

Assignment 3: To create a 3d representation of a car and building façade on the UQ campus

Assignment Available: Wednesday 21st September (week 9)
Assignment Due: Friday 28th October (week 13) at 5pm, with assignment presentations in week 14

TASK: Working with an assigned team to plan and create a 3D model of a car, the façades of buildings 69 and 67, and Mansfield Place within the UQ campus for an imaginary client. A building footprint is provided indicating the area to be modeled. The footprint provided is in Tucan format (.asn). Tucan software is to be used for the creation of this model. An attached map with shaded areas in red indicates which sections are to be modeled.

Scenario:

Client would like a real time model of the building façade and Mansfield Place surrounds with a car of your choice placed in the scene. Model is for a basic fly around of the exterior of the building and car.

The model is to be of the external aspects of the building and car only and able to be viewed from ground level. Model should include all data shown in the attached map. Important signage attached to the building and adjacent to it should be included, as should all line markings in Mansfield Place.

Project to be completed by the assignment due date mentioned above. No extensions are possible on this assignment as it is a group assignment.

Client would like regular design reviews to view progress (*do these amongst your team*)

Objectives:

- Plan data acquisition of the building and car.
- The car to be modeled is of your own choice and should be decided by the group.
- Produce a plan of the costs involved providing a written quote for the client. This is to be broken down into the following areas showing time and cost for each.
 - Data acquisition- imagery, building data, car data etc.
 - Texture preparation/application.
 - Labour costs are based on \$500 per person per day
 - Client meetings, travel time etc. Factor in two client meeting before the final presentation. Your client is 30 minutes travel time away from you.
 - Modeling work.
- Assign tasks equally amongst team
- Assign a project manager
- Have regular design reviews with your team.
- Achieve an efficient and smooth running model that you will present in the in 3-5 minutes. Include the time you will need to practice for your presentation. Keep extensive notes to produce a written report including

- Problems that occurred during project.
- How each member contributed from the start to the final presentation of model.
- How did you plan your project
- For each texture used show the original source image.
- For the car you must also submit any data acquired to allow you to accurately model it, this should include any brochures acquired, photographs, specification sheets etc.
- **No more than 3000** polygons in total for your building.
- **No more than 3000** polygons in total for the car.

The following section indicates what you MUST submit for the final assessment.

1. A 3D model of the building and surrounds as per the attached diagram with the model of your car of choice placed in the scene. This model must be in Tucan (.asn) format with Level Of Detail (using addition or replacement). The building surrounds include the following:
 - Footpaths on both sides of the Mansfield place.
 - The garden beds inside the defined area. (You do not need to include plants if you don't want to).
 - Road markings and parking bay markings.
 - Barrier blocks around the circular area at the end of Mansfield Place.
 - Stonework in the circular area at the end of Mansfield Place.
 - Gutters on each side of the road.
 - The walkway across Mansfield Place
 - Street lamps in the defined area.
 - Any signage in the assigned area
 - The exterior of buildings 62 and 69 as per the diagram. (This includes the walkway between building 62 and 69).
2. The following features are expected to be included in your modeled car of choice.
 - All exterior features of the car including, decals, trim and body work.
 - Wheels and wheel arches.
 - All panels should be defined. E.g. fenders, bonnets, doors etc.
 - Registration plates with fictional numbers.
 - Windscreens and windows.
 - Wing mirrors and other protruding features (e.g. roof racks).
3. You are required to produce three (3) levels of detail for the car (High, Medium, and Low) and appropriate levels of detail for the building.
4. You will be required to present your model in a 5 to 15 minute demonstration. Your model will need to be both efficient and smooth running. A panel will assess your presentation and ask relevant questions, your peers will be invited to view your presentation.
5. Produce a plan of the costs involved providing a written quote for the client. This must contain a breakdown of costs as detailed above.

6. In no more than 300 words describe how each member contributed from the start to the final presentation of model and the roles assigned.
7. In no more than 500 words describe the how you planned the project, the milestones you set and the problems encountered. Describe how any problems encountered were overcome. **A project plan table (such as a Gant Chart) will be required.**

The following is a guide to how Assignment 2 will be assessed.

Assignment 3 Modeling component

Item	Objective	
Economical use of polygons	Check for excess polygons and depth complexity. Check polygon budget at onset of a project.	
Ordered hierarchy	The hierarchy structure should be efficiently ordered and polygon nodes named appropriately.	
Scaling of model	Items within the model should be scaled to look realistic	
Good structured LOD's	Good distances set for change in detail. Structure of Lod (replacement / additive)	
Textures applied correctly	Textures should be applied and scaled correctly to the polygon	
Non-planar polygons	All of single polygons vertices should be sitting on the same plane	
Missing polygons (gaps)	All polygons should meet correctly where they touch with no gaps showing	
Z fighting	Check model for overlapping and coplanar polygons	
Back-faced polygons	Check for polygons facing the wrong way	
Neat texture/object palette and source files.	Only items in model to be in palettes. This includes your source image files.	
Total Modeling marks		65

Assignment 3 other assessment components

Wow factor (the extra bits that make the model, this can include sound animations, plants etc.)	10
Project presentation (Q4)	10
Written quote (Q5)	5

Team contributions (Q6)	5
Project Plan (Q7)	5
Total other marks	35

Notes for assignment 2

The following bullet points are of **importance** as they will be features that we will be looking for during the assessment. Points will be deducted from the overall mark of the modeling component if the points are not considered.

- **Economical** use of polygons.
- **LOD's** to be sphere not box.
- **Top level Object** Node flagged.
- **No unused textures** in palette
- **No unused objects** in Object palette.
- **No unused .asn** files to be submitted
- **All nodes open and building ready for presentation.** Include camera positions in the of the model.
- **All textures as .jpg/.gif** and to the power two (eg 256 x 256). Kept in directory /Textures
- **Source files** in a separate directory called /Source (each image **no bigger than 800x600!!!!!!** Reduce your source files to this size before submitting them.).
- **No unused source files**, this does **not** include sighting shots used.
- List **all** web references used, particularly for any information gathered for your car of choice. These should be included in a document in the **Source** directory.
- Any hardcopy brochures acquired for the car should be scanned and submitted as files in the **Source** directory.
- Any images **sourced from the web must be acknowledged** as such in the document that is in the Source directory. These should include images of a car if you choose to create something not commonly available in Australia and sourced the images from the web.
- **DO NOT UNDER ANY CIRCUMSTANCES USE A MODEL OF A CAR SOURCED FROM THE WEB. SUCH MODELS ARE EASILY IDENTIFIABLE AND WILL RESULT IN AN IMMEDIATE FAILURE OF THIS ASSIGNMENT FOR THE GROUP IN QUESTION.**
- Attached to this assignment is also a letter to cover your group should you be questioned while walking around your building or if approaching a car retail outlet to obtain brochures. Please fill in your names and student numbers in the relevant spaces and bring the letter to me (Lazaros) for signing should you need it.

For those of you that do not have digital cameras, there will be a limited number available through the ACMC office for loan. You will have to sign them in and out. You will need to contact Lazaros Kastanis (lek@acmc.uq.edu.au) to organize booking a camera.

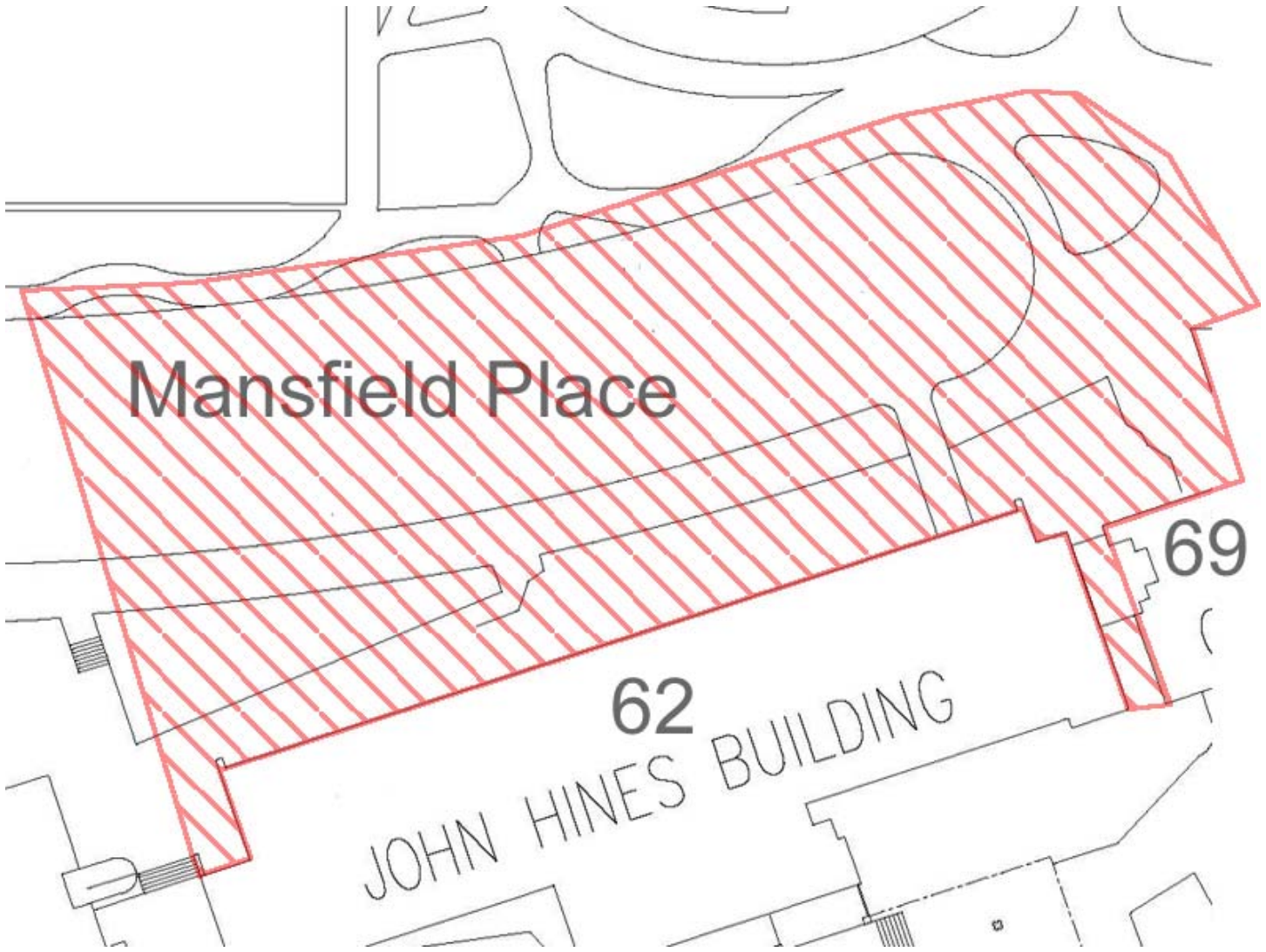
Use whatever methods you have at your disposal to calculate the dimensions of the building and car you are modeling. You will be provided with a basic outline of the building in TUCAN format but there is no guarantee that it is accurate in terms of size.

This is an imaginary project but is based on the type of project you may acquire for a basic urban simulation within the real time modeling industry.

Planning and communication is one of the most important aspects of producing a good result within the time given.

You must appoint a project manager whose job it is to liaise with the client and keep the team communicating. He/She must plan regular design reviews during which you can discuss any problems you may be having. If you don't communicate with each other work may be held up due to minor issues. Team members need to assigned responsibilities by their project manager.

The image acquisition and editing will be a large part of the project so do not underestimate the time you will need to complete it. It is best to over estimate in this area. Plan and catalogue your images with many sighting shots included. Read this document carefully to make sure that you have not missed anything. We will not be lenient with issues that have been covered in this document and have not been adhered to. **NO LATE SUBMISSIONS WILL BE ACCEPTED UNLESS YOU HAVE PRIOR CONSENT OF THE COURSE COORDINATOR!!!!!!!**



30/09/05
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To whom it may concern

This letter is to verify that the following students are involved in a group assignment for COMP3202 at the University of Queensland.

Student ID	Student Name
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The assignment is worth 50% of the total assessment for this course. The students are required to model an assigned building and a car of their choice in a 3D environment. The modelling requirements are:

- To model the exterior only of the assigned building up to the edge of the surrounding pavement.
- The entire exterior of their car of choice
- Students will be required to measure the dimensions of the building to ensure accuracy.
- Students will require detailed measurements of their car of choice, this may include reference material such as brochures etc.

The students have no need to encounter or liase with tenants of the building. Should the students have any issues with access they will contact relevant personnel before proceeding.

Should you have any questions please feel free to contact me. Thanking you in advance for any help offered to the above-mentioned students.

Lazaros Kastanis
ACMC