

# Quixel Research Home Entertainment Survey Series™

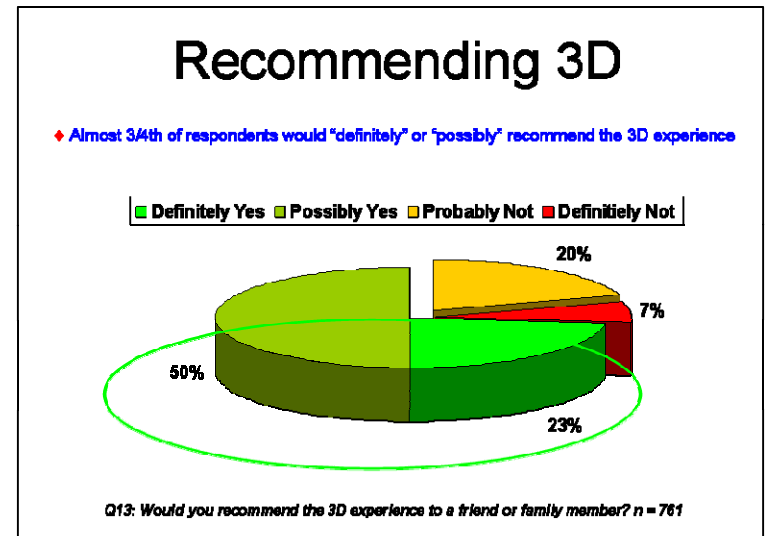
## ***3D Internet Survey: 3D Displays for Mainstream Consumers***



# Research Finds 75% of Consumers Willing to Recommend 3D

## ***3D Internet Survey Answers:***

- ◆ What is the overall opinion of 3D?
- ◆ What are the advantage and disadvantages of 3D movies and games?
- ◆ What type content is expected on a 3D TV at home?
- ◆ Trade offs for 3D technology – what about those glasses?!?
- ◆ How much more are consumers willing to pay for 3D at home?
- ◆ What type of display, and size, is expected for 3D?
- ◆ What is the level of interest for 3D in the home and when is 3D TV expected?
- ◆ Where does brand fit into the 3D equation?



# First Independent Study to Quantify Consumers' Perspective and Opinions on 3D

## **Objectives/Scope:**

- ◆ The primary aim of the **3D Displays for Mainstream Consumers** is to enable display manufacturers, component suppliers and content providers to determine consumers' **level of acceptance** of the current 3D technology available for home entertainment usage.
- ◆ Understand the 3D market opportunity from the **consumer perspective** vs the supply side; identify if 3D is a niche market (gimmick!) or a real opportunity.
- ◆ Clarify how consumers **perceive 3D technology fitting into their lives**, the drivers for purchase as well as the potential impact of 3D on content consumption and display purchases. Find out if the glasses are a true barrier for adoption and will consumers pay more for an experience without glasses.
- ◆ To assess the effect of **price and purchase** when consumers consider a 3D display; unlock the keys the building awareness and setting expectations.



# Methodology/Design

## ***Methodology:***

- ◆ A U.S. representative panel was used for email recruitment of potential participants. This panel is refreshed, cleaned, and updated on a regular basis. Email invitations conform to the Interactive Marketing Research Organization (IMRO) code of ethics and meet U.S. anti-spam legal requirements for non-contract opt-out.
- ◆ Respondents were required to own an HDTV – LCDTV, PDP, RPTV, Front Projector
- ◆ Age minimum of 18 yrs old and HHI minimum of \$30K
  - ◆ The 47 question online survey took approximately 12 minutes to complete
  - ◆ Field dates were October 17-24, 2008
  - ◆ The total generated sample is 761



# Respondent Profile

- ◆ Average respondent age is 44, and 64% are 25 to 54 years old
- ◆ 53% male and 47% female
- ◆ 30% of respondents have HHI between \$50K and \$75K
  - \$88K is the average for the sample
- ◆ All respondents had an HDTV, with the vast majority owning a PDP or LCDTV; close to 45% owned either an HD Cable or Satellite Box and more owned an HD DVD than Blu-ray player
- ◆ 50% of respondents stated that they are not planning to purchase any of the typical CE products (aided) in the next 12 months; 17% mentioned purchase consideration for LCDTV or Blu-ray and 13% mentioned Nintendo Wii
- ◆ The study included consumers from 47 states



# Results Overview

- ◆ **3D Product Awareness:** A significant number (75%) of respondents have had a 3D experience and said that they would recommend 3D to friends or family.
- ◆ **3D Interest/Purchasing:** Close to half of those surveyed are interested in watching 3D at home, with younger respondents, as well as those who had seen a 3D movie recently, are even more interested than the overall sample.
- ◆ **3D Timing:** Product planners be advised - over a third of those surveyed expect 3D TV within 1-2 years. Almost half cited that they have a high preference to receive 3D content via their cable/satellite provider and Blu-ray disc was their most preferred method.
- ◆ **3D Opinions:** 3D is not a gimmick or fad for many surveyed. Both positive and negative opinions are provided; respondents describe 3D as an image or experience with depth, that is realistic and lifelike. It is an immersive and improved way to experience a movie or game.
- ◆ **3D Glasses:** Yes, they are a distraction but not enough to hinder consumers' interest in purchase. Several sub groups will pay more for a 3D TV without glasses, but even a 3D experience with glasses is something consumers are interested in for the home.
- ◆ **3D Movies and Games:** Over half of respondents agreed that 3D makes movies and games more enjoyable, with gamers finding the 3D experience slightly more enjoyable. For both gamers and TV watcher, 3D offers compelling entertainment and very few associate 3D with nausea, dizziness or eye fatigue.



# Quixel Research Home Entertainment Survey Series™

## 3D Internet Survey Questionnaire



1. Which of the following categories includes your age?

- Younger than 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-60
- 61-70
- 71+

2. Do you own any of the following products (check all that apply)

- LCDTV
- Plasma TV
- Rear Projection TV(CRT, DLP, 3LCD DILA, SXRD)
- Front Projector
- None of these

3. Do you own any of the following products (check all that apply)

- Blu-ray Player
- HD DVD Player
- Home Theater System (with 5 or more speakers, plus subwoofer, for surround sound 5.1 or higher)
- Xbox 360
- PS3
- Nintendo Wii
- Gaming PC (Alienware etc.)
- HD Satellite Box
- HD Cable Box
- None of these

4. Within the next 12 months, are you considering buying any of the following products (check all that apply)

- LCDTV
- Plasma TV
- Rear Projection TV(CRT, DLP, 3LCD DILA, SXRD)
- Front Projector
- None of these
- Blu-ray Player
- HD DVD Player
- Home Theater System (with 5 or more speakers, plus subwoofer, for surround sound 5.1 or higher)
- Xbox 360
- PS3
- Nintendo Wii
- Gaming PC (Alienware etc.)
- HD Satellite Box
- HD Cable Box
- None of these

5. Please indicate the category below that represents your total annual household income before taxes:

- Under \$30,000 TERMINATE
- \$30,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000-\$149,999
- \$150,000-\$199,999
- \$200,000 or more

6. Are you....

- Male?
- Female?

7. Do you watch high definition movies on (CHECK ALL THAT APPLY)

- Over-the-air broadcast
- Cable
- Satellite
- DVR
- Blu-ray Player
- PC
- None of these

8. Do you currently use your PS3 to watch Blu-ray movies/content?

- Yes, I use my PS3 to watch Blu-ray movies/content
- I have a stand alone Blu-ray player to watch movies/content
- No, I do not use my PS3 to watch Blu-ray movie/content

9. Which of the following content do you think is currently available in 3D (three dimension effects)?

- Full length movie
- Short films
- Video games
- Music videos/live events/concerts
- Television
- None of these

10. Please describe what the 3D experience means to you:

\_\_\_\_\_

11. What do you think is good about 3D technology?

\_\_\_\_\_ do not know

12. What don't you like about 3D technology?

\_\_\_\_\_ do not know

13. Would you recommend the 3D experience to a friend or family member?

- Definitely Yes
- Possibly Yes
- Possibly No
- Definitely No

14. Have you ever watched a movie in 3D?

- Yes  
 No

15. Where did you watch the 3D movie?

- Traditional Movie Theater  
 IMAX Movie Theater  
 On My Home Theater (TV/Projector)  
 amusement park, zoo  
 Other

16. If you check "other" above, what was the location?

\_\_\_\_\_

17. How long ago was it that you saw a 3D movie?

- 0 to 6 months  
 6 months to 1 year  
 1 year to 2 years  
 2 years to 4 years  
 4+ years  
 Don't remember

18. What is your perception/opinion of your latest 3D movie experience? Use a scale of 1 to 5, where 1 is equal to strongly agree and 5 is equal to strongly disagree.

(Rotate)

- 3D makes movies more enjoyable  
 3D makes movies less enjoyable  
 It was a one time thing  
 I would like to watch all movies in 3D  
 I would like to watch some movies in 3D but not all movies  
 The glasses were a distraction  
 It is a fad  
 It made the story more compelling  
 It was distracting to the story  
 It is for young people  
 Primarily for animated movies  
 Something that I would like at home  
 Made me dizzy, nauseous /fatigued

19. If you ever played a 3D video game, what type of gaming device was it? (check all that apply)

- Have never played a 3D game (Skip to Q22)  
 Game Console (Playstation, Xbox, Wii, etc)  
 PC  
 Arcade  
 Other

20. If you listed "other" in the above question, where was the location?

\_\_\_\_\_

21. What is your perception/opinion of your latest 3D gaming experience? Use a scale of 1 to 5, where 1 is equal to strongly agree and 5 is equal to strongly disagree.

(Rotate)

- 3D makes games more enjoyable  
 3D makes movies less enjoyable  
 It was a one time thing  
 I would like to play all games in 3D  
 I would like to play some games in 3D but not all movies  
 the glasses were a distraction  
 It is a fad  
 It made the game more compelling  
 It was distracting to the playing the game  
 It is for young people  
 Primarily for "shooting" games  
 Something that I would like at home  
 Made me dizzy, nauseous /fatigued

22. On a home 3D TV, what content would you expect or want to watch? (CHECK ALL THAT APPLY)

- Movies  
 Serial TV shows  
 Sports  
 Music videos/live events/concerts  
 News  
 Other

23. If you checked "other" above, what content would that be?

\_\_\_\_\_

24. In which ways would want to get 3D content on your home TV? (CHECK ALL THAT APPLY)

1= high preference, 2= some preference, 3= would not want

- Online download  
 Download from cable or satellite provider  
 VOD (video on demand)/streaming  
 Broadcast (over-the-air via antenna)  
 Blu-ray, DVD  
 Other (specify)

25. If you had a 3D TV, would you watch it more?

I would watch:

30%+ more TV

I would watch 20- 30% more TV

I would watch 10% to

20% more TV

I would watch 1-10% more TV

I would not watch more

TV

26. Rate your level of agreement with the following statements below. Use a scale of 1 to 5, where 1 is equal to strongly agree and 5 is equal to strongly disagree. (Rotate)

a) Having surround sound audio would enhance the 3D entertainment experience.

b) I am aware that in order to watch 3D content I need to wear special glasses.

c) I would not wear 3D glasses to watch 3D at home because it would be a distraction to me.

d) I would be willing to accept lower picture quality to be able to watch 3D at home without glasses.

e) I would be interested in converting my home movies or personal content into 3D.

f) I would be willing to pay more for a 3D display at home that I didn't need glasses to watch.

27. During your latest 3D experience what type of glasses did you use?

Colored lenses (i.e. red and blue, red and green)

Clear lenses (i.e. grey like sunglasses)

Don't know (Skip to Q29)

28. How would you describe the difference between your experience using "red/blue" glasses vs. "clear lens" glasses?

29. Would you consider 3D an "individual" or "group" experience?

Use a scale of 1 to 5, where 1 is equal to group strongly preferred, 2 is equal to group slightly preferred, 3 is equal to either is fine, 4 is equal to individual slightly preferred, 5 is equal to individual is strongly preferred and 6 is equal to don't know. (Rotate)

3D Video Games

3D Full Length Movies

3D Short Films

3D Music Videos, Concerts or Live Events

3D Television

30. How much additional might you pay for a 3D display at home, that would not need 3D glasses?

Pay more than 30%

Pay 20-30%

Pay 10-20%

Pay less than 10%

I would not pay more

31. Why is that?

32. What type of electronic product (display device) would you expect and/or like to use to watch 3D content?

\_\_\_\_\_ (list as many as you can think of)

33. On which electronic display products would you like to watch 3D content?

Flat Panel TV (LCDTV, Plasma TV)

Front Projector

Rear Projection TV (CRT, DLP, DILA, LCOS, SXRD, 3LCD)

Computer Monitor

Mobile Device (smart phone, standard phone)

Handheld Device (Portable Media Players/MP3, PSP, Portable DVD Player)

34. Are there any other display products you would like to use to watch 3D content? If so, please list them.

35. What picture quality difference might you see if you were using these devices to watch 3D content? Please rate the level of difference on a scale of 1 to 5, where 1 is equal to high quality difference, 4 is equal to no quality difference and 5 is equal to don't know.

Flat Panel TV (LCDTV, Plasma TV)

Front Projector

Rear Projection TV (CRT, DLP, DILA, LCOS, SXRD, 3LCD)

Computer Monitor

Mobile Device (smart phone, standard phone)

Handheld Device (Portable Media Players/MP3, PSP, Portable DVD Player)

36. Rate your level of agreement with the following statements below. Use a scale of 1 to 5, where 1 is equal to strongly agree and 5 is equal to strongly disagree.

a) I am interested in watching 3D content/entertainment at home.

b) I would like to purchase a high definition TV capable of delivering 3D content/entertainment.

c) Some sacrifice in picture quality would be acceptable in order to watch a movie in 3D at home.

d) No degradation in picture quality would be acceptable in exchange for 3D capabilities.

e) Having a TV with 3D capabilities could motivate me to buy a larger TV.

37. The ideal size of a home TV to watch 3D content would be?

22inch (computer monitor)

32inch

37inch

40-49inch

50-59inch

60-65inch

65-73inch

front projector (80-120inch)

other, please specify

38. Which electronic display devices would you pay more for if they would allow you to watch 3D content?

Pay more than 30% Pay 20%-30% Pay 10% to 20% Pay less than 10%Would not pay more

Flat TV (LCDTV, Plasma TV)

Front Projector

Rear Projection TV (CRT, DLP, DILA, LCOS SXRD, 3LCD)

Computer Monitor

Mobile Device

(smart phone, standard phone)

Handheld Device

(Portable Media Players/MP3, PSP, Portable DVD Player)

Gaming PC (Alienware etc.)

Gaming console

Blue-ray player

39. When would you expect 3D TV to be available for purchase for the home?

Less than 12months

1- 2yrs

more than 2 yrs

other, please specify

40. Which ONE company do you believe would be most likely to offer this type of product?

\_\_\_\_\_

41. Which of these brands would you trust to deliver a good 3D experience? Use a scale of 1 to 5, where 1 is equal to very likely, 4 is equal to very unlikely and 5 is equal to I don't know.

ROTATED LIST (check as many as applicable)

Panasonic  Sony  Samsung  Philips  Pioneer

Vizio  LG  Epson  JVC  Sensio  Texas Instruments

Apple  Xbox 360  Playstation 3 (PS3)  Nintendo Wii

Dolby  Toshiba  Mitsubishi  Warner Brothers  Real D

IMAX  Walt Disney  Comcast  Time Warner  Dish Network

Direct TV  AT&T  THX  Other (please specify)

42. Are there other brands that you would trust to deliver a good 3D experience? Why?

\_\_\_\_\_

42. Are there other brands that you would trust to deliver a good 3D experience? Why?

\_\_\_\_\_

43. Which of the following retailers, that you may buy electronics products at, are within a 10 miles radius? (Check all that apply)

Electronics retail store (i.e. Best Buy, Circuit City)

Regional retail specialty store (i.e. Magnolia Home Theater, Video Only, HH

Gregg, etc)

Mass merchant (i.e. Walmart, Target)

Club/Warehouse store (i.e. Costco, Sam's Club, BJ's)

44. For classification purposes, please enter your state.

\_\_\_\_\_ Zip Code

45. For classification purposes, please enter your zip code:

\_\_\_\_\_ Zip Code

# Purchase Information

- ◆ Full Survey Report (PPT/electronic) \$12,999  
Contains relevant comparisons at no additional charge
- ◆ Custom Crosstab Analysis request proposal
- ◆ Contact:  
Tamaryn Pratt  
284 Birdshill Road  
Portland, Oregon 97219  
503.699.5133  
tamaryn@quixelresearch.com  
www.quixelresearch.com



# About Quixel Research

## Services

Research services are not a "one-size-fits-all" proposition for Quixel Research. We work with our clients to define objectives. Quixel Research assesses exactly what you need to accomplish, determines the most successful methodology to achieve your outcome and then delivers top-notch results to drive smart business decisions.

### ◆ Customized Product Studies

Often your company needs to deeply explore the dynamics of a specific market opportunity. Quixel Research designs customized research projects that meet your specific needs and deliver a deeper understanding of the Home Theater and Home Entertainment market. Our experience with focus groups and one-on-one interviewing will help your company analyze buying intentions, features and brand preferences, as well as customer satisfaction. Find out what potential customers want **BEFORE** your company launches products.

### ◆ Strategy Formulation and Planning

Quixel Research uses primary research, industry knowledge, experience, and commercial judgment to design and provide independent objective analysis that will guide and support management decisions. Your company is guaranteed actionable results in these areas:

- Competitive Benchmarking
- Distribution Channel Analysis
- New Market Evaluations and Follow up to Launch Studies
- Alliance Assessment and Strategic Partner Identification
- Business Planning Support



# About Quixel Research

## Syndicated Reports

Quixel Research's reports provide the most accurate view of the consumers' needs and trends in the home. Our detailed ***display market reports*** deliver exceptionally precise statistics, forecasting and analysis for several high growth display products. Builders, suppliers and users of Home Theater and Home Entertainment products use our reports for strategic guidance and tactical decision-making. Current reports include:

- ◆ **LCDTV Market Report**
- ◆ **PDP Market Report**
- ◆ **FT PJ Market Report**
- ◆ **MD RTPV Market Report**
- ◆ **Advanced TV Market Report**

All reports are quarterly and offer sell-in shipments and include multiple breakdowns by screen size, resolution, ASP, aspect ratio, etc depending on the category covered in the report. The reports also cover both short and long term forecasts as well as the models offered by to retailers.

