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## Online Collaboration

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### Abstract

Even though the Internet technology has become ubiquitous, many people are still afraid of using the technology to collaborate on projects online. A few people think it is too late for them to learn how to use online technology, while others think it is not as effective as face-to-face collaboration. There are definitely distinct advantages in working in a face-to-face environment; however, there may be several hindrances in making the collaboration successful, such as two individuals working on a project from two different parts of the world. Online collaboration can cut travel costs, time, and the office space required to meet in person. Because distance is no longer a factor in online collaboration, organizations can save virtually thousands of dollars just on travel expenses. The current Internet technologies allow us to collaborate in a variety of ways. This paper addresses the use of email attachments (e.g. with Microsoft Word review features), discussion forums, and other online collaboration technologies, such as AdobeConnect, Blackboard, ProjectSpace, MegaMeetings, and WebEx.

Online collaboration tools can greatly enhance the success of a student project. Even though these technologies can be used in a variety of ways, the author primarily focuses on using email attachments (e.g., Microsoft Word documents), Blackboard, AdobeConnect, and Google docs. The reasons for selecting these popular technologies, which are among many other online collaboration technologies, such as Cisco's TelePresence and WebEx; GoToMeeting; and Microsoft's Groove, NetMeeting, LiveMeeting, and SharePoint to name a few, is the cost and products of choice for Purdue University College of Technology at Columbus. In addition, all of our students are entitled to use these products for free. Google Docs is free for everyone. It can be accessed from <http://docs.google.com>. Using the Google Docs technology, one can create/edit/delete Word and Excel documents just by using any Internet browser, e.g. Internet Explorer, FireFox, and Opera. All of the changes made to the documents are automatically saved and available immediately for distribution and/or collaboration.

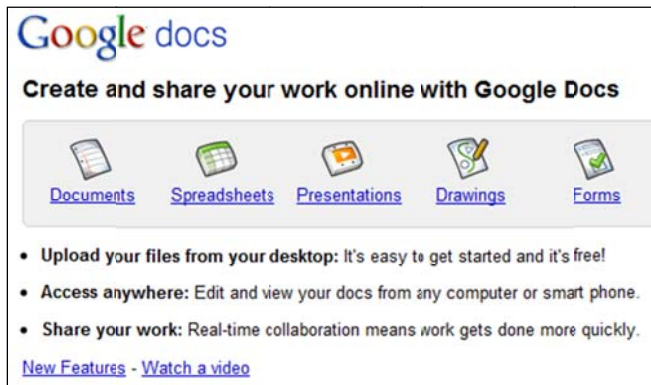


Figure 1: Google docs

“Telepresence technology can slash travel costs—if you can afford it, and if it’s really used.” (Shein, 2010). This is particularly true in a corporate environment. But in an educational environment, “Review”, with the “Track Changes” features of MS Word is particularly useful. This way several students can work on one document, yet keep track of who made - what kind of changes to the documents. Suppose students are working on a group project and not all of them are able to meet face-to-face. In this situation, students can simply email their project as an attachment, such as an MS Word document to all the group members. Once the document has been received, each student can open the document in MS Word and turn on the “Review” feature. Even though this technology has been available for many years, its usage has not become widespread yet. Figure 2 depicts an example of using the digital ink.

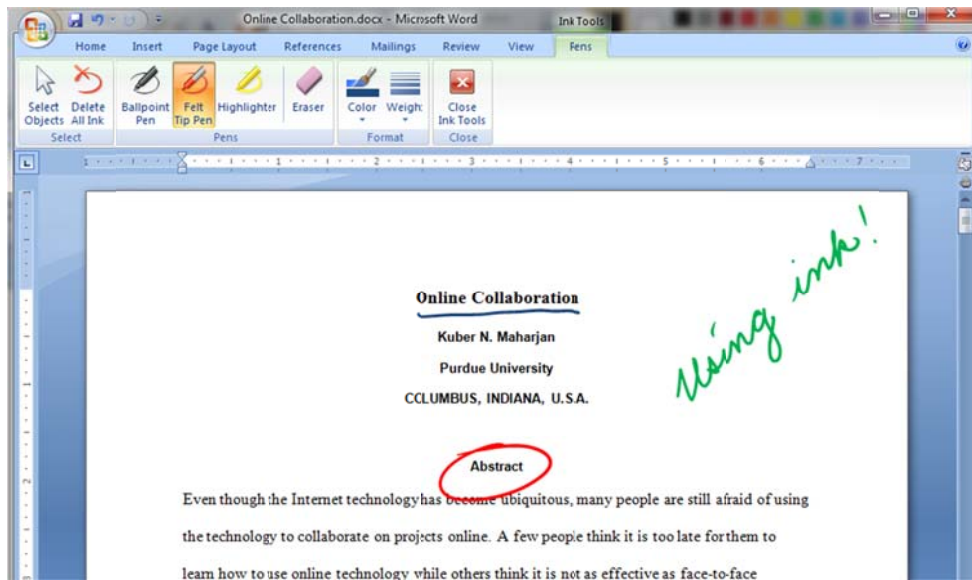


Figure 2: Digital Inking

For a number of semesters, the author has eliminated the paper submission of homework assignments. Instead, students get their assignments online, complete their assignments at home, or at the library, or any place with a computer, then submit the assignment online. The author uses his personal tablet PC to grade the submitted assignments. The use of the “Start Inking” task feature of “Review” in MS Word allows the instructors to grade electronically submitted papers in lieu of traditional hard copies. First, the document is downloaded and saved with a different name. Then the document is opened for grading. Then turn on the “Review” feature and “Start Inking”. Once complete, the document needs to be saved and returned to the student. It certainly involves a lot of extra work for the instructor, but the students enjoy the feedback with a personal touch. Figure 2 depicts online homework assignment using the Blackboard technology.

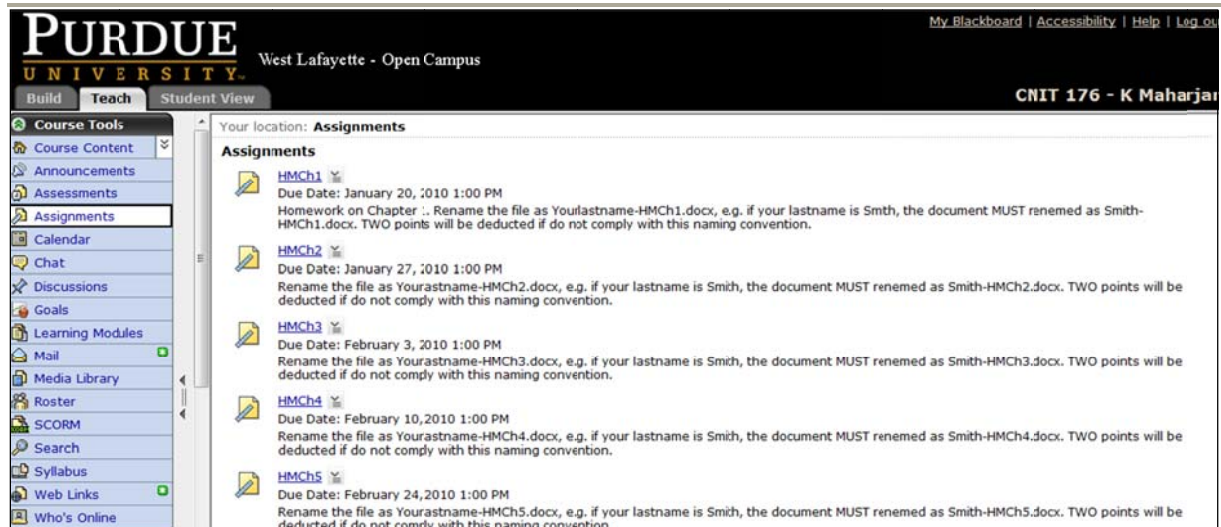


Figure 3: Online Homework Assignments

The author uses Blackboard technology throughout the semester and in numerous occasions the author has implemented AdobeConnect in traditional classrooms. There are several reasons for using this technology in a traditional classroom. First, it introduces students to the latest online collaboration technologies. Second, the students gradually become used to these technologies and become proficient in using these technologies to communicate, submit assignments, and meet virtually. Third, in case of emergency, students can attend the classroom virtually. Most of the students, at Purdue University College of Technology at Columbus, are non-traditional, such as single parents and/or full-time/part-time workers. Several students drive to campus in excess of 25 miles. This semester (spring 2010), the school was not closed, even during snow storms, however some of the students were not able drive to the school because of the inclement weather. But because the author implemented AdobeConnect, those students were able to attend the classroom virtually from home. Other reasons for students using this technology to attend the classes are due to the inability to find babysitters; they're out of town on official business, and for medical reasons.

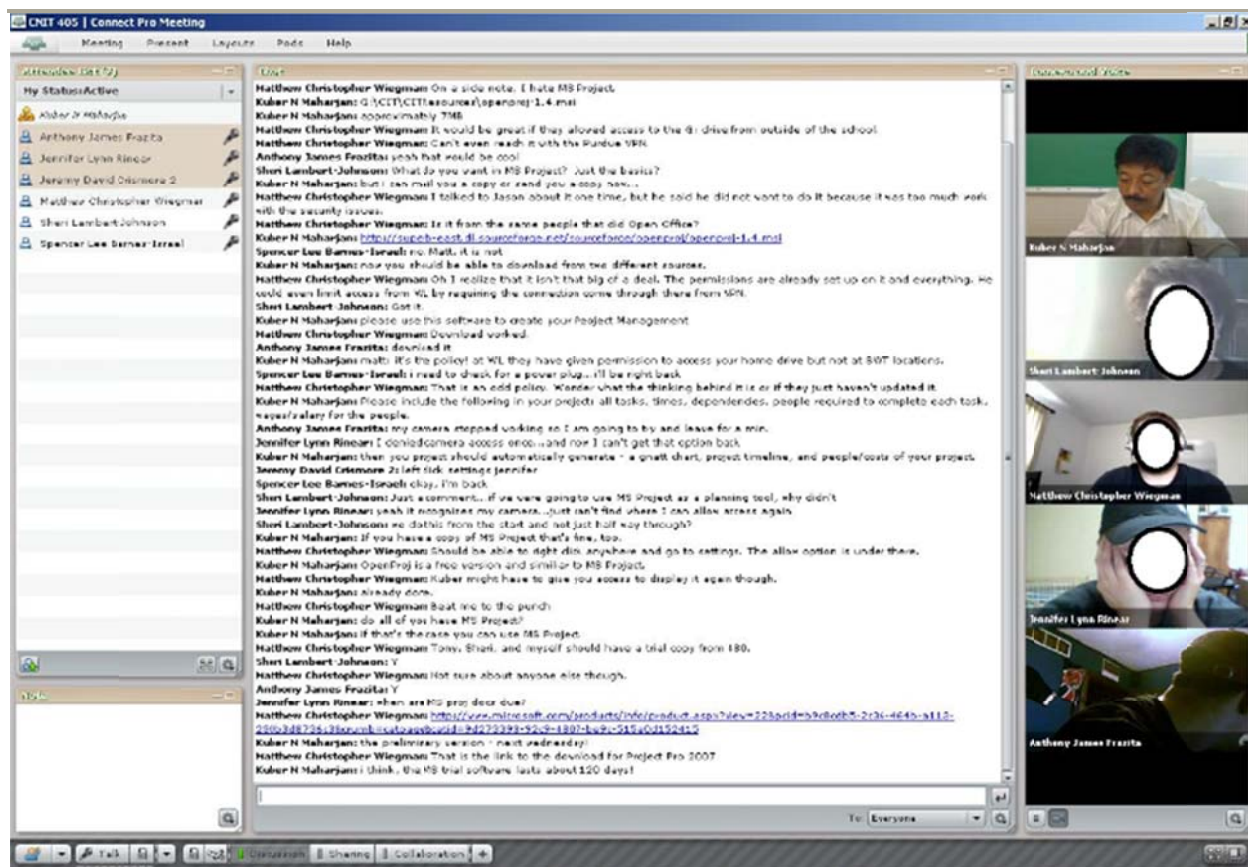


Figure 4: An AdobeConnect Session

The above figure depicts an AdobeConnect session in progress. During the session, texting, audio, and video were enabled. All of the students, seen in the pictures, participated from their homes using their personal PCs, webcams, speakers, and microphones. Students preferred text messaging to complement the video instead of using microphones, because they can see what was said on the screen.

The author has been implementing a course-specific email system for many years. Still, many students are not accustomed to using this type of email for online collaboration. Once groups are created in Blackboard, students are able to communicate with their groups very easily. Because of the use of a course-specific email system, student mailboxes are no longer swamped with junk mail and any other non-course specific mail.

This semester (spring 2010), the author extensively used "docs.google.com" to distribute course schedules and arrange online scheduling. Because documents can be edited online without any specific software other than the browser, it is a tremendous asset for quick editing and distributing. These documents can be shared as read-only or read/write. As an example, the author used this technology to collaborate on filling out a lab check-off spreadsheet document. Initially, the document was shared with read/write permission to all students. Once all students have selected their check-off days and times, the document is locked. Now students can view the document (every one's schedule) but not modify.

In conclusion, there are many ways to implement online collaboration technologies in the classrooms. Possibilities are endless and it could certainly overwhelm anyone. Therefore, start with a

small and a simple project first, e.g. class-specific email. It is better to introduce course-specific technologies gradually until all students embrace the technology. It is very important to test and retest before each class period to make sure that everything goes smoothly. When technology works it is great. But when it fails it can be miserable.

## **References**

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