

# VRT MEDIA LAB

keynote

**"3D!".... Is it here to stay?**

**Kommer Kleijn SBC**  
[www.kommer.com](http://www.kommer.com)  
[kommer@kommer.com](mailto:kommer@kommer.com)  
[Kommer@StereoGrapherS.net](mailto:Kommer@StereoGrapherS.net)

BARCO demo zaal, Kuurne, 10 december 2009

# Kommer Kleijn SBC

- Visual Effects Cinematographer - Stereographer
- Worked on 12 stereoscopic productions starting '98
- Used a choice of different 3D camera systems
- Co-designed a stereoscopic camera
- Collaborating with camera development projects
- Personal stereoscopic screening room
- Member of UP3D and StereoGrapherS.net
- SBC, IMAGO, EDCF, BKSTS, SMPTE
- Free lance consultant and stereographer

# Stereographic Options

- Giant screen 3D
- Around the screen 3D
- Mobile Phone 3D

# Giant Screen 3D

- Works well when screen borders are not much present to the viewer
- Of the three, it mimics natural human vision best "as if you were there"
- Viewers eyes more often dynamically converge during the show
- Reproduces real size of close actors and objects, resulting high emotional impact
- Shot and projected mostly parallel (non converged) and with 60-65mm interaxial

# Around the screen 3D

- Mandatory option when screen borders are present to the viewer forming a window (cinema back seats and TV)
- Viewers eyes stay referenced on the screen plane (unless floating windows)
- All depth is orchestrated relative to the screen window (often mostly behind it)
- Apparent size of actors and objects varies often (like it does in 2D movies)
- Both camera interaxial and convergence (or shift) are set for almost every setup

# Mobile Phone 3D

- Screen size very small in comparison to human interocular: Classical stereography often inefficient.
- Only a limited depth feeling can be generated because of the very small window: high risk for retinal rivalry.
- Vibrating displacement 3D quite appropriate (also because watchable without glasses)

# Options Incompatibility

- The higher the compatibility required the more limited are the stereographers options (the duller the 3D)
- Cinema Theater 3D is the most difficult to manage.
- Mobile Phone 3D most limited in result.
- Giant screen 3D the most rewarding but works well only if many conditions are met.

# Cinema Theater 3D is the most difficult to stereograph.

- Long form and relaxation expectations make that eye strain must be avoided at all cost.
- Cinema Theaters have different sizes and shapes.
- Front customers close to screen: high risk for positive disparity incomfort
- Back customers far from screen: strong window (sometimes theater) presence
- Actual market requires 2D compatibility

# "3D!".... Is it here to stay?

- Compared to the 3D vague of '52-'54 we have significantly better, but not perfect, equipment
- Digital post production is a big help for comfort
- Digital projection is a big help for comfort
- IMAX 3D (immersive) helped promote 3D
- 3D in theme parks and museums helped
- More installed 3D cinema theaters today than ever before in history
- First serious interest from the TV industry
- Blue Red Bad - abandon old anaglyph 3D

# Stereoscopic Challenges

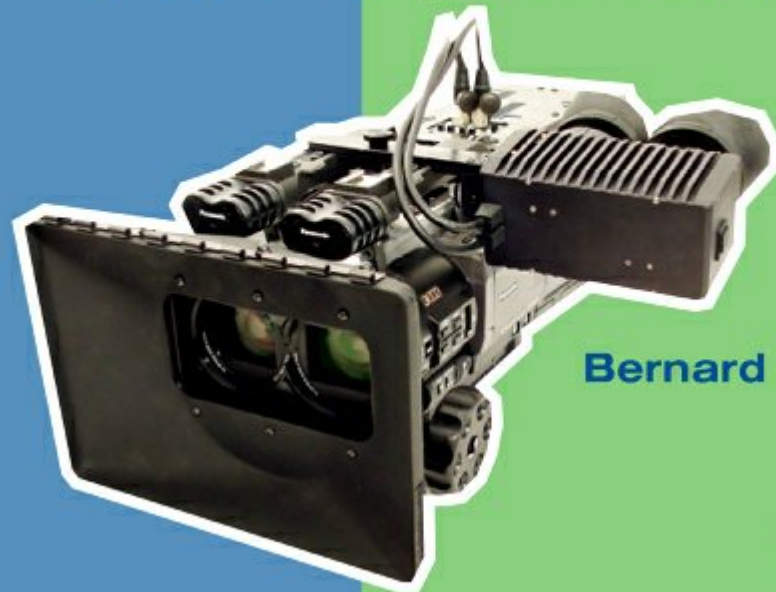
- The four kind of screen sizes (giant screen cinema screen, TV screen, phone screen)
- Non giant screen, 3D window compromises
- Limited and uneven viewer experience levels
- The low theater projection light levels
- Lack of stereographic production experience
- Lack of TV signal standardization
- Need for 2D compatibility
- 10% have impaired stereoscopic perception

# 3D

# Movie Making



## Stereoscopic Digital Cinema from Script to Screen



Bernard Mendiburu

DVD  
ROM  
INCLUDED





# Thank you

nWave Digital - Brussels

ACE Digital House - Brussels

Carrillon Producers - Amsterdam

KADENZA - Brussels

# Thank you

Thank you for your attention

Please feel free to contact me on

[kommer@kommer.com](mailto:kommer@kommer.com)

**Kommer Kleijn SBC**

[www.kommer.com](http://www.kommer.com)

[kommer@kommer.com](mailto:kommer@kommer.com)

[Kommer@StereoGrapherS.net](mailto:Kommer@StereoGrapherS.net)

BARCO demo zaal, Kuurne, 10 december 2009