Comment [l1]: These are the instructions for your Final Year Project reports (Proposal, Progress Report, and Final Report), in an **annotated example** form. To help you understand how to design and write a good report that communicates effectively, we have shown a few examples of what each section might contain, annotated with comments explaining what you need to think about.

Comment [l2]: **DO NOT** blindly copy the examples. Every project is different! Some projects might best be described making heavy use of formal languages like UML; other projects might best be described using natural language (i.e., English). Discuss this with your advisor.

Comment [l3]: You are required to consult the communication tutors at least twice in the process for additional guidance. See details at http://www.cse.ust.hk/ct/.

Comment [l4]: **IMPORTANT**: This document gives a general skeleton of the report. Do not simply copy from it. Further, make sure you credit all sources of information by providing appropriate citations.

WU1

Comment [E5]: Put down your project code on the cover page with large bold font. The project code should be the **only** text on the cover page.

An Enhanced Mobile Multilingual Information Extraction Agent

by

Alfred Wong Kitty Fung Chan Wai Kit

Advised by

Prof. Dekai Wu

Submitted in partial fulfillment

of the requirements for COMP 395

Comment [E6]: Use your course code.

in the

Department of Computer Science and Engineering

The Hong Kong University of Science and Technology

2007-2008

Name of student: _____ Signature: _____ Date: _____

Name of student: _____ Signature: _____ Date: _____

Name of student: _____ Signature: _____ Date: _____

Table of Contents

Comment [E7]: Major sections should be given their own heading and indent headings to subsections.

1 Introduction

Comment [DW8]: Gives the project a general context, explains why the project is important, states what the FYP aims to accomplish and how, provides objectives and identifies possible problems or complications.

1.1 *Overview*

Comment [E9]: General introduction of the project. It should be understandable by a non-specialist.

Gaming, as both a cultural phenomenon and a lucrative global, **has enjoyed** enormous success over the past five years. With this increase in popularity **has come** a demand for more sophisticated 3D modeling. The push in the industry **is** for smoother, seamless graphics. For this project, we **will design** a software program intended to greatly enhance the capabilities of 3D Studio Max to produce more realistic graphics.

Comment [DW10]: Tells the reader why the project area is important.

Comment [DW11]: Explains the immediate context that motivates the problem you plan to attack.

Comment [DW12]: States the general problem.

Comment [DW13]: States the specific problem you will attack – what the proposal aims to accomplish and how.

…

1.2 *Objectives*

Comment [DW14]: Think of your **objectives** as what you want **to accomplish** and what you need **to learn** (software packages, algorithms).

Comment [DW15]: What are the problems that you will address and why?

Comment [DW16]: What are your goals? What will you deliver?

Comment [DW17]: What are the technical challenges and how do you plan to overcome these?

Comment [DW18]: Sets up the detailed context for your project. States **explicitly** your background assumptions justifying the merits of your project – why it is a good idea to design your project the way it is, in contrast to previous work already done by others.

For all its strengths, GPS **has** two related weaknesses: signal reception and the accuracy of local information. Overcoming these weaknesses would greatly enhance its performance, thereby stimulating a new generation in GPS technology and design. We **will create** an algorithm that addresses the problem of local positioning while...

In this project, we **will achieve** the following goals: X, Y and Z. To achieve the first goal, we **will review** the literature on algorithm design and... The technical challenges involved in reaching this first goal are...

…

1.3 *Critical Review (or Literature Survey)*

Comment [E19]: A literature survey is a general review that compares and contrasts **multiple** competing approaches. If you only analyze the strengths and weaknesses of **one** existing approach, then you just have a critical review (e.g., your project is to extend a specific existing system). Discuss this with your advisor.

Comment [E20R19]: You may not need to address all the questions below, just the ones that are relevant to your project. Discuss this with your advisor.

Comment [E21R20]: What is the history of your project topic?

Comment [E22R21]: What are experts in the field discussing that relates to your topic?

Comment [E23R22]: What are the strengths and weaknesses of existing approaches? What are the tradeoffs between different approaches?

Comment [E24R23]: What is the state-of-the-art or the latest research in your project area?

Comment [E25R24]: You should include a brief review of any books, journals and other academic or commercial resources you are going to use.

Comment [E26]: Normally this section gives a clear description of what you were doing during the summer.

1.4 *Feasibility Study*

Comment [E27]: If your advisor required you to perform initial feasibility studies over the summer, report the results here. Like the critical review, this also sets up the background assumptions as to why it is a good idea to design your project as you will be describing in the rest of this report.

2 Methodology

Comment [E28]: Describes and justifies the various phases of the project. Throughout this section, you must explain your choices, your logic. If you will use X software to implement your system, you need to explain why you selected X and not Y or Z. If you are using voice recognition software, which are you using and why? Why are you using that one and not another? Why did you choose platform A and not B?

This explanation is critical. While you and your supervisor may understand why you chose X over Y, the second reader WILL NOT unless you explain. Use the facts from your Critical Review or Literature Survey to justify your choices.

Also, throughout your professional life, you will be called upon to make decisions and justify those decisions. Think of:

- available time and resources [trade-offs]
- comparability
- state-of-the art technology/ industry standard

Comment [E29]: If you have a problem thinking of how you will describe this – especially if UML is appropriate for your project – revisit your notes from **COMP 211** or see http://course.cs.ust.hk/comp211/. Also discuss this with your advisor. You are expected to follow good software engineering practices if your work involves software development.

Comment [E30]: Many students are confused by the phases of the system development process: Design, Implementation, Testing, and Evaluation. How does the design phase differ from the implementation phase? How does testing differ from evaluation? Follow the guidelines below.

2.1 *Design*

Comment [E31]: Describes how you plan to figure out what the sub-problems are, and what approach or theory you will use to attack them.

Comment [E32]: This phase focuses on theory, analysis, and conceptualization.

Comment [E33]: If your project is a research project, very likely you will describe and motivate your **scientific hypotheses** here.

The Design Phase **was started** in **early June** and we **will continue working** on the following aspects:

- collection and analysis of data
- construction of domain application model
- description and specification of data in either XML schema or DTD schema
- design of end-user interfaces

Comment [E34]: Use the same part of speech to start each set of bullet points.

…

2.2 *Implementation*

Comment [E35]: Describes how you plan to build it.

Comment [E36]: This phase relies on your technical skills.

Comment [E37]: Will you build hardware? Use a simulator? Build software?

Comment [E38]: What tools will you need/use (compilers, development environments, testing environments, equipment, etc.)?

Comment [E39]: If your project is a research project, very likely you will describe and justify your **experimental setup** here and in the following Testing subsection.

During the Implementation Phase, we **will follow** the designs produced earlier to implement the system. Our strategy **is** to first get the basic structure and then add more details. We **will divide** the project into 5 sub-tasks for easier implementation and task distribution:

- Embedding XMill in Java (using JNI)
- Networking across the multi-tiers
- Applying XMill to data transmission
- Operating an Oracle 9i database
- Transferring data between XML documents and relational databases

Each sub-task **may be** further **divided** into smaller tasks **if** there is a need during the implementation process. After each sub-task is implemented successfully, we **will combine** the results to form the system.

…

2.3 *Testing*

The Testing Phase **will be carried out** during the entire development process. We **will test** all components of the system as soon as we finish implementing them. Testing **will consist** of a set of simulated supermarket application scenarios, e.g. a salesperson records the sales in the cashier's terminal, then the records are sent to the Division Tier which in turn sends the data to the Operation Tier.

…

Comment [E40]: Describes how you are going to ensure that it [the program/ game/ etc.] works correctly? [black box, white box, regression testing, etc.]

Comment [E41]: If you have a problem thinking of how you will test your implementation, revisit your notes from COMP 211. But do **not** just copy and paste from your COMP 211 notes, as the testing needs to be specific to your project!!!

Comment [E42]: Look at the project from a **micro** level.

Comment [E43R42]: Include experiments.

Comment [E44R43]: Look at system results.

Comment [E45R44]: Test each part of the system.

Comment [E46R45]: Make sure that design and implementation work.

2.4 *Evaluation*

For the Evaluation Phase, we **will produce** graphs, simulation results or timing charts for X, Y and Z. Subsequently, we **will analyze** overall performance and the effects of each smaller part on the whole. Possible improvements will be discussed with our TA and supervisor.

…

Comment [E47]: Evaluate your results relative to your stated objective.

Comment [E48]: Look at the project from a **macro** level.

Comment [E49]: Measure performance.

Comment [E50]: Compare your system/model with one or more (a) baseline systems/models, and/or (b) similar competing systems/models.

Comment [E51]: If your project is a research project, very likely you will describe and justify your **experimental observation and measurement** methodology here.

3 Project Planning

Comment [E52]: All projects require planning including an outline of who in the team is doing what and when; thus, you will need to include a **Division of Work** chart and a **Gantt chart**.

3.1 *Division of Work*

	Tommy Chung	Mei Yip	Ricky Chan	Jade Lee
Requirement Analysis and Information Research	X	X	X	X
AI, Graphic and Voice Recognition Research	X		X	X
Web Server Set Up				X
3D Window Design	X		X	
Animation			X	
Product (text mapping)	X			
PDA and PDA interface Design		X		
Proposal Report	X	X	X	X
Database Server Setting Up				X
Web Page Design and Implementation				X
Coatroom Implementation				X
PDA Interface Implementation		X		
Voice Recognition Implementation	X	X		
PRS Implementation			X	X
Progress Report	X	X	X	X
System Testing and Debugging	X	X	X	X
Evaluation	X	X	X	X
Final Report and Project Poster	X	X	X	X
Presentation and Demonstration	X	X	X	X

3.2 *Gantt Chart*

Comment [E53]: A Gantt chart outlines what aspects of the project will be completed by when. It is a necessary component of good project management and something you will be asked to do as a part of your job. You can create a Gantt chart in Excel, MS Project, etc.
To know more about Gantt chart, please refer to http://en.wikipedia.org/wiki/Gantt_chart

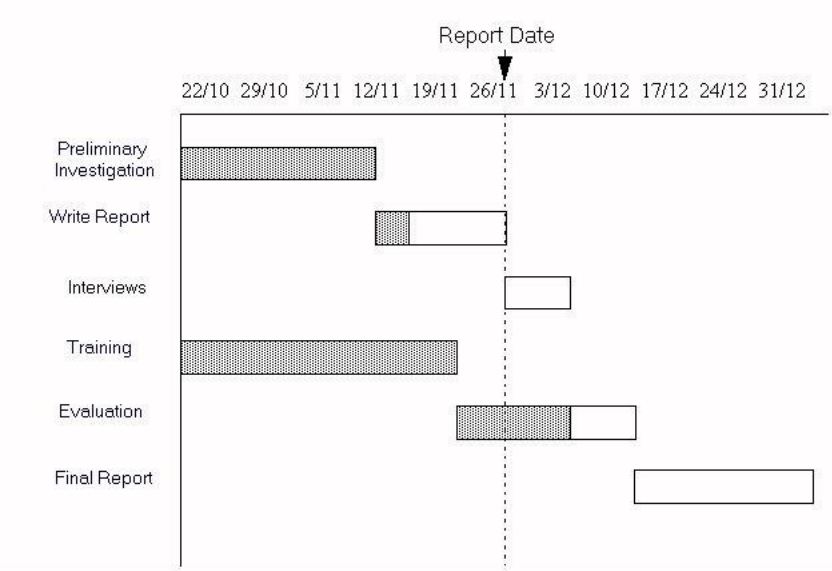

Figure 1: Gantt Chart

4 Required Hardware and Software

Comment [E54]: This information may be presented in point form or using tables.

4.1 *Hardware*

- **Operating System** – Microsoft Windows (2000 Professional and XP) and UNIX
- **Computer** – PC / Notebook / UNIX machine in CS labs
- **CPU** – Pentium II 300 MHz or above
- **Hard Disk** – 500 MBytes
- **Memory** – 128 MBytes or above
- **DBMS** – Oracle 9i provided by CS System
- **Minimum Display Resolution** – 800 X 600 with 16 bit color

4.2 *Software*

- XMill: XML data compression
- Java™ Native Interface (JNI): Invocation of XMill (C++) in Java
- Java 2 Enterprise Edition (J2EE): "Write Once, Run Anywhere™" portability, JDBC™ API for database access, full support for Enterprise JavaBeans™ components, Java Servlets API, JavaServer Pages™ and XML technology, make multi-tier applications easier to architect, etc
- Java Web Service Development Pack (JWSDP): provides full set of technologies for developing and deploying Web services and Web applications

5 References

…

Comment [E55]: The References section containing bibliographic citations comes after the body of the paper and includes **ALL** the articles, books, software packages, web sources, interviews and other sources used in putting together the project.

Comment [E56]: Throughout the paper, you must provide **citations** whenever you paraphrase and/or summarize someone else's ideas and when you use a direct quote. The citation style commonly used is the number system. For an example, see: http://wwwlib.murdoch.edu.au/find/citation/ieee.html

Comment [E57]: Not providing citations hurts your team and your work in several ways. First, it makes your team look like a bunch of amateurs. Second, it discredits your work. Third, providing no citations equals plagiarism-the academic equivalent to robbery.

Comment [E58]: Providing full documentation and citations for academic papers is **NOT** just an option; it is your duty to the traditions of scholarship and good science.

Comment [E59]: If you are still lost and need help, make an appointment to see either a Communication Tutor –Denise– or contact a Librarian.

Appendix A: …

…

Appendix B: Minutes

B.1 Minutes of the 1st FYP Meeting

Date:

Time:

Place:

Attending:

Absent:

Recorder:

1. **Items discussed**

    1.1.

    1.2.

        1.2.1.

        1.2.2.

        1.2.3.

    1.3.

2. **Problems/questions**

    2.1.

    2.2.

3. **Solutions/ ideas**

4. **Action items/tasks**

5. **Date and time of next meeting**

6. **Meeting adjournment**

The meeting was adjourned at **[time].**

B.2 Minutes of the 2nd FYP Meeting

Date: May 3, 2002

Time: 6:00 p.m.

Place: Room 3501

Attending: Prof. Wilfred Ng

Lau Wai Yeung

Cheng, Jim

Hong, Michael

Lui, Annie

Tsang Tak Wing

Absent: None

Recorder: Jim

1. Introduction to the FYP

    1.1. Yeung introduced the XMill, a compressor for XML Data.

    1.2. Yeung explained the implementation principles of the Xmill:

        1.2.1. Separating structure from data

        1.2.2. Grouping data items with related meaning

        1.2.3. Applying different compressors to different containers

    1.3. Jim said that Xmill was only a compressor and asked if we could add applications that use Xmill.

    1.4. Prof. Ng answered that studying Xmill was our first step in the FYP and we should think about how to use the advantages XML and Xmill to reduce the file sizes in order to gain bandwidth in

data transmission and reduce space requirement in data archiving.

1.5. Jim asked whether the group should build applications on the web so that people could access the web and use them.

1.6. Prof. Ng answered that it would be likely to have web applications or any other application but the application must be built on top of Xmill.

2. Tasks to do

1.7. Prof. Ng asked us to conduct a preliminary study on Xmill.

1.8. We agreed and decided to start the study on Xmill in June.

3. Date and time of next meeting

Prof. Ng suggested we have the 2nd meeting in early June and we all agreed. The date, time and venue of the meeting will be confirmed later by email.

4. Meeting adjournment

The meeting was adjourned at 7:30 p.m..

B.3 Minutes of the 3rd FYP Meeting

Date: June 6, 2002

Time: 6:00 p.m.

Place: Room 3505

Attending: Prof. Wilfred Ng

Lau Wai Yeung

Cheng, Jim

Hong, Michael

Lui, Annie

Tsang Tak Wing

Absent: None

Recorder: Michelle

1. Approval of Minutes

The minutes of the 1st meeting were submitted for approval.

2. Report on Progress

The team finished reading the paper on "XMill". There are parts on which the team is not clear.

3. Discussion Items

3.1 Resources

Since the XML sample may be very large, Prof. Ng suggested we conduct trials in the FYP labs. Jim will be responsible for finding which resources we need and will send an email to Prof. Ng.

3.2 Clarification

There was some confusion about the compression of the XML. Prof, Ng and Yeung explained that the data not in XML format must be converted manually into XML format . Then, XMill can automatically put the XML into different containers.

3.3 Sources

Yeung will send the source code to us.

3.4 Meeting

Prof. Ng suggested that we have meetings twice a month.

Date and time of next meeting to be confirmed. The meeting was adjourned at 6:45 p.m.