Typical screen behavior

**Experiment setup**
- C2D: 2.66 GHz Core2Duo (1440x900)
- I7: 2 GHz quad-core i7 (1680x1050)
- Dual boot to Mac OS X SL & Windows 7
- DemoForge mirror driver in Win7
- CoreGraphics callback in Mac OS X
- Watched movie (H.264, Adobe Flash), presentation (PPT, Keynote) , cnn.com, game (Cityville) and IDE (VS, Xcode)

**Observations**
- Amount of pixels not high; rate can be high
  - Pixels per sec.: C2D: 0.6 - 34.0 Mps, I7: 1.5 - 49.9 Mps
  - Updates per sec: C2D: 9.6 - 50 ups, I7: 9.5 - 80.7 ups
  - Visual Studio: 62 ups ($\sigma$: 114), ~1 Mps
  - @24 fps, C2D: 31 Mps, i7: 42 Mps
  - Mac/Win7 choose interactivity by immediately displaying contents
    - H.264 played back at twice fps in Win7
    - Long inactivity duration, flurry of activity
    - Fixed rate screen capture inadequate
    - Rendering rate depends on GPU
    - Tablet inspired artifacts in OS X Lion and Win8 require high capture rates

Effective Screencast strategy
- Require high capture rates
  - 16 ms good interval for animation end
- Lossless Zlib compression CPU friendly
- Compression ratio poor
- Bytemap transformation incorporates intra-update redundancy into pixmap

**Performance:**
- Movie: Mac: 4.1 ups (50 Mbps), Win: 10 ups (94 Mbps)
- VS 2010: 49 ups (207 max) - 1 Mbps (12 Mbps max)
- Powerpoint: 3.6 ups (240 max) - 0.2 Mbps (4.6 Mbps max)
- VNC - 4.5 fps