

# Rapid Users

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## Internet Broadcasting Brings Local News Online for Major Broadcasters with Digital Rapids DRC-Stream Encoding Systems

by TJ Kudalis, Senior Multimedia Engineer

Internet Broadcasting is the nation's largest publisher of local news online. Celebrating its 10-year anniversary, the company publishes 79 TV station sites for America's premier broadcasters, including NBC, Cox Television, Hearst-Argyle, The McGraw Hill Companies, Post-Newsweek, Meredith Broadcasting, and Scripps Howard. Internet Broadcasting's national reach includes sites in each of the nation's top 25 markets and 45 of the top 50. We serve approximately 13 million streams each month.



**Internet Broadcasting**<sup>SM</sup>

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capture

encode

stream



As Internet Broadcasting's Senior Multimedia Engineer, I am responsible for the company's video hardware and software as well as our overall streaming media production process and delivery. We discovered Digital Rapids DRC-Stream cards and software in 2001 while testing out quite a few capture cards and software packages to find one that would fit our requirements. We were looking for a combination of hardware and software that would take us to the next level of quality and reliability in both VOD and live streaming video, while being flexible enough to work with the wide range of technology and facility infrastructure available at all of our partners' TV stations.

Speed, efficiency and ease of use were also extremely important, as the systems need to be usable by non-technical editorial staff in a high-pressure breaking news environment.

After looking at about two dozen different cards, the Digital Rapids DRC-Stream cards were the clear winner for editorial video capture and transcoding; virtually everything else was either targeted toward the consumer or professional video editing markets, neither of which met our needs as a company focused on publishing professional-quality Web video.

We chose the Digital Rapids cards because of the quality of the video, the reliability of the card, the wide and ongoing format support, and the incredible flexibility of both the hardware and the software. Not only did it meet our needs in terms of video capture, it also provided us with a solution to the problem of transcoding into multiple video formats quickly and easily. Our video capture and transcoding is performed by largely non-technical editorial staff, and the Stream software makes the often tricky transitions between inputs, capturing, and transcoding easy. The DRC-Stream hardware's on-board processing really makes the cards stand out in terms of quality. The pre-processing and de-interlacing are phenomenal, and being able to capture several different streams simultaneously

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**The User:** Internet Broadcasting

**The Challenge:** increasing quality and integration flexibility for encoding and streaming

**The Solution:** DRC-Stream

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with almost no CPU overhead is incredibly useful. We use the DRC-1500 cards with Digital Rapids StreamPro software, along with the Sorenson ACE and On2 VP6 (Flash 8 video) plugins, and have deployed approximately 40 of these systems.

## Integration and Workflow

One of our biggest challenges has been dealing with the radically different technologies and resources available at all the TV stations we support. The Digital Rapids workstations have been the "Swiss Army knife" that allows us to integrate into virtually every environment. Some of the workstations may simply have a single SDI feed with embedded audio; others may be attached to an analog router feed (composite video and balanced audio), a DVCAM deck (via the DV input), a PVR (component video and unbalanced audio) and a VCR (S-Video and unbalanced audio) all at once. We've employed virtually every possible combination of inputs across our network to meet the requirements at each station.



On the software side, we've integrated the Digital Rapids systems into digital NLE environments by dropping files directly from editing booths onto the workstations, then using the Stream software to transcode into multiple formats. In some of our installations, Watch Folders are used to start the transcoding as soon as the files arrive on the workstation; in other installations the workflow has dictated manual control of the transcode. StreamPro's FTP features allow us to name and transport our files for hands-free importation into our content management system, and its expandable codec plugin architecture has allowed us to continue to use those workstations as new video format requirements (such as podcasting and Flash video) have arisen.

While workflows vary from station to station, in general, our editors capture news broadcasts using Digital Rapids Stream, edit the clips in an NLE (often Sony Vegas), then transcode into multiple formats for upload using a different Stream system. The simplicity and speed of the multiple-format transcoding process is essential for our workflow – we operate in a breaking news environment where speed and ease of use are paramount. We also use the Stream software for Windows Media live streaming on a regular basis. Special cases have included integrating into digital NLE environments as above, capturing hours-long events directly into Windows Media for immediate upload, simultaneous capture and live streaming, and handling a wide range of input files for transcoding into video ads and promotional videos.

We generally capture AVIs compressed with HuffYUV for editing, then output multiple bitrates of Windows Media 9, podcasts, and Flash FLVs produced with the Sorenson ACE plugin. We are in the process of upgrading to the On2 VP6 plugin for Flash 8 video. For sales video, we convert from wide range of formats, including QuickTime, MPEG-1, MPEG-2, Windows Media, and MPEG-4 into Windows Media 9 and Flash.

I have not found another card on the market that so easily allows me to integrate a video workstation into all the diverse environments we support. Digital Rapids DRC-Stream cards and Stream software have provided us with the ability to create high-quality streaming media quickly and easily with our existing editorial staff. The parallel transcoding saves us critical time during breaking news, and the quality of the video matches the high expectations of our broadcasting partners. Additionally, Digital Rapids stays on the cutting edge of streaming video technologies, allowing us to continue to leverage our existing investments as the field progresses. We expect to continue to use their products as we grow and expand as a company.

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