Moore's Law

- See Wikipedia entry for complete Info
  - http://tinyurl.com/6n7kqv
  - Thirteen hours of video uploaded every minute

“Over the next decade, people will be at the center of their video and media experience. More and more consumers will become creators. We will continue to help give people unlimited options and access to information, and the world will be a smaller place.”

Can we double every two years?

- Explaining Moore’s Law:
  - http://www.youtube.com/watch?v=bLSMn0cNWAw
  - http://www.youtube.com/watch?v=D3dKbq5AXz8

From Bits to Hex: Youtube and tinyurl

- 6n7kqv and D3dKbq5AXz8 are links to ...
  - What does 6n7kqv mean? How is it generated?
- How many four digit (base ten) numbers are there?
  - 10, 100, 1000, 10000, ...
- How many numbers represented by 4 bits (base 2)
  - 2, 4, 8, 16, 32, ...
- How many two letter words are there?
  - aa, ab, ac, ..., az, ba, bb, bc, ..., za, zb, ....zz
  - 26x26 = 676, three letter words?

How does tinyurl work?

- Enter any URL, do some math stuff to turn the string/words into a number
  - If only lower-case letters and digits used, then 36 different “digits”, so six-digit number is
  - $36 \times 36 \times 36 \times 36 \times 36 \times 36 = 2,176,782,336$
  - What about upper and lower case?
  - What about YouTube, number of videos?
  - This is called hashing, change words to number
    - Any word converted to number? Collisions?
DNS Again: Root Servers

- There are 13 DNS root servers
  - http://www.root-servers.org/
- There are really lots more than 13:
- If we could take out “one”, would there be trouble?
  - Yes and no, why?
- What is a server? What does it do?
  - Computer, runs code, ...

OpenDNS

- OpenDNS has servers situated strategically at the most well-connected intersections of the Internet. Unlike your ISP, our network uses Anycast routing technology, which means no matter where you are in the world your DNS requests are answered by our closest datacenter. Anycast routing also means that you are automatically routed to our next closest datacenter in the event of maintenance or downtime. This makes your Internet faster and more reliable.

Digital Natives meet Civics/Democracy

- Talk of a "digital generation" or people who are "born digital" willfully ignores the vast range of skills, knowledge, and experience of many segments of society. It ignores the needs and perspectives of those young people who are not socially or financially privileged. It presumes a level playing field and equal access to time, knowledge, skills, and technologies. The ethnic, national, gender, and class biases of any sort of generation talk are troubling. And they could not be more obvious than when discussing assumptions about digital media.
  - http://tinyurl.com/6c6ebx

Think Globally, Act Locally

- Many of us (self included) are actively working to become global citizens. Often, this means that we know more about what’s going on in Darfur or Georgia than we do about what decisions are being made at our school board. Don’t get me wrong - being a global citizen is really important. … We always bitch and moan about the state of the union, but too often, we forget about the importance of local communities. They matter. And being an informed citizen really matters. Democracy isn’t about presidential races. It’s about engaging in civics at all levels to make society a better place. It’s about knowing who’s running, what they stand for, and how they will make your community a better place.
  - dana boyd: http://tinyurl.com/69wjxv