CIS660 AUTHORING TOOL PROGRESS REPORT

WEEK OF:_____2/27/2107_____

Name of Authoring Tool _____Interlocker_____

· Current date: _____03/05/2017_____

· Name: _____Jiongjian Chen _____

Task Activities since the Last Report

· **Tell me what Design Doc work plan tasks you worked on over the past week**

Week 1 assignment is Building Framework.

· **Tell me specifically what the work consisted of and what was accomplished**

The breakdown of detailed work plans according are listed as follows:

1.1. Model interlocking furniture parts in 3d Max or Maya – Jiongjian

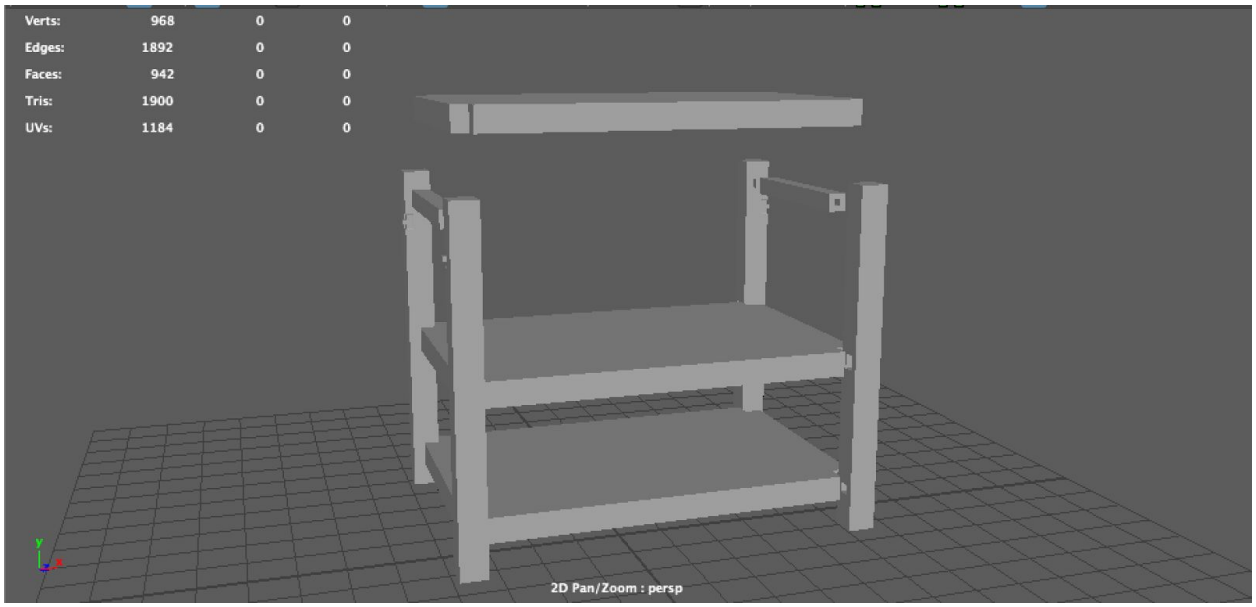
1.2. Implement user GUI interface dialog (MEL) - Meohamed

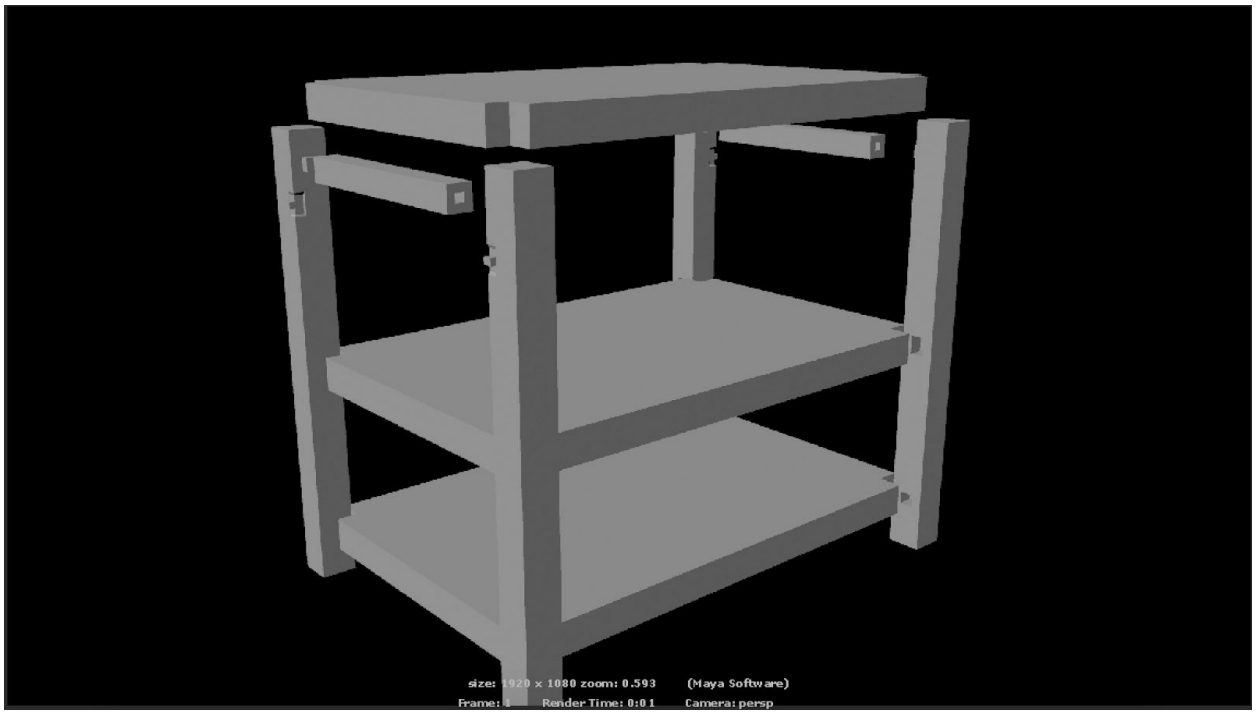
1.3. Implement command plugin framework (C++) – Mohamed & Jiongjian

1.3.1. Write code stubs

Specifically, we start off by looking at this example: http://www.offi.com/pdfs/puzzlechair.pdf . It introduces the assembly instructions for a puzzle chair with detailed photo explanation of each step.

I created 3D modeling for a few furniture mentioned in the paper(shoe rack, bench and sofa) for future use, see render image below(shoe rack):





Later I found an interesting software that might be helpful to learn (http://burrtools.sourceforge.net/) and played around with.

Software Introduction:

> This (set of) program(s) will help you solve a certain kind of puzzle. Namely puzzles that are made out "glued" together basic units. As basic units the program currently supports: square or dice shaped units, spheres, prisms with an equilateral triangle as base or 2 grids that use tetrahedra.

Mohamed did the part of

- implementing user GUI interface dialog in Maya using MEL

We did the part of implementing the framework of wrapper code together for our future C++ implementation just like in homework 2.

· **List the number of hours you worked on each of these tasks this week**

~10 hours. 2 hours for searching for relevant online resources, 2 hours for modeling furniture parts and exporting them into compatible obj files, 1 hour for referencing back to the original paper, 5 hours for setting up the plugin framework in Visual Studio and creating wrapper code.

· **List the total number of hours you have spent working on your authoring tool since the start of the project**

Apart from hours devoted to high concept generation and initial design document, hours spent so far on implementation is ~10 hours.

Activities Planned for Next Week

· **Tell me what you will be working on next week and what you plan to accomplish in terms of the work plan tasks and milestones**

Next week Mohamed and I will be working on the construction of Parts-graph which should takes around 2 weeks to finish, breakdown of this part is as follow:

1. Generate initial parts-graph with given furniture model

2. Merge degree-1 nodes in the graph with their adjacent parts

3. Analyze and identify groups of overlapping cycles in the parts-graph

By the end of next week, we should be able to finish the part-graph algorithm and by the week after, certain APIs would be defined in order to integrate this part into the whole system.

Work Plan Tasks Completed to Date

- **Tell me what tasks you have completed to date (as defined in your Design Doc Work Plan)**

Completed tasks are organized as follows:

1. BuildFramework – 1week

. 1.1. Model interlocking furniture parts in 3d Max or Maya – Jiongjian □

. 1.2. Implement user GUI interface dialog (MEL) - Mohamed □

. 1.3. Implement command plugin framework (C++) – Mohamed□ & Jiongjian

1.3.1. Write code stubs □

Problem Areas

· **Identify any significant technical issues, problems or roadblocks you have encountered (if any) which you think have or will affect your development schedule.**

We still need to well define the interface variables between Maya and C++ code for interlocking algorithm, the interaction between two modules should be planned beforehand so we'll probably bring forward this in our scheduling.