

GPU Architecture

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The early “GPU”

- Early Video Game console – Atari
- Government work – Aerospace Simulations in 1992





3Dfx Voodoo 1996

- Specialized in 3D rendering
- Accelerator for 3D
- Dominated the market 85%
- Company struggles
- Acquired by Nvidia 2002

The “first GPU”

- Nvidia GeForce 256
- Released in 1999, coined GPU
- Nvidia said GPU: "a single-chip processor with integrated transform, lighting, triangle setup/clipping, and rendering engines that is capable of processing a minimum of 10 million polygons per second."
- 50% better frame rate than predecessors
- 220 nm process



Radeon Technologies Group

FinFET GPU Excitement

Year	Technology Node
2005	90nm
2006	80nm
2007	65nm
2009	55nm
2011	40nm
2016	28nm FinFET

Improvements

- More cores mean more power
- Processes are shrinking - 7nm experiments
- Heat problems

Nintendo

MAKE MONEY

Demand increase

- Better equipment
- Price increase
- GPU's almost doubled in price since rise of bitcoin
- Nvidia 1080 on release \$599
- Nvidia 1080 now \$899

WITH BITCOIN



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