

## Weekly Status Report – Niles Guo Aug 13, 2017

### **This week's activity:**

1. Drafted two research plans and presented them for feedback.
2. Based on the feedback, started to research and create a potential taxonomy for the different models and frameworks related to CADs. I first thought of using a CS framework of trying to define each one using either a *has-a* or an *is-a* framework. This is often used to construct and define members in an object or class. However, after playing with this concept a bit, I realized this wouldn't work with our models and frameworks, since neither *has-a* or *is-a* will provide enough differentiation to the different models for it to be useful. Instead, I'm going to build upon a design model taxonomy designed for software designers and developers (Ceret et al. 2013, this will be my paper to be reviewed this week) as inspiration for the taxonomy framework.
3. Will try to have a preliminary taxonomy categorized and described before our meeting on Monday afternoon.

### **Issues/Agenda for next meeting**

1. Go over the taxonomy framework and see if you have any feedback on the approach and preliminary results.
2. What should I present to the lab meeting on Friday?

### **Next week's activity:**

1. Continue to refine and define the model taxonomy.
2. Present research ideas to the lab on Friday morning.

### **Journal Article Review**

Céret, Eric, Sophie Dupuy-Chessa, Gaëlle Calvary, Agnès Front, and Dominique Rieu. "A taxonomy of design methods process models." *Information and Software Technology* 55, no. 5 (2013): 795-821.

The authors saw a need to create a formalized taxonomy of design methods in the software design/development field due to the increasing number of available design approaches. The lack of a classification system made it difficult for designers and developers to select the most appropriate one for their specific project. By studying existing process models in the existing academic field, the authors came up with a classification model based on six main axes: collaboration, artefacts, flexibility, cycle (describing iteration, top-down/bottom up approaches etc.), maturity, and finally recommended use. For each of these axes, the authors then defined the different classifications that would distinguish each model with.

While these axes do not all apply to our inventory of models and techniques, and we will want to add additional axes here, this paper does present a starting point to think more rigorously about how to classify and categorize our models. In particular, collaboration, artefacts, and flexibility can and should all apply as axes for our model taxonomy. Other axes should also include quantitative methods and targeted audience.