

Market Research on Partner Robots for Households

By 2016, the size of the partner robot market in Japan is expected to be 18.6 million units, worth 3,260 billion yen. There will be a cumulative total of 90 models of partner robots announced or launched in Japan until that year; 62 units of these models are likely to be made available in the market, with about 30% (28 models) being two-legged.

Seed Planning, Inc., a Taito-ku, Tokyo-based research and consulting firm, conducted a research on partner robots for households. The Company has continued to conduct the research on the robotic market biannually since 2001, and published serial research reports on this topic in June 2001, June 2003 and April 2005. The 2006 edition is the fourth issue. Partner robots have drawn much attention stimulated by robot exhibitions at the Aichi World Expo in 2005, spurring the sales of partner robots in following years.

This study analyzes the 90 units of partner robots announced/launched in Japan based on the results of the interviews with approximately 30 electronic manufacturers, robot venture companies and research institutes. The report contains the details of the interview results including the company name, distribution channels, type of robot, comments from representatives of the companies surveyed, etc. Also profiled in this study are 62 robots that have been announced or launched (including the ones that have yet to be released) as well as 28 two-legged robots. In addition, the study covers core robotic technologies and key parts, analysis of the robotic market by category, type, price, etc., and the trends of robot venture companies that show a consistent gradual

increase. Predictions up until 2016 are also given for the market size for each category.

The key results of the research are described below:

Trends and forecast of the Partner Robot Market in Japan

This research predicts that entertainment robots, lifestyle support robots, surveillance robots will continue to be on the rise, reaching 3.8 million, worth 64,000 billion Yen, by 2011, and the market is expected to grow to 18.6 million units, worth 3,260 billion Yen, by 2016. In addition, the Japanese Robot Industry Association predicts that the lifestyle-related robot market will expand to 1, 800 billion yen by 2013.

Trends of Partner Robots in Japan by Year of Announcement/Launch

More than 90 models of partner robots have been announced or launched in Japan since 1999, with nine models being announced/launched respectively in 2002 and 2003. The number of announcements/launches surpassed 20 in 2004, showing a consistent gradual increase. Of these commercially-available partner robots, entertainment robots are the most popular, followed by surveillance, educational, research, nursing, and cleaning robots. A major change was seen in 2004 when the figure increased sharply to more than 20. Since that time, a cumulative total of 90 models have been announced or launched, with 19 models being made commercially available from the beginning of 2006, as of June, 2006. To date, 62 models of them have been released.

Trends of Two-legged Robots in Japan by Year of Announcement/Launch

Two-legged robots had been developed at Waseda University, the University of Tokyo, and the National Institute of Advanced Industrial Science and Technology, etc. even before Honda announced ASIMO, its unique two-legged robot, in 1999.

From 2000 to 2004, two-legged robots that are above one meter tall were announced or released, while after 2005 shorter robots have increasingly become popular; 60cm or less in 2005, 40cm or less in 2006, and even shorter-than-20cm models are likely to gain in popularity. Recently compact two-legged robots have become mainstream, partly because the size of hobby robots currently available is commonly around 40cm. Robot size can be made smaller in an attempt to reduce R&D cost from the beginning, like JVC's 'J4', or aiming to cut both costs and efforts in case of presentation events.

<Outline of the Research >

Items surveyed:

Entertainment robot, lifestyle support robot, cleaning robot, educational robot, surveillance robot, nursing and care support robot, etc.

Target companies and organizations

Electronic / IT companies, automobile manufacturers, security companies, toy manufacturers, robot venture companies, related organizations, industry associations / research institutes, etc.

Total 30 companies and organizations

Methodology:

Face-to-face Interviews, phone Interviews and gathering published information

Research Period

10 February 2006 – 15 June 2006

2006, Update on the Partner Robot Market and Analysis of Key Technologies and Parts [Color Edition]

Report Summary

Highlights

This research covers the latest trends of robot venture companies, including partner robot market entry trends by category, technology used, market size (the first color edition), as well as trends related to partner robot business categorized by field or industry, fields that are established relatively earlier among each field and the industry that will become the next focus of our attention. We also predicted upcoming movements of partner robot manufacturers and key parts, industry trends, technologies used, market size and so on.

Report Name	2006, Update on the Partner Robot Market and Analysis of Key Technologies and Parts [Color Version]
Date Published	20 June 2006
Pages	A4 / 213 pages
Price	95,000 yen + delivery (Deliveries in Japan requires extra 4,750 yen as consumption tax.) *Please contact us if you require the English-translated version, because pricing is different.

Publisher	Seed Publishing, Inc.
Remarks	Japanese, colour printed

Samples

- [Research Summary](#) (PDF file, 10 KB)
- [Abstract and General Overview](#) (PDF file, 19 KB)
- [Company Case Study](#) (PDF file, 30 KB)

Research Subject

■ Research Objectives

1. Entertainment robot
2. Lifestyle support robot
3. Cleaning robot
4. Educational robot
5. Surveillance robot
6. Nursing and care support robot
7. Others

■ Companies / Organizations Surveyed

1. IT / electronic companies
2. Automobile manufacturers
3. Security companies
4. Toy manufacturers
5. Robot venture companies
6. Related organizations / research institutions

Total: 30 companies and organizations

Methodology

Face-to-face interviews, phone Interviews and gathering published information

Research Summary

I. General

1. Classification of partner robots
2. Current status of partner robot market entries
3. Listing of partner robot products
4. Partner robot price distribution by category
5. Partner robot year-of-release comparisons by category
6. Robot venture company trends

7. Trends of two-legged robots
8. Partner robot market trends
9. Future trends of partner robots

II. Partner Robot Product Trends

1. Listing of key partner robots
2. Analysis of partner robots by type
 - (1) Trends of partner robots' faces
 - (2) Partner robot pricing trends
 - (3) Trends of two-legged robots
3. Trends of partner robots by category
 - (1) Entertainment robot
 - (2) Cleaning robot
 - (3) Nursing robot
 - (4) Reception robot
 - (5) Others
 - 1) Event robot

2) Surveillance robot

3) Dispatch robot

III. Partner Robot Industry Trends

1. Analysis of partner robot business models
2. Trends of timing for entry into the partner robot market
 - (1) Number of market entries by timing
 - (2) Ratio of robots released versus sales
 - (3) Market entry timing by type of industry
3. Trends of commercially available partner robots
 - (1) Uses of partner commercially available robots
 - (2) Listing of partner robots by category
 - (3) Listing of partner robots by timing of release
4. Trends of players in the partner robot market
 - (1) Trends of robot venture companies
 - (2) Trends of major robot venture companies

Tmsuk / Business Design Laboratory / Advanced

Industrial Science and Technology (AIST) / Advanced

Telecommunications Research Institute International

(3) Trends of academic robot ventures

5. Trends of key technology and key parts

6. Latest trends

1. KDDI Research Center and I Bee, Inc / Asahi Beer and
Suntory / RIKEN / Robot Library

IV. Partner Robot Market Trends

1. Partner robot market size

2. Partner robot market predictions

3. Trends of partner robot related markets

(1) Growth of the industrial robot market

(2) Trends of robot-related patents

V. Trends of Partner Robot Companies / Organizations

Listing of partner robot companies profiled

Trends of companies surveyed

<Electronics & IT>

1. SGI Japan, Ltd.
2. NEC
3. Fujitsu Automation
4. Fujitsu Frontech
5. National

<Robot Venture Companies>

6. Activelink Co., Ltd.
7. KOKORO COMPANY LTD
8. Specys Corp.
9. Sales On Demand

<Toys and Figures>

10. Kondo Kagaku Co., Ltd.
11. Tomy Co., Ltd.
12. Bandai Co., Ltd.

<Other companies & research institutions>

13. ALSOK

14. Honda Motor Co., Ltd.

15. The University of Electro-Communications

Trends of Companies Researched

<Electronics & IT>

16. IHI

17. Kawada Industries, Inc.

18. Sony Corporation

19. Toshiba Corporation

20. Victor Company of Japan, Limited (JVC)

21. Hitachi, Ltd.

22. Mitsubishi Heavy Industries, Ltd.

<Robot Venture Companies>

23. Cyberdyne Inc.

24. ZMP, Inc.

25. Tmsuk Co., Ltd.

26. Business Design Laboratory Co., Ltd.

27. Lobos, Inc.

<Other Companies & Research Institutions>

28. NTT DoCoMo, Inc.

29. Toyota Motor Corporation

VI. References

1. Data from the Statistics Bureau (Ministry of Internal Affairs and Communications)
2. Japan Industrial Standards Committee
3. Robot fairs
4. Robot Development, Demonstration and Experimentation zone
5. Chiba Institute of Technology
6. Trends of Robots Outside Japan