User Experience (UX) an industry perspective

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My background

- BSc (computer science)- U. Auckland
- BA (psychology) – U. of Auckland
- Saw lots of frustrated users struggling with software, failing to save documents
- MS (HCI)– U. California, Berkeley
- Intel Research Labs, Seattle
- Peace Software – research + development
- Member of the UPA, ACM SigCHI

Exciting fields in HCI

- Mobile and ubiquitous computing (and privacy issues)
- Information visualization
- Haptics
- Sensor applications
- Assistive technology
- Collaborative filtering

Exciting approaches in usability

- User-centred design
- Automatic usability testing
- Usability of mobile devices (UI translation)
- Accessibility
- Information architecture (info scent)
- Usability testing methods

Today's talk

- My background
- Why am I in this field? Excitement
- Organisations with UX/UCD teams
- How can UX fit into an organisation
- Goals
- Processes – topical controversy

Where is HCI/usability used?

Industrial research labs	**Intel Research**
Human centred design companies	IDEO
Specialist usability consultants	UIE, Optimal Usability (NZ), AUT Usability Lab
Software houses	**Peace (NZ)**, Navman (NZ)
Businesses/govt agencies with user focus	Telecom (NZ), Westpac
Consulting companies	Cap Gemini (NZ)

IDEO – the full gamut of UX

Roles benefiting from UX

- User Interface/Interaction Designers
- UI Developers
- Industrial Designers
- Human Factors Engineers
- Designers: Interaction | Visual | ID
- Business Analysts
- Technical Communicators & Instructional Designers, , Quality Engineers, Market Researchers, Cognitive Psychology Practitioners.
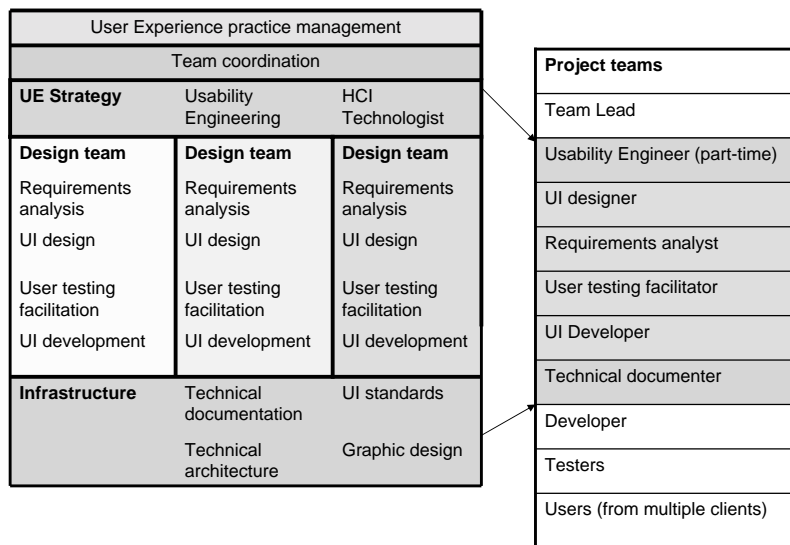
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Peace currently (small UX team)

- Three people doing UX part-time
- Requirements gathered onsite from clients or from Peace product managers and SMEs (subject matter experts)
- Analysts in Auckland design screens

A larger UX Team

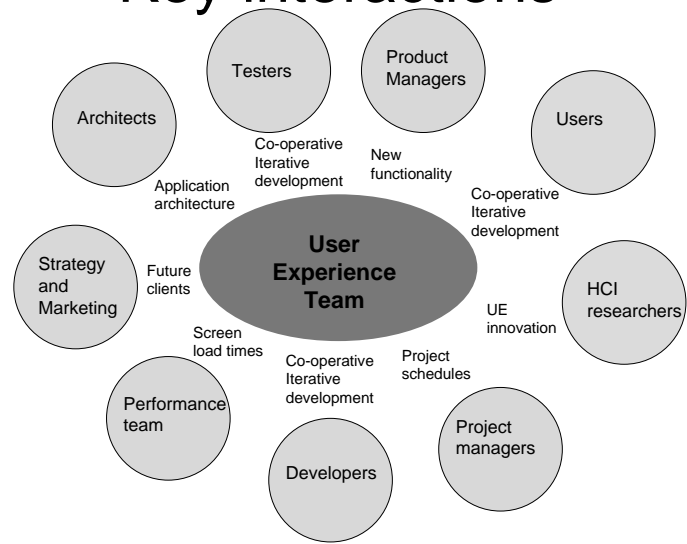Some roles will be part-time and multiple roles may be performed by one person

User Experience practice management		
Team coordination		
UE Strategy	Usability Engineering	HCI Technologist
Design team	**Design team**	**Design team**
Requirements analysis	Requirements analysis	Requirements analysis
UI design	UI design	UI design
User testing facilitation	User testing facilitation	User testing facilitation
UI development	UI development	UI development
Infrastructure	Technical documentation	UI standards
	Technical architecture	Graphic design

Project teams
Team Lead
Usability Engineer (part-time)
UI designer
Requirements analyst
User testing facilitator
UI Developer
Technical documenter
Developer
Testers
Users (from multiple clients)

UE roles in development projects

User requirements analyst	Immediate focus. Works with end users at multiple client sites to identify current processes, tasks and unmet needs. Communicates with product managers to build a complete requirements picture for internally driven enhancements.
User testing facilitator	Coordinate and perform prototype testing with end users at multiple client sites. Measures key metrics at each iteration for usability success to ensure the design meet requirements.
UI designer	Develop use cases. Create navigation. Design screen layouts. Works closely with UI developer to ensure screens match designs.
UI developer	Develops UI iteratively with UI designer. With the UI designer, communicates technical design requirements to non-UI developers and architects.

## UE vision and infrastructure roles

Usability Engineer	Long term focus. User profiling, formal task analysis, develop and advise on high level interaction patterns for navigation, search, CRUD modes etc. Iterative screen design evaluation, user feedback coordination, identification of opportunities for product feature enhancements, competitive analysis. Predicts needs of future clients with user research tasks including observations, interviews, user groups and competitive analysis.
HCI technologist	Identifies innovative HCI research, technology trends, translates UE vision to technical architects.
User Experience practice manager	Ensure the team receive appropriate training and guidance to be maximise team effectiveness. Facilitates communication with other areas of the company. Is a researcher-practitioner of usability who can guide the team through their experience.
Technical architect	Maintains frameworks and tools for screens, navigation, validation, error messages, internationalisation.
UI standards author	Write and maintain detailed UI standards with links to framework standards, develop patterns. Maximises consistency and reuse by providing how-to information and standards.
Technical documenter	Documentation of functionality in user guides.
Graphic designer	Graphical treatments of look and feel changes for version releases

Key interactions

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A NATURAL HISTORY OF COMPUTER SYSTEMS
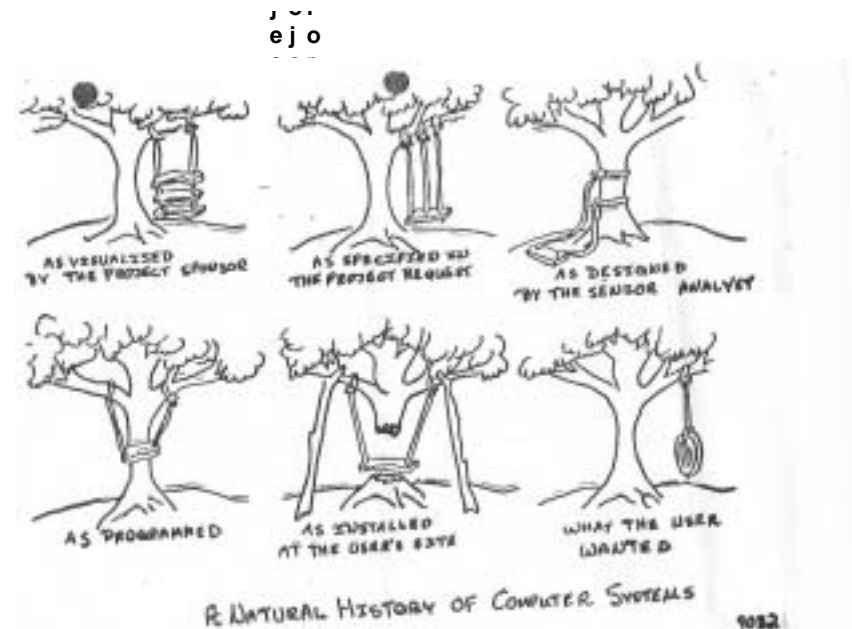
Avoid problems

"I've bought <…> before, I'm a user too" – developer who uses similar products

"I'd like to make those changes but we'll miss our deadline" – project manager

"The system cost has cost us too much, we won't evaluate it" – IT purchaser

"We don't have the budget to do usability evaluation" – project management

"You are the usability professional – can't you just design it to work well" - developer

"Usability doesn't matter – our users don't have any choice about using it" – senior management

"We can talk to their managers about what they need" -

"Can't you just make it pretty?" – marketing

Get benefits

"It is so obvious that we need to get user feedback" – developer

"If I do this to improve performance, what will the effect be on the user?" – developer

"I'm raising usability as a risk to the success of this project" – project manager

"I want us to paper prototype this before we even think about development" – product manager

"Just don't forget you are helping us" <hug> - drunk user, in pub

"This was a great way to know the new system will help us, we'd like to do usability testing more often" – manager of users

Achieving our goals

- More usable products
  - Efficient, effective and enjoyable user interfaces
  - Reduce process complexity, tasks to achieve goals
  - Use technology to solve problems well
  - More appealing, more saleable designs

- Better development processes
 - Clearer requirements
  - Lower costs
  - Faster delivery

http://www.fawcette.com/interviews/beck_cooper/default.asp

What processes could we use for developing a new product?

Usability Testing in labs	Iterative SDLCs
Field usability testing	System Testing
Technical Design	Focus Groups
Test driven development	Storyboarding
Functional testing	Pair programming
Waterfall SDLCs	Heuristic evaluations
Competitive analysis	Paper prototyping
Contextual Inquiry	Ethnographic observations
Expert evaluations	Keystroke level modelling

THE USABILITY ENGINEERING LIFECYCLE
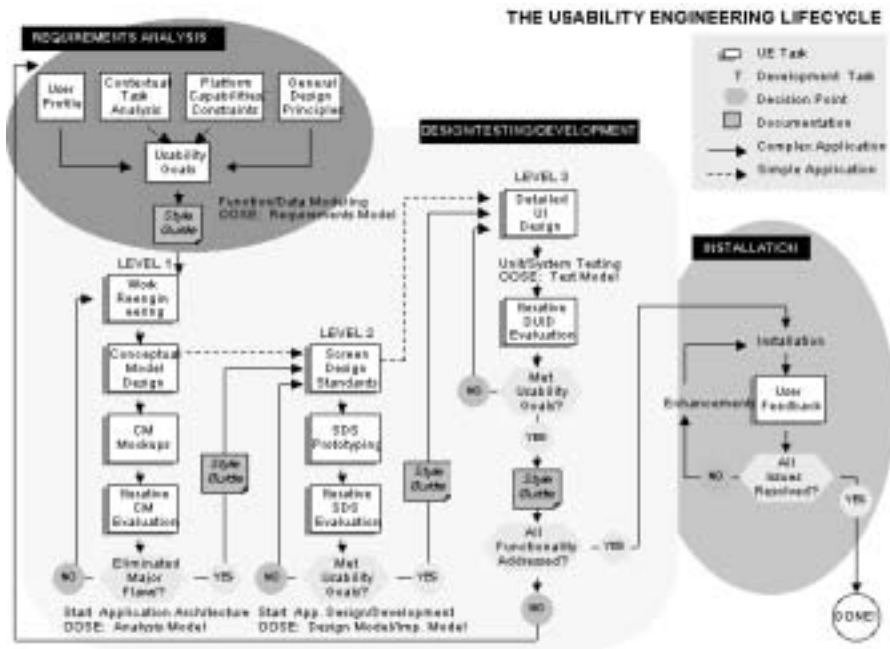
RUP
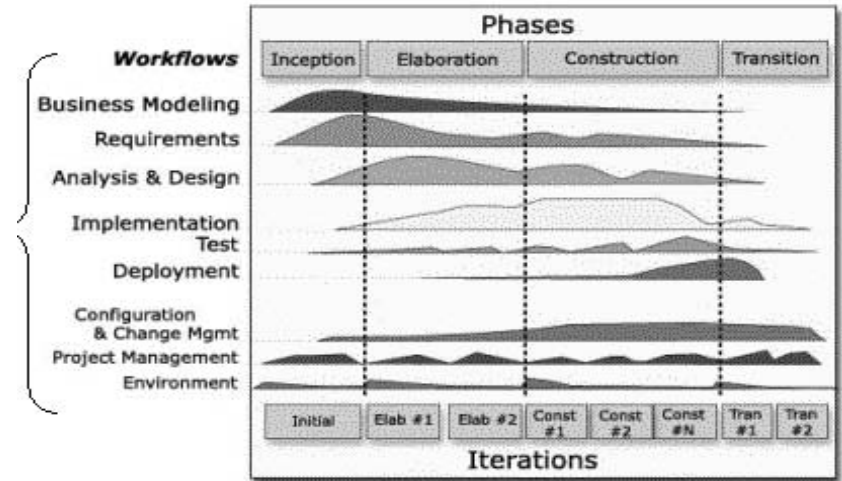
Usability in a waterfall (ish) SDLC
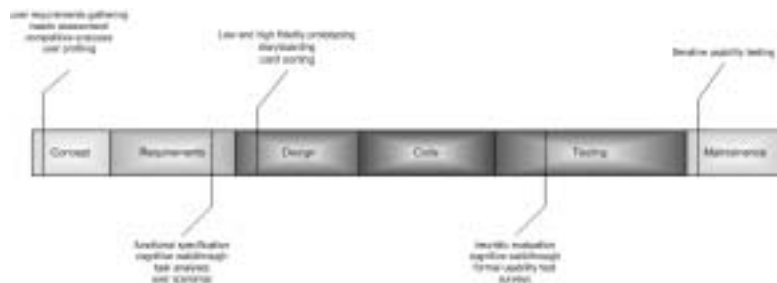
Scientist-practitioner models

Used in Peace and in psychology practices

Necessary to advance the field

- Test and validate your own usability testing methods
- Keep up with the latest research
- Publish and participate in peer review
- Base your decisions on science

Get your research info from industry publications, mailing lists, conference proceedings, peers

Calling all Usability and User Experience Enthusiasts!

The Auckland *Usability Community of Practice* is having its first get together on Tuesday July 27 from 6-8:30 pm at BNZ, 125 Queen Street.

A group of Usability professionals in the Auckland area will be your hosts for the evening. Anyone interested in or involved with Usability should attend.

RSVP to Suzanne Currie at scurrie@navman.com. Bring your business cards to exchange. $10 per person at the door.

The BNZ facilities are across the alleyway from Burger King and directly opposite Shortland Street. Please meet in the foyer and call Mark McLay on 0274 88 23 88 to be let in.

This meeting is the first of a series of monthly meetings for Usability and User Experience practitioners.

Related links

- UPA (Usability Professionals Association) - http://www.upassoc.org/

- ACM SIG CHI (Association of Computing Machinery's Special Interest Group on Computer Human Interaction) – http://www.acm.org/sigchi/
- SIG CHI NZ - http://www.acm.org/chapters/sigchi_nz/

- HFES (Human Factors and Ergonomics Society) - http://hfes.org/

- AIGA (American Institute of Graphic Arts) – http://www.aiga.org/content.cfm?Alias=casestudies

- Jakob Nielsen's (usability guru) Website - http://www.useit.com/

- Good Experience - http://www.goodexperience.com/

Questions?

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