



### Temporary Views on Television 2010—focused on 3D TV

**After watching 3D TV, viewers of all generations enhanced their expectations for 3D TV and willingness to purchase a 3D TV set.**

**Over 50% of middle-aged viewers have a willingness to purchase 3D TV.**

**The retirement of baby boomers may trigger the diffusion of 3D TV**

3 out of 4 viewers answered that 3D TV should be “enjoyed together with family members or friends”

Over half of young male viewers support “professional baseball,” highly evaluating 3D-characteristic rendering methods

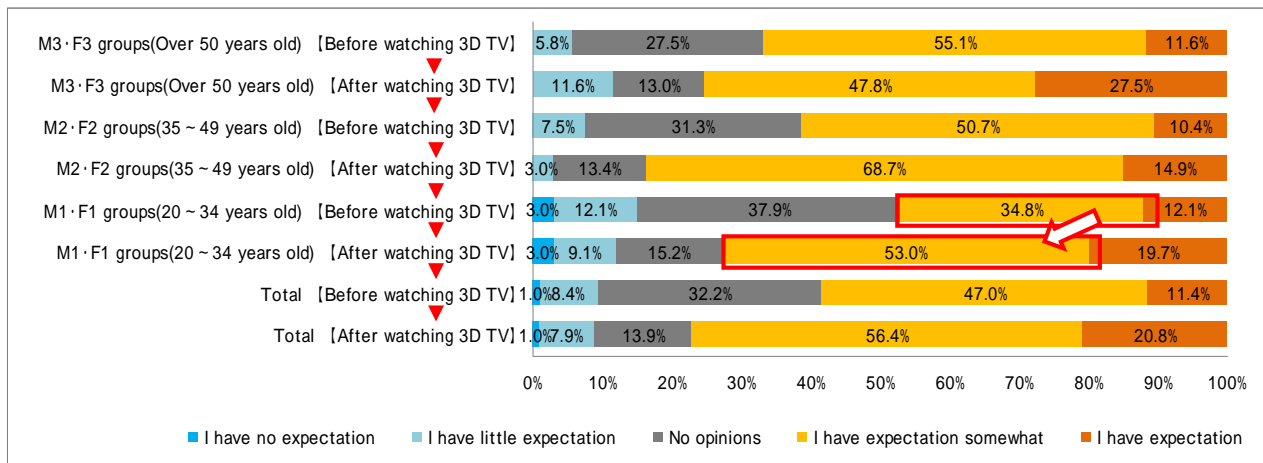
SKY Perfect JSAT Corporation (Head Office: Minato-ku, Tokyo; President and CEO: Masanori Akiyama) conducted a “on-site survey regarding 3D TV” for grasping the variations in expectations for 3D TV, willingness to purchase it, evaluation of its contents, and impressions about it by gender and generation this year, that is, the first 3D year. On October 26 and 28 this year, we showed 10 kinds of 3D contents to a total of 202 people at the age of over 20 years, including men and women, residing in the Tokyo metropolitan area, for 2-3 minutes. for each content. Between before and after the show, we conducted questionnaire surveys.

#### ■About the evaluation of 3D TV

1) The viewers improved their expectations and impressions for 3D TV after watching it. Especially, M1 and F1 groups improved them considerably.

As for “expectations for 3D,” the percentage of viewers who answered “I have expectation” or “I have expectation somewhat” was 58.4% (118 viewers) before watching 3D TV, and 77.2% (156 viewers) after watching 3D TV. The percentage increased by 18.8 point. (Graph 1)

By age, in the case of “M1 and F1 groups (20-34 years old),” the percentage of “I have expectation” or “I have expectation somewhat” increased substantially by 25.8 point from 46.9% (31 viewers) to 72.7% (48 viewers). (See the red framed parts in Graph 1.) This increase in percentage was higher than that for “M2 and F2 groups (35-49 years old)”: 22.5 point (from 61.1% [41 viewers] to 83.6% [56 viewers]) and that for “M3 and F3 groups (over 50 years old)”: 8.6 point (from 66.7% [46 viewers] to 75.3% [52 viewers]).

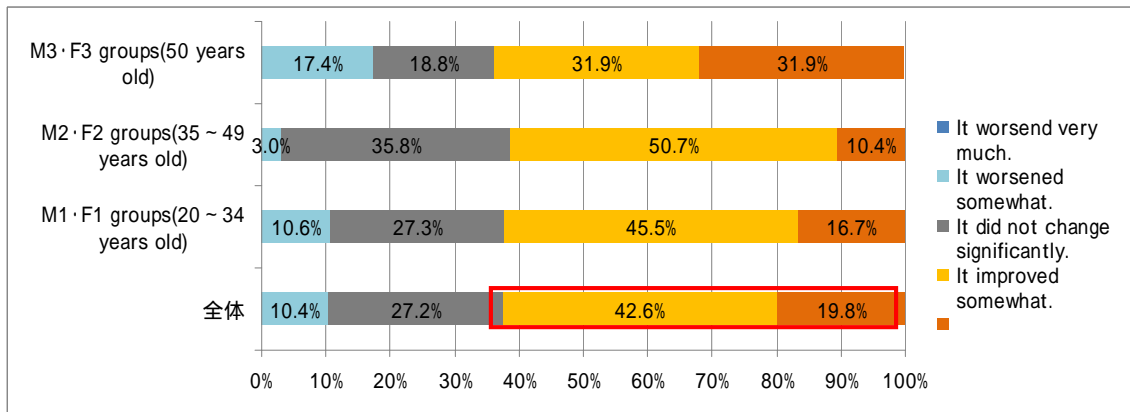


▲<Graph 1> 【Comparison among generations and between before and after watching 3D TV】

Q. How much do you have expectation for 3D?

After viewers watched 3D TV, we asked them how their impressions toward 3D TV changed. Over 60% of viewers answered “it improved very much” or “it improved somewhat.” Before watching 3D TV, 43.6% of viewers (88 viewers) gave preferable answers: “good impression” or “slightly good impression”<sup>\*1</sup>, and after watching 3D TV, 62.4% of viewers (126 viewers) answered “it improved very much” or “it improved somewhat” (red framed part in Graph 2). It was found that viewers can realize the excellence of 3D by watching it actually.

**\* 1 For details of the survey results about “impressions toward 3D TV” before watching it, see Appendix P6.**



▲<Graph 2> 【After watching 3D TV】 Q. How your impression changed after watching 3D TV

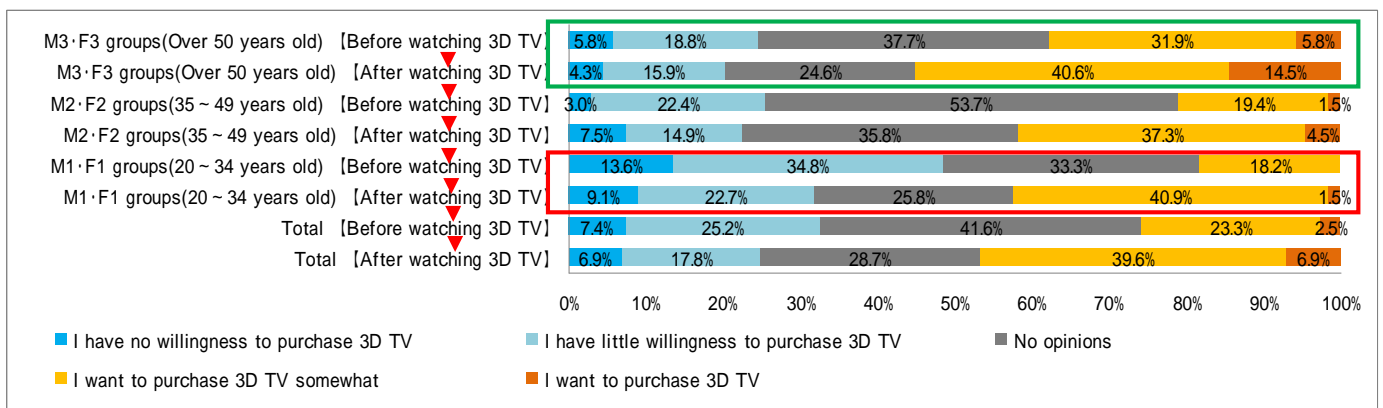
2) Over 50% of middle-aged people have the willingness to purchase 3D TV. This may trigger the popularization of 3D TV.

For all generations, viewers enhanced their willingness to purchase 3D TV after watching it. Especially, the M1 and F1 groups (20-34 years old) showed the largest increase; the percentage of viewers who answered “I want to purchase 3D TV” or “I want to purchase 3D TV somewhat” increased by 24.2 point from 18.2% (12 viewers) before watching 3D TV to 42.4% (28 viewers) after watching it. (red framed part in Graph 3)

The willingness to purchase 3D TV of the M3 and F3 groups (over 50 years old), which are expected to have more free time, is noteworthy. The percentage of middle-aged viewers who answered “I want to purchase 3D TV” or “I want to purchase 3D TV somewhat” increased from 37.7 point (26 viewers) before watching it to 55.1% (38 viewers), indicating a positive tendency. (green framed part of Graph 3)

The reasons include “I will stay home for more time after retirement”(F3, female), “I had thought that 3D is not necessary at home, but I enjoyed watching it today, and so I came to think it would be good to have it at home” (M3, male), and “3D is exciting, impressive, and attractive. I anticipate it, and I want to sometimes watch it with my family members” (F3, female). It can be understood that they have a strong willingness to purchase 3D TV to enjoy it at home.

This year, baby boomers (born in 1947-1949) started retiring from their jobs. Due to the continuation of the eco point campaign and terrestrial digital media, the sales of TV sets are healthy. 3D TV may be diffused rapidly for entertaining baby boomers.



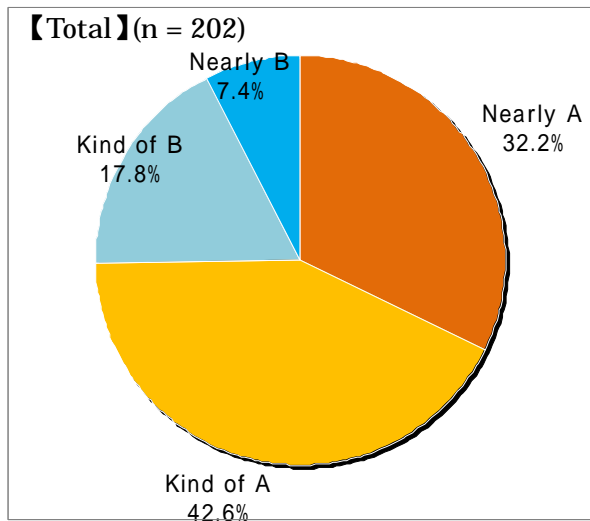
▲<Graph 3> 【Comparison among generations and between before and after watching 3D TV】 Q. How much do you want to purchase 3D TV?

■ About the usage and attractiveness of 3D TV

1) Most viewers answered that 3D should be “enjoyed together.” This may become a communication tool at home. When we asked whether viewers enjoy 3D TV alone or together with someone, 72.3% (146 viewers) answered “I enjoy it with my friend, lover, or family member” or “I tend to do so,” before watching 3D TV, and 74.8% (151 viewers) answered so after watching it. (Graph 4) It was found that most people think that 3D TV should be enjoyed together.

After watching 3D TV, the percentage was 78.2% (79 viewers) for females, and 71.3% (72 viewers) for males. Especially, 81.8% (54 viewers) of the F1 and F2 groups (20-34 and 35-49 years old) answered “3D TV is an entertainment that should be enjoyed together.”

At present, a TV set is purchased for “each person” rather than “for each household.” From now on, 3D TV may become a communication tool for improving “family bonds” and “family gathering.”



\*<Graph 4: Total (n = 202)> 【After watching 3D TV】  
 Q. For your household, which of the following well describes 3D TV?  
 【A】 : Entertainment enjoyed together with friends, lover, or family members  
 【B】 : Entertainment enjoyed alone

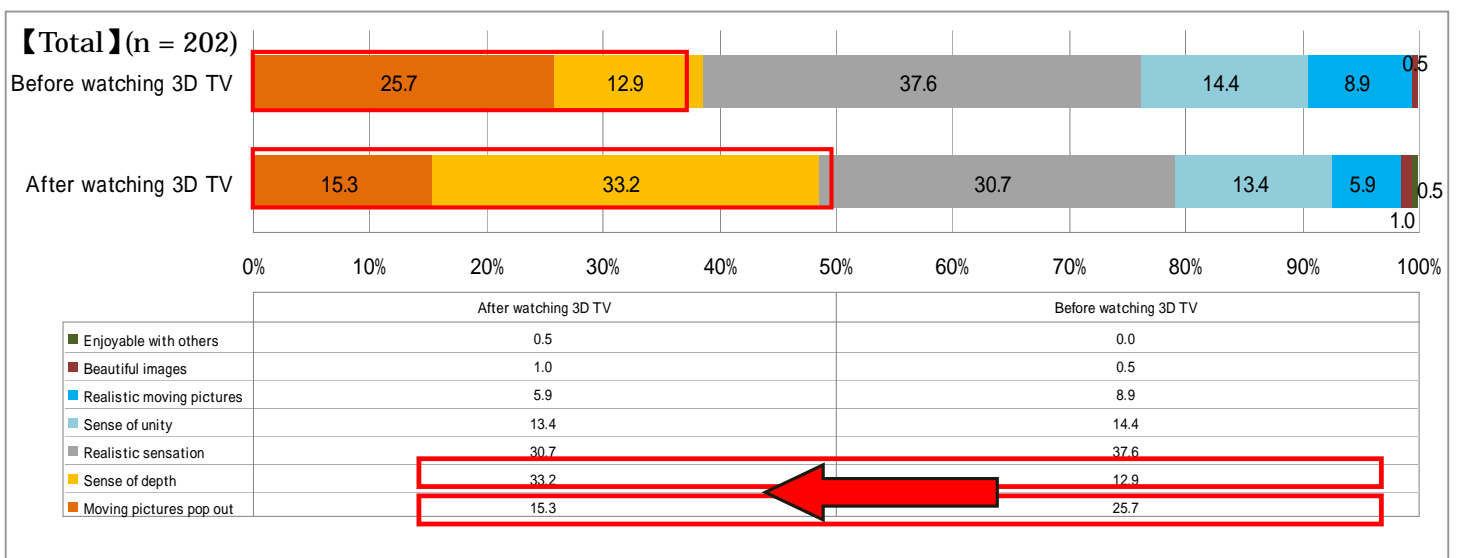
2) As for the attractiveness of 3D moving pictures, the percentage of viewers who highly evaluate “a sense of depth” increased by about 20 point

To the question about “the major attractiveness of 3D moving pictures,” many viewers answered “realistic sensation,” “moving pictures pop out,” and a “sense of depth.”

After watching 3D TV, the percentage of viewers who “felt a sense of depth” increased by 20.3 point (from 12.9% [26 viewers] to 33.2% [67 viewers]), while the percentage of viewers who “thought moving pictures pop out” decreased by 10.4 point (from 25.7% [52 viewers] to 15.3% [31 viewers]) (Graph 5). Generally, many people imagine “moving pictures that pop out” when hearing about 3D, but after watching it actually, they came to be attracted by “a sense of depth.”

In 2010, that is, the first 3D year, an increasing number of people experience 3D TV at electronics retail stores, etc. As people change their recognition of the “attractiveness of 3D moving pictures” by watching 3D TV, there may emerge the needs for various 3D programs (moving pictures).

▼<Graph 5: Total (n = 202)> 【Comparison between before and after watching 3D TV】  
 Q. Which do you think is the “primary attractiveness of 3D TV”?



■ About moving picture contents

1) The contents “aquariums” and “natural landscapes” were highly evaluated, maybe because they are easy to watch.

After viewers watched 3D TV, we asked them “which contents they want to watch again in 3D.” The most demanded was “aquariums,” followed by “natural landscapes” (Table 1).

The reasons include “it symbolizes 3D the most” (F2, female) and “the scene was natural as if I was there” (M2, male). When viewers watch 3D TV for a short period of time like this survey, viewers evaluate contents highly when they are easy to watch and grasp.

Meanwhile, the percentage of viewers who highly evaluate contents increased by watching 3D TV, especially for “festival<sup>\*2</sup>” (271.4% increase) and “martial art<sup>\*3</sup>” (176.5% increase) (Table 2). This is considered because viewers changed their recognition of the “attractiveness of 3D moving pictures,” including a sense of depth and realistic sensation. As for the question “Please write the programs (moving pictures) you want to watch in 3D freely,” viewers answered a variety of contents, including “travel programs,” “theaters and operas,” “historical plays,” and “dramas.” It seems that viewers realized the great potential of 3D rendering by watching it actually.

**Viewers watched “YOSAKOI Soran Festival” for #2 “festival” and “Iaido” for #3 “martial art.”**

Ranking	Before watching 3D TV	After watching 3D TV
1	Natural landscape	Aquarium
2	Aquarium	Natural landscape
3	Music concert	Professional baseball
4	Professional baseball	Music concert
5	Skating	Festival

Change in support rate after watching 3D TV		
Ranking	Contents	Increase rate
1	Festival	271.4%
2	Martial arts	176.5%
3	Aquarium	157.4%

▲<Table 1: Total (n = 202) > 【Comparison between before and after watching 3D TV】  
 Top 5 of “the contents viewers want to watch in 3D”  
 \* After viewers watched 3D TV, we asked them “which contents they want to watch again.”

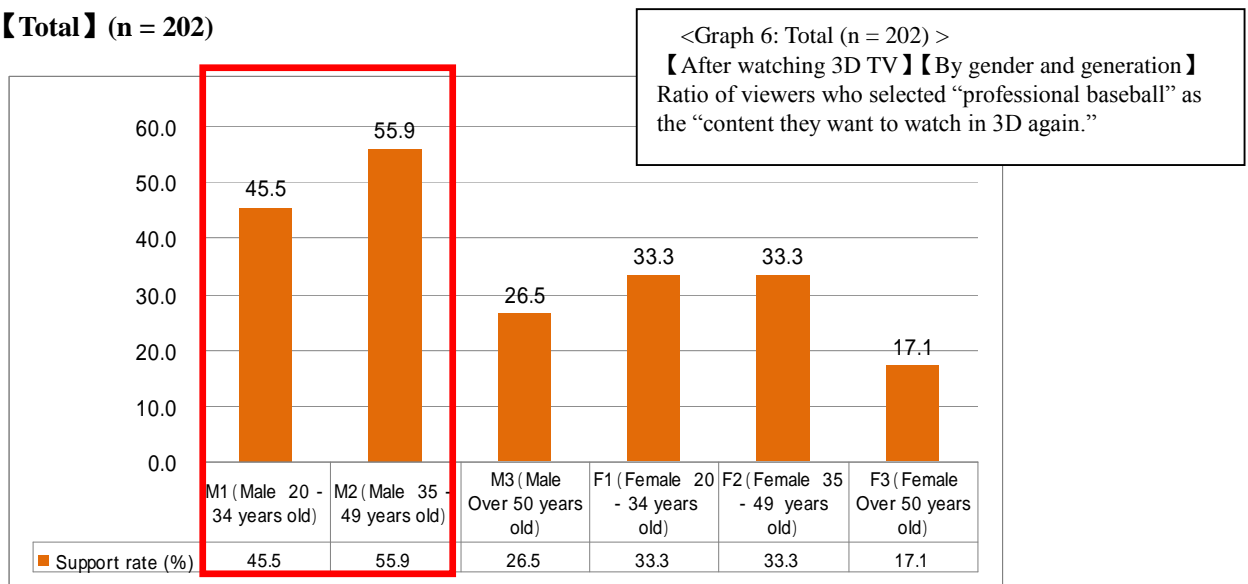
▲<Table 2: Total (n = 202) > 【Variation in support rate between before and after watching 3D TV】

2) Although professional baseball is becoming less popular in Japan, young male viewers supported “3D professional baseball”!

As for the characteristics of each content, although “professional baseball is becoming less popular,” the percentage of viewers who support professional baseball increased. Especially 45.5% (15 viewers) of the M1 group (20-34 years old) and 55.9% (19 viewers) of the M2 group (35-49 years old) answered “I want to watch professional baseball in 3D again.” These percentages were higher than those of other generations (Graph 6).

The reasons include “I felt as if I was in the stadium and I enjoyed the game from the viewpoint of players.” (M1, male) and “If I go to a stadium, the field is distant from seats, while ordinary TV does not have realistic sensation. 3D TV would solve these problems.” (M1, male). “The filming and rendering methods for 3D” won such support. This result indicates that contents other than professional baseball would attract viewers if their rendering methods are changed with the 3D technology.

**【Total】 (n = 202)**



SKY Perfect JSAT Corporation opened the 3D channel for the first time in Japan in June this year. At the end of November, it plans to air 17 3D programs, including serial dramas, martial arts, and documentaries, which were selected among proposals from broadcasters and production firms, to enrich 3D contents. As a leading company that creates a new TV culture, we will challenge new expressions, including 3D, with utmost effort. We will live up to your expectations.

**Reference: Overview of the survey: Contemporary Views on Television 2010—focused on 3D TV**

- Survey title: On-site survey regarding 3D TV
- Purpose of survey: In 2010, that is, the first 3D year, an increasing number of people somehow experienced 3D moving pictures, including films, and the sales of TV are healthy due to the continuation of the eco point campaign, etc. In this situation, how do viewers recognize 3D TV? How do viewers change their recognition about 3D TV when they watch it in an appropriate condition? A survey was conducted showing 3D TV, with the purpose of grasping the change in impression by gender and generation between before and after watching 3D TV.
- Survey method: 10 kinds of 3D contents were shown for 2-3 minutes for each, and a questionnaire survey was conducted before and after it.
- Survey dates: October 26 and 28, 2010
- Subjects: 202 people at the age of over 20 years, including men and women, residing in the Tokyo metropolitan area
  - \* Targeted at those who do not have 3D TV sets at home
  - \* Targeted at mainly married people, for grasping each family member's willingness to purchase 3D TV
  - \* Excluded those who work for the mass media, research, manufacturing and selling of AV, home appliances, and electric devices, etc.
- Grouping: M1 (20-34 years old), M2 (35-49 years old), M3 (over 50 years old)  
F1 (20-34 years old), F2 (35-49 years old), F3 (over 50 years old)

	20-34 years old	35-49 years old	Over 50 years old	Total
Male (M1-M3)	33	34	34	101
Female (F1-F3)	33	33	35	101
Total	66	67	69	202

- Major questions (a total of 8 questions before viewers watched 3D TV, and 15 questions after viewers watched 3D TV)
  - How do you now recognize 3D TV?
  - Choose one as the primary “attractiveness” of 3D moving pictures.
  - Select the content(s) you want to watch in 3D among the following 10.
    - ◇ Natural landscape, aquarium, trains, such as steam locomotives, festival (YOSAKOI Soran Festival), professional baseball, soccer (J League), skating, music concert, martial arts (Iaido), promotional videos of talents and idols, etc.
  - How much do you have expectation for 3D?
    - ◇ 1. I have no expectation. / 2. I have little expectation. / 3. No opinions / 4. I have expectation somewhat. / 5. I have expectation.
  - How much do you want to purchase 3D TV?
    - ◇ I have no willingness to purchase 3D TV. / I have little willingness to purchase 3D TV. / No opinions. / I want to purchase 3D TV somewhat. / I want to purchase 3D TV.
  - For your household, which of the following well describes 3D TV?
    - ◇ 【A】 Entertainment enjoyed together with friends, lover, or family members
    - ◇ 【B】 Entertainment enjoyed alone
  - Which of the following is the price difference from the ordinary TV set you can tolerate for obtaining a 3D TV set?
    - ◇ Less than 10,000 yen / 10,000 to 30,000 yen / 30,000 to 50,000 yen / 50,000 to 100,000 yen / Over 100,000 yen / I do not want to purchase a 3D TV set even if its price is the same as that for an ordinary TV set