

Mediasite by Sonic Foundry for Distance Education and e-Learning

Excerpted from

The Distance Education and e-Learning Landscape

Volume 2:

Videoconferencing, Streaming and Capture Systems for Learning

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Introduction

Several traditional dividing lines have existed as methods of defining distance education and e-Learning. These have included:

- Synchronous (real-time) versus asynchronous (on-demand)
- Brick-and-mortar (physical universe) versus online learning
- Learning moment versus learning reinforcement (live or on-demand)

This document is drawn from a larger report series that is meant to serve as a broad overview of today's state of the distance education and e-Learning markets. The three-volume report series explores the impact of Learning Management Systems (LMS), streaming video, lecture capture solutions, videoconferencing, web conferencing (virtual classrooms), electronic whiteboards, and ancillary technologies such as Second Life. Additionally, Wainhouse Research has made a conscious effort to narrow its coverage to those companies that offer some type of *strategic differentiation* or *go-to-market messaging* unique to one of three major markets: corporate training, higher education, or K-12. A full executive summary of *The Distance Education and e-Learning Landscape* is available at www.wainhouse.com/reports.

Market/Technology Discussion

Streaming Video & Webcasting

Streaming (audio and video), also known as webcasting when conducted over the public Internet, is the equivalent of broadcasting to large audiences – and of making content accessible to learners in either synchronous or asynchronous fashion. A streaming broadcast may be live or recorded, but the core content typically flows one-way. Generally this means that there is limited learner interaction; however, in some instances streaming solutions do allow users to conduct live chat or post messages for later viewing. Increasingly streaming vendors are introducing new features, e.g., editing, tagging, and sharing features that further promote the ability to enhance or provide access to content.

Lecture Capture Systems

Lecture capture systems are a subset of streaming products, with the exception that many are designed specifically for capture and management of classroom content.

Early on some of the streaming companies (which initially focused on audio/video over enterprise networks) realized that a market would exist for blending not just audio and video, but also PowerPoint presentations, other productivity application documents, PDF files, Flash animations, rich media e.g., video clips, web content, and polls and surveys. Thus the next generation was born - the lecture capture system market - which automates the steps described above and blends the types of content.

Other closely related technologies include videoconferencing, which is designed for two- or multi-way, real-time audio/video communications with some data; web conferencing, which is designed for two- or multi-way data communications, with audio/video as

supplementary components; and electronic whiteboards, which increasingly provide local and remote capabilities for real-time sharing and archival of content..

The Benefits of Streaming and Lecture Capture Systems

Whereas Learning/Course Management Systems are ideal for content and learner management, and interaction enablers and synchronous web-based tools are ideal for instructor-learner delivery of learning content, video at its essence adds a contextual element that enhances text, still images, and audio. Its *richness* as a medium makes it ideal for a more holistic interaction between instructor-learner and learner-learner. Streaming and lecture capture systems provide major benefits, such as the ability to reuse and repurpose content and the ability to make that content accessible to large numbers of individuals in a live or on-demand fashion. Streaming and lecture capture systems, by their nature, scale to large numbers much better than does simple two-way videoconferencing.

We believe that videoconferencing and streaming/lecture capture solutions provide a level of congruence (and monitoring) important to learning; similarly, that generation known as the “millennial” generation is beginning to mimic adult learners, in the expectation that they have access to learning content anytime, anywhere. These factors, along with other drivers discussed throughout the full Wainhouse Research report, make these technologies uniquely suited to distance education and e-Learning.

Though on demand products are often thought of as primarily distance-learning oriented, one large statewide network reports to Wainhouse Research that at one of its state college campuses, 50% of those taking online courses *delivered on that campus* nonetheless attend the courses using streaming services instead of attending in person. Similarly, some campuses report that content of archived classes tends to be reviewed as much as 50% faster than the session, highlighting the importance to learners of searching and finding specific portions needing review.¹ Streaming and lecture capture systems will be increasingly important as certain types of institutions, particularly colleges and universities, offer more and more courses online.²

Often streaming and lecture capture solutions are differentiated by data rates, numbers of concurrent users or sessions, file formats supported, and amount of content that can be captured at any one time. Some vendors have strengths in automating the cataloging and storage/accessibility process; others excel at managing those resources through complex tracking and reporting capabilities. Some vendors are far superior at placing tools in the hands of educators, trainers, and learners for manipulating and editing/working with content.

The following figure demonstrates how robust some lecture capture tools have become, offering end users the ability to control content review speed, review both presenter and content, and share content with others.

¹ The Chronicle of Higher Education, The Wired Campus, October 2008

² Minnesota state colleges have indicated their intention to offer 25% of college credits online by 2015.



Sample Video / Content Viewer

The Future

Wainhouse Research believes that the total size of the market for educational and corporate training videoconferencing, streaming video, and lecture capture platforms and services³ will reach approximately \$2.4 billion by 2013, with streaming and lecture capture solutions showing the higher compound annual growth rate. Opportunities for streaming and lecture capture vendors are highest because of the need for both corporate users and educational learners to have access to on demand and live content. These products will see even faster early stage growth than did videoconferencing because they do not face the traditional interoperability issues faced by videoconferencing endpoint manufacturers – nor do they require the investment in multiple endpoints. They are free to “ride” the curve of technological innovation from Microsoft, Apple, and others – while also driving innovation with their own solutions.

Snapshot Analysis of Ecosystem Participants

Vendor participants in the distance education and e-Learning markets have demonstrated a variety of strengths and weaknesses, and a number of strong offerings are available. The full report contains a snapshot analysis that takes into consideration each vendor's:

- Ability for or history of technical innovation,
- Agility in developing new products or responding to evolving market conditions,
- Involvement in standards development,

³ This revenue number is a subset of the overall markets for these technologies, which is accounted for in other Wainhouse Research reports.

- Involvement in distance learning and e-Learning standards, committees, and initiatives,
- Support for learners, teachers, and trainers,
- Track record in these and related technologies,
- Record in sales and deployment successes,
- Size and global footprint, and
- Approach to partnerships and distribution relationships.

Wainhouse Research provided a broad overview of the *relative placement* of each of these companies in the full segment report, and placed Sonic Foundry as a market leader for depth of overall blend of products and among the highest in ability to execute.

The following is an updated reprint of the profile of Sonic Foundry contained in The Distance Education and e-Learning Landscape, Volume 2.

Sonic Foundry, Inc.

Headquarters: Madison, WI
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<i>Offerings</i>	Yes	No
Interaction Enablers & Classroom Management		√
LMS/CMS		√
Streaming/archiving	√	
Web conferencing		√
Videoconferencing		√
Other	Event webcasting	
<i>Edu/e-Learning Focus</i>		
Corporate training	√	
K-12 education	√	
Higher education	√	
Edu discounts	√	
US eRate schedule	√	
Staff w/ edu/training experience	>5	
Non-edu staff dedicated to edu/training markets	37	

Company Overview

Sonic Foundry, Inc., was founded in 1991 and taken public in 1998. Having divested itself of a desktop video software editing business in 2003 to Sony Pictures Digital, Sonic Foundry has focused on its core solution, Mediasite. This is a web-based capture, communications, and content management system designed to automatically let organizations create multimedia webcasts and give them the tools to manage, monitor and secure their presentations.

The Mediasite solution family includes:

- Mediasite Recorders to capture multimedia presentations
- Mediasite Server Software to stream, archive and manage online presentation content
- Sonic Foundry Services to provide managed services, event webcasting, training, installation and custom development
- Customer Assurance Services (formerly SmartServe) to provide annual software maintenance and technical support.

Two methods are available for deploying a Sonic Foundry Mediasite solution. One way is to place one Mediasite Recorder in each room in which lecture capture will be taking place, and to deploy one or more EX Servers within the organization's network to handle the streaming, archiving, and management of content. The second way is to use Recorders in classrooms but to engage Sonic Foundry as the hosted server provider; the company has its own data center used for such purposes and to support its managed services group. This group provides turnkey hosting and event services to a wide variety of mostly corporate customers (who have discrete training or rollout needs).

The Recorder – the latest RL model is a 2U rack-mountable device, the ML is a heavier, more robust portable device – captures input from VGA or DVI-I connected devices including video cameras, audio, laptops/PCs, document cameras, e-whiteboards, etc. It offers widescreen image capture, including HD recording, as well as 480p, 720p, and 1080i resolutions. The content is then converted to Windows Media file format and stored on the server. Much about the Mediasite solution is automated, from the actual conversion process to cataloging of content and creation of automated reports, and the server plays a key role in both immediate streaming of content to on-demand access.

Among recent enhancements in Sonic Foundry's 5.0 Release are several that add to Mediasite's versatility:

- The ability to pause a recording (whether live during its recording or on-demand viewing). This enables lecturers to pause to hold side conversations or even simply pause during breaks.
- Full-motion video capture – the ability to capture not just the lecturer, but also content such as PowerPoint files, Internet content, YouTube videos – and integrate that content into the recording. Three modes (default, content-only, and picture-in-picture of lecturer) are available.
- A completely overhauled Mediasite Editor that provides advanced, non-destructive editing tools, e.g., the ability to edit from the middle of a presentation, add transitions like fades and cross-cuts, and even slide placement.
- Within the Mediasite Player, several enhancements:
 - The ability to email a link to a presentation from any point (marker) within that presentation
 - On-slide magnifier for enlarging specific content
 - Skip back review mode and more granular speed control (as much as 2x fast forward), a feature much appreciated by learners who often must review several hours of content at a time.
 - Enhanced slide thumbnails within the Player.

While Mediasite content can be embedded easily within a CMS/LMS – and Sonic Foundry counts Blackboard and more recently Moodle as partners – Release 5.0 provides the ability to automatically create online catalogs, with multiple catalogs per EX Server and hierarchical folders. A spot for presentation links is available in the Player, enabling

educators to provide links to other content such as websites, PDFs, or content management systems. An RSS feed feature enables notifications of new content.

The final major new capability within Mediasite 5.0 is its reporting, which also was completely revamped for this 2008 release. A wide variety of statistics are supported, from numbers of views, most popular segments, and peak traffic times. Reporting is in graphical format, while the underlying data can be exported to XML or Microsoft Excel as well.

Sonic Foundry offers a web services-based API that allows customers or third-party solution providers to integrate Mediasite content into other applications (e.g. learning or course management systems, portals, content management systems, etc.) Most users prefer, however, to simply publish the links between applications instead of actually doing any integration work.

Education/e-Learning Market Focus

Sonic Foundry has more than 1500 customers, and higher education comprises more than 50% of that total. The company has shipped more than 2000 Recorders in its most recent fiscal year and expects to have at least 700 universities as customers by the end of its latest fiscal year. Corporate training is another very large portion of the remaining 50% of customers.

From a partnership perspective, Sonic Foundry has focused on a few “best-of-breed” partners that clearly target education and training. Blackboard is one, and Sonic Foundry takes advantage of Blackboard’s Building Block program. Using Mediasite Building Block for Blackboard, any Mediasite-recorded lecture, presentation or meeting on campus, whether live or archived, can be published as learning content to the Blackboard Learning System. Students get on-demand access to their instructors’ rich media presentations directly from their Blackboard-managed courses – including fully-synchronized audio, video and presentation materials ranging from PowerPoint and electronic whiteboards to document cameras or other presentation devices. Off-campus students can access multimedia lectures that replicate the in-class experience.⁴

Dell Computer Corporation is another partner, and has incorporated Mediasite into its Intelligent Classroom Initiative. This *smart* classroom design is focused on the K-12 market. Sonic Foundry also offers educational bundling with Dell. Other partners in higher education include AMX and Crestron for control panels, making Mediasite easily integrated into smart classrooms.

Analysis & Opinion

Sonic Foundry has done a rock solid job in attacking education for three distinct reasons:

1. It has a mature product that benefits from lengthy development time and multiple enhancements;
2. Mediasite is focused on on-demand access, which supports any combination of blended learning, e-Learning, or distance learning, while balancing the needs of

⁴ Since publication of this report in November 2008, the same can be said for integration with Moodle.

in-room or local students. That balance cannot be overstated, as it makes it versatile for both distance learning as well as everyday, local campus use.

3. Thus far, the company has shown savvy in product design and direction (more on this below).

For these reasons Sonic Foundry has jumped to the head of the pack in terms of revenue and market penetration. From the perspective of product maturity, Mediasite is tried and true and we hear no complaints regarding its functionality. It is easy to use, and covers all the bases, without burdening users with too much technology.

From the perspective of blended learning, Mediasite allows for delivery of content based on various learning and teaching styles. Put simply, it puts content at the instructor's and learner's respective fingertips. It's not alone in doing this, but it does it well.

Finally, in terms of product design, Sonic Foundry has been timing its releases with savvy, more or less delivering features desired by the market *at the right point in time to encourage adoption*. The latest point in case: its full-motion video capture in Release 5.0, hitting the market just as academics are finally recognizing that they need its capabilities for capturing the external content on which they daily grow more dependent. The overhaul of the Editor and management tools reflect a mature product that is best-of-breed.

Another case in point is support for Silverlight, Microsoft's Adobe Flash wannabe. In January 2008 Sonic Foundry added support for Silverlight, a programmable web browser plug-in that enables platform-independent, rich media applications over the Internet (and to mobile devices). Silverlight enables animation, non-Windows Media Player audio/video playback, and vector graphics, and will be increasingly important to mobile learning applications. Sonic Foundry is positioning itself to play in mobile environments early, perhaps in hopes of gaining a competitive edge.

Has Sonic Foundry missed any beats? One could argue that the relationship with Dell is not terribly meaningful, and highlights that the company could do more, as a market leader, in channel development. One would scarcely know from Dell's marketing that Mediasite is available as a capability. But Sonic Foundry has leveraged its large installed base and done a stellar job pushing the envelope of thought leadership, helping campuses find ways to grow their own uses, and creating a reference-able base – and user group – that will serve it well in its growth strategy.

About the Author

Alan D. Greenberg is Senior Analyst & Partner at Wainhouse Research. Alan is practice manager for the Wainhouse Research Education and e-Learning advisory service and co-lead analyst on the Wainhouse Research [WebMetrics](#) program. He also covers web and mobile conferencing and the suite of unified communications technologies as they are applied for education and e-Learning. Alan has conducted research into dozens of distance learning networks and corporate e-Learning environments, was product marketing manager for a set of turnkey classroom packages, and led a number of educational and training initiatives. He has published white papers / research notes and conducted webinars on topics like best practices for content providers and K-12, the effectiveness of distance learning, the penetration of video into K-12 markets, web conferencing for e-Learning, virtual labs, and other topics, and he has keynoted or presented at Wainhouse Research Summits, USDLA, statewide distance educational association, Online Educa, ED-NET, and many other educational and training events. Alan serves on the advisory board of the Center for Interactive Learning and Collaboration. He holds an M.A. from the University of Texas at Austin and a B.A. from Hampshire College, Amherst MA. He can be reached at agreenberg@wainhouse.com.

About Wainhouse Research

Wainhouse Research is an independent market research firm that focuses on critical issues in the Unified Communications and rich media conferencing fields. The company conducts multi-client as well as custom research studies for industry vendors and consults with end users on key implementation issues. The firm also publishes a news bulletin, white papers and market statistics, and delivers public and private seminars as well as presentations at industry meetings. Visit www.wainhouse.com for more information.

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