CS 1: Social Issues part II
Social Context of computing
Internationalization and more

Ascii and Character Sets

- American Standard Code for Information Interchange
  - original universal character set for computing
  - developed in early 1960s
  - mandated for all computers sold in US by Johnson in 1968
  - remained dominant till mid-1990s
  - 7-bit character set
    - 127 total characters possible
    - see printed chart of ascii characters

Ascii and the world

- US was largest consumer of computers in world in 1960s-1980s.

  - ASCII on all of them

  - many seminal programming languages developed in that time

  - what is the side effect?

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    - English became the de facto language for programming for a long time.

    - and for computer use

  - issues?

Computing and culture

- Today

    - unicode (UTF-8) is standard

        - superset of ASCII with 32,767 possible characters.
        - nearly all of worlds languages have characters represented.

    - localization an important feature in program development

    - issues here?

        - Coke

            - Coca-Cola name in China was first read as "Kekoukela", meaning "Bite the Wax Tadpole" or "Female Horse Stuffed with Wax", depending on the dialect.

Computing and culture II

- Cultural issues – apply to computing as well as other business.

- Gerber baby food sold in USA

  - same bottles taken to Africa, effect?

- Laundry detergent commercial example on board.

- Also happens in CS domain (not just in software)

  - Our Logo looks like underwear

  - https://blog.rjmetrics.com/2013/10/09/our-logo-looks-like-underpants-a-case-study-in-internationalization/

- ## Not original ad,

- "The premise of these images was simple: In the first frame, a frowning woman holds up a dirty shirt. The second frame shows her placing this shirt into a washing machine and loading it with Tide detergent. Finally, in the third frame she cheerfully holds up the now-clean shirt."

  - Ref:
    - https://www.altalang.com/beyond-words/ad-translation-when-good-campaigns-go-bad/
  -
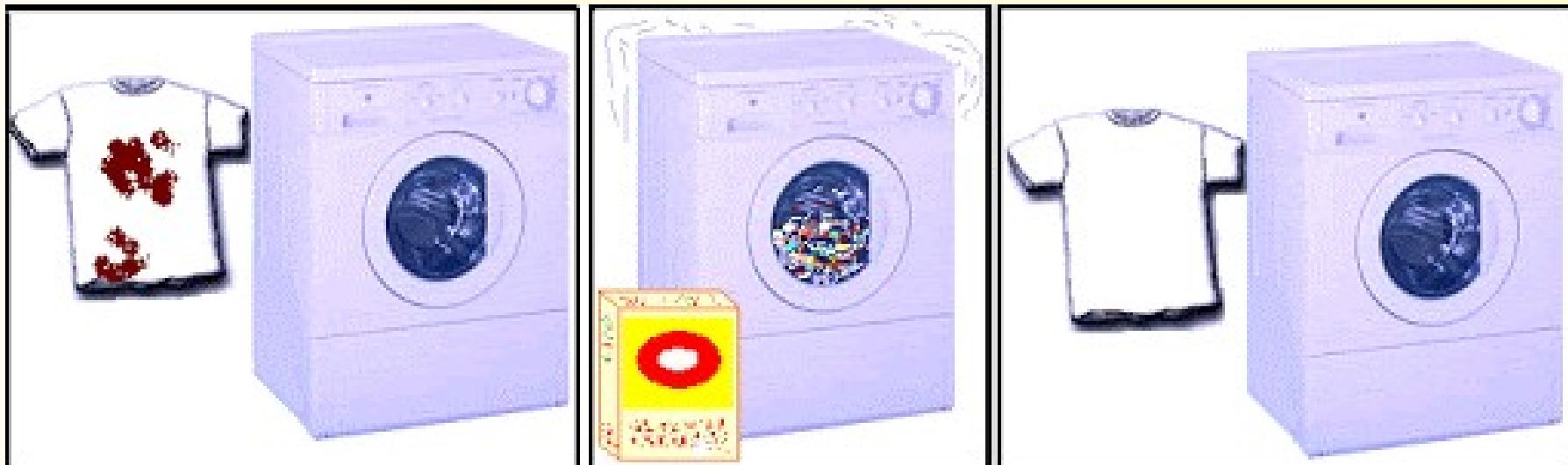
International issues and computing

- http://www.google.com/governmentrequests/

  - government info requests.

- US cryptography export laws

- Ebay: France/Germany.

- Europe's 'Right to be forgotten'

- great firewall of china.

- Is this the way the US government works?

- http://www.syracuse.com/news/index.ssf/2014/10/governments_fake_facebook_page_rips_off_watertown_womans_identity.html

- Outcome:

Facebook, Google and Privacy

- Lets pick and site and look at it
    - How does facebook track you?
    - Are you ok with it?
- How about google?

And while we are on the topic of phones

- Michigan police have a software/hardware system to slurp all data off of a phone in < 2 minutes
    - Bought for terror but used in everyday cases
    - Police get warrants for suspect
    - But tech pulls all data in range
    - http://www.detroitnews.com/story/news/local/michigan/2015/10/22/stingray/74438668/
    - Apparently some local departments in MA have these too
        - https://www.aclu.org/map/stingray-tracking-devices-whos-got-them
        -

Wearable computing

- Early wearable computing
  - circa 1995

Wearable Today

-
-
-
-
-
- http://www.digitaljournal.com/

- what does this mean?

Wearable in the near future

- Some of this is still in prototype

Health status sensors

Chemical & external temperature sensors

Microprocessor unit & wireless communication module

Chemical & external temperature sensors
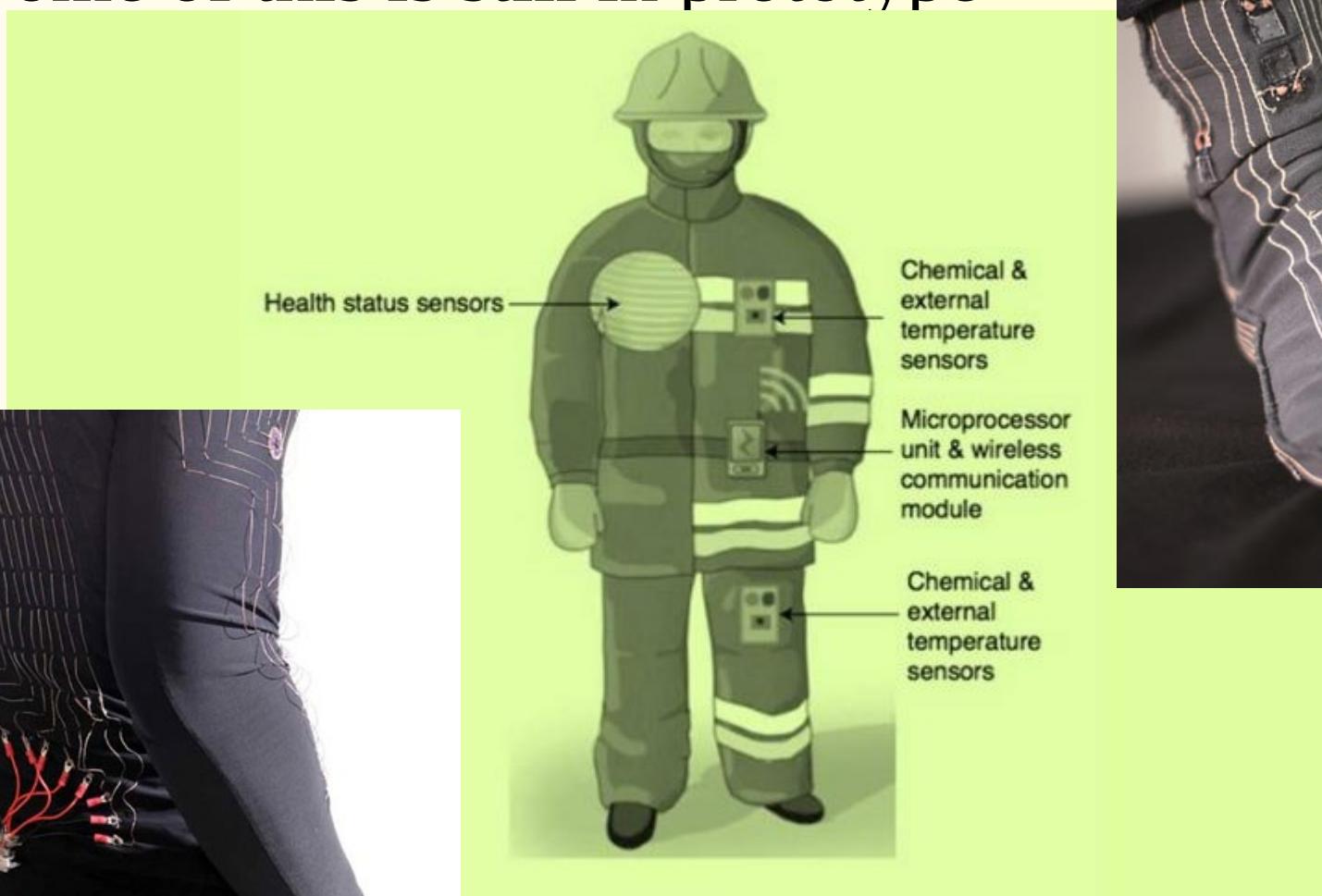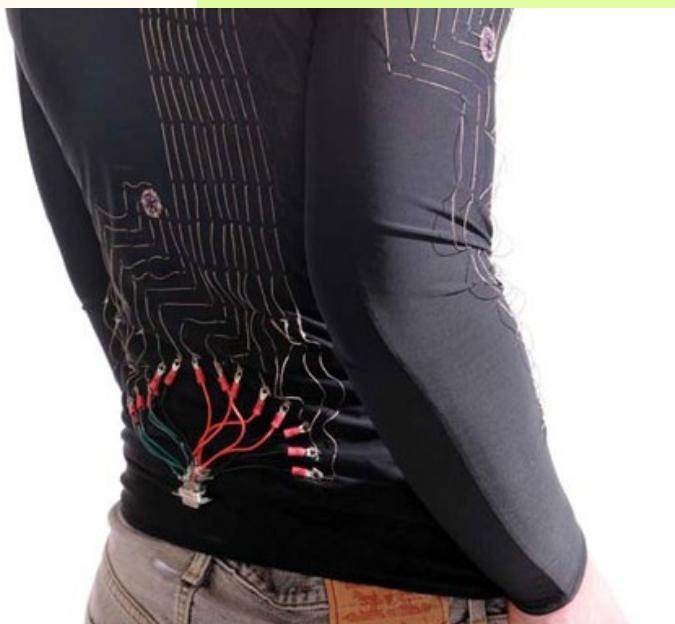
Next

- What is next for human computer interaction?
  - The next step past wearable?

The next step

- This is now:

- https://www.youtube
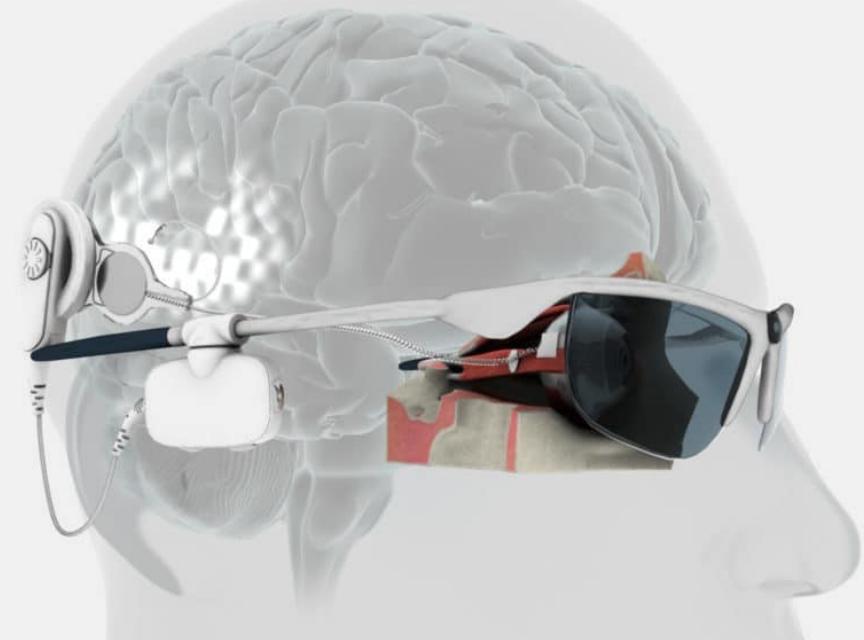
Or even

- Kyoto brain controlled third arm:

    - https://www.thetimes.co.uk/article/kyoto-scientists-devise-mind-controlled-arms-for-multitasking-9qg7w9gwg

    –

And now we are implanting them

- Chips implanted in employees at Stockholm office center

    - http://www.ibtimes.co.uk/stockholm-office-workers-epicenter-implanted-microchips-pay-their-lunch-1486045

- Filmmaker who lost eye replaces it with camera

    - http://eyeborgproject.tv/

- Brain implanted thought to speech

    - https://www.bbc.com/news/health-48037592

    -

The next step

- Ethical questions:

  - What should we do when mechanical/computer parts are better?

  - Sports implications

  - Job implications?

Computers in The workplace

- In workplace
    - Employer owns
        - Computer
        - Network
        - Software licenses
    - They can set the rules
        - Can read any employee email
        - Can monitor employee computing
    - Upheld by court decision.
    - Read and live by acceptable use policies.

AI and Training Data

- Most AI from the last 10-15 years
    - Take a bunch of "training data"
    - Do some statistical/math processing to find patterns
    - Use that to predict appropriate response to new situations
    - What could possibly go wrong!?!?!?

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Example: 2010's era chatbot

- Microsoft wanted to make a bot to connect with young (18-24) people.
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    - AI had no/few preconceptions and was to learn everything by interacting.
    - What could possibly go wrong?
    - ?

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  - Well – have you visited the Internet??

  - https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist

  - And there were far worse than on that page

Let's end this topic here