SHAPING THE FUTURE WITH "TSUNAGU" TECHNOLOGY.

FUJIKURA NEWS

Power & Telecom

Release of Advanced Multi-fiber Fusion Splicer, the 90R Series
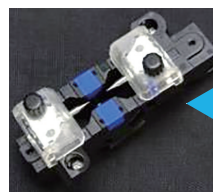
Optical fibers have become a more important social infrastructure in step with the spread of new 5G cellphones and Multi-cloud, increasing their diversity according to applications. In addition, raising the efficiency of installing the fibers has become a common challenge for customers involved in installation work. Fujikura's newly developed multi-fiber fusion splicers of the 90R series consist of three models, the 90R4 for splicing up to 4 fibers, the 90R12 up to 12 fibers, and 90R16 up to 16 fibers.

Furthermore, for the new 90R series, its V-groove unit, which is the most important component for a multi-fiber fusion splicer, and electrodes can be replaced. Multi-fiber fusion splicers have had a challenge of rising connection loss for a long time because glass particles that have vaporized at the time of fusion splicing gradually adhere to the electrodes and V-groove. Removing the glass particles that adhered to a V-groove is difficult, and the removal needs to be done at our repair center. In contrast, the new 90R series allows its V-groove to be replaced on site and thus resolves problems immediately.

In addition, the new 90R series retains the functions that have been used in previous models.

Major features
- Real-time calibration of electric discharge intensity
- Incorporation of automatic open/close wind proof, automatic open/close heater
- Reinforcement sleeve positioning function
- Automatic revolving function of optical fiber cutting blade
- Function of automatically changing heating temperature or time of multiple fiber stripper
- Compatible with fiber-optic ribbon cables, SWR® (Spider Web Ribbon®), with 200 μm and 250 μm sheath diameter
- Dividable multi-function large-capacity work tray

Replaceable

● Spare V-groove unit for replacement

● Replacement of V-groove unit on site

● Work tray

● 90R main unit

● Carrying case

Precious Equipment Division https://www.fusionsplicer.fujikura.com/jp/

Information
Fujikura Awarded Derwent Top 100 Global Innovator 2020

Fujikura has been named as a Derwent Top 100 Global Innovator 2020 by Clarivate Analytics, a global information service company and awarded a trophy on February 19. This award aims to select the top 100 of global innovative companies and institutions through analysis of their intellectual property trends based on the patent data obtained by Clarivate Analytics. The selection process uses four criteria, the number of patents, the success ratio (patent-to-application), globalization, and influence of patents on others in terms of citation. As a result of intensifying our patent portfolio in Japan, the U.S., Europe, and China, our globalization has been highly recognized and granted the award for the first time.

We will continuously solidify our core technology foundation in the four areas of optics, wireless, electronic components, and electric wire and cable and expand our technology through open innovation.

By doing so, we will continue to develop new products, create new businesses and promote the generation of intellectual property to support these activities

Right, Executive Vice President & Board Member, Akira Wada

✉ Intellectual Property Center   wwwadmin@jp.fujikura.com

Exhibition
Fujikura Exhibits at 22nd Data Center & Storage EXPO Spring

Dates April 8（Wed） to 10（Fri）,2020
10 am-5 pm　（First day 10 am-6 pm, 5 pm on last day）

This exhibition is held as part of a general technological trade fair related to Cloud and IoT, Japan IT Week 2020 Spring (estimated number of exhibitors: 1600, visitors: 90,000). During the exhibition, technologies that support IT infrastructure, such as operational administrative and backup software, SAN/NAS, tape storage as well as data center facilities including power supplies, air conditioners, and racks.

* SAN：Storage Area Network / NAS：Network Attached Storage

Venue Hall West4, Tokyo Big Sight
（Fujikura Booth West23-56）

Fujikura has exhibited at the event every year since 2016, and this year marks the fifth. In each of the past years, we welcomed many visitors at our booth and had them experience our solutions for data centers under a slogan "to be the most trusted partner in our market using our Tsunagu (connecting) technology." In this exhibition, especially, we will put on display data center interconnect (DCI) solutions and the underlying technology of optical cabling, which are indispensable to the next-generation data center, in the hands-on experience corner .

✉ Optical Cable System Division   telcon@jp.fujikura.com

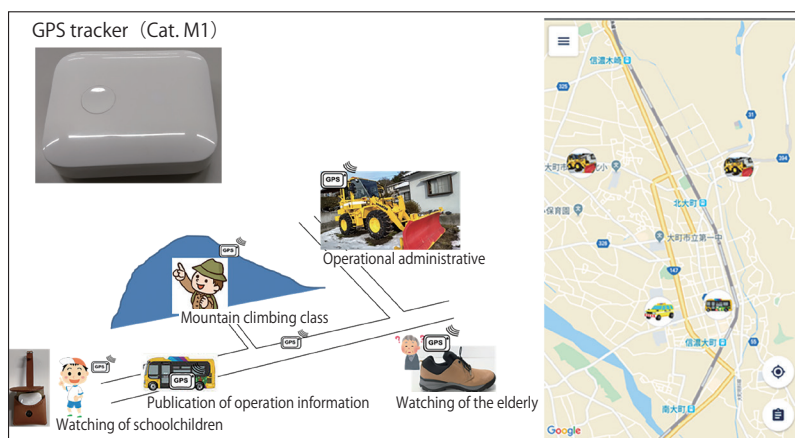# Fujikura Starts Verification Testing on IoT with Omachi City, Nagano Aiming at Participatory Smart City

Since January 2020, Fujikura has conducted verification testing jointly with Omachi City, Nagano, and IoTBASE with the aim of "creating a smart city together with the citizens." We work toward constructing a system to develop a reassuring and safe town by the participation of the public in protecting the elderly and schoolchildren from danger using our IoT device (GPS tracker). We also aim to build an operation platform (hereafter mapping system platform), which uses a map and can be used by each department of the municipality for various purposes. Omachi City and we have proceeded with verification testing on the GPS tracker and comfortable shoes that can contain the device, a tracker that uses the mapping system to track the elderly, the maximization of snowplowing work efficiency, and elderly peoples' health support operations. Through the testing, we have verified the applied technology and the effectiveness of the introduction.

The mapping system platform makes various services available on the same system. They include watching the elderly and children, providing public transportation location data, and displaying a map for children's reassuring and safety. This platform is expected to provide services across the municipality's different departments and improve work efficiency and reduce operation costs. Through this initiative, we assess these services and will start to put them to use in society step-by-step from fiscal 2021.

● **Application example of GPS tracker and mapping system platform**

GPS tracker（Cat. M1）

Mountain climbing class
Operational administrative
Watching of schoolchildren
Publication of operation information
Watching of the elderly

Service selection screen

Display of location of bus

Display of risk information

■ **Implemented activities**

① **Provision of positional data of loop bus**
・A loop bus carrying the GPS tracker was operated and its positional data was published on Omachi City's website.
・The citizens can check the positional information using their smartphones or PCs.

② **Streamlining of snowplowing time and grasping of operation situation**
・A snowplow with a GPS tracker was operated to scrutinize the difference from actual data by calculating the start time from the parking area and return time from GPS data.
・The municipality staff can check the operation status by e-mail sent at the time of dispatch and returning and the location on the map.

③ **Watching of the elderly**
・Collection and analysis of activity data of those who returned their driving licenses to consider their ways to get around
・Consideration of ways to assist the elderly and those who returned their driving licenses in getting around

④ **Watching of schoolchildren at school event**
・Watching at school travel and mountain climbing class using GPS

⑤ **Sightseeing**
・Publication of temporary bus operation schedule at Northern Alps Art Festival

FUJIKURA NEWS   Apr.2019 - Mar.2020

Power & Telecom

Apr.	Expanded Portfolio of Optical Cable with 200 μm Fibers
May.	Development of Small-diameter LCX for 920 MHz Bandwidth
Jun.	Ultra-low-loss MPO Connector
	Development of New Partial Discharge Measuring Device
Jul.	Sales Launch of CPR-compliant Sheathed Highly-flame-resistant Low-smoke WTC
Aug.	Air Blown Wrapping Tube Cable™ to Be Fully Introduced by British Telecommunications plc for First Time
	In-line Joint for High-voltage Heat-resistant Cables
Oct.	Expansion of Small-diameter High-density WTC® with SWR® Lineup
	PANDA Fiber with Bending Radius of 5 mm
Nov.	Fujikura's Attempt To Construct IoT Cloud & Sell Things
Dec.	Release of Aerial High-density High-strength Single-mode Optical Fiber Cables for NTT East and West
	Fujikura Releases Indoor-Outdoor Cable with 200 μm Fiber
	Expansion of NETIS-registered LCX Lineup
Jan.	Start of High-voltage Cable Diagnostic Service using IoT
Feb.	Release of New Core Alignment Fusion Splicer 90S
	Fujikura's "Tsunagu" (connecting) Technology to support 5G
	One-row 16-fiber Ultra-low-loss MPO Connector for Single-mode Optical Fiber
Mar.	Fujikura Starts Verification Testing on IoT with Omachi City, Nagano Aiming at Participatory Smart City
	Release of Advanced Multi-fiber Fusion Splicer,the 90R Series

Electronics

May.	The MMCXG Series of Connectors for Detachable Earphone Cable
	Development of FPC Welding Technology
	The CE05M Series of Waterproof Circle Connectors for Servo Motor
Dec.	Circular Waterproof Connector DCA-A-F Series

Automotive Products

Apr.	Heater and SBR Hybrid Device
Nov.	The 17th Formula SAE Japan

R&D

May.	Release of Rare-earth-based High-temperature Superconducting Wire Rod with Artificial Pinning Center
Jul.	Development and Operation of Visual Inspection System Using AI (Deep Learning)
Aug.	Fujikura obtains license to use IBM 5G technology to support their development of next-generation of millimeter-wave RF-ICs.
Oct.	CFRP Machining with Single-mode Fiber Laser
	Release of Highly Flame-resistant Polyolefin Compound
Dec.	Fujikura and National Institute for Materials Science (NIMS) Co-awarded Tsukuba Encouragement Prize
Jan.	"Tackling Heatstroke Using ICT Tackling Heatstroke Using ICT -Visualization of Bulb Globe Temperature（WBGT）"

Information Exhibition

Apr.	Fujikura to Exhibit at The 11th Data Center Expo
	Introduction to Bio Garden Fujikura-Kiba Millennium Woods
May.	JECA FAIR 2019 (the 67 Electrical Construction Equipment and Materials Fair)
	Consecutive Wining of Corporate Innovation Award @ Batch 2.2019
Jun.	19th Fiber Optics Expo (FOE 2019)
	Cable Tech Show 2019
	5G/IoT Network Expo(Communications & Broadcasting Week 2019)
	To Accelerate Open Innovation by Aroma Testing Starts at Fujikura Innovation Hub, BRIDGE.
Jul.	Fujikura's Efforts to Achieve Sustainable Development Goals
Aug.	Fujikura to Exhibit at CEATEC 2019
	Joint Exhibition with NTT West at Heat Solution Kyushu
	Fujikura Receives The Seventh ICT Business Award from The Telecommunications Association
	Fujikura Receives Technology Prize for WABE Package® from the Japan Institute of Electronics Packaging
Sep.	Fujikura Exhibits at CEATEC 2019
Oct.	First Anniversary of Fujikura Innovation Hub BRIDGE
Nov.	Fujikura Social Health Research Institute Ltd. Established To Lead Health Management To Take Next Step
	Selected as a constituent of the global ESG Investment Index (FTSE) this year too
Dec.	Volunteering for Reconstruction in Earthquake-stricken Minamisoma City, Fukushima, again in 2019
Jan.	President's New Year Greet ings
	Fujikura Exhibits at BICSI JAPAN District Conference & Exhibition
	Fujikura's Joining RE100 Promotes Achievement of Environmental Long-term Vision 2050
Mar.	Fujikura Exhibits at 22nd Data Center & Storage EXPO Spring
	Fujikura Awarded Derwent Top 100 Global Innovator 2020