Theme 2-(3) : Home use

Watching Robot
-present and future-

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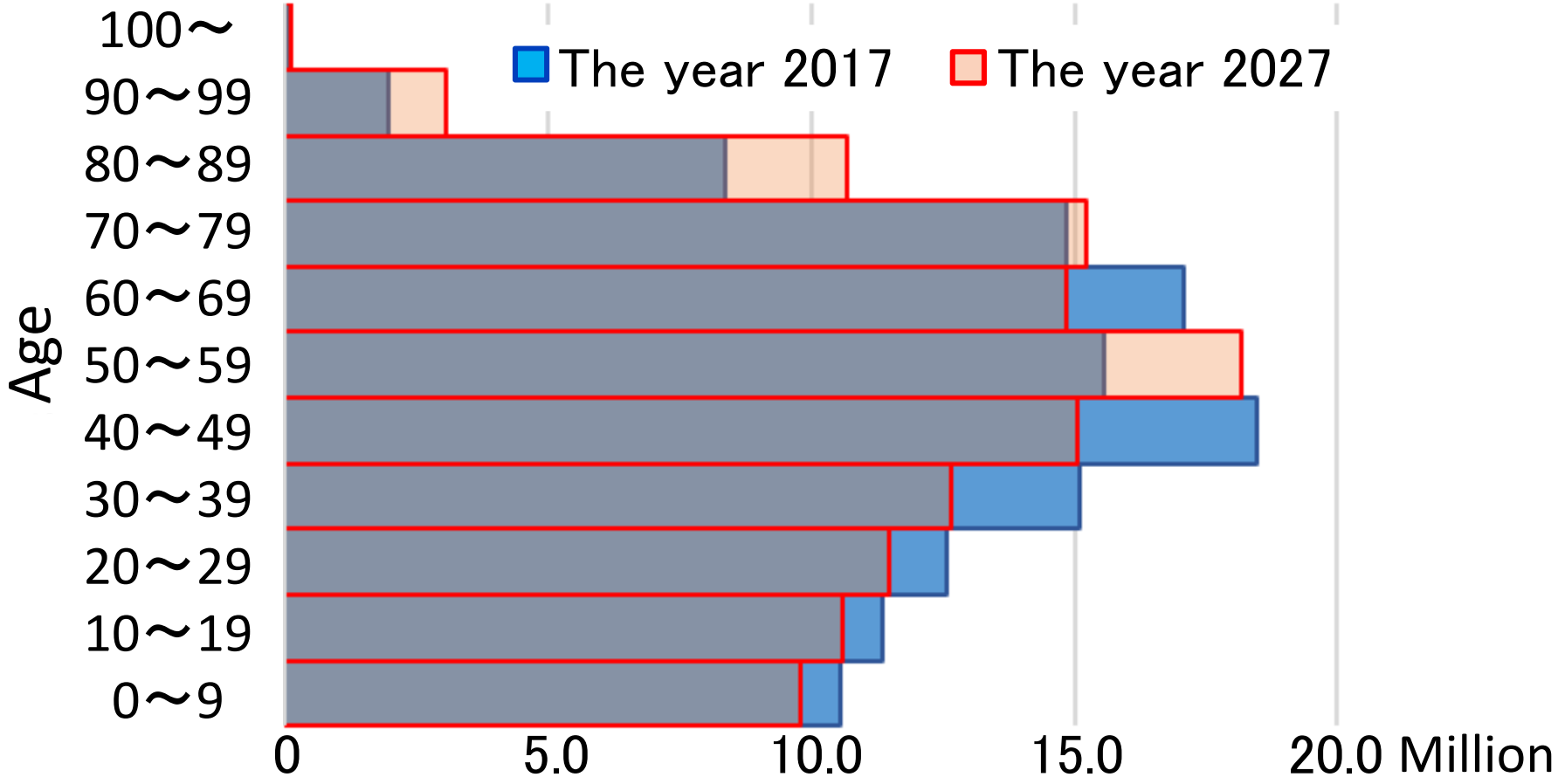
Background

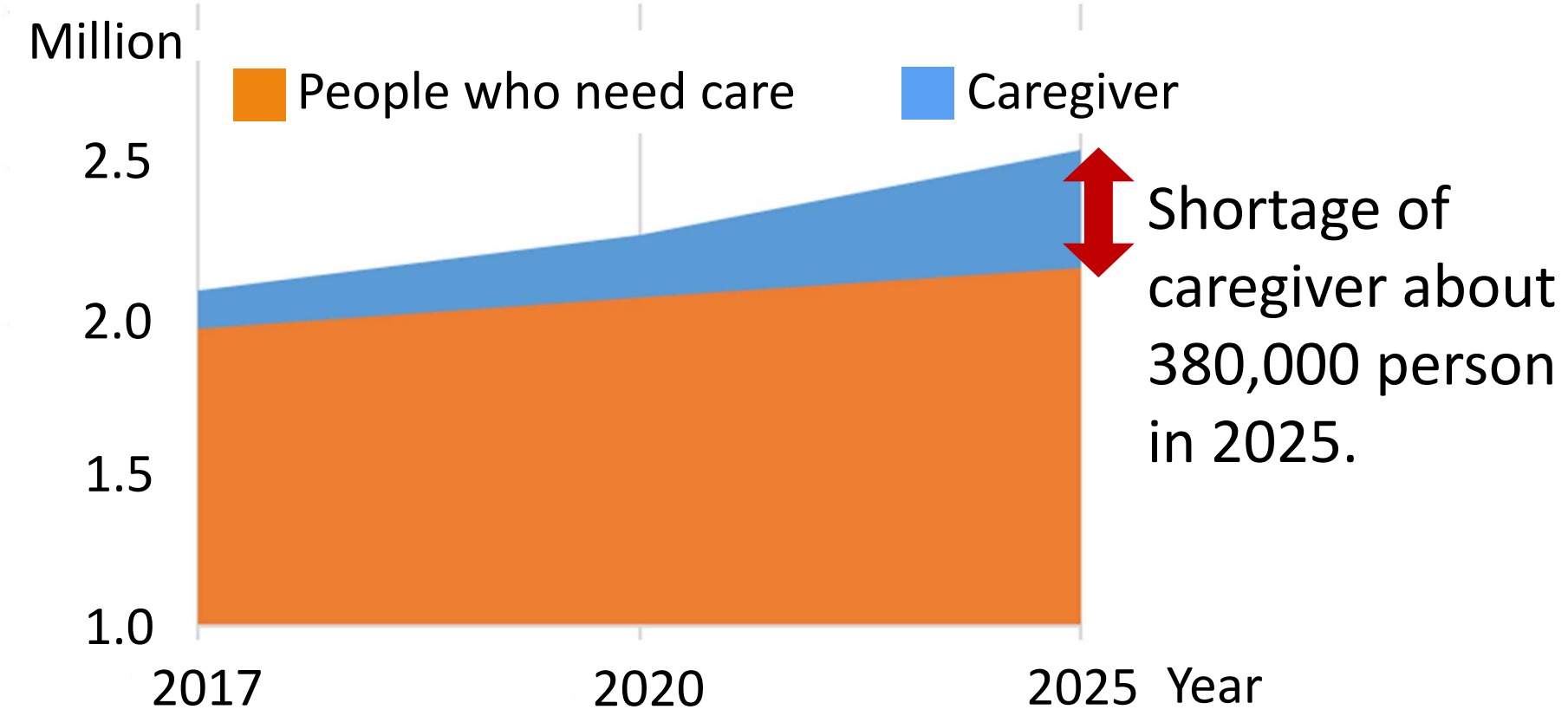
Japanese pyramidal population structure



▶Decline of birth ▶Increment of aging population

Background

A population of people who need care and caregiver

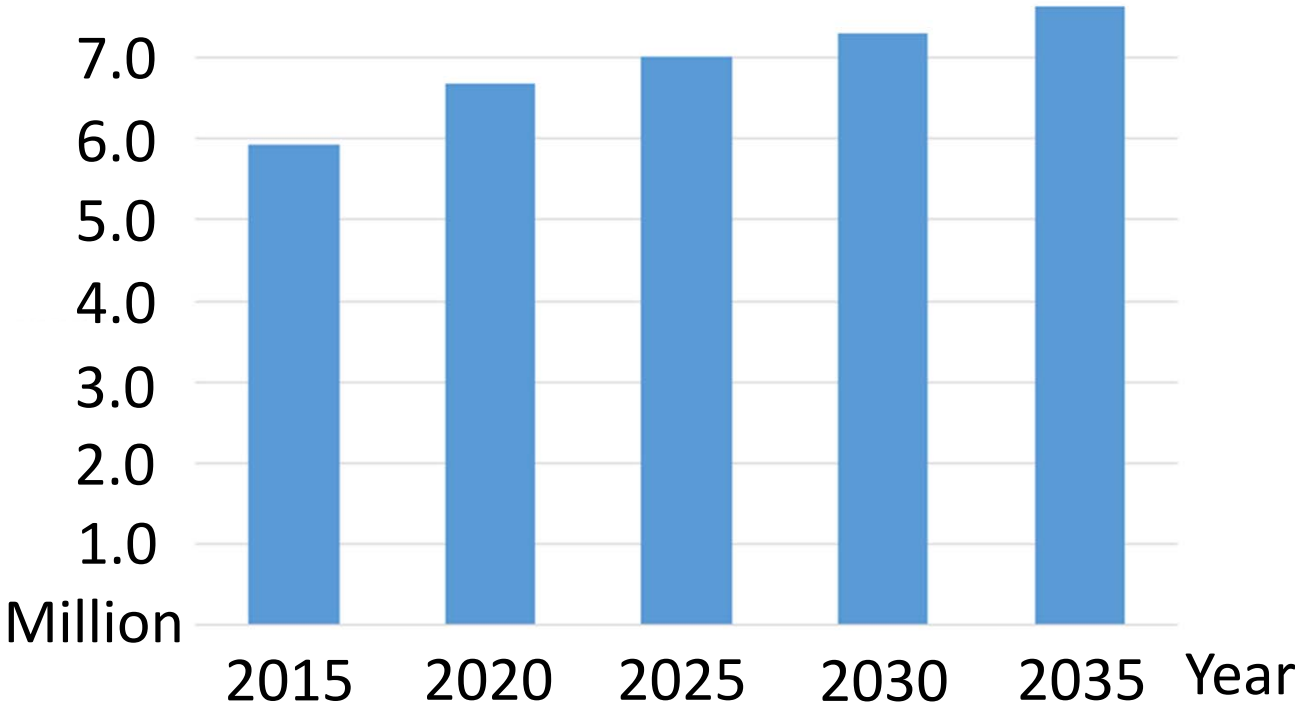


▶Shortage of caregiver.

▶Increment of caregiver's workload.

Background

Elderlies who live / will live alone

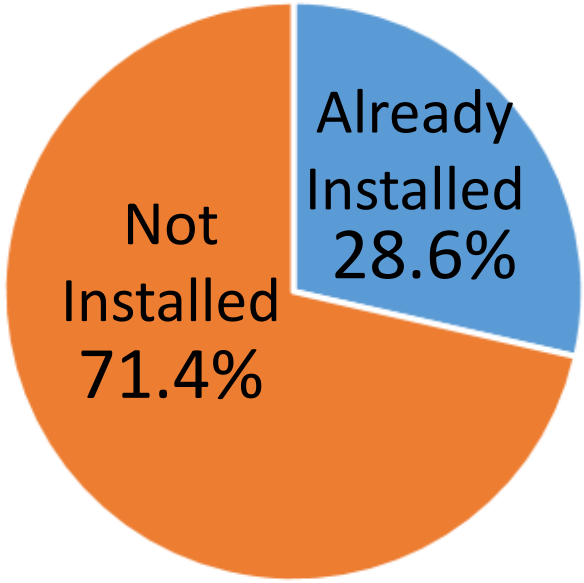


▶Elderlies who live alone will keep increasing.

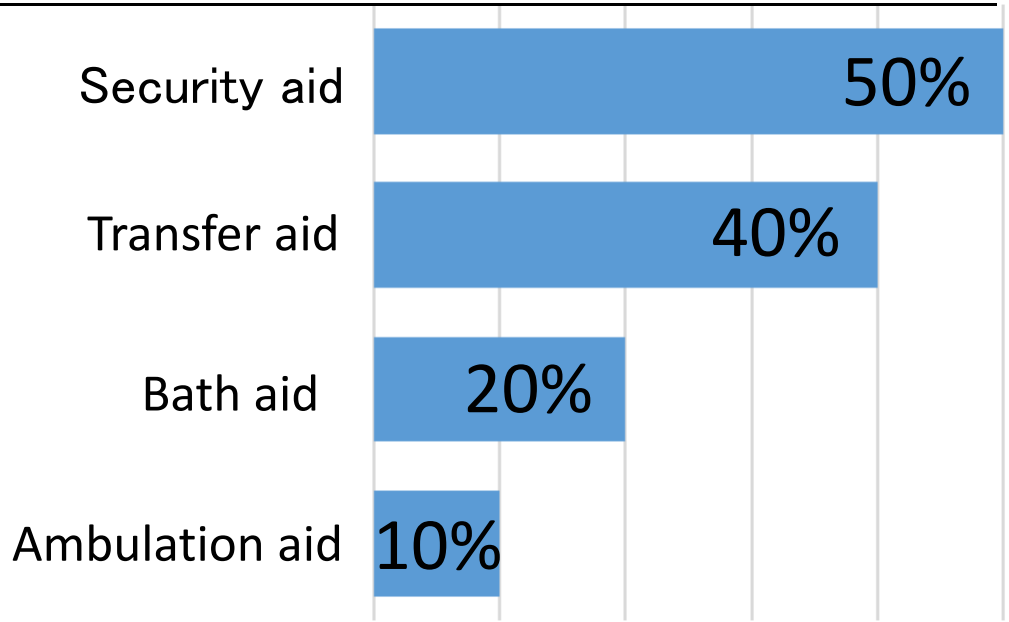
If they fall into a dangerous situation, who will help them?

We bileave that robot technologies can solve this problem.

Background



Installation rate of nursing care robots

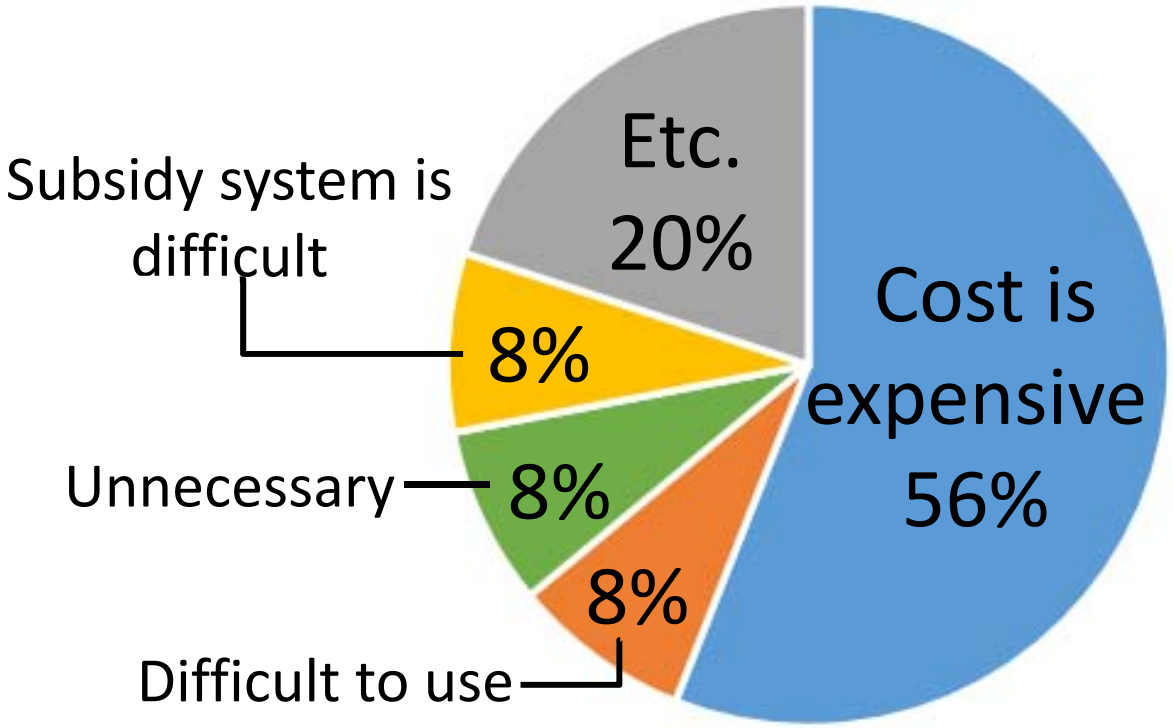


Type of nursing care robot that are used in care facilities

- ▶Introduction of robots is increasing step by step.
- ▶Watching robots are most spotlighted among them.

If so, why the other care facilities do not introduce such nursing care robots?

Background



The reasons why the other care facilities don't introduce a nursing care robot

- Using a nursing care robot requires much costs after purchasing the robot.

Procedures for receiving a grant should be easier and easier.

Background

Current nursing care robots market

- Nursing care robots are becoming common in care facilities.
- It's a problem that introducing a robot is difficult because of its cost in some cases.
- Watching robots are spotlighted among them.

We talk about "Watching robot" system.

Outline

(1) Outline of watching robots

(2) Communication based robots

(3) Security service based robots

(4)Summary

Outline of watching robots

Watching robots

- Watching robots will be effective for observation and psychotherapy based on the communication between such a robot and robot users.
- Some of such robots provide opportunities of recreation like enjoying music or exercise to the users.

Classification of watching robots

Communication based robots
Security service based robots

Communication based robots

These robots support users' activities.
(Communication mainly means conversation.)

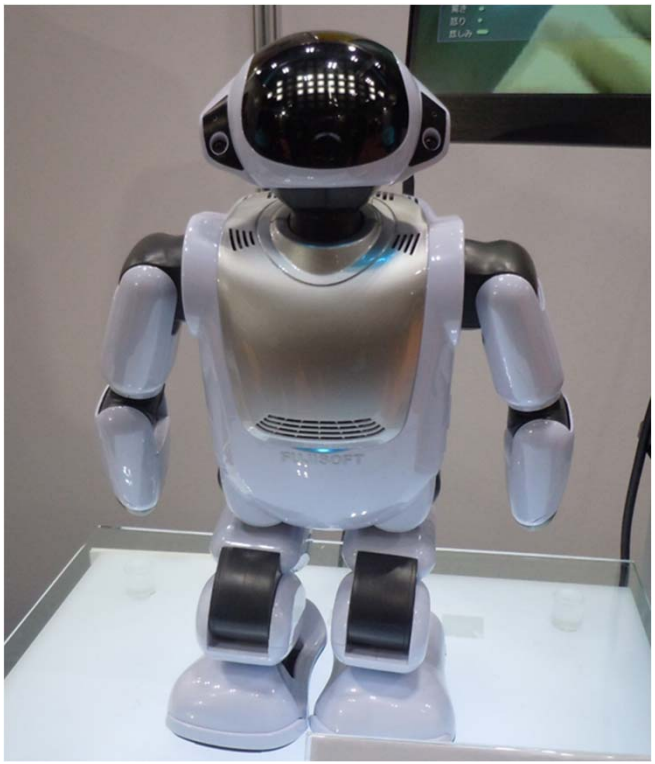
"PALRO" produced by
FUJISOFT Ltd.

"Tapia" produced by
MJI Ltd.

Source : https://mjirobotics.co.jp/#robot

PALRO

“PALRO” can talk, walk, and operate at long range by artificial intelligence.



“PALRO” produced by
FUJISOFT Ltd.

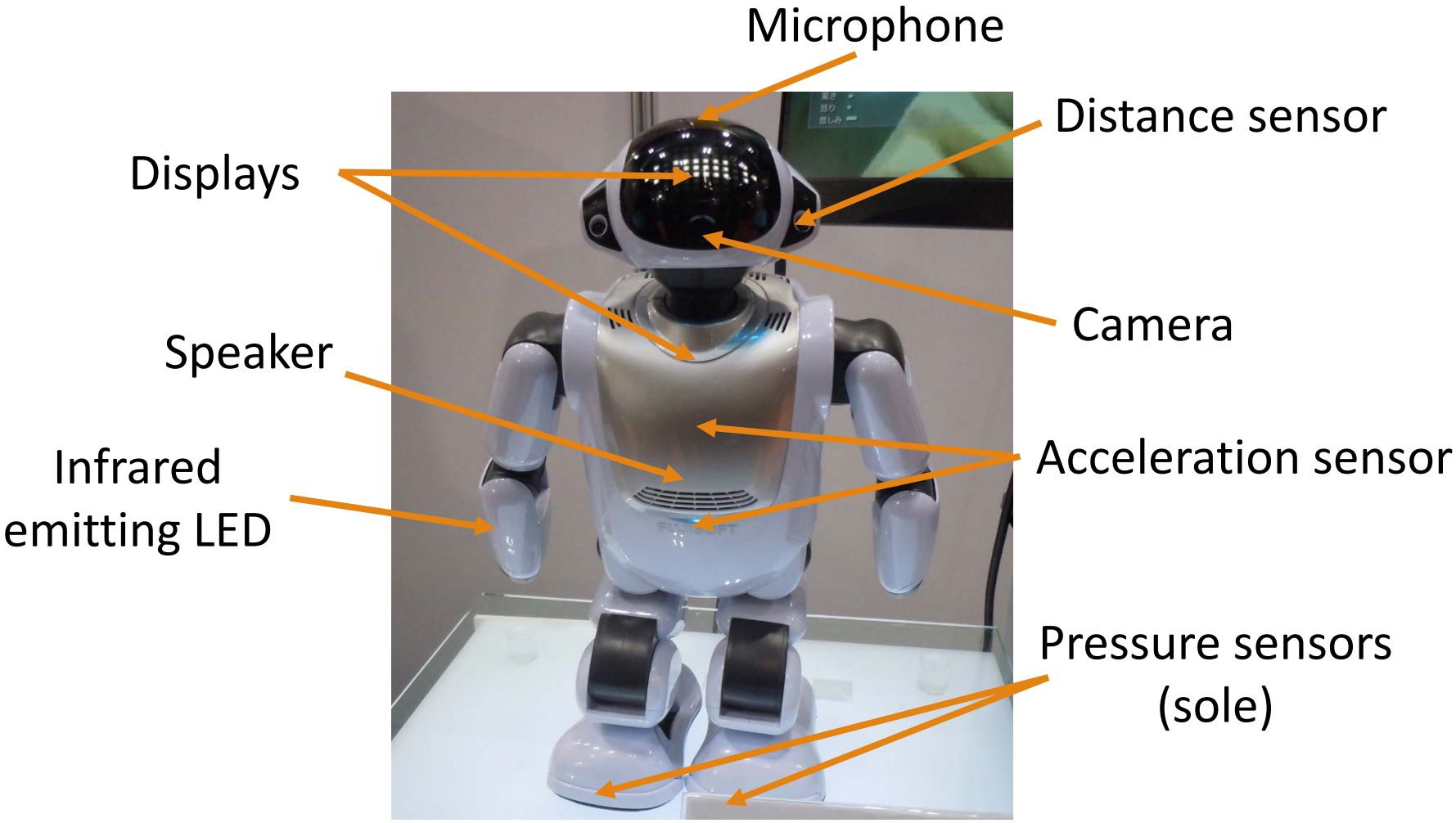
Feature

- Artificial intelligence
- Excellent conversation

Configuration

- Height :40[cm] (Approx.)
- Weight : 1.8[kg] (Approx.)
- Drive time :12[hour]

Structure of PALRO



PALRO's movie

Security service based robots

These robots can report the users' movements to caregiver. These enables the caregiver to watch the users from a distant place.

"Mi - Ru" produced by YACELEX Ltd.

"Odekake Catch" produced by FRANCEBED Ltd.

Source : http://robotcare.jp/?page_id=2306 https://kaigorobot-online.com/contents/43

Security service based robots

"Mi - Ru" is a watching robot that includes a camera.
It's used in a care facilities.

"Mi - Ru" produced by
YACELEX Ltd.

Feature

- Can watch a motion of a user
  by a portable device as a movie
- Can talk with a user
  by a portable device

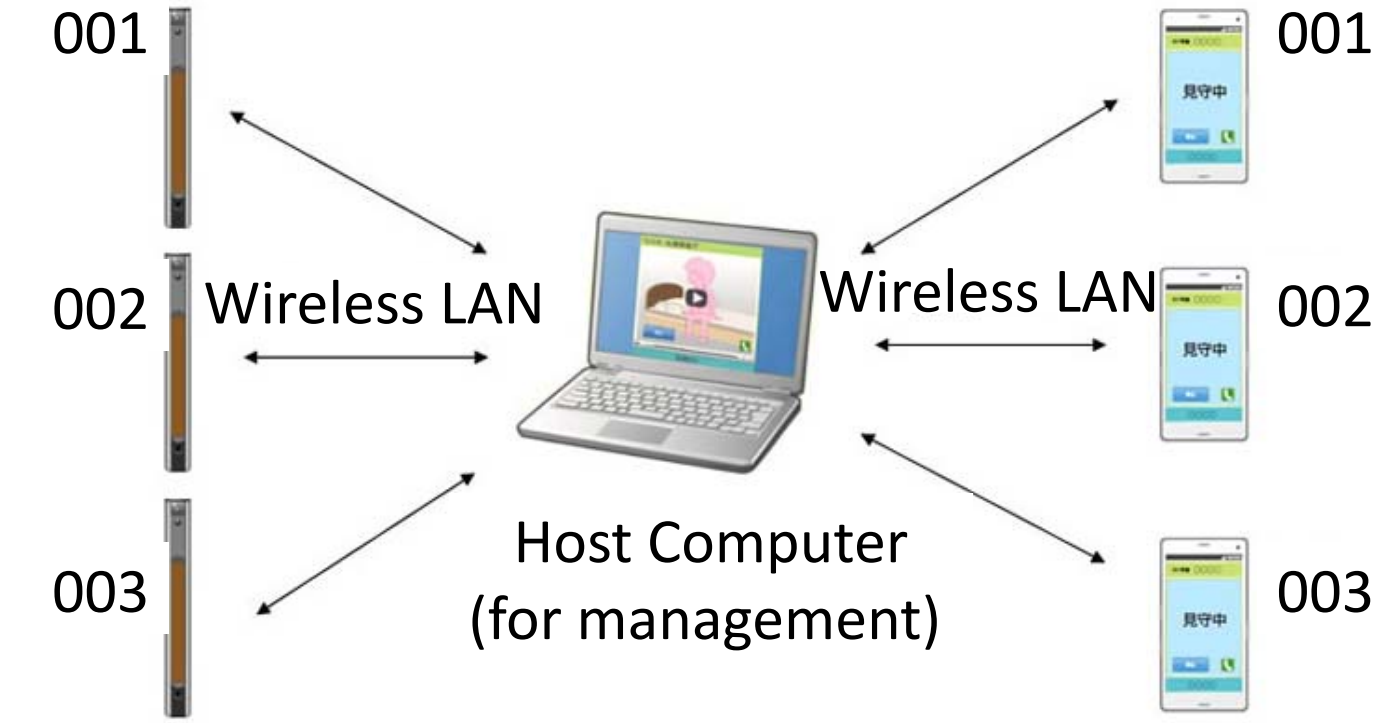
Configuration

- Size : (W)120[mm]
  (H)1320[mm]
  (D)50[mm]
- Weight : 3[kg] (About weight)

Source : http://robotcare.jp/?page_id=2306

Mechanism of “Mi – Ru”

A host computer manages several Mi - Ru’s information, and sends them to portable devices of a caregiver.



Source : https://kaigorobot.kaigoline.net/spacification/

Summary

- Nursing care robots including observation robots are gradually introduced into care facilities.

  The problem of introducing robots is usually its expensive costs.

- Watching robots are spotlighted among them.

- Communication based robots can reduce caregivers' workload by providing psychotherapies and recreations.

- Security service based robots can reduce the caregivers' workload by observation from a distant place.

Conclusion

We are developing two robots as our graduation researches.

- For assisting the visually disabled people
- For instructions of phonation.

Robot for assisting the visually disabled people

Through this International Robot High school, we have learned a lot of the latest robot technologies

We appreciate for everyone concerning IRH.

Thank you very much.