Visualized Interaction

Evaluation and design of multimodal applications

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Mobile Voice Conference
San Francisco, April 16, 2013
Work in progress

Collaboration effort

PhD work and zoom::moon design agency (see marzzippan.com)

Goal: bring two fields together, raise awareness
Spoken Language & Multimodal Applications
Bilingual Conversational System

FamilyMap: multimodal navigation
Speech-enabled messaging

Corporate Dialer

Speech-enabled digi box
Explicit user input & context & sensor info

Contextual Multimodal Integration
Experience Sharing: Multimodal & Multisensory UI
Publication

(To be published in April-May.)
Design Process
Concept
Discovery
Design
Validation
Implementation

< repeat >
Evaluation
Concept validation

Storyfication

1) Filling the gaps with sensed info
2) Generating story of event sequence
People – Places – Stories
Wizard-of-Oz studies
Usability evaluations
UX design and tests
Evaluation

Necessary at every iteration step
Black box vs. Glass box (Fraser et al.)
Measures at every level of complexity
But, context and relation is informative

*Looking* into the details
Interaction Visualization
Some earlier efforts

Corporate Dialer

c.a. 6k calls, 23k vocabulary

In Sixth International Conference on Spoken Language Processing, ICSLP 2000 / INTERSPEECH 2000, Beijing, China, October 16-20, 2000
Multimodal case

Wizard-of-Oz study on Experience Sharing

Speech and 3D gesture input

Couple examples
(from other domains)

"Progress Clock": visualization of challenges
SeaBirds: acoustic data visualization
Interaction
Visualization

Interaction
Interactive Visualization Interaction
Technologies

Standard html5 + CSS3

Basic Interactivity: Javascript

Visualization layer: Data Driven Documents (beautiful examples at d3js.org)

Backend: node.js

Best to start: d3.js and visual.ly meetups in the Bay Area, tutorials by Mike Bostock and Scott Murray
Current implementation

Data: from UX study & mobile apps
Plans

Experiments with more data
Continue experimenting with visual representation/encoding, more views, flow
Open up for the community

Have interesting data? Please mail to: peter@marzzippan.com

More on about.me/boda
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d3.js community

Thank You!