

# NRWision

## Case Study

Making Live TV over the Internet  
Possible

## **VideoFlow Makes Live TV over the Internet Possible for German Local TV Stations without Breaking the Budget**



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Mr. Arnd Bernstein,  
Technology Manager,  
University of Dortmund

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### **Live TV over the Internet: Challenges and Opportunities**

NRWision, a community TV station serving the state of Nordrhein-Westfalen, used a file-based system for the first nine years of operations, to upload non-live content created in the studio over an internet connection to a playout server in Unitymedia's network operation center (NOC). While NRWision had been part of Unitymedia's channel line-up for quite some time, it was not able to broadcast live over the internet.

This may sound strange given the fact that NRWision has 1 Gb/s connections to the desktop and - as a university - has a high-speed direct access connection to the Internet backbone. However, NRWision realized that high-speed internet connection is not enough to ensure successful live broadcast.

### **Live Programming is Key for Growing a Successful Television Station**

To fulfill its vision of bringing the best content to as many viewers as possible across Germany, NRWision understood the importance of live programming. Live TV introduces a new dimension and supports interaction with the audience. By nature, live programming is unexpected and spontaneous and thus more interesting to watch than non-live and edited talk shows. "The ability to broadcast live could allow us in the future, for example, to broadcast simultaneously from different sites and leverage the low delay for viewers to vote in real time," said Mr. Arnd Bernstein, Technology Manager, University of Dortmund.

Looking to the future, NRWision aspires to make its unique local programming available to additional audiences throughout Germany. The only way to do that is to add NRWision to the channel line-up of other cable operators in addition to Unitymedia, as well as IPTV service providers like Deutsche Telekom's MagentaTV (formerly EntertainTV) or Vodafone's Giga TV Net.

## Reliable Signal Contribution Over the Internet

To put these plans into action, NRWision began to look for a solution for a reliable broadcast of live video over internet connection while meeting its budget constraints.

Knowing that two other local TV stations in the state of Nordrhein-Westfalen were already using VideoFlow's Digital Video Protection (DVP) products to broadcast live over the internet to Unitymedia's NOC gave NRWision the confidence to evaluate VideoFlow. Moreover, Mr. Andreas Jaske, Stationary Platforms, and Media Technologies Regulations at Landesanstalt für Medien (LfM) Nordrhein-Westfalen recommended VideoFlow to NRWision based on the DVP's proven performance at Unitymedia.

Another vital factor in NRWision's decision was that VideoFlow is the only vendor certified by Deutsche Telekom MagentaTV for the contribution of TV signals over the internet to the playout center. As VideoFlow's DVP products are already in service by MagentaTV, this would allow NRWision in the future to seamlessly connect to the playout center and reach additional viewers across Germany.

After a rigorous 5-month of testing, NRWision found that VideoFlow DVP met its success criteria for live TV broadcast, including service reliability and video quality. VideoFlow DVP also met NRWision's budget by running seamlessly over a standard internet connection. Inexpensive operations were critical for NRWision since LfM Nordrhein-Westfalen is funding its operation, and federal budgets cannot support costly monthly connection expenses.

## NRWision is Broadcasting Live with Confidence

VideoFlow DVPs went on air in October 2018. Since that time, NRWision has been using DVP for broadcasting live over the internet to Unitymedia with outstanding service reliability.

Using the DVP, NRWision can rapidly, reliably, and inexpensively deliver live broadcast-quality content over the university's existing internet connection. One DVP "sender" is at the NRWision studio, and one DVP "receiver" is at the Unitymedia NOC. Service continuity and video quality are assured by VideoFlow's Emmy® award-winning technology, which recovers 100% of lost packets at a very low bitrate overhead.

In fact, after the testing period and five months of reliable live service, NRWision's technical staff does not feel the need to use DVP's built-in real time stream monitoring and network statistics features because they simply trust that the system works. "I tested the system thoroughly, and it's been working continuously ever since. We know we can rely on DVP 100% and don't need to spend time checking statistics and digging into the network," said Mr. Bernstein.

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## Results and Benefits

By using VideoFlow's DVP, NRWision has achieved concrete benefits:

- **Broadcast live over the internet** – Enabling NRWision to introduce new types of exciting live programming for its viewers.
- **Inexpensive operations** – Two DVPs and a standard internet connection allow NRWision to stay within its budget.
- **Proven funded projects** – VideoFlow DVP was already approved and financed by LfM to connect local TV stations over the Internet to playout centers.
- **Reach broader audience** – Seamless expansion of its exposure to a nationwide audience.
- **Broadcast with confidence** – Proven reliable system tested and certified for live TV signals contribution by Unitymedia and Deutsche Telekom.

## About NRWision

NRWision is a community TV station serving the state of Nordrhein-Westfalen since 2009. The station is managed and operated by the Institute for Journalism at the Technical University of Dortmund funded by the State Institute for Media (LfM) in the state of Nordrhein-Westfalen. Believing firmly in the right of free expression in the German constitution, NRWision offers a media platform that allows any citizen to publish video content on its channel.