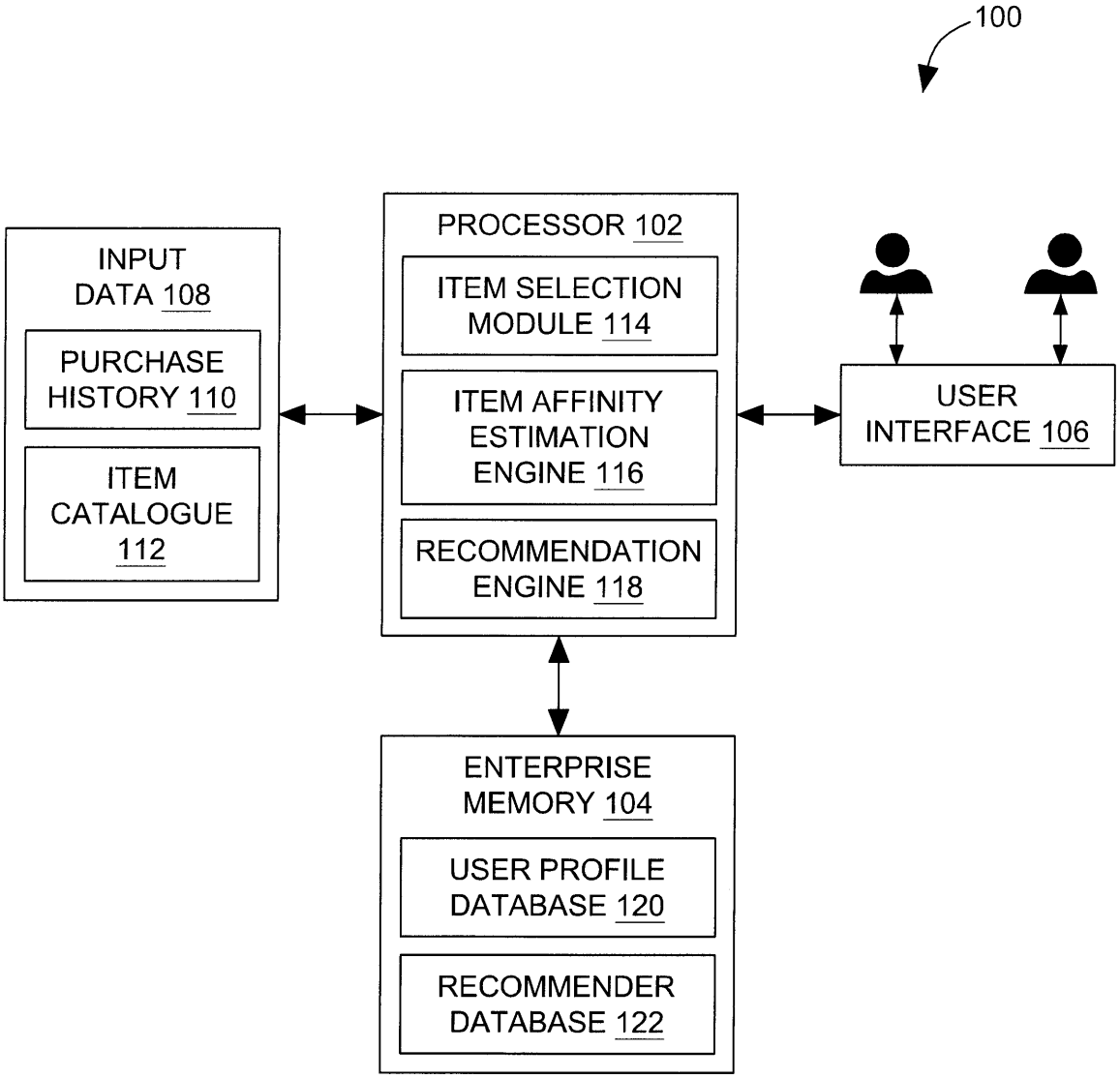

100
INPUT DATA 108
PURCHASE HISTORY 110
ITEM CATALOGUE 112
PROCESSOR 102
ITEM SELECTION MODULE 114
ITEM AFFINITY ESTIMATION ENGINE 116
RECOMMENDATION ENGINE 118
USER INTERFACE 106
ENTERPRISE MEMORY 104
USER PROFILE DATABASE 120
RECOMMENDER DATABASE 122

FIG. 1

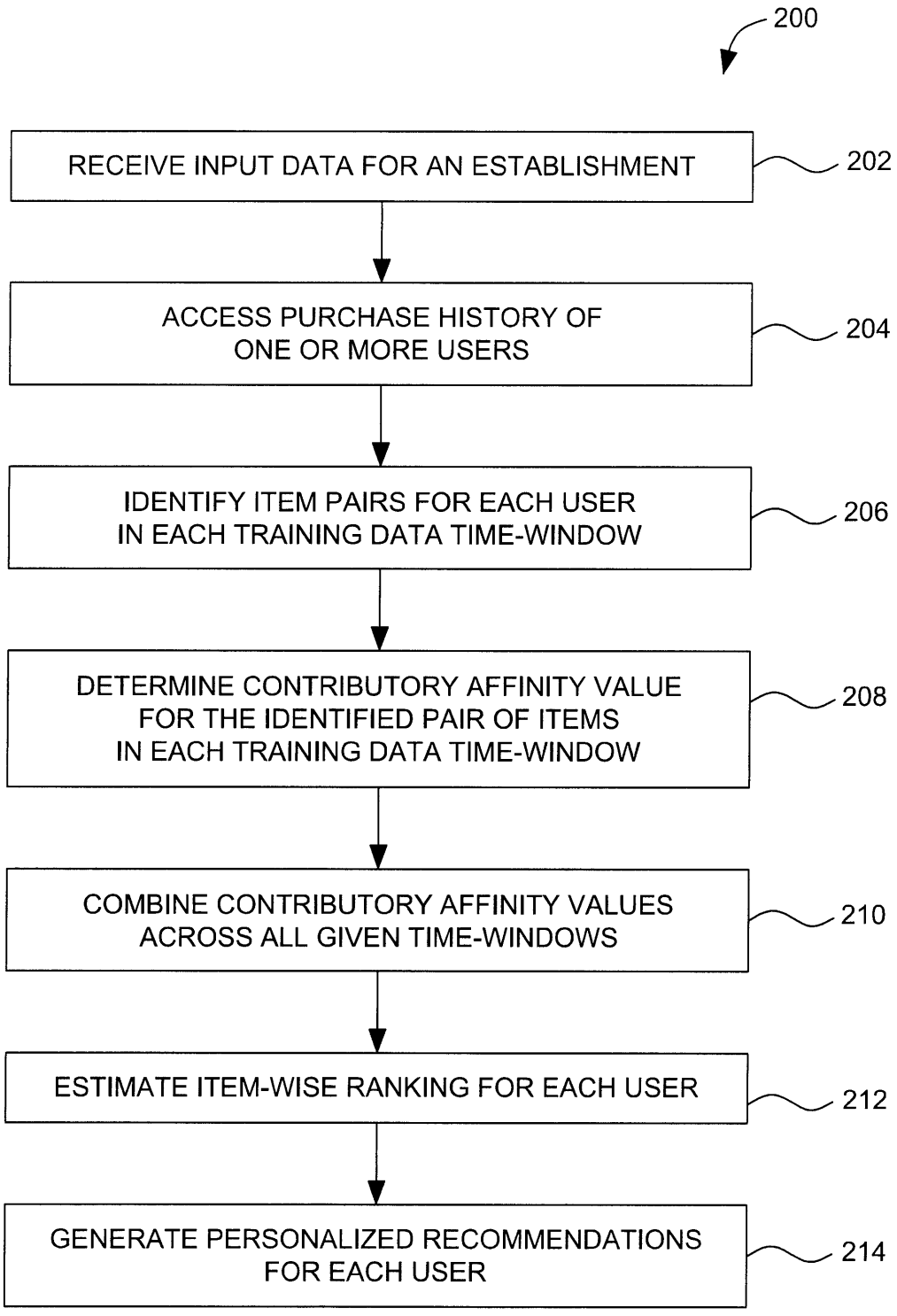

200
RECEIVE INPUT DATA FOR AN ESTABLISHMENT
202
ACCESS PURCHASE HISTORY OF ONE OR MORE USERS
204
IDENTIFY ITEM PAIRS FOR EACH USER IN EACH TRAINING DATA TIME-WINDOW
206
DETERMINE CONTRIBUTORY AFFINITY VALUE FOR THE IDENTIFIED PAIR OF ITEMS IN EACH TRAINING DATA TIME-WINDOW
208
COMBINE CONTRIBUTORY AFFINITY VALUES ACROSS ALL GIVEN TIME-WINDOWS
210
ESTIMATE ITEM-WISE RANKING FOR EACH USER
212
GENERATE PERSONALIZED RECOMMENDATIONS FOR EACH USER
214

FIG. 2

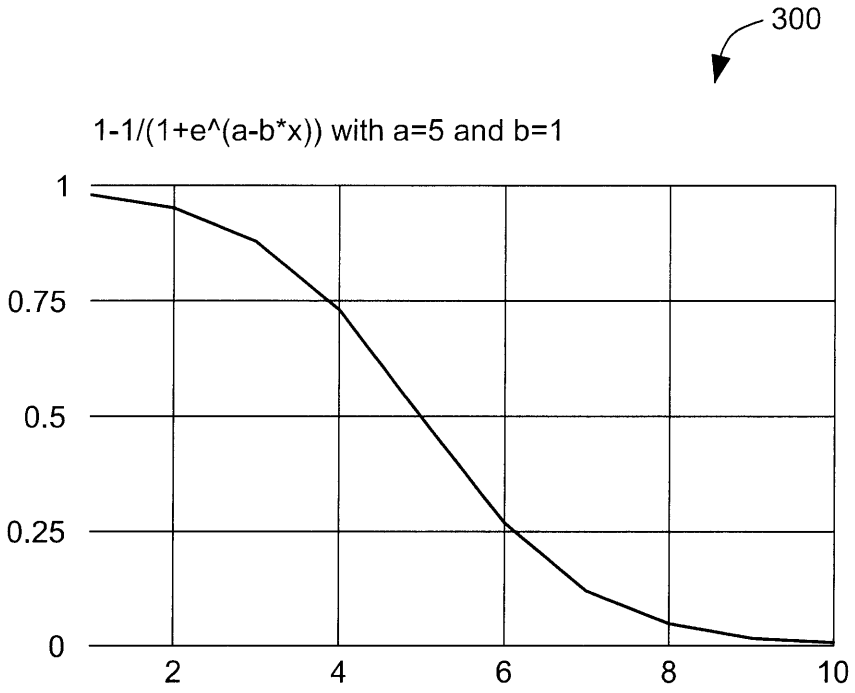

300
1-1/(1+e^(a-b*x)) with a=5 and b=1
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 3-A

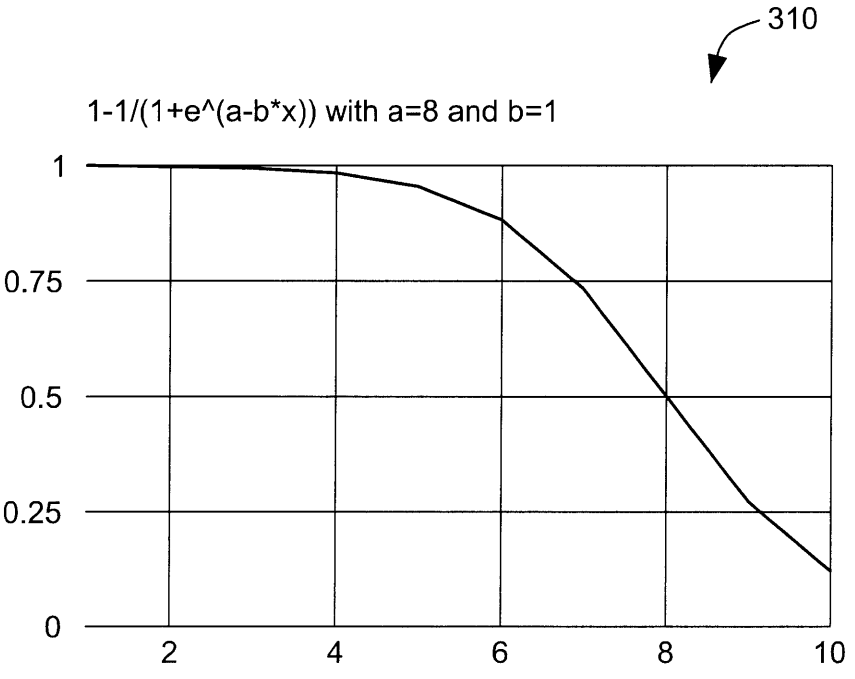

310
1-1/(1+e^(a-b*x)) with a=8 and b=1
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 3-B

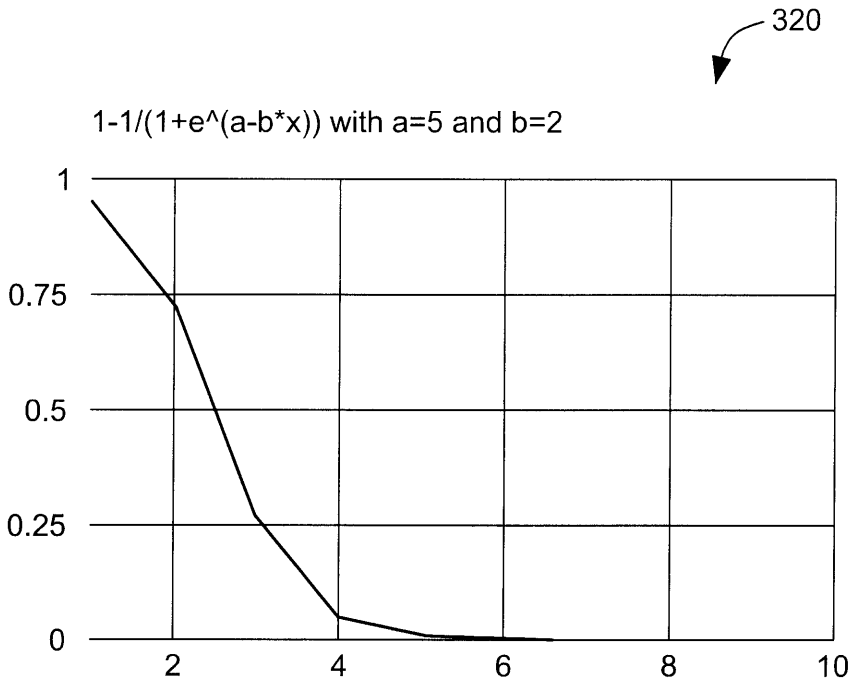

320
1-1/(1+e^(a-b*x)) with a=5 and b=2
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 3-C

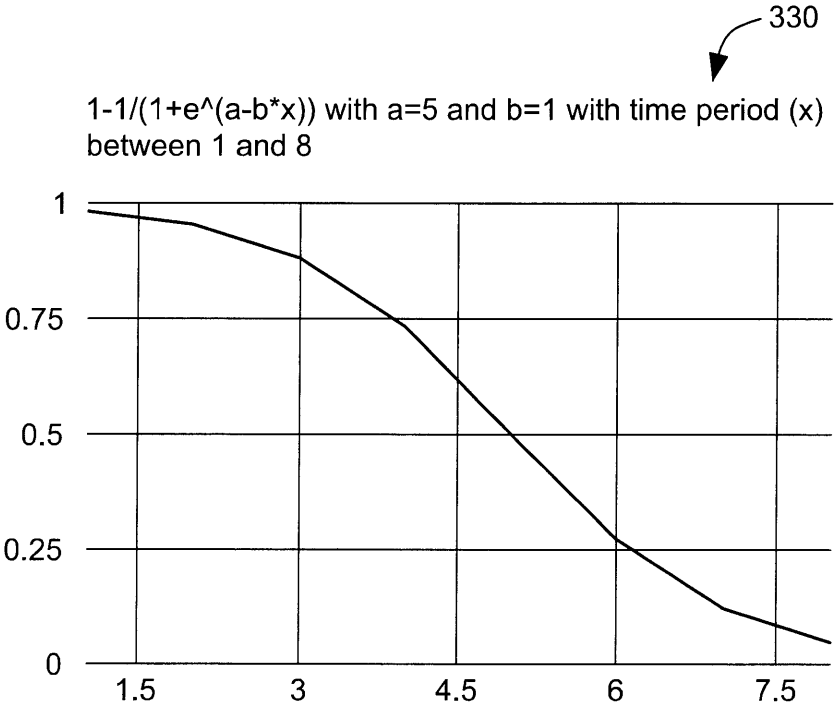

330
1-1/(1+e^(a-b*x)) with a=5 and b=1 with time period (x) between 1 and 8
1
0.75
0.5
0.25
0
1.5
3
4.5
6
7.5

FIG. 3-D

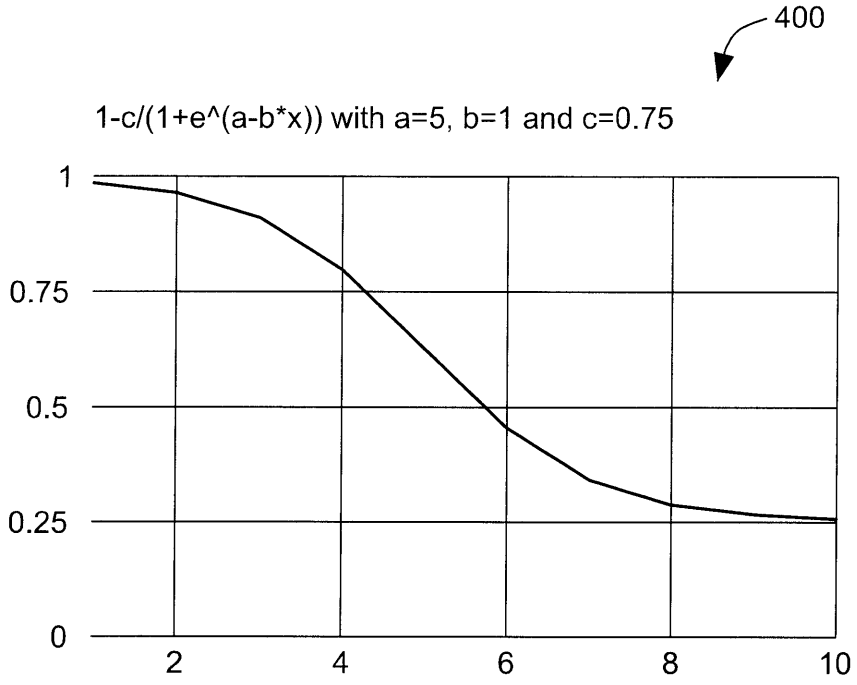

400
1-c/(1+e^(a-b*x)) with a=5, b=1 and c=0.75
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 4-A

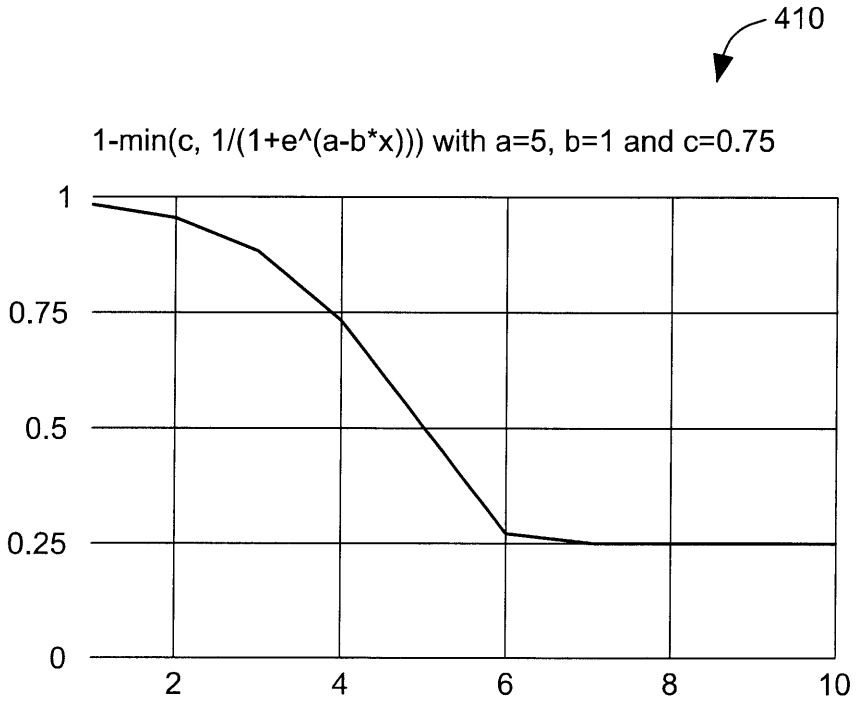

410
1-min(c, 1/(1+e^(a-b*x))) with a=5, b=1 and c=0.75
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 4-B

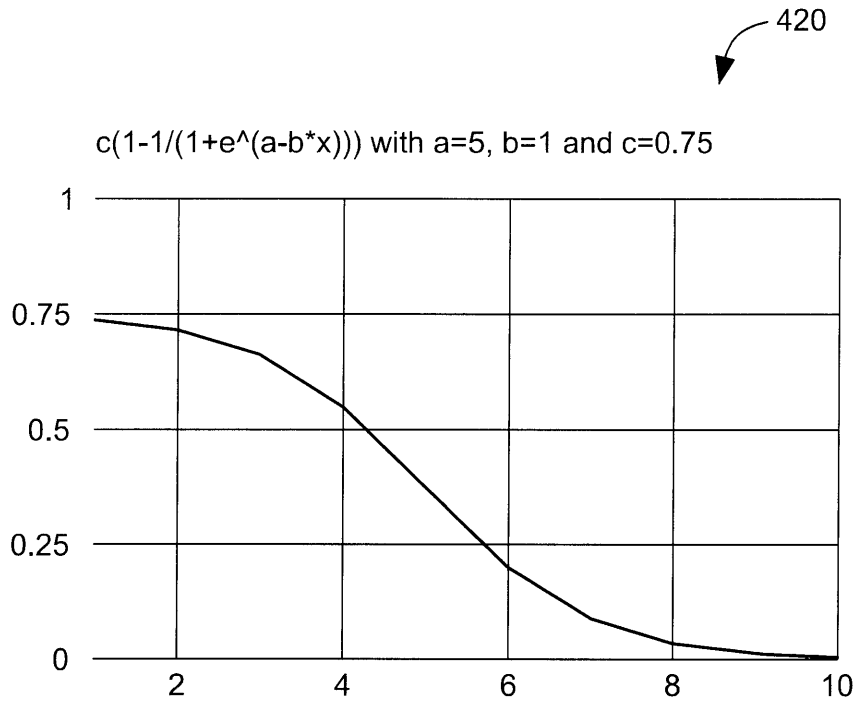

420
c(1-1/(1+e^(a-b*x))) with a=5, b=1 and c=0.75
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 4-C

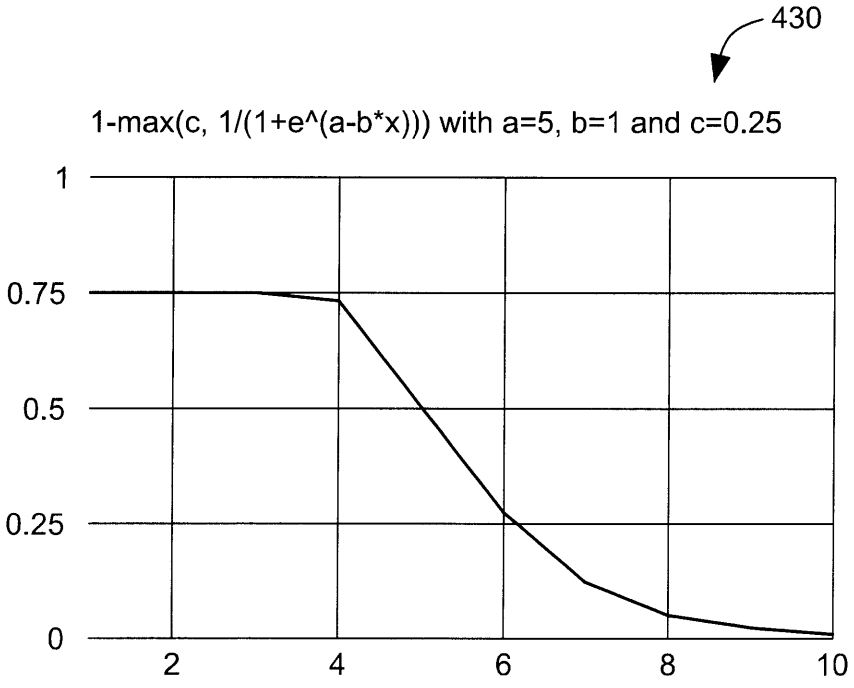

430
1-max(c, 1/(1+e^(a-b*x))) with a=5, b=1 and c=0.25
1
0.75
0.5
0.25
0
2
4
6
8
10

FIG. 4-D

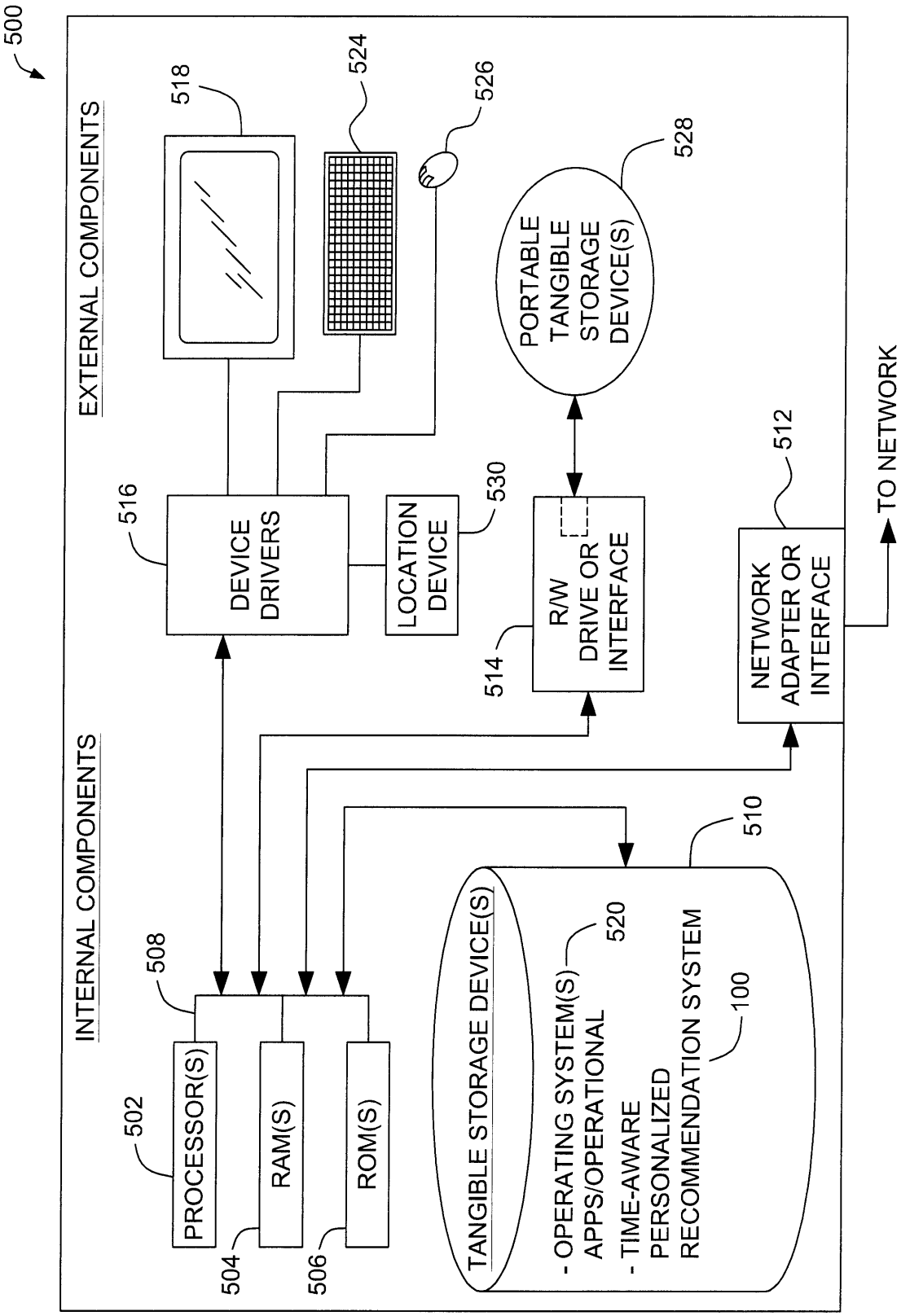

500
EXTERNAL COMPONENTS
INTERNAL COMPONENTS
518
524
526
528
PORTABLE TANGIBLE STORAGE DEVICE(S)
516
DEVICE DRIVERS
LOCATION DEVICE
530
514
R/W DRIVE OR INTERFACE
512
NETWORK ADAPTER OR INTERFACE
TO NETWORK
508
502
PROCESSOR(S)
RAM(S)
ROM(S)
504
506
TANGIBLE STORAGE DEVICE(S)
510
- OPERATING SYSTEM(S) APPS/OPERATIONAL
520
- TIME-AWARE PERSONALIZED RECOMMENDATION SYSTEM
100

FIG. 5