

Term Project Overview

COP 4910 – Frontiers in Information Technology

Fall 2004

COP 4910 or “Frontiers in Information Technology” is a project-oriented class in which students will be assigned a frontier area in information technology and conduct a thorough study of that area. Projects will investigate a variety of different emerging technologies. Student should approach class projects as if they were conducting real-world projects in the IT arena. Many of the facets of project planning and development will be explored including:

- Project planning and scheduling
- Reading related papers, journal articles, reference texts
- Performing research
- Performing experiments or building simulation/proof of concept models (where possible)
- Performing analysis
- Drawing conclusions
- Making presentations

Projects should clearly describe the capabilities of a new information technology and its ability to address business problems. The overall Project should be conceptualized as finding and proposing a solution to a business problem. The solution to the problem must incorporate some type of emerging information technology with the expectation that the technology will become a major business-enabling force within two to five years.

The written version of the project should be a traditional research study comparing and contrasting some old and new core technology across a number of different applications geared towards solving specific business problems. The length of the body of the final written project report will vary based on the size of each group: 40-50 pages for groups with one or two members, 50-70 pages for groups with three members. All reports should include detailed references with parenthetical citations in the report narrative. See the course web page for a more complete format guideline to follow.

Approach the project as if you were preparing a series of mini-reports that focus on selected areas related to the technology under investigation. The mini-reports can be combined together to form the final written report. Some additional sections (e.g., Executive Summary, Introduction, and Conclusions) will be needed to complete the final version of the report.

Note that each group is really investigating two things: 1) **a general area of IT** (e.g., Processors, Storage) and 2) **one or more specific technologies** within that area (e.g., HyperThreading & 64 Bit Processors, Blue Ray & Holographic Storage).

The five mini-report areas (MR) are as follows:

1) Background Information:

This MR should describe the current state of technology in the general area of IT under study. This includes a description of specific technologies that are commercially available today and in wide-spread use. A short history of the general area may be appropriate to give a context from which any new technologies will/have emerged. This is not a place to

describe specific new technologies that will be the focus of your project. The goal of this section is to understand today's IT environment and any current problems/limitations (e.g., speed, capacity, costs) that a new technology might solve. In short, by understanding today's world, we can better appreciate the things tomorrow will bring.

2) Technology Overview:

This second MR should look at a variety of new technologies that are emerging within the general area of study. Think of this as a broad survey of the options companies will have in the future. The one or two specific technologies that will be studied in depth should be a part of this survey. This is a high level overview with general descriptions of how things work and their basic capacities. What needs to be done here is show how the specific technologies compare to other alternatives. Alternative technologies do not have to be directly competitive with the one(s) to be studied in depth.

3) Business Issues:

This MR can be an extension of the Technology Overview. Here you want to describe the business issues associated with the general area of study and the technologies describe therein. For example, how would those technologies help solve a business problem? How would their use impact a business? Are any of the technologies more suitable for a certain type or size business (or departments within a business)? You may also want to address a variety of other business dimensions including but not limited to the following:

- Is the technology disruptive or industry transforming?
- Does the technology offer new growth opportunities?
- How can the technology improve efficiency of current operations?
- What new markets or revenue opportunities will the technology create?

4) Technical Details:

This MR is where you will describe the details of the specific technologies chosen for further study within your area of interest. For groups with one or two members, one technology is sufficient. Groups of three should plan on covering two unique technologies within the general area. Information in this report should be fairly detailed describing how the hardware/software works, related protocols, etc. Think of this as the nuts and bolts of each technology.

5) Implementation Issues

Last but not least are the details associated with implementing the specific technologies within a business' IT infrastructure. This MR should include information about cost, training, migration strategies (how to go from old to new), installation and support issues, etc.