

Report of SMPTE Task Force on 3D to the Home

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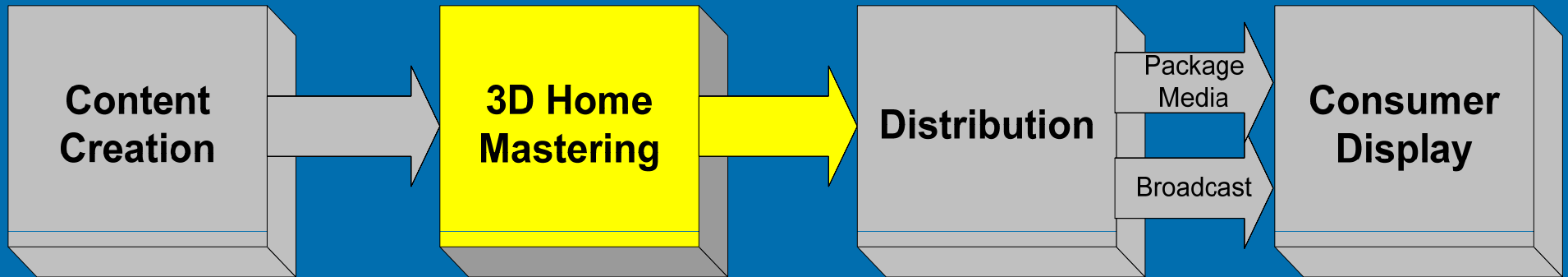


3D Task Force Mission

- What standards are needed?
 - for rapid adoption of stereoscopic content
 - from mastering to consumption in the home on a fixed home display
 - via multiple types of distribution channels
- What standards should be written by SMPTE?
- Liaison with other bodies to ensure other needed standards are written



3D End-to-End Value Chain



3D TF Scope: Home Master requirements with consideration from content creation, distribution and display



Specific Tasks

- Defines the issues and challenges related to 3D distribution for the home market
- Defines minimum requirements needed to overcome the issues and challenges
- Defines the minimum set of standards that would need to be written to provide sufficient interoperability
- Defines evaluation criteria



3D TF Activity

- Formed in August 2008
- 200+ members from 13 countries
 - well represented by the industry
- Monthly face-to-face meetings
- Weekly teleconferences
- Liaison with ATSC, DVB, ITU-R, MPEG, CEA and other industry forums
- All assignments were completed on schedule and the final report was released in March 2009

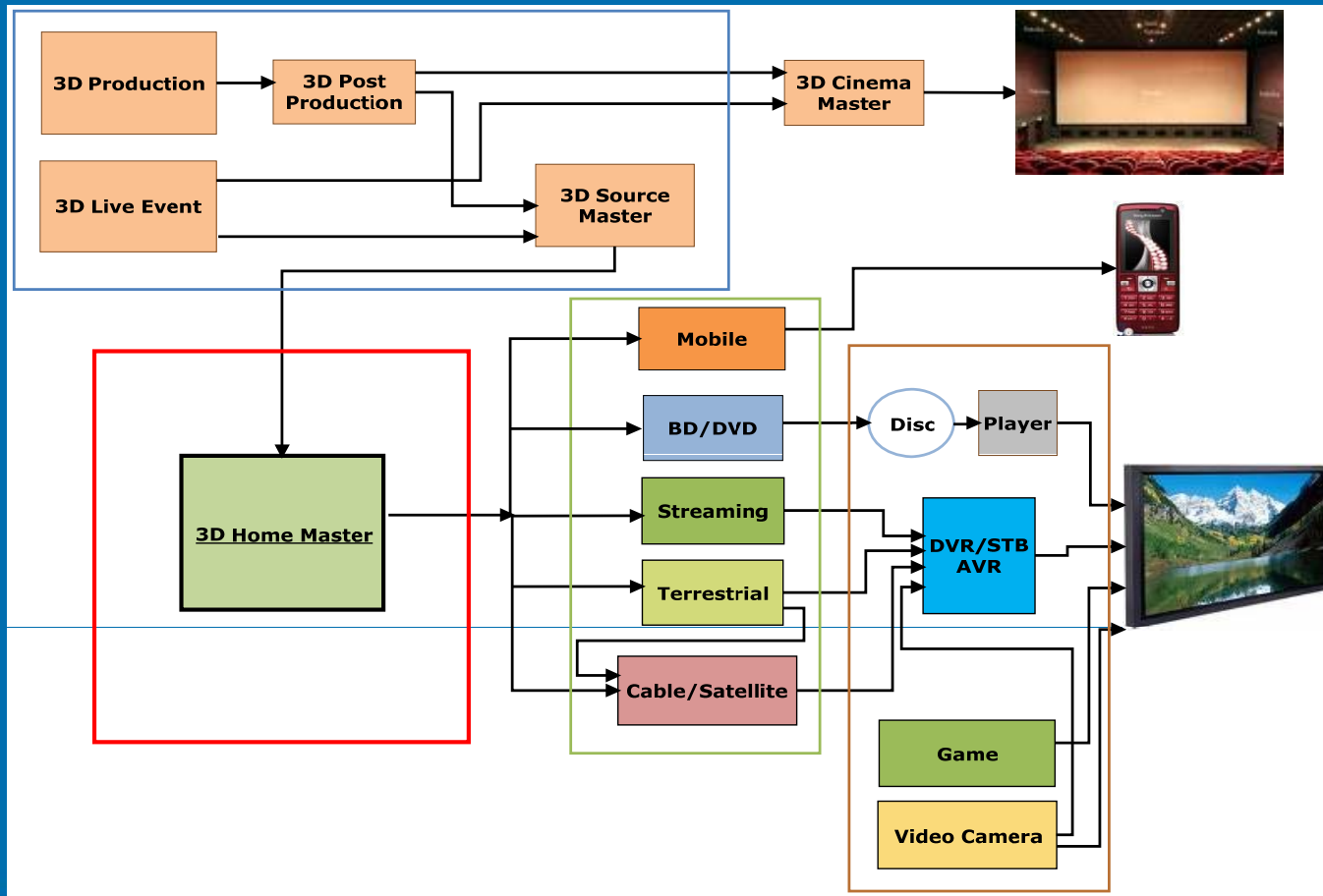


Key Components of Report

- Definition of 3D Home Master
- End-to-end system diagram
- 3D terminology
- Use cases
- 3D Home Master requirements
- Issues and challenges
- Recommendations
- References



3D End-to-End



3D Terminology

- Ensure discussions and documents within the SMPTE 3D TF remain coherent
- Total 80 terminologies in four categories
 - Display types
 - Image format representations
 - Basic concepts
 - Use case terms



Definition of 3D Home Master

- Uncompressed and unencrypted image format or file package derived from a 3D Source Master
- Intended to be used in the creation of 3D distribution data



Use Cases

- Inputs from cable, DTH, Studios, broadcasters, manufacturers
- Define priority and relevance to the 3D Home Master
- 90 use cases
 - in home television viewing
 - interoperability among devices
 - viewing of broadcast content
 - viewing of content on physical media
 - digital distribution
 - viewing on mobile devices



3D Home Master Requirements

- Image content
- Audio synchronization
- Graphical overlays
- Subtitles
- Closed captions
- Backward compatibility with 2D
- 3D metadata
- Ancillary metadata
- Evaluation criteria



Issues and Challenges

- Evolving display technology
- Future distribution channels
- Production and authoring techniques and needs
- Unexplored psychophysical characteristics of the Human Visual System



Recommendations

- Standardize 3D Home Master based on the requirements developed by the TF
- Establish liaisons with other relevant Standards Development Organizations
- Study and investigate solutions to the issues and challenges listed in TF report
- Embark on a review of how 3D content to the home affects the body of SMPTE publications



Next Step

- Report serves as basis to
 - Commence SMPTE standards development in June 2009
 - content format specifications
 - possible packaging specifications for distribution
 - Commence other relevant studies as timing may dictate
- Report has been sent to other interested SDOs



To purchase the TF report:

<http://store.smpte.org/product-p/tf3d.htm>

To download the TF report:

SMPTE website/Member Area/Standards
Community (member-only)



Thank You

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