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**Group: 5**

**Course: Computer Games  
Production**

**Unit: Computer Games Production –  
Group Project**

**Unit Code: GMC2002**

**Assignment Number: 5**

**Unit Lecturer: Phill Richardson**

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## **Group Project – Games Production.**

### **Introduction:**

This assignment is the final group submission for this project, it discusses the implementation of our project, and the final artefacts that were produced for submission.

### **Implementation Report Changes:**

We were initially tasked with creating an artefact using the Half Life 2 Source SDK Development kit. This artefact was to be used in either training or education, for example military use, we decided to create an artefact that would be a virtual tour of the University of Lincoln Technology Faculty, aimed at prospective students.

Due to time management and communication problems, a large section of our modification has been changed to enable us to produce a prototype artefact.

### **Character Creation:**

We initially planned on creating custom NPC characters, whom were based upon key members of the technology department. However it was decided to utilise Half Life 2 NPC characters instead so that the prototype could be completed.

### **Sounds:**

Again we planned to have custom sounds implemented unique to the university, however due to time constraints this was not implemented as it was never intended to be a priority, or to play a large role in our artefact.

### **Visual Style:**

We planned to produce our modification using the Cell-Shaded style of Team Fortress 2, however this was not implemented as the required tool updates were not released as planned, thus rendering us unable to include said visual style.

### **Mapping:**

We initially planned to have three separate maps, The Atrium, Quad and Technology building, however it was later decided to integrate all three maps into one, in order to save on loading times for the host computer. However, for sake of time constraints, we restricted ourselves to the 2 main buildings (Atrium and MHAC).

### **Custom Assets:**

It was planned to have all models and textures custom made, however again due to poor time management from key members of the group these were not completed. Some custom textures were implemented, but not to the standard required.

**Coding:**

The mod was going to consist of a coded mission system, with custom camera angles, menus etc, however it was found that we could implement the majority of these in Hammer, which would save a considerable amount of time.

**Implementation**

This section talks about the overall artefact produced, and will include screenshots showing progress as required.

We have produced a working prototype of our artefact, which is incomplete, lacking aspects such as custom models, as discussed above.

Our modification consists of a large map spanning “The Atrium”, “Quad” and “Technology Building”. The user of the artefact is able to traverse the entire level, and should be able to recognise key areas from their real life counterparts.

## Screen Shots

The artefact is experienced in the third person view, which was implemented using logic available in the development tool.

## Screen Shots

As the player progresses through the map they will trigger certain events which allow them to progress, for example they must go to a certain area in order for a door to open which allows them to continue. These quests were to initially be coded, however were implemented using the trigger function in Hammer.

## Screen Shots

Some custom textures were implemented in the artefact, however not all required textures were completed, resulting in the overall artefact not quite looking like it should.

## Screen Shots

We have also produced documentation to accompany our artefact, this explains how to use it, and should appeal to the target group. This can be found in the Appendix, along with all concept art produced for our initial designs.

Overall we have produced a functional artefact which meets the basic requirements of the brief, however due to several factors discussed above the final product is not of the standard we initially hoped for. Had we have managed our time in a more appropriate manner then we would have been able to produced all of the initially planned artefacts such as custom character models, which would have given the artefact a more realistic, and polished feel.

Lack of communication was also the downfall of this project, due to poor attendance of meetings, and an inability to contact members via email it was difficult to obtain required resources. This in turn halted, or slowed down the progression of other sections of development. If this had not been the case then more could have been produced and implemented.

### **Quality Assurance**

To ensure that our final artefact was of a playable standard we implemented several testing methods. Initially we assigned two group members to testing, continually running modified versions of the product, and attempting to break, to ensure that these problems could be fixed. As well as this the two mappers Toby and Jason were continually testing their own work to ensure that it was to a standard fit for the final deliverable, fixing any problems encountered, and adding new features as needed.

After this internal testing was completed we developed the artefact that it could be beta tested by none group members. This involved setting the beta tester several tasks to ensure that the product was usable:

The tester had to attempt to navigate from A to B, this was to find out if there were any obstacles preventing them from doing so, and to find out how much of a likeness the “Game World” had to the “Real World”.

The tester also had to complete the trigger based tasks, this was to ensure that all elements worked correctly, rewarding the player when required, and allowing them to progress.

We also asked the tester for their opinions on the product, what they liked, and what they disliked so that we could use this for improvement, we found the biggest problem to be aesthetics, however as previously mentioned, this was lacking due to poor time management and communication.

### **Process Report:**

As detailed in the submitted assignment 3, we split tasks up between group members according to skill. We also took into consideration how large each task was. Because of this we later revised our plan to reflect this, dividing the group into two teams, each to map, and create assets for specific areas of the university.

Sadly although this initial plan seemed sound, problems still arose. Lack of attendance was a major factor for most meetings, with very few occasions where all six group members were at the same place at the same time. This meant that communication was difficult, resulting in people not understanding what they should be doing, or being unable to give work to the correct person.

This should not have been too large an issue, but it was almost impossible to contact members in other methods, emails would fail to be received etc. There was also no online file management system set up like initially planned, making it harder still to attain required files.

While the bulk of the mod was created, maps, scripting etc lesser artefacts that would add to a polished feel were not, lack of custom models, and textures resulted in a final deliverable that was very different from the intended product.

This having been said, when the group did work together, it worked well, with large amounts of work being produced in a very short amount of time. This is a large advantage presented by group work. But sadly due to the rareness of these occasions the overall artefact was let down. This was in part due to poor time management by the group as a whole, with other large assignments taking priority over group submissions.

The final artefact could have been of a much higher quality had we have worked more cohesively as a team. Lack of attendance was a major downfall in our project, had all members have attended meetings unless there was a very good reason not to, then the flow of the group would have been improved. This would have resulted in much better communication between group members, and allowed a greater understanding of what was required of each member.

In the next section I will list each phase from the project plan, and talk about what was produced, and how efficiently:

#### Design Phase:

This was the initial phase in development, we needed to design all our assets, map layouts, prototype levels etc. We also needed to accumulate reference images.

#### **Output:**

For this phase we produced a considerable amount of resources, all included on the CD as an appendix:

We gathered a large number of reference images, these were used both in making concepts, and in mapping, modelling etc in future stages of development. Having these images meant that we could give our final artefact a genuine likeness to that of the university.

Overviews of each map were also created at an early stage, these were based on both reference images, and architectural plans obtained from the university. They were later used to help in the mapping of levels for the final artefact.

This was the initial stage where we decided to style the game after Team Fortress 2, giving it a Cell-shaded look. This was however changed in later production stages to meet software, and time constraints.

We also produced prototype maps and models for this phase, which were later to be developed further. These gave us a good grounding for future development, as intended.

**Resource Usage:**

This phase of production was handled very efficiently, the group was working cohesively, with most members contributing considerably to the creative side of design. Due to this we finished this stage ahead of schedule by 3 weeks, allowing us to move onto the next stage early. Finishing December 10<sup>th</sup>, instead of January 1<sup>st</sup>.

This resource management of this section was acceptable, with all members contributing documents etc, and attending meetings quite regularly.

**Production Phase:**

Once the design was finalised we planned to move onto the production stage, this is where we would create the components that were to comprise our final artefact. Maps, coding, models, etc.

**Output:**

Initially we had planned to produce the majority of gameplay elements, and GUI modifications via the use of coding. However due to time constraints it was decided to use Logic and Trigger functions available in the development tool to implement these functions instead, to give the same desired results.

Levels were created based on the initial designs and reference material, little was changed for these, other than linking the initially separate maps into one larger map.

Custom audio was not included in the final deliverable, primarily because this was deemed to be an unimportant aesthetic, and if included the final deliverable would have suffered in quality.

Few custom models and textures were produced, again due to time constraints, this resulted in having to use native materials available in the Half Life 2 Engine. This unfortunately meant that the overall feel that we were aiming for was not achieved, however we were still able to convey what was intended to the user of the final artefact, due to the use of recognisable maps.

**Resource Usage:**

Overall this section was much less successful, attendance for meetings dropped drastically, as did enthusiasm for the project due to the work load being experienced. The bulk of work was produced during group work assignment hand in weeks, as these were the only times the group met up as a whole. Because of this the whole project suffered, many required artefacts remained uncreated, resulting in the initial design having to be revamped in order to still produce a satisfactory deliverable.

This phase took much longer than expected, while it should have been finished in March, it instead took a further 3 weeks to complete, even with the missing artefacts.

**Testing Phase:**

This was to be the final stage in development, by now the artefact would be developed and testing could commence to ensure that any bugs found could be fixed etc.

**Output:**

Testing went ahead as planned, and was discussed earlier in this assignment, we tested with both internal and external sources, this allowed us to identify and fix any problems for the final deliverable.

**Resource Usage:**

This section as a whole took only two weeks to complete, while constant testing was undertaken, this was part of the production phase, final testing was quite a quick process, and utilised both internal and external resources in order to attain the best quality possible for our final artefact.

**Conclusion:**

This project has had good and bad aspects, as a group we have learnt a considerable amount, sadly this is too late to improve the artefact any further. Due to lack of communication, and poor time management many aspects of this project remain incomplete, but this did not stop us from producing a final deliverable based on our initial designs.

**Bibliography:**

The University Of Lincoln Blackboard

# Appendix 1 – Minutes

## Minutes for the week of 24/10/07

Work for first assignment beginning this week.

The sections described in the brief document are divided up between the members of the group.

Ken is assigned to the introduction

Jason is assigned to the Diagrammatic Overview and Validation and Verification plan

Will is assigned to the Method

Toby is assigned to the Group Processes and Risk Analysis

Mitch is assigned to the Requirements

Stuart is assigned the Gantt chart.

### Minutes for the week of 31/10/07

Final touches put to Requirements Analysis assignment.

Final document collated from individual segments formed and then tweaked to integrate the separately produced elements.

Toby completes Gantt chart.

Mitch to complete the hand-in itself due to the unavoidable absence of other group members later in the week.

### Minutes Summary for the weeks of 07/11/07 – 14/11/07

Very little activity during meetings for this period.

Group members primarily concerned with the individual submission due in the week commencing on the twelfth of November.

Consequently attendance quite low.

**Minutes Summary for the weeks of 21/11/07 – 28/11/07**

Attendance issues experienced with much of the group. Will, Ken, Mitch and Stuart sporadically appear.

Some basic preliminary speculative discussion concerning the forthcoming Group Design Document assessment.

## **Minutes for the week of 12/12/07**

### **Roles assigned.**

Stuart and Will volunteer dialogue script duties. Decided by coin toss. Stuart – tails. Will – heads. Heads wins.

Ken assigned to audio work. Voice recording, sound effects and stuff.

Stuart assigned as art director. Some level design.

Mitch suggested assigning small teams to each space. Two people: a mapper and a modeller assigned to two spaces out of four.

Toby and Jason assigned to mapping.

Jason assigned to MHAC and Sports Hall on Toby's suggestion.

Toby assigned to Atrium and Quad

Testing to be run by everyone, with builds distributed every so often with everyone writing error reports.

### **Design document**

Will doing justification for assigned tasks.

Toby and Jason on design overview.

Ken doing quality plan.

Stuart doing changes and design overview

Mitch doing configuration management

Deadline set for individual contributions as Thursday night or Saturday morning.

### **Work to be done and order done in**

Levels should be first.

Sports hall does not need to be fully modelled since the player camera can be “hijacked” and severely limited so we don’t have to construct the entire whole building.

Sports hall needs to be noisy. Busy place sounds recorded from somewhere.

Art style should have a retro futuristic edge to it. Features of buildings should be exaggerated as well as those of people.

Easter eggs should be put into the levels.

Floor plans of the buildings need to be attained.

Set up of forum or ftp suggested again as a platform for remote collaboration.

Individual folder structure suggested. Individual registers of files, changes and backup locations also suggested.

MSN contacts shared in order to facilitate remote communication:

ken gorton - iowa15uk@hotmail.com

Stuart - mangledchicken1@hotmail.com

Will Davies - telek\_ancnt@hotmail.com

Toby - guardianac00@hotmail.com

Jason - 06039966@students.lincoln.ac.uk

Mitch Williams - mitchwilliams1@hotmail.com

### **Minutes for the week of 09/01/08**

Preparation for the presentation assignment commences.

The presentation has two basic sections to it: The requirements and the design.

It is decided to attempt to divide the work up evenly with each group member producing and presenting the slides to which they are assigned.

Later in the week many of the group members express concern over the actual presentation itself as information filters back from other groups that their verbal feedback has been quite harsh.

### **Minutes for the week of 16/01/08**

In the wake of the presentation some of the group members do not feel confident.

Many express confusion over the feedback that we received and feel that it was inconsistent with both the brief and the information received from other groups.

### **Minutes summary for the weeks of 23/01/08 – 6/02/08**

While work on the mod itself gets underway attendance issues continue.

The effectiveness of the group suffers as Toby and Jason often find themselves the only attendees at meetings.

Duncan the group supervisor sends out emails and eventually it is decided that perhaps if all group members were to attend the Monday morning supervisor meeting then things might improve.

**Minutes for the week of 13/02/08**

Stuart not in attendance. Despite his claims to the contrary we have yet to see a sufficient contribution. Action to be taken.

Modified gantt chart states that maps are to be completed by the end of the month. Schematics need to be obtained to ensure proper scaling and layouts as opposed to approximations.

Mitch has taken photographic references of things in the atrium.

Coding to commence in march.

Friday meeting 10am in comp lab A to discuss progress during the week.

No other business.

**Minutes for the week of 20/02/08**

Basic demo map produced by Toby for demonstration to group supervisor.

Stuart produces head model for same demonstration.

Still some issues with attendance. Will absent.

Quality assurance and testing of final product discussed.

Most testing will be performed as the mod is made, since it is small and comparatively uncomplicated this shouldn't present a problem.

Also small scale user study to be performed. Most likely using the members of the group who are not working on the maps themselves.

**Minutes summary for the weeks of 27/02/08 – 05/03/08**

Work continues on final product in the run up to the Easter break.

Not a great deal to discuss as people go about their assigned tasks.

Attendance continues to be an issue but is somewhat improving. Still the usual suspects.

**Minutes for the week of 12/03/08**

This week: - Last meeting with Duncan Rowland. First meeting with new group supervisor Matt Lagner.

Preparation for final group submission commences prior to two week Easter holiday.

**Minutes for the week of 2/4/08**

First scheduled meeting with Matt Lagner, the new group supervisor, this week.

Work for the final group submission commences.

Toby and Jason begin to wrap up their maps.

Stuart to collect existing concept art for the appendix, also to embellish the existing material with new art for features that were not included in the final mod either due to time or resource constraints.

**Minutes for the week of 9/4/08**

Work continues on the final group submission.

Toby and Jason put the finishing touches to their maps.

Will assigned to produce the first part of the write up. Also the collection and editing of the minutes of the group meetings.

Toby and Jason produce the second part of the write up.