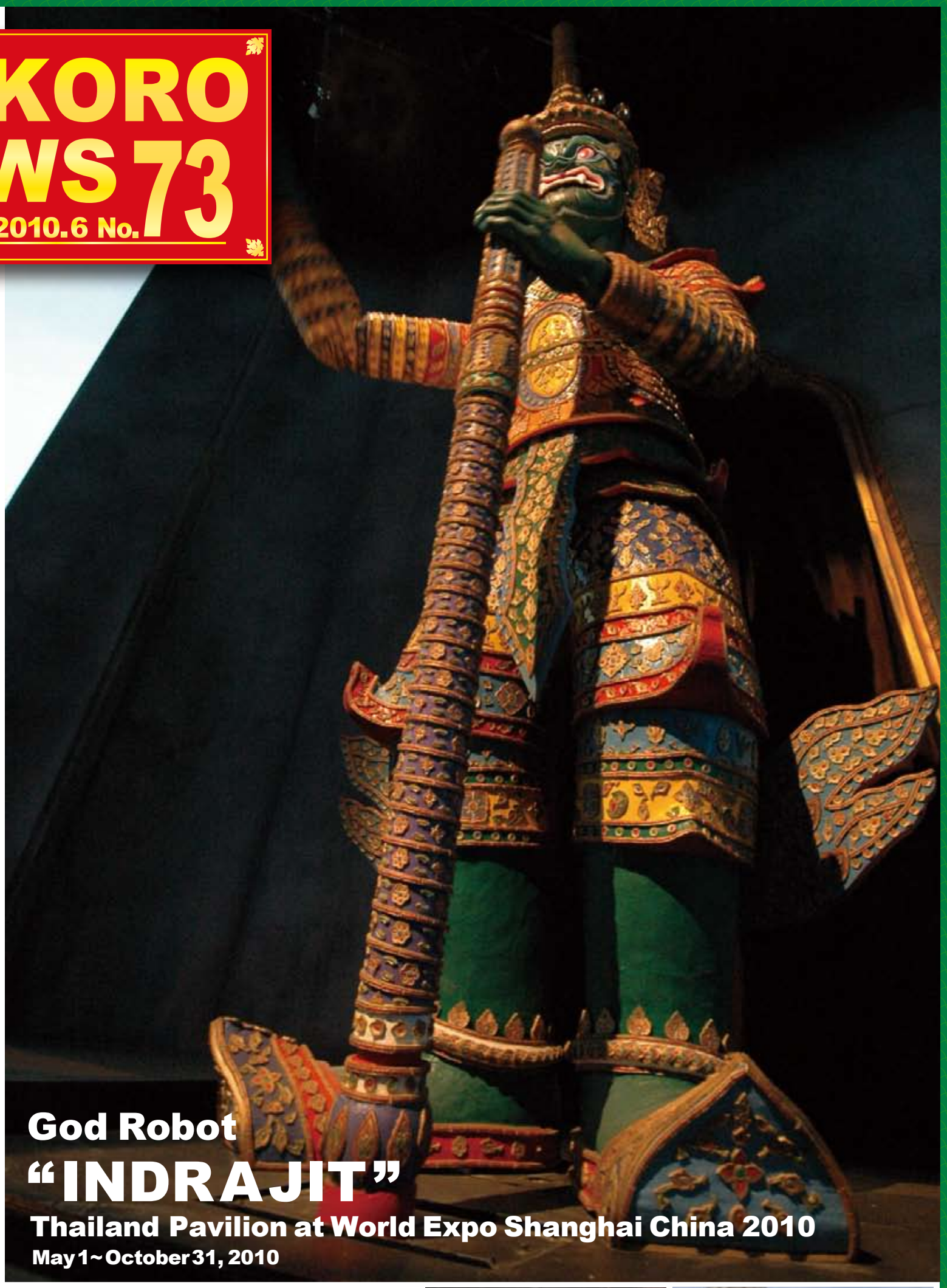
KOKORO NEWS 73

2010.6 No.

A "God Robot" descends to the Shanghai Expo.



God Robot "INDRAJIT"

Thailand Pavilion at World Expo Shanghai China 2010

May 1~October 31, 2010

The giant robot with the total height of 3m!

Kokoro was in charge of the manufacturing of the giant "God Robot" with the total height of 3m which has appeared in the theater in the Thailand Pavilion at World Expo Shanghai China 2010 hosted by the Thai government.
With the mechanics incorporated inside, this God Robot which is called "INDRAJIT" moves tremendously and shows various facial expressions such as speaking with its eyes lighting up. It looks as if life was breathed into the statue of the god! Such boggling staging has been gaining much attention of the media all over the world raising the profile of the Thailand Pavilion. It is highly contributing in attracting a lot of visitors!

In the theater, you can enjoy the magnificent staging which links video images with the robot. Let's visit the theater and experience the overwhelming punch!

It shows the external appearance of the Thailand Pavilion with a lot of visitors standing in a long line. It is re-creating the stately Thai architecture with the statue of "INDRAJIT" enshrined at the gate.

kokoro
a company of Sanrio Group

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2010 New Robotics Product Lineup

Much-needed popular products have been newly released with reasonable price and delivery schedule!

Acrtoid-F Main Body Specifications

Dimensions & Weight
Dimensions: W600 D800 H1400
Weight: 30kg

Control specifications
Pneumatic actuators & Servo control
Connected to an external general-purpose PC via serial communication (USB 1.0)

Movable parts (12 axes)
Between the eyebrows (Up/down), Eyebrows (Up/down), Eyes (Up/down, Right/left), Upper eyelids (Up/down), Mouth (Open/close), Cheeks (Up/down), Neck (Up/down, Right/left, Tilt), Shoulders (Up/down), Waist (Back/forth)

Power supply
AC100－240V

Voice output
A speaker is incorporated in the robot's main body.

Bundled software
Tele-operation system checker software

Geminoid F developed by Osaka University and ATR

*Photos provided by Osaka University

Geminoid F was developed at the Global COE Program "Center of Human-friendly Robotics Based on Cognitive Neuroscience" (led by Professor Hiroshi Ishiguro). Osaka University and ATR are participating in the program. Photos provided by Osaka University.

Tele-operated Actroid-F

The latest model in the Actroid series released!

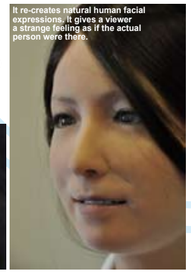
"Tele-operated Actroid-F" (commercial model of Geminoid F), the latest humanoid robot of Kokoro, has been completed. Kokoro is an authority in humanoid robots with one of its robots registered as "the first true android avatar" by Guinness World Records.
Actroid-F has achieved cost reduction and weight saving while re-creating more lifelike facial expressions compared with the existing Actroid series. A set of control equipment, which was previously incorporated in an external control box, is incorporated in the robot main body. So it can be made to sit on a chair in a natural position. Also, it can be installed in any place as it operates on household power source.
A tele-operation system is used for the operation of Actroid-F. Movements of the operator's face can be transmitted to the robot in real time through Internet connection.
When the operator moves his/her neck or mouth, the robot makes the same movement. Interactions full of live sensation can be created by reflecting the operator's voice, facial expressions, etc. on the robot. Kokoro is aiming to introduce Actroid-F into the medical field and explore new business opportunities looking at its use in various fields.

*These photos show Geminoid F. Basic specifications of Actroid-F are equivalent to those of Geminoid F, but the external appearance slightly differs.

*Photos provided by Osaka University and ATR Intelligent Robotics and Communication Laboratories

The robot in the back is Geminoid HI-1, copy android of Prof. Hiroshi Ishiguro.

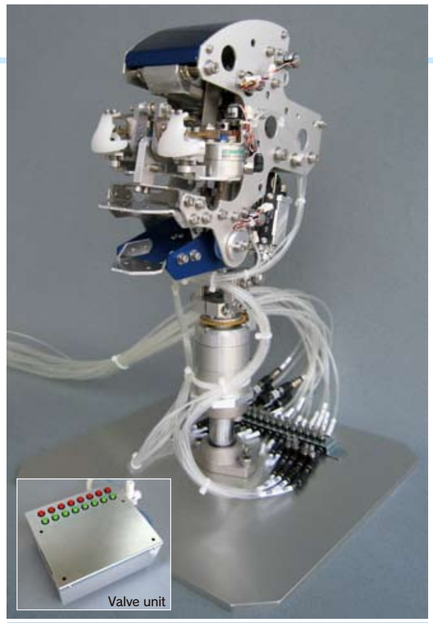
It can be changed to various figures by changing its external facing.



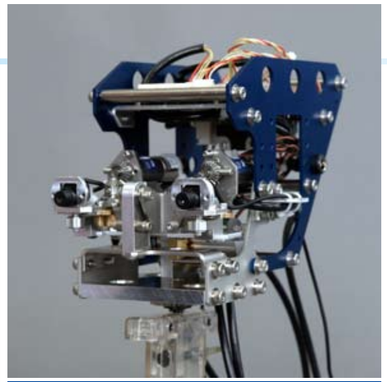
It re-creates natural human facial expressions. It gives a viewer a strange feeling as if the actual person were there.

Humanoid-Tech

Series1 Human-type Head Basic Assembly Kit
Series2 Stereo Active Camera



Human-type Head Basic Assembly Kit



Stereo Active Camera

Kitting Actroid technology

Humanoid-Tech Series provides handy kits so that everyone can readily make use of a part of Kokoro's robot technology which was crystallized into the Actroid series.
The first two kits released are "Human-type Head Basic Assembly Kit", which is specialized in the humanoid robot head mechanism, and "Stereo Active Camera", which is specialized in the eye movement and small cameras incorporated in both eyes.
These products are gaining attention as educational and research robots for universities and corporate laboratories. We already accepted an order from a certain customer who wanted to incorporate these parts into the customer's own robot. These products are acquiring a good reputation for their simplicity with specialized functions. Please look forward to future products as well.

User-friendly simple structure

Products in Humanoid-Tech Series have very simple structures so that they can be easily incorporated into a user's own robot. Stereo Active Camera is delivered in a completed state. Human-type Head Basic Assembly Kit provides a set of parts to a user as shown in the right picture and the user can learn about the robot mechanism through assembly work.

Components of Stereo Active Camera

All parts of Human-type Head Basic Assembly Kit

I-FAIRY installed at the entrance hall of Science Centre Singapore.

I-FAIRY looks happy displayed in such a splendid case.

Becoming a center of world attention with cute looks!

I-FAIRY, long-awaited Kokoro's new product, has been finally completed! Its debut at the CES 2010, largest-class trade show in the U.S., was broadcasted through Internet and it received attention and expectations as an unprecedented "cute" robot. Also, it was installed in Science Centre Singapore and is gaining popularity as a main attraction of the science center.
Its movements and speeches can be changed without complicated programming. As its contents can be changed immediately, it can be used for various events including one-day-only events.
In addition to its useful and innovative system, its cute and futuristic design is so attractive.
With the advent of low-cost robots such as I-FAIRY and Actroid-F, it is expected that the penetration of robots into the society will be increased at once. Kokoro will lead such new age!

It also appeared in a wedding ceremony!

Intelligent, Information, Icon
I-FAIRY

Fukuiraptor kitadaniensis

Fukui Prefectural Dinosaur Museum (in Fukui Prefecture)

The "Fukuiraptor" dinosaur robot appeared in the Fukui Prefectural Dinosaur Museum in March as part of the project to celebrate the museum's 10th anniversary coming in July. Fukuiraptors are a representative of Japanese meat-eating dinosaurs. With glorious accomplishments of excavation and research, the museum has a special feeling for this dinosaur. In creating the Fuluiraptor's first life-size restoration in the form of a dinosaur robot, Kokoro took a process of trial and error to pursue the accuracy compared with the skeleton specimen and to represent its charm as much as possible.

A Fukui dinosaur coming back into existence!

Fukuiraptor glaring and roaring in a low position. Its whole body including the end of the tail moves life-likely.

Fukuiraptor raising its body up and howling. When it looks down and catches your eye, you may feel as if you were falling prey to it.

Overwhelming the visitors with diverse poses!

The Fukuiraptor robot is displayed on the first floor of the entrance hall as a first exhibit seen from the visitors when they come down on the escalator. They can enjoy its overwhelming punch up close just ahead of the complete skeleton specimen of Fukuiraptor. Quick, light and agile movements and the variation of diverse poses are fully incorporated in the robot for the representation of ferociousness of a medium-sized dinosaur. It drastically changes from humorously sniffing in a low position to threatening the visitors holding its body up or moving its tail lithely like a real beast. It is completed as a very attractive dinosaur restoration which has combined delicacy and powerfulness.