



FILE-BASED NEWS EXCHANGE

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Brief history review

15 May 1926. – Radio Zagreb started

15 May 1956. – First TV transmission
from TV Zagreb



1967. – In line with a decision adopted by the EBU, the Zagreb TV Centre became the Eurovision Technical Centre for the entire JRT - an umbrella organization of Radio-Televisions in the Socialist Federative Republic of Yugoslavia.





1990. – In June, the Croatian Parliament adopted an act to rename Radio-Television Zagreb to Croatian Radio-Television (Hrvatska radiotelevizija: HRT).



1993. – As one of the successors to the former Yugoslav Radio-Television (JRT) umbrella organization, the HRT gained full "active" membership in the European Broadcasting Union (EBU).



2002. – beginning implementation of digital production in News TV program





File-based exchange at HRT

Significantly started in 2002. with stronger digitalization impact in news program.

File delivery was time consuming process and much slower than real-time transfer.

Problems?

Slow and expensive bandwidth
PC – slow and time consuming
transcoding



Software – lot of bugs, not supported all
codecs

Human factor – lack of experience, wrong
settings for transcoding

Problems?



No error correction

No e-mail notification when file delivery is finished

No security file transfer

File transfer not finished successfully - repeat

Experience gained

Transcoding format specified (QuickTime for fast, MPEG4 for slower bandwidth)

PC works much faster

Reserved bandwidth for file transfer

E-mail notification when finished

Software version improved

File transfer encrypted

Vendor solution

Digidelivery – Aspera



Using since 2007. and quite
efficiently

Still using on daily bases

Robust and reliable

Vendor solution

SmartJog



HW and SW not HRT property

Frequent updates and bug fixes on
Linux based OS

Vendor solution



Reuters

HW and SW not HRT property

Browse and broadcast video quality

Troubleshooting is complex and slow



Vendor solution – HRT experience

Not user-friendly solution (language)

Repair and maintenance time-consuming

Naming convention limits – no special characters

Upgrades and updates without notice

Different file format – transcoding needed



EBU file-based news exchange



HRT actively participating in File contribution groups.

From “SuperPOP” to “iPush-iPull” and now “TtF – Transfer to File”.

Experience gained is useful in news exchange with other sources.

EBU members various technology

In house formats are different, metadata different, manufacture interpretation of the standard, bandwidth limitations, software is not free of bugs and updates can cause interoperability issues and so on.



EBU “Transfer to File” group

EBU members are working “all together” with help of experts to find most efficient solution. Technical and editorial working together is better way for adopting new technology.





EBU File exchange platform

- System is file independent
- Network agnostic (satellite, fiber, public internet)
- Simple user interface
- Accelerated file transfer
- Standard IT equipment (virtual machines)
- Open system for evolution

source: Wei Jiang & Justyna Kurczabinska, EBU

Compression or not?

Calculation showed that with good network infrastructure, faster is to transfer broadcasting file.

3 MINUTE ITEM		PROD FORMAT - 50 Mbps		COMPRESSED - 6 Mbps	
Size of videofile	Mbps	1875 MB		187 MB	
Time to render	mm:ss	00:30		06:00 – transcoded !	
Network perf.	Mbps	12	120	12	120
Time for transfer	mm:ss	15:00	01:30	01:30	0:10
Total	mm:ss	15:30	02:00	07:30	06:10

source: Marco Degiorgi, EBU

Native file and higher bandwidth

- Less complexity: no compression or transcoding involve
- Less delay in delivery: don't waste time
- Higher quality: less noise, better color depth and higher definition



Different file format for different users

Concept is that access can be global over internet.

File formats will be:

Any native (6-60 Mbps)

MP2 (10 Mbps)

H264 (4 Mbps)

PCM (2 Mbps)

File exchange – torrent like solution

That idea must be considered.

Good algorithm will share bandwidth and increase download speed.

Security, encryption and open ports in firewall must be taken care.



Summary

File based exchange is the future of non live events.

Workflow must have revision and adjusted to file based platform.

Security must adopt new workflow.



Thanks for listening!