FIG. 1

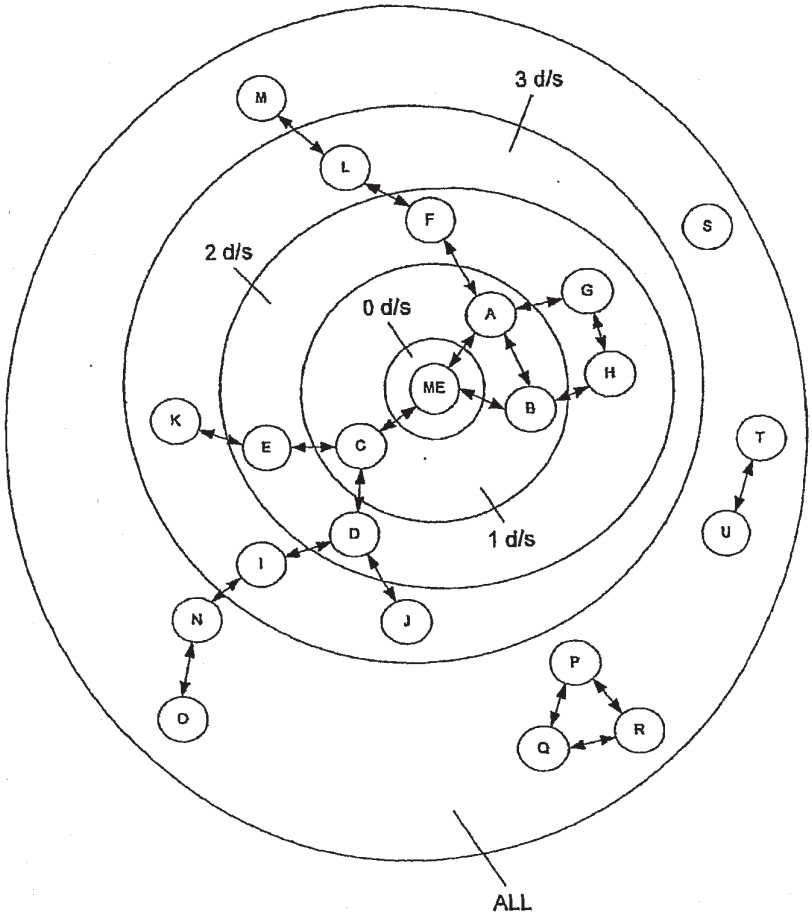


FIG. 2

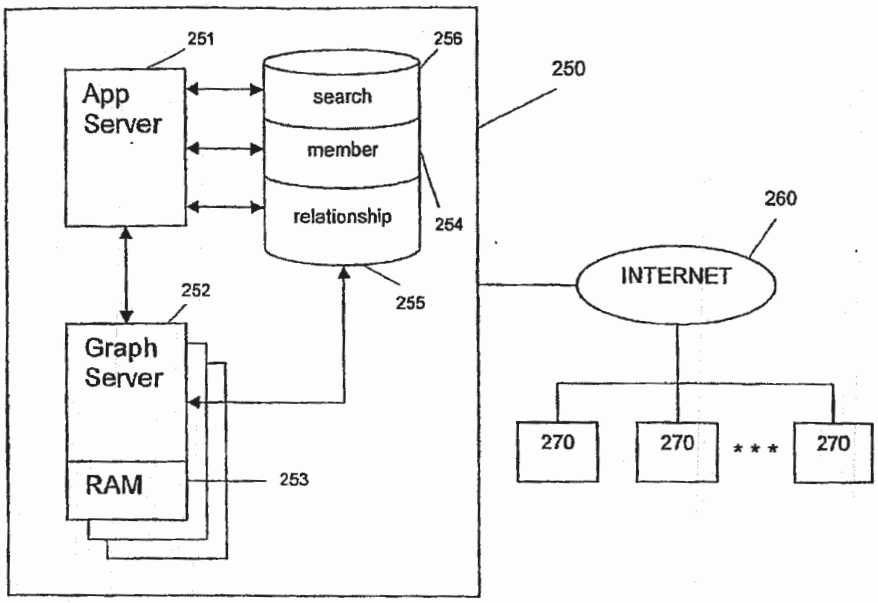

251
256
App Server
search
member
relationship
254
250
260
INTERNET
255
252
Graph Server
RAM
253
270
270
* * *
270

FIG. 3

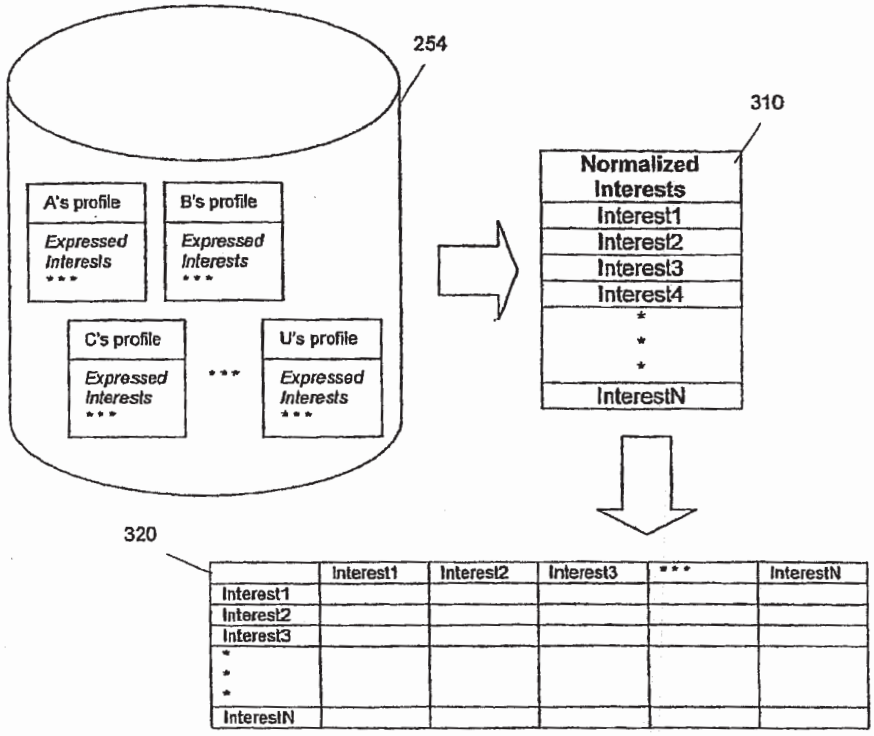

254
A's profile
Expressed Interests
B's profile
Expressed Interests
C's profile
Expressed Interests
U's profile
Expressed Interests
310
Normalized Interests
Interest1
Interest2
Interest3
Interest4
InterestN
320
Interest1
Interest2
Interest3
InterestN

FIG. 4

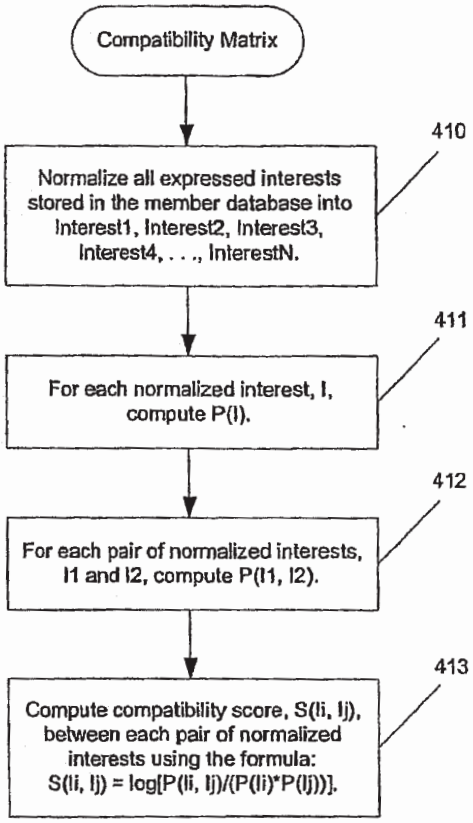

Compatibility Matrix
410
Normalize all expressed interests stored in the member database into Interest1, Interest2, Interest3, Interest4, . . ., InterestN.
411
For each normalized interest, I, compute P(I).
412
For each pair of normalized interests, I1 and I2, compute P(I1, I2).
413
Compute compatibility score, S(Ii, Ij), between each pair of normalized interests using the formula: S(Ii, Ij) = log[P(Ii, Ij)/(P(Ii)*P(Ij))].

FIG. 5

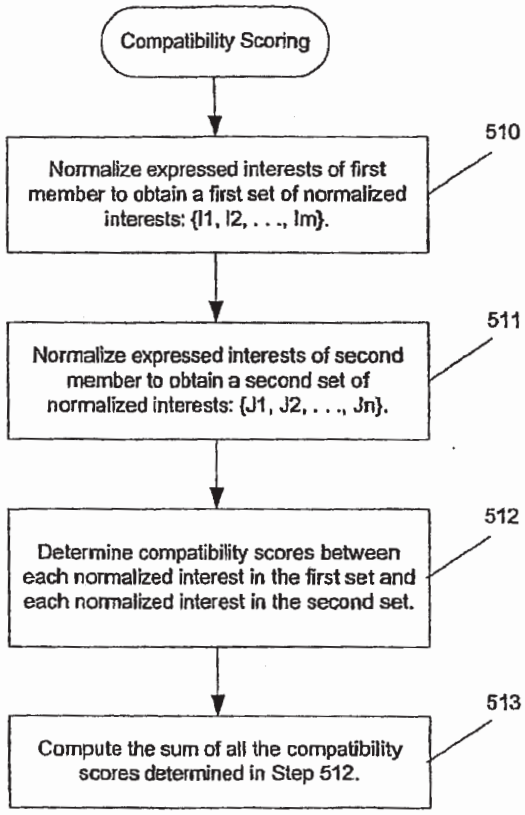

Compatibility Scoring
Normalize expressed interests of first member to obtain a first set of normalized interests: {I1, I2, . . ., Im}.
510
Normalize expressed interests of second member to obtain a second set of normalized interests: {J1, J2, . . ., Jn}.
511
Determine compatibility scores between each normalized interest in the first set and each normalized interest in the second set.
512
Compute the sum of all the compatibility scores determined in Step 512.
513

FIG. 6

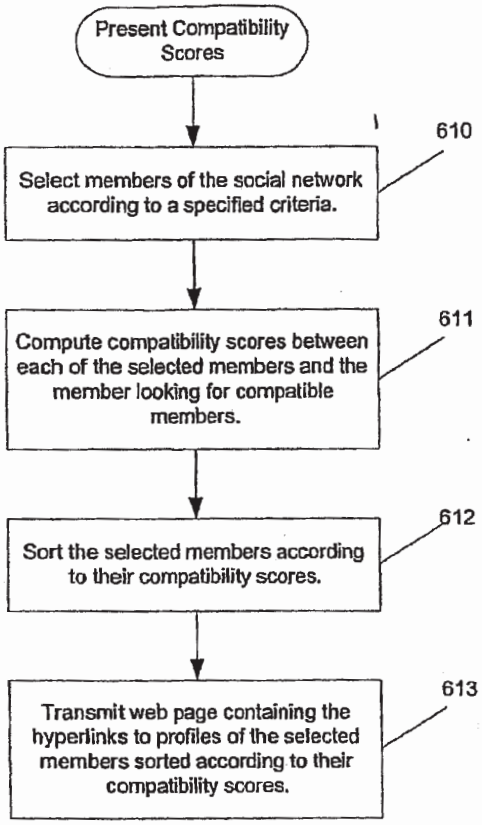

Present Compatibility Scores
610
Select members of the social network according to a specified criteria.
611
Compute compatibility scores between each of the selected members and the member looking for compatible members.
612
Sort the selected members according to their compatibility scores.
613
Transmit web page containing the hyperlinks to profiles of the selected members sorted according to their compatibility scores.

FIG. 7

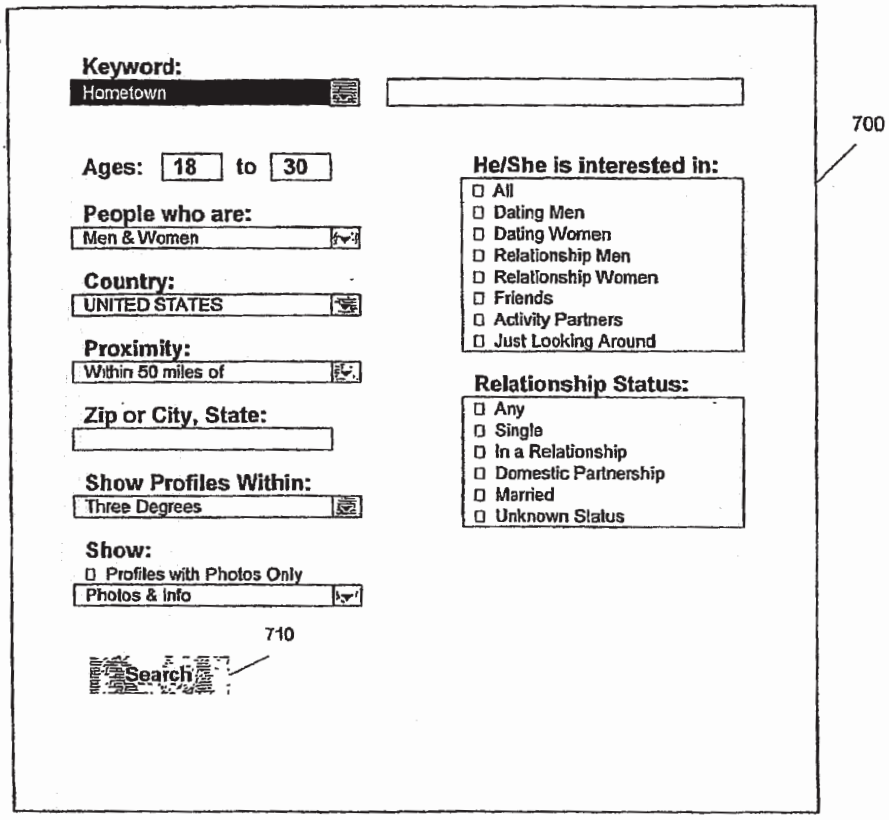

Keyword:
Hometown
700
Ages: 18 to 30
He/She is interested in:
All
Dating Men
Dating Women
Relationship Men
Relationship Women
Friends
Activity Partners
Just Looking Around
People who are:
Men & Women
Country:
UNITED STATES
Proximity:
Within 50 miles of
Relationship Status:
Any
Single
In a Relationship
Domestic Partnership
Married
Unknown Status
Zip or City, State:
Show Profiles Within:
Three Degrees
Show:
Profiles with Photos Only
Photos & Info
710
Search

FIG. 8

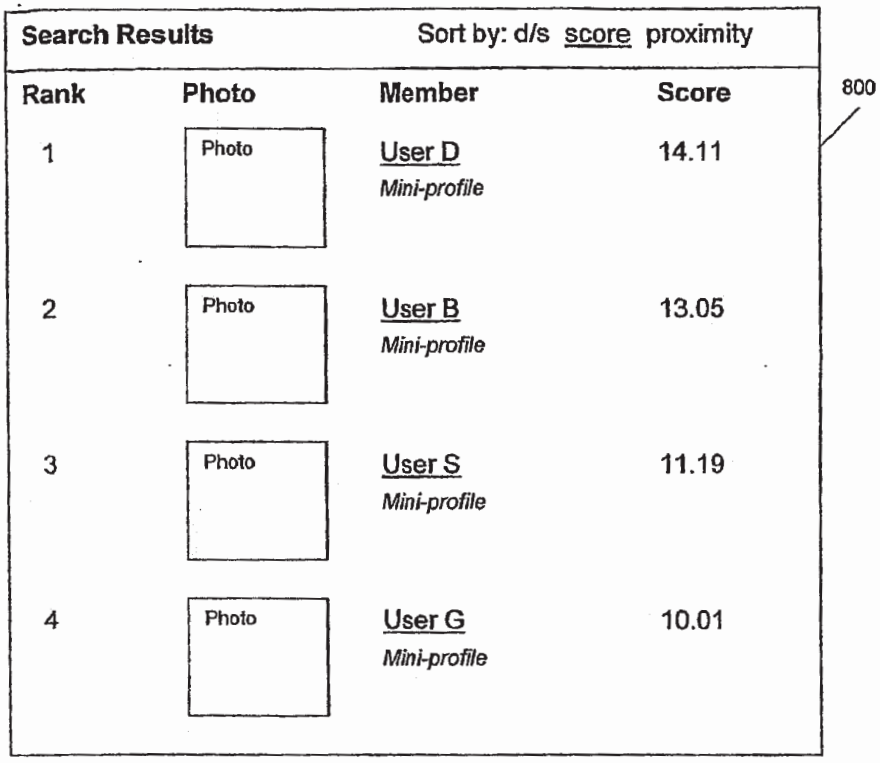
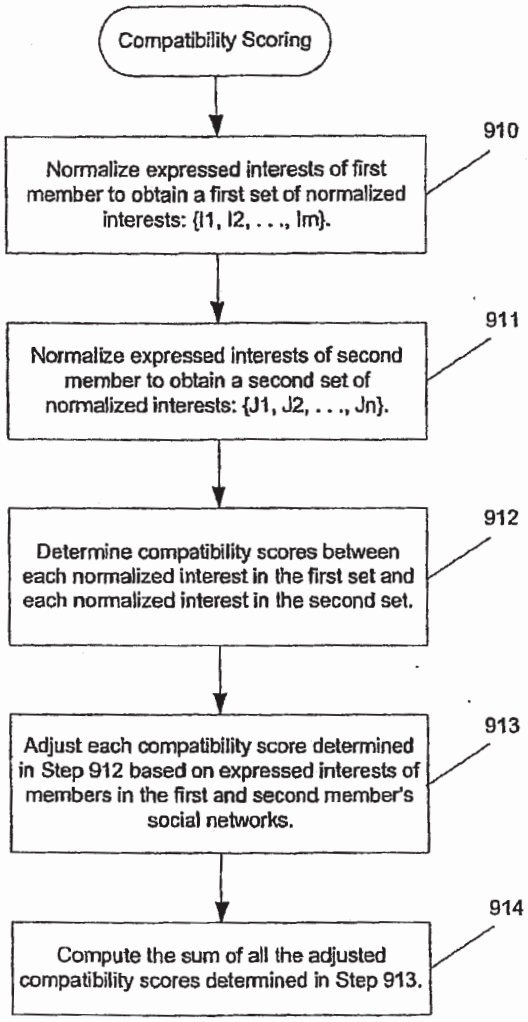

Search Results
Sort by: d/s score proximity
Rank
Photo
Member
Score
800
1
Photo
User D
Mini-profile
14.11
2
Photo
User B
Mini-profile
13.05
3
Photo
User S
Mini-profile
11.19
4
Photo
User G
Mini-profile
10.01

FIG. 9


Compatibility Scoring
910
Normalize expressed interests of first member to obtain a first set of normalized interests: {I1, I2, . . ., Im}.
911
Normalize expressed interests of second member to obtain a second set of normalized interests: {J1, J2, . . ., Jn}.
912
Determine compatibility scores between each normalized interest in the first set and each normalized interest in the second set.
913
Adjust each compatibility score determined in Step 912 based on expressed interests of members in the first and second member's social networks.
914
Compute the sum of all the adjusted compatibility scores determined in Step 913.