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**Subject:** LMS in Chicago  
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The current POR is to include the local message store in both Chicago and Chicago Premium. It provides MAPI apps with a place to put things and is needed by mail, MOS, and REN. Views of the LMS are integrated with Explorer. Documents can be dragged out of the local message store and into file system directories and vice versa. Documents can also be dragged between public (server) folders and either the lms or the file system. Rich user-defined views into the LMS are an important selling point for mail in particular and our workgroup strategy in general.

There is both a problem and an opportunity in this. At worst, this is an attractive nuisance: users will drag docs into the LMS to take advantage of the rich views and then not be able to "see" them when they are opening a doc from inside an application. At best, this could be a selling point for Chicago and an opportunity for Office apps to distinguish themselves further in 94.

There are at least five questions listed below which need to be addressed. I don't think the group ToddW is leading can solve these without guidance from the people of the to: line. Below the questions I've given some strawman answers and, at the end of this memo, some actions.

\*\*\*\*\*Questions

1. Should we make it impossible to drag between the LMS and the file system?
2. If we leave this capability in, what are the minimum things we have to do to make sure it is not a trap for users?
3. Is there an advantage in promoting this as a Chicago instead of just a workgroup capability?
4. If we actively promote this, are there even more things that have to be done to make it work the way a Chicago feature should?
5. Is there an advantage to Office in this?

There are already a series of technical discussions going on about this which will help gauge the difficulty of these options and may turn up other problems or opportunities.

\*\*\*\*\*Strawman answers.

1. Should we make it impossible to drag between the LMS and the file system?

No!!! This would defeat the integration with Explorer which will let us use Chicago to kill the Notes client and also extend our lead in messaging. It has to be possible to drag to public folders in order to post and it would be absurd not to be able to drag to private folders in the same hierarchy.

2. If we leave this capability in, what are the minimum things we have to do to make sure it is not a trap for users?

- Have excellent backup, restore, recovery facilities for documents in the LMS (this is a wgd problem).
- Make doc file summary properties visible to MAPI so they can become columns in user defined views, be used for filtering, sorting etc. (already POR)
- Make it possible for apps to see and open documents in a MAPI store including docs received as attachments without using MAPI directly (not POR). This has the added advantage of allowing apps to operate directly on documents in a public folder.

Note: we are looking at extending FindFile to see into a mapi store. This solves the problem when FindFile is available.



- Create conversion utilities from MAPI folders, public or private, to OFS (has to be done no matter what)

3. Is there an advantage in promoting this as a Chicago feature instead of just a workgroup capability?

This is really a Chicago call. From a workgroup POV, it would be great to have this info mgmt feature promoted as part of Windows mkting message. The feature has more universal appeal than mail or even fax; everyone has documents to manage. Moreover, it is a clear "leadership" feature. With this, it will be easier to view and manage documents in Windows than on the Mac and there is a consistent metaphor for managing local documents, messages, and documents in shared folders.

Interesting note: we could promote this for the Mac as part of an MS info mgmt client (Capone). The views and LMS are already being done. We could hook the Mac FindFile and SaveFile calls to look into the MAPI store. We would be selling a shell which replaces Finder for doc mgmt.

4. If we actively promote this, are there even more things that have to be done to make it work the way a Chicago feature should?

- Put the FindFile capability into the Chicago shell so that new apps (even better, old apps too) can look in the LMS for files and can take advantage of filtering by creator, subject, even arbitrary properties. Wayout idea: Can findfile spawn the Explorer window modally with the type filter set as specified by the app so that there would be the same UI for locating a msg to be opened from the File menu as there is from the shell?

- Make it possible for apps to store documents directly in a MAPI store without using MAPI directly. This has the added advantage of allowing apps to "post" in a public folder. Best if existing apps can do this, too.

- Make it possible to share a private folder in the wfw sense. Maybe this only a nice to have. I think it may be hard if not impossible but DarrylR is looking at it.

- Make it possible to add arbitrary properties to a document in a folder or a document being dragged into a folder. A template associated with a folder could be used to decide what properties are suggested, available, or required for docs in that folder.

- Merge the UI for automated searching for messages (message finders) and searching for files.

- Evangelize to Norton et al so there will be 3d party utilities.

- Look at performance. I don't think this is an issue on the typical desktop. I already create a 150 or so new files on my desktop every day in my mailfile and only two or three a day at most in the file system. Since the files don't have to be opened to see their mapi properties, finding files by anything beside FAT directory information is much faster in the LMS than the file system. This is a major reason why we use a private mail file rather than the file system to store mail today. StevenSi points out that there are performance implications for developers and others who run processes which create and destroy large intermediate files frequently. This should be OK as long as there is a way to have these utilities use the standard file systems for these temporary files which aren't advantaged by appearing in rich views.

Note: It has been suggested that customers will resist putting all their files in one big opaque place. I don't think so. This is exactly what doublespace does. They won't often see this space in the "real" file system because they won't often look at the real file system. It isn't opaque when they look at it with findfile or explorer.

5. Is there an advantage to Office in this?

There could be. Since Office apps already support summary properties, anything which makes these properties more useful like being able to sort on them, view by them, categorize etc. is an advantage.

We can make this better and more useful than Lotus Field exchange which gets good press but does almost nothing for the user.

Office will have an earlier adopter advantage in this since they already support summary properties, doc file, and findfile.

From an app's point of view, these capabilities are available wherever Capone is. So we can make them available for NT, Win16 or even the Mac by bundling the client physically with Office. So a clear advantage for the Office in doc mgmt on these platforms although not as well integrated as on Chicago.

To the extent Ren is positioned as an even richer right pane viewer of the contents of the LMS and other MAPI stores, the more we get the mapi stores used, the more valuable Ren will be

\*\*\*\*\* Actions

I'm assuming that we'll keep this capability in at least Chicago Premium so wgd is looking at the technical issues in #2 above. We need to work with DAD on access thru FindFile and we are getting help from DarrylR on all of this. We need to work with Cairo folk on conversion utilities.

Again with darryl's help we are looking at what is involved in the items needed for #4. StevenSi has been helping define this as well.

BradSi's call on whether this gets used to sell Chicago. If so Brad, ChrisP, and I have to figure out who does what to make findfile capability available etc.

ChrisP's call on what Office apps gain from doing.

ToddW's group needs to integrate whatever we decide into their common msg work.