

## **GDP Group 11 – Chris Lord (cil103)**

### **Individual Reflection and Evaluation**

#### **Group Formation and Operation**

Our group consisted of five house-mates. As we were going to be living together and we all knew about each other, we concluded that working on a group project together would be the most advantageous and convenient option. My role was primarily one of programming/implementation. Deepak's role was to handle the database and web-services side of things, a role partly shared by Tony, who handled web-services and the web user-interface. Heather completed all the background research, without which none of the visual aspect would have been completed; another aspect she was mostly responsible for. Matthew was responsible for the 3D recreation and rendering of the library, for which he took on the arduous task of learning POV-ray (a ray-tracer with its own scripting language). I also helped coordinate communications between us and our clients. I was happy to take a more active role in these areas, in exchange for taking a less active role in the idea-forming and report stages. Initially we had some difficulty in assigning roles, as various group members had skills that could have been applied in many parts of the project. As the project specification became more clear, however, assigning roles also became easier, as it was clear that our individual skill-sets made us suited to particular parts of the project. Once the project started progressing, we functioned very well as a group. Due to us living together, we were able to express ourselves more freely than if we were less well acquainted. Also, working in such close quarters also harboured an environment of inspiration and encouragement, allowing more work to be completed in a shorter time than if arrangements had been different. All disputes (of which there were very few) were settled democratically and amicably during meetings.

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#### **Work Breakdown**

We had a very well-rounded group that could excel in all areas. In particular, we are all strong programmers, and this showed in the quality of our final product. If any particular trait had to be pin-pointed as a weakness, perhaps our time-planning could have been better, but in no way was it less than adequate. Tasks were allocated during our meetings and usually there would be only one person who was best-suited to a particular task. In the cases where multiple people could have completed a task, it was assigned to the person with the least work. Through this method of task assignment, all members of the team were assigned equivalent amounts of work in their particular field. Each team member put in a considerable amount of effort into their tasks and work contributions were equal between members. The project given to us was a very large and ambitious project, and I think we performed admirably as a team.

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## Planning and Progress

The project was planned by analysing the specification and breaking it down into a list of high-level tasks. These tasks were then included in a Gantt chart, which allowed us to see when exactly particular sections would be finished and how we'd allocated our resources. This Gantt chart was revised slightly at the middle and towards the end of the project, to reflect where our estimations had proved incorrect, or where there'd been delays. The time taken for the design stages of the project were underestimated initially, however, the time taken for integration and testing was also over-estimated, so the project was completed within the allocated time. As mentioned in the 'Group Formation and Operation' section above, I took a less active role in idea-forming, in exchange for a more active role in implementation. I attended each meeting and provided my feedback on the suggestions made, where appropriate. Particular suggestions that were mine included the decision for the 3D visualisation to be created in Java using only standard Java classes, without the aid of hardware acceleration, and the design decisions associated with the 3D visualisation, such as the abstract framework (that allows it, theoretically, to be attached to any online library) and the XML storage format (allowing human-readable and future-proof scene description files). Due to the delay in meeting our client, the project specifications were finalised relatively late into the project (week 5). However, once the specifications were finalised, there was a clear path to follow from beginning to end, and very few new decisions or revisions needed to be made. The only significant adjustment made was that of spending less time during integration, as mentioned above. Integration took very little time, due partly to our close proximity, and partly to our well-specified design.

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## Your Own Contribution

During the project, I handled communication with our clients (see Appendix for e-mail headers) and generation of the Gantt charts. I also attended all meetings with our client, as did Tony and Heather. My largest responsibility, however, was the implementation of the 3D visualisation. This was a separate task from the generation of the resources required for it, and the research behind it; tasks which Heather and Matthew were responsible for. Implementing this involved designing an architecture to abstract the concept of a library hosted on-line, and creation of a Java, software-driven, 3D polygon-engine from first principals. I was eager to see that this part of the project would be reusable in different contexts in the future, as it required a large amount of time and research to implement. This was the main drive behind the amount of abstraction in this part of the project. Although this abstraction increased the work-load, it is a decision I think paid off, as it allows the on-line repository more freedom and provides a layered framework. This layered framework can be packaged completely independently and used in many different contexts, including as just a basic 3D visualisation package, or as a fully fledged, panoramic, on-line library interface. A further advantage of this abstraction was how it facilitated integrating the 3D visualisation with the rest of the system. I believe that my contribution was effective, as evidenced by a comment from Stephen Bygrave of the Southampton English department (one of the interested parties), "*We were impressed with the 3D visualisation. This offers a user-friendly interface,*

*which is important to us since its primary purpose of which is, to immerse the user in the library environment, rather than to be confronted with a secondary search and browse interface.”*. The full transcript of this e-mail can be seen in the Appendix.

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## **Reflective Evaluation**

This group project was probably one of the largest projects I'd undertaken and it taught me a lot about group dynamics and the importance of design. A clear design allowed each member of the group to work relatively detached and meant that there were fewer stopping points along the way. The experience of this project will influence how I start projects in the future, in that I plan to invest more time in creating a design before starting work on implementation. The benefits of abstraction have also been made more clear to me. Due to the abstraction of all parts of the project, integration was a very short and simple process, and I'm confident that certain components of the project will be used in the future, even if only by myself.

In hindsight, I think that it might have been prudent to have pushed harder to meet our client towards the start of the project. Circumstances outside of our control meant that there was an amount of confusion over whether or not the project was still continuing and who our point of contact was, but perhaps with more persistence, the size of the delay could have been decreased. This was one of the major delays in our project, and I feel I could have done more to prevent this. As client communications were my responsibility, this delay was partly my fault.

One further thing I would have done differently would be to have more redundancy built into the design. We managed to complete all our specifications on time and to a high quality; however, had there been a case where we found we couldn't do a particular task, or that we wouldn't be able to finish on time, we had little in the way of a fall-back plan. Our hard work and resourcefulness meant we didn't need one in this situation, and perhaps such a plan wouldn't be feasible for such a short project, but it is something I will consider in the future.

## Appendix

### Stephen Bygrave's e-mail with comments on the demonstration

Dear Chris,

Thanks very much to you, Heather and Tony for demonstrating what you've come up with for your project on the Godmersham virtual Regency library on Friday. You've done wonders with what had necessarily to be a rather vague remit. I hope you'll soon be able to send me a URL to experiment with it myself. In the mean time, I hope the following comments don't arrive too late to be useful. (I'm copying them to some others who've been involved, and they may like to add comments. Let me know if you'd like me to send this to Mark Weal too.)

We were impressed with the 3D visualisation. This offers a user-friendly interface, which is important to us since its primary purpose of which is, to immerse the user in the library environment, rather than to be confronted with a secondary search and browse interface. Ultimately, we would like to extend this visualisation for example by giving the user views through the library windows to the outside. The library graphic is attractive and intriguing and would encourage casual users as well as those with particular scholarly projects to fulfil.

\* It's important that this requires no additional software as a plug-in. If the user has Java, that should be all they need to run the system. When Annie Richardson, Helen Scott, Stephen Bending and I first discussed this project, this is the kind of tool we imagined but did not think would be possible.

\* It's important that the way in which we'd expect to search is fairly intuitive and/or is close to the kind of interface with which users will be familiar from library catalogues such as the BL or text databases such as ECCO (Eighteenth-Century Texts Online). It seems to me that this is what you've achieved so far. One thing we discussed was the possible addition of fuzzy searches such as can be performed within ECCO.

\* The kind of searches we'd perform on the system would be by means of the usual bibliographic terms (e.g. by author, title, date, and so on). At present, though, what's been inputted is our transcription of a library catalogue from the 1820s. While this contains details of where the books were shelved (which enabled you to mock up the library), it doesn't contain all this bibliographic information. Our part in the next stage of the project will be to fill in bibliographic details: this will be part of the remit for the researcher for whom we hope to apply for funding in the new year.

\* The next stage for us will be to link books on the Godmersham shelves to their contents, where available on EEBO (Early English Books Online) and ECCO. These are databases of digitised texts which are available under licence (both currently available with an ATHENS password via the Hartley Library's website). This would provide not only an extension of the tourist experience of using a gentleman's library but enable scholarly searching.

\* We would also want to provide a table of other facilities to link to (Chawton - although, sadly, still not to the library catalogue there, other libraries such as the Hartley, and to databases such as ECCO).

\* In general, you've come up with a usable (and rather exciting) interface. I know there is still work to do on integrating and debugging but it seems to us that you've made remarkable progress, mostly on your own initiative, and I hope that, when you move on to other projects next semester, you may still be able to advise us on how your baby should grow.

\* With very best wishes,

Stephen

Stephen Bygrave

## E-mail headers to illustrate communications with our client/interested parties

**From:** Helen Scott <[Helen.Scott@chawton.net](mailto:Helen.Scott@chawton.net)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Subject:** RE: Virtual Library Project meeting, Friday 10am 10/11  
**Date:** Wed, 8 Nov 2006 16:10:22 -0000

**From:** Stephen Bygrave <[S.J.Bygrave@soton.ac.uk](mailto:S.J.Bygrave@soton.ac.uk)>  
**To:** [cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)  
**Cc:** Parham A.K. <[A.K.Parham@soton.ac.uk](mailto:A.K.Parham@soton.ac.uk)>, Stephen Bending <[sdb2@soton.ac.uk](mailto:sdb2@soton.ac.uk)>, Helen Scott <[helen.scott@chawton.net](mailto:helen.scott@chawton.net)>  
**Subject:** Re: ECS Chawton House Library Project  
**Date:** Tue, 28 Nov 2006 14:59:26 -0000

**From:** Stephen Bygrave <[S.J.Bygrave@soton.ac.uk](mailto:S.J.Bygrave@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Cc:** Parham A.K. <[A.K.Parham@soton.ac.uk](mailto:A.K.Parham@soton.ac.uk)>, Stephen Bending <[S.D.Bending@soton.ac.uk](mailto:S.D.Bending@soton.ac.uk)>, Helen Scott <[helen.scott@chawton.net](mailto:helen.scott@chawton.net)>, Emma Clery <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
**Subject:** Re: ECS Chawton House Library Project  
**Date:** Wed, 29 Nov 2006 10:50:52 -0000

**From:** Clery E.J. <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>, Stephen Bygrave <[S.J.Bygrave@soton.ac.uk](mailto:S.J.Bygrave@soton.ac.uk)>  
**Cc:** Parham A.K. <[A.K.Parham@soton.ac.uk](mailto:A.K.Parham@soton.ac.uk)>, Stephen Bending <[S.D.Bending@soton.ac.uk](mailto:S.D.Bending@soton.ac.uk)>, Helen Scott <[helen.scott@chawton.net](mailto:helen.scott@chawton.net)>, Emma Clery <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
**Subject:** RE: ECS Chawton House Library Project  
**Date:** Thu, 30 Nov 2006 10:06:50 -0000

**From:** Parham A.K. <[A.K.Parham@soton.ac.uk](mailto:A.K.Parham@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Subject:** Out of Office AutoReply: ECS Chawton House Library Project  
**Date:** Sun, 3 Dec 2006 21:09:34 -0000

**From:** Clery E.J. <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
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**Subject:** RE: ECS Chawton House Library Project  
**Date:** Mon, 4 Dec 2006 10:48:44 -0000

**From:** Stephen Bending <[S.D.Bending@soton.ac.uk](mailto:S.D.Bending@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Subject:** Re: ECS Chawton House Library Project  
**Date:** Thu, 7 Dec 2006 12:11:24 -0000

**From:** Stephen Bending <[S.D.Bending@soton.ac.uk](mailto:S.D.Bending@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Cc:** Stephen Bygrave <[sjb6@soton.ac.uk](mailto:sjb6@soton.ac.uk)>  
**Subject:** Re: ECS Chawton House Library Project  
**Date:** Thu, 7 Dec 2006 17:44:38 -0000

**From:** Helen Scott <[Helen.Scott@chawton.net](mailto:Helen.Scott@chawton.net)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>, Clery E.J. <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
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**Subject:** RE: ECS Chawton House Library Project  
**Date:** Fri, 8 Dec 2006 16:05:00 -0000

**From:** Clery E.J. <[E.J.Clery@soton.ac.uk](mailto:E.J.Clery@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Subject:** RE: ECS Chawton House Library Project  
**Date:** Mon, 11 Dec 2006 07:15:54 -0000

**From:** S.J.Bygrave <[S.J.Bygrave@soton.ac.uk](mailto:S.J.Bygrave@soton.ac.uk)>  
**To:** Chris Lord <[cil103@ecs.soton.ac.uk](mailto:cil103@ecs.soton.ac.uk)>  
**Cc:** Steve Bending <[S.D.Bending@soton.ac.uk](mailto:S.D.Bending@soton.ac.uk)>, Helen Scott <[helen.scott@chawton.net](mailto:helen.scott@chawton.net)>  
**Subject:** Re: ECS Chawton House Library Project comments  
**Date:** Wed, 13 Dec 2006 08:44:05 -0000