COMS W4172
Case Study: 3D Windows/Desktops 2

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www.cs.columbia.edu/graphics/courses/csw4172

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SpaceTop  J. Lee, A. Olwal, H. Ishii,
C. Boulanger, CHI 2013

- Transparent OLED display
- Depth cameras track head and hands
- Main window appears in front
- When user raises hands from kbd, main window slides down to allow user to select another window from “virtual cabinet” behind it to take its place

http://dx.doi.org/10.1145/2470654.2470680
http://www.youtube.com/watch?v=HikewQGh1IE
More....

www.3dtop.com/

www.cubiceye.net/

www.marcmoini.com/f3_en.html

www.compiz.org

And even more....

tehnif.com/t3desk/

www.tactile3d.com

insitu.iri.fr/metisse/

www.spatialknowledge.com/projects/clara
Microsoft, Apple, Linux, Android

- **Compositing window managers** (e.g., Microsoft “Desktop Window Manager”)
  - Each window is rendered to a separate off-screen buffer
  - Window manager composites buffers to create final desktop, so user can
    - View one window’s pixels through another window (and process the pixels; e.g., to blur)
  - **3D possibilities**
    - Texture-map a 3D polygon with a window’s texture
    - Transform a window’s polygon in 3D

Microsoft, Apple, Linux, Android

- Flip 3D [Windows 7, but not 8]
- 3D dock [OS X Leopard,...]
- Cover Flow [iP{hone,od}, Os X]

- SPB Shell 3D [Android]
- Regina 3D Launcher [Android]