DESIGN PRINCIPLES FOR CONNECTED DEVICES

UNIT 1

CHAPTER 2

Here comes the Internet of Things

- The Internet will connect billions of people through mobile and embedded smart devices.

- Real-time communication and the accessibility to any information on-line will enrich people and machines; …

- The Internet will connect everyday things integrated into people's every day lives. – More equipment will be connected to the Internet than people by a factor of 8 to 1.

- IoT will integrate many industry verticals (e.g., healthcare, energy, transportations) into smart */city/building/home environments.

- IoT will be centric to people's needs and every day existence.

CALM AND AMBIENT TECHNOLOGY:

- • ubicomp is often also referred to as ambient computing.

- • the term "ambient" is not something to which we actively pay attention and in some cases as something which we seek to remove (e.g., ambient noise in a sound recording).

- • the term calm technology—systems which don't compete for attention yet are ready to provide utility or useful information when we decide to give them some attention.

MAGIC AS METAPHOR:

- • In addition to the technology becoming capable of a particular action, we often need society, to be ready to accept it.

- • There are many examples when the main difference between a failed technology and a wildly successful one is that the successful one arrived a few years later, when people were more receptive to what was offered.
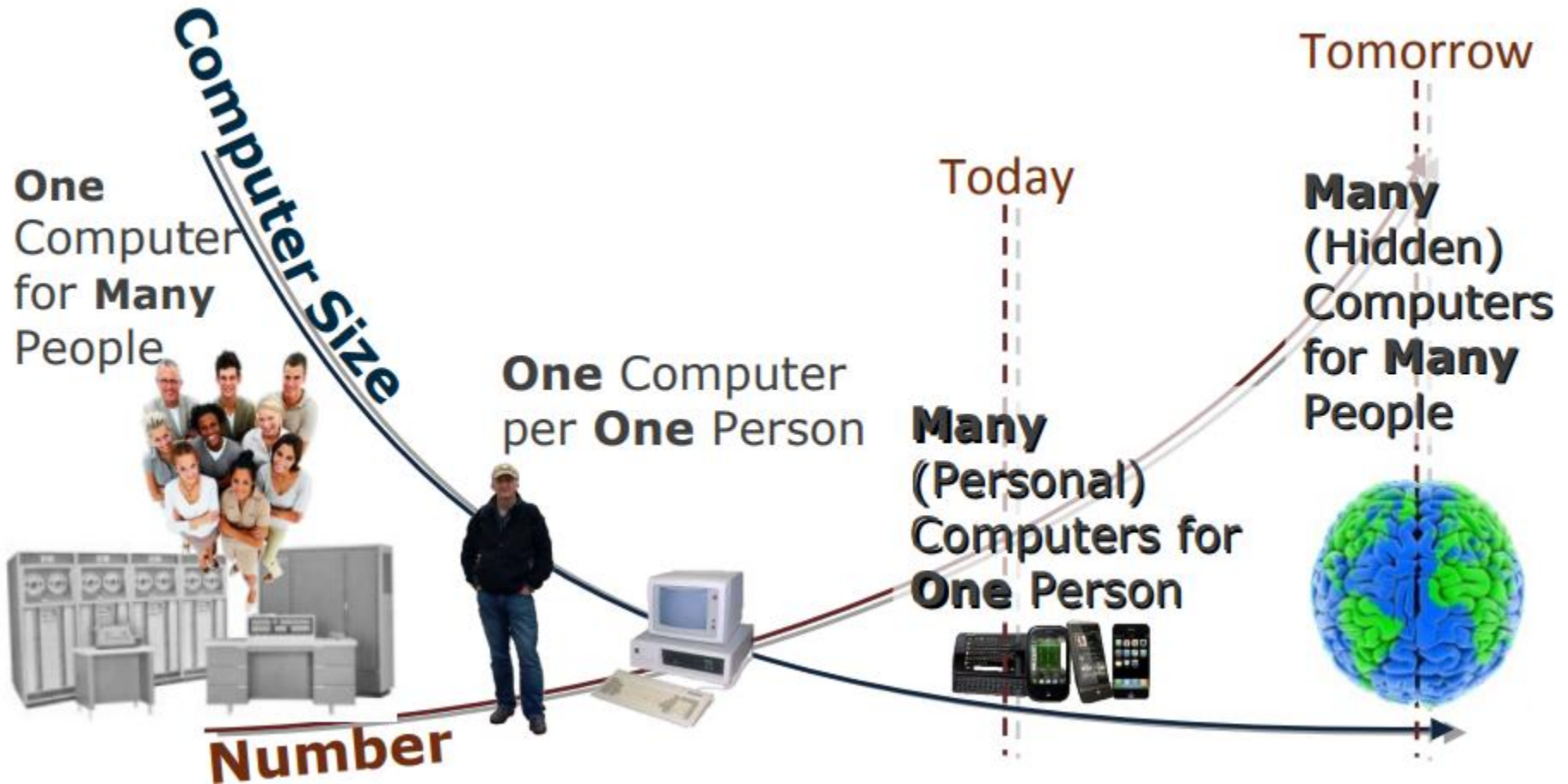
AFFORDANCES:

- • Donald Norman defines affordances as follows:
- • Affordances provide strong clues to the operations of things.
- • Knobs are for turning.
- • Balls are for throwing or bouncing.
- • When affordances are taken advantage of, the user knows what to do just by looking:
- • no picture, label, or instruction is required.
- • Complex things may require explanation, but simple things should not.
- • When simple things need pictures, labels, or instructions, the design has failed.

The rise of Ambient Intelligence: The Personalization, Socialization, and Real-world Awareness of the Internet

Computer Size

One Computer for **Many** People

One Computer per **One** Person

Today

Many (Personal) Computers for **One** Person

Tomorrow

Many (Hidden) Computers for **Many** People

Number

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CASE STUDY: The WhereDial

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- It is developed by John McKerrell