Folder Window as Canvas

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Abstract: In this paper we argue that already minimal additions to the operating system's folder window, are able to significantly enhance the quality of the users' Personal Knowledge Management, if they are leaning towards a certain style of cognitive and working preferences that embraces associations or connections among the concepts, documents, or "topics". Drawing upon empirical experiences with a prototypical lightweight user interface, we propose a filebrowser implementation as well as a subsequent user study involving people who expose preferences of spatial visualizers.

1 Motivation and Introduction

There is a striking disaccord between the generally acknowledged relevance of networked thinking on one hand, and its support in the ubiquituous GUIs for filing, on the other. The simplest and most efficient way to express and record networked relationships is to draw a connector line between two items – whatever these items might be. But typically, the user interfaces that handle the most crucial element of personal information management, the file storage, such as the explorer or the folder window, do not allow for such connector lines and hence do not sufficiently cater to networks.

One of the most serious implications of this behavior is the ubiquituous pressure to employ *hierarchical* relationships instead, and that premature pigeon-holing is encouraged. While some users are quite comfortable with their long, linear list of the explorer hierarchy, others can be expected to work more efficiently if their preference for a large visual context is met.

The classical problem of a file that should be in more than one folder, is nowadays often addressed by tagging. However, if available and used, these logical connections enable users to browse on flexible paths through their filesystem but they do not help to overcome labelling, plus their visualization in a common filebrowser is still disadvantaging the spatial visualizers.

Therefore, a promising approach to cater to this audience is to provide an environment where the contents of a folder window can not only be arbitrarily grouped and rearranged but also be associated by connector lines.

2 Connections on the Canvas

Connections have been emphasized as an element more relevant for ("connective") knowledge than the *nodes* they are connecting: Drawing on the common neural metaphor, Connectivism [S05] considers connections not only on the neural level, but also on the conceptual level, and on the personal/ external level, both of which can be seen in file storing criteria.

Traditional user interfaces of the operating system file storage, on the other hand, are lacking support for these connections. A possibility to draw connector lines between the contents of a folder, is not present in any widespread system. More generally, they are disadvantaging spatially visual users: While graphic elements like icons might satisfy *object* visualizers, see [KKS05], spatial visualizers' desire and potential to express the conceptual relatedness of their knowledge artefacts by spatial proximity, is not leveraged, even the possibility to switch autoarrange off has disappeared in the newest version of a popular operating system. Furthermore, these traditional user interfaces are still adhering to the application-centered paradigm described by [RP07]: The user has to switch between the storage overview and the file content detail by launching the appropriate application. Dedicated productivity applications that embrace visual lines, typically don't offer instant display of the content of outside files, in contrast to the preview pane of popular OSs. Typical mindmapping applications are additionally biased towards radial hierarchical structures.

A desirable combination of visual connections in an overview, and verbal content in a detail/ preview pane, can be seen in an opensource application called Deepamehta. Following this prototype, a filebrowser is proposed that combines the typical folder window behavior, serves *stable* visual contexts plus the ability to draw lines in the window as if it were a canvas. First user studies could be supported with the help of popular open source communities, for example with the utilization of semantic middleware or a desktop query service like Nepomuk [N09] offers in the popular KUbuntu OS. The filebrowser canvas should allow to launch arbitrary applications the OS is equipped with, if the preview pane is not able to show a preview. It is expected to yield superior effectivity satisfaction for spatial visualizers.

Note that the proposed visualizations pertain to one folder each, including subfolder names, but no larger parts of the filesystem. And the underlying prototype is not yet an implementation of the proposed application for a DeepaMehta canvas to folders.

References

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