

Grand Prix Winners 2017-2018

Started in 1990, the Mitsubishi Asian Children's Enikki Festa is a program that seeks to promote literacy education and to stimulate cultural exchange among children by allowing them to learn about each other through "enikki" (illustrated diaries).

■ <http://enikki.mitsubishi.or.jp/e/index.html>



Aala Mohamed Naushad
Age 11, Girl
Maldives

July 23, A Beautiful Day Naming My Little Brother
My aunt passed away after giving birth, and my parents adopted the newborn baby. Today was the seventh day. Islam tells us to give a beautiful name to the baby on the seventh day. On this day, we shaved the baby's head and made a donation of the baby's weight in silver to our mosque. We then slaughtered a goat and distributed bodibai sweet rice to 40 people. My little brother received a name, and we all prayed for him. My mother said that she hoped he would grow up to be a sincere person. We shared the bodibai and the goat meat with our relatives, with our neighbors, and with poor people in the area. We gave the name to my little brother that my aunt had in mind, Aala. That name means a gift from Allah. I like the name.



Fathia Alma Kalista
Age 12, Girl
Indonesia

Learning Batik
My school has an extracurricular activity where students who are interested can learn to do batik fabric dyeing. The process is complicated, but I am happy to have the chance to learn how to make batik. We start with making the pattern. Then, we use the canting tool to trace the pattern with hot wax, dye the fabric, wash it, and hang it out to dry. The white fabric changes into beautiful, colorful batik when it dries. I hope the young generation will carry on this important part of Indonesia's cultural heritage.

* The Enikki entries above, when necessary, have been translated into English from the language they were originally written in.

Capybaras Soak Happily in Onsen Yuzuyu

One winter, it was found that the Capybaras* at the Izu Shaboten Zoo in Shizuoka Prefecture, just southwest of Tokyo, liked to soak and warm themselves in the hot water used in the cleaning of the enclosure and then the zoo started its Capybara spa. Tradition has it, in Japan, that bathing in *yuzuyu* (hot water with yuzu citrus fruit floating on the surface) keeps colds and flu away during winter, and since the Edo period the custom of taking a *yuzuyu* bath in midwinter has become popular. During midwinter at the zoo, "Capybaras enjoying their open-air spa" changes to "Capybaras enjoying their open-air *yuzuyu* spa." Grouping together in families, the Capybaras appear to be in seventh heaven soaking in the *yuzuyu*, while their pups swim and frolic around them.

*The Capybara, a relative of the guinea pig, is native to South America and is the largest living rodent in the world.



©Jiji Press Photo

For more information about the Mitsubishi companies, see "mitsubishi.com" ■ <http://www.mitsubishi.com/e/>

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A Bimonthly Review of the Mitsubishi Companies and Their People Around the World



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2019
December
|
2020
January



ALMA antennas



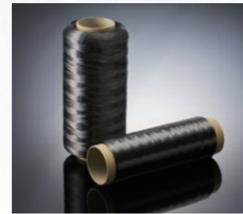
Inside the ALMA telescope

©ALMA (ESO/NAOJ/NAROS/Stanglino)

Mitsubishi Chemical Holdings

Technical Prowess Contributes to Historic Black Hole Pictures

The DIALEAD pitch-based carbon fiber from Mitsubishi Chemical, a **Mitsubishi Chemical Holdings** group company, is a material with high stiffness, high thermal conductivity and an ultra-low coefficient of thermal expansion which is widely used in satellites in the aerospace industry. The ALMA (the Atacama Large Millimeter/submillimeter Array) telescope in Chile played a pivotal role in the Event Horizon Telescope (EHT) planet-scale array of eight ground-based radio telescopes in a worldwide network that captured the first-ever images of a black hole in April 2019, and it uses DIALEAD fiber reinforced composites in the main structural parts in its antennas. Notwithstanding the drastic change in temperature between day and night in the desert at an elevation of 5,000 meters, ALMA's antennas delivered outstanding dimensional stability and contributed to the successful capturing of ultra-high resolution images of the black hole.



DIALEAD pitch-based carbon fiber

- https://www.m-chemical.co.jp/en/products/departments/mcc/cfcm/product/1201229_7502.html
- <https://www.almaobservatory.org/en/press-release/astronomers-capture-first-image-of-a-black-hole/>



This year's participants at the Tanegashima Space Center

Mitsubishi Heavy Industries

Elementary School Students Invited to MHI Tanegashima Aerospace Classroom 2019

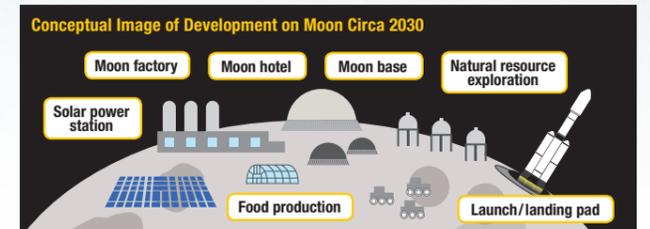
Mitsubishi Heavy Industries (MHI) invited 23 students ranging from fifth to sixth grade from all over Japan to MHI Tanegashima Aerospace Classroom 2019 held at its launch site in Tanegashima, Japan, from September 10 to 12. MHI Aerospace Classroom is a CSR event possible only for MHI Group, which is involved in the development, manufacture and launching of satellite launch vehicles. This was the fifth Aerospace Classroom MHI has staged, and invited students attended special science classes taught by MHI engineers, with emphasis on giving the students hands-on experience rather than simply listening to lectures. The students were given classes on the mechanisms of the launch with experiments and a guided tour of the actual launch vehicle, and they participated in a competition to launch plastic bottle "rockets." Also, they learned about Japan's outstanding space technology, and the efforts made to date in the field of aerospace development, as well as the importance of following their dreams.

- <https://www.mhi.com/news/story/csr190930.html>

Mitsubishi Research Institute

Space Resource Business: Collaboration Among Japanese Private Sector Essential

In the US and in Luxembourg, legislation has already been passed that permits the utilization of space resources acquired by the private sector. The space resource business, expected to kick off sometime between 2030 and 2035, will make use of resources found on the Moon, Mars and asteroids. One front-runner business is the excavation of water from the moon, and necessary facilities include exploration rovers to search for underground water, heavy digging machinery, plants for production and storage of fuel, communications infrastructure for managing work, long-term accommodation facilities, and solar power stations; and this means collaboration among multiple companies is required. Japan demonstrates high potential in this field thanks to its vast stock of related technologies. **Mitsubishi Research Institute** recommends swift collaboration among the Japanese private sector to capitalize on being the first to enter this blue-ocean industry.



Source: extracted by Mitsubishi Research Institute from Business Consortium for Space Frontier papers

Feature

The Pull of Space Business

It is 50 years now since man first stepped on the moon. Space is not simply the object of our dreams and romantic notions for today, and thus dozens of countries have their own space organizations and are investing in the space business. In this issue, we introduce some of the Mitsubishi Companies which are on the front line in their approach to the space business, the market for which is expected to greatly expand.

Mitsubishi Electric An Outstanding Satellite Lineup

Mitsubishi Electric has developed many artificial satellites using its wealth of know-how and advanced technical prowess. The company will continue to contribute to the global space business by providing a wide range of technologies, as seen in communication satellites, which sustain communication infrastructures; earth-observation satellites which mainly help

in weather forecasting and disaster prevention; the Michibiki quasi-zenith satellite, which provides precise and stable positioning services; and planetary exploration probes, as represented by the SLIM (Smart Lander for Investigating Moon) that is unlocking the mysteries of the moon. Please refer to our website for further details.



Communication satellite: Turksat-4A, 4B



Positioning satellite: Michibiki quasi-zenith satellite



Earth-observation satellite: ALOS-2



Planetary exploration probes: SLIM

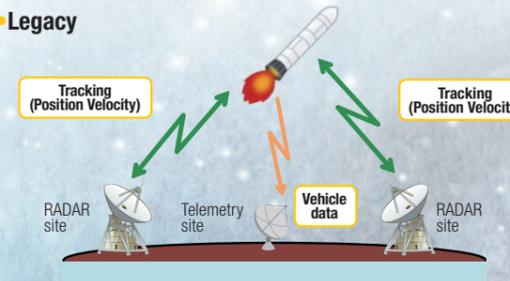
- <http://www.mitsubishielectric.com/bu/space/index.html>

Mitsubishi Precision "RINA" Radio and Inertial Navigation sensor

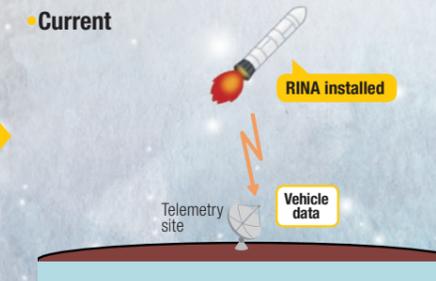
Mitsubishi Precision has developed RINA (Radio and Inertial Navigation sensor) with the Japan Aerospace Exploration Agency (JAXA) since 2011 and has contributed to the successful launching of six rockets since the demonstration flight 29 of the H-IIA rocket in 2015. To ensure safety in the early stages of flight, RINA uses a Global Navigation Satellite System (GNSS) and Inertial Measurement Unit (IMU) hybrid navigator to autonomously measure flight path and speed with the precision of a mere 0.01% margin of error in a rocket travelling so fast that it orbits the earth in 90 minutes. The revolutionary RINA is Japan's first navigator not to require rocket tracking by ground radar.



Legacy



Current



Images: Navigation without and with RINA

World Scope

Mitsubishi Monitor introduces some of the latest news about Mitsubishi companies as they play an active role on the world stage.



The Business Launch of Barricote Barrier Paper for Food Packaging



To tackle growing global environmental issues like marine plastic litter, **Mitsubishi Paper Mills (MPM)** group decided to launch "barricote" products across the world. Barricote is a new brand of sustainable coated barrier paper product dedicated for food packaging which has recently been commercialized by Mitsubishi subsidiary company Mitsubishi HiTec Paper Europe GmbH (MPE) in Germany. Barricote covers a wide range of requirements like combinability and heat sealability. As a paper product, it possesses a high degree of biodegradability and full recyclability. Eco-friendly barricote is also FSC® certified. Currently it is being adopted by or is in concrete development projects with major international food companies.



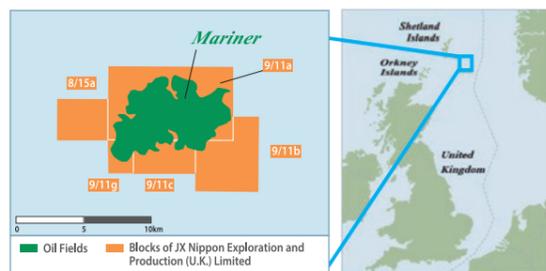
Barricote food packaging paper in use globally

■ <https://www.mitsubishi-paper.com/en/hitec-paper/products/barricote/>

The First Oil from the Mariner Oil Field in the UK North Sea



JXTG Holdings wholly owned subsidiary JX Nippon Exploration and Production (U.K.), or JXNEPUK, commenced production at the Mariner oil field (JXNEPUK working interest: 20%) in the UK North Sea on August 15, 2019. The Mariner field (operator: Equinor UK Limited) is a large oil field spanning four blocks and is located mainly in Block 9/11a of the North Sea, approximately 150 kilometers east of the Shetland Islands. JXNEPUK acquired a working interest in the Mariner field in 2012, and had been striving for the first oil in 2019. The Mariner field contains reserves of over 300 million barrels of oil and is expected to produce around 55,000 barrels of oil per day (gross) at plateau and around 70,000 barrels of oil per day (gross) at peak production. The field is expected to produce crude oil for about 30 years.



■ http://www.nex.jx-group.co.jp/english/newsrelease/2019/20190816_01.html

A Joint Research Memorandum Signed on Bridges & Civil Structures in Indonesia



P.S. Mitsubishi Construction (PSM) has reached an agreement with the Institute of Road Engineering, Indonesia (IRE), a research agency of the Indonesian Ministry of Public Works and People's Housing, to conduct joint research on bridges & civil structures. The agreement was signed at a ceremony held on July 23, 2019, at IRE in Bandung City, Indonesia. This is the first time the IRE has engaged in a joint project with a Japanese private company.

In 10 years' time, 50 percent of bridges in Indonesia will have reached an age of 50 since they came into service, and as with Japan the aging of infrastructure is becoming a major issue. The joint research is conducting tests into PS Mitsubishi's new Zn Cartridge electric anti-corrosion technology, and if its efficacy is proved the aim is to standardize its application on bridges in Indonesia.



PS Mitsubishi staff attend presentation on the technology

Signing of the joint research agreement

Second Wave of New Fighter Medium-duty Trucks Launched in Indonesia



Mitsubishi Fuso Truck and Bus (MFTBC) has introduced 6 new variants of its medium-duty Fighter truck on the Indonesia market where medium-duty trucks have been one of the fastest-growing segments in commercial vehicles within the last several years. Against a backdrop of rapid growth in mining and agriculture, both major drivers of the Indonesian economy, MFTBC now offers a line-up that includes extended wheelbase models, providing a solution to efficiency-focused business owners. All 15 Fighter truck variants sold by MFTBC local distributor PT Krama Yudha Tiga Berlian Motors are fitted with Runner Telematics, which allows customers to monitor vehicle location, usage and maintenance, as well as job status.

New medium-duty Fighter truck variants



■ https://www.mitsubishi-fuso.com/content/fuso/en/news/news_2019/20190718.html

Next-generation Personal Authentication Technology Demonstration Project



Mitsubishi UFJ NICOS (NICOS) and Mitsubishi Electric Information Systems in July 2019 started a demonstration project for a settlement service using the Lifestyle Authentication personal authentication technology that the two companies are currently developing with the University of Tokyo. Lifestyle Authentication is a new type of personal authentication technology that uses a person's behavioral data (smartphone location, Wi-Fi data, use of service history, etc.) as an additional fourth factor to the three current authentication factors: Something you know, Something you have, Something you are. The demonstration project aims to gather data on authentication accuracy and the time taken to settle purchases, and is being conducted on the assumption the settlement is being requested using a self-checkout machine or at an unattended store.



Making purchases in the demonstration project



Ceremony at Laem Chabang port, Chonburi Province, marking 4 millionth export.

Milestone Passed of Four Million Vehicles Exported from Thailand



Mitsubishi Motors Corporation (MMC) passed the milestone of exporting four million vehicles from Thailand, and held a ceremony in July 2019 to mark the occasion at Laem Chabang port, Chonburi Province. Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), MMC's subsidiary in Thailand, has three car-production plants and an engine facility in Chonburi Province, making it MMC's largest manufacturing center outside Japan. MMTh now employs more than 7,000 staff directly and thousands more in the supply chain.

MMC started its operations in Thailand in 1961 and last year exported almost 80 percent of the 440,000 vehicles manufactured there. MMC's commitment to Thailand remains firm and steadfast, and it will continue to strengthen its operations there as a key player in the ASEAN region, a bedrock of its business.

■ <https://www.mitsubishi-motors.com/en/newsrelease/2019/detail1209.html>

Waste Food Collection Demonstration Project Using the Existing Logistics Network



Lawson, working with the Nosan Corporation and **Mitsubishi Corporation (MC)**, in August 2019 started a demonstration project looking at waste food collection from three of its convenience stores in Tokyo. Delivery trucks, after unloading their cargo at the Lawson store, are used to collect waste food from the store and take it to a Mitsubishi Shokuhin logistics center. Another

carrier then takes the waste food to a recycling plant. It is believed the project will lead not only to improvements in food recycling, but will help provide a solution to the shortage of drivers and reduce carbon emissions by reducing the number of trucks on the road. Lawson plans to implement the system at its 400 stores in the Tokyo area in fiscal 2020.

•Current System



•Demonstration Project System



Global Spotlight focuses on employees from the Mitsubishi companies who are excelling in their respective fields around the world. In each issue we will get to know different employees, who will tell us about their hometowns, businesses, culture, and pastimes.

from **China**



My Colleagues, Work and Family

DNT-SH, where I work

I have been working at DNT (Shanghai) Co., Ltd. (DNT-SH) for 11 years.

DNT-SH is a wholly-owned subsidiary company of Dai Nippon Toryo Co., Ltd. in China. It mainly produces and manages protective coatings, plastic coatings and industrial coatings. Today the company has 52 employees.

DNT-SH is a big family: all of the company colleagues enjoy work and feel very happy.

We do exercises every morning before morning assembly, and then each person in turn will make a short speech about his or her recent work or life experience. I belong to the technical department, mainly responsible for sample production and quality issues. I love my work very much since I can learn a lot of technical knowledge through my job, and I can feel our company's continuous progress.

Nowadays, Shanghai is changing rapidly, and demands from government for environment control and improvement are getting stronger and stronger. DNT-SH has also made positive efforts to improve environmental issues, and it will bring much better business conditions in the future.



On an office outing



DNT-SH, my company



Shanghai, where I live

Shanghai, an international city, is located in the east of China. With its world-famous landmarks such as Jin Mao Building, the Oriental Pearl TV Tower and Lujiazui financial center, Shanghai has become a tourist destination for many travellers. If you enjoy shopping, you can visit Nanjing Road and Huaihai Road. They are called "Shopping Paradise" in Shanghai. You won't feel bored if you walk along these two roads and many goods will catch your eye. If you enjoy delicious food, don't forget to visit Yu Garden and a lot of local snacks will await you there. Now the famous Disneyland is located in Shanghai, if you take children, you can also find the right place for them. Why not spread your wings and visit it? Shanghai — it's your choice.

When I am free, I give priority to being with my family. I'll cook with my wife and play the piano with my daughter. I like sports. On sunny weekends, I often play badminton with my family. In addition, I jog for eight kilometers three times a week. I also like gardening; I have a small garden with a lot of potted plants. Although I am only an amateur gardener, I enjoy it either way. Now I have a new hobby: keeping cats. I have two cats, they are beautiful. Coincidentally, one of them was born on the same day as my birthday. I like them very much.



My daughter and cat



Mr. Lei Han

Technical Department Deputy Manager

DNT Shanghai

A subsidiary of Dai Nippon Toryo

My Most Important Job in Life

New Zealand – Small but Beautiful

Most recently noted for our native Hobbit species, in reality

New Zealand is a country that continually redefines the mantra of "Small but Beautiful."

Located at the bottom of the world and only occupied by 4.5 million people, New Zealand is renowned internationally for both the beauty of its natural landscapes and of its people.

While we might not have been the most creative when naming our two islands (the North Island & the South Island) you may be surprised by the many innovations and firsts that have come from such a small country. From splitting the atom, to conquering Mount Everest, to being the first country to give women the vote, New Zealand often leads the way for others to follow.

What truly defines New Zealand as a country is our ability to punch well above our weight on the world stage. That ability is constantly on show through our sports teams, leaders and innovators.

Mitsubishi Motors NZ – a family spirit

It's that ability to punch above our weight that also defines MMNZ; A small, but dedicated team that inhabits our Head Office at the bottom of New Zealand's North Island and occupies 3rd place in the market.

As the Head of Marketing I have the privilege of working with a number of talented internal teams.

Whether that's our award-winning Customer Care Centre, our globally recognised Aftersales team or the overachievers in our Sales, Finance and Administration teams, I am constantly blown away by the talents and abilities of the people within these four walls.

What helps bring those talented teams together at MMNZ is a sense of family, not just internally but also with our business partners and dealers. It's that family spirit which serves as our point of difference and helps us outmanoeuvre our well-heeled competitors.



With my other family

For me, that sense of family then flows through to home. Outside of MMNZ, I like to focus on my most important job in life — being a dad.

My children — Ivy (6) and Arlen (3) — ensure that our nights and weekends are always fun, fast-paced and just a little bit chaotic.

In the weekends, we spend much of our time taking our daughter to her sporting events, whether that's rugby, gymnastics, softball or horse riding. My son on the other hand, his main interest in life is Transformers, so when we're not indulging our daughter I'm instead fielding questions about what Optimus Prime has for dinner and what time Transformers go to bed.



Another member of our family is our dog Baxter. When he's not being ridden around the house like a horse by our children, Baxter enjoys being taken on weekend adventures at any of Wellington's stunning beaches.



from **New Zealand**



Mr. Reece Congdon

Head of Marketing & PR

Mitsubishi Motors New Zealand