

## Executive Summary

I haven't looked at the database and code, but I have given the whole networks thing a bit of thought. I'm not as adamantly against Gary's simple checkbox idea as I was before, but I still think there are significant benefits to named networks and a separate network admin screen. I'm also including notes from our conversation about allowing admins to edit and delete member items.

## Admin Edit/Delete Of Member Items

- Any admin can remove something from the groups they administer.
- Admins of CLOSED groups can edit items created IN the group. The edits are applied to the original item, not a duplicate of it.
- What happens to items removed from a group if they were created in that group? Are they deleted entirely, or is the original item transferred to the creator's personal space? I think they should probably be transferred, not permanently deleted.

## Networks Of Groups

- Only admins can create group networks.
- You must be an admin of a group in order to include it in a network. You cannot include a group if you are merely a member of it.
- Only CLOSED groups can be included in a network. Once a closed group has been included in a network, we should probably not allow it to be converted to an open group unless it is first removed from its network(s).
- Members creating an item in a closed, networked group can only share the item with other groups in the network if they are also a member of the group that they want to share it with.

This raises an interface question: on Create pages in closed groups we'll need a Sharing section like the one in personal space. In that area, should we show all the groups from all the networks that this group belongs to, and disable the groups that the user does not belong to, or should we show only the groups that they can actually share with?

- What happens to an item shared with networked groups if the network link is broken? This would happen if either the group in which the item was created or any group with which it was shared was removed from the network.

After a bit of thought I realized that this really isn't an issue. Since you can only share with groups to which you belong, and the sub record doesn't know what group the item was created in, breaking the link wouldn't necessitate any special handling for the shared items unless we decide that they should be deleted when the network link is broken.

For the record, I think that we probably should not automatically remove items when a group is removed from a network, but we might want to give the admin of the departing group the choice of removing items on a group-by-group basis. In that case, we should probably also give the admins of the remaining groups the choice of removing all of the departed group's items.

- Gary wants to let admins link networks through checkboxes on group admin pages. I think that would probably be difficult to accomplish, more trouble for admins to actually use, and it would definitely severely limit the possibilities for adding additional features to the networks concept.

All the problems arise from the way in which the network links would be modelled in the database. The interface Gary wants would correspond to a new table, call it NetworkLinks, which would have one record for each pair of linked groups. Each record would have two fields in which it would store the group IDs of the two groups that the link is connecting.

Say you have six groups: A, B, C, D, E, and F. If you are in group A, and you check B to network with it, then a single record containing the two groups' IDs would be created in the NetworkLinks table.

Gary's idea might work if you want only one-way sharing in the network. (Group A publishes to C, D, and F, but they can't publish back.) In that case one ID field could be reserved for the publishing group, and in any closed group you could just search for links where its ID appeared in that field to build the list of groups that can be shared with.

It also might work if you only want to create two-way links between the group you are in and the groups you are checking, but NOT between each of the checked groups. For example, say I'm in A, and I check B, D, and E. If I then go to any of the checked groups, I see that A is checked, but all the other groups are not. Each group that I linked A to knows that it's networked to A, but isn't aware of any connection to the others.

With either model, to get the effect of a network in which any group can share with any of the other groups, the admin will have to go to each group and check all of the groups that are supposed to be in the network. That's a lot of hassle, and they'll have to repeat it if they ever want to add another group or remove a group.

There is a way to avoid the tedious interface problem and still get networks where all groups can share with all the other groups, but it doesn't do anything about the problem of limited possibilities for adding features. The short answer is: have the database generate all possible links between all the groups in a network whenever a new group is added. The details of how that could be done are messy, but no messier than a lot of the rest of our code, and it wouldn't be happening so often that it would be a significant performance hit.

That's great, but the real problem with Gary's concept is that there is no way to add any sort of options that would modify one network of groups without affecting all your networked groups. To do that, you need a way to define a "network" and to specify which set of connections between groups make up that particular network.

Now, I don't know exactly what sort of options we might want to add in the future. Maybe we'd decide to let network admins limit sharing to certain tools, or we might want to allow them to add additional network admins. I just don't know, but I do know this: without a separate "network" entity, you won't be able to do it.

That's why I think we should have a separate Network item in the group admin menu that would appear only in closed groups. The Network admin page would list any networks you'd created, with the names of their member groups. Clicking on a network name would give you an Edit Network page with all your closed groups as checkboxes, letting you add or remove groups. Any additional network options would also appear here.

Putting the networking stuff on a separate Network admin page has a performance benefit over having it on the main admin page, since the database only has to find and format all the network info on the relatively rare occasions that you really want to see it. That's a feature that could (and I think should) be used with Gary's simple checkboxes, however, so it isn't necessarily a strong argument for named networks.

Apart from the ability to add options to networks, the other main advantage to named networks is that you can manage all your networks from a single screen that's present in every closed group. For example, if you have three entirely separate networks, then under the simple checkbox scheme you would need to visit one group from each network and navigate to it's network admin screen to see which groups are in the networks. With named networks that can be done by one visit to the network admin screen of any closed group.