ESCAPE! from the Home Brew Computer Club

What really happened the day Woz showed off the Apple II for the first time...
Castle Wolfenstein

- One of the first, great Apple II games
- Cool concept (Silas Warner)
- Good “bad guys”
- Primitive top-down room view 280x192
- Digitized sound
Wolfenstein 3-D

- Similar concept but less stealth
- 2/12 D ray caster 320x200
- Very high frame rate for 1992
- Set the standard for all FPS (John Carmack)
DUUM 3-D

- A bunch of tests to try ray casting on the Apple II
- Simultaneous sound and joystick reading
- Would have seemed impossible in 1977
- Technology demo released January 2007
- Merlin hosted
The Case For LO-RES

- 16 colors vs 6 colors
- Frame rate vs resolution 40x48
- Fast full screen is more immersive than small window
- Entire column render code unrolled for 4 cases
Sound And Input

- Sound is fully CPU driven (speaker toggle)
- Analog input is fully CPU driven (poll RC charge)
- Combine two axis analog input with sound gen
- Don’t need full resolution of analog input
- Critical timing so all code paths of equal length
Maps and Textures

- 32x32 level map
- 16x16 textures, 15 colors + alpha
- Hand-coded maps and textures
HBCC 3-D

- Silly concept including Woz and stealth play
- Added scaled, depth sorted sprites
- Animated textures and location based texture sets
- Fairly sophisticated line-of-sight “bad guy” AI
- Cross developed using CC65
Map Editor

- Written in BASIC w/ ASM helper
- Wall, texture, power ups, and bad guy placement
- Should run in emulated super-speed
Image Editor

- Written in BASIC
- Textures and sprites in one file
- Should run in emulated super-speed
Apple ][ Forever!