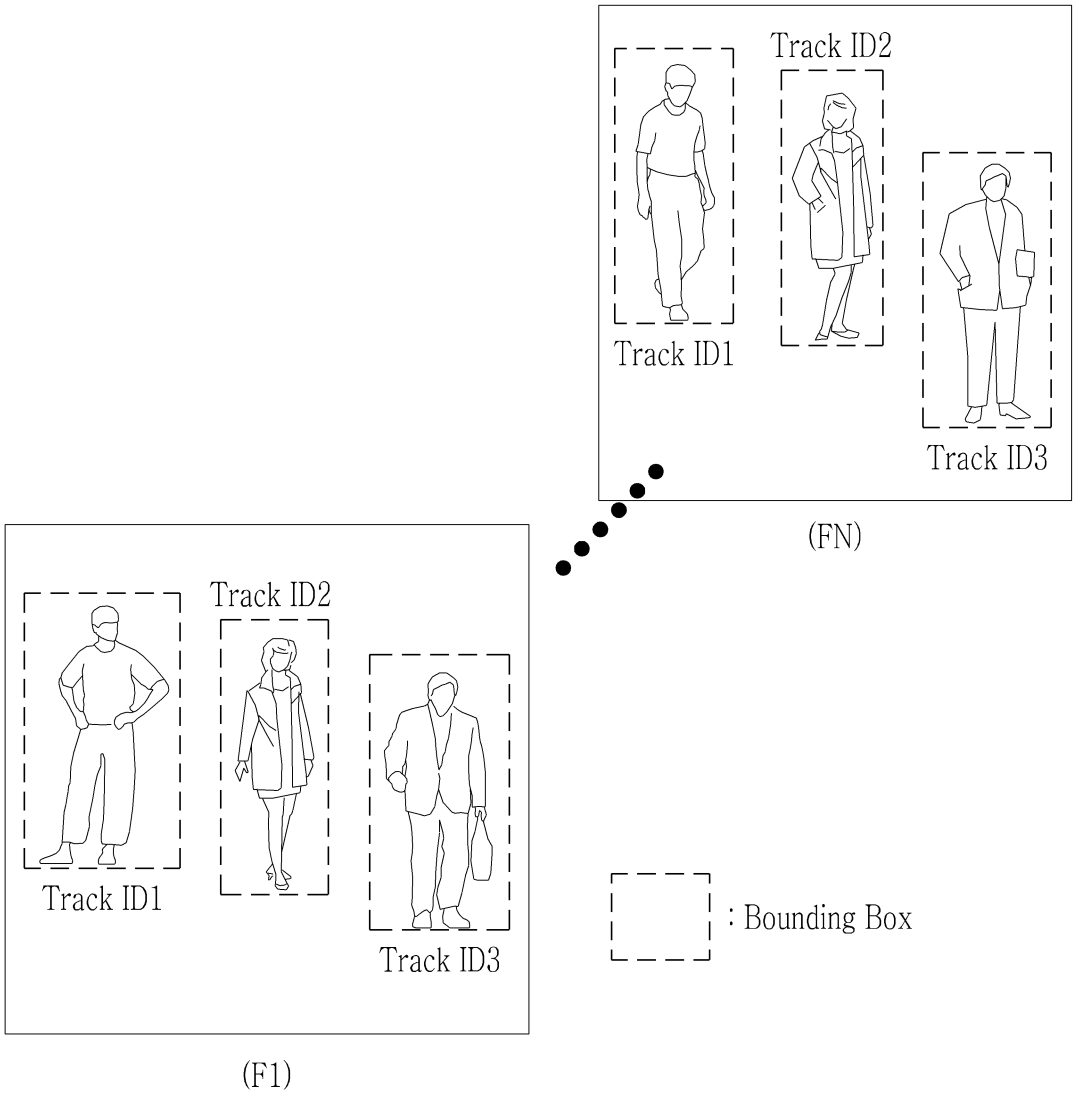

Track ID2
Track ID1
Track ID3
(FN)
Track ID2
Track ID1
Track ID3
(F1)
: Bounding Box

FIG. 7

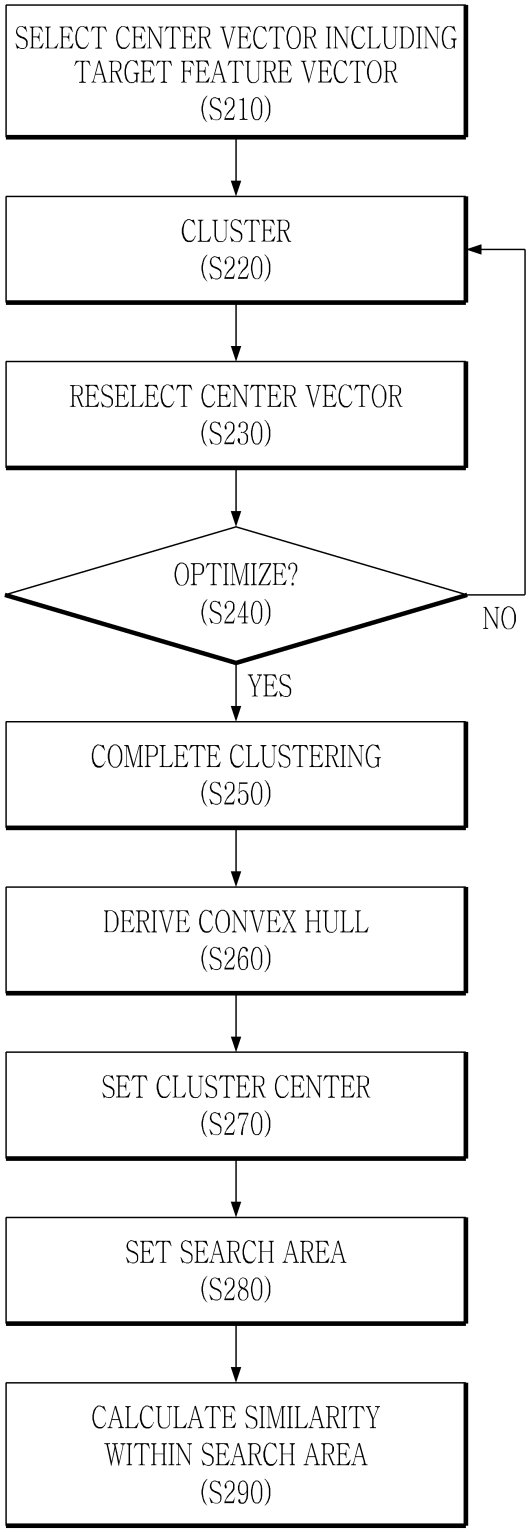

SELECT CENTER VECTOR INCLUDING TARGET FEATURE VECTOR (S210)
CLUSTER (S220)
RESELECT CENTER VECTOR (S230)
OPTIMIZE? (S240)
NO
YES
COMPLETE CLUSTERING (S250)
DERIVE CONVEX HULL (S260)
SET CLUSTER CENTER (S270)
SET SEARCH AREA (S280)
CALCULATE SIMILARITY WITHIN SEARCH AREA (S290)

FIG. 8

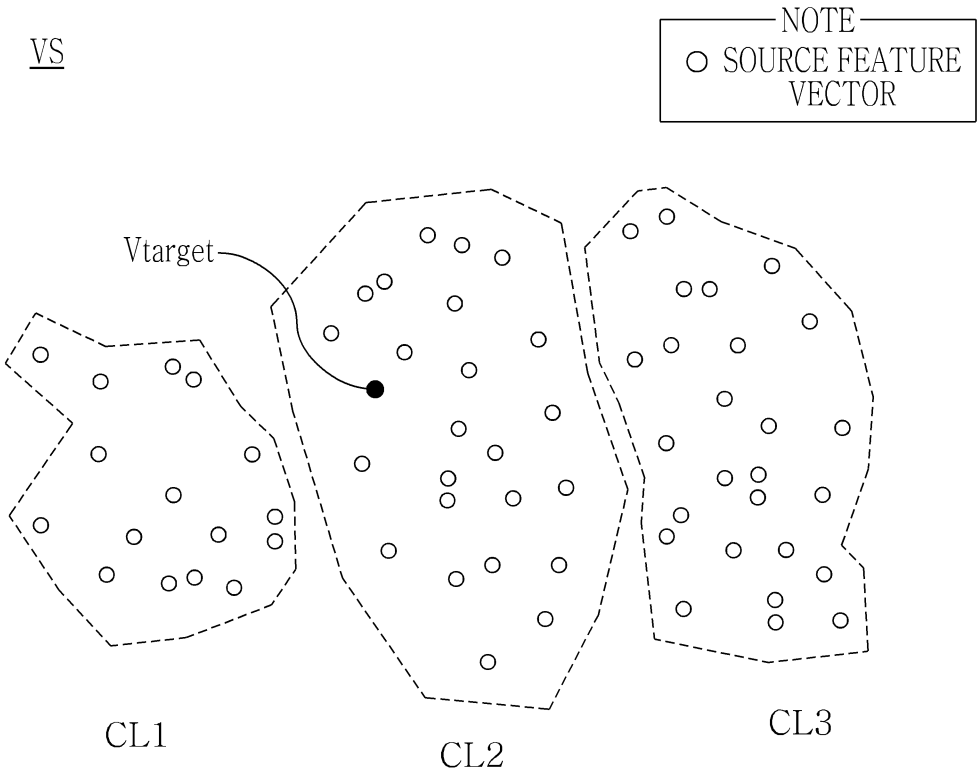


FIG. 9

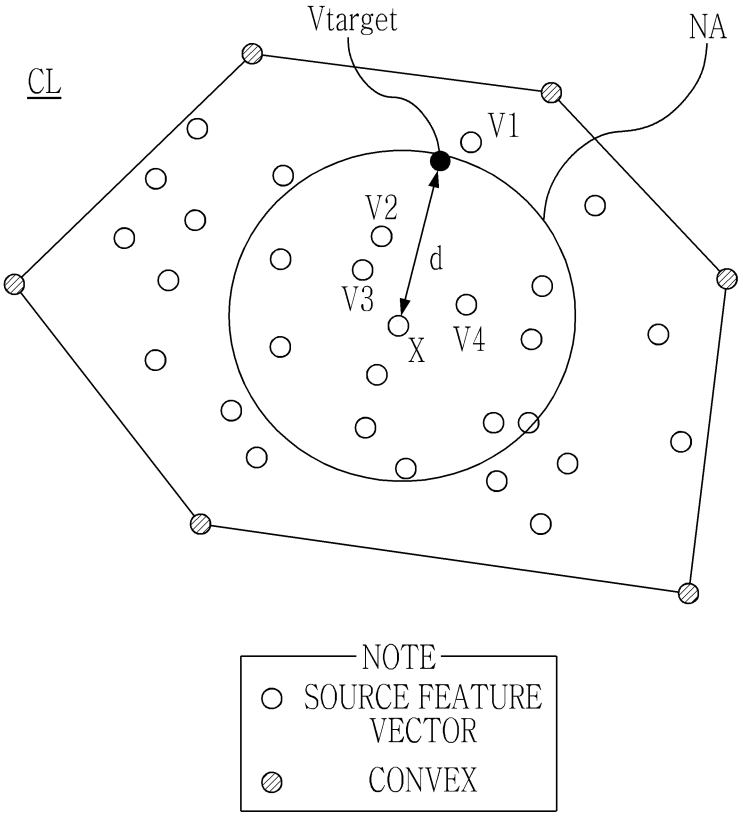
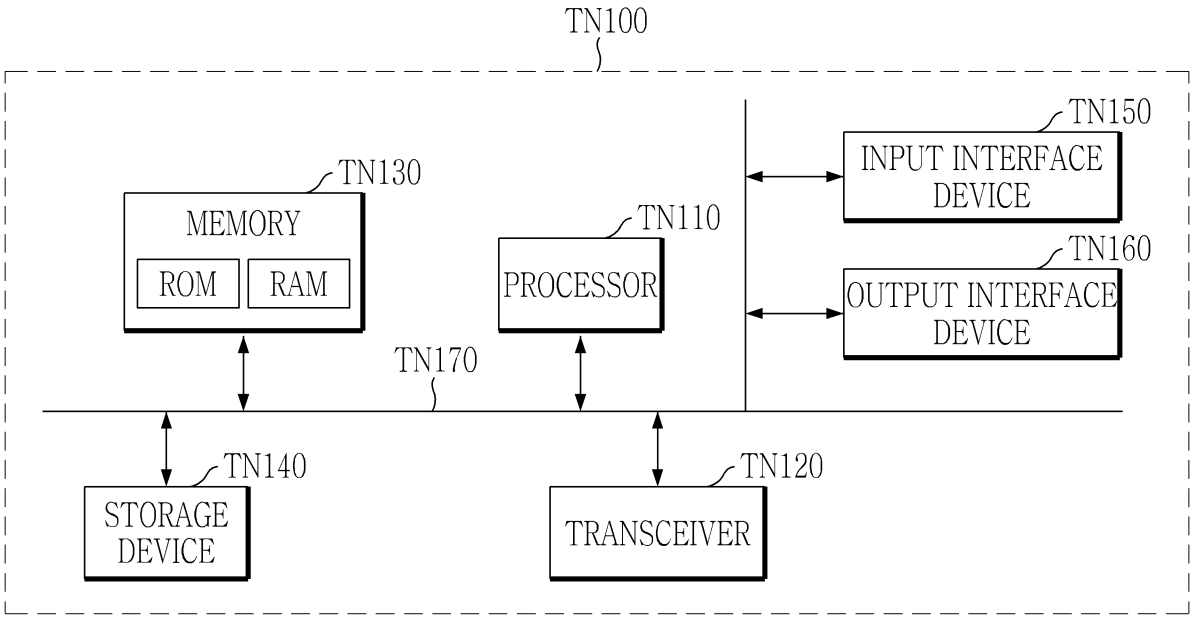

Vtarget
NA
CL
V1
V2
d
V3
X
V4
NOTE
SOURCE FEATURE VECTOR
CONVEX

FIG. 10


TN100
TN150
INPUT INTERFACE DEVICE
TN130
MEMORY
ROM
RAM
TN110
PROCESSOR
TN160
OUTPUT INTERFACE DEVICE
TN170
TN140
STORAGE DEVICE
TN120
TRANSCEIVER