Combat

Playfield: low rez
Missile: high rez
Sprite: high rez
Entire game on one screen

Only other element is *Pong*-style ball
How is this possible?
Atari VCS

- No frame buffer
- Key component: the Television Interface Adapter ("Stella")
- Drawing line-by-line, calculating in horizontal/vertical blanks
- How to create Pitfall!?
Pitfall!

- A founder of the “platformer” genre, 1982
- VCS required drawing each line — so moved high-resolution sprites during every frame (two sprites are tree details *and* Harry, etc)
- Also moved ball graphic during drawing to create vines that are on same line
- Technical and game design tour de force, created by one person: David Crane
Pitfall! Demo
River Raid

- Carol Shaw, Activision, also 1982
- Also pushed platform boundaries
- Also defined genre conventions
- Let’s take a look...
River Raid

• It scrolls — like tutorial! (One of the first vertical scrollers for any platform, big challenge on VCS)

• Fuel gauge (or points)

• Carol Shaw one of the first women in computer game design
First generation games tend to show off what the platform can do by default, then...
PS2

Unreal Tournament (launch title, 2000)

God of War II (late title, 2007)