


## Next Generation Network Engineering IP Video Streaming QoE / QoS Measurement

Yesterday has been analogue, today's TV is digital! And tomorrow's TV entertainment is already served by some provider: IPTV works with desktops as well as with all new stuff like smartphones, netbooks, and all other fancy clients. In combination with a set top box (STB) IPTV even works on legacy TV sets.



IPTV is established as the new way of distribution for linear television. Network designers especially focus on the quality-of-service (QoS) for IP streaming services. Increasing broadcast of HDTV channels forces providers to utilize efficient complex coders. In this environment minimal transmission failures lead to visible and nuisance errors resulting in disappointed TV consumers.

**Content Quality Measurement** **IPTV monitoring**  
**H.264 analyser** **IPTV End-to-end Performance**  
IPTV / IP Video **QoS/QoE Measurement Tools**  
Real-Time deep inspection for MPEG  
**smartVIDEO**   
QoE Video interpretation  
**Live Video monitoring in IP Networks**  
distributed system with "light weight" probes **MPEG-2 analyser**  
**IPTV measurement** **IPTV analyzer**  
Video quality metrics  
**Measurement of IPTV impact** **IPTV Testing Challenges**

The SmartVideo research project, granted by the federal BMBF (Bundesministerium für Bildung und Forschung) is working on measuring/monitoring methods and systems for the determination of a subjective image quality (quality-of-experience, QoE) in IP video streams. The SmartVideo monitoring system detects bottlenecks and deterioration in network and service quality. QoE monitoring in combination with suitable quality-of-service (QoS) control can be used to guarantee some pleasure of video entertainment.

The SmartVideo monitoring system is directed to broadband network providers (xDSL), Internet Service Provider (ISPs), mobile network operators as well as developers and suppliers of IP streaming services. The SmartVideo research project is supported by BMBF, Vodafone Germany and CETECOM.



**Let us demonstrate QoS manipulations!**  
**Experience the subjective quality (QoE) of video transmissions!**  
**We are looking forward to your visit at booth D06 in hall 9!**

Prof. Dr.-Ing. Andreas Grebe,  
Dipl.-Ing. Stephan Küffner  
Dipl.-Ing. Oliver Portugall  
Fachhochschule Köln  
Institut für Nachrichtentechnik  
Forschungsgruppe Datennetze

Cologne University of Applied Sciences (CUAS)  
Institute of Communications Engineering  
Computer Networks

Betzdorfer Straße 2  
50679 Köln (Cologne, Germany)  
Email [andreas.grebe@fh-koeln.de](mailto:andreas.grebe@fh-koeln.de)  
[stephan.kueffner@fh-koeln.de](mailto:stephan.kueffner@fh-koeln.de)  
[oliver.portugall@fh-koeln.de](mailto:oliver.portugall@fh-koeln.de)

Tel. +49 (0)221 / 8275 – 2507  
Fax. +49 (0)221 / 8275 – 72507  
Web [www.smart-video.org](http://www.smart-video.org)

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hall 9, booth D06