

# 3D-TV WEBINAR



3D-TV PRODUCTION  
AND FUTURE GENERATIONS OF 3D SYSTEMS

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# What is actually going on in the EBU?

- 1 EBU 3D-TV study group

*([http://tech.ebu.ch/groups/ecv\\_sg\\_3dtv](http://tech.ebu.ch/groups/ecv_sg_3dtv))*

- 2 European projects :

MUSCADE (<http://www.muscade.eu>)

3D VIVANT (<http://www.3dvivant.eu>)

# EBU 3D-TV study group

- Chairman: Andy Quested (BBC)
- Platform for exchange of experience



# Recommendations of 3D

- High level Do`s and Dont`s
- Principal of 3D stereo camera set-up, positioning, riggs
- Camera work techniques
- Storytelling
- Postprocessing, Captioning/graphics, subtitling
- Contribution/Distribution
- Archiving
- Cost issues and budgeting

The MUSCADE project covers the whole 3DTV chain:

- scalable and generic 3DTV representation format, advanced multi-view video coding algorithms → MVD4 format
- intelligent audio-visual capture and production assistance system performing multi-view configuration and providing calibration and metadata → 4-camera rig and a multi-camera version of the STAN (stereoscopic analyzer)

# Multicamera-Rigs



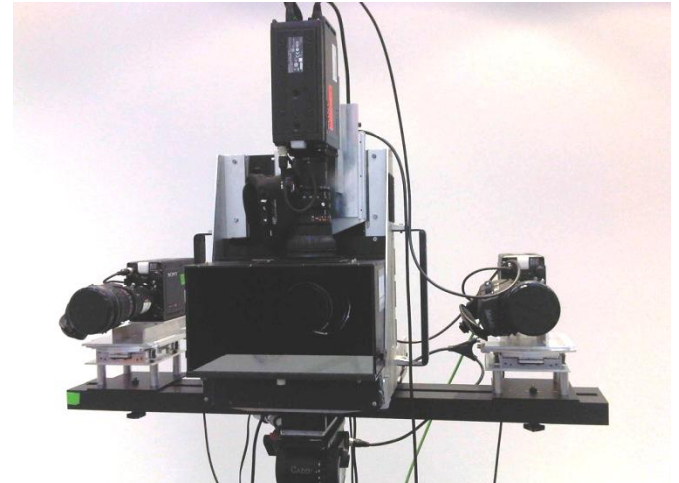
SbS - Stereo-Rig

(<http://3dnewsandreviews.com/uploads/3D%20camera%20rig%20Redover.jpg>)

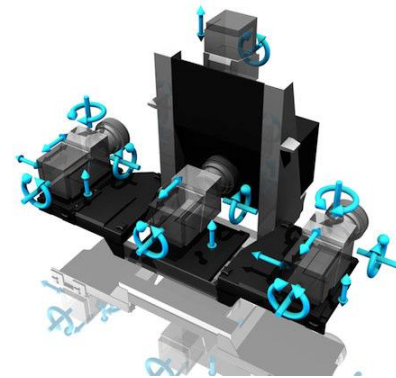


Beamsplitter - Stereo-Rig

([http://www.fdtimes.com/news/wp-content/uploads/2010/03/3DFR\\_HDW750\\_diagonal\\_c300\\_1080m.jpg](http://www.fdtimes.com/news/wp-content/uploads/2010/03/3DFR_HDW750_diagonal_c300_1080m.jpg))



Multicamera - Rig



# Stereo, MVD2, MVD4



Stereo

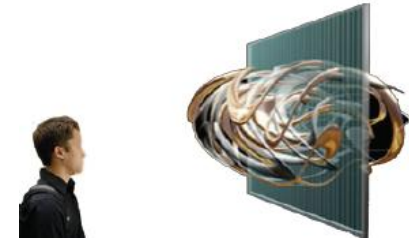


MVD2



MVD4

# 3D VIVANT



- To develop a demonstration of an end-to-end 3D broadcast system which offers fatigue free full parallax 3D viewing, independent of the viewer's position
- Multimodal story-telling





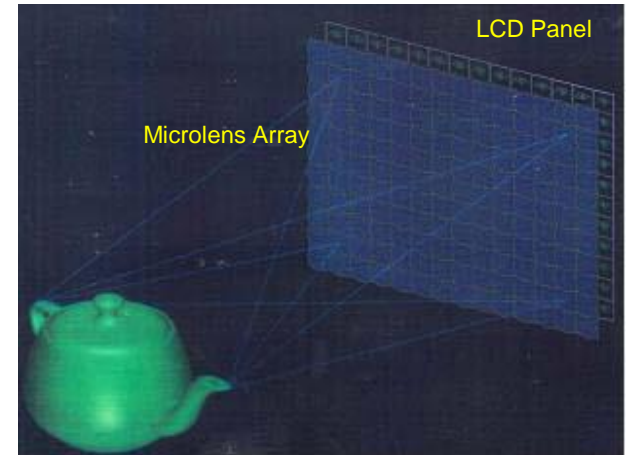
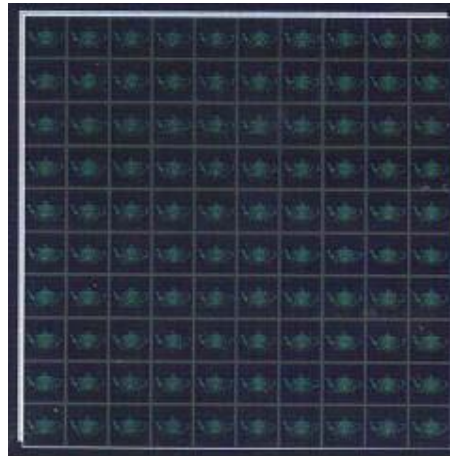
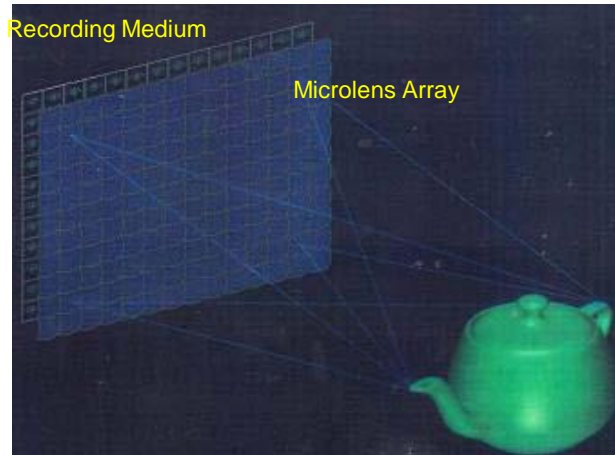
# 3D Vivant system

- 3D Holographic imaging technology =  
single HD camera with lenticular lens array  
+ Holographic display with holographic geometrical principles



3D holographic image of a horseman featuring horizontal parallax with a 600  $\mu\text{m}$  lenticular pitch

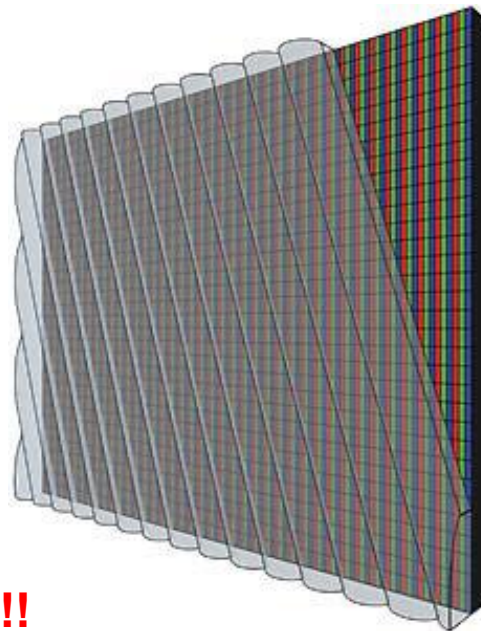
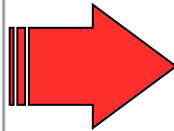
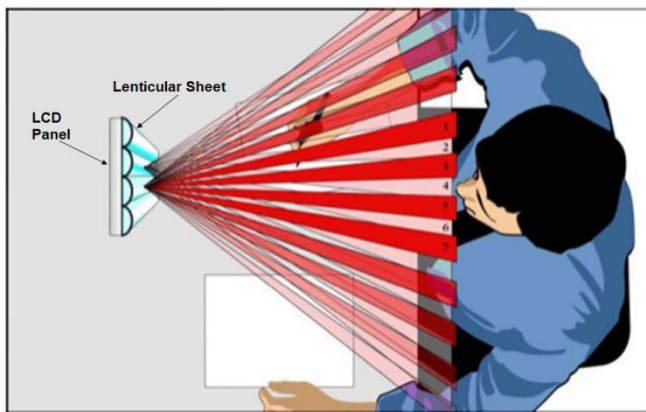
# 3D Holoscopic Displays



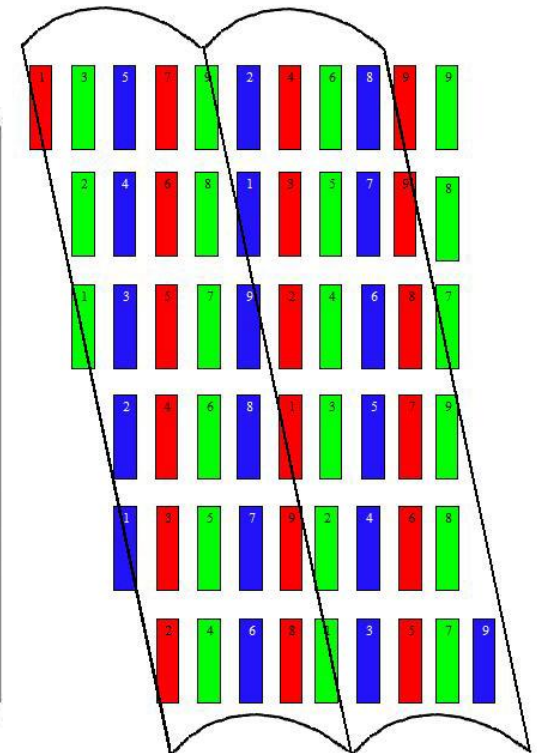
Camera – Array - Display

# Multiview autostereoscopic Display

- The combination of a lenticular sheet/filter and LCD element provides an optically efficient way of making an electronic 3D display which does not require the viewer to wear special glasses
- Multiview Displays with 4k...8k are required to provide HD resolution for each eye!!!!



**PROBLEMS!!!**



And now my last slide for you...

Thank you very much for joining our  
Webinar!!!

Questions?

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