Why Do You Make A Folder?

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Folder creation and file (or mail/url) placement are two common and important sub activities when managing information of various types and status. We conducted a study to understand how people manage information in their information workspace: desktop, in folders, email web bookmarks. A semi-structured interview on 17 users revealed two types of user folder creation strategies: prospective ("may want this sometime") and retrospective ("need to group these files somewhere now").

Keywords: folder creation behaviour, decision making, dumping

1. INTRODUCTION

Our rich information workspace on our computers includes the desktop, the file system, email applications and Internet browsers. These are tools that support our everyday life whether in work or leisure. The amount of information that we gather in these domains and through these applications is expanding tremendously and we have folders and files in all of them. However, the tools that should help us also encourage us to do extra 'management work' without necessarily knowing whether it will help us in future retrieval or not. A previous study [1] found that users employ a range of strategies when dealing with task-related email messages. However, we found additional aspects in our findings of how users managed their folders.

2. INTERVIEW AND WALKTHROUGH

In order to understand more about users' creation methods, we interviewed 17 users with various educational backgrounds and levels. All of them are very familiar with Office applications, at least one email application and all had used web bookmarks. The interviews took from 45 to 60 minutes at the person's place of work. During the interview sessions, we prompted the users to show us and guide us through their desktop screen, file folders, email folders and web bookmarks. While they showed us around their information workspace, we encouraged them to verbalise their management methods. 'Decision making' and 'dumping' emerged in our interviews as two core activities that occur during their folder creations.

3. HOW THEY DO IT?

For the users in our study, the computer is one of the main devices they use to help them accomplish their work and leisure goals. Even though many applications have emerged to help users manage their information, we find that users are comfortable with the basic support of folder creation, labelling and management. This finding is supported by the Jones et al [2] study about the role of folders in the organization of project-related information. His study provided three reasons why users still want to have and manage their own folders. These are trust, control, and visibility/understandability. Users' can also be classified either as 'no filers', 'frequent filers' or 'spring cleaners', based on the general level of the strategies they employ [3]. In contrast we have focused more on the dynamic moment-to-moment process of folder creation, which the 'frequent filers' and 'spring-cleaners' of users classified by [3] would employ.

From the analysis we found two types of folder creation method: *prospective* and *retrospective* creation. Prospective creation is when a person creates a folder in advance and thus demonstrates planning. This happens when they think they know in advance 'what will happen', or how the information or task will decompose or be structured and what will be achieved at a certain time. When users employ this type of creation, they use their previous experience and knowledge to create a file structure and a set of labels. Take for example, one of our subjects who was a first year PhD student in the computing department. She had a strong idea of the different folders she needed to create, to organise her work as a PhD student and so she created and labelled her folders, in advance according to her understanding of being a PhD student, even though there was nothing inside some of the folders.

Retrospective creation is when a person creates an appropriate folder by 'gathering together' several semantically related files previously stored in a temporary location(s) (e.g. root folder, top folder, sub-folder).

Users who employed this type of use reported that they did this instead of creating an organisation in advance or organising the documents at the time because of several reasons: time constraints; not having enough similar files or none that could be grouped together, the availability of multiple possible groupings and not knowing what a sensible structure would be at the time. One particular pattern of activity is *dumping*. Dumping usually occurs when users cannot decide where the files should be, putting off organisation and management work till a later date, if not putting it off altogether.
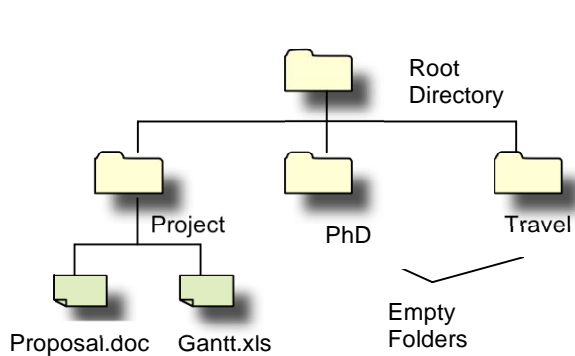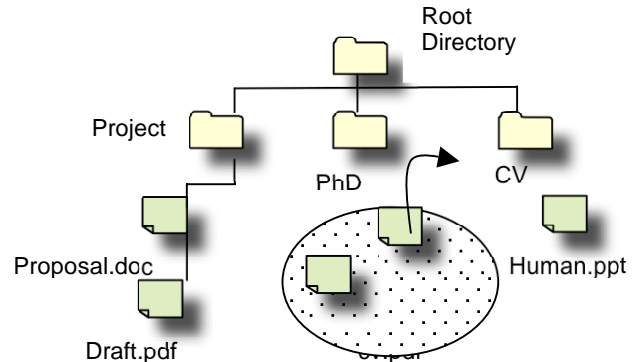

FIGURE 1: Prospective Creation

FIGURE 2: Retrospective Creation

3.1 WHAT TRIGGERS IT TO HAPPEN?
We see four different things that trigger the users' folder creation at specific times:
1- There are no files to classify, but the user just decides to create an empty folder prospectively.
2- The user has just received or created a single file and creates a sub-folder for it, based on the assumption that more files similar to it will arrive or be created. Here the folder starts off with a single new file in it.
3- The same, but when several files are being received or created at the same time, here the sub-folder starts off with many new files in it.
4- For various reasons either the root folder or some other folder has many unsorted files in it. The user notices this and is prompted to retrospectively create sub-folders to manage files, or perhaps split the main folder itself into several folders. In this way folder classifications may be reorganised over time.

4. CONCLUSION AND FUTURE WORK
Prospective and retrospective folder creation are both common strategies and users often employ both methods depending on the content of the information, the user's personal style (i.e. organising in advance, in retrospect, or not much at all) and previous experience. The moment-to-moment decision making whether to store files in existing folders, create new folders or simply 'dump' are based on often rapid, but complex, assessments of the difficulty and confidence in making a classification, the prediction of what files of what kinds are likely to be created or received from others in the future, and a cost-benefit trade-off between present organisation and future retrieval. Based on this understanding of patterns of file organization, we are running a diary study in order to see further relationships between these two methods in organizing information. Does prospective or retrospective creation make organizing easy and accurate? Does it help retrieval? How 'dumping' help organization? Do users separate their thinking about organization and retrieval? What is the critical point in making a decision to create a folder? Parallel with the diary study, we are progressing on building a tool that could utilize dumping activity which helps users in looking at their long forgotten information.

REFERENCES.
[1] Gwizdza, J., (2004) Email task management styles: the cleaners and the keepers. *Proceedings of CHI '04*, Vienna, Austria, 24-29 April, pp.~1235-1238. ACM Press, NY, USA.

[2]Jones, W., Phuwanartnurak, A. J., Gill, R., and Bruce, H. (2005) Don't take my folders away!: organizing personal information to get things done. *Proceedings CHI 2005*, Portland, OR, USA, pp.~1505-1508. ACM Press, NY, USA.

[3] Whittaker, S., and Sidner, C. (1996) Email overload: exploring personal information management of email. *Proceedings of CHI '96,* Vancouver, British Columbia, CAN, pp.~276-283. ACM Press, NY, USA.