Digital Archiving at BR television archives

Laying the fundament for additional values

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Agenda

1. The Szenario
2. The Ideas
3. The Values
4. The Practice
5. The Experiences
6. The Perspectives

1. The Szenario: conditions and tasks

Conventional tasks of the television archives at BR are:

- **storage** of broadcasted BR-programs and contributions
- **provision of information** about these essences (content)
- **provision and loaning of carriers** for rebroadcasting or reuse
- **exchange of essence** between the german broadcasters of public law
- **documentation of information about rights and restrictions**
  concerning foreign media assets

→ **value and role** of television archives in the production process ?!

1. The Szenario: successes and challenges

- physical archive with more than 700.000 video tapes, films and sounds
- FESAD-Database: supply of structured textual information (formal, contentual, physical) on BR-programmes and contributions
- steady increase of retrievals and orders in the database FESAD
- Decrease of storage area for physical tapes
- Increasing detoriation of program assets
- High efforts in the investigation and reconstruction of metadata
- Lack of time-based rights informations

2. The ideas: a business model for digital archiving at SZFM

- Technical fundament for digital long-term preservation
- Higher degree and more efficient utilization of archived assets

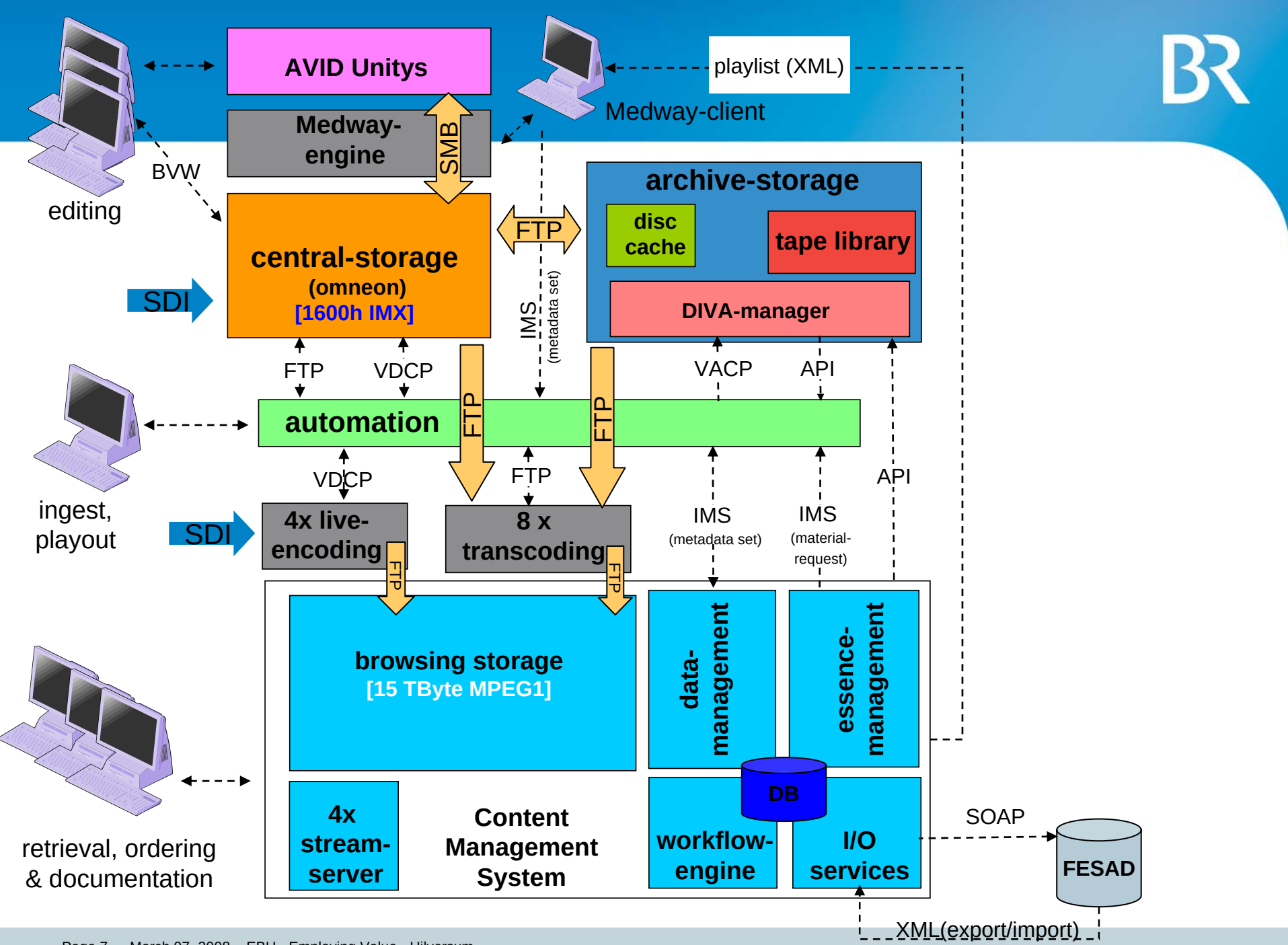
  →close integration of the digital archive into the digital production environment
  →setup of a media asset management to provide more valuable informations and integrated tools for digital workflow support

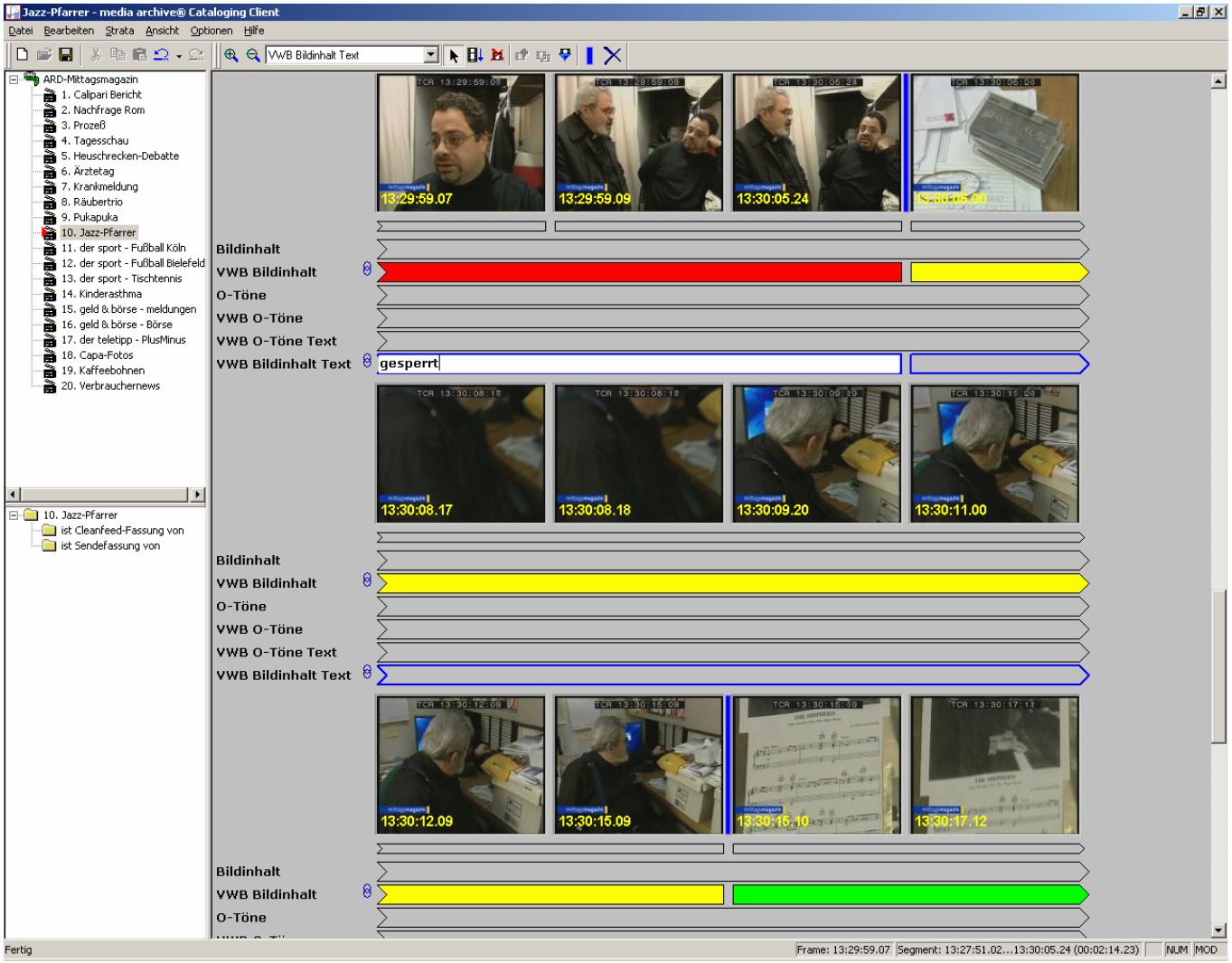
- Data Mining: Prerequisites to capture metadata
  → from other applications
  → in earlier stadia of production workflows

2. The ideas: a business model for digital archiving at SZFM

Strategies and constraints of digital archiving and preservation:

- Priority: archiving of new broadcasted programs
  - including cleanfeed-versions
  - including rebroadcastings from digitized archive-tapes
- Digitization: high quality-requirements and limited ressources:
  instant reuse
  only after colour-correction and quality control!
- Active preservation:
  based upon unallocated ressources of the technical staff
  chances in the growing amount of rebroadcasted files


AVID Unitys
Medway-engine
SMB
BVW
editing
playlist (XML)
Medway-client
archive-storage
disc cache
tape library
DIVA-manager
FTP
central-storage
(omneon)
[1600h IMX]
SDI
IMS
(metadata set)
FTP
VDCP
VACP
API
automation
FTP
FTP
VDCP
FTP
API
ingest,
playout
SDI
4x live-encoding
8 x transcoding
IMS
(metadata set)
IMS
(material-request)
FTP
FTP
browsing storage
[15 TByte MPEG1]
data-management
essence-management
DB
4x stream-server
Content Management System
workflow-engine
I/O services
SOAP
FESAD
retrieval, ordering
& documentation
XML(export/import)


Jazz-Pfarrer - media archive® Cataloging Client
Datei Bearbeiten Strata Ansicht Optionen Hilfe
VWB Bildinhalt Text
ARD-Mittagsmagazin
1. Calipari Bericht
2. Nachfrage Rom
3. Prozeß
4. Tagesschau
5. Heuschrecken-Debatte
6. Ärztetag
7. Krankmeldung
8. Räubertrio
9. Pukapuka
10. Jazz-Pfarrer
11. der sport - Fußball Köln
12. der sport - Fußball Bielefeld
13. der sport - Tischtennis
14. Kinderasthma
15. geld & börse - meldungen
16. geld & börse - Börse
17. der teletipp - PlusMinus
18. Capa-Fotos
19. Kaffeebohnen
20. Verbrauchernews
10. Jazz-Pfarrer
ist Cleanfeed-Fassung von
ist Sendefassung von
13:29:59.07
13:29:59.09
13:30:05.24
Bildinhalt
VWB Bildinhalt
O-Töne
VWB O-Töne
VWB O-Töne Text
VWB Bildinhalt Text
gesperrt
13:30:08.17
13:30:08.18
13:30:09.20
13:30:11.00
Bildinhalt
VWB Bildinhalt
O-Töne
VWB O-Töne
VWB O-Töne Text
VWB Bildinhalt Text
13:30:12.09
13:30:15.09
13:30:15.10
13:30:17.12
Bildinhalt
VWB Bildinhalt
O-Töne
Fertig
Frame: 13:29:59.07
Segment: 13:27:51.02...13:30:05.24 (00:02:14.23)
NUM
MOD

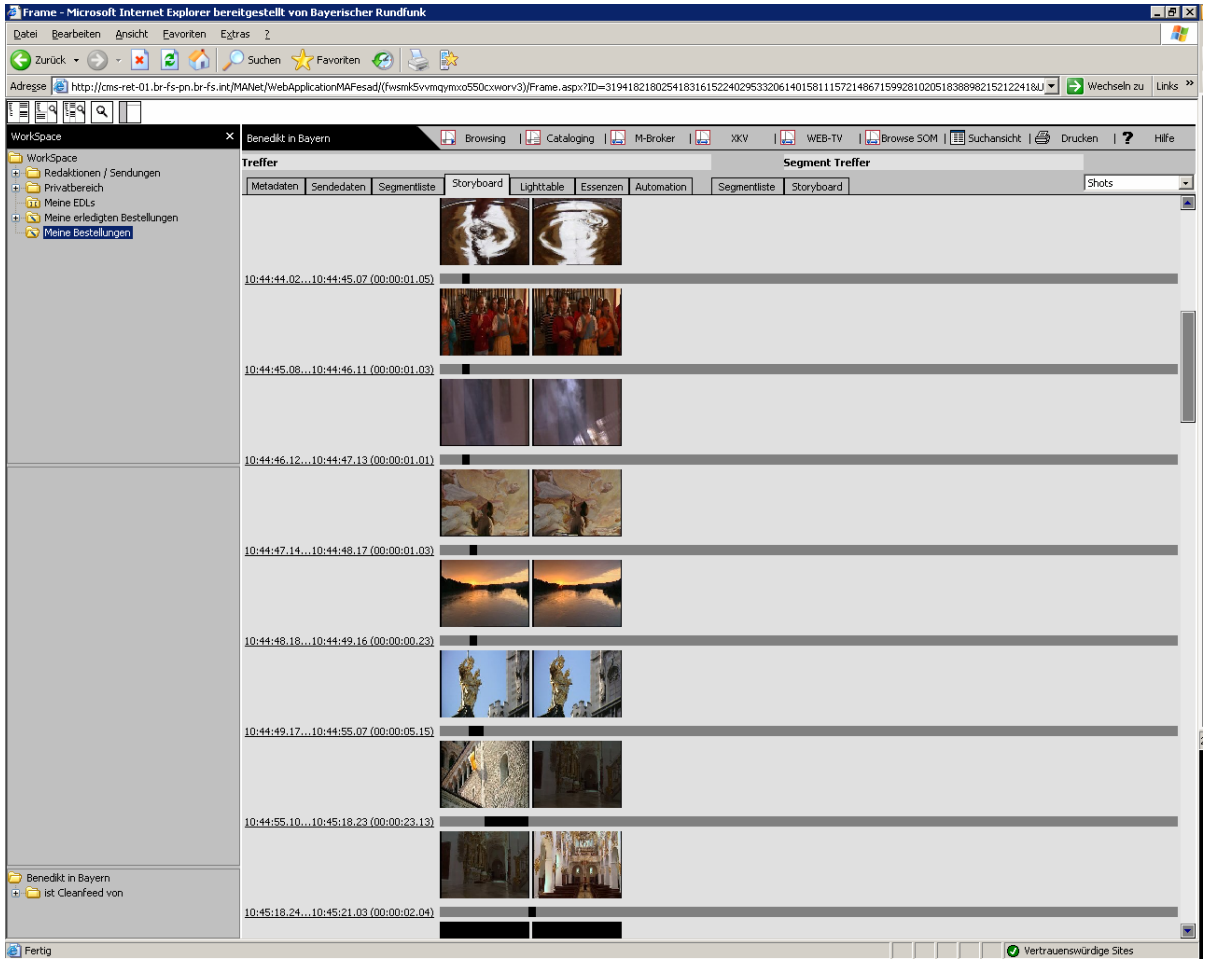
3. The Values: Services for production facilities

Enhancing the usage of archives – degree and efficiency

1. more precise and thus more valuable informations

- by timecode-based annotation of audiovisual documents
- retrieval leads directly to the searched content
- precise information on restrictions and rights per segment

Media Archive Retrieval Client

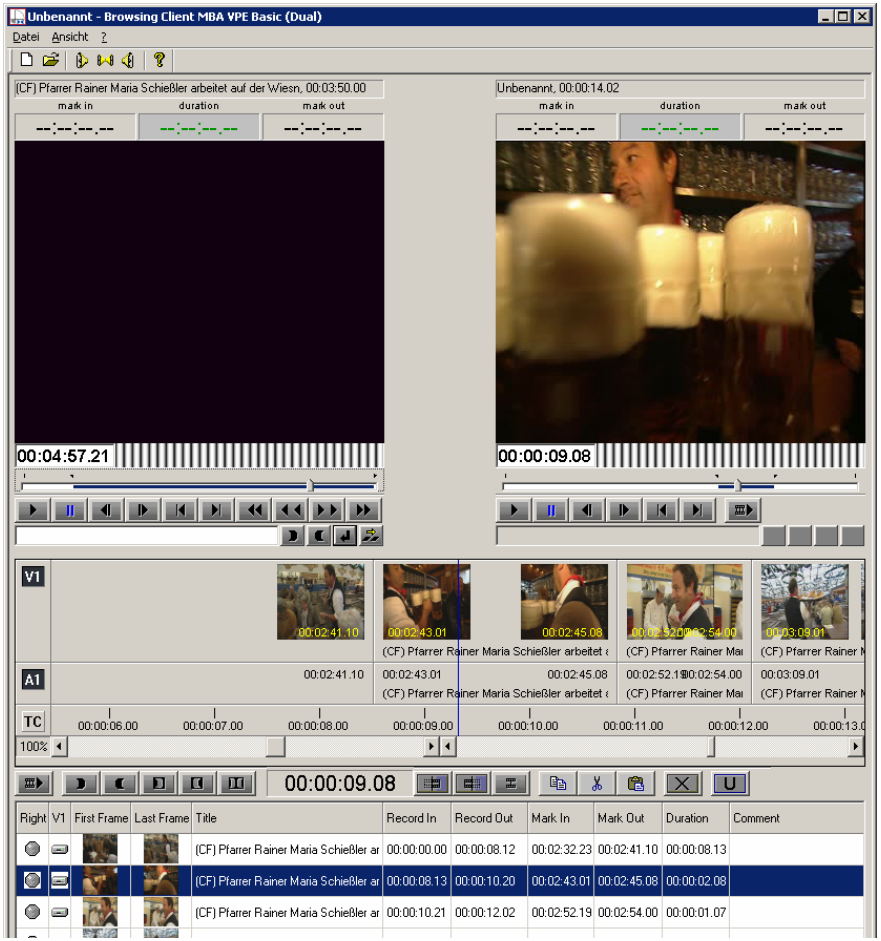


3. The Values: Services for production facilities

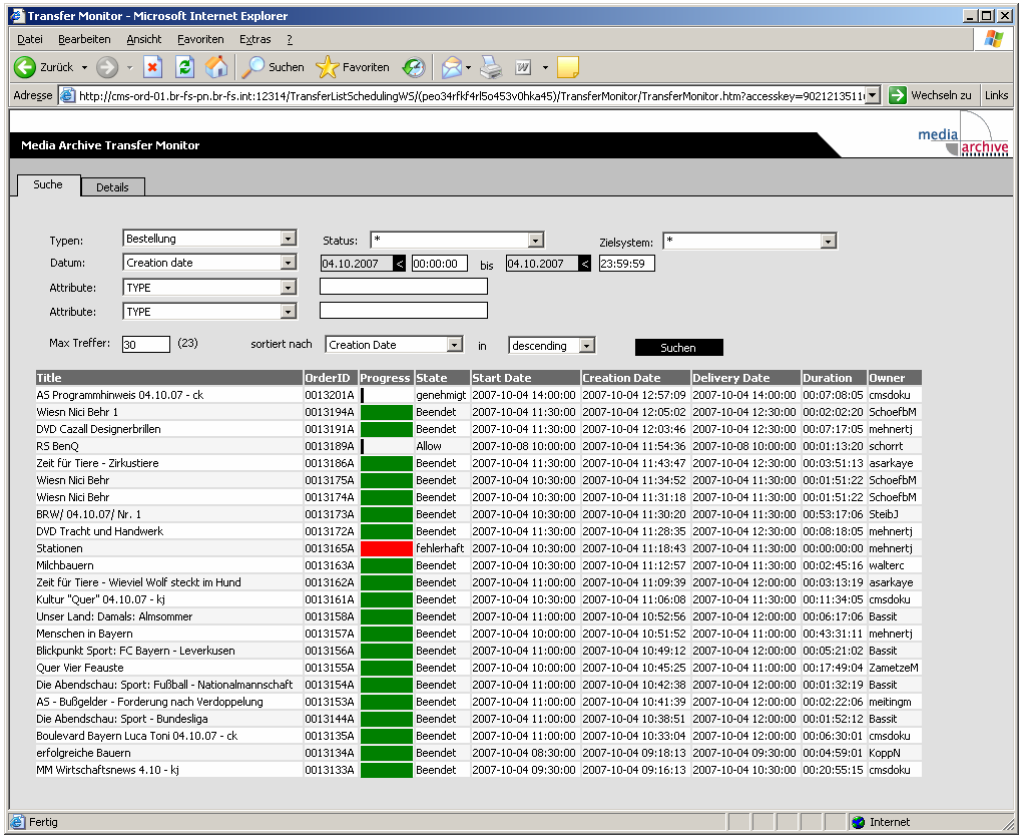
Enhancing the usage of archives – degree and efficiency

1. more precise and thus more valuable informations
   by timecode-based annotation of audiovisual documents
   retrieval leads directly to the searched content
   precise information on restrictions and rights per segment
2. more secure and purposefull selection and ordering
   by support of keyframes, low-res and rough cut lists
3. more efficient transfer to target systems
   by partial restore out of the archive
4. high availability of archived material: no lent tapes
5. automatical provision of metadata
   information for editors, base for future metadata-workflows

Media Archive Browsing Editor



Media Archive Transfer Monitor



3. The Values: Securing the Longevity of Cultural Heritage

Preservation of digitized assets - a technical solution:

- More efficiency in preservation by means of
  - monitoring of tape drives and media to prevent data loss
  - automatic migration of endangered essence to new media

- complete redundancy for disaster recovery and for load sharing

4. The practice: SZFM and CMS at work

- After a long period of planning, installing and testing:
SZFM is operating since March 26/28, 2007

- filebased production and broadcasting of nearly the complete programmes of BFS and BR-alpha

- until now digital archiving of ca. 40.000 High Resolution-Clips

- archiving volume of ca. 350 TB until now, daily growth of 1 TB

- ca. 1.400 registrated users for Media Archive

- Increasing number of orders via Media Archive: 60 per day in 02/2008

- Integration of a growing number of target systems, providing high resolution essence as well as low resolution essence and metadata

5. The Experiences: Archiving and Documentation

Transition from tape to file – a longer lasting period:

- limitations on the ingest facilities (high quality-requirements)
- remaining tape-based workflows
- investment in tapes and archive technology
- furthermore no preservation on tapes!

→ evaluate projects for external digitization!
→ evaluate concepts for Storage-on-Demand!

Migration to a timecode-based annotation:

- new workflows and additional efforts in documentation
- revision and adjustment of old-fashioned metadata
- manual work, no automatic proceeding

→ optimize usabililtiy, focus on the capturing of mass data!
→ implement tools for data mining!
→ Implement database-features (versioning)!

5. The Experiences: Editorial Workflows, Retrieval and Ordering

Media Archive is becoming a reference tool for editorial workflows:

+ getting information about all acquired essences
+ editorial approval
+ retrieve and browse assets (production or archive area)
+ ordering essences for digital transfer

→ design an open platform for archive and production!

Implementation of new order workflows for the editorial staff

- acceptance depending at a high degree on the usability and convenience of the retrieval and ordering tool
- acceptance depending on the functionality and stability of the different highly cohering transfer systems

→ optimize usability and workflows!

→ train and instruct of the archival and technical staff

6. The Perspectives

New requirements and challenges:

Provision of content for new targets, especially for Online-Use
→ more flexible transcoding systems
→ temporary storage of a MidRes-Format:

Supply of additional service for editorial staff, e.g. theme-oriented collections („Themenarchive“)
→ new documentary strategies required?
→ near-editing archive-storage required?

Tapeless acquisition
→ registration and logging of essence and content at the beginning of the production chain
→ archiving of selected and evaluated feeds

6. The Perspectives

Digital Intermediate Archiving:
Archiving of different types of intermediates in the production process
→ no playout on tape
→ advantages of browsing and ordering in the CMS

Rights Client:
software-supported capture and linking of rights informations to the annotated content in the CMS
→ easier annotation of rights via EDL-information out of the editing system
→ more valuable rights informations by integration with the BR-licence-database
→ supply of rights informations for soon reuse
→ necessary integration of the productions systems with planning units

Conclusions

In digital production environment television archives become even more service providers with the goal of optimal exploitation of assets.

The collecting, evaluating, selecting and providing of essence, content and asset is necessary all over the production and archive workflow.

The challenge is to find working concepts to manage the change and appropriate documentation to achieve the transition to this new role.

Automation skills and data mining may help to achieve these goals, but intellectual evaluation and adjustment will still be necessary!

Thanks for your attention!