Panopto

Solutions Focused on Education and Training Markets

Address: 506 2nd Avenue, Suite 1600, Seattle, WA 98104 USA
Corporate Structure: Private
Website: http://www.panopto.com
Employees: ~100

Company

Panopto, Inc., founded as a spinoff of Carnegie Mellon University (CMU) in 2007, is a privately held provider of integrated video capture and management software for the corporate, education, government and healthcare markets. Originally named Panopto CourseCast (after the original CMU project), the lecture capture service was re-branded Panopto Focus in 2010. Since then the company wisely has dropped the brand name Focus and another brand name, Unison, and simply sells its service in its entirety as the Panopto Video Platform.

The company has a direct sales force that targets 1) corporate / medical / government customers within North America, 2) education customers within North America, and 3) all markets in Europe as well as China and Australia. Panopto has also had a series of non-exclusive channel partnerships with companies that extend its sales reach in specific vertical markets and geographies. In the past in the education market, for instance, Panopto has partnered with MacMillan and Pearson, while another Carnegie Mellon spinoff, iCarnegie, distributed Panopto software in Asia, South America, and the Middle East. More recently Panopto has inked distribution deals with GlobePoint Korea and districalc, which sells educational, training, and corporate solutions in the U.S. and parts of Latin America. The company added video conferencing industry veteran Rob Hughes (Vidyo, Lifesize, Polycom) in fall, 2014 to beef up its enterprise sales, and COO Sean Gorman (Amazon, Microsoft) as COO in 2013.

Other channel or technology partners include Automatic Sync Technologies, Blackboard, Canvas, Jive, Cengage Learning, itr8, Microsoft, Salesforce, SMART Technologies, Seneca, SONY, and Top Hat Monocle. In the past year the company has partnered with RiverBed and Kollective for networking / integration alliances, enhancing its ability to distribute content on enterprise networks. As of spring 2016 Panopto claimed 4.5 million licensed users spread across more than 500 universities and corporations, and more than 100 employees in Pittsburgh, Seattle, London, Beijing, Sydney, and Hong Kong offices. Panopto has more than doubled in size in the past three years and seen revenue triple.

Offerings

Panopto’s Video Platform is a cloud- or premises-based platform that combines products the company previously sold as Panopto Focus and Panopto Unison. The solutions bring together an array of other capabilities such as a video content management system (VCMS), video search engine, web-based editor, media player, integration tools, and iOS / Android apps. Now on Release 5.0 (Fall 2015), the company can take credit for a number of feature updates or innovations, including multi-camera video

1 Originally published April 2015 in the Wainhouse Research Distance Education and e-Learning Subscription Service and licensed for distribution by Panopto.
recording on Windows and Mac OS, an early iOS app that included video recording from iPhones and iPads, early delivery of multi-stream HTML5, and a particularly unique approach to note-taking and video search capabilities (more on this below).

**Recording and Live Webcasting**

To support recording and live webcasting, Panopto provides a Windows and Mac lecture capture application that enables recording of High Definition (HD)-resolution screens, slides, and HD video and audio from multiple sources, and can stream in full HD up to 1080p (with full-screen viewing). That application is available on an appliance as well (described later). Core functionality includes:

- Recording of multiple HD video streams simultaneously with standard 30 fps screen capture (multi-bitrate) and 60fps in some configurations.
- Recording using H.264 video and AAC audio and live streaming using HTTP Live Streaming (HLS), an increasingly popular protocol for live Internet streaming.
- Plug-and-play support for webcams, HD camcorders, SMART boards, HDMI cards, and even recording using iOS devices as secondary cameras.
- Browser-based media editor, including the ability to trim and reposition individual video segments, specify video sources, and incorporate pre-recorded videos. These capabilities impact the viewer experience as well: viewers can watch different video sources using video switching or multiple sources simultaneously using a tile view capability.
- **Smart Sync** capability that synchronizes presenter video and content, leveraging HTML5 to provide high-quality, multi-stream video playback.
- Presenter controls to start, stop or pause recordings or to create pre-scheduled recordings.
- Ability to divide recording of content across multiple PC’s / Macs / record with multiple cameras.
- Panopto Remote Control, which enables administrative staff using any iOS or Android device to control an organization’s recording infrastructure without logging into a browser or PC. This means instructors or staff can walk into a classroom or conference room and easily turn on recording. An indicator light confirms that the recording has started, and Panopto automatically publishes the finished recording as it normally would. This app can also be used to schedule recordings and webcasts.
- Just recently in Release 5.0 Panopto overhauled its Mac client to bring it to parity with its Windows client, adding live webcasting and additional video streams, while updating the Windows client to provide multi-bitrate live streaming.
• Slide capture (with searchable TOC creation).
• Live broadcasting of presentations, and live notes, bookmarking, and text chat.
• Smartphone / tablet apps for replaying video or live streaming video.
• Student recording into a private folder.
• Failsafe recording.

Though its claim to fame is its origin as a pure-play hosted service for ingesting video uploaded from PCs and Macs, Panopto over time has found it advantageous to partner with some hardware vendors to deliver integrated, certified capture devices that work with the Panopto Video Platform. The company announced in 2014 a new Panopto-certified video capture appliance in a new form factor, through a partnership with Seneca (assembly and distribution) and incorporation of a Datapath capture card. The video capture appliance is called the Seneca Scribe and supports single, dual, triple, or quad input configurations for capturing and live streaming video. If a customer buys one of these appliances with a Panopto license, it arrives preconfigured to point to their Panopto servers (cloud or on-prem, depending on the license). List prices start around $2,500 per unit.

Video and Content Management

Content management capabilities include support for multiple formats and approaches to analytics. These include:

• Access to a library of Panopto content, podcast viewing, live notes, and video search capabilities.
• Drag-and-drop video import and video encoding and processing.
• Support for .wmv, .asf, .wma, .flv, .f4v, .f4a, .avi, .mp3, .mpg, .mpeg, .mp4, .mp2, .m2v, .m2a, .ts, .tsv, .tsa, .mts, .m2ts, .mpg, .mpeg, .mod, .tod, .mp4, .m4a, .m4v, .3gp, file formats.
• Slide synchronization and transcription services.
• Access controls and Active Directory support.
• Per-user analytics as well as an IT admin dashboard for monitoring quotas on video streaming, captioning services, and client software licenses. Analytics enable administrators to determine which learners see videos on their mobile devices (as an example) and their related behaviors.
• Besides per-user analytics, system-wide data assessing video library, numbers of users, folders, sessions, views, and data servers is available, as well as engagement reports. A Panopto video library also can be integrated with Google analytics.

Viewing / Replaying / Content Search
Panopto also continues to expand features supporting content search and on-demand playback. The Panopto user interface, which consists of a customizable, multi-pane viewer, includes a pane for video of the presenter, a presentation content panel, a slide preview / sorter window, and a window containing tabs for text content, captions, notes, search, and presentation information. Unlike other lecture capture platforms, Panopto includes a “channel” approach to creating indexed notes and discussions during or after a class. Each channel functions as its own text stream for comments, questions, and note taking, and users can create their own private and public channels, or join public channels of others. Whenever learners play a video hosted by Panopto, the platform auto-detects device type and delivers a playback experience optimized for that device’s form factor.

A DVR feature enables viewers to pause and rewind live webcasts. If a student shows up thirty minutes late to a one-hour lecture, he / she can rewind, catch the beginning, and then watch the event in its entirety. The company also claims the service eliminates the delay typically associated with publishing live webcasts for on-demand playback. As a result, anyone who misses the live event has instant access to the recording.

Panopto calls its search capability Smart Search, and it enables search of any text or spoken word – including handwritten words shown on whiteboards or text shown during screencasts. Videos are automatically uploaded, tagged, and archived for on-demand playback. Users can search their own digital notes taken during playback as well as public notes for recorded videos. Panopto automatically indexes every recording in a video library – even imported videos created using other platforms. (Panopto Video Platform automatically generates a TOC and series of video thumbnails to better enable viewers to navigate to different points in a recording.) The automatic indexing occurs after a recording is completed and is performed without manual entry of metadata. This speeds the process of making content searchable.

Finally, like many other platforms targeting the education market, the Panopto solution is compliant with Section 508 of the American Disabilities Act.

Social Enablement Features
Social media capabilities include rich comments, the ability for students to easily insert comments on videos, provide feedback for instructors, and share insights with other students; community ratings, the ability to rate videos, enabling students to rank their favorites and also find the most popular recordings; and video bookmarks, the ability to add time-stamped, sharable bookmarks and notes during video playback that can be easily accessed at a later time to locate a specific point in the video. (The company reports that only some educational institutions utilize these features, which can be enabled or disabled as desired by the institution.)
Integrations and Technology Partnerships

Panopto focused early on integrating with the leading LMS platforms, most specifically those in the education marketplace. Other integrations or technology partnerships have been designed to beef up areas of weakness in corporate markets, such as lack of an end-to-end networking story offered by some of its competitors. Current Panopto partnerships include:

- Integration with a wide variety of Learning Management Systems, such as Blackboard, Brightspace (D2L), Instructure Canvas, Moodle, WebCT, Sakai, and Angel, including single sign-on, automatic provisioning of folders for LMS courses, and publishing of broadcast links.

- Basic Learning Tools Interoperability (LTI) -- the standard for LMS interop -- is available with support for folder mapping and pass-through authentication with Brightspace, Sakai, and eCollege.

- Apps are available for integrating video management, sharing, and search into Salesforce, SharePoint, and Jive. As an example of how this sort of integration works, Jive users can securely embed videos and playlists in Jive pages using single sign-on, and federate Panopto’s Smart Search capabilities with Jive search results. The Panopto app is available via JiveSoftware.com and is free to Panopto customers.

- APIs are available for further integration with the Panopto platform, for example to authenticate via other platforms. For more lightweight efforts, every video stored in Panopto includes an embed code that lets users incorporate video content into existing portals, SharePoint sites, and other websites.

- In October 2015 Panopto joined the RiverBed-Ready Technology Alliance Program, expanding the set of networking options compatible with Panopto’s streaming platform. Just a few months earlier the company unveiled similar support for networking solutions developed by Kollective. The goal was to enhance integration of their products and simplify would-be enterprise implementations of deployments incorporating offerings from both vendors.

Sales Programs

In January 2016, Panopto announced a migration program for lecture capture / video management provider MediaCore, after Workday announced in 2015 it was to acquire MediaCore. With MediaCore support ending August 31, 2016, the migration program (which reportedly ran through March, 2016) enabled MediaCore customers to preserve and continue using their existing video assets. Panopto’s migration program included a Panopto-built video content conversion tool, professional services, and financial incentives. For universities and businesses that committed to migration before March 31, 2016, Panopto waived its $3,000 professional services fee. In addition, customers transitioning to Panopto’s cloud-hosted video platform received 1,000 hours of MediaCore video conversion at no cost. The company ran a similar program in 2015 for Tegrity customers that included a comparable migration tool and professional services.

Analysis

Wainhouse Research has watched Panopto mature dramatically since we first began covering the company in 2010. While skeptical initially that it might be distracted by spreading itself too thin – it seemed at the time to be going after too many vertical opportunities before it was ready – we finally see the company demonstrating the growth and cohesion we have been looking for. This happened even as the company sustained a sharp focus on – and made steady gains in – the market it knows best,
education. Witness: where Panopto was an unknown when we began tracking them, 11% of our Distance Education and e-Learning Metrics survey takers claimed to be users by early 2015. This result is more than just a pure lecture capture market share number. Survey respondents also could choose recording solutions from vendors like Polycom and Cisco as well as Office 365 Video. But Panopto is well-branded and well established in education markets and is going in the right direction.

Perhaps more to the point, the platform has grown out of feeling like the bare bones science lab experiment it looked like when first conceived and now – when it comes to product capabilities in the lecture capture market – has overtaken Echo360 and the fast-fading Tegrity with a steady stream of incremental releases the past few years. While it competes occasionally we believe with Sonic Foundry and VBrick in education, it operates within a particular band where lower cost deployment models and versatility are paramount – and we think it’s doing very well against Echo360 and Tegrity.

Much the way Tegrity originally established cloud-based pricing based on FTEs, Panopto prices are based on number of full-time enrolled students. For very small deployments, such as 500 students, the price is about $25 / student / year. As the number of FTEs increases, the per-student price drops. (The Tegrity and Mediacore sales efforts point to a focused sales aggressiveness on Panopto’s part in the past few years, and we believe those already have begun to pay dividends.)

Back to product: Panopto has made a number of shrewd moves in the past several years that have brought it to – dare we say it – a market leadership position (along with Sonic Foundry) in higher education markets.

Introducing Panopto-certified appliances, with Seneca as the fulfillment arm for the appliance instead of trying to build its own appliance, was a smart move. This put Panopto in the game on bids where premises-based appliances are required – and at a very compelling price point against higher end competitors. More to the point, the appliance responds to Panopto customer feedback that some users want the higher end device delivered with multiple input options, while others want a low-end, low-entry-priced, single-channel HD + SD version.

Release 4.7 and more recently Release 5.0 cleaned up some lingering disparities between different clients or “nits” – missing capabilities – that cumulatively added up to make it feel like the platform wasn’t “all there.” WR always felt the product, as mentioned earlier, was still missing something in the user experience and sweep of features that prevented it from feeling coherent. This sense has gone away with the recent releases.

Release 4.7 delivered an improved encoding pipeline and HTML5-based multi-stream, multi-bitrate recording (not streaming, see below) that provides very robust performance. Panopto Video Platform previously focused on Microsoft’s Silverlight technology. This meant that a Panopto client would create a Windows Media video using video (WMV9 / VC-1) and audio (WMA) codecs, relying on the Panopto server to convert these to Silverlight smoothstream so the stream could be multi-bitrate. In the new scenario, a recording takes place using HLS, H.264 video, AAC audio, and multiple bitrate encoding also takes place at that same client, and then is sent to the server. This improves the ability to “fastpath” that video content already formatted in multi-bitrate fashion. Bingo! Improved performance (though by necessity it needed to do this as Silverlight approaches end-of-life status.) Just six weeks after that release the company provided an update that added 60fps recording and broadcasting from Windows PCs.

Release 5.0, introduced in early 2016, overhauled Panopto’s Mac client for the Mac OS. Panopto has never supported the same feature set on its Mac client as it has in Windows. Release 5.0 brought the
two different clients to parity. While the previous Mac client supported recording of two video streams and slide ingestion, users could not run a live webcast from a Mac and could not have more than one secondary video stream. Release 5.0 introduced multi-bitrate live streaming (new to its Windows client as well) and support for two secondary streams. Meanwhile Panopto also updated the Windows client to improve the UI and add that multi-bitrate live streaming. Other developments in Release 5.0, such as Panopto Remote Control and the DVR feature, show an attention to detail and both administrator / user requirements. They don’t seem to be engineer-driven features; they seem to be market-driven.

This set of updates continues Panopto’s evolution from being a video capture and management system to what it hopes to become: a more extensible platform that easily integrates with existing IT infrastructure. Wainhouse Research noted in 2013 that Panopto at the time offered “a respectable lecture capture product that has turned some heads in education for its particular feature set and extensive search capabilities” but one that was a “mostly (but not quite yet) mature service.”

The kid’s grown up now. Moves like its partnerships with RiverBed and Kollective help it target a bigger, broader swath of the market, where sensitivity to networking technologies is paramount.

As competition increases in the lecture capture space, we believe that Panopto is well positioned for acquisition (which may or may not be its goal, but which is a potential outcome because its technologies will be appealing to many larger vendors who focus on the education markets). Other than that, we are watching to see what Panopto does in relation to Microsoft Office 365 Video – how will it play in the sandbox with this looming dominant force for streaming in the enterprise? We predicted in 2013 that Panopto’s larger competitors needed to be looking in the rear-view mirror. In terms of lecture capture, it has arrived and many competitors will find it to be a nimble adversary.
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 covers lecture capture, learning relationship managers, touch technologies, videoconferencing, interactive whiteboards, web and mobile conferencing, and the suite of unified communications technologies as they are applied for education and e-Learning. He is editor of the Wainhouse Research Blog, and was awarded an Outstanding Leadership Award 2010 by the U.S. Distance Learning Association. More about Alan.

About Wainhouse Research: WR provides strategic guidance and insight on products and services for collaboration and conferencing applications within Unified Communications. Our global client base includes established and new technology suppliers and service providers, as well as enterprise users of voice, video, streaming, and web collaboration solutions. The company provides market research and consulting, produces conferences on technology trends and customer experiences, publishes a free weekly newsletter, and speaks at client and industry events. More about WR.