



Tools for Requirements Elicitation and Analysis

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Agenda

- Questions to answer
- Context
- Practitioner Tools and Workstyles for User-Interface Design (Campos & Nunes, 2007)
 - Which tools use practitioners?
 - Which tools are the most popular?
 - Workstyle transitions
 - Example tools
- Market research for requirements analysis using linguistic tools (Mich et al., 2004)
 - Application of Natural Language Processing (NLP) in RE
 - Crucial Software Activities
 - Market for CASE tools supporting NLP
- Discussion

Questions to answer

- What are the most important tools for the design of graphical user interfaces?
- What is the influence of the development process on tool choice?
- What are possible applications of natural language processing in RE?
- In this market study, which software activities have been perceived as crucial?
- According to [Mich 2004], is there a market for a CASE (computer-aided software engineering) tool supporting natural language processing?

Context

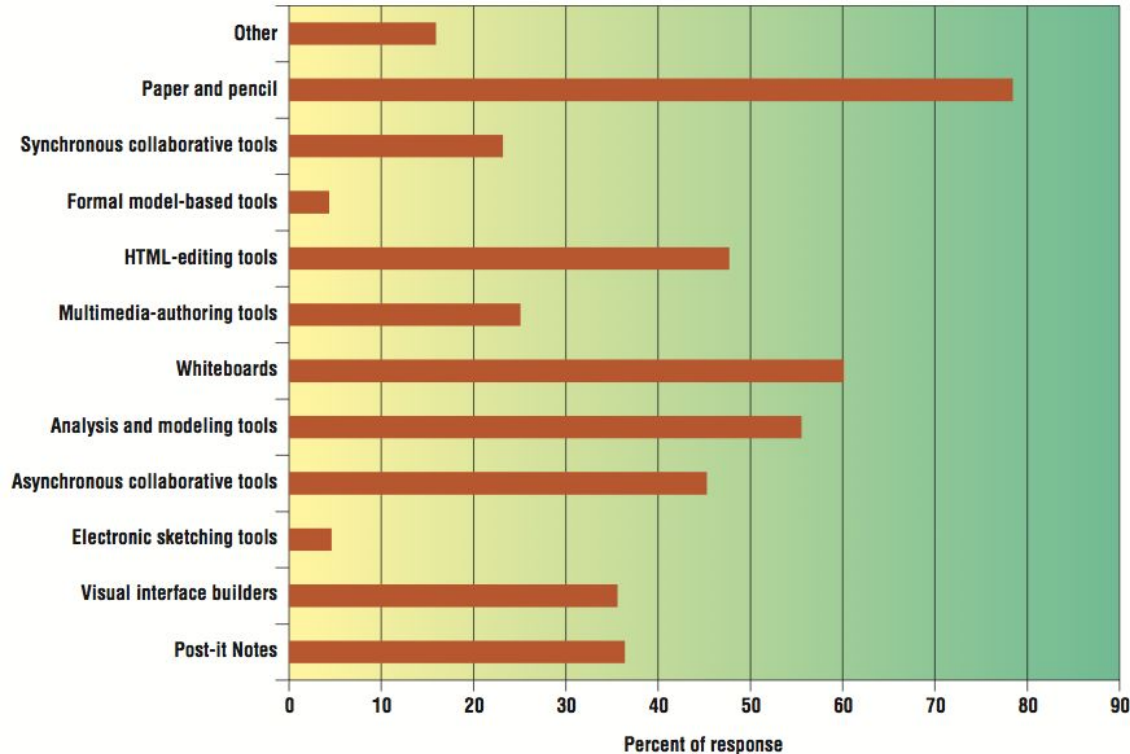
Due to the following distinctive features of RE, tools are less satisfactory to support RE analysis than those available for other phases in the software life cycle:

- Iterative, cooperative process
- Variety of representation formats for documenting
- Understanding customer's needs is crucial
- Checking the accuracy of the understanding gained (req. validation)

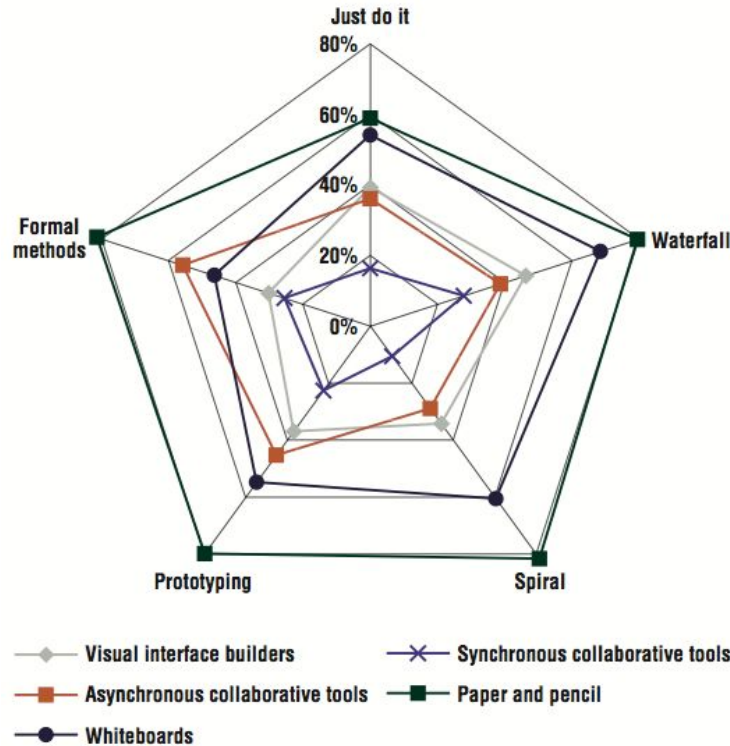


Many of the activities involved are cognitive, require creativity and human skills in communication, listening, feeling

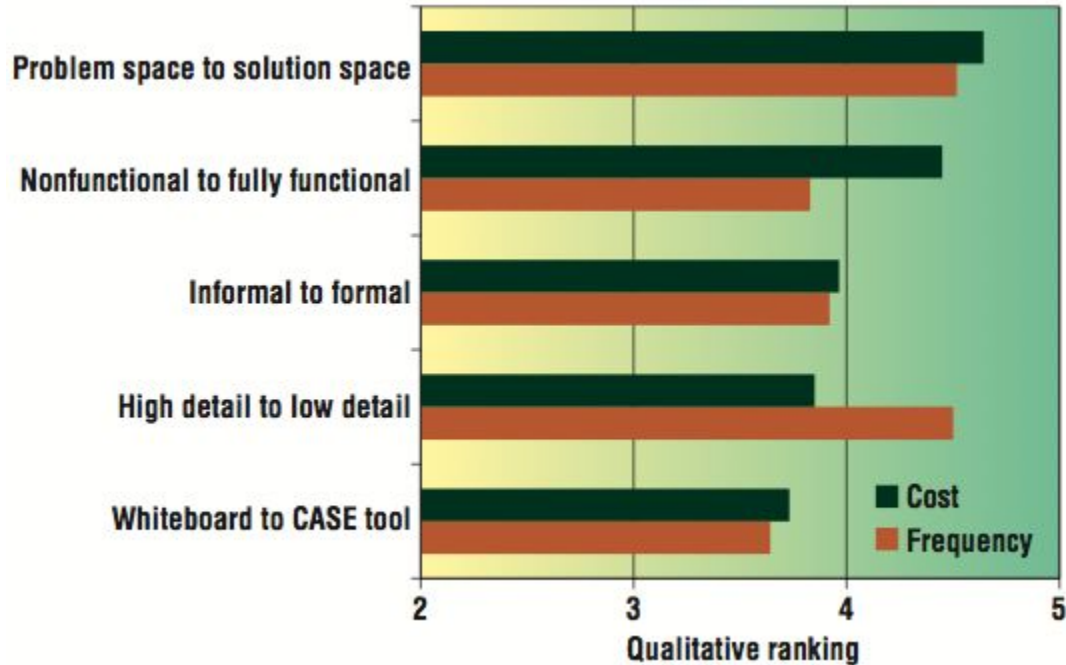
Which tools use practitioners for designing the UI?



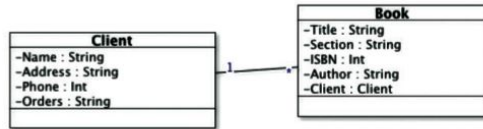
Tool use in the most popular development processes



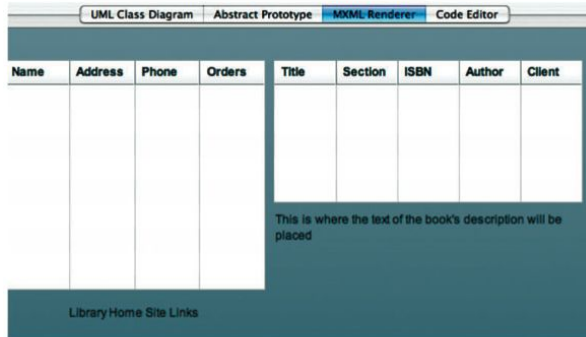
Workstyle transitions and their frequencies and cost



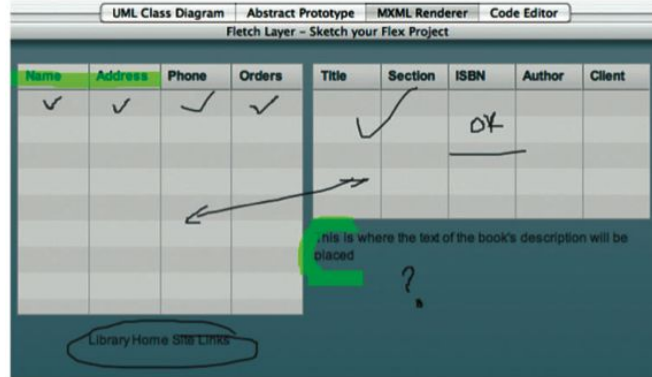
Example tools for workstyle transitions



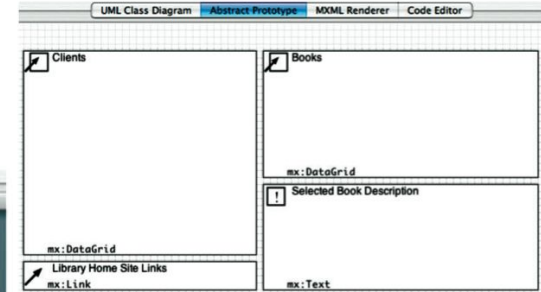
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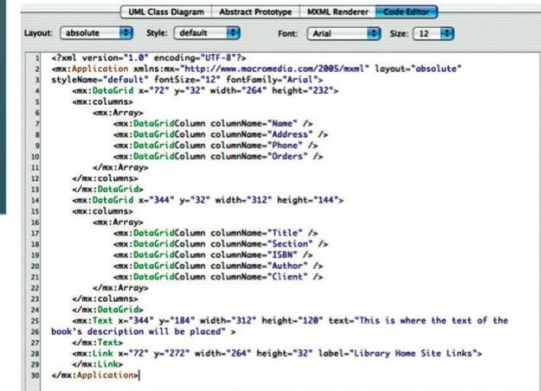
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(c)

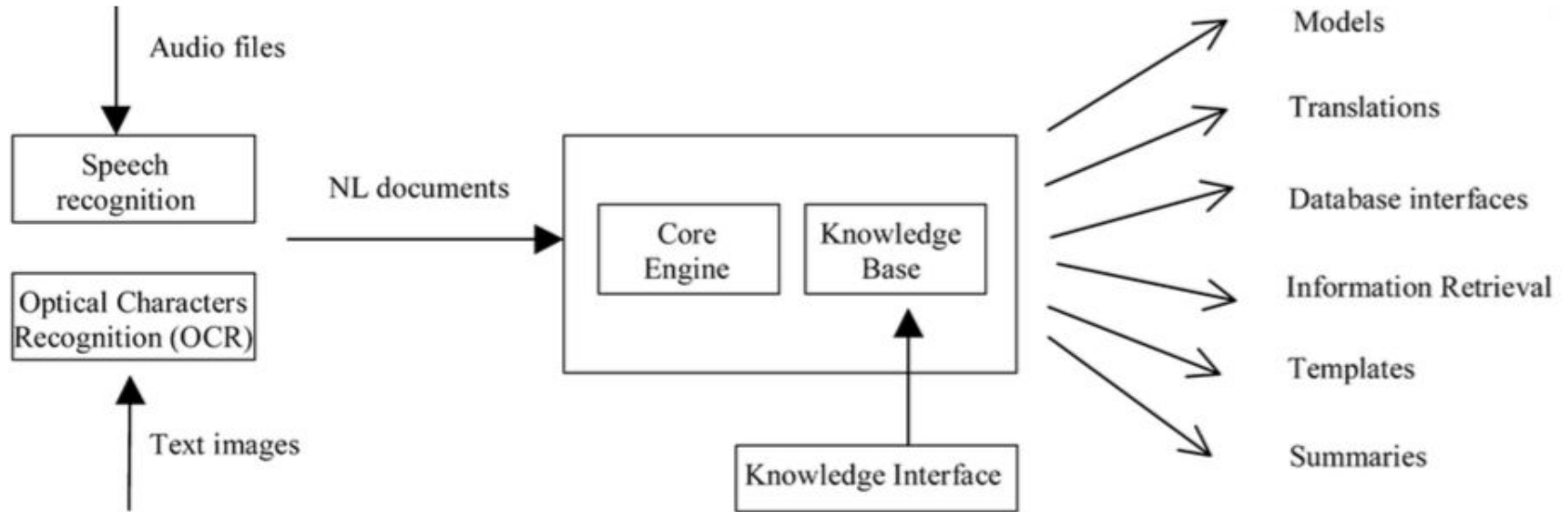


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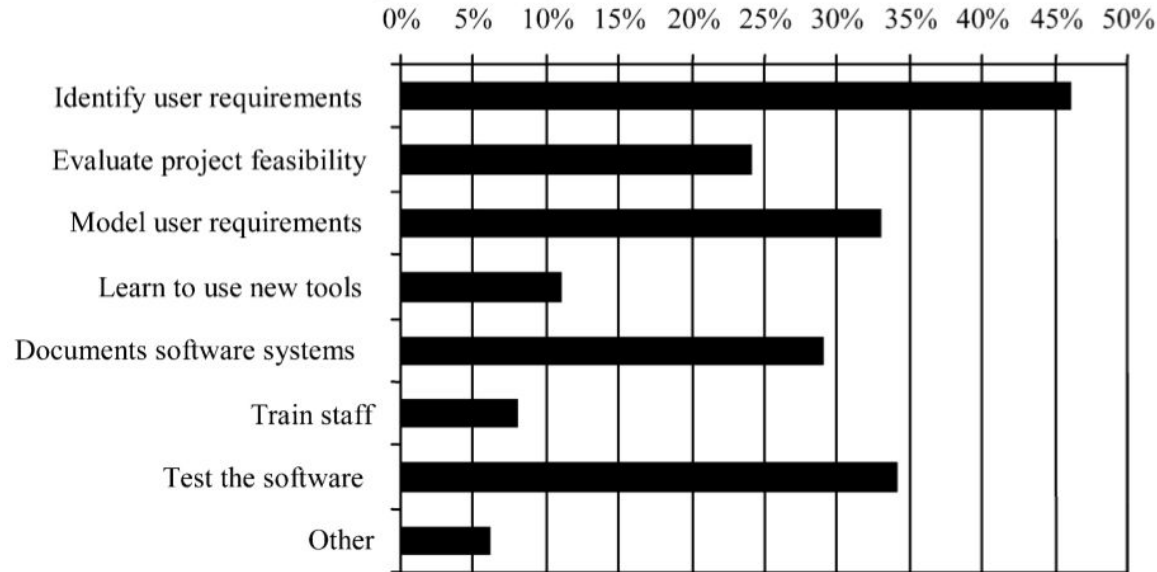
(e)

Application of NLP in RE



Crucial Software Activities

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



Is there a market for CASE tools supporting NLP?

Two company profiles have been identified:

- Companies having an engineering approach to software development
 - Emphasis on identifying user requirements

➡ Integrate NLP software in already existing CASE tools

- Companies without using CASE tools so far, but indicating crucial activities where the usage of software engineering is well developed
 - E.g. emphasis on testing or software documentation

➡ NLP software facilitates the adoption of CASE tools

Questions?

Discussion

1. What would be methods to improve general day-to-day efficiency?
2. What is the influence of the development process on tool choice?