CHAPTER 13:
The Timely User Experience

Designing the User Interface:
Strategies for Effective Human-Computer Interaction

Sixth Edition

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Addison Wesley
is an imprint of
PEARSON

CSci363 – User Interface Design

Fall 2024

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Recorded* 12/04/24	Recorded* 12/04/24	Recorded* 12/04/24	Recorded* 12/04/24	Recorded* 12/06/24	Recorded* 12/06/24	Recorded* 12/06/24	12/02/24 1:25 – 1:40
V P O S	V P O S	V P O S	V P O S	V P O S	V P O S	V P O S	V P O S

NULLbodies	Rough Riders	Green Grass	The Compile Crew	Fantastica	Team Team	Team 07	Just The Bit
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12/02/24 1:40 – 1:55	12/02/24 1:55 – 1:10	12/04/24 1:25 – 1:40	12/04/24 1:40 – 1:55	12/04/24 1:55 – 1:10	12/06/24 1:25 – 1:40	12/06/24 1:40 – 1:55	12/06/24 1:55 – 1:10
V P O S	V P O S	V P O S	V P O S	V P O S	V P O S	V P O S	V P O S

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12/09/24 1:25 – 1:40	12/09/24 1:40 – 1:55	12/09/24 1:55 – 1:10	12/11/24 1:25 – 1:40	12/11/24 1:40 – 1:55	12/11/24 1:55 – 1:10
V P O S	V P O S	V P O S	V P O S	V P O S	V P O S

***Recorded presentations will be done in YuJa and shared with the instructor by the end of day**

Updated Friday, November 22, 2024

Project Presentation Rubric

Presentation Rubric
Scale I: Vocal Expression Vocal expression refers to the distinctness of the articulation and pronunciation of words. This refers to the voice rather than to meaning. The rating is an evaluation of the clearness of the expression, not the understandability of the meaning of the word being used. **85 – 100** Clear throughout **70 – 84** Generally clear **50 – 69** Poor articulation
Scale II: Physical Expression Physical expression refers to the degree to which the speaker maintains eye contact with the listeners. One extreme is represented by the person who either avoids eye contact altogether, the other by the person who seems to be staring constantly at you. The ideal is represented by the person who attracts the listener's attention and interest through use of the eyes without making the listener uncomfortable. **85 – 100** Involves audience with eye contact **70 – 84** Some eye contact **50 – 69** Avoids eye contact
Scale III: Organization Organization refers to the sequencing of main points within the message. No order would be extremely confusing to listeners, while effective order helps them both to follow and to anticipate ideas. **85 – 100** Effective order **70 – 84** Some order **50 – 69** No order
Scale IV: Support and Elaboration Support and elaboration refer to the way the speaker works with each idea. Does the speaker provide proof, data, and evidence? Are illustrations, examples, etc., sufficient to support and clarify the ideas and their relevance to the social implication of the subject/topic? **85 – 100** Reasoning clear and effective **70 – 84** Reasoning clear **50 – 69** Reasoning unclear

UML Use Case Description

A UML Use Case Description is a textual explanation of a specific function or interaction within a system, detailing how an external entity (called an "actor") will interact with the system to achieve a particular goal, outlining the steps involved, and providing a high-level view of the system's expected behavior from the user's perspective; essentially capturing the "what" a system does rather than the "how" it does it. (Google AI)

UML Use Case Description Example

USE CASE #	< the name is the goal as a short active verb phrase>	
Goal in Context	<a longer statement of the goal in context if needed>	
Scope & Level	<what system is being considered black box under design> <one of: Summary, Primary Task, Sub-function>	
Preconditions	<what we expect is already the state of the world>	
Success End Condition	<the state of the world upon successful completion>	
Failed End Condition	<the state of the world if goal abandoned>	
Primary, Secondary Actors	<a role name or description for the primary actor>. <other systems relied upon to accomplish use case>	
Trigger	<the action upon the system that starts the use case>	
Description	**Step**	**Action**
	1	<put here the steps of the scenario from trigger to goal delivery, and any cleanup after>
	2	<...>
	3	
Extensions	**Step**	**Branching Action**
	1a	<condition causing branching> : <action or name of sub-use case>
Sub-Variations		**Branching Action**
	1	<list of variations>

UML Use Case Description Example

Use Case Description Example - login

Use Case ID:	ACC_UC_1
Use Case Name:	login
Created By:	Joe Blogs
Date Created:	1-1-2012
Description:	This use case allows user to login into the system to access the relevant functions according to the user's role. The various user roles are staff, admin staff, system administrator, manager and department head. To login to the system, all users have to enter their unique staff id which is their NRIC number. The users have a maximum of 3 attempts to login after which their account are locked and they will have to contact the system administrator to unlock their account upon successful login the system will display the relevant user's home page.
Primary Actor:	User
Secondary Actor:	None
Preconditions:	1. User has to have a valid account
Postconditions:	1. The system displays the relevant homepage

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UML Use Case Description Example

Use Case Title: Pay for a job posting
Primary Actor: Recruiter
Level: Actor goal
Precondition: The job information has been entered but is not viewable.
Minimal Guarantees: None
Success Guarantees: Job is posted; recruiter's credit card is charged.
Main Success Scenario:

1. Recruiter submits credit card number, date, and authentication information.
2. System validates credit card.
3. System charges credit card full amount.
4. Job posting is made viewable to Job Seekers.
5. Recruiter is given a unique confirmation number.

Extensions:

2a: The card is not of a type accepted by the system:
    2a1: The system notifies the user to use a different card.
2b: The card is expired:
    2b1: The system notifies the user to use a different card.
2c: The card is expired:
    2c1: The system notifies the user to use a different card.
3a: The card has insufficient available credit to post the ad.
    3a1: The system charges as much as it can to the current credit card.
    3a2: The user is told about the problem and asked to enter a second credit card for the remaining charge. The use case

Expectations and Attitudes

- Users may achieve rapid task performance, low error rates, and high satisfaction if the following criteria are met:
  - Users have adequate knowledge of the objects and actions necessary for the problem-solving task
  - The solution plan can be carried out without delays
  - Distractions are eliminated
  - User anxiety is low
  - There is accurate feedback about progress towards the solution
  - Errors can be avoided or, if they occur, can be handled easily

- Three primary factors that influence user expectations and attitudes regarding SRT are:
  1. Previous experiences
  2. Individual personality differences
  3. Task differences

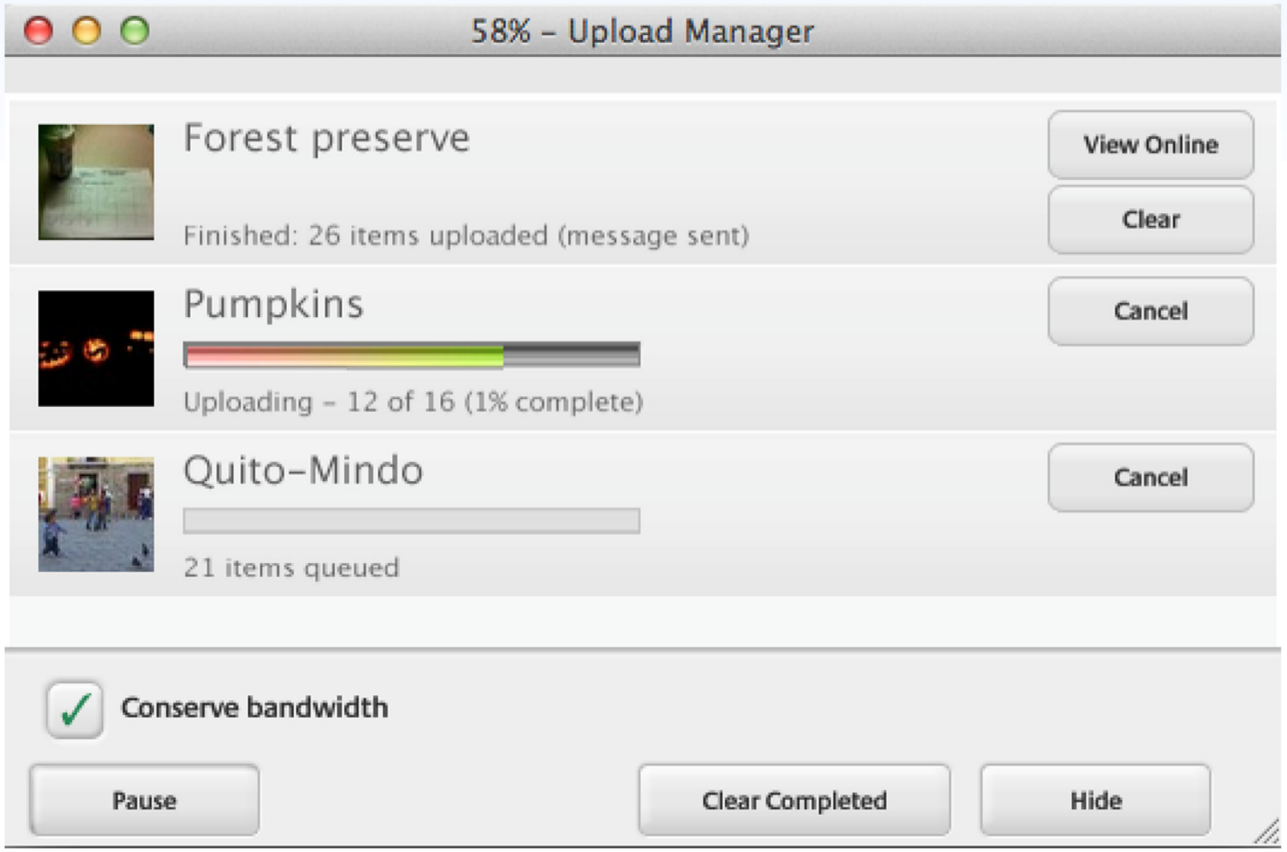
Expectations and Attitudes (concluded)

- These conjectures may play a role in choosing the optimum interaction speed:
  - Novices may exhibit better performance with somewhat slower response times.
  - Novices prefer to work at speeds slower than those chosen by knowledgeable, frequent users.
  - When there is little penalty for an error, users prefer to work more quickly.
  - When the task is familiar and easily comprehended, users prefer more rapid action.
  - If users have experienced rapid performance previously, they will expect and demand it in future situations.

User Productivity and Variability in SRT

- Repetitive tasks
  - Nature of the task has a strong influence on whether changes in response time alter user productivity
  - Shorter response time means users responds more quickly, but decisions may not be optimal
- Problem solving tasks
  - Users will adapt their work style to the response time
  - Users will change their work habits as the response time changes
- People are willing to pay substantial amounts of money to reduce the variability in their lives, e. g. the insurance industry
  - Most people appreciate predictable behavior that lessens the anxiety of contemplating unpleasant surprises

User Productivity and Variability in SRT (concluded)



- Progress indicators reassure users that the process of uploading photos from Picasa to the web is underway, and how far it has gone already
  - They also allow users to see the results or to cancel uploads

Frustrating experiences

- Since frustration, distractions, and interruptions can impede smooth progress, design strategies should enable users to maintain concentration.
- Three initial strategies can reduce user frustration ☹
  1. Reduce short-term and working memory load
  2. Provide information abundant interfaces
  3. Increase automaticity
     - Automaticity in this context is the processing of information (in response to stimuli) in a way that is automatic and involuntary, occurring without conscious control.
     - An example is when a user performs a complex sequence of actions with only a light cognitive load, like a driver following a familiar route to work with little apparent effort.

Reducing User Frustration

- Increase server capacity, network speed, and network reliability
- Improve user training, online help, and online documentation including tutorials
- Redesign instructions and error messages
- Continue the battle to stay ahead of the technology to protect users against spam, viruses, and pop-up advertisements
- Organize consumer-protection groups
- Increase research on user frustration
- Catalyze public discussion to raise awareness

SRT Guidelines

- Users prefer shorter response times
- Longer response times (> 15 seconds) are disruptive
- Users' usage profiles change as a function of response time
- Shorter response time leads to shorter user think time
- A faster pace may increase productivity, but it may also increase error rates
- Error-recovery ease and time influence optimal response time.
- Response time should be appropriate to the task:
  - Typing, cursor motion, mouse selection: 50–150 milliseconds
  - Simple, frequent tasks: 1 second
  - Common tasks: 2 – 4 seconds
  - Complex tasks: 8 – 12 seconds

SRT Guidelines (concluded)

- Users should be advised of long delays
- Strive to have rapid start-ups
- Modest variability in response time is acceptable
- Unexpected delays may be disruptive
- Offer users a choice in the pace of interaction
- Empirical tests can help to set suitable response times