Partnerships in Streaming Media Technology

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Several years ago, when computers were a rarity and few people were familiar and comfortable with the technology, a major computer vendor identified the potential for using computers as an educational tool and established a mutually beneficial relationship between education and technology. Apple Computers donated its computers and operating system to educational institutions, at no cost to the schools or students, so that students and educators would be become familiar and comfortable with computer products and technology.

Now, another technology has emerged as a tremendous driving force behind expanding and improving educational opportunities for learners and delivery methods for providers. Streaming media technology is, of course, not limited to education, but offers vastly improved delivery systems for business, telecommunications, science, and other commercial venues. The technology is growing at a tremendous pace. To continue the rapid evolution of streaming media as a forceful and effective means of obtaining and providing information, and to realize the full potential of streaming media as an educational tool, technology and education need to develop a symbiotic partnership relationship that benefits both.

When streaming media solutions are applied to the challenges of making high quality education more affordable and available to consumers, everyone benefits: Business and industry, telecommunications, science and medicine, and education all share in the benefits of faster and better information delivery methods. Unlike several years ago, when computer learning was limited to classrooms and computer labs, students no long have to rely on attending lectures, taking copious notes, participating in classroom exercises and laboratory experiments, handing in papers, or other activities requiring their physical presence. Educators no longer have to rely on physical classrooms, printing multiple copies of handouts and other material, classroom behavior, graduate assistants, and many other classroom teaching tools and techniques. Now, all that is required is the virtual presence of students and teachers on line.[1]

Streaming media is revolutionizing the way that educators and students look at education. The technology provides an infinite potential for exploiting previously untapped methods of delivering quality education to everyone who wants it by fulfilling two fundamental needs.

The first need is for affordable, reliable, high quality educational materials that are available to everyone, everywhere; in a format that is easy for both providers and consumers to configure and use. The delivery system must be inexpensive, so anyone with a computer and Internet access can afford to use it. Instruction delivered by streaming media must meet the same high standards of quality, comprehensiveness, thoroughness, and consistency that are expected of on-campus

instruction. The second need is the ability of educational institutions to keep up with such a rapidly changing technology and meet the expectations and demands of an ever more sophisticated consumer base of learners and providers.

SoftTV.net, Pictron, Hampton-James, and Adobe — four leaders in the field of streaming media technology — have recognized the benefits of meeting both needs and have begun filling them. These four providers recognized the potential synergy between industry and education. They recognized how industry and education can become partners in a grand strategy to provide access to affordable, reliable, quality education for everyone who wants it. They recognized that using sophisticated technology to enhance and enrich education is a win-win proposition in which everyone realizes the benefits.

Streaming media is exceptionally appropriate for distance learning. Distance learning works in two directions: vertically and horizontally. It works vertically in that all institutions within a system, public or private, primary, secondary, or higher, and everyone within a system, have access to the same high-quality, consistent educational materials regardless of time, distance, or. Distance learning works horizontally in that regardless of geographical location — Tennessee, California, China, or Germany — everyone has access to the same consistent, high-quality materials with no outside intervention or influence based on religion, creed, political affiliation, or language.

The demand for increased, high-quality, up-to-date, reliable, and affordable education has increased both demand and opportunities for education to partner with streaming media providers to deliver affordable, reliable education. By forming partnerships with leading providers of streaming media such as SoftTV.net, Pictron, Hampton-James, and Adobe, educational institutions develop the capability of delivering more and better educational opportunities to a greater audience in more locations than ever before. The result is a more-educated populace that has become accustomed to high technology learning and working environments. SoftTV.net collaborates with forty educational institutions to provide distance learning.

Major changes are occurring in the way both students and providers look at education. According to Dale Gantous, chief executive officer of SoftTV.net, forty universities currently use streaming media to provide online lectures.[2] These progressive universities recognize and meet two strong needs: the need to expand their educational offerings and support far behind geographical boundaries, and the need to provide an environment where learners can work at their own pace and on their own schedule, and where they have access to courses that are not locally available.

The downside to distance learning is the time-honored "caveat emptor": That is, potential students sometimes become prey to online education programs that range from out-and-out scams to programs that are worthless because they are not accredited by legitimate accrediting institutions.[5] Although streaming media technology cannot provide guarantees against scams and worthless programs, the technological magnetism of streaming media mitigates two potential disadvantages to distance learning: the lack of self-discipline and the lack of student-teacher, face-to-face interaction.

For example, streaming media technology overcomes a learner's lack of self-discipline by providing an attractive, enticing, and interesting educational delivery method. A distance learning experience via streaming media is, as Dale Gantous describes, "extremely cool, fun, and rewarding." With streaming media, students want to learn instead of procrastinating or giving up. Although students and teachers do not interact face-to-face, they can communicate during online chat sessions and real-time video. The distinct advantage that streaming media provides is the ability to broaden the learning experience for all participants. Class diversity, size, and participation are boundless and extend beyond national, cultural, religious, gender constraints.[4] Additionally, the anonymity factor, where students can remain unknown to their classmates and teachers, means that students are not inhibited by peer pressure.

The benefits of distance learning via streaming media are apparent. Also apparent are the costs that educational institutions must absorb to provide distance learning. Educational institutions from primary schools through colleges and universities cannot rely on tuition, fees, and other charges to cover the costs of providing affordable, reliable, consistent, quality distance learning experiences. Other considerations are the constantly increasing expectations and demands placed on educational institutions to both keep current with a rapidly evolving technology and maintain a constant, replenishable supply of skilled providers and knowledgeable consumers of streaming media.

Streaming media providers are seeing opportunities for creating a greater demand by more consumers of their technology and products in more markets than ever before. Providers of streaming media solutions who develop partnerships with educational institutions contribute to an educated workforce, people who are technically proficient, well versed, and experienced with new and evolving technologies. The challenge is finding, motivating, educating, and placing them where they can provide the greatest benefit to both educational institutions and streaming media providers.

There is a practical solution that meets everyone's needs. The solution enables educational providers to stay technologically distributes the costs and rewards of providing streaming media, provides a constant supply of informed users, allows vendors to penetrate more markets with better technology and products, and ensures a support base of technologically savvy solution providers.

The solution is to build working relationships and partnerships between educational institutions and streaming media solution providers. An example of how educational institutions obtain tangible benefits from vendors is that in 2001, Adobe provided in-kind support to many nonprofit organizations. Adobe's contributions included $3,494,361 to nonprofit organizations and schools in the form of cash grants, scholarship awards and matching gifts, and approximately $4,959,000 (based on suggested retail price) in direct software donations.

Educational institutions can benefit by continuing to explore and develop in-kind gifts opportunities from streaming media technology providers. Ideally, streaming media solutions partners donate in-kind gifts of seed software to educational institutions. The educational institutions will, in turn, use and test the latest technology and innovations by incorporating them in the delivery systems by which they provide distance learning to students. Pictron provides

full-version products at educational discounts to distance learning providers. East Tennessee State University uses Pictron's streaming media to develop distance learning and coursework using streaming media at both undergraduate and graduate levels.

Both Pictron and ETSU benefit. The university is a test environment and provides feedback on how to refine customer requirements and improve the product. Pictron benefits because the feedback reduces research, development, and testing costs, and the savings are passed on to consumers. According to Darwin Kuan, vice president of business development for Pictron, the objective is to provide, "high-end functionality with low-end-pricing."[3]

According to Dale Gantous, four factors significantly affect the efficiency and usefulness of streaming technology's contributions to distance learning. First, computers, including desktops and laptops, now have so much power that anyone with minimally adequate memory and processor capacity can use streaming media. Second, high-speed Internet access is no longer a requirement; anyone with a 56 kilobyte modem can download streaming media lectures. Third, the software for downloading and running streaming media has become so easy to use that anyone who is reasonably computer literate can use it without crashing the system. Four, continuous improvements in encoder-decoder (codec) technology means that users no longer have to be concerned with the back-end technology of sending and receiving streaming media.

When Apple and education collaborated before, Apple's marketing goal was to make users familiar and comfortable with Apple products to the extent that, when making independent purchases, they would instinctively gravitate toward Apple products, thereby building demand and market share.

Now, when solution providers such as SofTV.net, Pictron, Hampton-James, and Adobe actively provide assistance to educational institutions and help them deploy their hardware and software, three positive things happen: the streaming media industry as a whole realizes the benefits of a constant demand for their products and services, which ensures their profitability, survival, and growth; the costs of providing and receiving a reliable, quality educational experience are drastically reduced; and more people in more localities have an opportunity to receive a reliable, quality, affordable education.

Technological advances are expensive. But when companies such as Alias/Wavefront, Adobe Systems, SofTV.net, and Pictron work with educational institutions such as ETSU, four positive effects are realized. First, infrastructure costs, such as building and classroom maintenance, of providing distance learning opportunities are drastically reduced. Second the increased potential and value of the educational experiences provided by distance learning are drastically increased. Third, more students have more opportunities to contribute to technological improvements and innovative uses of the technology. And four, the working relationships established between academia and industry provide additional opportunities for internships, research, and jobs both before and after graduation.

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