ITV PLC at this time **do not** have plans to broadcast 3DTV. Its present status is to create a viable *technical and commercial* framework so formal statements can be made regarding any broadcast plans for 3DTV. Accordingly our input/role regarding broadcasting standardisation.

ITV PLC as a producer of content is able to produce stereoscopic material (test as well as final format) and is open to consider production opportunities.

Introduction of 1st Generation stereoscopic television from a FTA broadcaster perspective

Evolution of broadcast audiences & production issues

Colin Smith, ITV PLC, Technical Analyst (colin.smith@itv.com)

UK based free to air commercial broadcaster (established in 1955)

EPG Position 103 for main channel – ITV1

Content Producer (Come dine with me, etc)

Global distribution arm

The only commercial broadcaster to reach mass audiences

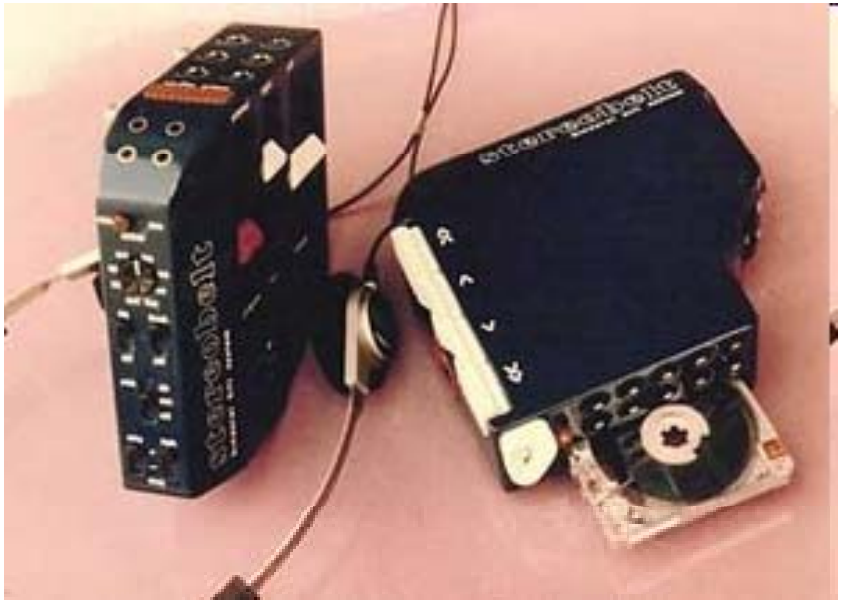
Partner with BBC in FTA platform ‘Freesat’

Work started with 3D in November 2007. Public debut MIPCOM 08

Stance. 3DTV will start off requiring the viewer to wear glasses but we want auto-stereo at the same quality point as soon as possible. Dependent on commercial model.

Never presume ***too much*** what a consumer might find acceptable

Stereobelt: 1972. Invented by Andreas Pavel.



Apple iPod: 2008. Enjoyed by over 170M+ people.

Wiki: “Pavel approached electronics manufacturers such as ITT, Grundig, Yamaha and Philips with his invention, but the companies felt the public would ***never wear headphones in public*** for listening to music.”

What is 1st Generation 3DTV?

Extension of HDTV (same panel)

Full colour per eye

Requires glasses (passive or active)

High quality 3D experience

High quality 2D experience

Required before 3DTV without glasses can move forwards

Issue with the glasses – those funny 3D glasses?

Can you swim 3D?

***If answer = yes** (i.e. you start off with a full 3DTV channel)*

***If answer = no** (i.e. you prefer 3DTV to start very gradually)*

***If answer = you are not ready or wanting to swim at all –** this still affects you*

Issue – this affects your need for the 3DTV content to be still viewed in 2DHD

If you're not ready for a 100% full time 3DTV channel then needs differ

Producing 3DTV means a compromise.

If you believe you are not ready to be able to launch a full time 3DTV channel then it needs to co-exist with your 2D HDTV channel(s).
The production grammar of 3D often differs to 2D productions. With 3D you still can view in 2D but the editing style will differ. Some formats will be affected more than others. Some none at all. HDTV has resulted in compromised 2D consumption (eg Football) yet it is still enjoyable in SD.

Where are we now – this affects how we need to produce?

Display market – significantly HD Ready

Content gap with little HD content

Why? Business model – who pays for it

Focus is required still for 2DHD. 1080P50 for example

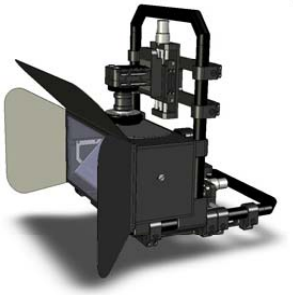
Significant momentum behind stereoscopic content

Yet as what? – a full time new channel, PPV or extension from HDTV

Tipping point or dividing point?


2DHD
backwards
compatible
Evolution approach
to glasses free 3DTV
needs thought now.
Extension of existing EPG
should be possible. Supporting
hybrid channels and roadmap
to full 3DTV channels.
The need to introduce
gradually is vital. Accordingly
3DTV content will have to co-
exist with 2DHD content.
Cannot force viewer to instantly put
glasses on. Needs human action. Key
on remote to activate 3D mode and
be in 2DHD until then.
START
1 MILE

Ways to shoot stereoscopic 3D



Factors affecting production

Live or non live

Test material or final asset

Degree of backwards compatibility to 2D viewing required. FTA vital. PayTV less so.

Lifetime value

Audience – kids show different grammar from long form content

Distance from subject possible

Budget

What's in Common?

All require a technical skill to be entertaining (a lot more than 2DTV)

Skills gap likely for period of years

Making 3D content can be easy but making good 3D content can be considerably more challenging

Parallax to show skill better

Visual Excitement

All shots work. Some better than others

Not everything has to have depth. Just as now with colour broadcasting we often have shots will little colour

Consider from story board to gain maximum benefit

Shots will effect rig type and camera selection

Tells story better – cuts through clutter

Perspective to increase impact

Product Launch

Not just technology. Any launch needs right message. Right business model. Right price point

Content gap is not easy to overcome in volume

Existing migrations to HDTV need to be maintained and any 3DTV content “optional”

Issue over glasses. Press find it easy to put over in a negative light

Issue over evolution. We have yet to bridge the HD content gap. That should not be affected

Issue over what real 3DTV might be. Roadmap from where we are today to lead to that point

Walk, then jog before you can run. Waiting for the future to magically happen overnight will deny your skill set from evolving.

This is possible now. Learn now.

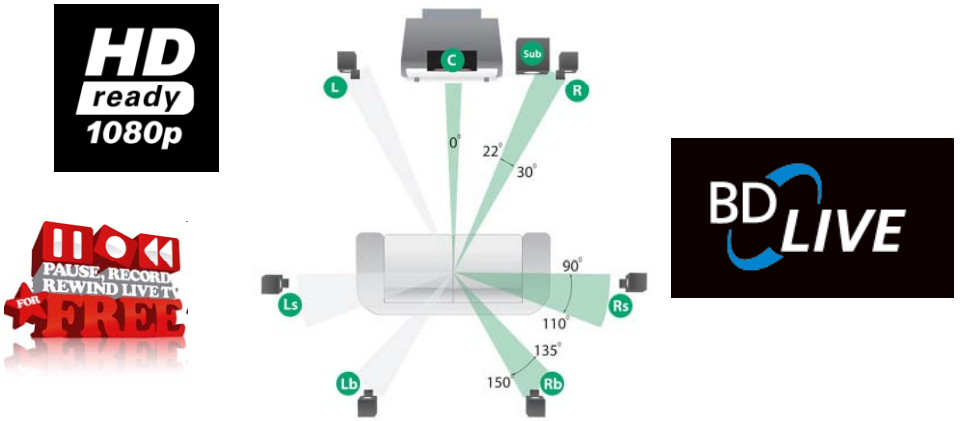
Auto-stereo. Don't stop to deny this – when it is technically and commercially viable.

How can this ever occur if the naming is not considered now?

Issue with backwards compatibility & timing

Quest for highest quality has to be balanced with migration and legacy planning. HDTV was helped by a mix between gaming consoles, BD/HD-DVD and DVB. Ideally the timescale framework should be aligned and in a way that lets the consumer be part of the process.

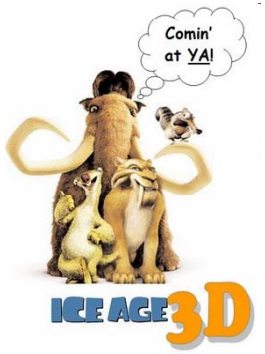
White paper design – a chance to create a new base line



This could be welcomed by all?

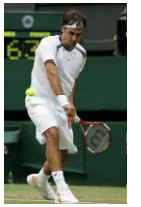
Format Suitability (firsts)

Films



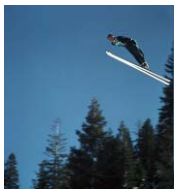
Event Television

Sports







Nature Documentary

2D Archive (2D-3D Conversion)

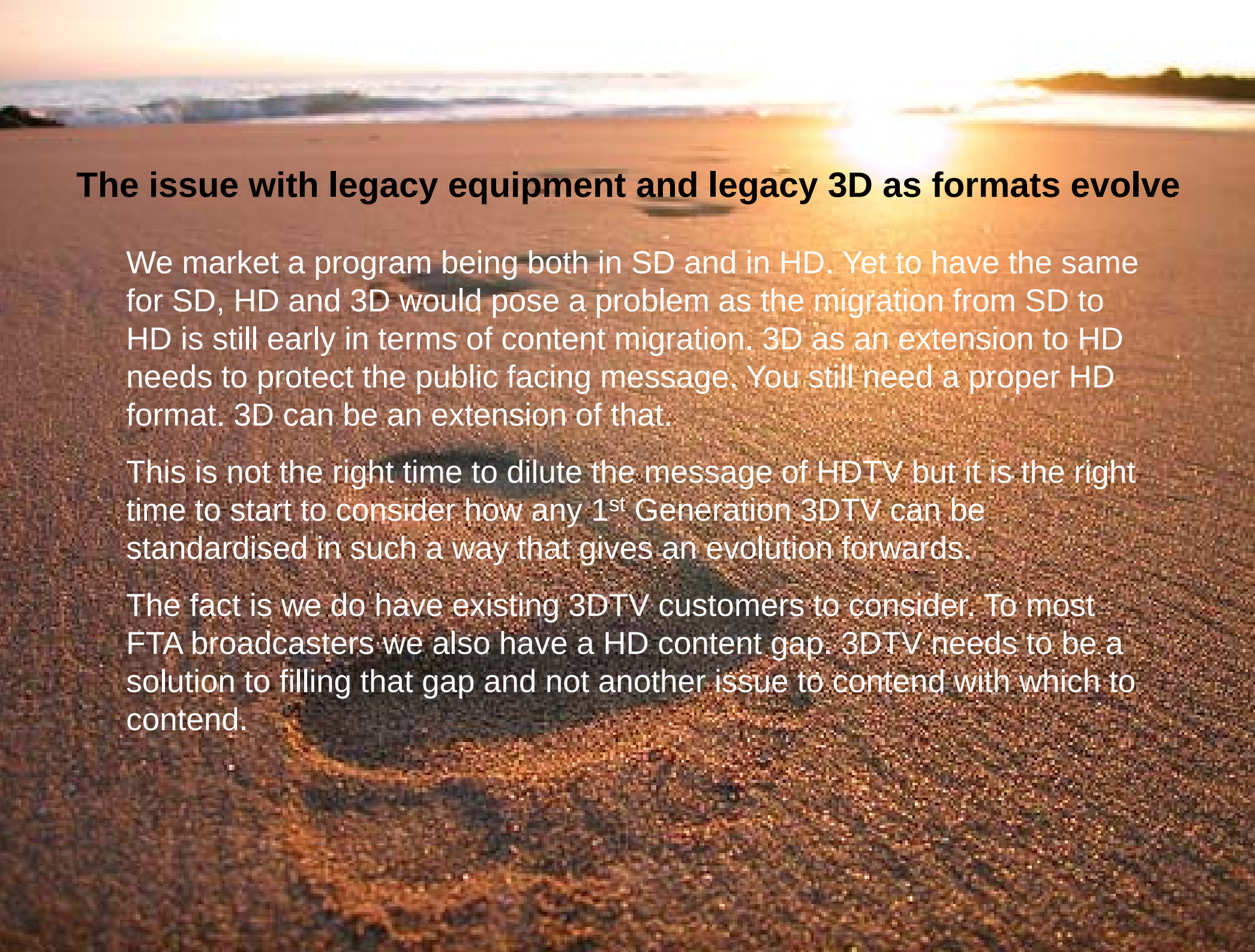
Stage events (Eurovision etc)

Family action (fantasy)

News(?)

CGI (children's and adult)


Physical game show

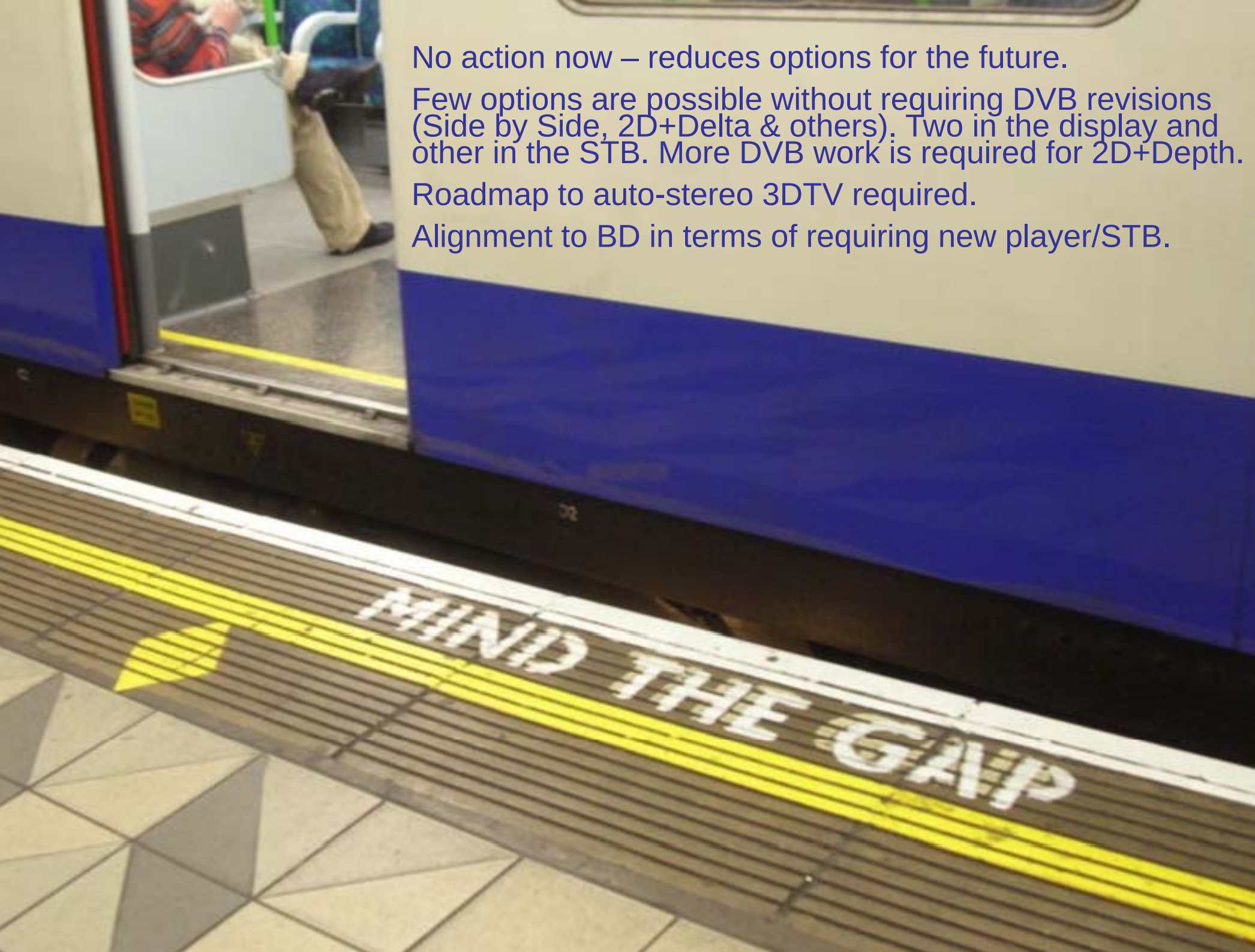



The issue with legacy equipment and legacy 3D as formats evolve

We market a program being both in SD and in HD. Yet to have the same for SD, HD and 3D would pose a problem as the migration from SD to HD is still early in terms of content migration. 3D as an extension to HD needs to protect the public facing message. You still need a proper HD format. 3D can be an extension of that.

This is not the right time to dilute the message of HDTV but it is the right time to start to consider how any 1st Generation 3DTV can be standardised in such a way that gives an evolution forwards.

The fact is we do have existing 3DTV customers to consider. To most FTA broadcasters we also have a HD content gap. 3DTV needs to be a solution to filling that gap and not another issue to contend with which to contend.



No action now – reduces options for the future.

Few options are possible without requiring DVB revisions (Side by Side, 2D+Delta & others). Two in the display and other in the STB. More DVB work is required for 2D+Depth.

Roadmap to auto-stereo 3DTV required.

Alignment to BD in terms of requiring new player/STB.


If we don’t align ourselves we
can all end up losing out.