UX Evaluation

Selected material from *The UX Book*, Hartson & Pyla
UX Evaluation

- Formative Evaluation (engineering)
- User Experience Evaluation (engineering)
- Informal Summative Evaluation (engineering)
- Formal Summative Evaluation (science)
Formative vs. Summative UX Evaluation

- Formative evaluation helps you **form** design
- Summative evaluation helps you **sum up** design
- “When the cook tastes the soup, that’s formative”
- “When the guests taste the soup, that’s summative”
Formative UX Evaluation

• **Goal** - identify UX problems and their causes early in design and fix them

• **Rapid evaluation** – less formal, fast, less cost
  – Inspections and **walkthroughs**
  – Heuristic evaluation

• **Design diagnostic** evaluation

• **Qualitative data** collection

• **Risk** – “good enough” but not perfect
Summative UX Evaluation

- Goal - assess the **quality** of the interactive **UX**
- **Improve** the **UX** through **re-design** as necessary
- **Late** in the **life cycle** (“beta”)
- **Rigorous** evaluation – **more formal, planned** process (“user testing”)
  - Preparation, data collection, analysis, and reporting
  - **Empirical** – observe users, collect **quantitative** and **qualitative** performance **data**
  - Evaluate user **performance** against **UX goals**
Data Collection Techniques

- **Direct measurement** of data; e.g.,
  - Time to perform a task
  - Number of errors

- **Critical incident observation** – task observation that may be a significant indicator of a UX problem
  - Errors but also other cues such as user hesitation or frustration
  - Due to design or requirements defects
Data Collection Techniques

- **Think –Aloud** – the *user verbalizes their thoughts* during the interactive experience
  - Intensions, rationale, perceptions of problems
  - Easy to do but unnatural

- **Questionnaires** – collect subjective data from users post evaluation
  - Especially *good for emotional impact, perceived usefulness*
  - Likert scales help quantify
Evaluating Emotional Impact

- Can be “measured” indirectly in terms of its indicators
- “Emotion is a multifaceted phenomenon”
  - Expressed through feelings
  - Verbal and non-verbal languages
  - Facial expressions and other behaviors
- Emotional impact indicators
  - Self-reported via verbal techniques
  - Physiological responses observed, e.g., facial expressions, body language
  - Physiological responses measured, e.g., biometrics
Surprise

Joy

Anger

Sadness

Fear

Contempt

Disgust

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