

APPLICATION NOTE

VidyoConferencing and Education

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VidyoConferencing and Education

Increasing Timeliness, Ease and Frequency of Learning Opportunities

From print-based instruction, to radio and television classes, to the use of on-line resources and web-based instruction, distance learning has come a long way. Video conferencing is the latest and most significant milestone along this path of innovations. Unlike its predecessors, video conferencing offers educators and students, for the first time, the uniquely significant ability to achieve bi-directional interaction; that is, face-to-face and voice-to-voice communication from teacher to student and students to teacher, using a laptop or desktop computer, running over any general purpose IP network. Without having to incur time or costly travel expenses to provide or receive this opportunity, students and teachers can convene more easily than ever before. Furthermore, any teaching session can be recorded and viewed by the student who was unable to attend the class.

For students, there is now a vastly increased choice of classes that has until recently been limited because of logistical inconvenience, access to skilled instructors, and travel time. For educators, video conferencing lends itself to a team approach to teaching and enhances the ability of teachers to meet and collaborate. Instructional video conferencing has been shown to decrease the amount of student absenteeism from class and allow increased and more personal monitoring of student attendance, progress, and success. And, as part of ongoing staff development requirements, teachers must attain Continuing Educations Units (CEUs) every quarter. Instead of having to drive or fly to the closest class, educators simply review the class's video recording on their own time and answer the on-line questions afterwards.

Reaching Beyond Traditional Educational Applications

On a larger scale, video conferencing is potentially the solution to help supply the sought after teachers and trainers needed to educate future designers and developers of our global society's infrastructure — from agriculture and schools to clinics, roads and transportation. For many years, talented students have traveled from less-developed to more-developed countries to fulfill their educational aspirations. With video conferencing, those students need only to have an Internet connected computer to access many excellent educational opportunities without travelling outside of their country.

For adult learners in the U.S. and other western countries, many professions require the completion of courses to achieve professional certifications or fulfill training programs in various job sectors. Prior to video conferencing, such programs required students to travel to a centralized location. This was difficult for older-than-average and other non-traditional students in urban and especially in rural communities.



Additionally, financial and time pressures, commitments to family and jobs, and responsibilities to the operation of the family farm or business, made it challenging at best to take these classes.

Video conferencing is able to serve many who live great distances from university campuses and training centers. By utilizing video conferencing, educators are successfully facilitating connections between students and educational resources, spanning distances and time zones.

Traditionally, distance learning students have felt socially disconnected from their educational experience, missing out on collaboration and interactivity with peers and teachers alike. High quality video conferencing overcomes this challenge by bringing remote students face to face with members of the educational environment, promoting collaboration and creating an inclusive learning community.

VidyoConferencing: Access to Everyone ... Anywhere

Video conferencing is now opening up opportunities for multitudes of people to whom education was previously "out of reach" because of time, geography and other logistical challenges. However, here's the rub: High-quality, low-maintenance video conferencing systems are still "out of reach" to most educational centers, learning enterprises and school communities! Why? Because of the high purchase costs required to maintain the type of equipment needed for these applications. That is, UNTIL NOW.

With VidyoConferencing, learning establishments and school communities don't need specialized classrooms or cost-prohibitive dedicated networks and equipment. VidyoConferencing provides the highest quality transmission and reception of HD video over shared IP networks (including the Internet). Why is HD so important? Because HD delivers a natural, life-like experience that is important for capturing and maintaining a participant's attention and conveying subtle communication cues -- key to a favorable learning environment.

Scheduling and participation in VidyoConferencing classes is elementary! Instructors and students alike can participate in a Vidyo class via a simple-to-use Internet portal with one-click calling. Ease of access means that a teacher can simply walk into a regular classroom and instantly have interactive instruction and collaboration tools at her disposal to reach students outside of the physical campus. Through Vidyo's recording and webcasting appliance, VidyoReplay, students who miss a lecture can view the recording on a laptop or desktop from the comfort of their home or dorm.

Until now, the use of and participation in video classes have had some frustrating limitations. Often students are only able to receive a video lecture that is "webcasted" or "streamed out" over the Internet. They are able to see and hear the lecture, but not able to ask questions or provide feedback to the instructor. This application may be useful for large lecture hall environments where professors are truly lecturing to the masses and any questions would be directed to the teaching assistant after the lecture. However for smaller, more intimate class sizes, using VidyoConferencing, the teacher is able to not only address immediate questions and feedback from students, but also literally SEE THEIR REACTIONS...even



if it's a 50-person video class! VidyoConferencing allows up to 100 people to participate in a video class because VidyoTechnology is extremely accommodating.

Colleges and universities are continually looking for ways to increase revenues and cut expenses while providing an exemplary educational experience to students. For example, a noted biotechnology scholar might be asked to lecture at a university thousands of miles away from his home. Using VidyoReplay, the scholar records a lecture from the comfort of his home or office, sends the recording link to the requesting professor, who then shares it with his class the next day. The scholar saved on travel time, the university saved on airfare and hotel expenses and the scholar's lecture can be leveraged from semester to semester. And because learning institutions don't have to purchase and maintain extremely costly networks and equipment to get the best quality video and audio communication, Vidyo is *financially* accommodating.

Vidyo is the first company to license technology and deliver products built upon an entirely new video conferencing architecture that utilizes a recently approved "scalable" video compression standard which delivers unparalleled video quality over unreliable networks including the Internet. Because of this unique ability — allowing disparate people to participate in video classes, using a laptop or desktop from many locations or having the option to view the class recording, regardless of where they are — learning centers no longer need to be concerned about the equipment, management, logistics and costs of video conferencing. The Internet is the key to access, worldwide, the very best instruction ... and VidyoConferencing is the only technology that holds the key to easily achieving the much needed benefits of this communications breakthrough in education.

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