

A Case Study in Webcasting

NYU TV & Media Services Support the Third Annual Clinton Foundation Forum

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Media support is now an integral part of planning a successful event at NYU. Since the opening of the Kimmel Center for University Life and the Skirball Center for the Performing Arts, NYU's Department of TV & Media Services has provided turnkey, high-end media solutions for a number of live events in these spaces. This past year alone, NYU hosted such high profile speakers as John Kerry and Al Gore, and the end of the year saw the return of the annual William Jefferson Clinton Foundation Forum.

Events such as these engage a synergy of NYU Libraries resources: The NYU Television Center (TVC), Campus Media Special Events, Campus Cable, and NYU-TV. Together, under the umbrella of the Department of TV & Media Services, these operational units provide services in the form of video production and distribution of the event both on-campus and to the news media, as well as coordination of backstage media support for television and webcast viewing. The area that has seen the most growth in popularity is webcasting. In many instances, it has become a given that clients will wish to have their events seen not only by the NYU community, but by as many people as possible.

Since former President Clinton's first visit to NYU in 1998 for the NYU

School of Law-sponsored Forum, *Strengthening Democracy in the Global Economy: An Opening Dialogue*, much has changed about the way webcasting is facilitated at New York University. Held on December 6, 2004 at NYU, the most recent Clinton Foundation Forum, *New Thinking on Energy Policy*, is a case study of the diversity, flexibility, and autonomy in streaming media options currently available at the University. With the help of NYU's TV & Media Services, this event was the first live webcast hosted at the Clinton Foundation's website, <http://www.clintonfoundation.org> (see figure 1 on p. 19).

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In recent years, the NYU Television Center served as the field video production group and would transmit the analog video/audio signal to NYU's Information Technology Services (ITS), who supported the encoding and back-end server

process.¹ Now, a recently installed infrastructure gives non-ITS entities, such as the TVC, the option to have local production control over the encoding stage. This alternative gives us the autonomy to create and issue media-streaming URLs ahead of time, thereby facilitating customer service support and affording our clients additional time to publicize their webcasts. The advanced issuance of URLs also improves testing, event web page creation, and cataloguing.

GETTING STARTED: THE HARDWARE AND SOFTWARE

The Clinton Foundation event marked the debut of the dedicated single-mode fiber optic infrastructure in place between the Kimmel Center and the Television Center. The traditional way of getting a signal over to the encoder was by modulation of the signal over the analog coaxial broadband cable network, and then demodulating the signal with a low-end RF tuner like a VCR. With the construction of the Kimmel Center, bi-directional fiber optic lines were installed from Kimmel's master control to the TVC's master control, located in the Pless Building. This connectivity allows for broadcast quality audio and video signal transmission that can be routed for distribution to any number of digital or analog networks.

1. Information about streaming media services available through ITS is available at: http://www.nyu.edu/its/ftc/about/streaming_services_about.html.

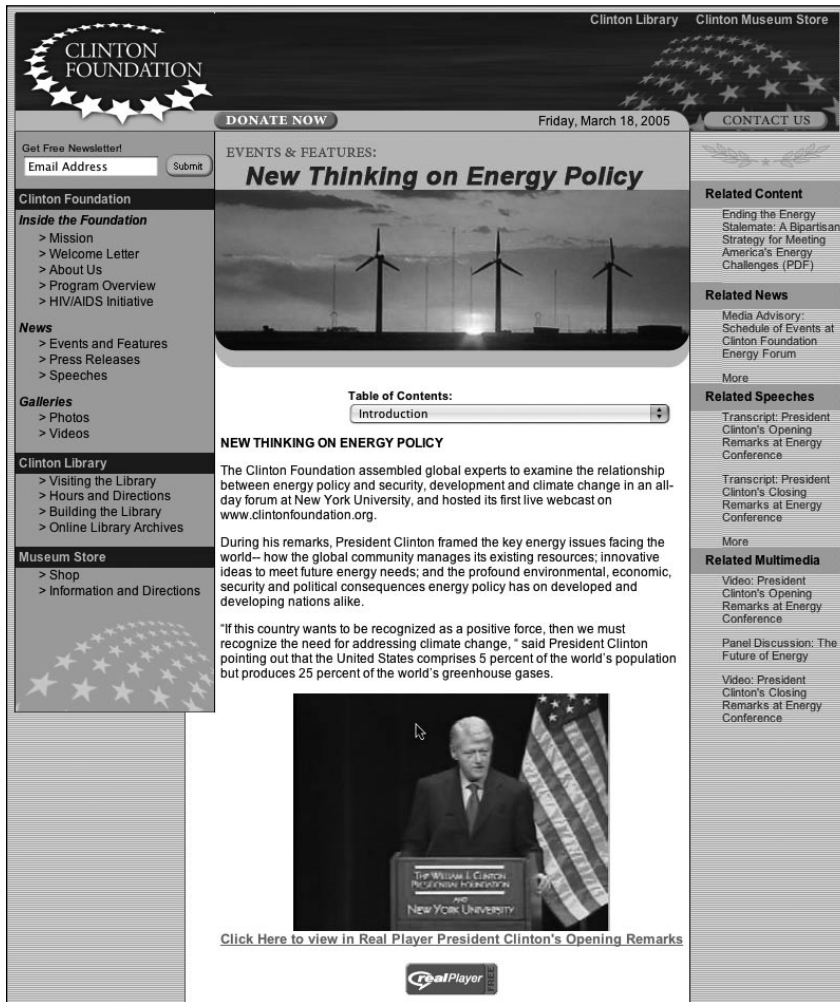


Figure 1. The Clinton Foundation website features information about the Clinton Forum and archived streams of President Clinton's webcast.

Encouraged by these developments, the TVC set out to collaborate on a new workflow with ITS Academic Computing Services. Knowing the success of this venture would entail an investment in the latest equipment, we developed our ideas with help and support from ITS, particularly Ethan Ehrenberg, an Instructional Technology Specialist at the ITS Faculty Technology Center, and Jeff Bary, an ITS Senior Arts Technologist.

Based on our production experience, we knew that we needed a machine that could comfortably process and cache an eight hour, 256 Kbps streaming file, FTP to an archive server, and support the storage of large files locally. For these purposes, we acquired a current version of the Precision 670

workstation with dual RAID 400 GB SATA drives, a Xeon 3.20 GHZ processor, and 4 GB of SDRAM memory, operating on the Windows XP platform. A webcast encoding machine is only as good as its audio and video capture cards, so we decided to forgo the multimedia PCI cards that came with the system, replacing them with higher quality processing devices. In the audio slot, we placed an Orban Optimod PC-1100 PCI card to handle the gamut of commercial codecs currently available that can otherwise result in a cacophony of sound ranges. The multi-band process of this card levels and re-equalizes the input signal and, with more than 30 presets and 50 parameters, a web producer has the ability to sculpt "web sound" to any variety of textures.

With a sound card that versatile, we would have been remiss if our video capture device was of a different standard. Based on its reputation with other broadcasters and cable networks, and its unique technical features, the Osprey 560 from Viewcast was the obvious choice. It offered us the opportunity for Advanced DMA at a full 30 frames per second, closed-caption extraction, and AVI capture for use with the most popular third party editing and streaming software applications. It was this ability to support multi-platform streaming that made the device so attractive to us.

NYU remains, for the majority of its applications, a RealNetworks client and possesses a robust Real server and license. Nonetheless, the Television Center periodically receives requests to stream content on other major commercial platforms, and we wanted to be able to accommodate those requests. Using a bundled software plug-in, Simulstream, the Osprey 560 card is enabled to simulcast multiple bit rate streams in several platforms, including QuickTime, Windows Media, and of course, Real.

The Clinton Forum lasted all day and was edited into four parts for the archived streams, corresponding to the day's events: the plenary introduction, individual sessions, keynote, and closing remarks. For this post-production requirement, it was not necessary to cut the event using a non-linear editing system. Instead, we used the Real Media Editor that is bundled with the RealProducer Plus encoding software (see figure 2, p. 20).

While a basic, no bells-and-whistles editor, the Real Media Editor offered us several important advantages: it maintains the native resolution of the original stream, issues URLs using the same cataloguing structure as the parent file, and provides XML fields to input essential metadata clip information. The practical benefit was that we were able to provide the client with condensed, sound byte-rich segments suitable for the news media in a span

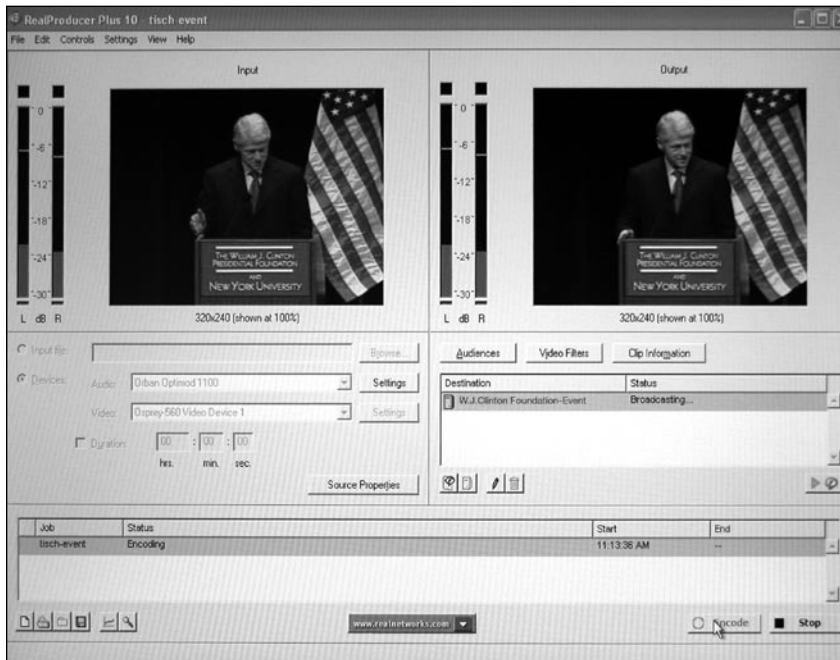


Figure 2. For post-production of the streamed event, the Television Center used the editing tool that is bundled with RealProducer Plus.

of minutes, rather than archiving an all day conference on complex environmental policy issues in one large file.

PRODUCING A WEBCAST: ORGANIZING THE WEBCAST AND GETTING AN AUDIENCE

The process involved in making a webcast happen is two-fold. The first requirement, of course, is having the technical infrastructure to support the webcast. The second is coordinating all the players. As with all video production projects, communication, foresight, and organization are key components. When working with external clients, we have discovered that either they have their own webmaster for their site or, if they are a large entity like the Clinton Foundation, they outsource their site to another commercial vendor that manages the technology related issues. With so many different players involved, there is all the more reason to keep the lines of communication open.

While NYU and the Television Center provide the network access and licensing for a webcast, we also work with the client, who must pro-

vide support for the webcast to run efficiently. For starters, the client should have a website or page where the webcast will be advertised. The goal is to make the web viewing experience as user-friendly as possible.

To do so, we recommend to our clients that their main web page clearly explain the basics; in most cases, this includes who, what, when, and how viewers can access the stream. Since we use Real, we always recommend that a prominent disclaimer about downloading the RealPlayer be included with any advertising of the event, along with a link to Real.com. This way, viewers can prepare their computers in advance. We often supply clients with sample text that they can easily adapt for their sites.

Support from our clients is also needed in terms of updating their web page. A client's webmaster is the most appropriate person to update the pages with all the relevant information and links to the webcast. We strongly recommend that this person also be available for the duration of the webcast, in case there are any technical glitches that require imme-

diated communication with the web audience.

One method of measuring the success of a live webcast is through the number of hits and simultaneous streams from viewers. That's why publicity is the most important factor in getting an audience for a webcast. There are a couple of concerns to address before putting the publicity machine in motion. Clients should always weigh the power of their marketing efforts and the need for a live virtual audience against whether the content is better put to use after the live event.

Questions to consider are: Who is the audience for this event? In the best-case scenario, what is the anticipated number of viewers? Whom does the client wish to attract via publicity for this live webcast? Once a publicity strategy is determined, the numbers of potential streams need to be evaluated along with the date and time of the live webcast to see how this event could potentially impact routine traffic on the NYU network.

In the case of the Clinton Foundation, there were many variables, including possible world events making for a busy news day. The reasoning for having a live webcast was dictated by the nature of the Forum itself—a daylong series of panels and a keynote address by President Clinton on the topic of energy. As a result, the event had the potential to garner significant publicity from both the print and television press. The goal was not only to reach out to people who could not attend, but also to provide a stream for the University of Arkansas to use for educational purposes.

Moreover, the Forum took place shortly after the Clinton Presidential Library opening, and organizers hoped to capitalize on the "bounce" from that event to draw attention to the Clinton Foundation and send traffic to their website. Lastly, the presence of world leaders at the Forum would bring international viewers via the webcast.



Figure 3. This webcast was very successful, with many live viewers participating on the day of the event, and many more watching the archived stream on the Clinton Foundation website.

Ultimately, based on the need to accommodate a non-broadband audience both domestically and internationally, we decided to clip our bit streams at 150 Kbps. For an event of this type, a lecture in which there is little movement and the camera is framed on a tight shot of each speaker, this bit rate proved more than adequate. It also facilitated the compression rate of an

eight hour event that at any other rate would have taxed our drive storage capacity as well as the network.

After successfully webcasting the event, our technology and communication skills were put to one more test. At the end of the day, the Clinton Foundation requested that the archived streams of President Clinton's opening remarks and keynote

address be placed up on the Web as soon as possible. A reporter from the *Washington Post* had been unable to see the live event, but guaranteed an article in the next day's paper if he could watch it online immediately. A responsive staff, quick editing, and user-friendly software allowed us to get the archived streams up in a short amount of time. As a result, the Clinton Foundation was the focus of a lengthy article in the *Washington Post* the following day, which also mentioned New York University. This would not have been possible without the coordinated efforts of all staff involved.

In the end, with the total number of live viewing streams coming in at 238 and hits from viewers as far away as China and Paraguay, this webcast was very successful, both from a production standpoint and from the Clinton Foundation's perspective. More information about the *New Thinking on Energy Policy* Forum, including archived streams of the event, can be found at <http://www.clintonfoundation.org/feature-energy-120604.htm>.

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For details about the services available through the NYU Television Center, visit <http://www.nyu.edu/tvcenter/>. You can also learn about NYU-TV at <http://www.nyu.edu/nyutv/>.

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"ID," "E-mail," and "Negative." I also have the full dataset from the original survey with all the demographic and other easily coded data such as "ID," "Age," and "Internet Connection Type." I merge these two datasets using the common variable, "ID," resulting in a dataset with feedback about the dot-com's e-mail culled from the textual responses,

merged with information that will allow me to analyze the demographics of those who are not happy with the service.

All told, SPSS Text Analysis for Surveys is an impressive tool, greatly facilitating the process of including textual data in quantitative analysis. ITS has a copy available for researchers at the ITS Stats/Map-

ping Lab (at 12th St. and Third Ave.); contact frank.lopresti@nyu.edu for more information. SPSS also offers a free 30-day demo at <http://www.spss.com/downloads/>.

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