



Multimedia system - MMC

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www.ict-academy.eu

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Fakulteta za elektrotehniko
Univerza v Ljubljani



History MMC LTFE

2005

MM room

MM center

Some mobile equipment

2006 – MMK

2008 – more equipment

2009 – more equipment

2010 – more equipment

2011 – RTC in AATCe



Equipment

MMC LTFE

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First – there was a beginning

Where we started?

2 × Sony Z1

1 × AD/DA converter

1 × lights

1 × MAC G5

1 × Berghinger audio mix

some converters, cables...



MMC - equipment

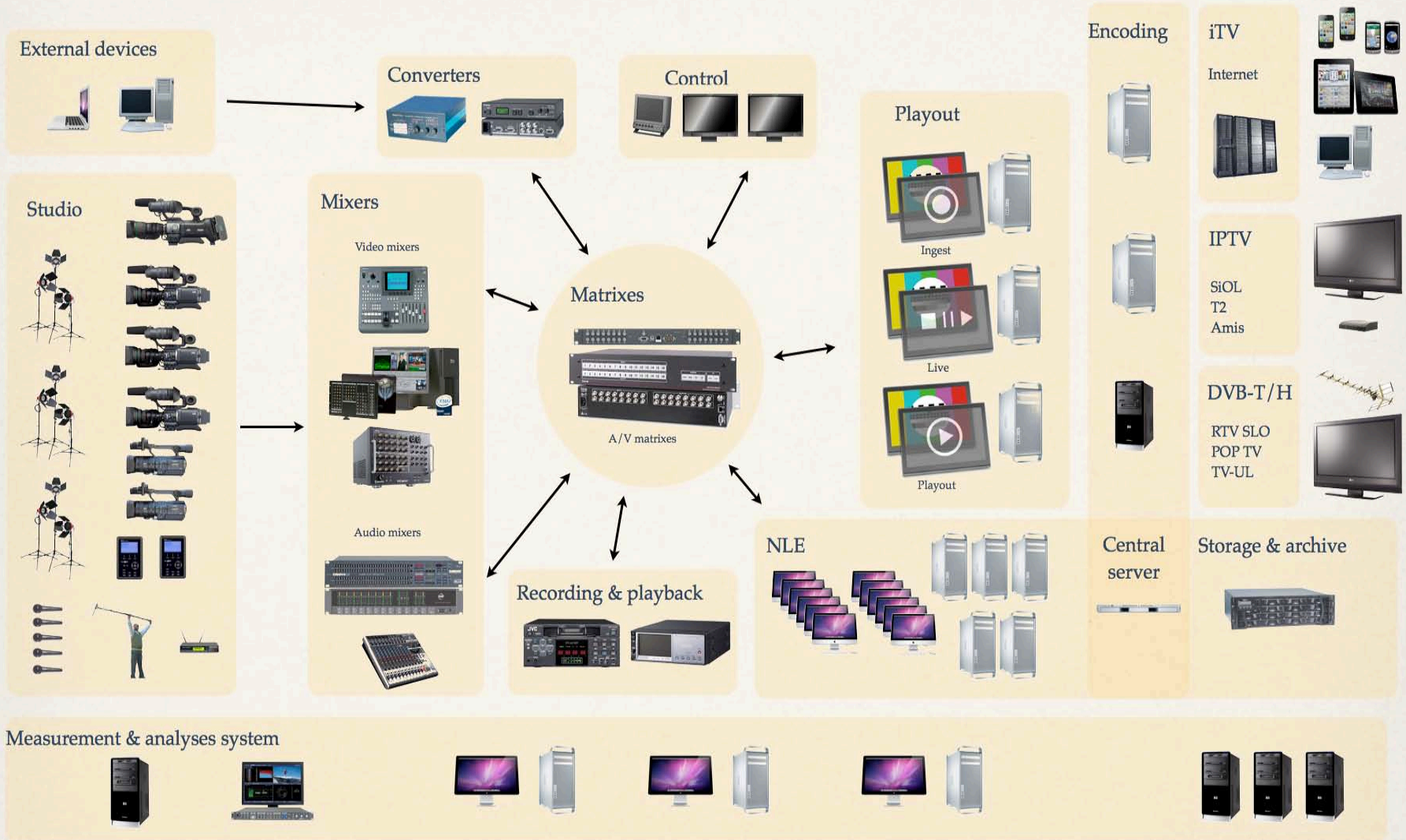
Who we are?

What we work?

Where we are (with equipment)?

What we would like to have?

LTFE MMC – TV production system



LTFE Multimedijski center

Professional equipment

Harris multiformat HD/SD-SDI in Analog signal monitor

Harris Jitter Evaluation Module

DekTec SDI Analyzer and Monitor

DekTec MPEG-2/AVC Video ES and Quality Analyzer

DekTec Transport Stream Analyzer

DekTec Transport Stream Jitter Analyzer

DekTec RF Analyzer in Monitor



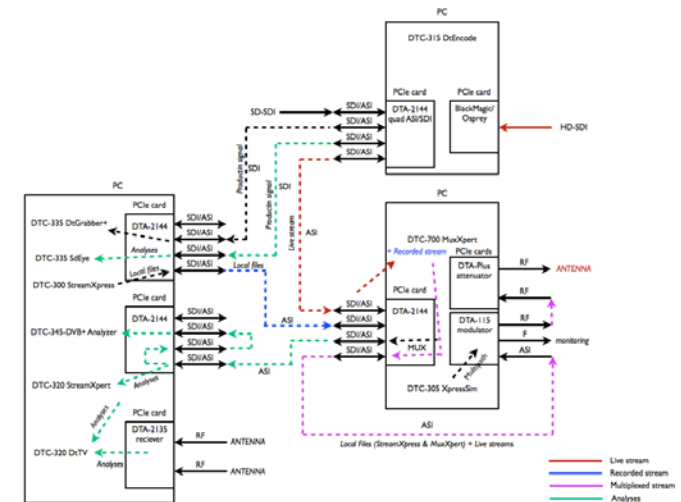
Measurements and analyses

Studio signals: waveform, spectrum, vector, gamut, timing, eye, jitter

MPEG-1, MPEG-2 and H.264 video stream datoteke: objective quality, distortion, VBV buffer, picture and macroblock coding, motion vectors, DCT

Transport Stream Multiplex: PID, services, tables, PSI, DVB-SI, DVB-RCS and ATSC-PSIP tables and descriptors

DVB-T,H spectrum: RF levels, constellation, MER, eye, multipath, channel response



Equipment today 1/2

Audio – video

- 4 × JVC ProHD, 2 × JVC full HD , 2 x Sony HDV cameras
- 5 × Sony BRC300 cameras with remote control
- 4 × video mix
- 2 × audio mix
- 2 × audio-video matrix 16×16
- Lightning equipment and some other smaler things

Apple equipment

- 12 × iMac 27" i7 2,93 GHz, 8GB RAM,
- 5 × MAC Pro (2×6 core 2,66 GHz, 16 GB RAM, 4TB disc, Cinema Display 27", AJA kona 3)
- 4 × MacBook PRO (15,4", C2D 2,8 GHz, 4GB RAM)
- 2 × Mac Mini
- 1 × Xserve (2×4 core 2,66 GHz, 12GB RAM, 3TB HDD, Fiber channel)
- ES_6216SX storage 32TB (Fiber Channel)



Equipment today 2/2

Broadcasting infrastructure (production and measurements)

DVB-T/H RF probe and spectrum analyzer

DVB-T/H VHF in UHF modulator and demodulator

DVB Multiplexer

DVB-T receiver (redistributor, dual channel, diversity mode)

DVB Analyzer

Streaming station

Harris VTM4100 video analyzer (Waveform, Vector, Gamut, Picture, and Timing screen, digital and analog module)

Reference monitors JVC in Sony with waveform and vectroscope

Production system

Video-audio sistem, Apple equipment and broadcasting infrastructure possibilities

Apple equipment allows clustering

TV playout

Based on Apple platform

Apple MAC PRO 12×2,66 GHz, 16GB RAM, 4 TB disks

AJA KONA 3 AV-IO cards

Ingest – Just In

HD-SDI, SD-SDI, component

Audio AES/EBU

Playout – Just Play

play lists

Additional graphic layer

Live transmission - Just Live

2 graphic layers for adding overlays

1 additional video timeline



Our services

Multimedia classes

Production and RTV systems

Recording equipment

Compression

Adobe CS basics

Apple classes (AATCe in RTC)

MAC OS X in MAC OS X Server

Final Cut Studio

iWork

Video production and postproduction

Designing of production systems

Recording and sincronization of e-learning content

Coomer - production of video e-learning content



Lekcije Patent urejanje objavljen izbrisi Jernej Rožac: odjavi

Strani lekcije [-]

Pogoji za pridobitev patenta

Pogoji za pridobitev patenta

- Izum mora biti
 - **nov** (absolutno - na celem svetu)
 - vložiti patentno prijavo pred objavo članka!
- na inventivni ravni
 - že zelo majhne izboljšave so lahko patent
- industrijsko uporabljivi

Pravice iz patenta

Pravice iz patenta

- **Prepovedna pravica**
 - Ustavitev obstoječe kršitve in prepoved bodoče kršitve
 - Uničenje kršičih izdelkov
 - Odškodnina
 - Objava sodbe
- **NIMAMO pravice do uporabe**
- Pravica do razpolaganja s patentom

Posebnosti slovenskega patenta

Posebnosti slovenskega patenta

- Urad podeli patent **BREZ** preizkusa
- imamo razpolagalno pravico
- Nimamo prepovedne pravice
- Traja 10 let (in ne 20 let)

UVOZI

nacin taganja

00:03:43

brez živo ura video

premik tagov

0 s potrdi

Tagi

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Video posnetek

Pot do posnetka FLV (obvezno):
http://fivstream.life.org/fiv/share/KRRR_2011/ceme_t

Pot do posnetka WMV (opcjsko):

shrani

O predavanju [-]

Pravice iz patenta [-]

Pravice iz patenta

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Pravice iz patenta [-]

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FIZIČNOGEOGRAFSKI DEJAVNIKI
Zgradba Zemlje in njena površja

Netnarna zgradba Zemlje

Značilnosti Zemljine notranjosti spremenjajo porazdelitev in produktivnost površine, naj se postopno vidljiva klenjajo tava, kjer se oporekne gostota ocvet. Z vrstno je človek prodiral okoli 13 km globoko, kar predstavlja le 0,3 % Zemljinega polmera.

Tri aspekti nje značilnosti Zemljine notranjosti so zelo pomembni s prostorskega vidika, ki so to notranjost površje na površju. Vemo, da ima notranjost Zemlje veliko vpliva, ki so kako kot prostorskega vidika ali obliki izobrazni na površju.

Značilnosti notranjosti in na glavno **konverktivne vrste**:

1. jama,
2. jaba,
3. skrajca.

1. **Zemljino jedro** ali nile so najpogostejša vrsta (Din in Jekso (Pci). Jaba se deli na: a) notranje jedro, ki naj bi bilo v notranji stanju in b) zunanje jedro, ki naj bi vodilo več snovi in naj bi bilo v tekočem stanju.

2. **Zemljine plašč** se deli na notranji ali spodnji in

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Lecturer:
Zvonka Kos

Date:

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My Lectures Razvoj PHP aplikacij v okolju Eclipse in sistem...

Razvoj PHP aplikacij v okolju Eclipse in sistem za nadzor različic kode Subversion

Marko Štamcar
July 2008

http://videolectures.net

Marko Štamcar <marko@stamcar.com>

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Faculty of electrical engineering,
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