

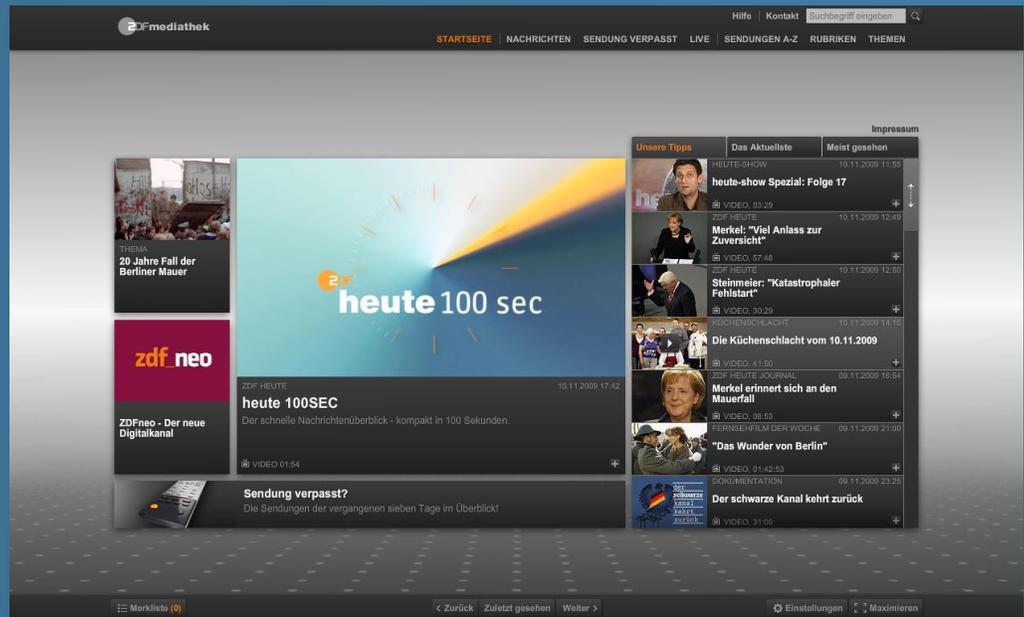


## ZDFmediathek

ZDFmediathek, the video portal of Germany's ZDF national public television station, transitions to Adobe® Flash® Media Server software to improve the online viewing experience

**M**issed the daily news program or an episode of your favorite TV show? Your favorite primetime show begins in ten minutes and you are still sitting at the office? It's not a problem with ZDFmediathek, ZDF's video portal. ZDFmediathek provides live, Internet-based television of ZDF's rapidly expanding television programming and exclusive full-length online productions—available via web browser for free on almost any Internet-enabled device.

The intuitive user interface of ZDFmediathek is based on Adobe Flash technology and provides extensive functionality to help users find desired content.



*“Essentially, we were motivated by the fact that Adobe Flash CS4 Professional offers more creative opportunities when designing online portals, and the technology is well known within the creative community.”*

**Andreas Grün, system engineer and project manager, ZDF**

### 15 million video views per month

ZDFmediathek is a perfect example of the Web TV boom in recent years. Affordable broadband rates have driven the use of video on the Internet and made online video a daily habit for many people. ZDFmediathek is a leader in online video. In fact, the team behind the video portal is considered one of the pioneers of online programming—ZDF developed its first video streaming offerings more than ten years ago.

The use of open and free technology was an important building block from the outset. As a public broadcaster, ZDF seeks to provide the entire population with information. “We want to make all the ZDF content available via a

central portal. Unlike linear television, the videos can now be accessed independent of time,” explains Andreas Grün, system engineer and project manager at ZDF.

Grün believes in maximizing usability and doing everything possible to avoid having ZDFmediathek visitors locked out due to operating systems, hardware, or digital rights management (DRM) access control incompatibility. ZDFmediathek’s creators consistently pursue this goal.

In preparation for the IFA 2007 consumer electronics trade show in Berlin, ZDFmediathek was completely redesigned to include new protocols and formats to reach even more devices. Viewers responded to this open strategy with heavy use. ZDFmediathek quickly became one of Germany’s most successful video portals, and today records approximately 15 million video downloads per month.

### Video portal challenges

For ZDFmediathek, providing access to such a large audience represents a tremendous challenge. In addition to developing content, providing fast download times, and transcoding video, seamless playback is a key factor in delivering a quality user experience.

*“Our plans materialized when Adobe announced H.264 support in the Flash Player. That was important, because we could continue to use the existing MP4 streams to reach audiences on all the major platforms.”*

**Andreas Grün, system engineer and project manager, ZDF**

“During live programming, we often experience massive traffic spikes,” says Grün. “There have been times when we have experienced up to 60 Gbps streaming demand during live sporting events, and we are constantly setting new records for demand.” The usage patterns of the audience have also changed in recent years. “Previously only short clips were viewed, but today complete programs with durations of 45 minutes or longer are in high demand,” he adds.

The quality of video materials has also significantly improved, as has the design of the portal to enhance the user experience. In 2008, the team first started considering a change of the basic technology behind ZDFmediathek. “We wanted to enhance users’ experience on the site,” says Grün. “And that meant moving away from HTML and toward using Adobe Flash technology.”

#### **Motivated to use Adobe Flash Media Server**

In May 2009, ZDFmediathek moved to Adobe Flash Media Server software. Previously, the video portal used QuickTime and Windows Media Player and was powered solely by Microsoft® Windows® Media Server. But the team wanted to switch to the Adobe Flash Platform to enable users to play the videos using Adobe Flash Player software, which is already installed on 98% of Internet-connected PCs worldwide and includes H.264 standard video support.

“We wanted to use the Adobe Flash Platform for a long time. Essentially, we were motivated by the fact that Adobe Flash CS4 Professional offers more creative opportunities when designing online portals, and the technology is well known within the creative community,” says Grün. “At the same time, we needed to simplify our work. We wanted to maintain only one ZDFmediathek portal to support all PC platforms. Our plans materialized when Adobe announced H.264 support in the Flash Player. That was important, because we could continue to use our existing MP4 streams to reach audiences on all the major platforms.”

Another benefit was H.264 support for devices and platforms such as smartphones, mobile phones, set-top boxes, and TVs, in addition to the classic PC. “We see an extreme demand in the market and want to supply the broadest possible set of devices with our content,” says Grün.

#### **Extensive testing before the switchover**

Good planning was necessary for a smooth transition. Among other things, the challenge at the time was that neither the ZDF team nor the external service providers had experience with the delivery of streaming content using Flash Media Server.

#### **ZDFmediathek**

Mainz, Germany  
[www.zdf.de/ZDFmediathek](http://www.zdf.de/ZDFmediathek)

#### **Challenge**

- Reach the broadest possible audience
- Provide a streamlined, instant-on user experience
- Leverage existing MP4 streams
- Support diverse devices

#### **Solution**

- Move to the Adobe Flash Platform, including Adobe Flash Media Server and Adobe Flash Player software
- Redesign the site using Adobe Flash CS4 Professional

#### **Benefits**

- Broadened audience reach
- Improved user experience with features like Dynamic Streaming
- Delivered existing MP4 content via the Adobe Flash Platform
- Reached users on multiple devices

#### **Toolkit**

- Adobe Flash Platform. Components used include:
  - Adobe Flash Media Server 3.5
  - Adobe Flash CS4 Professional
  - Adobe Flash Player



*“Adobe Flash Media Server is a robust, stable broadcast product. . .With the Adobe Flash Platform, we are well-positioned for the future.”*

**Andreas Grün, system engineer and project manager, ZDF**

ZDFmediathek is available on a variety of mobile devices, including the HTC Diamond shown here.

“We conferred with Adobe in advance and secured consulting know-how,” says Grün. With support from Adobe, the team tested a streaming range from five to eight Gbps. Additional load tests with the service provider were performed three days before the launch and also included storing content in the cache. “The system was tested in a state similar to production use. Overnight the front end went live, and links were activated. Viewers immediately gained access to the new servers,” recalls Grün.

#### **The future: higher quality and more devices**

Since the launch in May 2009, ZDFmediathek has been stable and runs smoothly with the new technology. Currently, the video portal is used only for a fraction of its possibilities. “Right now, we use Flash Media Server for playout, but it has more potential that will be tapped as ZDFmediathek expands,” says Grün. “Adobe Flash Media Server is a robust, stable broadcast product.”

Future plans for Flash Media Server include automatic bandwidth detection and Dynamic Streaming, which will intelligently adjust quality levels to help ensure a superb viewing experience. Addressing the increasing number of video-enabled devices on the Internet is also on the list for the team. Grün looks forward to these and other challenges in the dynamic video environment. “With the Adobe Flash Platform, we are well-positioned for the future,” concludes Grün.



**Adobe**

**Adobe Systems Incorporated**  
345 Park Avenue  
San Jose, CA 95110-2704  
USA  
[www.adobe.com](http://www.adobe.com)

Adobe, the Adobe logo, and Flash are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners.

© 2010 Adobe Systems Incorporated. All rights reserved. Printed in the USA.  
91023527 04/10