

Tools for Requirements Elicitation and Analysis

Caroline Lottenbach & Camilla Gretsche

Group 2

11.12.17 - Requirements Engineering II - Assignment 7 - Group Task B

Relation to the whole topic of RE tools

- DESMET: Methodology of finding the right method and tools
- Carillo de Gea et al.:
Overview and ranking of requ. tools
- Bruckhaus et al.:
Model to find the best tool for a project considering its impact on the productivity

→ **Focus on evaluation of already existing tools**

Two papers presented today

→ **Focus on the design of new tools for RE**

L. Mich, M. Franch,
P. I. Novi
2004

Market research for
requirements analysis using
linguistic tools

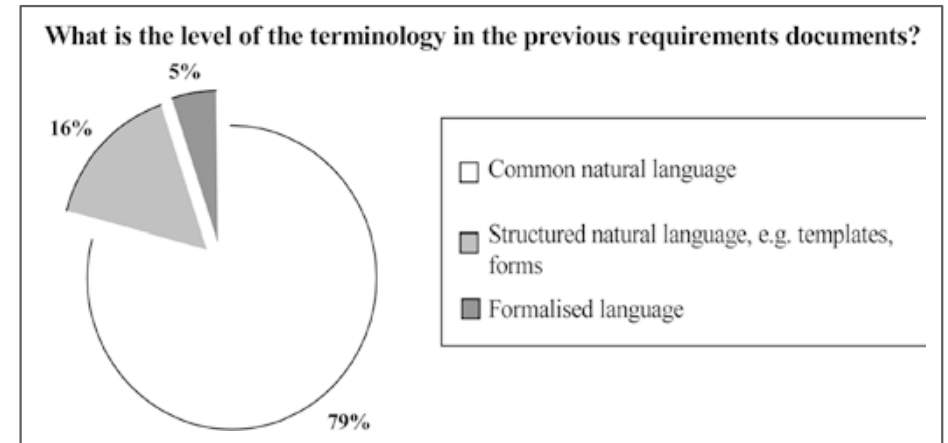
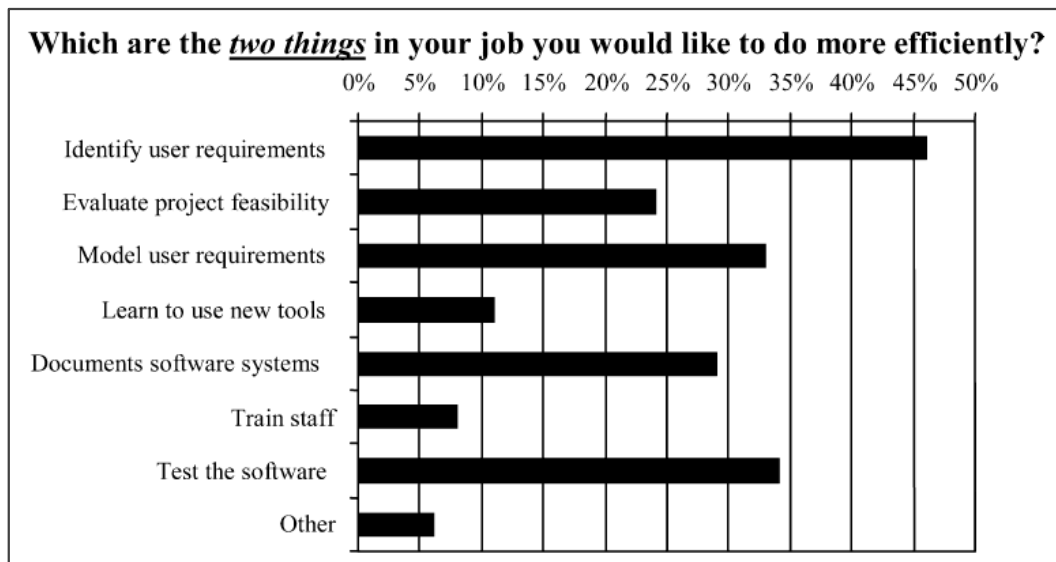
Goal of the paper

- Research of market potential for NLP based CASE Tools
 - NLP = Natural language processing
 - CASE = Computer-aided software engineering
 - Main questions of the research
 - Potential demand for a CASE tool
 - Economic incentive of developing such a tool
 - Possible to design a general-purpose tool for different domain applications
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Methodology of the paper

- Distribution of an online survey to two target groups
 - Software developer
 - Manager of software engineering teams/departments
- Statistical analysis of the collected data
 - Descriptive interpretation of the data
 - Responses are not a representative sample of the software development companies

Main findings of the paper



Market niches

There is a market for a NLP based CASE tools!

1. Market niche:

Companies that already use methodologies and instruments to support requ. analysis.

→ Need for tools which efficiently supports these already used methodologies

2. Market niche:

Companies that neither use methodologies nor instruments to support requ. analysis.

→ New tool supports adaption of engineering approach in software development

P. Campos, N. J. Nunes
2007

Practitioner Tools and
Workstyles for User-
Interface Design

Goals of the paper

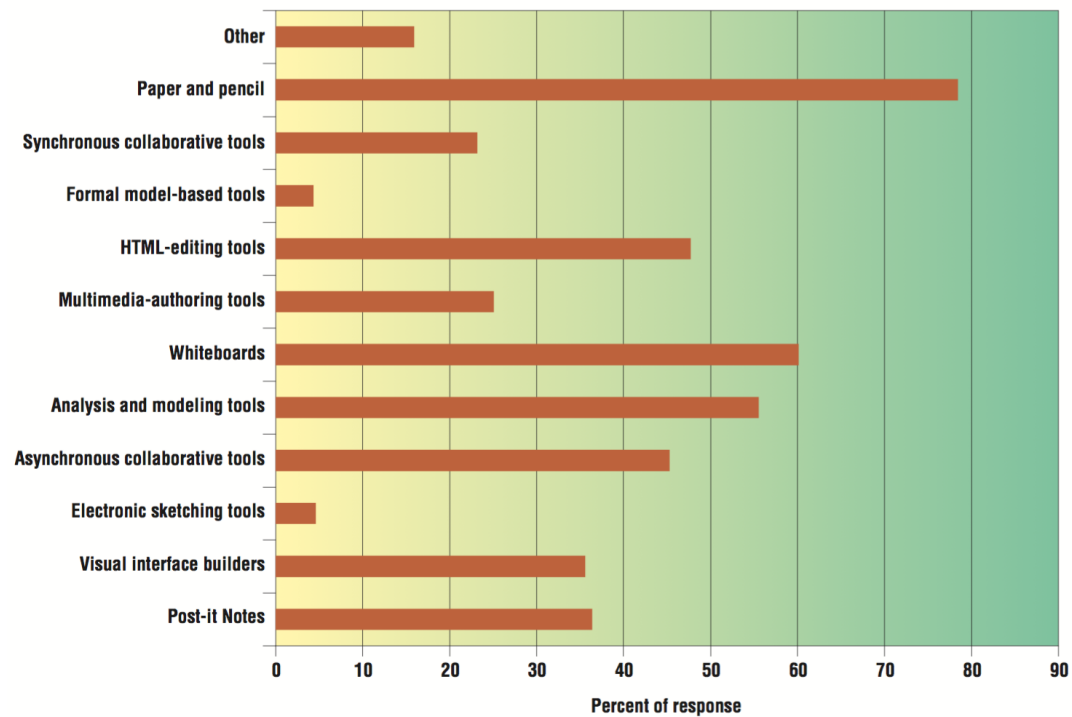
- Research about different workstyles and tools
 - Research focus is on interaction design
 - Design tools which support key workstyle transitions
 - workstyle transitions = software developers use different workstyles and move between them
- Reduce the love-hate relationship between practitioners and their tools
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Methodology of the paper

- Questions with the focus on interaction design
 - Distribution of an survey via Email
 - Target group:
 - interaction designer,
 - programmers
 - system analysts
 - project manager
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Main findings of the paper

1. Tools used in Practice



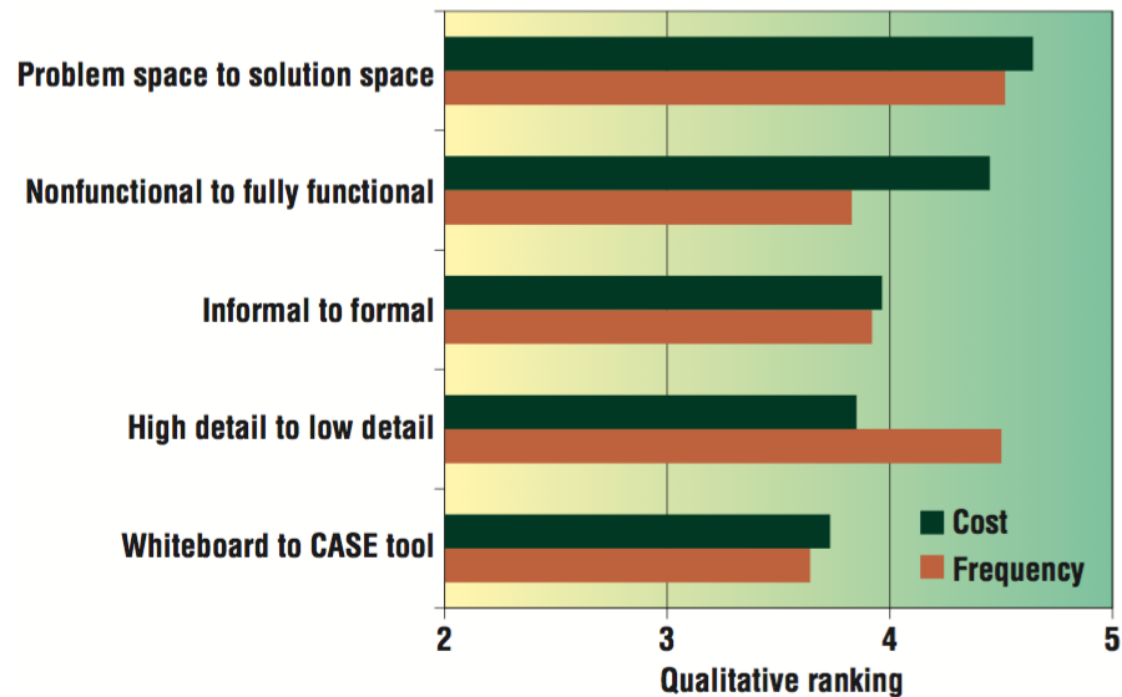
Main findings of the paper

2. Relationship between development processes and tools

Development process	Type of tool				
	Interface builders	Asynchronous tools	Whiteboards	Synchronous tools	Paper and pencil
Just do it	39	36	54	16	59
Spiral	34	29	61	11	82
Prototyping	37	45	55	23	80
Formal methods	30	56	47	26	81
Waterfall	46	39	69	28	80

Main findings of the paper

3. Frequency and cost of workstyle transitions



Tools to support workstyle transition

- TaskSketch
 - Supports changes in perspective
 - → focus on architecting the system
- CanonSketch
 - Supports changes in perspective, functionality and detail
 - Synchronize a model between four views

Connection between the two papers

Similarities and differences of the two papers

Similarities

- Research for new or improved tools
- Usage of online survey to gather data
- Tools need to consider the development processes and methods that used
- Including the size of the company as a factor in the research

Differences

- Mich et al. focused on tools supporting requirements elicitation and analysis
 - Campos et al. concentrated on tools to facilitate UI design
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Questions

- Have you ever used tools that rely on NLP (natural language processing)?
 - Did you use NLP in a requirements engineering process?
 - What do you think is the role of traditional paper and pencil tool in today's RE?
 - Do you have any other ideas for application of NLP in RE?
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