

HISTELCON2017 exhibition list

	Title	Exhibiting company	Summary
1	History of Tokaido Shinkansen	Central Japan Railway Company	We show the history of the first high-speed rail in the world, Tokaido Shinkansen. The main transportation artery links Japan's principal metropolitan areas of Tokyo, Nagoya, and Osaka.
2	GS Yuasa History and Latest Secondary Battery Applications.	GS Yuasa International Ltd.	The GS Yuasa Group, which started with the lead-acid battery business, will celebrate its 100th anniversary in 2017. We will be exhibiting about GS Yuasa history and latest secondary battery applications.
3	20-inch Photomultiplier Tube	Hamamatsu Photonics K.K.	Exhibition of 20-inch PMT (photomultiplier tube) which is used as a detector in "Super-Kamiokande", Kamioka Observatory, Institute for Cosmic Ray Research, University of Tokyo.
4	Honda Electro Gyrocomator	Honda Motor Co., Ltd.	The Honda Electro Gyrocomator, commercialized in 1981, was the world's first map-based automotive navigation system. Honda adopted a direction sensor which was developed as a result of the world's first*1 practical application of gas-rate gyro sensor for automobiles. The gas-rate gyro sensor detects the direction the vehicle is moving. The combination of this direction sensor, driving distance sensor, microcomputer and other technologies enabled it to detect direction and the distance of the movement, which were used to calculate the current position of the vehicle. By indicating the current location, direction and driving trajectory of the vehicle on a cathode-ray tube (CRT) display where the user placed the map film, it was made easier for the driver to select which path to take. *1Honda internal research
5	Introduction of Hydropower Plants of Kansai Electric Power Co., Inc, was dedicated IEEE Milestone.	Kansai Electric Power Co.,Inc.	Introduction of "Kurobe River No.4 Hydropower Plant" and "Keage Power Station" was dedicated IEEE Milestone. Kurobe River No.4 Hydropower Plant contributed to industrial development and enhancing living standards in Kansai region. Keage Power Station contributed Kyoto's prosperity and technological modernization.
6	Yosami Radio Transmitting Station	Kariya City	The Yosami Radio Transmitting Station using very low frequency (17.4kHz) or long wave (17.2km) with eight 250m-high towers was completed in March 1929 in Yosami Village, the suburbs of Kariya. It was built for trade and governmental communications between Japan and European countries. The generator-transmitters, which were one of the largest transmitters in the world at that time, were designed by Telefunken and built by AEG of Germany. Its first destination was Warsaw, Poland on April 15th, 1929, followed by Berlin, Paris, and London, by 1930. Communications through 8,500 - 9,700km distances with European countries became possible by the opening of Yosami Radio Transmitting Station.

7	First Transpacific Reception of a Television (TV) Signal via Satellite, 1963 [Ibaraki Earth Station]	KDDI Corporation	On 23 November 1963, this site received the first transpacific transmission of a TV signal from Mojave earth station in California, U.S.A., via the Relay 1 communications satellite. The Ibaraki earth station used a 20m Cassegrain antenna, the first use of this type of antenna for commercial telecommunications. This event demonstrated the capability and impact of satellite communications and helped open a new era of intercontinental live TV programming relayed via satellite.
8	The MU (Middle and Upper Atmosphere) Radar, 1984	Kyoto University, Mitsubishi Electric Corporation	In 1984, Kyoto University build the MU (Middle and Upper atmosphere) radar as the first large-scale MST (Mesosphere, Stratosphere, and Troposphere) radar with a two-dimensional active phased array antenna system, with the collaboration of Mitsubishi Electric Corporation. IEEE milestone was dedicated in May 2015.
9	IEEE Milestone "Outdoor large-scale color display system, 1980"	Mitsubishi Electric Corporation	Mitsubishi Electric developed the world's first large-scale emissive color video display system in 1980. The system has entertained and informed millions of people in sports facilities and public spaces worldwide. Here, the original technology and the change of core technology is presented.
10	Nobeyama 45-m Telescope	<ul style="list-style-type: none"> <li>· National Astronomical Observatory of Japan</li> <li>· Mitsubishi Electric Corporation</li> </ul>	<p>In 1982, the Tokyo Astronomical Observatory in collaboration with Mitsubishi Electric Corporation completed the 45-m telescope as the world's largest antenna for millimeter-wave radio astronomy in Nobeyama.</p> <p>The Nobeyama 45-m telescope's innovative engineering contributed to the progress of radio astronomy by enabling high-resolution and high-sensitivity observations.</p> <p>Notable discoveries included new interstellar molecules and a black hole. In this conference's exhibition we will introduce the characteristics and history of the Nobeyama 45-m Telescope, which was dedicated this year as IEEE Milestone.</p>
11	IEEE Milestones Dedicated to NHK's Technical Achievements	NHK (Japan Broadcasting Corporation)	Direct satellite broadcasting service, high definition television system, and emergency warning code signal broadcasting system, that are NHK's technical achievements, were dedicated as IEEE Milestone in 2011, 2016, and 2016, correspondingly. We will introduce each technology by using a poster and video.
12	Line Spectrum Pair (LSP) for high-compression speech coding	NTT Corporation	Line Spectrum Pair (LSP), invented by Dr. Fumitada Itakura at NTT in 1975, is an important technology for speech synthesis and coding. A speech synthesizer chip was fabricated based on LSP in 1980. Since the 1990s, LSP has been adopted in many speech coding standards as an essential component, and is still used worldwide in almost all cellular phones and Internet protocol phones.

13	The Excellent Mass Production of High-quality Optical Fiber based on the vapor-phase axial deposition (VAD) method	NTT Corporation	The VAD Method is Recognized as a IEEE Milestone in 2015. We describe the technical and social contribution which was brought by the VAD method.
14	Heartbeat-By-Heartbeat Blood Pressure Monitoring via the Wrist	OMRON Corporation	OMRON is pursuing initiatives to reduce the cardio- and cerebrovascular incidence to zero. With this goal in mind,OMRON developed technology that uses the tonometry method to enable heartbeat-by-heartbeat measurement of blood pressure using only a simple device strapped to a subject's wrist.
15	Birth and Growth of Primary and Secondary Battery Industries in Japan (Recognized with IEEE Milestone in 2014)	Panasonic Corporation	<ul style="list-style-type: none"> <li>· Panasonic's contributions in the fields of dry batteries, lithium primary batteries, and nickel-cadmium batteries in Japan have been recognized by the IEEE.</li> <li>· Panasonic began with in-house production of manganese dry batteries in 1931.</li> <li>· In 1971, Panasonic was the first in the industry to develop lithium primary batteries.</li> <li>· In 1958, Panasonic started full-scale production of Ni-Cd secondary batteries.</li> <li>· These batteries have undergone continual technology advancement to the present day, and are used in a wide variety of applications from household devices to industrial equipment.</li> </ul>
16	Development of Electronic Television,1924-1941	Research Institute of Electronics, Shizuoka University	Television has fulfilled the dream of instantly viewing distant objects and events. Television systems have influenced many aspects of human society enormously, including communications, entertainment, education, the arts, sports, politics, economics, science, technology, and has greatly contributed to the process of globalization. Television is now indispensable to our daily life. Professor Kenjiro Takayanagi is one of the pioneers for the development of television. He achieved most of his work independently of activities in Europe and United States of America because at the time, global communications were poor. His pioneering achievements in the development of television from 1924 – 1941 are described.
17	Discovery of the Principle of Self-Complementarity in Antennas and the Mushiake Relationship, 1948	Research Institute of Electrical Communication, Tohoku University	Basic principle yielding the Mushiake Relationship is described and examples of self-complementary and modified self-complementary antennas with various shapes obtained by this relationship are presented. It is pointed out that the principle of self-complementarity is very important for obtaining ultra-wideband antennas. Examples of the applications of self-complementary antennas are also presented.

18	Electronic Calculators, Photovoltaic Cells, and TFT LCD technologies are three significant Sharp Corporation's achievements honored as IEEE Milestones.	SHARP corporation	In 1964, Sharp corporation successfully developed the all transistor and diode electronic calculator. Then the engineers dreamed that people lived comfortably thanks to the semiconductors. The dream brought evolution of the computers, LCDs and the photovoltaic power generation.
19	Development of Ferrite Materials and Their Applications	TDK Corporation	Panel explain the history of ferrite and the transition of their applications with time period. We will show the latest ferrite products.
20	Directive Short Wave Antenna, 1924	Tohoku University	The Directive Short Wave Antenna composed of linear radiator and parasitic reflectors and directors has sharp directivity in the direction of directors. It was honored as the IEEE Milestone for the first time in IEEE Region 10 (Asia - Oceania) in 1995.
21	World's First Japanese-language Word Processor	Toshiba Corporation	The first ever Japanese word processor, the JW-10 introduced kana to kanji conversion and editing still in use today in computers and smartphones.
22	T1100, a Pioneering Contribution to the Development of Laptop PC	Toshiba Corporation	T1100 is an IBM PC-compatible laptop PC released in Europe in 1985, equipped with high resolution LCD display and 3.5-inch floppy disk drive in its compact size and 4.1kg body, up to 8 hours battery life with newly developed power control technology.
23	Invention of a Temperature-Insensitive Quartz Oscillation Plate, 1933	Tokyo Institute of Technology	In April 1933 Isaac Koga invented a temperature-insensitive quartz oscillation plate. This invention was used at first for radio transmitters and later for clocks, and has proven indispensable to all radio communication systems and much of information electronics. This achievement was approved as an IEEE Milestone, which was dedicated to Tokyo Institute of Technology in March 2017.