Ch. 18
Methods for User-Centered Design

Aims and objectives

- Identify the importance of considering the whole human-computer system
- Understand the role of the different methods within HCI design
- Understand the ‘star’ life cycle approach
Soft systems methodology (SSM)

- The essential aspect of understanding situations from a systems perspective is to consider the system as a whole.
- The emphasis of SSM is not on finding a solution to a specified problem, it is on understanding the situation in which a perceived problem is thought to lie.

Stages of SSM

- Stage 1 - the problem situation
- Stage 2 - The problem situation expressed
- Stage 3 - Root definitions of relevant systems
- Stage 4 - Building conceptual models
- Stage 5 - Comparison of models and expressed problem situation
- Stage 6 - Feasible and desirable changes
- Stage 7 - Action to improve the situation
Cooperative design

- Participative design
- Sociotechnical design

Open Systems Task Analysis (OSTA)

- The most significant of sociotechnical approaches to system design
Steps involved in OSTA

- Step 1 - The primary task of a work system is stated
- Step 2 - Task inputs are identified
- Step 3 - The external environment is established
- Step 4 - Transformation processes are described
- Step 5 - The social system is analysed
- Step 6 - The technical system is analysed
- Step 7 - Performance satisfaction is introduced.
- Step 8 - The requirements for the new technical system are derived from the task analysis

Problems of OSTA

- The need for an expert to guide the design process and support user
- Level of integration with other system development processes and methods
- They can only be used if the organizational political climate is suitable
- Sometime, cost effectiveness
Multiview: A user-centered methodology

- PTM-Primary task model
- FM-functional model
- PT-People tasks
- RS-Role sets
- CTR-Computer task requirements

Strength and weakness of Multiview

- Strength-Ability to aid designers, ensuring that systems are developed carefully and logically
- Weakness-difficult to fit specific designs into a rigid framework
An HCI design approach (Star model)

- Evaluation is central in this model
- All aspects of system development are subject to constant evaluation by users and by experts
- Star model promotes an “alternating wave” approach to system development

Star model

- Emphasizes the important distinction between conceptual design and physical design
- Primarily oriented to the particular demands of developing interactive systems that will be usable by people.