CE4002 – BIM Fall 2016

For Groups 1-3

Homework 1 – Topics to be covered in the presentations on Nov. 27th, 2016

Group 7

- Briefly overview the process of generating estimates in Allplan.
- How did this tool improve the estimating task? Compare the benefits and limitations of such a tool with the current approach of manual quantity take off and estimating.
- What features of the system need improvement?
- Describe the considerations you must make while using Allplan for estimating, as opposed to paper-based estimating.
- Do you think the model given to you for quantification is ready to be used for cost estimation? Do you think the model requires further processing (changes, additions, formatting, etc.) for a realistic cost estimate?

Group 8

- Briefly overview the process of generating estimates in Navisworks.
- How did this tool improve the estimating task? Compare the benefits and limitations of such a tool with the current approach of manual quantity take off and estimating.
- What features of the system need improvement?
- How did you estimate the unit prices? From a web-based source? A unit price book? By an educated guess, etc.? What other sources can be used?
- At what point in the design process would this tool be most useful? (i.e. is this tool more useful for 90% complete design versus 30% or both) Why?

Group 9

- Do you think you are exporting all the information in the building model when you save it as a .NWC file for the cost estimate? What do you see as the opportunities and challenges of file-exchange between multiple software packages in the AEC industry?
- Can you be sure that the model based quantity take-off is correct? Describe the considerations you must make while using Autodesk Navisworks Quantification to estimate, as opposed to paper-based estimating. Do you think this method covers all the cost items you should include in a construction cost estimate?
- Are there any advantages of doing manual instead of automated quantity take-off?
- What type of construction projects would benefit most from this tool? Complex? Simple? Why?
- What might be your suggestion for linking cost information to model based quantities?Eg. Can you save the unit cost information into a database for reusing that information in similar projects? Or do you need to reenter for each estimate?

Please:

- Keep the presentations within 15-20 minutes.
- Be specific.
- Provide your group's own views on the discussion topics. But be ready to explain and backup your points based on your own understanding.
- Minimize repetition amongst presenting groups by looking at the topics assigned to other groups presenting and <u>not repeating</u> those points in your presentation. (i.e. Do not present other groups' topics.)

Group 7-9-8-9 will perform their presentations on November 27th, during the class hour.