Case Studies

What is case study

- A case study is an in-depth study of a specific instance (or a small number of instances) within a specific real-life context.

What is case study

- Four key aspects:
  - in-depth investigation of a small number of cases;
  - examination in context;
  - multiple data sources;
  - emphasis on qualitative data and analysis.

Why case study

- Goals of traditional qualitative case studies generally fall into one of three categories:
  - exploration: understanding novel problems or situations, often with the hopes of informing new designs;
  - explanation: developing models that can be used to understand a context of technology use; and
  - description: documenting a system, a context of technology use, or the process that led to a proposed design.
- HCI case studies address these and one additional goal:
  - demonstration: showing how a new tool was

Types of case study

- Intrinsic or instrumental
  - Intrinsic studies describe cases that are of interest to a particular situation.
  - instrumental case studies ask questions in the hope of generating insights that go beyond the case at hand, leading to a broader understanding.
- Single case or multiple cases
  - May need to use multiple cases when one might seem to do just as well, because instrumental case studies aim at generalization.
- Embedded or holistic
  - Embedded studies: include multiple units of analysis within a single case.
  - Holistic studies: address only one unit in each case.

How to do case study

- Four components of a case study design:
  - questions;
  - hypotheses or propositions;
  - units of analysis; and
  - a data analysis plan.

How to do case study

- Once defined your questions and hypotheses, move on to consider other questions of case study design:
  - the type of case study,
  - selection of cases,
  - data collection, and
  - data analysis.

An Example

- In this case study (Shinohara and Tenenberg, 2007), researchers tried to understand how Sara (not real name), a blind person, used a variety of technologies to accomplish multiple tasks.
- They were specifically interested in understanding "what technologies were most valued and used, when they were used

Table 7.1 Analysis of Sara's Tasks

Object/ Task	Description	Intentions/ Goals	Limitation (What Exactly is Going on?)	Explanation (Why Does the Limitation Happen?)	Workaround (How is the Limitation Overcome?)	Usability of Workaround (Efficiency, Memorability, Satisfaction)	Wish (Desires for the Future)
Navigating with JAWS	Incorrect key strokes may cause her to lose her bearings	Execute an action through specific hotkeys	JAWS is doing something other than the intended action	Other keys may have been hit by mistake	Keeps trying different key combinations to execute intended action	Satisfactory but not efficient	JAWS could help gather her bearings before executing commands
Searching for A CD to play	Linearly searches all CDs	To select a specific CD to listen to	She cannot quickly read CD covers	CD jewel cases not easily identifiable. Labels do not fit on case spines	Labeled CDs, mentally organized by preference, read one at a time	Slow but satisfactory	None
Organizing CD collection	CD collection is placed on two shelves, in almost no particular order	To distinguish CDs in player, preferred ones from least favorites	Discs are not organized in conventional means	She does not have much time; she has a lot of CDs	Three discs currently in CD player have a special spot on CD shelf	Efficient, quick and straightforward	None

JAWS refers to the assistive screen-reading software used to turn text on the screen into speech (http://www.freedomscientific.com/Products/Blindness/JAWS [accessed 19.03.16]).