

## COMP SCI 4HC3 - Human-Computer Interaction RESEARCH Project Milestone #3 – Final Report

**Due Date:** December 15, 2014, 12:00 noon

**Late submissions:** No lates will be accepted.

**Grading:** This milestone is worth 50% of your project grade (i.e., 20% for 4HC3, 25% for 6HC3).

**Group Work:** This, and all project milestones, are group work. Groups are the same team you picked for Milestone #1. Grad students (continue to) work alone.

### **Part 1 – User Study & Analysis**

Now that your methodology and ethics protocol are approved, proceed to conduct your user study. Keep logs of all data collected, as you will submit these with your final report (preferably as Excel spreadsheets). You should aim to have your study take between 20-30 minutes per participant – include additional trials/repetition of conditions to add more data if you find your study is extremely short via pilot testing on your group members. Make sure to document any changes from your originally proposed methodology – it's OK if this happens (since we can't always predict the future!), but you should keep track of it, i.e., by updating your methodology section in the final report to reflect what actually was done.

For the analysis component, you will need to use some kind of statistical software. MacKenzie provides ANOVA and posthoc software. You may instead want to use something like NCSS, SPSS, or Matlab for this component. In any case, you should analyze your main independent variables and interactions between them in context of each dependent variable – i.e., you want to find if there are significant differences in the average scores for your dependent variables between your conditions. Try to use posthoc tests to identify specific pair-wise differences between conditions – recall that ANOVA will only identify if there is a difference between any two conditions, but won't tell you which two are actually different!

### **Part 2 – Results, Discussion and Conclusion Sections**

Document your results from Part 1. This will involve adding a couple of new sections to your (on-going) report. These are the **results**, **discussion**, and **conclusion** sections. The results section should include the statistical reports (see above) for your variables, even if they are not significant (i.e.,  $p > .05$ ). These should be formatted as indicated in the slides and text book. You should also include figures, graphs, and tables as appropriate. For example, you may want to include graphs summarizing scores for each condition, or a table of statistical reports if you have a lot of independent/dependent variables. The results section need not be particularly long, but should be thorough enough to report the main effects. This will probably be approximately 250 – 500 words, but these are not hard limits.

The discussion section should follow results. This is where you derive meaning from the results. Were your hypotheses correct? If so, point this out. If not, try to explain why that might be. How do your results line up with similar work from the papers you surveyed for your literature review? Did anything surprising happen? These questions are a good starting point to inform your discussion, but you should not feel limited to just answering these – if you can think of other interesting things to point out, go for it! This section should be approximately 500 - 1000 words, but you can add more if you feel there is more to discuss. As before, getting out all the important details is more important than the overall length for your results and discussion sections. Finally, the conclusion section should tie it all up. This section will likely be the shortest part of your report (probably no more than two or three paragraphs), and will essentially restate what you did, and your main findings.

### **Submission:**

These final sections should be appended to your Milestone #1 and #2 submissions, i.e., in the ACM CHI submission format ([http://www.sigchi.org/publications/chipubform/sigchi-papers-word-template/at\\_download/file](http://www.sigchi.org/publications/chipubform/sigchi-papers-word-template/at_download/file) and on Avenue). **At this point, you should also edit your proposal and literature review to serve as an Introduction and Related Work section. Please also change these to past tense!!** If you find new references that are relevant, you can certainly include them. Take your prior feedback into consideration during editing, as \*all\* sections of the final report (including those from MS #1 and MS #2) will be evaluated again now. **The entire paper should be absolutely \*NO MORE\* than 8 formatted pages long.** Submit your document – both original Word format and a PDF – and a zip of all data logs to the Avenue link by the date specified. If you used custom software, please submit this as well so I can try it out. Only one group member should submit.