Microsoft, Apple, Linux, Android

- Compositing window managers (e.g., Microsoft “Desktop Window Manager”) appear 2001–2007
  - 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**

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

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**2D Windows in 3D Space Redux**

- Industrial research reinvigorated by commercial AR HWD dev kits

- Microsoft HoloLens (composited image)
- Meta 2