



BskyB 3D

EBU Stereo 3D Workshop

Chris Johns, Chief Engineer - Sky

S3D Broadcast Television

- A new and exciting medium
- The commitment to 3D is showing rewards
 - Investment is a necessity
- The lessons learnt from HD are well founded
 - Content is king
 - The growth trend is akin to HD
- The challenge is to maintain the content quality
 - To educate and encourage learning



Sky 3D

CREATING A VIABLE BUSINESS MODEL AND BUILDING AWARENESS

- Sky 3D launched on the 3rd April 2010
 - EPL Soccer and major live events – now to over 2000 pubs
- Sky 3D consumer channel is now over one year old
 - Re brand complete and creation of Colossus Productions
- Sky 3D is available, for free, to top tier customers offering a flavour of the future on all 3.8M Sky HD STB's



- Sky 3D is broadcasting live events weekly
 - 200th live event next month
- Offers a wide selection of movies, entertainment, factual, & the arts all in fantastic 3D
- Deals in place with MTV, Disney and Discovery for 3D content



The BSkyB 3D platform in the UK

- Acquisition

- Two full 3D Outside Broadcast Trucks

- 15 3Ality based fully adjustable Camera Rigs per unit
 - 8 Mirror
 - 6 Side
 - 1 lightweight
 - 2 Element Technica Quasar Rigs
 - EVS 3D servers
 - Full convergence area
 - 3Ality Stereo Image processors



- Still very labour intensive to create, specialist cameras also needed
 - Different production values to HD 2D



The BSkyB 3D platform in the UK

- Acquisition
 - New investment in transportable Cased systems
 - Three Rig system based on ET Pulsar rigs
 - Sony P1 Camera's
 - Three independent units
 - Small multi Cam environment
 - Mixer / TB / Audio / Image Proc.
 - Flight cased for ease of use
 - Arri Alexa camera pair + ET Quasar system
 - Allows high end content creation.



3D Broadcast Television - BSkyB

- Post Production
 - S3D can take significantly longer to post produce – Especially if shot poorly- finishing tools important
 - Off line
 - Avid
 - FCP
- On Line
 - SGO Mistika
 - Two full On Line suites and One Offline area
 - Flame



3D Broadcast Television - BSkyB

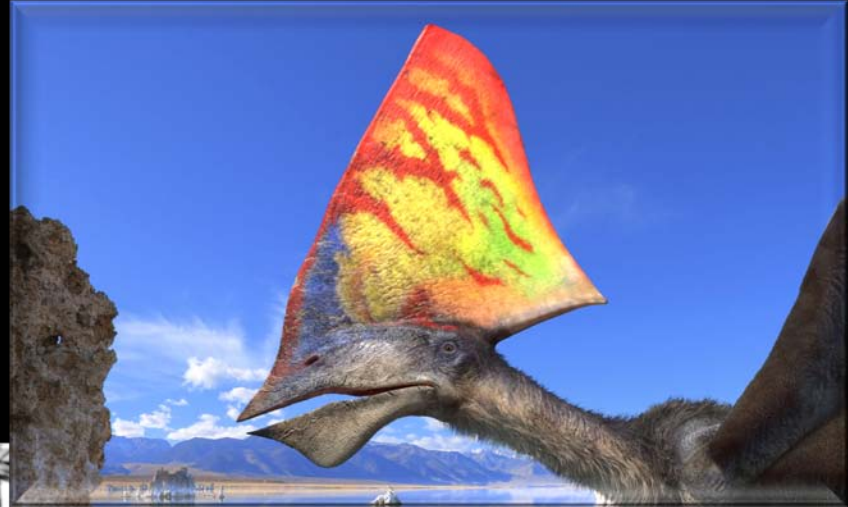
- Content to date
 - Sport and Movies really do benefit from 3D
 - Prime sports events being shot in 3D
 - Ryder cup, Champions league final, Wimbledon Finals
 - Major blockbusters are being made in 3D – many Premier on Sky3D
- Creating Unique content is also key
 - High end programming such as Flying Monsters
 - Short dramas, Arts, Dance, Festivals, Music
- Just in the early days of HD, there has to be a commitment to create



3D Broadcast Television - BSkyB

- Future Projects

- David Attenborough is back...
 - Penguins, Macro Life at Kew Gardens
- New documentaries
- More sport
- Music – festivals and Artists
- Partnerships
 - Small and Large
- Commitment to invest



3D Broadcast Television - BSkyB

- Commitment to training
- 3D is not entirely like HD
 - New skills are needed
 - Creative eye with an understanding of how we perceive perspective
 - Very easy to create a “3D look”, Harder to create a natural 3D programme
- Sky has worked with Skillset and will continue to look at ways to work with the industry to deliver these 3D skills



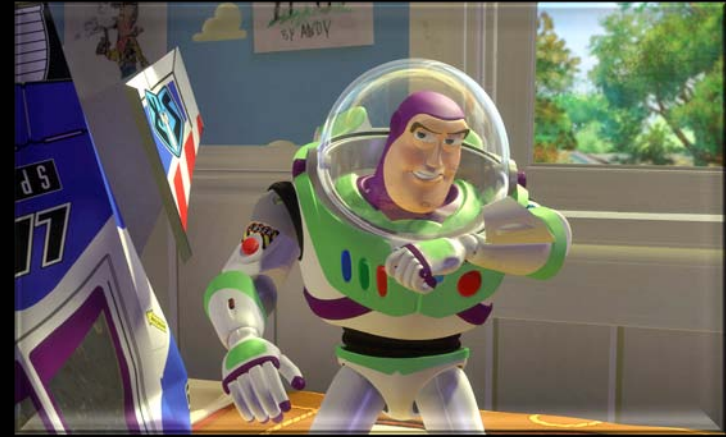
3D Broadcast Television - BSkyB

- The challenges of Live events
 - The English weather
 - Unique challenges
 - The correct camera positions
 - The correct cameras
 - 2D/3D simulcasts



3D Broadcast Television - BSkyB

- Maintaining quality in 3D
 - Keeping the image quality high throughout
 - Quality control – now even more important
 - Not just the HD technical quality - Quantative
 - Now the brain manages stereoscopic images - Subjective
 - Guidelines must be followed, shortcuts avoided
 - Avoid the bad 3D, and don't be afraid to reject it
 - 2D to 3D conversions
 - Unless done with dedication, care and attention – will fail
 - The one stop box is not yet here



3D Broadcast Television - BSkyB

- Maintaining Standards in 3D
 - S3D Standards need to be defined
 - SMPTE
 - DVB
 - MPEG
 - Recommendations and Best Practice
 - BSkyB
 - DTG
 - EBU
 - ITU
 - 3D@Home
- All need to be defined and implemented in a timely manner



<http://www.sky.com/sky3d>

