

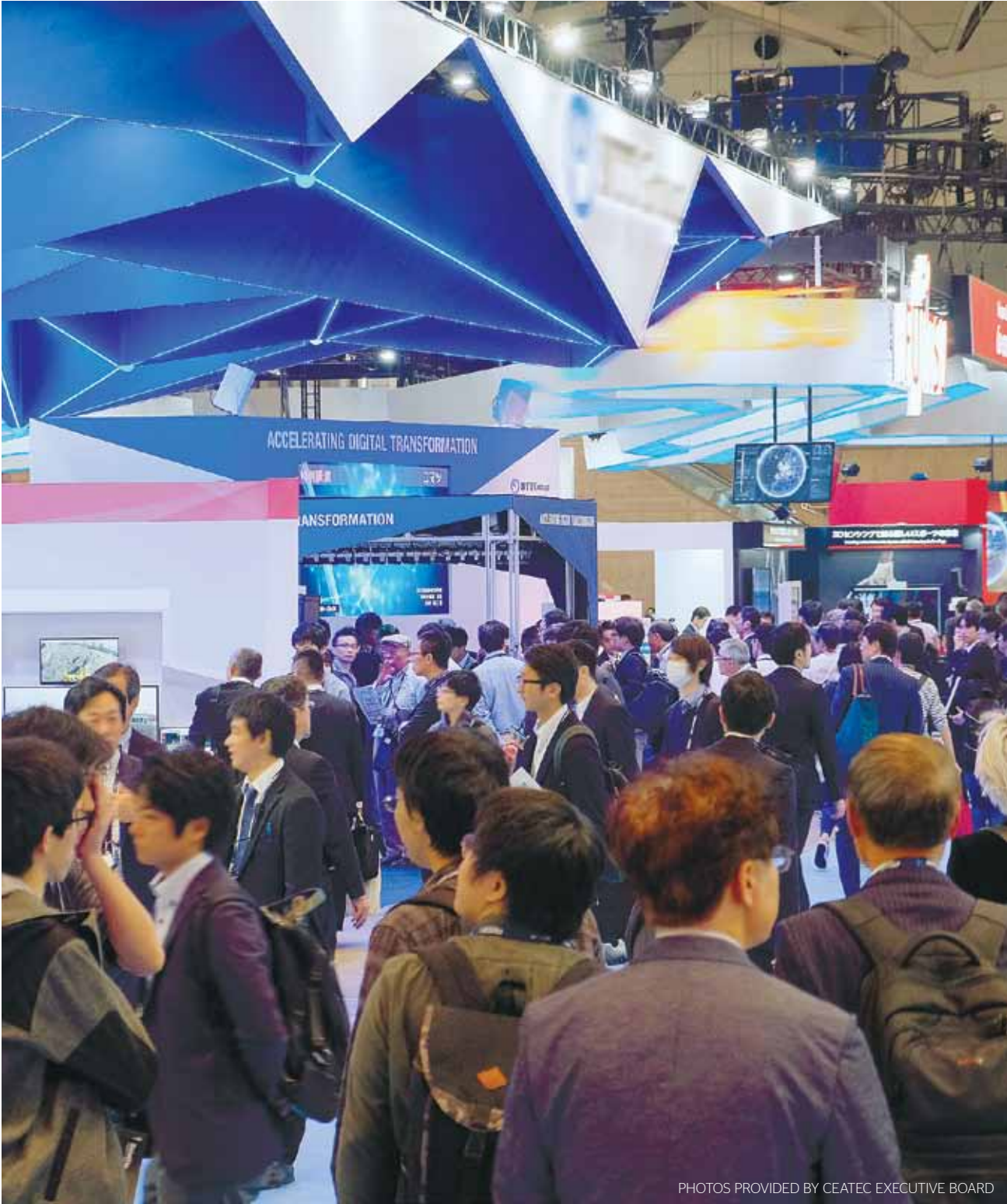


thejapan times

Head Office: 14F Kioicho Bldg., 3-12 Kioicho, Chiyoda-ku, Tokyo
Advertising (Cross Media) Tel: 050-3646-8421
Email: jtad@japantimes.co.jp Web: www.japantimes.co.jp

CEATEC 2019 Special

Duration: Oct. 15 – 18
Venue: Makuhari Messe



PHOTOS PROVIDED BY CEATEC EXECUTIVE BOARD

INDEX

EVENT OVERVIEW	2
SOCIETY 5.0	3
FUTURE TECH	4



CEATEC
CPS/IOT EXHIBITION

EVENT OVERVIEW



Visitors look over the floor plan at last year's CEATEC. The event has been held at Makuhari Messe in Chiba since its initial launch in 2000. CEATEC EXECUTIVE BOARD



CEATEC is an annual showcase of the latest technology. CEATEC EXECUTIVE BOARD

AN INNOVATIVE PEEK INTO TECH OF TOMORROW

Maiko Muraoka
CONTRIBUTING WRITER

CEATEC (Combined Exhibition of Advanced Technologies) is an annual event where innovative technologies, products and services are all exhibited together in one place to illustrate what a future society may be like.

This year's CEATEC, for which The Japan Times is a prime media partner, will be held at Makuhari Messe in Chiba Prefecture from Oct. 15 to 18. It requires preregistration from all visitors on the CEATEC website, www.ceatec.com. People can also register online at the venue reception area during the event.

The event, sponsored by the CEATEC Executive Board, comprised of the Japan Electronics and Information Technology Industries Association, the Communications and Information Network Association of Japan and the Computer Software Association of Japan, consists of two major parts — an exhibition and a conference.

The exhibition is made up of three main areas: "Total Solution" for products and solutions that are designed to realize Society 5.0, an ultra-smart society where people can enjoy comfortable and active lives; "Smart X" for innovations that are expected to bring about revolutionary changes in specific industries; and "Devices and Technologies" for showcasing electronic components, devices, software and other technologies that are meant to support Society 5.0.

In addition, there will be two themed exhibits. One is a Society 5.0 Town in the central area of the venue. It showcases what a society may be like in 10 years, through exhibits of about 70 independent booths of companies from various sectors, each offering products and services that make people's lives convenient and more efficient.

The participating companies vary greatly in size, industry and specialization. There will be booths set up by Japan's four major construction companies, gas and electricity companies, transportation companies including ANA Holdings Inc., which will participate in CEATEC for the first time. Various sectors are represented including travel, housing, entertainment, finance, medical services, retail, manufacturing and IT, among others.

"The booths will be lined up along the street that runs through the center of the Society 5.0 Town, making it possible for visitors to experience the city of 2030," said Kiyoshi Shikano, the executive producer of CEATEC, during an interview with The Japan Times.

There will also be a co-creation zone in the Society 5.0 Town. Some of the exhibitors participating in this area collaborated to combine their technologies to introduce new goods and services at the event. This is what makes CEATEC unique — it encourages open innovation among exhibitors from different industries whereas typical trade fairs and exhibitions embody a collection of various companies organized by industry.

The other planned exhibit is Co-creation Park, where startups from Japan and abroad gather and a Global Pavilion Zone comprised of organizations and companies from Switzerland and Russia, as well as several other countries.

Shikano stressed that it is important to offer students opportunities to think about the future as the main players of the next-generation society. For that purpose, a lounge area for students will be set up inside the venue where students can meet with businesspeople, gather information about various companies and learn about diverse industries.

This year's CEATEC also offers a special

exhibit named Trend Watch that commemorates the 20th anniversary of the event. It is divided into three categories, with the Mobility section displaying a fully autonomous car, the Smart Life section presenting various "internet of things" solutions to utilize big data, and the 5G section exhibiting telecommunications carriers and mobile parts manufactures.

An autonomous car will also run on the route connecting Makuhari Messe and Makuhari Station. "It is a rare thing that a fully autonomous car carrying passengers drives on a public road with normal traffic," said Shikano. Visitors can take the 15-minute ride on a reservation basis.

During the four days of the exhibition, the startup First Pitch Contest will be held in collaboration with CEATEC's global partner, Plug and Play Japan. Four winners will be selected among the startups participating in the contest and they will receive various benefits to help boost their businesses.

There will also be an awards ceremony for the CEATEC Award 2019 during the exhibition. Entry applications and screening are conducted prior to the show to select technologies, products and services that are highly innovative in terms of academic, technological, marketing, potential and other perspectives. The awards ceremony of Ministerial Awards will be held on Oct. 15 and that of Special Awards and Category Awards on Oct. 16.

At the conference, visitors can listen to and learn from the leaders and experts in various sectors and fields. During the morning of Oct. 15, Nick Parker, a corporate vice president of the Consumer and Device Sales of Microsoft Corp., and two other corporate officials from the company will deliver a

speech, "Society 5.0 Built with the Intelligent Cloud and Intelligent Edge," after the opening ceremony in a hall that accommodates 1,000 people.

In the afternoon, representatives from ANA, JTB Corp. and Japan Taxi Co. will give speeches in the same room.

On Oct. 16, speeches and panel discussions will center on the theme of 5G and communications. Leaders from the four major telecommunications carriers in Japan, ministry officials and other experts in the field will speak on various issues.

The main theme for Oct. 17 is artificial intelligence. Representatives from Philips Japan Ltd., Amazon Japan G.K., and Toshiba Corp. will speak under the theme, "Use of AI Technologies toward DX (Digital Transformation) Realization and Challenges."

On Oct. 18, mobility innovation will be the main theme of the day, and a director-general from the city of Chiba, a national strategic special zone for autonomous vehicles and drones, will join the panel discussion under the theme of "Draw the smart mobility in the near future."

There will be 120 to 130 conferences altogether over four days, including smaller sessions covering diverse technological and business trends. Simultaneous interpretation is available at major conferences via the official CEATEC app. It is advised that visitors install the app on their smartphones before attending the conferences and bring headphones.

"The exhibition areas and conferences are designed to supplement each other," said Shikano. He expressed his hope that visitors will not just come once, but return the next day because there will be new discoveries every day during CEATEC 2019.



Speakers representing a range of industries take part in the event's conference segment. CEATEC EXECUTIVE BOARD



SOCIETY 5.0

CONNECTING REALITIES THROUGH CYBERSPACE

Minoru Matsutani
STAFF WRITER

One of the highlights of this year's CEATEC (Combined Exhibition of Advanced Technologies) is Society 5.0 Town, an exhibition area where companies from diverse sectors such as retail, banking, construction, transport and local governments will showcase their technologies to connect people, information and things to enhance people's lives.

Society 5.0 is a concept created in Japan and is defined as "a human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space," according to the Cabinet Office website.

The town's theme is in line with Japan's push to become a global leader in utilizing technology to create a community that maximizes energy efficiency and residents' convenience, as well as welfare.

Dozens of predominantly Japanese companies will participate in Society 5.0 Town at CEATEC, to be held at Makuhari Messe in Chiba Prefecture from Oct. 15 to 18. Participants range from ANA Holdings Inc., Mitsubishi Estate Co. and Taisei Corp., among others.

Airline company ANA Holdings will showcase Avatar, a remote-access robot.

"We are a company about mobility. We want to solve mobility-related challenges. If you want to go somewhere, you have to go to an airport and fly. Avatar saves people from having to do that," said Akira Fukabori, director of the Avatar Division.

One of the most affordable models suspends a tablet-sized monitor at face level with a thin pole as a body. It can move across flat surfaces and is priced "equivalent to a notebook PC," said Fukabori. The model is currently being tested in an Oita Prefecture household where a husband and wife can speak to their daughter in Tokyo via video; the catch is that their daughter can control it remotely with a computer or smartphone.

Additionally, unlike messaging apps, their daughter is able to see and hear her parents without them answering calls, allowing her to act as a caretaker despite being across the country.

ANA Holdings is planning to make Avatar commercially available around April 2020.

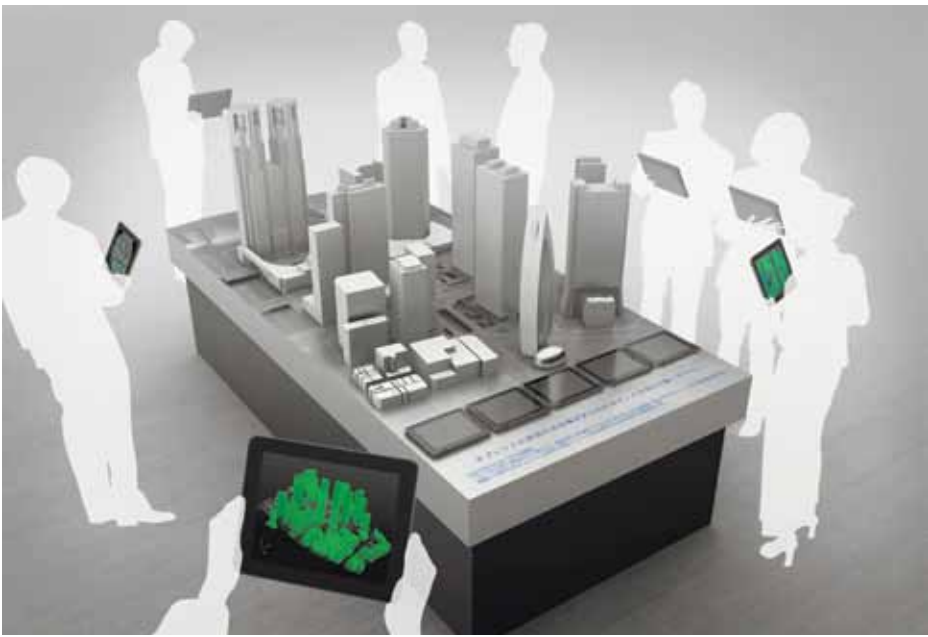
The company is also collaborating with technology companies to enhance Avatar's functions by, for example, adding robotic hands.

ANA Holdings has also developed Avatars that can fish and perform other tasks. In one test case, the company gave an individual with Lou Gehrig's disease the task of operating a waiter Avatar at a cafe, allowing him to have a remote part-time job.

Anticipated demand for Avatar is expected to range from business conference calls and remote participation in school lectures to watching sports events, just to name a few possibilities.

Visitors to ANA Holdings' CEATEC booth will be able to try using various types of Avatars, Fukabori said.

Meanwhile, major real estate developer Mitsubishi Estate will exhibit its transformation of the Marunouchi district in Tokyo's Chiyoda Ward. The company has recently revamped the area, generally considered home to large traditional companies in the last century, as an interactive hub of startups and large established corporations.



Visitors to the Taisei Corp. booth at Society 5.0 Town at CEATEC can look at the future image of buildings in the Shinjuku district of Tokyo. TAISEI CORP.

While Marunouchi is home to more Fortune Global 500 companies and publicly listed companies than other business areas in Tokyo such as Shinjuku, Nihonbashi and Shinagawa, the area is also a base for smaller companies.

Egg Japan, Finolab and Inspired.Lab — all located in Marunouchi — serve as rental offices for entities with up to 20 individuals. Each also offers various services such as networking events.

On the security front, Mitsubishi Estate is looking to showcase cutting-edge technologies designed specifically with offices in mind, created in collaboration with technology startups and corporations.

For example, Mitsubishi Estate plans to

exhibit SQ-2, an automated security robot developed by Seqsense Inc. SQ-2 was first used in the Otemachi Park Building on Aug. 29, marking its first step into the commercial market. When patrolling, SQ-2 records and analyzes images and sounds in real time to detect suspicious objects and individuals. It can also make conversation.

In terms of architecture, construction company Taisei Corp. aims to use data from structures it has built and currently maintains to propose design updates and changes for both existing and new buildings.

For example, Taisei collects data such as worker movement patterns in factories and tasks artificial intelligence with calculating the most ideal blueprint for similar factory projects in the future.

"Until now, construction companies have been involved in the first and last part of the life of a building — construction and dismantling. However, we can collect valuable data and be involved in the middle, longest part in the life of a building — operation," said Toshihiko Ueda, acting general manager of the company's Artificial Intelligence and "internet of things" Business Promotion Department.

At Taisei's booth, one of the exhibits visitors can experience is to analyze virtual renderings of Shinjuku streets displaying different data sets with human icons illustrating movement patterns.



SQ-2, an automated security robot
MITSUBISHI ESTATE CO. / SEQSENSE



Rendering of a community using Avatar ANA HOLDINGS INC.



News + Everything you love about Japan



Download NHK WORLD-JAPAN's free app



English	اللغة العربية	বাংলা	မြန်မာစာ	华语	Français	हिन्दी	Bahasa Indonesia	한국어
English	Arabic	Bengali	Burmese	Chinese	French	Hindi	Indonesian	Korean
فارسی	Português	Русский язык	Español	Kiswahili	ภาษาไทย	Türkçe	اردو	Tiếng Việt
Persian	Portuguese	Russian	Spanish	Swahili	Thai	Turkish	Urdu	Vietnamese

FUTURE TECH



Above and right: Antenna clips and device controllers are designed to aid deaf and hearing impaired individuals through recognizing sound via light and vibration.
FUJITSU LTD.



Professor and Pixie Dust Inc. CEO Yoichi Ochiai posits that the technology behind remote smartphone-controlled crane game apps could be integrated into convenience store jobs in the future.

YOSHIAKI MIURA



SCI-FI NO MORE: CREATIONS TO ADDRESS SOCIETAL DILEMMAS

Masumi Koizumi
STAFF WRITER

Advances in artificial intelligence (AI), 5G wireless networks and other technologies are making our lives more exciting and convenient, but a young entrepreneur, professor and media artist is also keen to harness them for other ambitions: addressing social challenges unique to Japanese society.

The fifth-generation, or 5G, high-speed mobile network set to enter commercial service in the country next spring will “have an enormous impact on our communication media,” Yoichi Ochiai said in a mid-September interview with The Japan Times.

“But it won’t end there. It will become a means for us to resolve challenges.”

Ochiai, 32, who specializes in human-computer interaction and computer graphics, serves as an associate professor at the University of Tsukuba and is CEO of Pixie Dust Technologies Inc. Also a commentator on technology, Ochiai will give a speech at the digital trade fair CEATEC 2019, which runs from Oct. 15 to 18 at Makuhari Messe. The Japan Times is a prime media partner for the event.

When introduced, 5G will handle large data volumes at higher speeds with little time lag. A two-hour movie will be downloadable in just a few seconds.

To illustrate the change that 5G will bring, Ochiai cited remotely controlling a robot arm to support human work as one example.

Ochiai demonstrated a claw crane game app for smartphones as evidence of the budding potential under the current 4G standard.

The application, called Toreba, allows users to remotely play on a machine that exists in real life. He demonstrated how smoothly the claw reacted to his directional commands.

He said the claw is “no different from a robotic arm.”

“If we can play the remote-controlled claw crane game at this speed,” he said, “we can do a similar job at any location.”

Given that the 4G standard already enables such a game, 5G presents even greater possibilities.

Remote-controlled robotic arms may someday find a niche at convenience stores, where Ochiai believes many part-time jobs could be done remotely.

“Grabbing a prize with the claw is basically the same as picking an *oden* hot pot dish (at a convenience store),” he said.

The problem to consider when the network speed has increased, he said, is “how we can combine (the abilities of robots) with humans in distant locations.”

Japan’s graying population is an inevitable conundrum that Ochiai wrestles with.

He believes that improving service infrastructure for the elderly, including taxi-hailing apps to go to hospitals and automatic transcriptions for those with hearing difficulty, is vital to their independent living. He said that the country is “in dire need of research, development and on-site experiments to determine whether the services are commercially viable and how they should be provided to users.”

“My research and development project xDiversity involves these things,” he said.

Ochiai leads the xDiversity project backed by the Japan Science and Technology Agency under the science ministry. Its main quest is to support people’s physical “diversity” using machines, AI and robots.

The motivation is to move away from “standardization,” or a society where people are expected to conform to what is considered normal, to embracing diversity, he said. This could include assisting people with disabilities and even augmenting their capability with technology.

Ochiai will introduce xDiversity’s research efforts in his CEATEC speech on the second day of the event. The speech is titled “Design and Deployment of an xDiversity AI Platform for Audio-Visual-Tactile Communication Towards an Inclusive Society.”

One effort is to have Hirotada Ototake, author of the best-selling book “Gotai Fumanzoku” (“No one’s perfect”) who was born without limbs, walk in prosthetic legs.

Since the Ototake Project launched last year, he has made much progress in walking, Ochiai said.

“It was difficult for us to make the artificial legs lighter,” he said.

He will also speak about Ontenna, a device worn like a hairpin to let wearers sense sound through light and vibration. Fujitsu Ltd. released the gadget, which was developed with the deaf and hearing-impaired community, in July.

Ochiai said that this year’s speech will unveil “more project examples” than last year’s.

Asked about the message he wants to convey through the speech, he said, “I want people to have the awareness of the issues affecting Japan, such as the low birthrate and aging population.”



Connecting
Society,
Co-creating
the Future

2019

10.15 TUE
10.18 FRI

Makuhari Messe

www.ceatec.com

Sponsors CEATEC Executive Board

JEITA Japan Electronics and Information Technology Industries Association

CIAJ Communications and Information network Association of Japan

CSAJ Computer Software Association of Japan



CEATEC

CPS/IOT EXHIBITION

20th

Toward Society 5.0