



HDTV OB Van: first experiences

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ag



HDTV OB Van: the first experiences



Sony,
Basingstoke



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HDTV OB Van: milestones

- decision, to invest in a HD OB Van:
approval from the Board of Directors

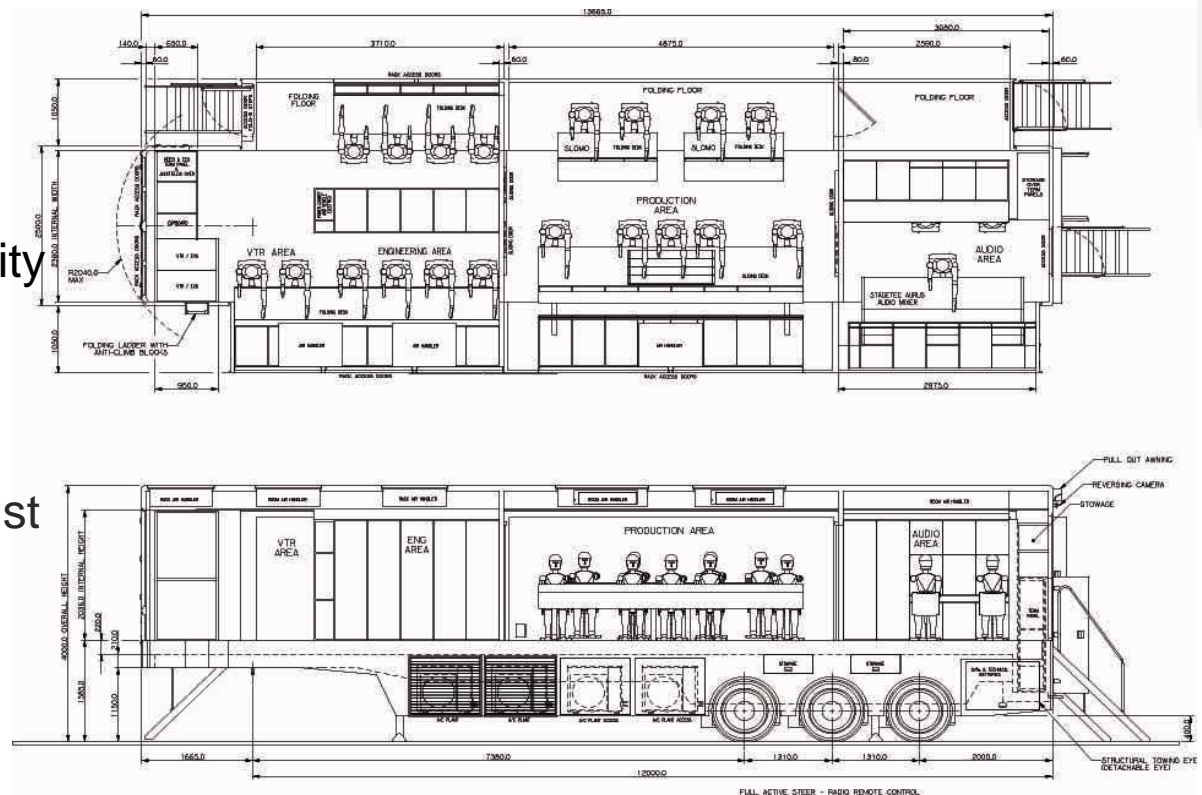
November 04





HDTV OB Van: basic features

- Trailer with two extensions
- 12 - 24 camers
- Multistandard capability
720P/50 (60)
1080i/50 (60)
625i/50, 525i/60
- The infrastructure must be cost effective





HDTV OB Van: milestones

- decision, to invest in a HD OB Van:
approval from the Board of Directors

November 04

- order:
choosed Sony as a general contractor

January 05

- delivery:

October 05 (Week 42)

- first production

November 12 - 05





HDTV OB Van: open questions for tpc

- Viewfinder
LCD or tube?
- Monitoring
conventional (tubes) or Flat Panels ?
- Camera cables
Triax or Fibre ?



HDTV OB Van: the Viewfinder problem





HDTV OB Van:

which type of viewfinder? (comparison Color-LCD vs. tube)

- LCD: good picture quality (brightness, sharpness)
general opinion
- LCD: slight, but visible smear
not a problem for standard productions, but may cause problems in special applications like sports (SloMo, fast camera movements, etc)
- Different effects on external light sources LCD vs. tube monitors
an external light source may cause picture loss, because the screen is complete flat and violet. For some cameramen this situation is unsuitable, for others not a big problem, if a Sports-hood with variable top and side covers will be available.

Conclusion:

- no clear opinion on LCD - Viewfinders
- not enough experiences



HDTV OB Van:

which type of viewfinder / tpc's decision

- Decision for 6" LCD Viewfinders because of the big price difference,
but they are some modifications needed
- proposals for modifications
 - Sports-hood with variable top and side covers
 - more possibilities of mechanical positions (much lower just behind the camera
to reduce the side-effects of external light reflections)
 - a switch on the Viewfinder to have immediate Y-Signal (B/W display)
 - improvement of the mechanics (ex: Knob to fix the mechanical position
is
too small, not possible to move it with gloves)



HDTV OB Van: the monitoring

Basic decision on past experiences:

- for the quality monitoring (camera control, Director, Engineer, etc), we will

use 20" High Definition tube monitors

reason: best possible quality, no delay, color reproduction, etc.

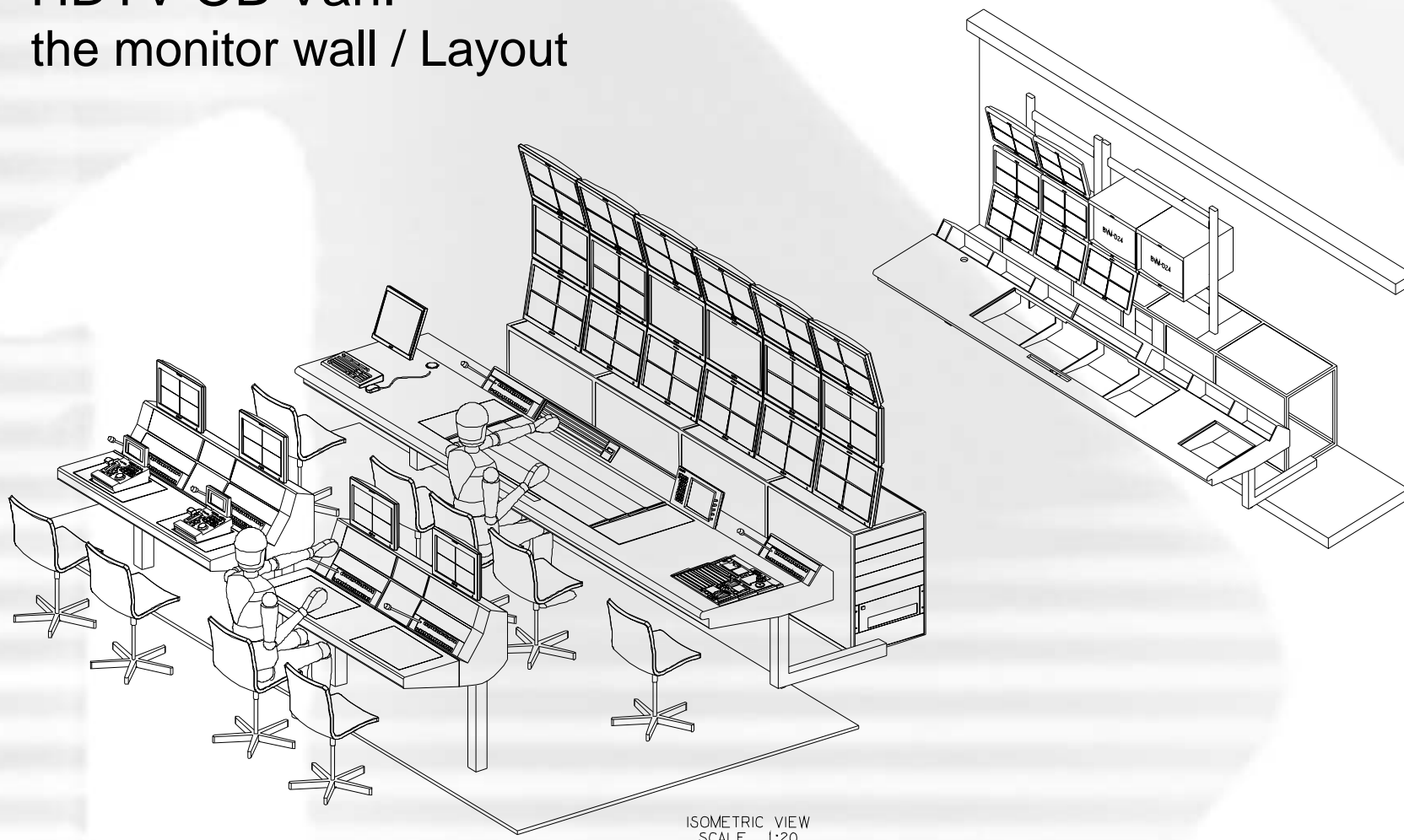
- for the source preview monitoring we will use Widescreen LDC Flat Panels

together with SDI to WXGA Quadsplit converters

reason: low power consumption, small mechanical dimensions, low weight,
good price / performance ratio



HDTV OB Van: the monitor wall / Layout





HDTV OB Van: the monitoring problem





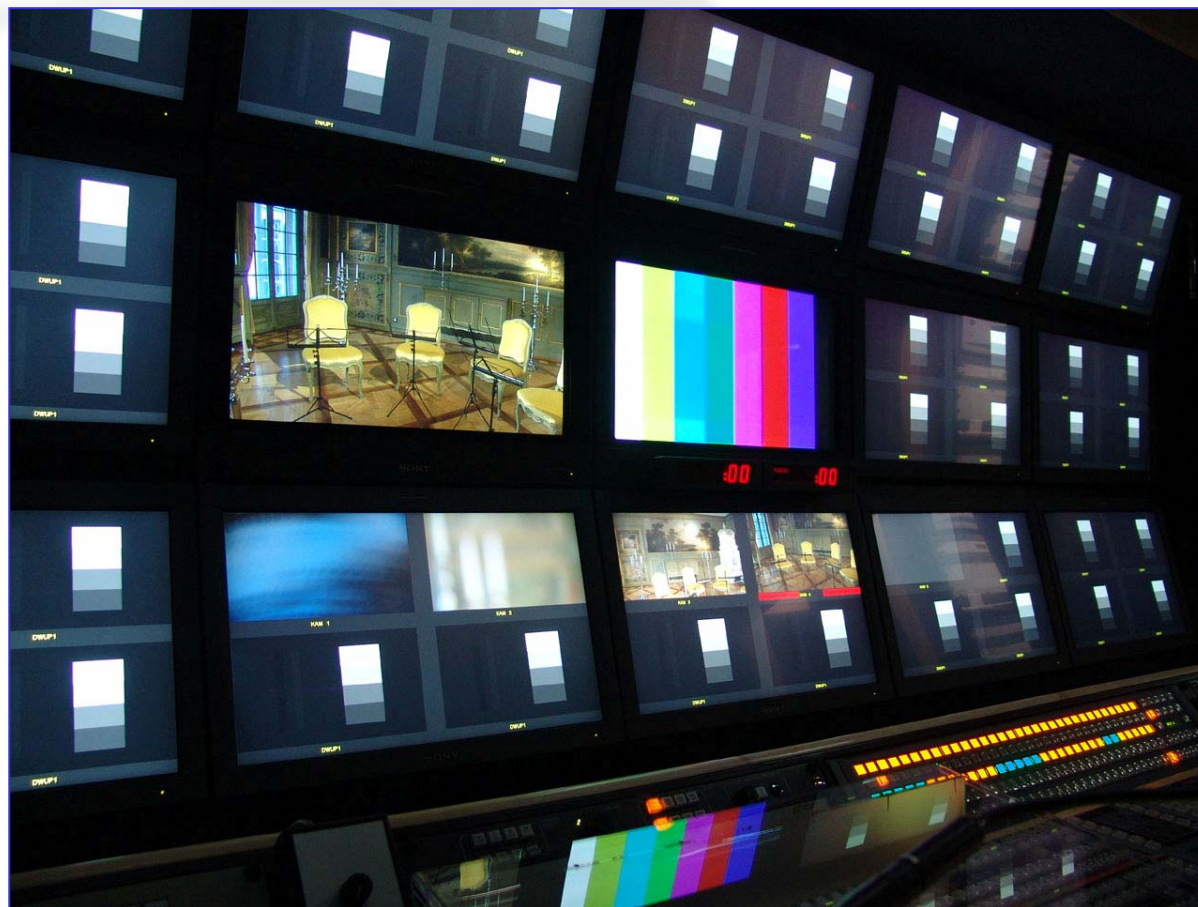
HDTV OB Van: the monitoring problem



Solution:
modification of the
Quadsplit Systems,
that the border width
(wider then the
standard
configuration) and the
border colour (same
colour as LCD - panel)
are adjustable



HDTV OB Van: the monitoring





HDTV OB Van:

Camera cables: Triax or Fiber?

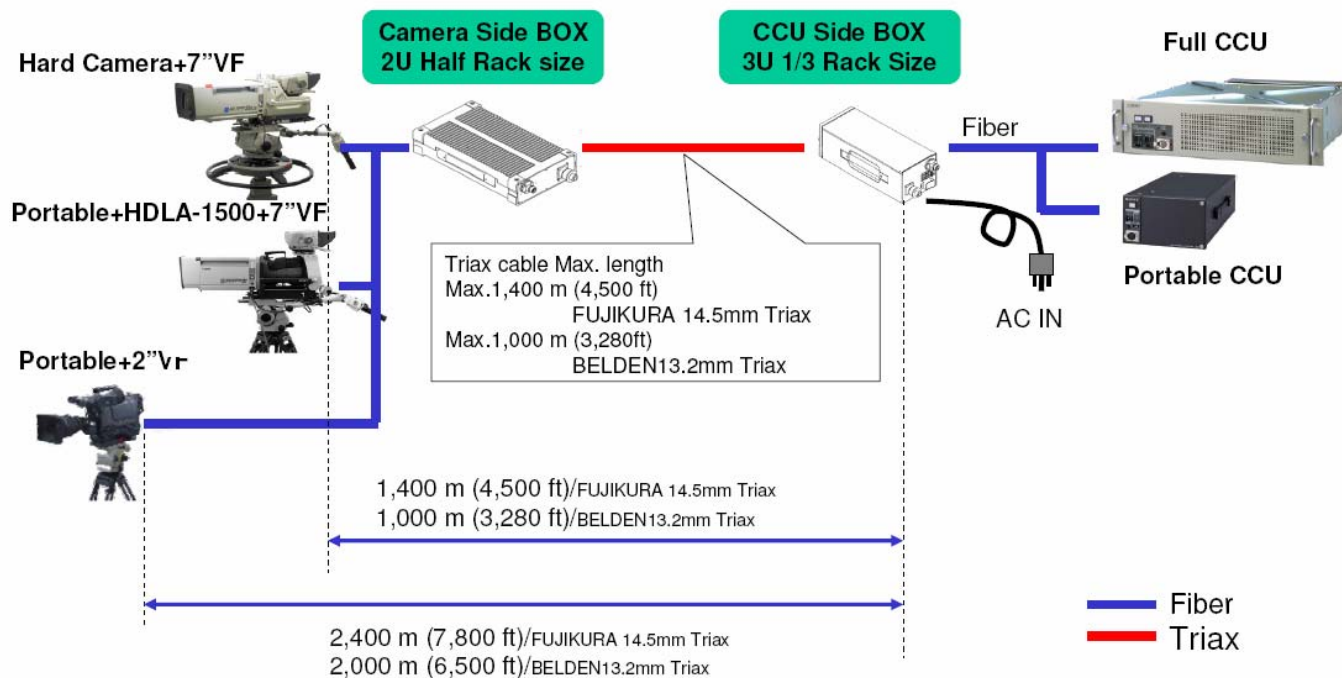
Situation:

- HDTV Studio cameras are available in Triax- as well as in Fibercable versions
the SMPTE fiber-optic cable consists of two single-mode fibers and copper pairs
- for power and startup communication between camera and CCU
- the length of Triax cables is limited (~800m)
in some live- productions we need more then 1'500 meters
- all our stadiums are pre-cabled with Triax cables
we have pre- installed Triax cables between the dispatch point and all major camera positions
- Fiber to Triax adaptors are available
Adaptors are available, but expensive



HDTV OB Van: Camera cables: Fiber to Triax adaptor

HD Triax System Outline





HDTV OB Van:

Camera cables: Triax or Fiber?

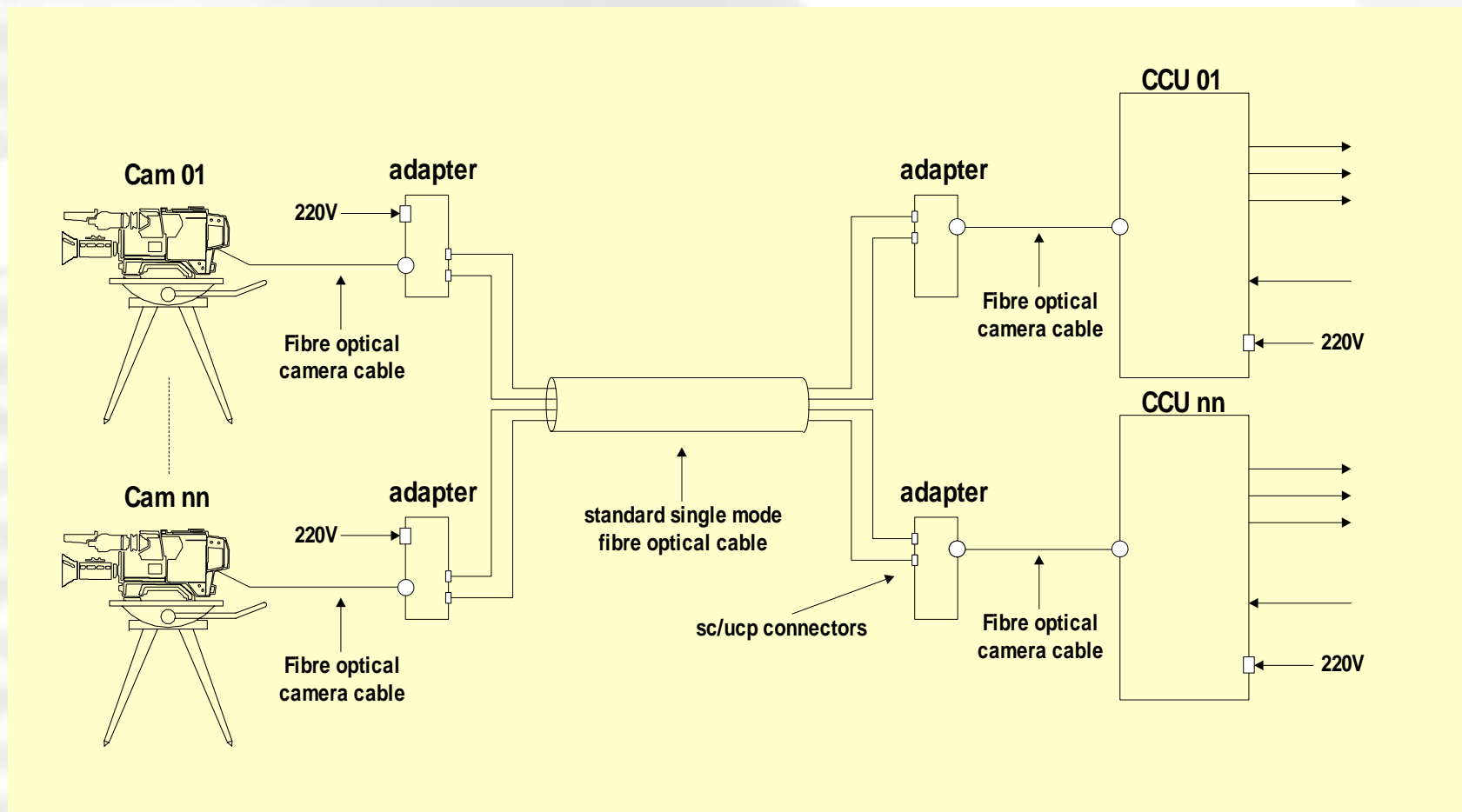
tpc's decision

- we use fiber cable adapters for all cameras
cabling in the stadiums has to be adapted
Problem: the SMPTE Fiber cable is about 3 times more expensive
than the
Triax cable
- solution: we use standard single mode fiber cables
adaptors for SMPTE - cables are available



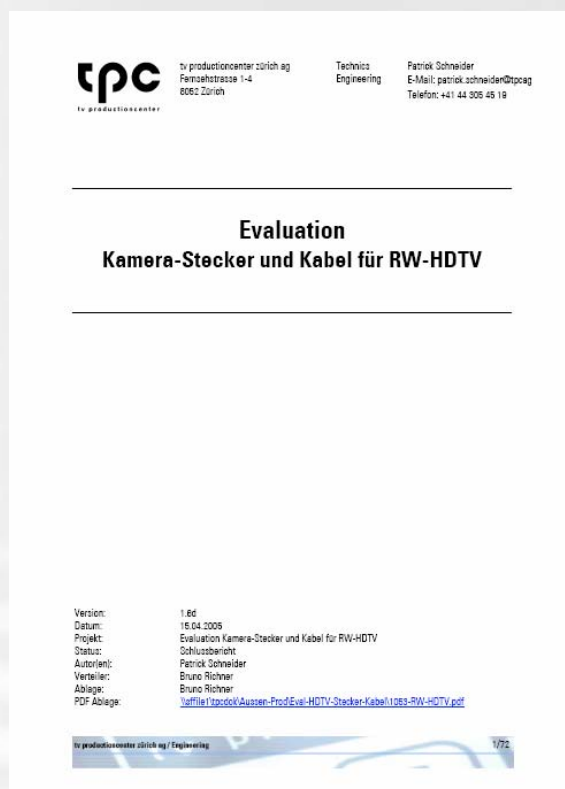
HDTV OB Van:

Camera cables: SMPTE to standard single mode fiber adapter



HDTV OB Van: SMPTE fiber cables: wich connector?

- extensive tests with different connector- and cable manufacturers
Test report: „Kamerastecker und Kabel für RW-HDTV“ is available



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HDTV OB Van:

SMPTE fiber cables: wich connector?

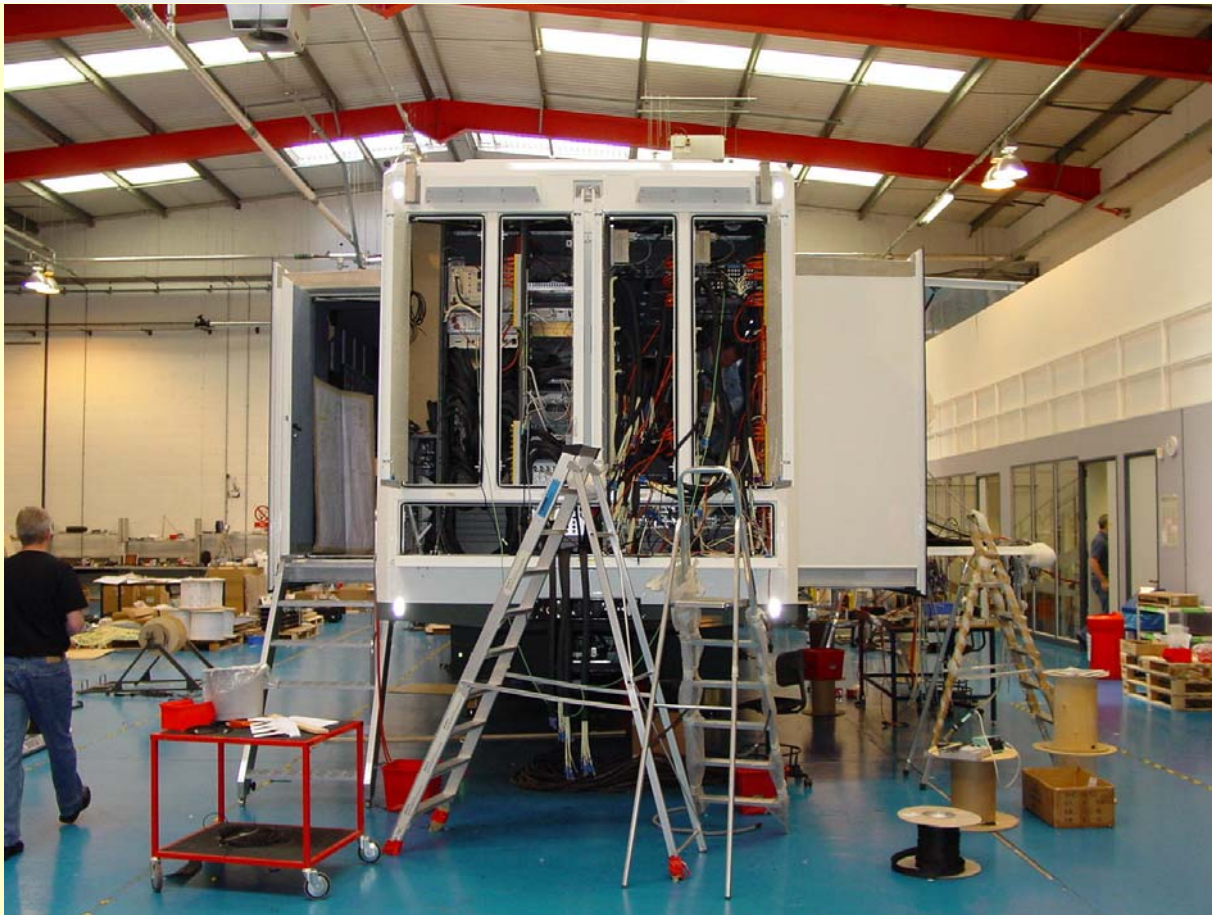
- extensive tests with different connector- and cable manufacturers
Test report: „Kamerastecker und Kabel für RW-HDTV“ is available
- tpc's decision for „Fischer“ connectors
 - It is possible to assemble a connector in the field



- connectors for HDTV fiber camera cables should be standardised

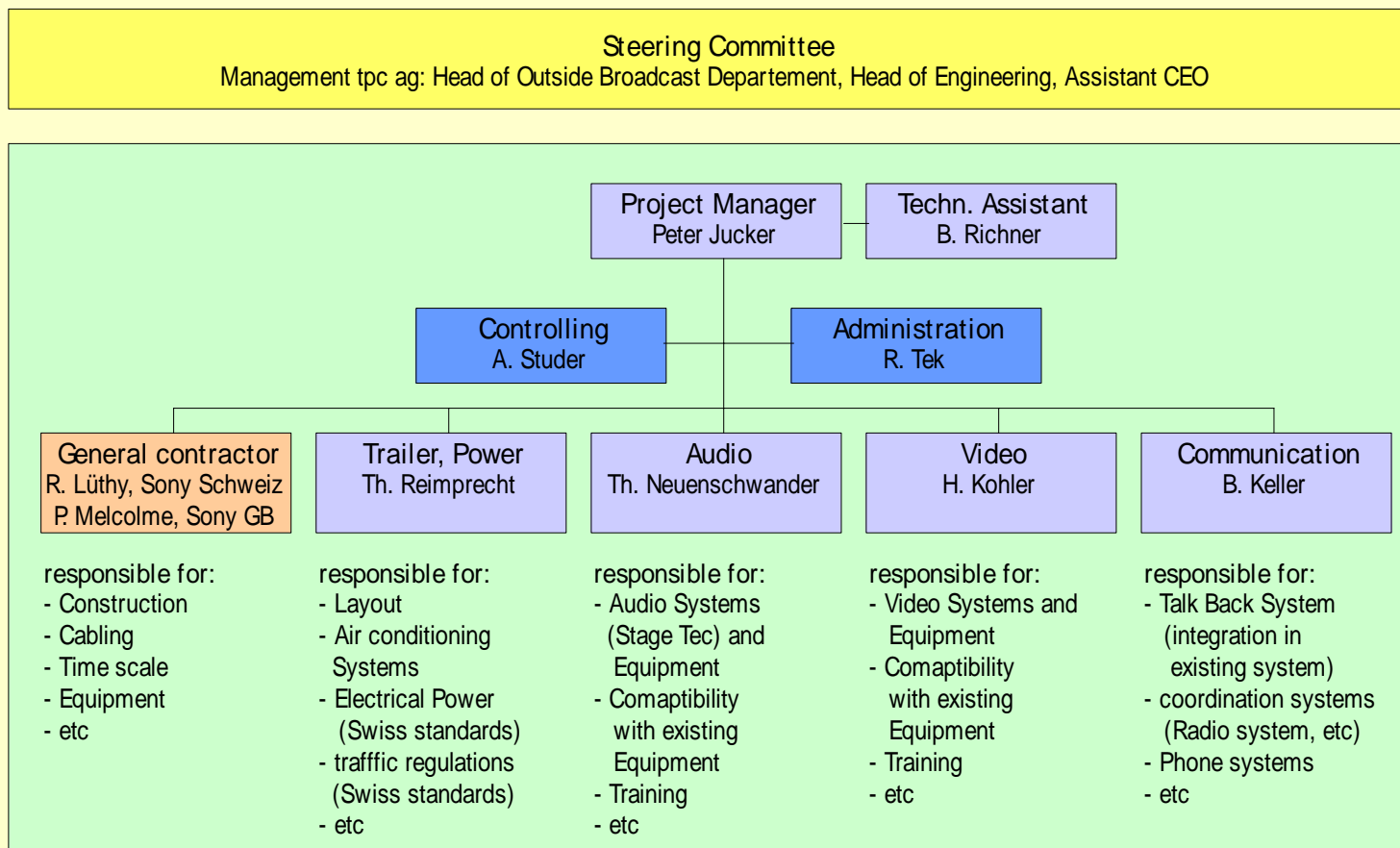



HDTV OB Van: the construction progress





HDTV OB Van: project organisation





HDTV OB Van: project monitoring

- Project reporting: every two weeks
- financial reporting monthly
- steering committee meeting monthly



HDTV OB Van: project development

- no remarkable problems during the entire project
- delivery of OB - Truck in time
- project realized within the budget
- final system approval successfully completed in October by RBT (Rundfunk Betriebstechnik Nürnberg)
 - small problems, for example:
 - audio embedder did not work in 720P > software modification required
 - Chairs cause EMC - problems > replacement of chairs



HDTV OB Van: tpc's first HDTV production





HDTV OB Van: our experiences

- Monitoring still not fully satisfactory. Above all pictures with dark sceneries are on LCD-monitors totaly different to the tube monitor (black is not dark enough). But much more better after software modification on the Quad Split System.
- Viewfinder
Possible compromise: Replacement of some LCD - Panels with tube monitors
still no clear opinion on LCD - Viewfinders, need much more experiences. Some cameramens don't have any problems, others can not work with.
Possible compromise: Purchase of a limited numbers of tube Viewfinders for critical situations



HDTV OB Van:
our next international productions:



- January 05:
Alpine Ski Worldcup
Adelboden
- January 06:
UEFA EURO 2008:
Qualifying Draw
(Montreux)
- February 06:
2006 Olympic Winter
Games Turin
Alpine Skiing



HDTV OB Van:

please visit our OB Van at the EBU Car park

tpc's representers:

- Peter Jucker
Project manager / Outside Broadcast Department
- Christoph Gertsch
Video Engineer, Outside Broadcast Department
- Bruno Richner
Technical assistant / Engineering department
- Hans Peter Staub
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