ESIP Usability Cluster Monthly Meeting:
Brief Overview of Usability and Introduction to Usability Testing

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Brief Overview of Usability
Usability Concepts

• **Definition of Usability:**
  • “Quality attribute that assesses how easy user interfaces are to use.”
  • “Methods for improving ease-of-use during the design process.”

• **5 Quality Components:**
  • **Learnability** - How easy is it for users to accomplish basic tasks the first time they encounter the design?
  • **Efficiency** - Once users have learned the design, how quickly can they perform tasks?
  • **Memorability** - When users return to the design after a period of not using it, how easily can they reestablish proficiency?
  • **Errors** - How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
  • **Satisfaction** - How pleasant is it to use the design?

Usability Concepts - Continued

Introduction to Usability Testing

Introduction to Usability Testing

• Testing the interfaces with real users.

• A Usability Test has four stages:
  • Preparation
  • Introduction
  • The test itself
  • Debriefing

• Testing should be performed with at least 5 users.

• “Discount usability” variation.
Preparation

• Planning for the test goals and plans.
• Understanding the test budget.
• Selecting the test tasks.
• Acquiring test users.
• Complying with ethical/legal requirements.
• Performing pilot testing/rehearsals with the intended test administrators.
• Setting up the test environment.
Introduction

• Welcome.

• Purpose of the test.

• Disclosure of related policies / terms and conditions.

• Confirmation of agreement to participate in the test.

• Explanation of test process, including the usage of equipment involved.

• Invitation to the user to ask questions to ensure user’s comfort and confidence.
The Test Itself

- Remind user to think aloud.
- Resist the urge to help/bias the user.
- Avoid factors that might distract the user.
- Maintain the same test administrator during the same test session.
Debriefing

• Give the user the opportunity to ask questions and provide additional feedback.

• If an additional survey/questionnaire will be given to the user, the survey/questionnaire should be administered before the discussion of the test process.

• Compile the summary report for each test as soon as possible
Comparison to Focus Group / Interview
Focus Groups / Interviews

- Both are considered as indirect methods to study user interactions.
- The results might reflect users’ opinions (i.e. what they think they do) instead of what they actually do.
  - However, focus groups can help in assessing user needs and attitudes and interviews can help in determining user satisfaction.
- It is helpful to leverage different evaluation techniques as different methods have their own strengths and weaknesses.