**NFI File Sharing & Collaboration Tools**

**Requirements**

The requirement is for people within NFI to share files and folders between themselves and other people outside of both NFI and ISU.

The facility should have at least 5Gb or more of space, allow “guests” to be grouped to allow access to various files and folders. Contacts should also be allowed to belong to multiple groups.

If possible, the facility should offer file collaboration tools so that documents can be edited by more than one person and version control so that changes to documents can be tracked. People sharing the folders / files should be informed when a change is made to a file or one is created or deleted.

**Security**

When using any of these facilities it should be remembered that the recipient may choose to share the files with other people. If the recipient is given the appropriate write permissions then the files on the server may be overwritten. When using these online tools care must be taken that sensitive information is kept private and individual users are responsible for whom they allow to share these files - <http://www.indstate.edu/adminaff/docs/932%20Data%20Security%20Policy.pdf>. To emphasize this, one of the reasons that the university will no longer keep emails older than 180 days is for legal requirements - <http://www.indstate.edu/oit1/userservices/ithelp/Retention/retentionpolicy.html>.

It a Class D Felony if you knowingly, intentionally, or recklessly release unencrypted personal data. This means you can be held personally liable and charged with a Class D Felony if you have unencrypted personal data stored on your computer and someone breaches it.

There are methods to help protect files. Do not put files containing sensitive information into public folders and limit the number of people who can access the private folders. Microsoft Office files can be password protected against editing or to even open the file. If Adobe Acrobat is available then PDFs can have the same level of protection applied. 7-Zip - <http://www.7-zip.org/> and TrueCrypt - <http://www.truecrypt.org/> can also protect almost any file to AES-256 standards.

If you’re interested, a device that could check a billion billion (1018) AES keys per second would in theory require about 3×1051 years to exhaust the 256-bit key space - <http://en.wikipedia.org/wiki/Brute-force_attack>

**Options**

There are now several dozen companies offering tools that appear to meet our requirements. I’ve taken a look at some of these and in many cases found that their “blurb” is a lot better than the actual systems they offer or are difficult to use. Some of the options that were looked at can be found at <http://techcrunch.com/2007/10/05/stixy-free-form-collaboration-and-file-sharing-spaces/> and <http://www.missiontolearn.com/2009/08/free-online-collaboration/comment-page-1/>

Another problem with some of these other choices is that they are relatively new companies with an unproven track record in regard to security and reliability.

**Main Contenders**

In the end it came to several well-known and trusted solutions. These were…

Dropbox - <https://www.dropbox.com/>

Google Docs - <http://docs.google.com>

iSecure - <https://files.indstate.edu>

Mobile Me - <http://me.com>

Rackspace Cloud Drive - <http://69.20.89.3/apps/backup_and_collaboration/online_file_storage/>

SkyDrive - <http://explore.live.com/windows-live-skydrive>

**Dropbox** – <https://www.dropbox.com/>

A good simple to use and understand system. Users sign up for an account and download a small program on to their computer. This creates a shortcut on the Taskbar which automatically downloads shared folders / files to their computer and informs them that a file has been altered and/or added. There is a Public folder where individual files can be linked to and shared with anyone – they do not need a Dropbox account to access the file. This system is fast and reliable.

2Gb limit on free accounts. Pro50 upgrades to 50Gb per month for $10 per user per month.

Help and a demonstration can be found at <https://www.dropbox.com/help> and <https://www.dropbox.com/tour>.

**Google Docs** – <http://docs.google.com>

A good simple to use and understand system. Users need to create a Google account but files can be shared to non-account holders.

Users can be grouped but it does entail grouping the users in Gmail - <http://mhauden.com/GoogleApps/docs/sharingWithContacts>, then using those groups in Google Docs. You can share documents to people without a Google account by “publishing” it. However, Google’s search engine WILL index the document if it is published. [http://www.google.com/support/forum/p/Google+Docs/thread?tid=0ca72389c9b26ef4](http://www.google.com/support/forum/p/Google%2BDocs/thread?tid=0ca72389c9b26ef4). There is no notification that the files inside a folder have changed but an email can be sent manually from inside the system.

1Gb limit. Pricing for more space can be found at <http://docs.google.com/support/bin/answer.py?answer=39567>. There is no 5Gb limit the next step is 20Gb which costs $5 per year per user - $60 for 12 people.

**ISecure** – <https://files.indstate.edu>

This application is offered by ISU and should have been so much better. Users can be grouped. Individual folders can be shared with different users and groups. Can be accessed and/or edited by people outside of ISU. Set up interface can be very slow especially when adding users. Entire directories can be shared. Help for this system can be found at <http://www.indstate.edu/cirt/ittrain/resources/tutorials/filesharing/isecure/ISecUre-Getting-Started-handout.pdf>

This system cannot be recommended because it is so slow and cumbersome to use. It should integrate with the university’s email system but is very slow and can cause the web browser to lock up to the point where it has to be restarted.

5Gb limit.

**Mobile Me** - <http://me.com>

This is a commercial offering from Apple and is more of a file sharing rather than true collaboration tool. It’s more expensive than other solutions $99 per user per year but it can be gotten for $60 from places like Amazon. A “family plan” of 5 accounts for $150 is available. A little like Dropbox it’s very easy to use but it’s hard to justify the cost of it.

**Rackspace Cloud Drive** - <http://69.20.89.3/apps/backup_and_collaboration/online_file_storage/>

I like Rackspace, both as a company and for the tools they provide. Their support is excellent should we ever need it. Pricing starts at 10Gb of space at a cost of $4 per user per month. Like most of the other solutions the system is easy to use. At the moment though it is hard to justify the cost of this service when there are others that are free – at least to start with. As online computing gets more common and as we as a group get used to sharing files this way then Rackspace may well be the way to go in the future.

**Skydrive** – <http://skydrive.live.com/>

This is a service offered by Microsoft. Users need a Microsoft Live ID account, but files and folders can be shared with people who do not. Files can be synched between computers. Contacts are easy to manage and group. The version control is good and files can be edited online using standard Office programs. Contacts are easily imported from any other email system and the contacts are easily grouped which makes sharing files very easy. The versioning controls are probably the best of any of the test solutions and it was easy to go back to earlier versions even after several edits. Files can be edited using either the account holders installed MS Office or the online Office Live. Files can easily be updated on several computers using LiveMesh – a system similar to Dropbox.

One problem that users may experience is that the emails advising shared users of new files may be stopped by at least ISU as spam.

25Gb limit

**Conclusions**

With the exception of **ISecure**, all of these systems are easy to use and it doesn’t take long to get accustomed to any of them.

At the moment we are using different solutions. Some of us in Networks are already using one or more of the test solutions or one of the others that wasn’t already specifically tested here.

There is no single solution that does everything that we may need from it now or in the foreseeable future but for ease of use, quantity and quality of services offered then my recommendation would be to use Microsoft’s Skydrive. This is especially true as the university will soon stop archiving emails and people are going to need to have access to their own archived emails which can be easily be done using LiveMesh.

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Google Docs - <http://docs.google.com> - 1Gb of free space - 1Mb to 20Mb individual file size limit depending on type
Dropbox - <http://dropbox.com> - 2Gb of free space - 300Mb individual file size limit
SkyDrive - <http://skydrive.com> - 25Gb of free space - 50Mb individual file size limit
Adrive - <http://adrive.com> - 50Gb of free space - 2Gb individual file size limit
Megaupload - <http://www.megaupload.com> - 200Gb of space - 1Gb individual file size limit
Mediafire - <http://www.mediafire.com> - unlimited free space? - 200Mb individual file size limit