

**CEA**  
Consumer Electronics Association

[www.CE.org](http://www.CE.org)

### CEA 3D Update

20 May 2009  
Brian Markwalter

### CEA Activities

- Market Research in conjunction with the USC Entertainment Technology Center
- Standards
- Consumer terminology (future)
- International CES




[www.CE.org](http://www.CE.org)


Producer of 

### CEA & ETC Research Key Insights

- 3-D is showing some momentum into the home and US households are taking note
- Notably similar to HDTV, experiencing 3-D first-hand impacts how consumers think about 3-D content and the 3-D experience
- While still in its infancy, a viable consumer market is emerging for 3-D




[www.CE.org](http://www.CE.org)


Producer of 

### Who's Watching 3-D?

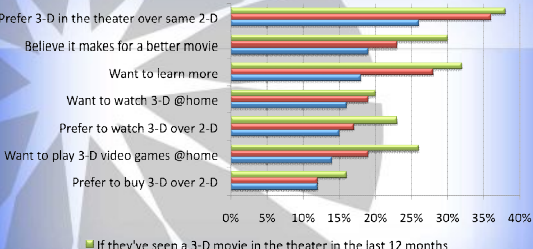
- 17% of US Adults (41M) say they've seen a 3-D movie in theater in the last 12 months
- They tend to be younger (18-29 years old)
- They tend to have children in their household
- They tend to live in the top 20 DMAs




[www.CE.org](http://www.CE.org)

Producer of 


### Seeing is Believing



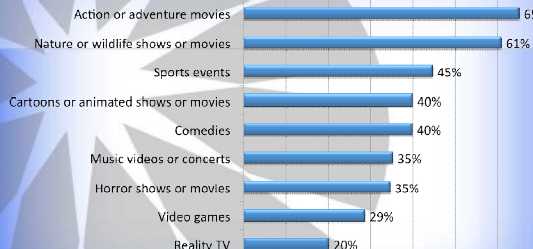
Category	If they've seen a 3-D movie in the theater in the last 12 months	If they've heard, read, or seen something about 3-D	Overall
Prefer 3-D in the theater over same 2-D	~38%	~28%	~25%
Believe it makes for a better movie	~35%	~22%	~20%
Want to learn more	~32%	~28%	~25%
Want to watch 3-D @home	~28%	~22%	~20%
Prefer to watch 3-D over 2-D	~25%	~18%	~15%
Want to play 3-D video games @home	~22%	~18%	~15%
Prefer to buy 3-D over 2-D	~18%	~12%	~10%




[www.CE.org](http://www.CE.org)

Producer of 


### Broad Interest Across Possible 3-D Genres



Genre	Interest (%)
Action or adventure movies	65%
Nature or wildlife shows or movies	61%
Sports events	45%
Cartoons or animated shows or movies	40%
Comedies	40%
Music videos or concerts	35%
Horror shows or movies	35%
Video games	29%
Reality TV	20%



[www.CE.org](http://www.CE.org)

Producer of 

### CEA Standards Activity

**R4 Video Systems Committee**

- CEA 3D Task Force
- R4.8 DTV Interfaces Subcommittee

*"Research areas for standardization in the area of 3D technology."*

CEA www.CE.org Producer of CES

### R4-3DTF Discovery Mtg. Topics

Liaisons (3D@Home, SMPTE, ITU, ISO, IEC)
New work under R4?
CEA-861-E 3D Update
R10 consumer installation/use issues
Define class of interface for 3D consumer products
Define terminology for 3D video
Standard names for 3D video parameters
Broad specs for 3D (broadcast, cable, satellite, PC gaming, etc.)
Eyewear specifications
On-screen display specifications
Signaling metadata for 3D video
Mixed 2D/3D viewing
Closed and/or open captioning for 3D video
Definitions for 3D audio (different speaker placement from non-3D)

CEA www.CE.org Producer of CES

### R4-3DTF Topics Prioritized

Now	Later
Liaisons (e.g. 3D@Home, SMPTE, ITU, ISO, IEC)	Standard names for 3D video parameters
Define terminology for 3D video	Broad specs for 3D (broadcast, cable, satellite, PC gaming, etc.)
CEA-861-E 3D Update	R10 consumer installation/use issues
Signaling metadata for 3D video	On-screen display specifications
Eyewear specifications	Mixed 2D/3D viewing
	Closed and/or open captioning for 3D video
	Definitions for 3D audio (different speaker placement from non-3D)

CEA www.CE.org Producer of CES

### Outcome of 3DTF Report May 12th

- The general scope of CEA's work should focus on the interfaces between consumer sources, sinks, repeaters, converters, and glasses. CEA should not address the selection or recommendation of a specific 3D encoding format for use in the content creation, production or distribution chain.

CEA www.CE.org Producer of CES

### Outcome of 3DTF Report May 12th

- 3DTF recommended that R4 ask R4.8 to consider extending CEA-861 to support the carriage of 3D content and bi-directional 3D format signaling.
  - Approved by R4
  - Now in R4.8's court

CEA www.CE.org Producer of CES

### Outcome of 3DTF Report May 12th


- Investigate the development of standards for 3D glasses including interface, signaling, setup, control and polarization
- Approved as a **new working group** under R4

CEA www.CE.org Producer of CES

### Outcome of 3DTF Report May 12th

- Investigate the need to document terminology that conveys interoperability to the consumer
- Decided not a standards issue
- Sent to CEA's Video Division

3D Ready?



CEA [www.CE.org](http://www.CE.org) Producer of **International CES**

### Coming Up

## 3D Techzone at International CES, January 2010



CEA [www.CE.org](http://www.CE.org) Producer of **International CES**