MeRE workshop @ RE'2008

MEGORE: Multimedia Enhanced Goal-Oriented Requirement Elicitation Experience

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Chinese Culture related issues

- ## Perceptual thinking
  - ❑ "Chinese like women's language and are ashamed of abstract words, whose pattern of thinking is both comprehensive and specific. The Chinese rely heavily on intuition to discover the mystery of nature."—Yutang lin
  - ❑ It is better to see once than to hear a hundred times.
  - ❑ Seeing is believing.

- ## Face perception
- ## Collectivism

Influence of Perceptual Thinking

Feedback from Engineering Cases

- A web site engineer said:" In the requirement elicitation process, we had to collect the regulation in the guide section online, then made a prototype immediately and drew workflow diagrams....... Prototype is better than focus group meeting."

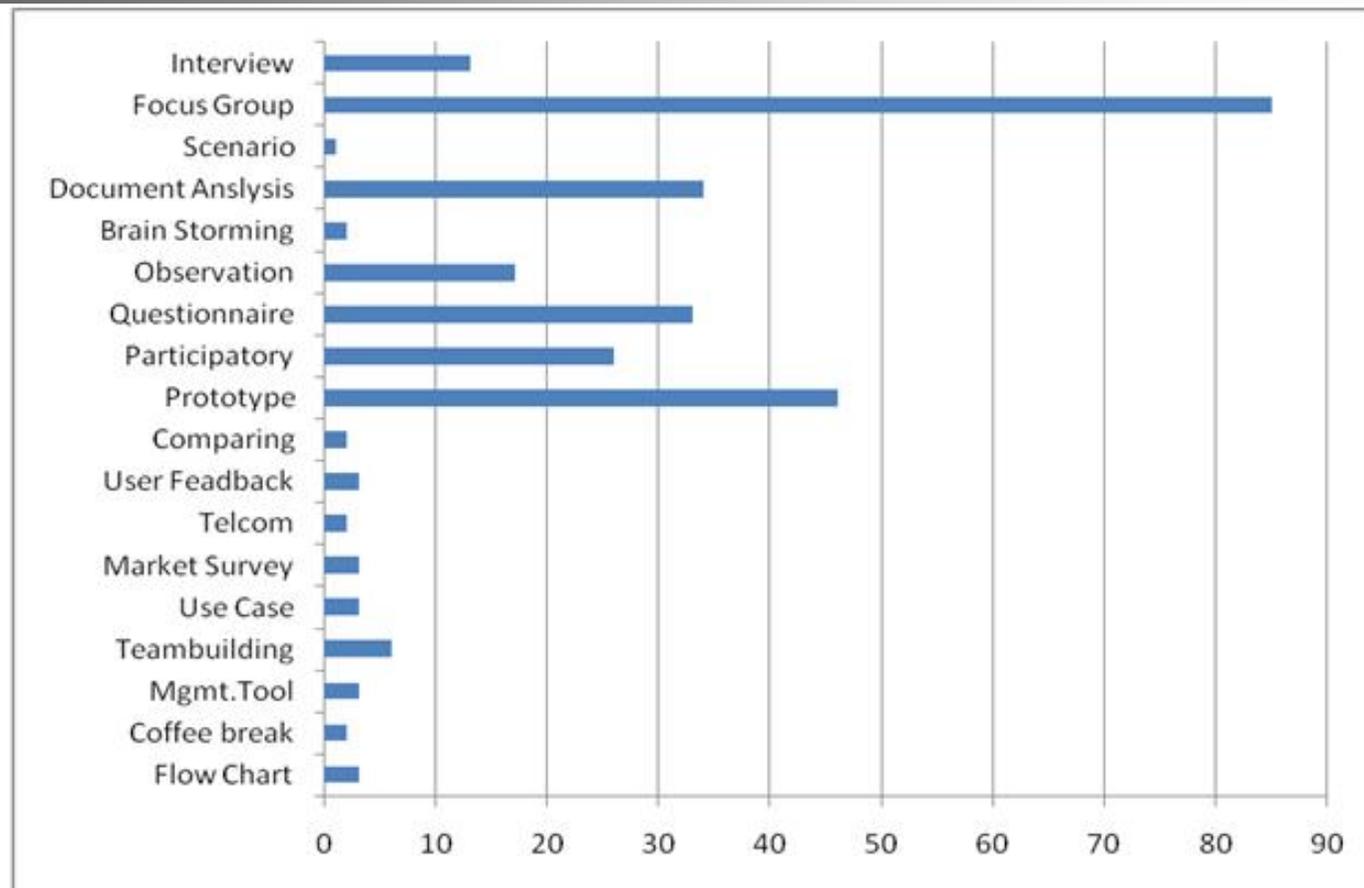- "In my recent projects, we always used prototype to complete the requirements. After analysis when we got a new project, we make a new model as quickly as possibly, then modified it with customers' feedbacks. "

Popular RE techniques

Ranking of requirements elicitation techniques[project report 2008 siemens]

Our Proposal

Use media to enhance the requirements elicitation process
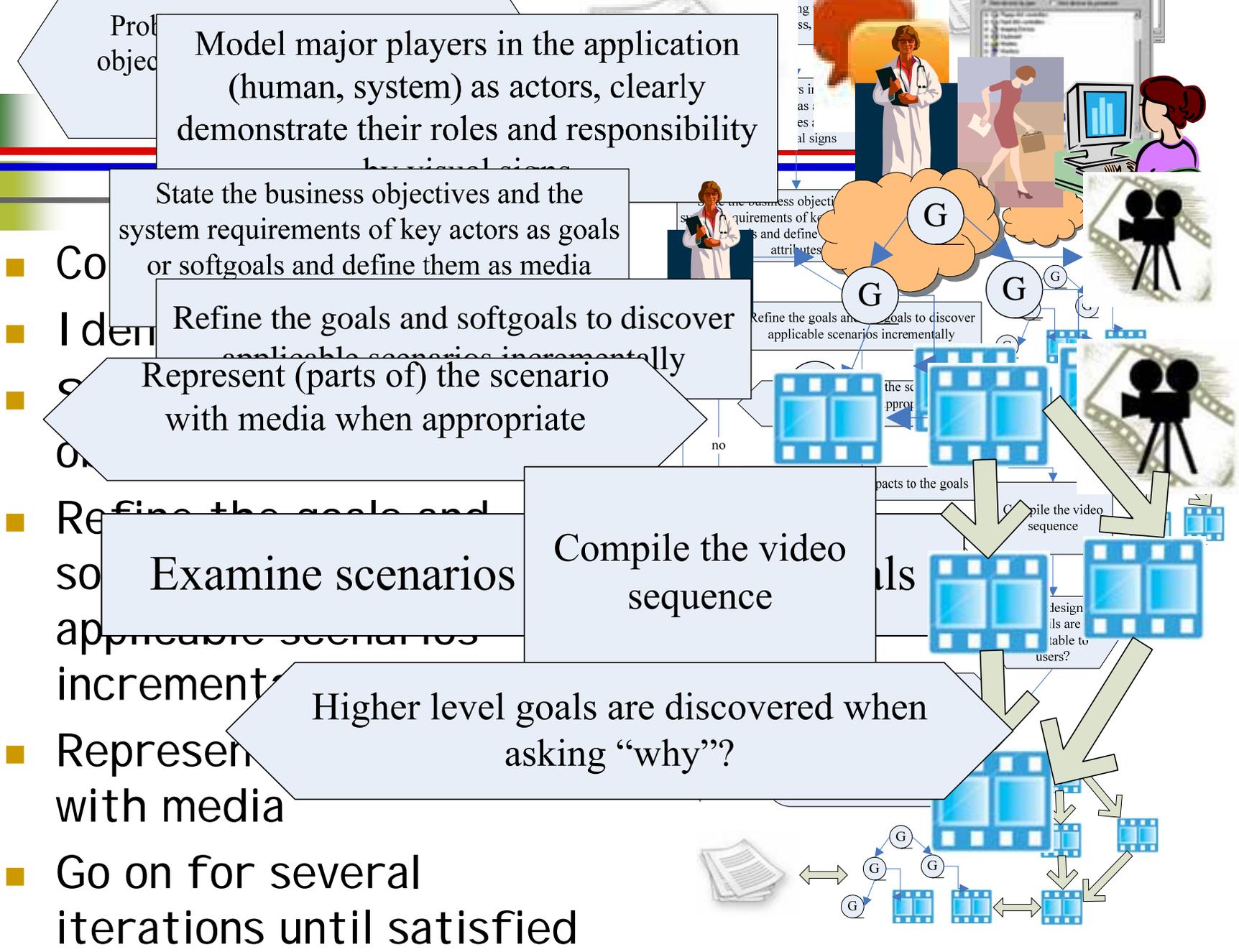
The core of the method

The three tuple <M, G, R>

- **M** represents a synchronized presentation of media types used for software requirement elicitation, such as graphic, image, audio, video, and animation content.

- **G** is the goal of the media scenario aims to be achieved.

- **R** represents the requirement specification of the goal and media.

Use 5W2H to identify media enhance-able objects

- **Who** captures the major players of the required scenarios and their roles, responsibilities.

- **Why** captures the goals.

- **What** The concrete operations and actions can be presented by videos, cartoons vividly.

- **When** the time of activities.

- **Where** The scene of the actions

- **How & how well** capture the concrete design alternative and its influence to nonfunctional requirements.

Model major players in the application (human, system) as actors, clearly demonstrate their roles and responsibility by visual signs

State the business objectives and the system requirements of key actors as goals or softgoals and define them as media

Refine the goals and softgoals to discover applicable scenarios incrementally

Represent (parts of) the scenario with media when appropriate

Examine scenarios

Compile the video sequence

Higher level goals are discovered when asking "why"?

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- I den
- S
- o
- Refine the goals and so als applicable scenarios incrementa
- Represen with media
- Go on for several iterations until satisfied

MEGORE

- **Goals**
  - Basis of MEGORE
  - Beginning of the MEGORE process
  - Criterion of whether media fulfill the requirement.
- **Others**
  - Whether videos or images are chosen largely depends on the temporal order.

Practice and lessons

- The proposed method is applied in the design of **Electronic Marine Chart Navigation System**.
- **Take the process of design the interfaces for example**
  - The soft goal is user friendliness.
  - Collect the raw materials including the pencil drawn user interface diagram, similar system interface and some documents
  - Model the user: navigators and operators
  - Refine the soft goal
  - Design the user interface in images and discuss with stakeholders
  - Modify the images according to comments
  - Go on for several iterations until the goal is achieved.

Collect the raw

Practice and lessons

- **Return of Investment**
  - Reuse the multimedia
  - Prepare the multimedia repository
- **Feedback is important**
  - More comments are useful to get the requirements.
  - Media can be easy to be commented.

THANK YOU