

Tools for Requirements Elicitation and Analysis

Group 1 :

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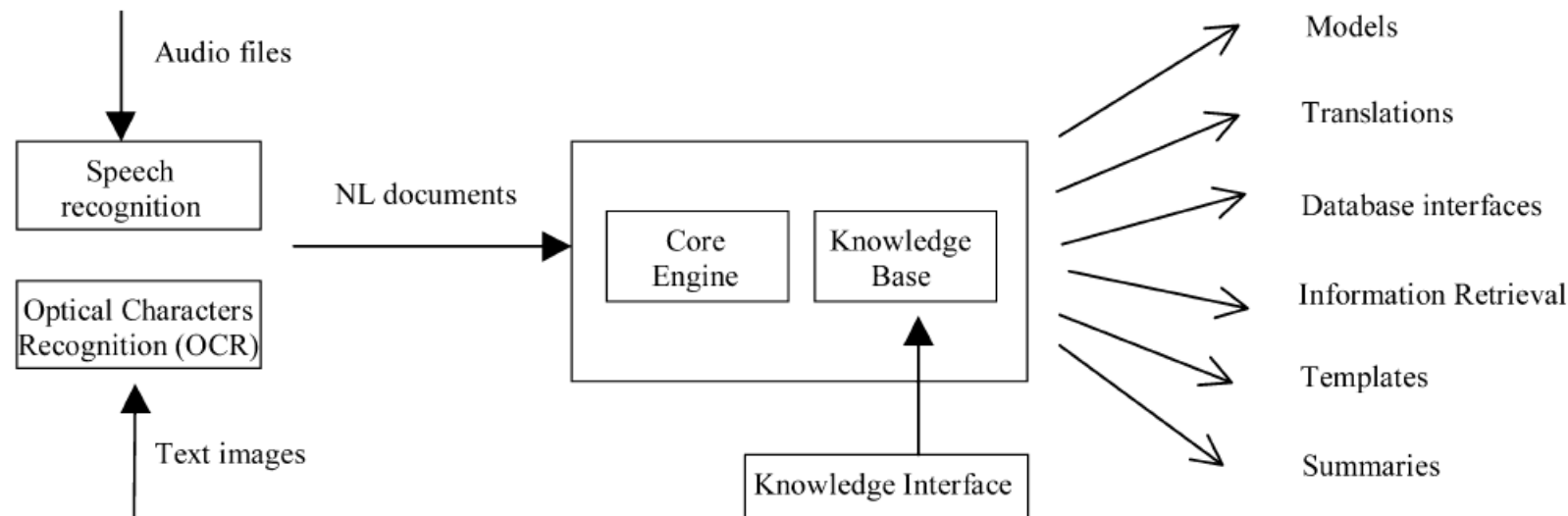
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Introduction

- Relationship between practitioners and their tools
- Requirement analysis using linguistic tools
- User-Interface Design Tool Support

Natural Language Processing (NLP) Systems

- Restricted language VS natural language
- Syntactic, semantic, or pragmatic analysis
- Can be used:
 - In requirements phase
 - To model requirements
 - To support requirements validation

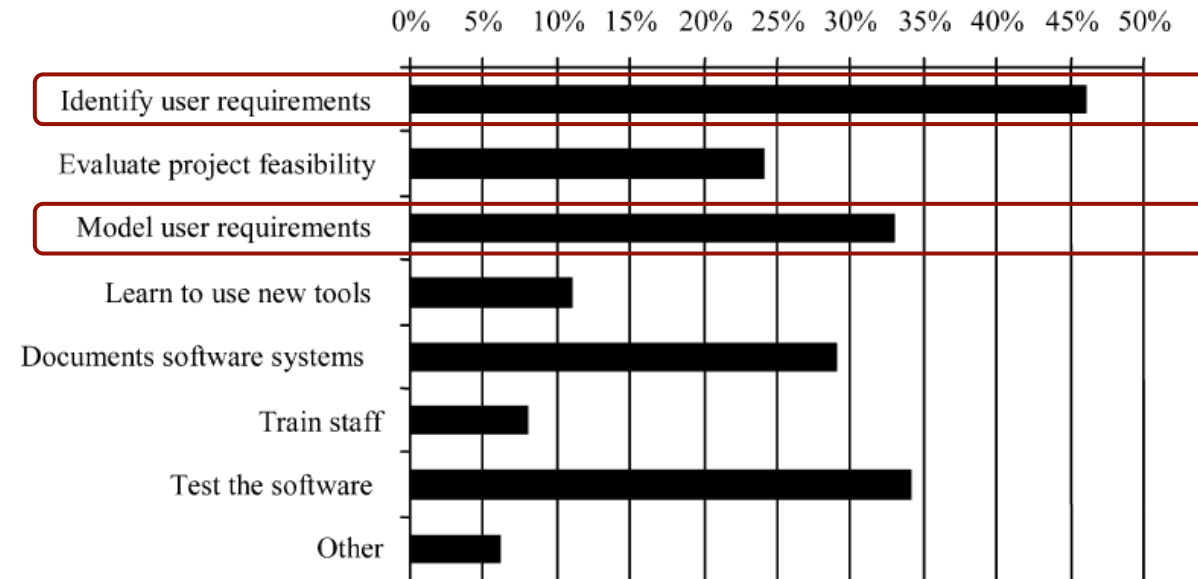


Survey

- Conducted in 1999
- Mainly software developers and managers
- is a NLP-based CASE tool needed?
- 18 questions on
 - company
 - respondent
 - processes of software production
 - methodologies
 - tools
 - documents used in requirements analysis
 - efficiency of the development process
- the use of ER diagrams, OO development and modeling

Results

Which are the two things in your job you would like to do more efficiently?



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What would be the most useful thing to improve general day-to-day efficiency?

	Automation	Outsourcing	Internal delegation
Identify user requirements	69%	9%	22%
Evaluate project feasibility	44%	12%	44%
Model users requirements	75%	4%	21%
Learn to use new tool	86%	0%	14%
Documents software systems	71%	5%	24%
Train staff	18%	0%	82%
Test the software	67%	4%	29%
Other	43%	14%	43%

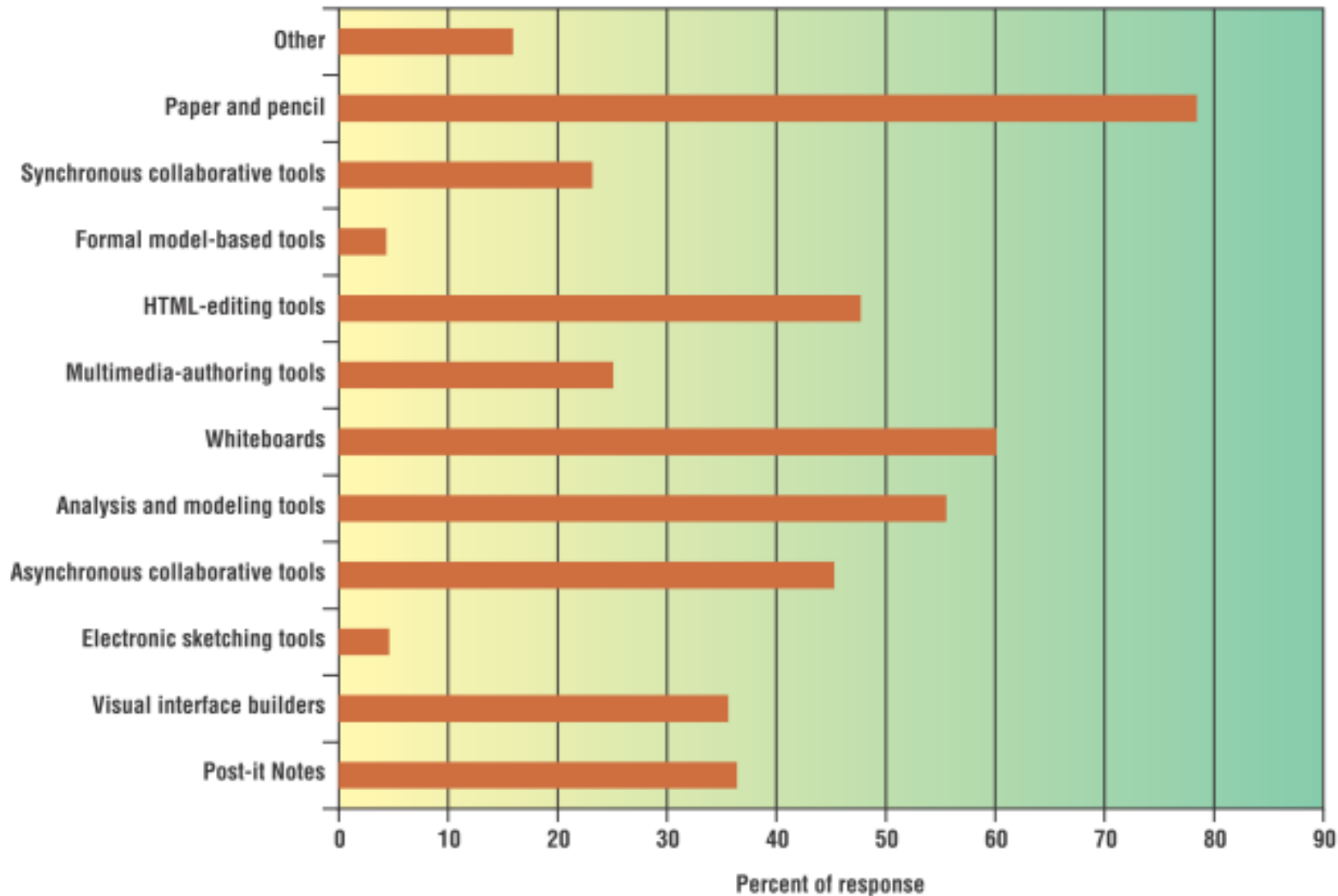
Results

- The bigger the company
 - more likely tools are used
 - more likely ER diagrams are used
 - use of methodologies ~ use of CASE tools
 - tools for RE are used in less than 1/3 of cases
 - higher level of automation desired
- there is a need for NLP

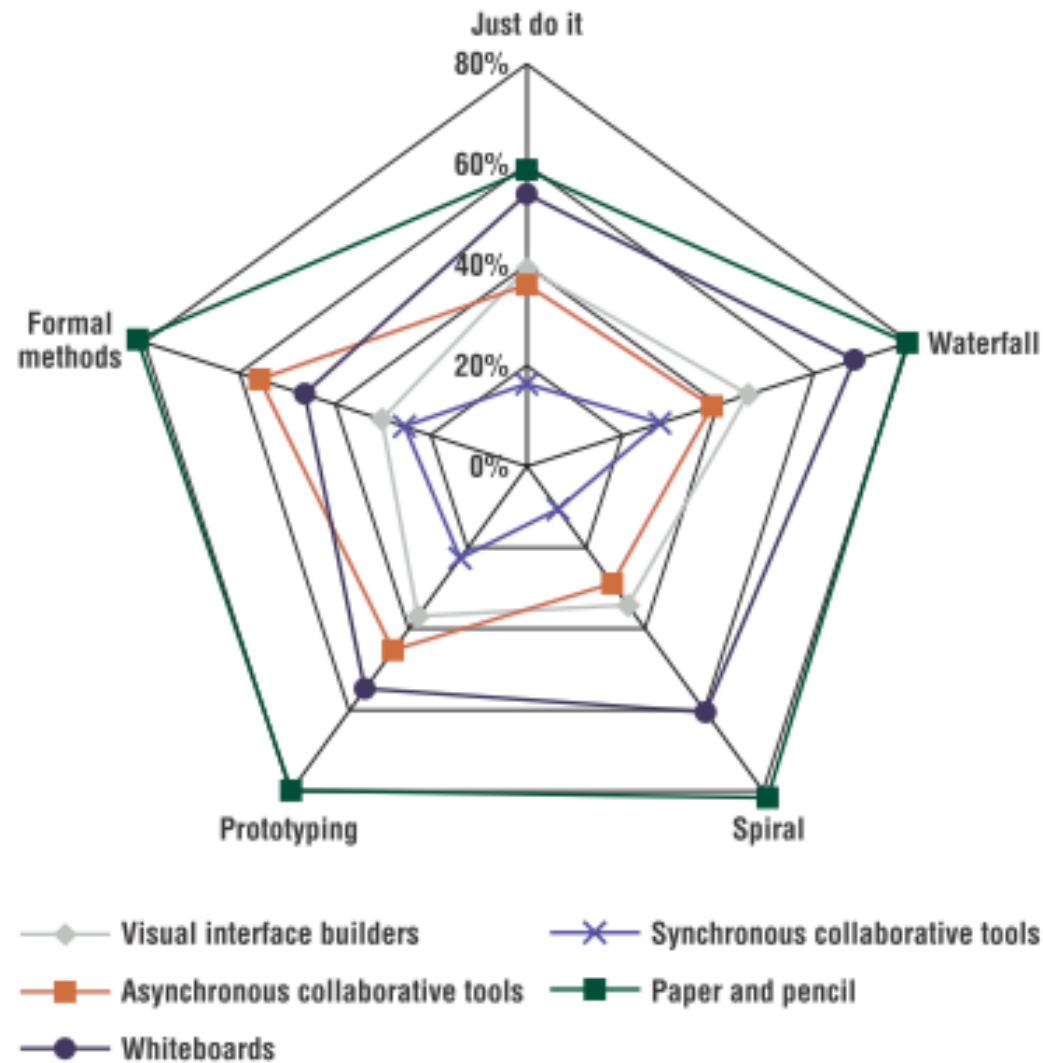
User-Interface Design Tools

- Nature of interaction design:
 - Highly creative
 - Inherently interdisciplinary
 - Communication intensive
- Survey
 - How are which tools used to accomplish UI-Design
 - Workstyle transition
- Result:
 - Which tool is used the most
 - Relationship between the development process and the tools used
 - Workstyle transitions and their frequencies and cost

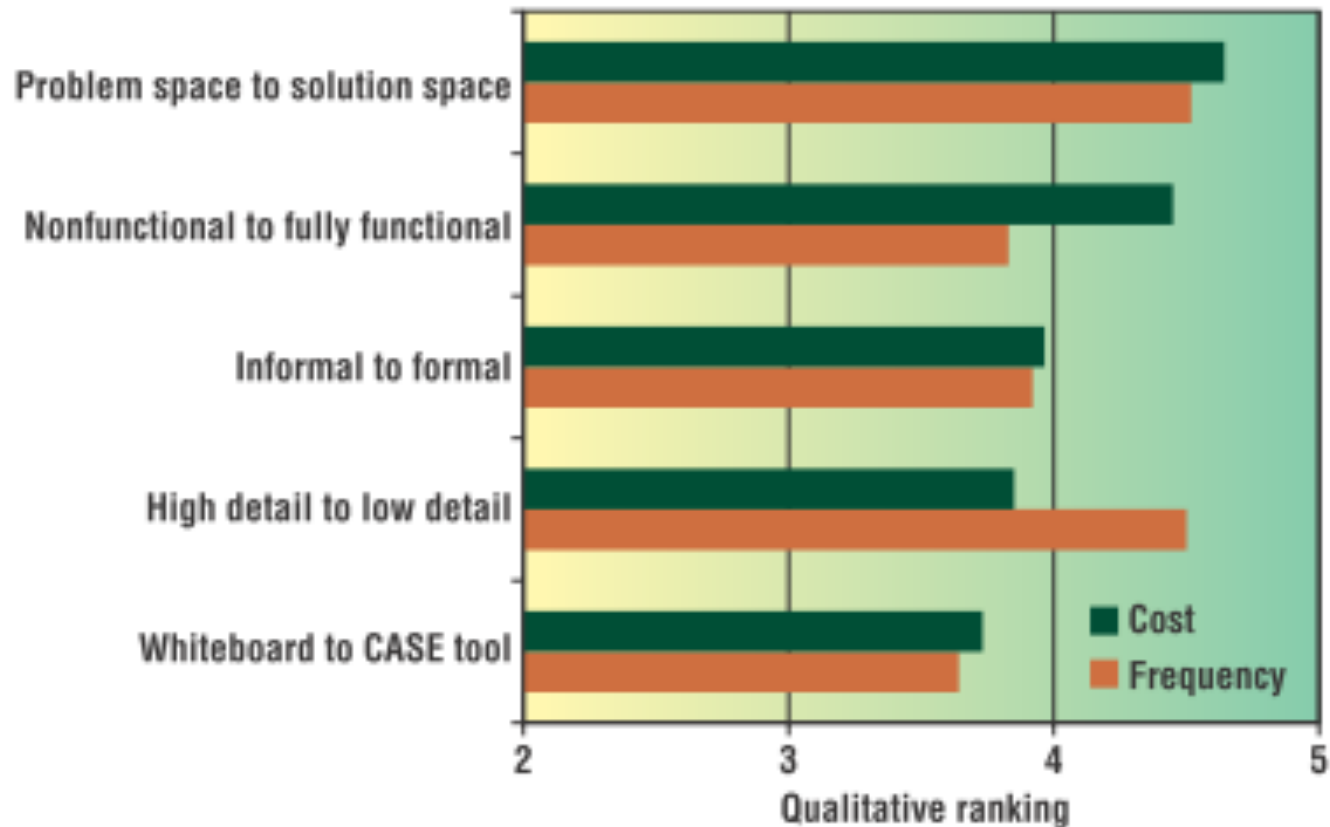
Result of UI-Design Tool Survey (1)



Result of UI-Design Tool Survey (2)



Result of UI-Design Tool Survey (3)



Conclusion

- Empirical studies extremely useful for understanding the daily work practices
- Support of workstyle transition could improve the usability of a tool
- Automation of requirements engineering sub-processes is desired
- Tool use dependent on development process