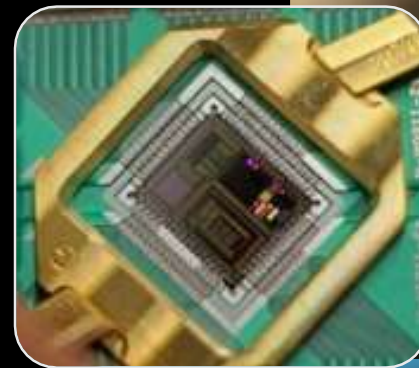




D-Wave Quantum Computing
September 10, 2015

What is a Quantum Computer?

- Exploits quantum mechanical effects
- Built with “qubits” rather than “bits”
- Operates in an extreme environment
- Enables quantum algorithms to solve very hard problems
- Architecture is analog like

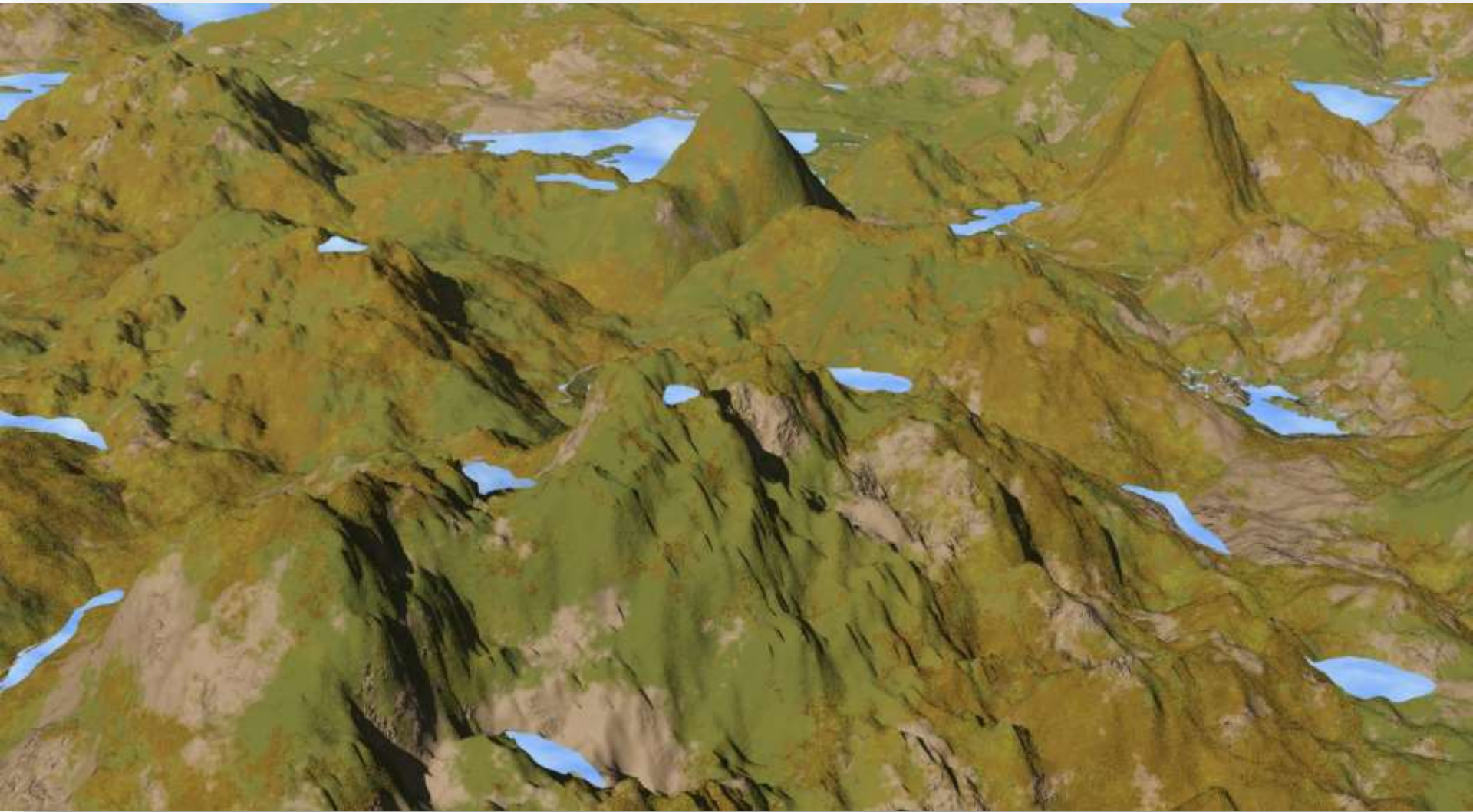


Quantum Processor

But, It Is Fundamentally Different Than Anything You've Ever Done Before!

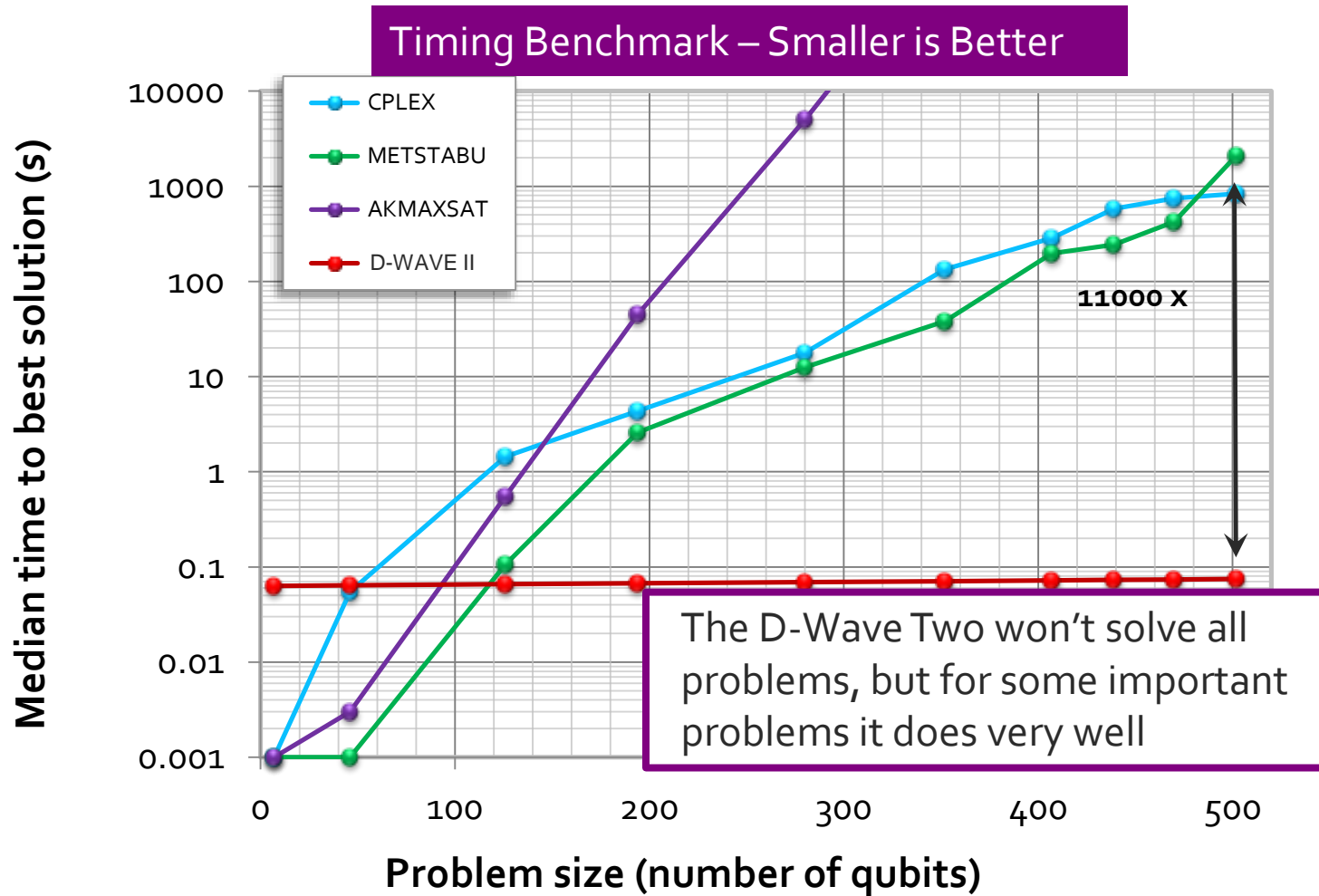
	Intel 64	D-Wave
Performance (GFLOPS)	~20 (12 cores)	0
Precision (bits)	64	4-5
MIPS	~12,000 (12 cores)	0.01
Instructions	245+ (A-M) 251+ (N-Z)	1
Operating Temp.	67.9° C	-273° C
Power Cons.	100 w +/-	~0
Devices	4B+ transistors	500 qubits
Maturity	1945-2015	~1950's

How it Works



Discrete Combinatorial Optimization Benchmarks

Median Time to Find Best Solution



The background of the image is a complex, abstract fractal pattern. It features a central, bright orange and yellow core that radiates outwards into a dense, swirling structure of purple and magenta. The overall effect is reminiscent of a quantum wave function or a complex mathematical fractal. The colors are vibrant and contrast sharply against the dark, almost black background.

D:wave

The Quantum Computing Company™