

FOR IMMEDIATE RELEASE

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## **Robot Astronaut Kirobo and Commander Koichi Wakata Conduct a Conversation Experiment in the International Space Station**

Dentsu Inc. (Tokyo: 4324; ISIN: JP3551520004; President & CEO: Tadashi Ishii; Head Office: Tokyo; Capital: 74,609.81 million yen) announced today that on December 6, 2013, Japan Aerospace Exploration Agency (JAXA) astronaut Koichi Wakata and robot astronaut Kirobo held a conversation experiment on board the International Space Station (ISS).

The conversation, the first of its kind between a human and a robot in outer space, represents the latest development in the KIBO ROBOT PROJECT, a joint research project being carried out by Dentsu, the University of Tokyo's Research Center for Advanced Science and Technology, ROBO GARAGE Co., Ltd. and Toyota Motor Corporation. JAXA is also providing extensive assistance.



Experiment content:

1. Autonomous conversation using voice recognition technology
2. Communication with people on Earth

**Extract from the conversation experiment (translation)**

Wakata: How did you get out here into space, Kirobo?

Kirobo: On a Kounotori\* from Tanegashima.

Wakata: Oh, so you flew all the way into space on a bird?

Kirobo: It wasn't a bird, it was the Kounotori rocket.

Wakata: It's incredible that you came here all by yourself.

Kirobo: Well, I'm a robot!

\*Kounotori is the Japanese word for "white stork" and is also the name of the H-II Transfer Vehicle used with the H-IIB Launch Vehicle.



Further conversations will be held, and conversation logs and other data will be gathered and utilized by the project participants. The key aims of the project are to facilitate the coexistence of people and robots, and to explore possible future deployment of communication robots in outer space.

**Kirobo's basic specifications**

- Dimensions: Height: 34 cm, Width: 18 cm, Depth: 15 cm (approx.)
- Weight: 1000 g (approx.)
- Language: Japanese
- Main features: Voice recognition, natural language processing, voice (speech) synthesis, telecommunications functions, gestures, facial recognition camera, recording camera



### Key project developments to date

- Nov 29, 2012 The project is announced; the public begins proposing robot names.
- Jun 26, 2013 Kirobo and backup (ground) crew member Mirata are completed and introduced at a press conference.
- Aug 4, 2013 Kirobo leaves Japan for the ISS aboard the Kounotori 4 transfer vehicle from the Tanegashima Space Center.
- Aug 10, 2013 Kirobo arrives at the ISS.
- Aug 21, 2013 Kirobo speaks his first words in outer space:  
"On August 21, 2013, a robot took one small step toward a brighter future for all."

### For reference

- Nov 7, 2013 JAXA astronaut Koichi Wakata boarded the Russian spacecraft Soyuz and arrived at the ISS the following day.

### Future project plans

- Dec 2014 Kirobo scheduled to return to Earth.

Kibo Robot Project website: <http://kibo-robot.jp/en/>

Twitter: [@kibo\\_robot](https://twitter.com/kibo_robot) (Japanese language only)

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