



SNAPSTREAM IN EDUCATION

WHITE PAPER

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One of the most challenging aspects of using television within education is the need to study the news as it happens. The world of media moves quickly and doesn't wait for scholars to catch up. This is especially the case with television journalism. The speed of communications today creates the possibility of reporting on events in real time. Due to the nature of breaking news, it is very difficult to capture and analyze this material.

SnapStream Media can unlock the power of television in education by providing the ability to:

- Record and archive broadcast TV
- Search within TV recordings by keyword
- Receive e-mail alerts when keywords appear on TV
- Watch recordings or live TV across the network
- Extract clips from full recordings
- Download recordings and import them into 3rd party applications

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INTRODUCTION

This white paper explores the challenges involved in utilizing television in education. It also describes SnapStream's ability to bridge the gap between television and new technologies, allowing educators access to current events and other educational TV programming in their curriculum. Many teachers and professors take the initiative to record TV at home, spending countless personal hours reviewing and preparing content for the classroom. SnapStream streamlines this process and has saved many educational institutions thousands of hours devoted to television study.

SnapStream Enterprise is powerful television search technology used by organizations that want to put their finger on the pulse of TV. A cross between a DVR and a search engine, SnapStream Enterprise allows educational institutions the ability to easily record and search thousands of hours of TV recordings and distribute that content directly to the classroom over the LAN.

One SnapStream TV search appliance can simultaneously record up to 10 TV shows and store more than 9,000 hours of recordings – giving educators the ability to search within recordings and pinpoint TV content of interest to the institution or course curriculum. Once television programming is recorded, teachers and professors are able to use SnapStream's powerful television search technology (which uses closed-captioning among other programming information to search inside television programs) to find and categorize key content for curriculum. The solution also allows users to clip the appropriate content and download or burn it DVD — all without any expensive per-clip or per-seat fees. Clipped and sorted content can be stored for up to two months on the SnapStream Server, streamed or copied to desktop computers, burned to DVD or dropped onto network storage for future access. With SnapStream, an entire organization can have access to television, specific to the interest of the individual or department.

ACADEMIC ENRICHMENT

TELEVISION IN THE CLASSROOM

One of the most exciting uses of SnapStream's DVR technology is the ability to stream recorded and live TV to a projector for classroom instruction. Many schools do not have the luxury of TV in the classroom, instead spending tightly controlled IT budgets on computer equipment and networking. In rare situations, school facilities supply broadcast television to the classroom (without cable), but provide no access to specialty channels of interest. Unfortunately, in many such cases, the only way for teachers and professors to access television programming is to record content at home with a VCR. Since the SnapStream television appliance is based on a client-server architecture, educators can stream live TV directly into the classrooms over the LAN through the SnapStream Link client. Educators can build fresh television content into their course curriculum to keep the interest of current generation students. Educators can also enable the SnapStream Enterprise client software in their computer labs, making it accessible to students for homework and out-of-class research.

TELEVISION SEARCH

The manual labor of searching and skimming through recordings is inefficient and costly. Educators usually take it upon themselves to skim recorded content for applicable information as schools typically do not provide clipping services. Until the release of the SnapStream search appliance, there wasn't an easy and cost-effective way to search *inside* television broadcasts. SnapStream Enterprise's powerful television search technology eliminates this manual labor, making it possible to search and analyze television in ways that have not historically been possible. Educators are able to record multiple programs of interest and then utilize a search engine to locate applicable content. And a clipping function is available that allows users the ability to clip the appropriate content and download or burn it DVD for use in the classroom.

CONTENT ANALYSIS FOR BROADCAST TV

While content analysis of broadcast TV has historically been limited to schools with the financial resources to pay human transcribers, SnapStream's TV search technology allows any educator to conduct and teach content analysis on broadcast television. This is an important advantage for a smaller school without access to hours of graduate student manpower necessary for visual monitoring of recorded news broadcasts. Schools doing content analysis on print journalism can now expand their content analysis to include television.

Content analysis can include side by side news comparison. Using streaming video and editing software, teachers are able to show video clips from multiple newscasts in classrooms, highlighting the differences between them. In traditional print media, comparative analysis usually covers positioning and perspective of the same story. The same focus can be achieved with the SnapStream search appliance, recording competing news broadcasts and searching for similar content across all recordings. The result is the ability to show program clips one after another, or even side by side, demonstrating the differences and adding perspective to the molding of our future news reporters and anchors.

Educators also have the ability to perform real-time news analysis. Using the SnapStream real-time TV search technology, professors can even search live television broadcasts up to the minute, giving students an unprecedented opportunity to examine news coverage as events unfold – all from the convenience of the classroom or the school computer lab.

PUBLIC RELATIONS

Educational institutions are often the bridge between the world of academia and the outside world, influencing everything from science to public policy to pop culture. Your school's visibility on national and local broadcast television is important to your schools image, to its fund-raising efforts and to its dialog with the broader community. Additionally, local television can be a primary tool to your school's awareness of local community events and activities.

School public relations officials often find themselves relying on a bank of VCRs or Tivos, each dedicated to recording a particular channel. Since the recordings are sometimes made manually, news programs that are broadcast outside of business hours may be missed. And topics of interest have to be scanned for manually, without any real search technology. Furthermore, recording capacity is limited, since additional tapes require significant physical storage space, and there is often no means of easily editing to distributing TV recordings amongst staff. This arrangement is cumbersome and inconvenient, and it takes up a great deal of space, both for

Utilizing the SnapStream Enterprise search appliance, any member of the public relations and anyone else with a PC and a LAN connection, is able to easily record and watch broadcast TV. Given the capability to search within the recordings, any user can find specific mentions of their institution, its officials and faculty as well as students and activities. Administrators can also setup e-mail alerts on any keyword so they automatically get a notification when those keywords appear on television. The additional ability to clip and archive these news events means the data, in a digital format, can be stored indefinitely without taking up valuable physical real estate.

EXTENDED ACCESS

STUDENT PROJECTS

While it is a breakthrough to allow educators to utilize television in course curriculum, it is just as important to extend television search to students for individual projects and research. The SnapStream Link client can be deployed to library PCs, or in campus computer labs to allow for such access. In an effort to maintain the integrity of the SnapStream solution, security can be set so that students have only the ability to search, view and potentially download content that is assigned or interesting to their research; eliminating the ability to schedule recordings and delete valuable content. Professors can assign coursework for students to do their own evaluations based on content that is recorded – there is even the ability to provide a web link so that students can be taken to the appropriate content without having to utilize the search functionality. In addition, institutions can also record broadcasts on a campus cable channel, on which student projects air, for critique and analysis.

ARCHIVING

The SnapStream Enterprise Server provides enough storage capacity for months of automatic recordings, making it convenient for stories to be studied across news cycles. Clips of particular interest can be burned to DVD or copied to network drives for long-term storage and easy retrieval.

In addition to storing recorded content, the SnapStream Enterprise solution offers educators the ability to ingest material stored on other media. There are available s-video analog ports that can consume and digitize content from a VHS or DVD player. If the media contains closed captioning (common on VHS recordings of television) the content will be indexed and searchable through the SnapStream Link client. Once the digital files exist on the server, they can be archived utilizing the same method as recorded television.

CONCLUSION

In summary, SnapStream Media prides itself on bringing some of the power of new media, such as easy search and copy and paste, to the old media of television. Providing the first television search appliance of its kind, educational institutions can now cost effectively utilize the power of television in their curriculum, research and public relations. SnapStream's powerful television search technology and clipping features are extremely easy to use, closely aligning with SnapStream's commitment to customer service and satisfaction. As a recap, SnapStream Media can unlock the power of television in education by providing educational institutions the ability to:

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If you would like more information on the SnapStream Enterprise search appliance, or to schedule a product demonstration, please visit us at [**www.snapstream.com/enterprise**](http://www.snapstream.com/enterprise).

Case studies specific to education are also available on our website.