

10 things you need to know about...



Stereoscopic 3DTV

- 1** Today's 3D Television systems are 'First Generation 3D TV'.
There is more ahead for 3D television, with future generations developed over the coming decades. Each generation will come ever closer to our natural viewing experience.
- 2** The first 3D television broadcasts will use 'Frame Compatible' (FC) formats
The simplest form of 3D TV - 'colour-anaglyph' - may be used occasionally, but it may be too limited in quality for permanent services. 3D TV begins with the eight 'Frame Compatible' formats, specified by the DVB project
- 3** The FC format is arranged to 'look like' an HDTV signal to an HDTV set top box
The FC format is chosen based on the content origination and normal HD delivery formats. Different FC formats will give the best results, depending on whether 1080i or 720p is used for origination and broadcasting
- 4** The FC formats L and R images have lower resolution than normal individual HDTV images
One way or another, some resolution of each L and R picture must be lost. Nevertheless the S3D results seen by viewers can be good; if broadcast bit rates are adequate
- 5** There may be also a case for formats which give 'full resolution' for each L and R image
These would match the quality of the 3D Blu Ray, which uses a 'Service Compatible' 3D TV format. The DVB Project is studying the need for such systems
- 6** 3D TV will not suit all kinds of programme content
The strongest depth effects, and the most effective 3D TV, occur when specific 'production grammar' is used. 3D TV will not replace or supersede normal HDTV, which allows a wider range of production grammar, but may be used when effective



7 First Generation 3D TV viewing is constrained

Viewers need to buy a new 3D display, to wear glasses, and to view the screen standing or sitting upright. If they sense eye discomfort they should remove the glasses

8 More studies are needed on 3D TV and eye discomfort

Experience with the first 3DTV broadcasts will bring experience, but more controlled scientific experiments are needed

9 EBU Members are monitoring 3D TV developments

Though taking part in standardisation discussions, and evaluating 3DTV production issues, EBU Members are not announcing plans for 3DTV services, until more knowledge is gathered

10 The EBU has an S3DTV group, open to practitioners

The group largely focuses on 3D production and production training. The group is chaired by Andy Qusted BBC and managed by Dr Hans Hoffmann EBU and Frans deJong EBU. Check it out on tech.ebu.ch