

# **CS6027 Requirements Engineering (Fall 2014)**

# PROJECT 2: GOAL MODELING (20% of your total grade)

### **IMPORTANT DATES**

Thursday (10/2/2014): Release Project 2 (in class)
Tuesday (10/21/2014): Project 2 report due by 11:59pm

All submissions shall be made in Blackboard as one or more <u>PDF</u> files. The instructor can help you scan your hand-drawn models right after Tuesday's class (10/21/2014).

#### **BACKGROUND**

- The weblink <a href="http://homepages.uc.edu/~niunn/courses/">http://homepages.uc.edu/~niunn/courses/</a> contains important supplementary materials.
- Lecture Note "10-1002-nfr.pdf" also contains some relevant information.

#### **DESCRIPTION**

Project 2 requires you to practice the  $i^*$  goal modeling by expanding the 'Meeting Scheduler' example in a transformationally creative way. In the supplementary-material weblink (<a href="http://homepages.uc.edu/~niunn/courses/">http://homepages.uc.edu/~niunn/courses/</a>), 13 references that include 'Meeting Scheduler' in  $i^*$  notations are provided. In addition, 3 representative 'Meeting Scheduler' models are listed. The constructs used in those references can be found in the weblink and partially summarized as follows; the number in the parentheses represents the frequency of occurrence. Only the most and least frequently occurred constructs are shown below.

Actor	Goal	Softgoal	Task	Resource
Meeting Initiator (7)	Meeting Be Scheduled (14)	Low Effort (10)	Attend Meeting (4)	Details (3)
Meeting Scheduler (5)	Agreeable Meeting Date (4)	Quick (4)	Organize Meeting (3)	Proposed Date (2)
Meeting Participant (5)	Solicit Response (4)	Accuracy of Constraints (4)	Determine Meeting Date (3)	Agreement (2)
User Directory	Get Interests from	Invitee's Privacy	Gather	Personal Data
Manager (1)	Participants (1)	(1)	Constraints (1)	(1)
Administrator	Attached Files	Easy	Find Suitable	Participant
(1)	Scanned (1)	Configuration (1)	Slots (1)	Address (1)
Anti Virus (1)	Messages Received and Read (1)	Enhance Participatory Spirit (1)	Wait One Day (1)	Meeting Proposal (1)

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Each student is required to work <u>individually</u> on Project 2. The student is asked to expand the 'Meeting Scheduler' models (strategic dependency model, strategic rationale model, or both) by:

- Practicing transformational creativity, that is, challenging the constraints
  on the search space & enlarging the space of possible ideas to explore. In
  practice, this typically means thinking of another <u>domain</u> or multiple
  domains & adapting the ideas from the new domains to make the
  'Meeting Scheduler' more creative.
- Introducing at least 9 new constructs spanning at least 3 categories. Note that  $i^*$  has 5 construct categories in total (actor, goal, softgoal, task, and resource). The 9 new constructs can come from one or more new domains.
- Connecting the new constructs introduced in the previous step by using proper *i*\* relationships, for example, goal-decomposition-link, dependency-link, softgoal-contribution-link, and so on.
- Documenting your 'transformational creativity' process. This includes, but is not limited to, the following aspects.
  - The new domain or domains that you come up with, and the new modeling constructs of each of the new domains.
  - Your strategies, tacits, and heuristics of identifying & relating the new domains.
  - o Insights drawn on 'transformational creativity', 'Meeting Scheduler', '*i*\* modeling', or relevant topics.

#### **GRADING**

Your individual grade will be computed based on your project report:

- Results (45%).
  - Have you created at least 9 new constructs spanning at least 3 categories? Your construct is new if it does not repeat, and is

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significantly dissimilar to, the existing modeling constructs (see the weblink <a href="http://homepages.uc.edu/~niunn/courses/">http://homepages.uc.edu/~niunn/courses/</a>).

- Are your models well-formed, self-contained, and easy to comprehend?
- Process (45%).
- Legibility, grammar, formatting (10%).

### **NOTES**

- Lateness penalty applies (please see course syllabus).
- The 13 references provided in the weblink are not meant to be complete but to be starting points. Feel free to identify additional literature.
- Because no (good) *i*\* modeling tool exists, drawing your models by hand is a good choice for carrying out this project.
- Because producing a complete *i*\* model manually can be tedious, feel free to draw only partial models highlighting <u>YOUR</u> new contributions. For example, you may add a new Actor to Ref13-Fig2, show the new Actor's dependencies in a strategic dependency model, and present the new Actor's strategic rationale model. In any case, your model submissions shall be self-contained.

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