

Trends in Japan

Sci-tech

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The Evolving Shinkansen

A Crystallization of Cutting-Edge Technology

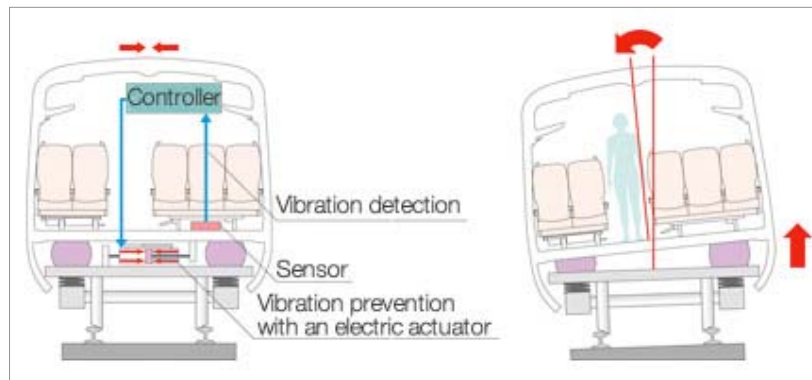


The E5 Series is the latest addition to the Shinkansen team. (c)The East Japan Railway Company

In 2011, the new E5 Series will debut on the Tohoku Shinkansen lines in northern Honshu. When it reaches its full operating speed in March 2013 the E5 Series will be Japan's fastest train ever, with a top speed of 320 kilometers per hour.



A close-up view of the distinctive "Long Nose" front of the E5 Series. (c)The East Japan Railway Company



Illustrations showing the new train's tilting mechanism. (c)The East Japan Railway Company



The redesigned low-noise pantograph. (c)The East Japan Railway Company



An E5 Series train on a test run, with a 200 series train in the background. (c)Kawai Satoshi

Unraveling the Riddles of the Deep

Japan Leading the World in Deep Earth Exploration



An external view of *Chikyu*. (C)Japan Agency for Marine-Earth Science and Technology

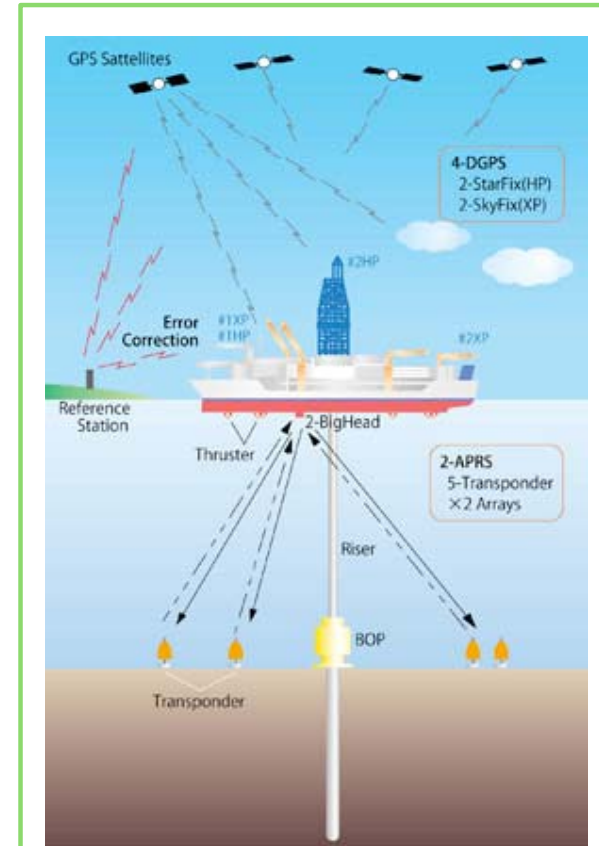
The mission of the Japanese deep-sea drilling vessel *Chikyu* is to drill down into the earth's mantle, far below the deepest seas. Using some of the most advanced drilling technology in the world, *Chikyu* will reveal new information about how earthquakes happen, and discover previously unknown marine resources and life forms.



Riser pipes on deck ready for use. (C)Japan Agency for Marine-Earth Science and Technology



Researchers carrying out analysis on board. (C)Japan Agency for Marine-Earth Science and Technology



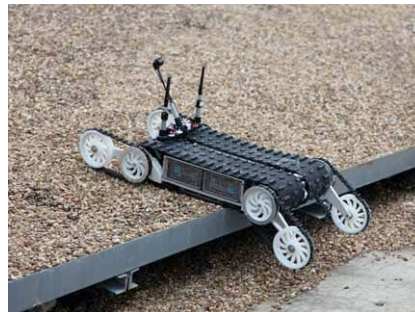
Chikyu's Dynamic Positioning System. (C)Japan Agency for Marine-Earth Science and Technology

Machines Play Vital Roles in Disaster Relief

The development of rescue robots is gaining momentum in Japan. Rescue robots help relief efforts in the aftermath of earthquakes and other disasters by navigating through wreckage that is too dangerous for people to enter and by gathering information on missing persons and the surrounding conditions. Recent years have seen rapid advances in the development of these robots, and Japan is now a global leader in the field.



Tokyo Fire Department's Robocue.
(C)Tokyo Fire Department



Quince. (C)IRS



The Active Scope. (C)IRS



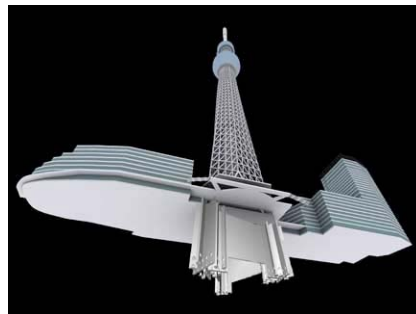
IRS Soryu. (C)IRS

Protecting Japan's Tallest Building against Earthquakes



An image of the completed Sky Tree.
(C)TOBU Railway CO.,LTD and TOBU
TOWER SKY TREE Co.,Ltd

When it is finished, the Tokyo Sky Tree will be the tallest free-standing broadcast tower in the world, at a height of 634 meters. The antiseismic technologies used in the tower represent a groundbreaking fusion of traditional techniques and the latest modern technology.



A computer-generated image of the
Sky Tree. (C) OBAYASHI
CORPORATION



Testing the earthquake
resistance of a five-story
pagoda. (C)NPO
Corporation Forum for Wood
Architecture / Building
Research Institute



A recent picture of the Sky Tree
under construction, at a height of
398 meters.