BumpTop Desktop

Course: CMPT 811 - HCI
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Technique

Computer desktops have been designed as two dimensional environments using concepts like icons and windows to bring about a more user friendly method comparing to text console environments to computer users. Although they have done a good job for more than a decade and helped many users be introduced to computer systems without solid knowledge about operating systems available commands and functionality, but huge improvements to 3D graphics techniques backed by strong hardware accelerators brings about a new potential arena for application user interfaces that is hardly touched yet. BumpTop desktop is a primary step for future GUI's which uses that one additional dimension.

Improvement

Many ideas initiated in traditional 2D desktop environments is about to vanish in 3D environments. In BumpTop desktop files and folders will have 3D visual and physical representation and there will be new ideas for sorting and arranging documents that using them users can scale their control over large number of documents they have. The ultimate goal of this project will be to introduce a completely new shell not only a desktop for operating systems like Linux through which users enhance their usage performance and scale by the use of 3D representation of files, folders, windows, widgets and etc. .

Main features going to be implemented will be: 3D visual and physical representation for files and folders, selection and transformation of files and folders, creating piles of documents and operations like Fan-Out, Grid and Messy/Tidy for the piles, context menu system and regular operations through the menu.

Work plan

Nov. 10: Implementation of 3D visual and physical representation for files and folders, selection and transformation of files and folders

Nov. 18: Implementation of piles system and operations like Fan-Out, Grid and Messy/Tidy for the piles. Implementation of context menu system.

Nov. 20-Nov. 27: Evaluation of the technique.

Development Environment

Libraries going to be used for this project will be selected from available open source cross-platform widely supported libraries, such as Ogre3D (Open source Graphics Rendering Engine) for 3D graphics renderer and ODE (Open source Dynamic Engine) as the physics engine. Programming language going to be used for this project will be C++98 as there is a rich set of libraries and development facilities available for this language.