Identifying and Selecting Users for User-Centered Design

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Contents

- Introduction: Why do we need to identify and select users?
- The process of identifying and selecting users
- Experiences from seven case studies
- Conclusions
Introduction

- User involvement is a key principle of user-centered design
- Need to identify and select users for field studies, usability tests etc.
  - Users may not be known
  - Large numbers of heterogeneous users
- The involved users should represent the intended users
Analyzing stakeholders

- Utilizing existing knowledge and documents
- Identifying stakeholders
- Identifying user groups
- Preliminary description
Identifying and selecting users: process

- Brainstorm a preliminary list of users
- Describe user characteristics
- Describe main user groups and prioritize them
- Select typical and representative users from the groups
- Gather information and redesign descriptions
Main user characteristics: Checklist

- Personal characteristics
  - Age, sex, lifestyle, skills, physical constraints etc.

- Task related characteristics
  - Goals, tasks, usage (heavy vs. light, frequency)

- Geographic and social characteristics
  - Location, cultures, communities, organization
## Describing users: User/task table

<table>
<thead>
<tr>
<th>User group</th>
<th>Task</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission clerk</td>
<td>Collect patient data</td>
<td>25</td>
</tr>
<tr>
<td>Nurses</td>
<td>View medical data</td>
<td>490</td>
</tr>
<tr>
<td>Administrators</td>
<td>Install and maintain software</td>
<td>12</td>
</tr>
</tbody>
</table>
Describing main user groups

User groups in hospital

Admission clerks
- Collect patient data
- Want effectiveness

Nurses
- View medical data
- Want to heal patients
- Need easy access and accurate data

Administrators
- Install and maintain software
- Love technology
- Want security
# Selecting product features by weighing user segments and tasks (Redish & Wixon, 2003)

<table>
<thead>
<tr>
<th>Users</th>
<th>Relative Market Size</th>
<th>Task Relative Importance</th>
<th>Product Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hi-3 Med-2 Low-1</td>
<td>Hi-3 Med-2 Low-1</td>
<td>Interruption Protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Analyser</td>
</tr>
<tr>
<td>Tecno Bob</td>
<td>1</td>
<td>Install 3</td>
<td>1</td>
</tr>
<tr>
<td>Newbie Ed</td>
<td>1</td>
<td>Write 1</td>
<td>-1</td>
</tr>
<tr>
<td>Pract. Sue</td>
<td>3</td>
<td>Download 2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analyse 3</td>
<td>1</td>
</tr>
<tr>
<td>Sum</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-1- will confuse users
0-users will not use
1-users mildly positive
2- users strongly positive
Selecting users: Stratified sampling

- The populations is divided into groups
- Random samples are drawn from each group
  -> A representative cross-selection of users
Lead user method

- The most advanced users are selected
- Very effective in finding new innovative product ideas and can be used to understand future needs
- A combination of lead and ordinary users most beneficial
  - The reality of the findings can be checked with ordinary users
Seven case studies

- Real product development cases in six companies in Finland
- The goal was to pilot field studies in real contexts
Observations

- Developers underestimated the diversity of users
  - Infrequent and indirect user, summer help, special groups were neglected
- Identification of user groups is an iterative process
Type of user needs identified

- Additional
- Common
- Conflicting
Conclusions

- The process helps identify the diversity of users and select representative users
  - We could gain broader information about user needs
  - The core set of common needs + conflicting needs were identified