CLAIMS

1. A method for automatic management of user permissions in an organization comprising:

automatically grouping users into a plurality of user clusters based on at least one similarity between users in each said user cluster, wherein said automatically grouping comprises:

generating a first matrix representing access permissions associated with each user;

generating a second matrix representing resources accessed by said each user during a predetermined period of time preceding said grouping; and

grouping said users into said user clusters based on combining said first and second matrices,

for each user cluster, automatically generating a set of cluster user permissions, said set of cluster user permissions comprising user permissions belonging to users in said cluster and actively used by at least one user in said cluster, and

for each user cluster, automatically modifying user permissions of each user in said each cluster in accordance with said set of cluster user permissions.

2. The method according to claim 1, wherein said at least one similarity comprises a similarity in access permissions of said users and a similarity in resources accessed by said users, via said access permissions.

3. The method according to claim 1, wherein said combining comprises:

finding distances between respective ones of said users in said first matrix;

finding distances between respective ones of said users in said second matrix;

combining said distances between said respective ones of said users in said first and second matrices, thereby generating a third distance matrix representing combined distances between respective ones of said users in said first and second matrices; and

grouping said users into said user clusters based on said combined distances in said third distance matrix.

4. The method according to claim 3, wherein said combining said distances comprises a weighted combining, wherein a greater weight is given to said distances between respective ones of said users in said second matrix in comparison to said first matrix.

5. The method according to claim 1, wherein said access permissions associated with said each user comprise at least one of direct access permissions and membership of user access groups.

6. The method according to claim 1 and also comprising, prior to said generating said first and second matrices:

obtaining data relating to said users and to activity of said users with respect to said resources over said period of time preceding said grouping; and

unifying said data relating to said users, in order to avoid user duplication.

7. The method according to claim 6, wherein said unifying is based on comparing unique user identifiers between said users, comprising at least one of user names, user email addresses and user phone numbers.

8. The method according to claim 1, wherein said modifying user permissions comprises at least one of:

granting or revoking user permissions so as to be in accordance with said set of cluster user permissions; and

adjusting a level of said user permissions so as to be in accordance with said set of cluster user permissions.

9. The method according to claim 1, wherein said modifying user permissions comprises creating a new cluster having said set of cluster user permissions and populating said new cluster with said users to which said set of cluster user permissions is applicable.

10. The method according to claim 1, wherein:

said first matrix representing access permissions comprises rows of users arranged with respect to columns of access groups and comprises entries indicative of membership of each user of said rows of users with respect to each access group of said columns of access groups; and

said second matrix representing resources accessed by said each user comprises rows of users arranged with respect to columns of resources and comprises entries indicative of actual access by each user of said rows of users with respect to each resource of said columns of resources.

11. A method for management of user permissions comprising:

automatically grouping users into a plurality of user clusters based on a similarity between users in each said user cluster wherein said automatically grouping comprises:

generating a first matrix representing access permissions associated with each user;

generating a second matrix representing resources accessed by said each user during a predetermined period of time preceding said grouping; and

grouping said users into said user clusters based on combining said first and second matrices,

for each user cluster, automatically generating a set of cluster user permissions, said set of cluster user permissions comprising user permissions belonging to users in said cluster and actively used by at least one user in said cluster, and

for each user cluster, automatically providing a user-sensible output comprising a recommendation to modify user permissions of each user in accordance with said set of cluster user permissions.

12. A system for automatic management of user permissions in an organization comprising a computer-readable medium storing instructions thereon, which instructions, when executed by a processor, cause the computer to:

automatically group users into a plurality of user clusters based on at least one similarity between users in each said user cluster, by being operative to:

generate a first matrix representing said access permissions associated with each user;

generate a second matrix representing said resources accessed by said each user during a predetermined period of time; and

group said users into said user clusters based on a combination of said first and second matrices,

for each user cluster, automatically generate a set of cluster user permissions, said set of cluster user permissions comprising user permissions belonging to users in said user cluster and actively used by at least one user in said cluster, and

for each user cluster, automatically modify user permissions of each user in said each cluster in accordance with said set of cluster user permissions.

13. The system according to claim 12 wherein said at least one similarity comprises a similarity in access permissions of said users and a similarity in resources accessed by said users, via said access permissions.

14. The system according to claim 12, wherein said instructions, when executed by said processor, further cause said computer to:

find distances between respective ones of said users in said first matrix;

find distances between respective ones of said users in said second matrix;

combine said distances between said respective ones of said users in said first and second matrices, thereby generating a third distance matrix representing combined distances between respective ones of said users in said first and second matrices; and

group said users into said user clusters based on said combined distances in said third distance matrix.

15. The system according to claim 14, wherein said instructions, when executed by said processor, further cause said computer to combine said distances in a weighted manner, wherein a greater weight is given to said distances between respective ones of said users in said second matrix in comparison to said first matrix.

16. The system according to claim 13, wherein said access permissions associated with said each user comprise at least one of direct access permissions and membership of user access groups.

17. The system according to claim 13, wherein said instructions, when executed by said processor, further cause said computer to:

obtain data relating to said users and to activity of said users with respect to said resources over said period of time preceding said grouping; and

unify said data relating to said users, in order to avoid user duplication.

18. The system according to claim 12, wherein said instructions, when executed by said processor, further cause said computer to at least one of:

grant or revoke user permissions so as to be in accordance with said set of cluster user permissions; and

adjust a level of said user permissions so as to be in accordance with said set of cluster user permissions.

19. The system according to claim 12, wherein said instructions, when executed by said processor, further cause said computer to modify said user permissions by creating a new cluster having said set of cluster user permissions and to populate said new cluster with said users to which said set of cluster user permissions is applicable.

20. The system according to claim 12, wherein:

said first matrix representing access permissions comprises rows of users arranged with respect to columns of access groups and comprises entries indicative of

membership of each user of said rows of users with respect to each access group of said columns of access groups; and

said second matrix representing resources accessed by said each user comprises rows of users arranged with respect to columns of resources and comprises entries indicative of actual access by each user of said rows of users with respect to each resource of said columns of resources.