



## **Tegrity System for Distance Education**

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### **Abstract**

There are many and various technological methods for enhancing and streamlining online education. Faculty in the School of Allied Health Sciences (SAHS) at the Medical College of Georgia (MCG) in Augusta Georgia have used or experimented with many different products available to help place PowerPoint presentations with voice-over online, or help format documents and handouts for online delivery. None of the previously used products has had such a profound impact and provided such a tremendous enhancement to the training and online delivery methods as the Tegrity System.

Tegrity is designed to help remove some of the added online course preparation required to teach distance education. It is designed to capture in-class lectures, including instructor video, audio, PowerPoint, annotations and diagrams, and in-class demonstrations. Tegrity packages all these features for Internet streaming and delivery to students anywhere in the world. When the distance student views the presentation, all the features of the classroom experience are displayed in one window with the ability to move forward, backward, skip or locate any section of the presentation at will.

The Return On Investment (ROI) is significant considering the fact that Tegrity provides the ability to package and upload an entire classroom lecture within minutes after the presentation is given. Faculty have been able to save hours and even days of preparation time normally required for other forms of online educational delivery.

Keywords/key-phrases: Online training, online education, video streaming, distance education, lecture capture, lecture recording, instructional delivery system.

### **Introduction**

Online education is not new to faculty in the School of Allied Health Sciences (SAHS) at the Medical College of Georgia (MCG). What is new is the method for packaging and delivery of the online education. The Tegrity system has revolutionized how lectures are delivered online and to distance students. Tegrity Software is one of

many software platforms designed to allow classroom instruction to reach beyond the walls of university campuses. Other products with some similar capabilities of Tegrity Campus include Apreso Classroom ([www.Apreso.com](http://www.Apreso.com)), and Elluminate Live ([www.illuminate.com](http://www.illuminate.com)) These products are limited however, in their capabilities and features when compared with Tegrity (Anystream Inc, 2005; Elluminate Inc, 2004; Tegrity Inc, 2006a).

The school purchased the first Tegrity Cart in May of 2003. Now, because of its rapidly growing popularity among faculty, the school has 25 plus Tegrity stations, including an Enterprise License to use the entire suite of Tegrity Software. Orders have already been placed to add up to twenty more systems as the entire campus begins to realize the benefits of this lecture capture system.

## **A Product Review of Tegrity**

The following is a product review of the Tegrity Software Applications that faculty have used at the Medical College of Georgia. The basic Tegrity Software package includes instructor software to capture classroom lectures, editing software to allow instructors to cut undesired footage, import videos, perform voiceovers, and many other functions to enhance the presentation. Included in the basic package is either the option to lease space on the main Tegrity Corporate server to stream presentations, or install a campus edition of Tegrity Server software to stream lectures directly from the home campus.

A recently released and highly touted addition to the Tegrity software package is Student Notes. This Tegrity Option has not yet been implemented at MCG however, this module allows students to use their laptop or tablet PC to take notes either while in class listening to the instructor, or while at home viewing a prerecorded or live lesson. Later, when the student is ready to review his or her notes, he or she can synchronize the notes with the lecture. The Tegrity presentation along with Tegrity Notes will display on the same screen side-by-side (Tegrity Inc, 2006b).

### Tegrity Instructor Software

Tegrity Instructor software is the primary module used in recording lectures for later streaming. This software operates in two modes. The Simple Recording mode is relatively easy to start and stop, but is a simplified version of a screen recorder and provides the instructor with limited choice of features and functionality. The Classic Recording mode, provides the instructor with much more flexibility and control over the recording. The basic equipment needed for any type of recording is a computer system and a microphone. There are additional features that require added equipment that are discussed below

### Tegrity's Simple Recording Mode

The Simple Recording mode is the default recording mode at installation. Tegrity provides an Options Menu for selecting other recording modes. Whichever mode is

selected in the Options Menu will become the default recording mode for all future recordings on that computer system (Tegrity Inc, 2006a).

The Simple Recording mode can be launched by simply clicking on an icon conveniently placed on the taskbar at the bottom of the screen, then clicking start when the instructor is ready to begin the lecture. The first step in starting a recording session is to test the microphone and video camera angle. There is a screen provided that allows the instructor to select an A/V Test button that will make a short recording of the audio and/or video for preview. During playback of this 5 to 10 second recording the instructor can see and hear what the students will see and hear during later streaming of the recording. An important note here is that this is the only time the instructor will be able to see him or herself at anytime during the recording. Once the recording has begun there is no option to view oneself during the actual recording phase.

Once the Simple Recording is started anything that happens on the computer screen is automatically captured. Since the Simple Recording mode is essentially a screen recorder, the recorded files in this mode will be much larger than those created in the Classic Recording mode. This could become an issue if your Tegrity server has limited storage space (Tegrity Inc, 2006a).

### Tegrity's Classic Recording Mode

The Classic Recording mode, which in previous versions of Tegrity was the only mode, is slightly more complicated to launch but provides the instructor with much more flexibility over the recording. This recording mode can be launched from either an icon on the bottom taskbar or from a drop down menu integrated into the PowerPoint toolbar.

Both the Simple and Advanced Recording modes allow the instructor to record voice, video, PowerPoint presentation, and on-screen annotations during the lecture, but the Advanced mode creates much smaller files while in PowerPoint recording than the Simple Recording mode.

During recording the instructor can switch from PowerPoint recording mode to screen recording to show a demonstration of a software application or to surf the Internet for supporting material. At any point during screen recording the instructor can take a snapshot of what is currently on the screen, and Tegrity will automatically insert that snapshot into the current PowerPoint presentation where the instructor can continue to discuss the contents of the screen capture.

A microphone is needed to record the instructor's speech, and an instructor's camera can be added to capture video of the instructor speaking to the class. By adding a touch screen monitor, or by using a Tablet PC, the instructor can write or make annotations directly onto the PowerPoint presentation. The on-screen annotations feature eliminates the need for a chalk board or white board. All annotations or diagrams can be made directly on the touch screen, and when the screen is full, the instructor can simply insert another blank PowerPoint slide and continue making annotations.

## Added Hardware Helps Enhance the Presentation

Adding a document camera or an ELMO® Presenter gives the instructor the ability to use the Tegrity software to quickly switch from instructor camera to document camera and record a demonstration or capture a picture of an object or a page from a book. If the instructor clicks the on-screen button to take a snapshot of the page or object, the Tegrity software will capture that picture and insert it directly into the current PowerPoint presentation. Video cameras, VCR's or DVD players can also be connected to the computer system and allow Tegrity to capture and make video a part of the presentation.

## Tegrity Live Recording Mode

Tegrity Live Recording software is an option that has been used infrequently at MCG. It has all the features of Tegrity Recording, but allows students to log onto a predetermined website and join the live lecture as a distance participant. Tegrity Live has a slightly different look on the instructor's computer screen because the instructor is able to see who is currently logged onto the live session, and the distance students are able to raise their hand and ask questions via text messaging or Voice over IP if the instructor gives them control of the microphone. The Tegrity Live session is also automatically recorded for later streaming by students who could not participate or for review (Tegrity Inc, 2004).

## Tegrity Editing Software

The Tegrity Editor Software allows the instructor to view the entire presentation, and cut segments that are not desirable. He or she can also import video into the presentation, add or remove annotations, record voice over the presentation, and add or remove hyperlinks to be displayed during the presentation.

## Tegrity Server Software

The Tegrity Server Software can be installed on any high-end PC or server allowing that system to act as the Tegrity content streaming server for the school or organization. The server software is relatively simple to install and the latest version, 7.02, is designed to work with Windows 2003 Server. At this writing, the latest version of Tegrity server software has been designed to integrate with either WebCT or Blackboard, allowing instructors to log on to their WebCT course, click on an imbedded Tegrity Icon and begin recording their lecture. When the lecture is completed it can be automatically uploaded to the Tegrity Server, and a link to that presentation will be placed in WebCT to allow students quick access to the prerecorded lecture.

## **Return On Investment**

Most administrators want to know what the bottom line or Return On Investment (ROI) is on any new venture. Talking with Dr. Shelley Mishoe, Dean of the School of Allied Health Sciences at MCG (personal communication, May 15, 2006) the majority of cost and time savings from using Tegrity comes from the ability to capture a class while in session, and then upload that recorded session to the Tegrity server, so that within minutes it can be accessed and viewed by students online.

## **Conclusion**

The advancing use of the Tegrity system at MCG is just one of many success stories from around the country that provide insight into leading edge technology that is changing how lectures are conducted, and how students study and review for exams. Tegrity is one of many tools that are essential to the advancement of academic programs, especially for university systems that are working to take their curriculum online.

Forward thinking university systems understand that a large part of academic instruction is packaged for online delivery either for distance or local education. As the School of Allied Health Sciences at MCG has discovered, non-traditional students are a growing portion of the student population, and online education is key to providing the anytime, anywhere, type of education these students must have. The old stereo-typical notion that students must be present and sitting in class at a predetermined time and place is a changing paradigm for education in the classroom of the future.

Online lecture delivery systems such as Tegrity are the wave of the future, and university systems that are slow adaptors or who fail to see this ever increasing need may become seriously marginalized in the months and years ahead. Students who are technologically savvy are beginning to demand a certain level of flexibility and adaptability provided by these technologically advanced tools.

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