

## Creating a paperless classroom with the best of two worlds

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### ABSTRACT

The information age has presented unprecedented opportunities for educators to digitize traditional classrooms, an evolution that can empower instructors to extend the channels of knowledge dissemination and unleash the learning power of students from the manacles of physical classrooms. Since the early adoption of the Internet technology by educational institutions, various studies have been done to explore the conceptualization of the paperless classroom, focusing on its theoretical framework and impact on traditional learning environment. This paper aims to present a hands-on developmental framework that brings together the best of two worlds – online academic course management and industry-class collaboration into a state-of-the-art paperless classroom.

Keywords: Paperless Classroom, e-Learning, Virtual Classroom, WebCT, Domino Web Access



## 1. INTRODUCTION

Educators in the 21<sup>st</sup> century are vested with the task of preparing students for the emergence of an information society (Slowinski, 2000). To face this challenge, since the inception of the new Management Information Systems (MIS) program at Marietta College in 2004, the department ventured to create a complete digital environment where the exchange of physical materials between the MIS instructor and students is virtually eliminated. The adaptation of the paperless classroom in the MIS courses has proved to be a strong catalyst for improved learning conditions, which help to dissolve the physical classroom walls and allow the instructor and students to continue conversation outside the boundaries of time and space. The innovative implementation of the academic flagship product WebCT and industry-class collaboration tools (IBM Lotus Domino Web Access<sup>TM</sup> and TeamRoom<sup>TM</sup>) in the classroom empowers students to fully utilize the benefits of the Internet in their learning process and get well prepared for future working environment. In this paperless classroom, students are engaged in various learning activities online, such as reviewing course materials, locating resources, taking quizzes/exams, submitting assignments, receiving grades and feedback, managing team projects and collaborating with teammates and the instructor.

Rea et al. point out that the traditional approach to course instruction involves little or no technology, where students and faculty interact face to face in the classroom or during office hours and may continue communicate using low technology approaches, such as telephone or library reserves. This approach represents the industrial-based model and certainly can not prepare students for the information age (Rea, White, McHanley and Sanchez 2000). Compared with the traditional approach, the paperless classroom pedagogical approach employed by this hands-on study exemplifies a wide range of benefits to students, including:

- an anytime and anywhere learning environment where the instructor's assistance is only a couple of clicks away; students' questions are answered promptly
- a set of convenient tools to manage course materials and team projects
- strong knowledge management (KM) capabilities
- a transition to active and hands-on learning
- a learning community in which students feel always connected
- useful online skill sets that will prepare them for the digital future

## 2. DEVELOPMENT OF A FRAMEWORK FOR PAPERLESS CLASSROOM

The emergence of the paperless classroom was initially driven by needs to reduce the use of physical materials in classrooms and fueled by the underlying Internet technology (Slowinski, 2000). Since its early adoption, a large number of paperless classrooms have been developed in cutting-edge U.S. colleges and universities. Unfortunately, anecdotal evidence shows that much of this storm of development has been undertaken in haste, without expert preparation or knowledge of the process. The lack of system analysis and design has crippled many of these paperless classrooms, leaving them incapable of fulfilling the envisioned educational goals (Lynch, 2002). Thus, during the system analysis phase of this study, the interaction of the two main entities - instructor and student has been carefully examined and a list of key functionalities

needed for the paperless classroom have been identified. Table 1 shows a list of these key functionalities identified by this study.

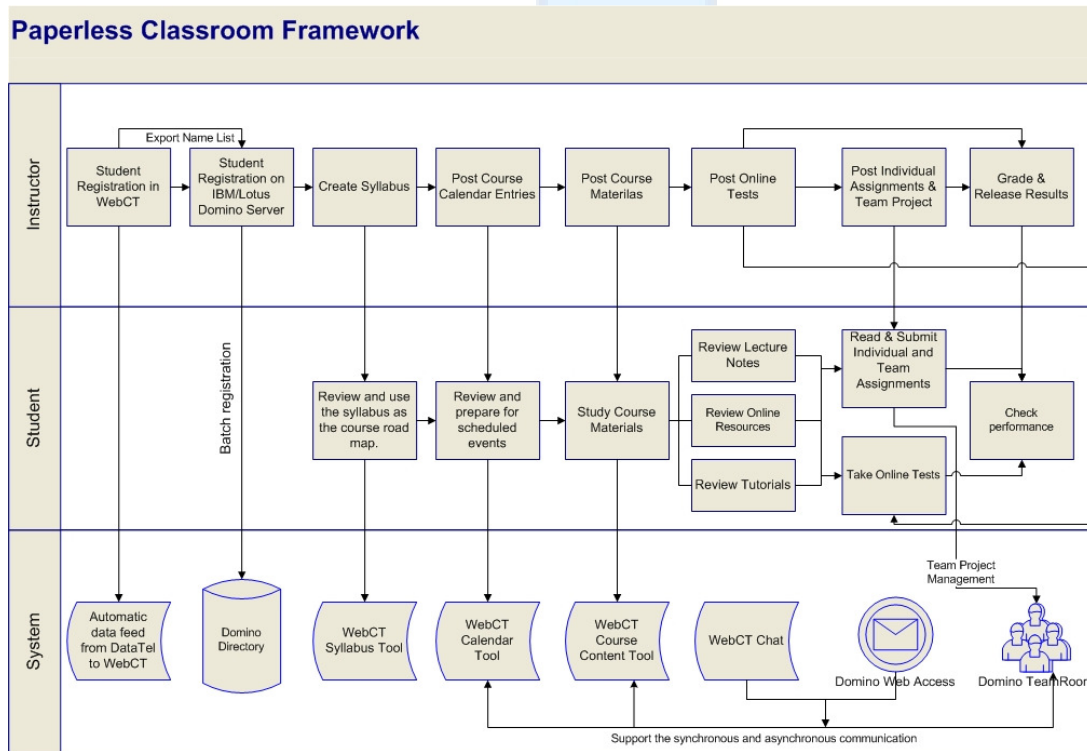
**Table 1: Paperless Classroom System Analysis**

|                     | Desired Functionalities    | Instructor   | Student   |
|---------------------|----------------------------|--|---|
| Course Management   | Online Syllabus            | <ul style="list-style-type: none"> <li>✓ Create well-formatted syllabus without knowing the details of HTML</li> </ul>   | <ul style="list-style-type: none"> <li>✓ View syllabus online with any browsers</li> </ul>  |
|                     | Course Calendar            | <ul style="list-style-type: none"> <li>✓ Post individual calendar entry through a web form</li> <li>✓ Reuse course calendar entries by importing a compiled text file</li> </ul>   | <ul style="list-style-type: none"> <li>✓ View the course calendar in different format</li> </ul>  |
|                     | Course Materials           | <ul style="list-style-type: none"> <li>✓ Post reading materials in various formats</li> <li>✓ Upload lecture notes</li> <li>✓ Create links to downloadable recourses</li> </ul>  | <ul style="list-style-type: none"> <li>✓ View reading materials online</li> <li>✓ Download lecture notes</li> <li>✓ Download course related software packages</li> </ul>                  |
|                     | Assignment                 | <ul style="list-style-type: none"> <li>✓ Post well-formatted assignments with the help of WYSIWYG tools</li> <li>✓ Add comments to submitted assignment files (MS Word format)</li> <li>✓ Post feedback document</li> <li>✓ Assign grades</li> </ul>                                 | <ul style="list-style-type: none"> <li>✓ View assignment materials online</li> <li>✓ Upload assignment files</li> <li>✓ Read detailed feedback document</li> <li>✓ View grades</li> </ul> |
|                     | Quiz/Exam                  | <ul style="list-style-type: none"> <li>✓ Create a highly customizable question bank that supports various types of test questions</li> <li>✓ Batch upload questions though the file import of a simple text file</li> <li>✓ Grade essay questions and release test scores</li> </ul> | <ul style="list-style-type: none"> <li>✓ Take web-based tests</li> <li>✓ Review correct questions and scores</li> <li>✓ Review old tests</li> </ul>                                       |
|                     | Performance Reports        | <ul style="list-style-type: none"> <li>✓ Release all test and assignment scores</li> <li>✓ Export scores to spreadsheet application for grade calculation</li> <li>✓ Post midterm and final grades</li> </ul>  | <ul style="list-style-type: none"> <li>✓ Keep track of grades online</li> </ul>   |
| Class Collaboration | Asynchronous Communication | Features: <ul style="list-style-type: none"> <li>✓ a messaging system that supports group collaboration</li> <li>✓ discussion forums</li> <li>✓ virtual team spaces that improve team project management</li> </ul>  |   |

|                           |   |
|---------------------------|---|
| Synchronous Communication | Features:<br>✓ real time chat – virtual office hours<br>✓ white board sessions<br>✓ remote assistance |
|---------------------------|---|

To achieve the goals stated in the above system analysis, this hands-on study brought together the best of two worlds – the academic courseware management tool WebCT and the industry-class collaboration suite Domino Web Access™ and TeamRoom™ into this state-of-the-art paperless classroom. WebCT is a leading web-based courseware management system with strong customization capabilities and comprehensiveness. IBM/Lotus Domino Web Access™ offers sophisticated web messaging capabilities and delivers a highly flexible and reliable collaboration platform. Domino TeamRoom™ provides an efficient virtual team space that requires minimum system setup and configurations with its ready-to-use database template. A logical design on the integration of these tools is developed by this hands-on study around the situated cognition model to ensure student learning effectiveness. Following the design guidelines for motivational courses suggested by Keller and Burkman (1993), this study aims to design a paperless classroom that would spark student *interests*, show the *relevance* of course materials and knowledge to real-world situations, promote user *expectancy* by adhering to good navigational, graphic and text design practices and eventually ensure student *satisfaction* in learning new marketable skills. Figure 1 depicts the development framework designed by this hands-on study to integrate these disparate systems seamlessly into the paperless classroom, in which each system plays an integral role in enhancing the student learning experience.

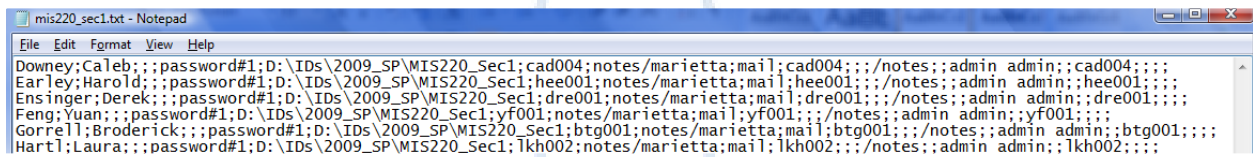
**Figure 1: Development Framework Designed by the Hands-on Study**



## 2.1 Student Registration

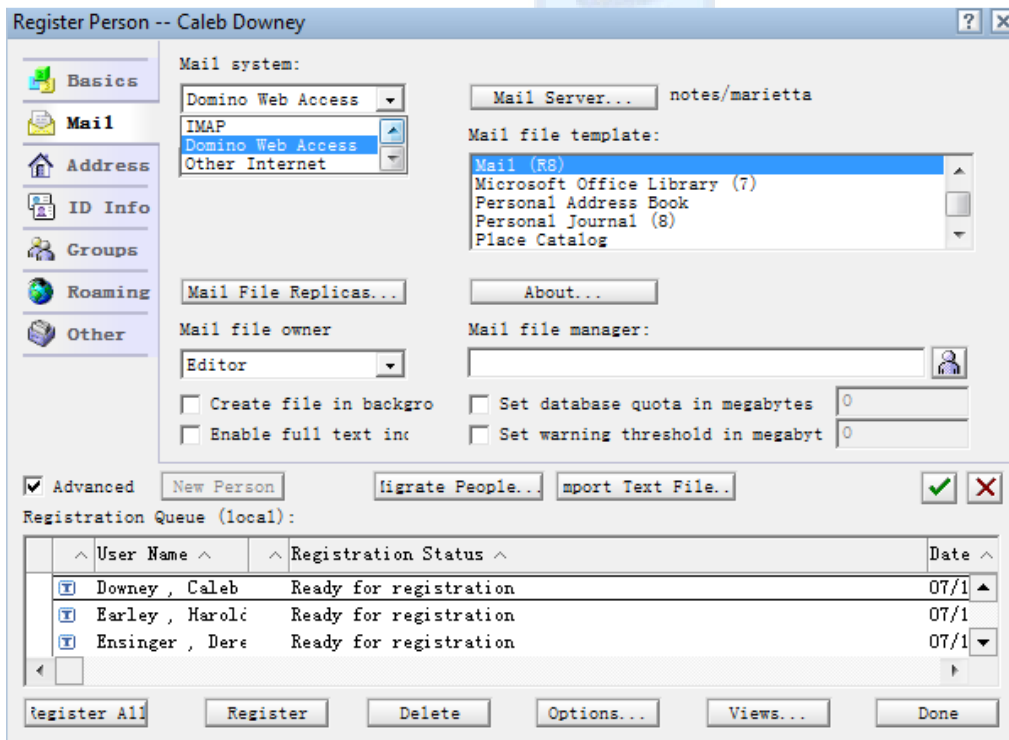
As the instructor's process row in Figure 1 shows, the student registration at Marietta College is handled by Datatel's WebAdvisor solution, which feeds student registration data to WebCT through a nightly batch process. Since the data feed is not bidirectional, WebCT instructors need to manually remove students who drop the course during the add/drop period. The final name list can then be exported to a text file, as shown in Figure 2, which are used for user registration on the IBM/Lotus Domino server.

**Figure 2: Domino User Registration Import Text File**



During the Domino user registration process, student email databases are created on the Domino server and student user profiles are added to the Domino server directory, as illustrated in Figure 1. To enable the web browser-based client Domino Web Access™, the Domino mail system option needs to be specified as Domino Web Access (Figure 3).

**Figure 3: Domino Mail Database Option**



## 2.2 Online Syllabus

The next step in the instructor's process flow depicted in the development framework is to create a good online syllabus that provides a course road map. The grading scale included in the syllabus allows students to keep track of the grades throughout the semester. The WebCT syllabus tool offers excellent customization capabilities for instructors to create rich-content online syllabus without prior knowledge of HTML. Since the syllabus tool supports embedded HTML, a good practice is to develop the syllabus content as a web page in Microsoft Word application and copy the underlying HTML code into the WebCT syllabus editor (Figure 4). Students can then access the well formatted syllabus anytime and anywhere. This technique can be used to create other rich web contents in WebCT, such as assignment description and discussion topics.

**Figure 4: Import HTML Code from MS Word to Display Complex Web Content**

The screenshot shows the 'Introduction to Management Information Systems (01)' syllabus editor in 'Designer Options' mode. The page title is 'Introduction to Management Information Systems (01)'. The breadcrumb trail is 'Homepage > Syllabus > Edit Section Content'. The section is titled 'Edit Section: Custom' with a note: 'Custom sections may be used to create additional Syllabus sections. Empty fields will not be displayed to students.'

The form contains the following fields:

- \*Section title: Method of Evaluation
- Label: [Empty field]
- Information: [Empty field]
- Label: [Empty field]
- Information: `<html xmlns:o="urn:schemas-microsoft-com:office:office" xmlns:w="urn:schemas-microsoft-com:office:word" xmlns:x="urn:schemas-microsoft-com:office:excel">`

The 'Information' field containing the HTML code is highlighted with a red box. A red arrow points from this box to the text 'HTML imported from MS Word' located to the right of the 'Label' field. Below the form, the 'Format' section has 'Plain text' and 'HTML' radio buttons, with 'HTML' selected and circled in red. 'Update' and 'Cancel' buttons are at the bottom left. A note at the bottom left states '\*Required fields.'

myWebCT Resume Course Course Map Check Browser Log Out Help

**Introduction to Management Information Systems (01) Jeremy Fei Wang**

View Designer Options

Homepage > **Syllabus**

and to do this online, this tool will help to prepare you for future working environment.

<http://notes.marietta.edu/mail/YourMCLoginName.nsf>  
 Login Name: FirstName LastName (Your full name as used in WebCT)  
 Initial Password: Password#1

**Method of Evaluation**

|                               | Points/Each | Quantity | Points Possible | Weight |
|-------------------------------|-------------|----------|-----------------|--------|
| <b>Individual Performance</b> |             |          |                 |        |
| Quizzes                       | 10          | 10       | 100             | 15%    |
| Assignments                   | 50          | 3        | 150             | 35%    |
| Final Exam                    | 50          | 1        | 50              | 15%    |
| <b>Team Performance</b>       |             |          |                 |        |
| Team Projects                 | 100         | 1        | 100             | 30%    |
| <b>Class Participation</b>    |             |          |                 |        |
|                               | 20          | 1        | 20              | 5%     |

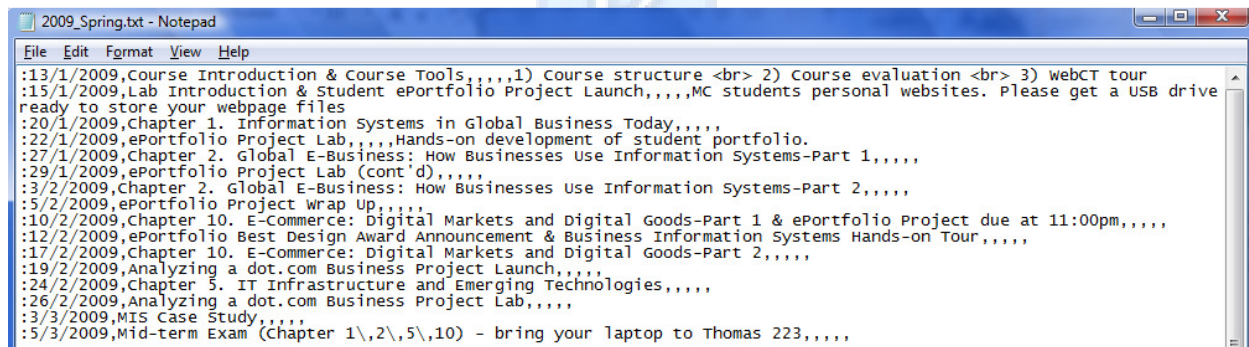
Grades will be assigned according to the following plus/minus system, using standard rounding methods:

| Percent Score | 97+ | 93-96 | 90-92 | 87-89 | 83-86 | 80-82 | 77-79 | 73-76 | 70-72 | 67-69 | 63-66 | 60-62 | 59- |
|---------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| Grade         | A+  | A     | A-    | B+    | B     | B-    | C+    | C     | C-    | D+    | D     | D-    | F   |

### 2.3 Course Calendar

The online course calendar is a great feature in WebCT, highly customizable and easy to use. As the paperless classroom development framework (Figure 1) shows, instructors can batch upload the calendar entries for a whole semester through an import text file (Figure 5) and make ad hoc changes if necessary. The online calendar reminds students to read assigned reading materials, prepare for in-class discussions and submit assignments online.

**Figure 5: Calendar Entry Import Text File**



### 2.4 Course Materials

The next step proposed in the development framework is to add good course materials which are needed to ensure the learning effectiveness of the paperless classroom. This is where the paperless classroom dissolves the physical walls and facilitates the anytime and anywhere knowledge dissemination. The WebCT page management tool offers a variety of options to add the course materials through the combination usage of Organizer Page, Single Page and URL. A list of chapters from the textbook is posted on organizer pages and lecture notes, self-study

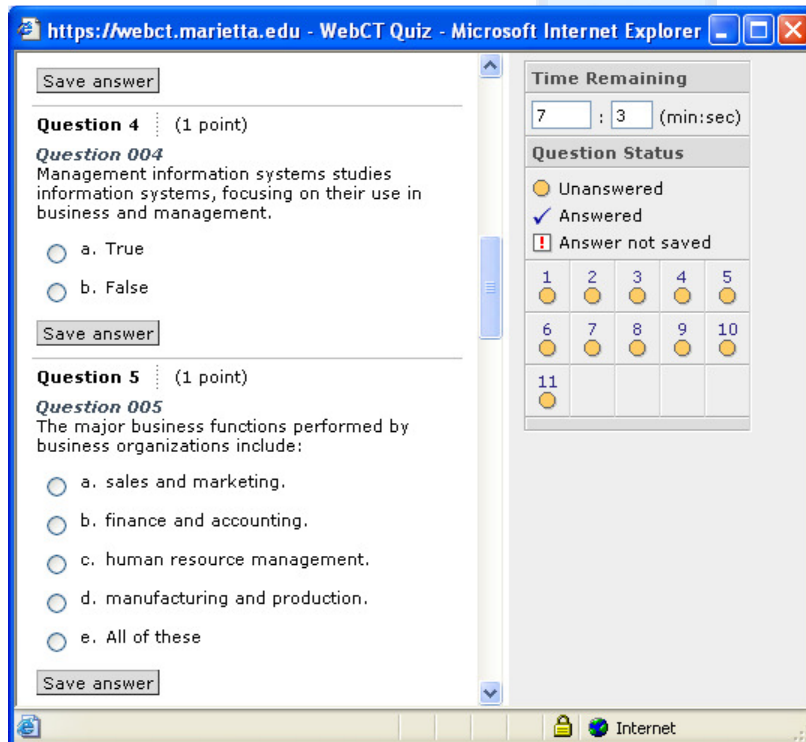


questions and relevant online resources are posted logically under each chapter. These materials will help students to internalize the concepts learned in class. Hands-on lab materials, including PowerPoint slides, PDF lab manuals and software packages can also be posted under Lab sessions (Appendix 3 and 4). While in this paperless classroom, students can seek help by using the class collaboration tools, such as sending an email to or scheduling an appointment with the instructor through the Domino Web Access™ messaging system, posting a question in the class discussion forum or chatting with the instructor during virtual office hours (Figure 1).

## 2.5 Online Tests

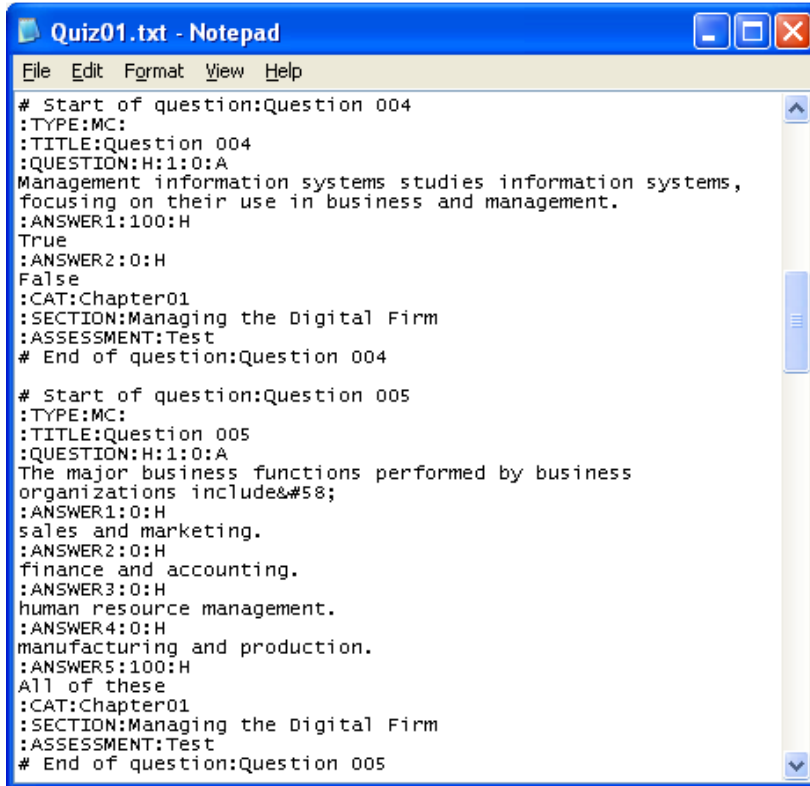
As shown in the development framework, to evaluate students' performance, instructors can use a set of powerful WebCT tools to setup online tests (Figure 6), which support true/false, multiple choice, short-answer and essay questions. These questions can be setup in the question bank by importing a plain text file (Figure 7), which dramatically cuts down the setting up time and allows reuse of the questions. The true/false and multiple choice questions can be automatically graded. Short-answer or essay questions need to be graded by the instructor and the results are then posted online. From here, students can use the collaboration tools to check with the instructor if there are any issues.

**Figure 6: Online Test in WebCT**





**Figure 7: Test Question Import Text File**



## 2.6 Online Assignment

Instructors can also post individual or team assignments by using the WebCT assignment tool (Figure 1). This online assignment feature virtually eliminates the exchange of physical materials between students and instructor, which exemplifies the convenience and cost saving advantages of the paperless classroom. Online assignments can be easily posted by importing the HTML code from Microsoft Word web pages (as discussed in 2.2). A good practice is to provide detailed feedback by using the Microsoft Word comment tool on submitted Word documents and attach the modified documents along with the grades. Students find this type of feedback more informative and easy to follow (Figure 8). Students can also use the collaboration tools to ask the instructor questions and collaborate on team assignments.

**Figure 8: Assignment Feedback**

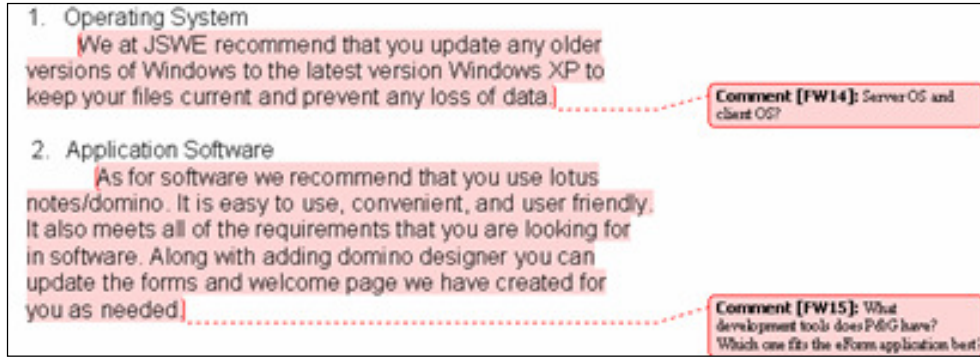
Student files: To view a file, click its filename.

| Files  | Modification date       | Size      |
|--|-------------------------|-----------|
| <a href="#">JSWE Consulting Proposal.doc</a> | January 20, 2006 8:07pm | 1097.0 KB |

Graded files: To view a file, click its filename.

| Files                             | Modification date       | Size      |
|-----------------------------------|-------------------------|-----------|
| <a href="#">JSWE_Feedback.doc</a> | January 20, 2006 8:23pm | 1080.5 KB |


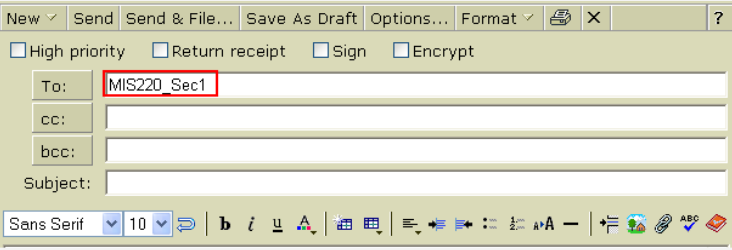


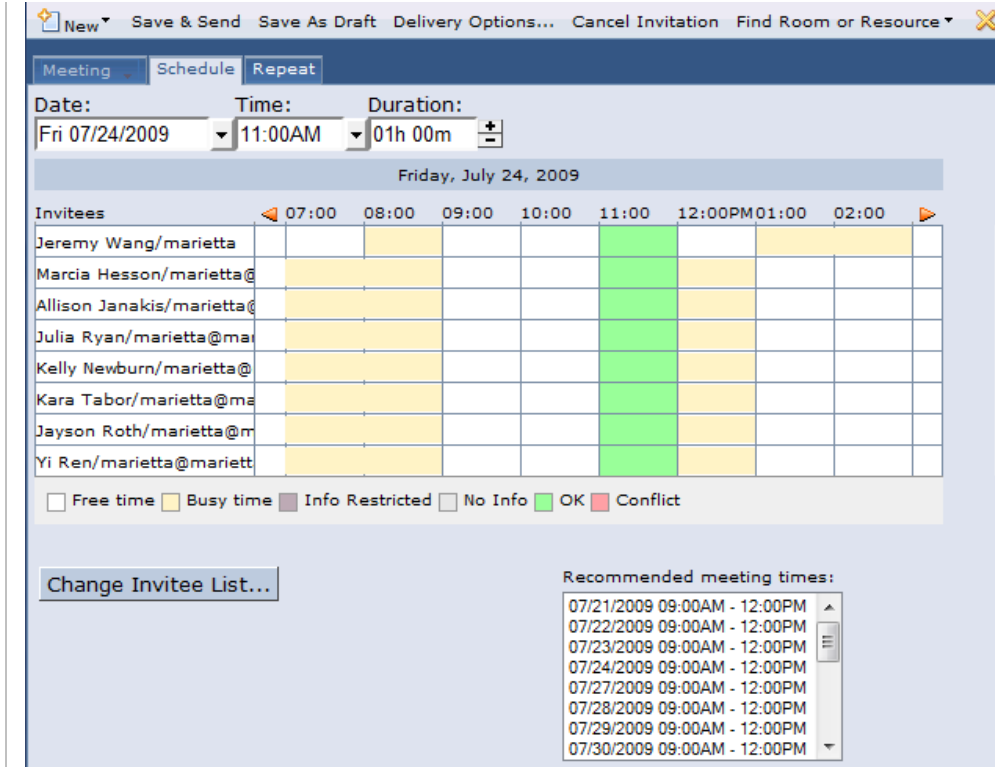


## 2.7 Asynchronous Communication

As the development framework (Figure 1) illustrates, the IBM/Lotus Domino Web Access is the main asynchronous communication tool deployed in the paperless classroom. This enterprise collaboration tool greatly facilitates the exchange of information and also helps to prepare students for the future working environment. Table 2 illustrates some of the best practices adopted in the framework.

**Table 2: Domino Web Access Best Practices**

| Best Practices                  | Implementation   |
|---------------------------------|--|
| <p>Class Distribution Lists</p> | <p>Class distribution lists can be easily created and maintained in the Domino server directory. The instructor and students can send out emails to the whole class or certain teams conveniently.</p>   |
| <p>Online Appointments</p>      | <p>Students can use the powerful calendar tool of Domino Web Access™ to check the instructor’s free time and make appointments online. This feature can also help students coordinate team meetings during group projects.</p>   |



**Group Calendar**

For team projects, students can create a group calendar to keep each other informed of their personal schedules, which facilitates the communication among team members.

The screenshot shows a group calendar for Tuesday, July 21, 2009, with the following details:

- Calendar View:** Tuesday, July 21, 2009. The time slots range from 07:00 to 04:00.
- Members and Schedules:**
  - Allison Janakis: Busy (blue) 07:00-08:00, Busy (blue) 11:00-12:00.
  - Jayson Roth: Busy (blue) 07:00-08:00.
  - Jeremy Wang: Busy (blue) 08:00-09:00, Busy (blue) 12:00-01:00, Busy (blue) 01:00-02:00.
  - Julia Ryan: Busy (blue) 07:00-08:00, Busy (blue) 11:00-12:00.
  - Kara Tabor: Busy (blue) 07:00-08:00, Busy (blue) 11:00-12:00.
  - Kelly Newburn: Busy (blue) 07:00-08:00, Busy (blue) 11:00-12:00.
  - Kyrstin Lesic: Busy (blue) 07:00-08:00, Busy (blue) 11:00-12:00.
- Meeting:** A meeting titled "11:00AM - 12:15 MIS220" is scheduled for 11:00-12:15.

The paperless classroom also features the Domino TeamRoom™, which offers a virtual team space for students to share research materials, drafts and online resources with other team members and manage project milestones. Each TeamRoom™ is secured for the authorized team members only (Figure 9). Students can first review the detailed project description posted in WebCT, and then they can collaborate with other team members through Domino Web Access and Domino TeamRoom, which are seamlessly integrated with the WebCT, as illustrated in the development framework (Figure 1).

**Figure 9: Domino Team Room**

## 2.8 Synchronous Communication

The WebCT chat module is implemented for synchronous communication. Although the virtual office hour initiatives are welcomed by students, the effectiveness is limited by the less-robust capability of the WebCT chat tool. The future work section of this paper will discuss plans to implement IBM/Lotus Sametime™.

## 2.9 Grade Posting

All the quiz/exam and assignment results are posted in WebCT and students can check their performance through the My Grades tool. By referring to the grading scale included in the online syllabus, they will be able to verify any discrepancy between the instructor's calculation and theirs. A good practice is to export the results from WebCT to an Excel spreadsheet and then use appropriate formulas to calculate mid-term or final grades. This dramatically reduces the grading work for the instructor. Students are also happy about the fact that their grades are always transparent to them.

To make these different tools work well together in the paperless classroom, navigation links should be well planned out to promote the human-computer interaction. Esnault and Zeiliger (2000) reiterate that special attention should be given to the course structure and to the navigation features which very often come as an outcome. Based on the logical flow of the development framework (Figure 1), the navigation links are grouped into four major categories: 1) Course Content 2) Course Evaluation 3) Collaboration and 4) My Tools (as shown in screenshot 1 in the appendix). These links are shown in a navigational frame and are always available to students while they are viewing various content pages. The intuitive layout helps students to find resources quickly and promote the use of the paperless classroom. Table 3 outlines the hyperlinks used in the course navigation pane.

**Table 3: Paperless Classroom Capabilities**

| <b>Features</b>        | <b>Implementation</b>  | <b>Benefits</b>   | <b>Details</b> |
|------------------------|--|---|----------------|
| Online Course Calendar | Detailed course schedule and relevant activities in each class session are posted online.  | Students are always updated of the class progress.  | Appendix 1     |
| Online Syllabus        | An online syllabus outlines the instructor's contact information, class expectations, course requirements, grading standards and useful links to online resources.   | Students don't have to worry about losing their syllabi anymore. The course road map is available to them 24 hours a day, 7 days a week.  | Appendix 2     |
| List of Chapters       | Lecture notes are posted as PowerPoint files for every class. Each chapter also contains a set of self study questions online in true/false and multiple choice question formats. Students will receive feedback right away after they complete the questions. | Students have access to the PowerPoint notes and tutorials all the time. The self study questions help students to internalize the key concepts of each chapter.  | Appendix 3     |
| Lab Sessions           | Hands-on lab tutorials, case study materials and sample works are posted here, which can guide the students through the challenging lab sessions. Licensed software is also available for students to download and install on their laptops or desktops.       | With a lab "tutor" online all the time, students with lower computer proficiency levels can keep up with the progress of the class. By distributing sample works and software online, students can learn from the best practices and work on their projects anytime and anywhere. | Appendix 4     |
| Assignment             | Detailed assignment description and requirements are posted with relevant file attachments or hyperlinks to online resources. Students submit their assignments and receive feedback and grades online.  | Students no longer have to worry about losing assignment files. Detailed feedback is provided with the MS Word comment utility. Students will know exactly which areas can be improved.   | Appendix 5     |
| Quiz/Exam              | Short online quizzes are given after each chapter in the format of True/False and multiple choice questions. Essay questions are added to the final exam.  | Quizzes are automatically graded and students can review the correct answers after the results are released. The online quizzes and exams help students to get more accustomed to the computer-based testing (CBT), which is becoming more prevalent in the real business world.  | Appendix 6     |

|                    |  |   |            |
|--------------------|--|---|------------|
| Domino Web Access™ | This enterprise collaboration tool is made available to every student registered for the course.         | The rich collaboration features of this tool greatly facilitate the communications between the students and the instructor. It also helps to prepare students for the future working environment. | Appendix 7 |
| Domino TeamRoom™   | Each team is provided with a secured online team place. Only designated team members have access.        | Students acquire hands-on experience on a virtual team working environment, which is widely used in business nowadays.  | Appendix 8 |
| My Grades          | A summary of the results of quizzes, exams and assignments is posted online and transparent to students. | The online postings of grades help students to accurately track their progress in class.  | Appendix 9 |

### 3. SUMMARY AND FUTURE WORK

The paperless classroom serves an important role in preparing students for the 21<sup>st</sup> century, offering them an environment where they can learn the skill sets are important for the digital future. This paper describes a development framework and its implementation in a state-of-the-art paperless classroom, which brings together the best practices from both worlds. This hands-on study has shown that students are highly motivated to use the paperless room and reap the benefits it offers. An online survey was sent out to students who have completed the Introduction to Management Information Systems course. The survey results were very favorable with all categories in the "agree" and most between agree and strongly agree. The following table summarizes the survey results.

**Table 4: Summarized Results**

| Questions   | Mean | Standard Deviation |
|---|------|--------------------|
| 1. Overall, the online tools (WebCT, Domino Web Access, TeamRoom) help me greatly in learning the MIS220 course.        | 4.23 | 0.63               |
| 2. The paperless course environment helps me to better manage the course materials and access information.              | 4.23 | 0.68               |
| 3. The online tools help me to better collaborate with my teammates and the instructor                                  | 4.00 | 0.83               |
| 4. The online tools have created an anytime and anywhere learning environment. I feel more connected to the instructor. | 4.40 | 0.67               |
| 5. The industry standard online tools prepare me better for future team working environment                             | 4.30 | 0.65               |

**Scale - 5: Strongly Agree 4: Agree 3: Neither 2: Disagree 1: Strongly Disagree**



The next goal of this study will be to continue searching for ways to make the paperless classroom more robust, intuitive and efficient. One weak area of the current paperless classroom is the synchronous communication module, which does not fulfill student needs that well. The latest Instant Messaging (IM) solution SameTime™ from IBM/Lotus is being evaluated and a pilot study will be launched to integrate this leading industry IM tool into the paperless classroom. The digitization of the traditional classroom has just begun.

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## APPENDICES – DETAILED SCREENSHOTS

### 1. Welcome Page & Calendar

In the welcome page, a brief description of the tools helps students to get familiarized with the paperless classroom environment. They can also download the syllabus in either MS Word or PDF file format.



The navigation pane is logically separated into four sections: **Course Content, Course Evaluation, Collaboration and My Tools**, which help students to locate resources and navigate through the paperless classroom more efficiently.

The screenshot shows the MIS220 WebCT website. At the top, there is a navigation bar with links: myWebCT, Resume Course, Course Map, Check Browser, Log Out, and Help. Below this is a header for the course: 2009 Spring - Mngt. Info. Systems (Jeremy Fei Wang). The left sidebar contains a 'Course Menu' with categories: Course Menu, Course Content (including Calendar, Syllabus, List of Chapters, Lab Sessions, Glossary), Course Evaluation (Assignment, Exam), Collaboration (Student Homepage, Discussion, Mail), Lotus Teamspace, and My Tools (My Progress, My Grades, Weekly Feedback). The main content area is titled 'Welcome to MIS220!' and features a large blue banner for 'MANAGEMENT INFORMATION SYSTEMS: Managing the Digital Firm 10th Edition'. Below the banner, a welcome message states: 'Welcome to the MIS220 WebCT website! We will use this site extensively for course materials posting, assignment submission, online quizzes and class collaboration. The following is a brief description of the important tools you will be using:'. A list of resources follows, each with a description:
 

- Calendar - Our Course Road Map:** THIS IS A VERY IMPORTANT TOOL OF OUR COURSE! Our weekly learning activities will be posted on the calendar. Please check the calendar frequently for updates and complete the assigned activities for each week. "I didn't know" is not an acceptable excuse for failing to meet the course requirements. If you fail to meet your responsibilities, you do so at your own risk.
- Syllabus:** Please refer to the syllabus for information on course description, course structure, course competencies, textbook and materials, course policies and computer skill sets you'll be building through this course.
- List of Chapters:** This includes a list of chapters covered in this course. You will find lecture notes, study guide, practice questions, PowerPoint slides posted for each chapter. Please review these materials for each chapter.
- Lab Sessions:** Our hands-on computer lab materials will be posted here, which include PowerPoints, manuals and relevant software for download. These materials will guide you step by step through the lab projects.
- Assignment:** Project assignments will be posted here. Please review the requirements and relevant links/attachments carefully. Submit your work before the due date. Detailed feedback will be posted after your assignment has been graded.
- Quiz/Exam:** A short online quiz will be given for each chapter covered. The format of the quiz includes True/False and multiple choice questions, which are similar to the self-study and practice test questions. An online final exam will be given at the end of the summer course. The format of this comprehensive exam includes True/False, multiple choice and essay questions.
- Student Homepage:** This is where you can add a link to your ePortfolio and show it to your fellow classmates.
- Discussion:** Online discussion questions will be posted here. This will count towards your class participation.
- My Grades:** All quiz/exam and assignment scores will be posted here. Please notify me immediately if anything is missing.

 At the bottom, a message says: 'Well begun is half done! Let's get started. Please click on the calendar and review this week's learning activities and make preparations accordingly.' Below this are two icons: a document icon for 'Syllabus MS Word Version' and a PDF icon for 'Syllabus - PDF Format'.

Detailed course schedule is posted on the WebCT calendar. Ad hoc updates can be easily posted here as well.

2009 Spring - Mngt. Info. Systems (Jeremy Fei Wang)

Homepage > Calendar

February 2009 Previous month Next month

Date: February 2009 Go Add entry Compile entries

To view, add to, or edit the daily schedule, click a hyperlinked date below.

|           | Sunday | Monday | Tuesday   | Wednesday | Thursday  | Friday | Saturday |
|-----------|--------|--------|---|-----------|---|--------|----------|
| View Week | 1      | 2      | 3<br>-Chapter 2. Global E-Business: How Businesses Use Information Systems-Part 2                           | 4         | 5<br>-ePortfolio Project Wrap Up  | 6      | 7        |
| View Week | 8      | 9      | 10<br>-Chapter 10. E-Commerce: Digital Markets and Digital Goods-Part 1 & ePortfolio Project due at 11:00pm | 11        | 12<br>-ePortfolio Best Design Award Announcement & Business Information Systems Hands-on Tour | 13     | 14       |
| View Week | 15     | 16     | 17<br>-Chapter 10. E-Commerce: Digital Markets and Digital Goods-Part 2                                     | 18        | 19<br>-eBusiness System Tour & Analyzing a dot.com Business Project Launch                    | 20     | 21       |
| View Week | 22     | 23     | 24<br>-Chapter 5. IT Infrastructure and Emerging Technologies   | 25        | 26<br>-Analyzing a dot.com Business Project Lab   | 27     | 28       |

## 2. Online Syllabus

An online syllabus is always available to the students.

2009 Spring - Mngt. Info. Systems (Jeremy Fei Wang)

Homepage > Syllabus

**Course Information**

Course title: Introduction to Management Information Systems  
 Course number: MIS220 Section 1  
 Course discipline: Business Management  
 Course description: The course Management Information Systems explores how organizations use information technology to support operational and strategic activities. It introduces you to basic concepts of information systems from both technical and managerial perspectives. Through individual and team projects using computer-based tools, students will acquire and enhance problem identification/definition, solution development, as well as communication and collaboration skills.  
 Course date: Monday, January 12, 2009 through Friday, April 24, 2009  
 Location: T: Thomas 209 & TH: Thomas 223  
 Meeting day (s): Tues & Thurs  
 Meeting time (s): 11:00am- 12:15pm  
 Prerequisite (s): The prerequisite for the course is sophomore-standing or higher.

**Professor Information**

Name: Prof. Jeremy Fei Wang (MCSD, MCAD, PCLP)  
 Email: [jeremy.wang@marietta.edu](mailto:jeremy.wang@marietta.edu)  
 Office location: Thomas 117  
 Office hours: MW: 11:00am - 12:00pm, TTH : 4:00pm - 5:00pm or by appointment

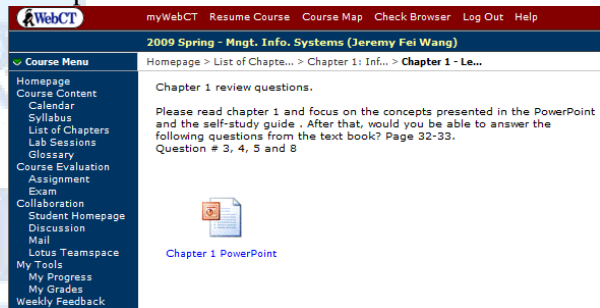
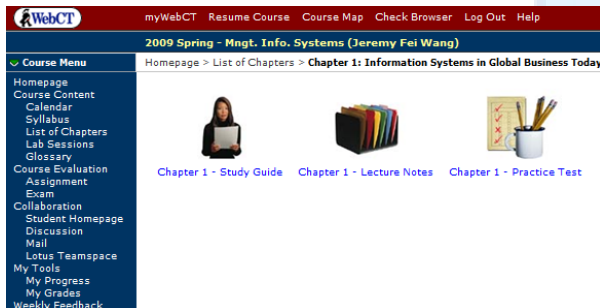
### 3. List of Chapters

Lecture notes and self study questions that accompany the textbook are available to students 24 hours a day, 7 days a week.

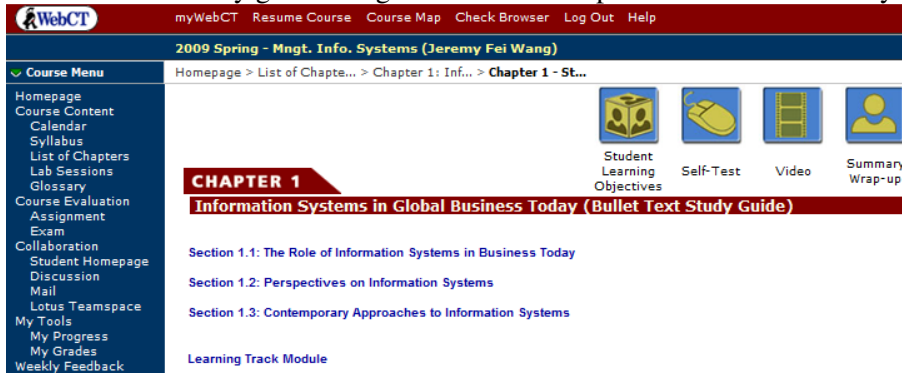


Self-study guide, lecture notes and self-test questions are available for each chapter covered.

Lecture notes are available in MS PowerPoint format. Students can download these files to review the key concepts discussed in class.



Interactive self study guide is a great feature to help students review the key concepts.



## 4. Lab Sessions

Hands-on lab tutorials, notes and software are posted online to guide students through the “maze” of IT projects.

## 5. Assignment

Class assignments are all managed online, including postings of assignment requirements, relevant attachments, submission and feedback.

## 6. Quiz & Exam

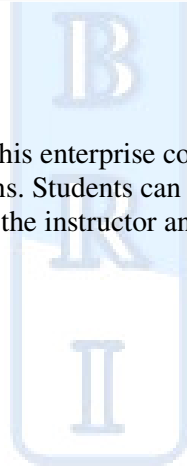
All quizzes and exams are administered online, in the format of true/false, multiple choices and essay questions.

The screenshot displays the WebCT interface for a course. At the top, there is a navigation bar with links for 'myWebCT', 'Resume Course', 'Course Map', 'Check Browser', 'Log Out', and 'Help'. Below this, the course title '2008 Fall - Mngt. Info. Systems (Jeremy Fei Wang)' is shown. A 'Course Menu' is visible on the left, listing various course components. The main content area is titled 'Quiz/Exam' and includes a 'Quizzes and Surveys' section with links to 'View class statistics for quizzes' and 'View scores for quizzes'. It also shows '0 Available' and '0 Due soon' items, a display filter set to 'All quizzes and surveys', and a list of four assessments:

| Assessment Name                 | Availability   | Duration   | Grade    | Attempts                 |
|---------------------------------|--|------------|----------|--------------------------|
| MIS220 Final Exam               | December 10, 2008 12:00pm - December 10, 2008 2:30pm | 75 minutes | --- / 55 | 0 completed, 1 remaining |
| Quiz - Team Project Lab Session | December 4, 2008 9:00am - December 4, 2008 11:00pm   | 15 minutes | --- / 11 | 0 completed, 1 remaining |
| Quiz - Chapter 13               | December 4, 2008 3:50pm - December 4, 2008 4:05pm    | 10 minutes | --- / 11 | 0 completed, 1 remaining |
| Lab Quiz - Technical Writing    | November 6, 2008 2:25pm - November 6, 2008 2:30pm    | 10 minutes | --- / 11 | 0 completed, 1 remaining |

## 7. Domino Web Access

Every registered student is given access to use this enterprise collaboration tool through the department intranet, which greatly facilitates the class communications. Students can send rich-featured emails, invite team members for team meetings, schedule appointments with the instructor and manage personal calendars and to do lists online.



# MARIETTA COLLEGE

Welcome to the EMA Department

Intranet



Please identify yourself:

User name:

Password:

For any login issues, please contact [jeremy.wang@marietta.edu](mailto:jeremy.wang@marietta.edu)



The screenshot shows a Mozilla Firefox browser window displaying a Lotus Domino web page. The page has a navigation bar with 'Welcome', 'Mail', 'Calendar', 'To Do', 'Contacts', and 'Notebook'. The main content area is split into two panes. The left pane shows a calendar for July 2009, with the date '22' highlighted. The right pane shows a document viewer for a document titled 'Our final product' with a date of '05/01/2008' and an author of 'Chengyan Sun@marietta'. The document content includes the text: 'GREAT JOB TEAM !!! (Rachel Mecklenborg@marietta 05/01) (Chengyan Sun@marietta 05/01) Great Job (Frank Thomas@marietta 05/01)'.

The screenshot shows an email client interface. The top part displays an 'Inbox' with several messages. The selected message is from 'Jeremy Wang' with the subject 'ePortfolio project results are released.' and a date of '07/19/09 10:25PM'. Below the inbox, the full email content is displayed:

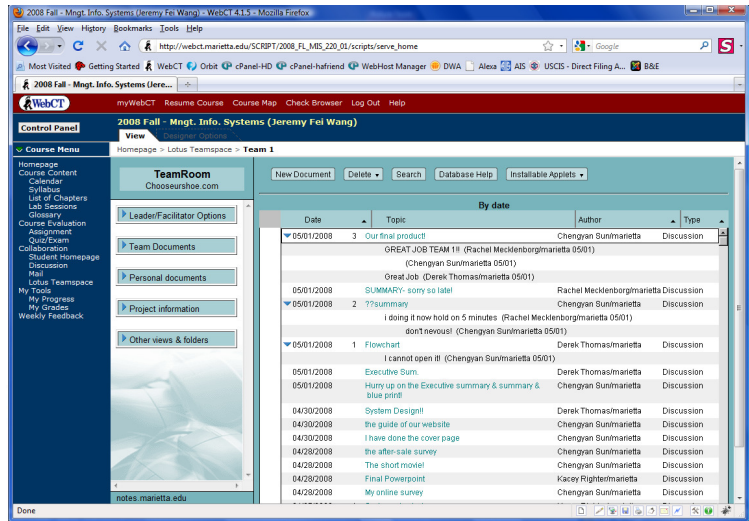
**From:** Jeremy Wang/marietta  
**Subject:** ePortfolio project results are released.  
**To:** MIS220\_SM  
**cc:**

Hi everyone,  
 The ePortfolio project results are released in WebCT. Please review my detailed comments and let me know if you have any questions.  
 Best,  
 Prof. Wang

## 8. Domino TeamRoom



Each team is provided with a secured virtual team space, where they can manage various project related activities online.



## 9. My Grades

The results of all quizzes, exams, assignments and team projects are posted here. Students can accurately track the progress of their work and discuss any discrepancies with the instructor right away.

