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FROM THE EDITOR

At the beginning of a new year, we will share with you in this issue Delta's success stories, exhibitions, events and awards at the end of 2019. Looking ahead, I feel that, as a dweller on earth, climate problems and environmental issues are still something we should continue to pay attention to. The latest relevant updates on international news are also included in this issue.

With the growth of big data on the Internet, a reliable and energy-efficient data center power solution has become an important goal for cloud computing providers. Delta and Alibaba jointly launched a new IDC (Internet Data Center) power solution—Data Center Panama Power Solution, which combines Delta's power management technology with Alibaba's vast background in cloud computing. The "Special Report" of this issue explores how Delta broke ground and developed this innovative IDC power solution.

In the last issue, we introduced the works created by an artist using AI in the "Future and Art" exhibition at the Mori Art Museum in Tokyo. A new experience was explored via a perfect combination of cutting-edge imaging technology and contemporary art. Delta was very pleased to host a VIP night event in this museum early this year. We invited nearly 100 first-tier Japanese customers and partners to experience the beauty of modern visual artwork in stunning detail made from 8K projection technology. In this issue, "Brand Circle" will take you straight to the VIP night.

In the past few years, the Brand News Bi-Monthly has interviewed regional heads, BG heads, corporate function heads and senior managers of affiliated companies. The "Brand People" column will extend its coverage to the marketing heads of each region so that colleagues can learn how sales can be facilitated through marketing based on the characteristics of different markets. In this issue, we interviewed SEA Marketing Head—KK Chong. Mr. Chong will talk about the marketing plans of SEA in 2020, how SEA cooperates with various business groups, and his work experience at Delta.

To respond to the tough challenges of global climate change, Delta took on its international corporate citizenship with actions. The Delta Foundation participated in the UNFCCC's Conference of the Parties (COP) for the 13th consecutive year. "Brand Circle" will bring you first-hand news on the COP25, Climate Change Conference in Madrid and allow you to learn how Delta shared the water resource plans that were developed to deal with the global climate change crisis with the international communities. In "Delta Green Life", let's take a look at the "Emissions Gap Report" published by the United Nations Environment Agency (UNEP). To create a better future in the coming year, we may review and rethink how we can act together to protect the planet and make changes to your life to reduce greenhouse gas emissions. Stay tuned for more content!

Brand Management Office



Delta teams up with Alibaba to launch the Data Center Panama Power Solution

Delta teams up with Alibaba to launch the “Data Center Panama Power Solution”

Text by CISBU

With the explosive growth of global big data on the Internet, IDCs operations are under intense pressure on energy consumption, reliability, and even siting. Cloud computing providers have been seeking solutions to improve the energy efficiency of data centers and solve IDC power problems. Similar to the completion of the Panama Canal in 1914, which greatly shortened the voyage between the Pacific Ocean and the Atlantic Ocean, the Data Center Panama Power Solution introduced by Delta and Alibaba brings a historic breakthrough in IDC power solutions.



Break the mold: the brand-new IDC power solutions

At the Beijing Data Center Annual Summit on 20 November 2019, Shuiwang Liu, Senior Expert of Data Center Infrastructure at Alibaba, and Chih-Chiang Chan, Technical Director of Delta's CISBU, announced that Delta and Alibaba have jointly launched a new IDC (Internet Data Center) power solution—the Data Center Panama Power Solution. High-voltage DC power supplies are a trend in China, and Alibaba was looking for a reliable technical partner with excellent technical competencies, which culminated in the collaborative "Panama Power Solution" project. In the autumn of 2017, Chan was invited to Alibaba to discuss issues such as multiple links and complex power distribution within the current IDC power architecture. Subsequently, Delta proposed an architecture that integrates transformers and modular rectifiers. It has obvious advantages over traditional solutions, such as high efficiency, reliability, easy operation and low maintenance. The outlook is therefore promising. After finalizing the architecture, Delta's R&D team in Shanghai and Chungli immediately began the product development process. In spring 2018, by virtue of Delta's extensive experience in power efficiency, a 600kw prototype was developed within half a year. It was then tested in the lab and in operations with excellent performance for one and a half years. The team has endeavored to optimize the product architecture and it further increased the power to 1.2MW. At present, more than 50MW has been produced and shipped.

Liu stated that, compared to traditional IDC power solutions, the Panama Power Solution has achieved 98.5% module efficiency which reduced the number of devices by 40%. Combining Delta's power management technology with Alibaba's vast background in cloud computing, the collaborative project came to fruition and the 10kV-direct-to-240V DC (or 336V DC) Panama Power Solution was launched, taking the progress of IDC power supply technology to new heights.



Stable, scalable and energy-efficient

The power architecture of the Data Center Panama Power Solution is compact and highly reliable, ensuring that the power system can operate continuously for five years. Compared to traditional power solutions for data centers, this solution brings the cost of equipment and construction down by 40%, and reduces floor area by 50%. The innovations of the Panama Power Solution revolutionizes traditional power architecture for IDCs by integrating electric and magnetic circuits. A streamlined power supply directly transforms medium voltage 10KV AC to 240V DC, replacing the many relays between medium voltage and DC output, resulting in a more efficient and reliable system. The product is characterized by super high efficiency, high reliability, high power density, high power capacity, and low maintenance. Module scalability allows the capacity of a single system reach over 2.5MW, which meets the increasing central demands of future data centers for productization, high reliability, intelligentization, high efficiency, and rapid deployment.



With its core technological capability in power electronics, and decades of experience in power supply development, Delta has been providing energy-efficient power management solutions to customers worldwide. The Panama Power Solution which was launched in cooperation with Alibaba can improve the efficiency of data center power supplies by 3% and reduce the total investment cost of power supplies and distribution by 20%. It is the latest generation of DC power products designed to address the DC power requirements of data centers for cloud service providers and telecom operators, and it has been successfully applied to some of Alibaba's data centers in Zhejiang and Jiangsu. The product of a joint effort with Alibaba in China is also gradually adopted by Alibaba's data centers overseas. This successful collaboration proves Delta's CISBU has a technical forte in HVDC solutions. In the future, Delta can also apply its successful experience and offer its services to overseas cloud service providers. In addition to a turnkey equipment solution, it can provide enterprises with counselling services for rapid implementation.



Shuiwang Liu, Senior Expert of Data Center Infrastructure at Alibaba, and Chih-Chiang Chan, Technical Director of Delta's CISBU, photographed at the 2019 Data Center Annual Summit



Head of Strategic Marketing at Delta Electronics (Thailand), Mr. KK Chong

Creating a champion brand from the ground up

Interview with Mr. KK Chong, Head of Strategic Marketing,
Delta Electronics (Thailand)

Text by Delta Electronics (Thailand)

Last year's inclusion of Delta Electronics (Thailand) into the Delta Group and the strategic importance of Southeast Asia for production and market diversification has made promoting Delta's branded businesses regionally a top priority. In this issue of Brand News Bi-Monthly, we interviewed Mr. KK Chong, Head of Strategic Marketing at Delta Electronics (Thailand), to find out more about how Delta Thailand is driving growth in one of the most promising regions in the global economy. We will also get his insights into what lies ahead for the Delta brand in Southeast Asia, India and Australia as well as thoughts about his over 15-year career at Delta.



From Thailand to the world

In Thailand, Delta Thailand is known as a public listed company in the SET50 index, a benchmark index of the top 50 performing companies listed on the Stock Exchange of Thailand (SET). It is also Thailand's largest public listed electronics manufacturer with over 11,000 employees including over 100 employees from countries like Taiwan, China, Singapore, Malaysia, India, Germany, Poland, etc.

In recent years, Thailand's government is focusing on Thailand 4.0 policy to transform Thailand into a knowledge based economy with much emphases on Industry 4.0 and digitization. As a highly regarded company in Thailand, Delta's prominence has been brought to the forefront. But instead of resting on our laurels, Delta Thailand's Marketing team has to work even harder to have our product and corporate branding strategies regularly updated to be on par with any well-established global company.



Delta Electronics (Thailand) HQ's new green lobby with vertical garden, ample charging points, comfortable seats and interactive screen is conceptualized by its Marketing team to provide employees and visitors a conducive and creative environment to inspire great ideas



Getting the ball rolling with Delta's branding

"I have to say that working in a company that aligns its businesses to global megatrends makes marketing relatively easier." Said KK. With Delta group's focus shifting to solution businesses, Delta Thailand's president Mr. Dick Hsieh felt the need for a dedicated corporate marketing and communications department and so in 2016, KK was asked to head the new Delta Thailand's Marketing department which oversees all marcom activities in Southeast Asia, India and Australia. The department is further divided into Brand Management Office(BMO), Corporate Communications(Corp. Comm.) and Sustainable Development(SD) teams to align DET's marketing strategy with Delta Corporate, DEI.

"As a relative latecomer to a playing field crowded by well-established brands, we have our work cut out for us if we are going to be heard above the noise and gain brand recognition on par with the competition." said KK. In the first two years, Delta Thailand's Marketing has largely focused on amplifying our voice and publicizing our achievements in sustainable financial performance, excellent CSR work and our future-proof innovation. This is very much due to few success cases for solution business in the region. Delta Thailand's prior business focus was in manufacturing and only started building up our solution capability around 2010.



Attending the Asian and Oceanian Stock Exchanges Federation (AOSEF) forum on Sustainable Development with the Delta Thailand's SD team. First from left is Aonthip, the team's subject expert and Nicha on the right who joined us in late 2019



Delta Thailand's Corp. Comm. (first from left, David Nakayama) and BMO (Benjapol) members



Delta Thailand's Corp. Comm. member, Pornsuda (first from left) working with US Google production team in DET HQ, Thailand



Thanks to the hard work of Delta Thailand's sales and engineering teams the company has been able to make major inroads in regional markets and several high profile success cases have opened up the door to new business opportunities. For example, although EV charging may not contribute as much revenue as our OEM businesses now, KK believes that it builds new partnerships and puts Delta top of mind among our potential B2B customers while extending our brand exposure as a green solution company.



Delta employees, our brand ambassadors

KK strongly believes that every happy employee can be a great brand ambassador for Delta to increase our Net Promoter score. Therefore, all his teams, DET BMO, Corp. Comm. and SD, are working closely to take a two pronged approach by influencing a good working environment while using creative tools and campaigns to educate DET employees about Delta businesses. One such tool is the 360 regional employee gazette. Such efforts will increase the chances of our employees spreading the good word about Delta to their friends and families per the principle of Net Promoter score. The SD team has been continuously creating projects together with the HR and CSR teams to ensure the fundamental welfare and rights of our employees are well taken care of. Every year the efforts have been recognized by the relevant authorities. Just to name a few, last year DET has been awarded Stock Exchange of Thailand's (SET) Best Sustainability Award; ranked number two on global ITC sector in the DJSI annual ranking, just behind DEI; and inducted into the Hall of Fame for Top Corporate Brand, a recognition accorded by SET with the country's top university, Chulalongkorn Business School.



Punching above our weight

Since last year, Delta Thailand has been transitioning from a traditional event-based marketing strategy to an integrated content marketing strategy that unifies online and offline promotion to deliver the right message at the right time to our audiences. A good example of this is our "sell without selling" concept- the Delta Industry Summit (https://www.youtube.com/watch?v=WXpqfsEIC_g) that began in 2018. Unlike our competitors, we made this event a platform for our partners to share their expertise and even display alongside us to show the breadth and inclusiveness of our solutions. By providing useful content and planting online and offline touchpoints throughout our campaign we are able to create a valuable experience that media, customers and local subject experts will look forward to.

KK thinks it's not necessary to have a big team but more importantly to have a diligent team that has the experience, skills, know-how and most of all the inspiration and grit to carve out the niche. For the same reason, all of KK's team members must take a job related training every year to ensure they always have the right skill to compete and a good chance to break out from underdog position amongst major global brands in the region.



A life of continual challenge and growth

Thais often exude a sense of positivity that will rub on anyone who is lucky to experience their hospitality and friendship. KK thinks he was fortunate to be part of Delta's Thai family since 2004 after relocating from Singapore.

KK's career in Delta began by leading the QA team and then moved on to head the creation of the Industrial Power Supply (IPS) business. He is very proud of the IPS team for creating a totally original Thai business. "We did everything including R&D, production, sales and marketing from the ground up. We even breakeven before the merger into PSBG in 2012. My current role in strategic marketing, and my one-year stint as Country Manager in Australia were not roles that I expected but will always cherish. I would like to thank my superiors at Delta for entrusting me with such important missions laid with abundant opportunities to explore, learn and make a difference." Said KK.

KK can still recall a tinge of regret on his first day in Delta Thailand when he started missing the personal printer and tall partition of his previous job. Then came the realization that there will be no more Conrad for his business trips. "Though I began at top multinational electronics manufacturers, the majority of my career has been at Delta. Ultimately I feel the integrity of our management, equal opportunity to grow based on merits and transparency in corporate governance are three of the key reasons that had made me stay over 10 years, just like many of my colleagues. I'm looking forward to many more fruitful years in Delta."



Delta Thailand's BMO member, Kimi Sun, with Delta India's Graphic Designer, Bharat, inspecting the booth setup for Elecrama 2020 in India



For the diverse data at a manufacturing site, the integration of OT and IT systems enables the two systems to exchange information seamlessly. Proper management and data analytics can result in amazing efficiency

Delta shares its experience in smart factory transformation 6 key steps to a 70% increase in production capacity

Text by IABG

In recent years, the manufacturing industry has encountered difficulties never seen in the past. Externally, rapid changes have impacted the global consumer market as highly homogeneous products formerly produced in large quantities were gradually replaced by personalized products. The demand for diverse designs produced in small quantities is rising. Internally, countries are facing an increasingly aging population. This is especially true of the China market on which Taiwan's manufacturers highly rely. The decline in population caused by the one-child policy of the past has had an impact on the labor markets. In addition, many other countries are making efforts to improve their labor conditions and laws, and global manufacturers are facing a huge predicament.

Experiencing the digital transformation of Delta's production lines, JP Wang, Chief Technology Officer of Delta Global Smart Manufacturing & Technology, pointed out that a crisis often means an opportunity to make changes. Manufacturers can take advantage of this situation to initiate the digital transformation toward smart manufacturing and widen the gap between themselves and competitors, while saving their energy for the next round of competition.





The new, smart production line has a 70% higher capacity compared with the old one

Being a leading global automation company, Delta has been actively working on “digital transformation” and it began its planning of smart automation in 2015. JP said, “To ensure that our products truly meet the needs of customers’ production lines, Delta’s automation products are installed on our own production lines before we launch them to the market. Only after a solid and thorough verification with sufficient time is completed and we can ensure function and stability, are the products launched to the market. The same rules apply for our smart manufacturing. Since 2015, Delta has designated two production plants in East China and South China to implement smart manufacturing. Now we are getting results, which include a 70% higher production capacity, a three-to-five times increase in productivity per direct labor, and a 35% decrease in the production area of the same capacity.”



JP Wang, Chief Technology Officer of Delta Global Smart Manufacturing & Technology

JP pointed out, the above-mentioned benefits prove that smart manufacturing can enhance efficiency and reduce costs, which is a positive direction for enterprises. It’s also an opportunity for employees at the manufacturing sites to upgrade themselves by developing a willing mindset to take on new challenges. Delta’s introduction of smart manufacturing at its own plants not only improves production capacity, but also allows personnel to witness the migration process towards smart manufacturing and the changes in daily operation. Comparing the differences between the old and new production lines, all of the staff understands that digitalization is an inevitable trend for the future, and they are willing to learn how to adjust direction for their work.

In terms of performance after implementation, Delta’s smart production lines are working quite smoothly in China. JP thinks that the key to this success lies in Delta’s meticulous compliance with the six-step requirements specified for the early, middle and late stages of the smart production line construction.





Delta's 6 steps to smart manufacturing

These six major steps include rationalization, standardization, modularization, cyber-physical integration, automation and digitalization. Before the implementation of the first step of rationalization, managers must first review whether the internal process and the line of flow are optimal. This will not only identify wastefulness caused by errors or unnecessary actions, but also further streamline the process. The next step followed by rationalization is standardization. When the process and the line of flow are rationalized, they are fixed and set as the standards to follow. A large number of automation devices are set up for the newly designed production line, and all the procedures will follow consistent standards. Under standardization, both capacity and yield rate are significantly enhanced. The third step is modularization, in which all the standard actions are duplicated on other production lines to maximize efficiency by best leveraging the resources previously invested.

The fourth step is cyber-physical integration. The core concept of smart manufacturing is the integration of OT and IT systems. When the information exchanges seamlessly between the two systems, more value is generated. JP pointed out that the data of a manufacturing site is both diverse and immense. Data is generated from exchanges between machine-to-machine, machine-to-human, machine-to-system, system-to-human and system-to-system, plus the specs of various raw materials, fixture actions, equipment parameters and others. The data is enormous and messy. If it can be properly organized and analyzed, the overall efficiency and benefits will be amazing.



OT & IT integration: One of the biggest challenges of factory digitalization

However, in the past, OT and IT systems belonged to two separate fields. With different domains and different system architecture, the two systems have difficulty communicating with each other. To address this issue, Delta identifies the differences in the specifications between the two systems and connection requirements before implementation, and then sets up an internal information standardization committee to take charge of connecting the two systems. After a long period of running-in, the two smart manufacturing production lines in East China and South China have now completed the cyber-physical integration. By connecting the cyber and physical ends seamlessly, the automated smart production lines operate smoothly and successfully deliver both high capacity and efficiency.

As for the ultimate vision of smart manufacturing, JP indicates that it should meet three major criteria. The first is a flexible production line—under the small quantity yet diversified production module, the line changeover can be done instantly. The second is self-detection and adjustment. When errors occur at a certain step of the production process, the equipment immediately detects and corrects the error. It then transmits the information to the equipment at following stations of the production line, to quickly adjust, respond and ensure the target yield rate and capacity. The third is the complete modularization of the equipment. According to the order requirement, the production line and workstations can be re-arranged for line change-over in the shortest time, so as to maximize production efficiency.





Delta has been working on “digital transformation” for smart manufacturing. The successful implementation of the two smart manufacturing production lines in East China and South China ensures that our solutions truly meet the customers’ needs



Key concept of digitalization: Rome was not built in a day, neither is digital transformation

Through the six steps, Delta has put smart manufacturing into real practice. However, JP pointed out that smart manufacturing is always dynamic, and there will be no completion date. For future operations, it is critical to review each step’s KPIs from time to time to continuously improve production line efficiency.

For the advice of conducting digital transformation to other manufacturers, JP suggests taking Delta’s experience as a reference and use it to develop their own digital migration strategy. He also pointed out that for most manufacturers, building smart manufacturing lines needs domain know-how and expertise, and seeking out external resources and consultation is also critical. With years of dedication to the automation field and using its own plants as trial sites to build solid experience, Delta has a comprehensive understanding of various pain points and the needs of different manufacturing industries. Before assisting a client in building a smart production line, Delta will first assess a customer’s needs and sketch out the most appropriate architecture to shorten the time for putting it into operation. For future development, Delta will not only continuously enhance the efficiency of its own smart production lines in factories, but will also actively assist other manufacturers in their digital transformation and getting them ready for the upcoming age of smart manufacturing.

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<https://buzzorange.com/techorange/2019/11/21/delta-smart-factory-transformation-experience/>





Delta's 8K projection technology displays the beauty of future art at VIP night

Text by Corporate Communications

Actively expanding new applications for 8K projection technology, Delta Electronics held a VIP Night at the Mori Tower in Tokyo, Japan. Inviting nearly 100 first-tier Japanese customers and partners to Mori Art Museum's "Future and the Arts" exhibition, Delta showcased its cutting-edge 8K projection technology to display the beauty of modern visual artwork in stunning detail. Bruce Cheng, founder and honorary chairman of Delta Group, and Yancey Hai, chairman of Delta Electronics, Inc., attended the event along with VIPs from top Japanese companies, Yoshiko Mori, chairperson of the Mori Art Museum, Fumio Nanjo, senior advisor of the Mori Art Museum, and distinguished guests. The attendees witnessed a brand-new visual experience as Delta's advanced 8K projection technology injected new life into the art of the exhibition.

In his opening speech, Bruce Cheng said, "Delta is dedicated to providing the best and most energy-efficient technologies to create a better tomorrow through innovative products and solutions in the power electronics, automation and infrastructure fields. Among these, Delta has developed remarkable 8K projection technology capabilities over the past three years through the efforts and persistence of our display engineering team. We have also begun to cooperate with world-class museums, art galleries and theaters to present groundbreaking performances. I am honored to provide our 8K projection technology to display the beauty of future art at the Mori Art Museum, Japan's leading modern art museum. For several months, under the guidance of the artist and the museum, we have successfully showcased the modern art video and audio work "Deep Meditation" on a 280-inch large screen using Delta's 8K projection technology. Through this stunning visual experience and exquisite image presentation, the exhibition has set a new milestone for Delta's innovative projection application by erasing the boundaries between high-tech and the fine arts, allowing the audience to immerse themselves into the deeper connotations of the artist's works while bringing new vitality to modern art."



(From left) Digital Projection CEO Kengo Ka, Delta chief brand officer Shan-shan Guo, chairman Yancey Hai, founder Bruce Cheng, senior advisor of Mori Art Museum Fumio Nanjo, DEJ executive director C.H. Ko, Delta chief sustainability officer Jesse Chou and GM of DSBU Jeff Fu attended the Delta 8K Night event

Fumio Nanjo, senior advisor of the Mori Art Museum, said, "The theme of this exhibition represents many artworks completed with science and technology, and combines the latest trends including AI, 8K and so on. Many thanks to Delta for providing the world's leading Digital Projection 8K projector, so that abstract visual art can be perfectly presented through 8K projection. Technology is life, and life is technology. To create a richer future, we need to combine technology and culture. We are very happy to have this successful cross-industry cooperation with Delta."



C.H. Ko, executive director of Delta Electronics (Japan), said, "This summer, a world-renowned international sporting event will be held in Japan. It will be a grand event that is expected to bring major changes to society and to people's lives by popularizing 8K display and 5G communication technology applications, as well as by renovating infrastructure and reconstructing cities. During this wave of change, Delta continues to provide customers with a variety of advanced energy-saving products and solutions, and to expand business opportunities. For example, our building automation solutions have successfully created an energy-saving and comfortable shopping environment for a newly-opened, large-scale shopping mall. We expect the shopping mall will replicate this experience at its chain stores nationwide. We have also introduced our energy-saving lighting solutions to well-known conference facility operators, a large specialty chain store, and others, to assist in their upgrade to more energy efficient lighting."



Chairperson of Mori Art Museum Yoshiko Mori (L2) met with Delta founder Bruce Cheng, (R2) chairman Yancey Hai (L1), and DEEF board director Chung Laung Liu at the Delta 8K Night event



Chief brand officer and DEF vice chairman Shan-shan Guo introduced 8K films produced by the Delta team, including the world's first 8K environmental documentary "Water with Life" and 8K documentary of the world's largest outdoor 8K projection event featuring "Water with Life" at Sun Moon Lake in Taiwan in 2019

At the VIP Night event, Delta also presented 8K films produced by the Delta team on a large screen. Shan-shan Guo, chief brand officer of Delta Electronics and vice chairman of Delta Electronics Foundation, introduced the content of the work to the guests. Highlights included the world's first 8K environmental documentary "Water with Life" produced by the Delta Electronic Foundation and NHK Enterprises to promote water education, and an 8K documentary of the world's largest outdoor 8K projection event featuring "Water with Life" that attracted thousands of viewers at Sun Moon Lake in Taiwan in 2019. While sharing its technological innovation through 8K films, Delta also shared its commitment as a world-class corporate citizen and called for seriously facing the challenges of water resource issues.

With its successful installations and applications of innovative 8K projection technology in the Japanese market, Delta has actively established new cooperation models with local artists and cultural operators for more business outreach. It recently cooperated with a major public media organization in Japan for live domestic and international 8K broadcasts using large screens for important international sports events and national traditional dramas held in Tokyo. The live 8K broadcasts immersed viewers at different sites in exciting sports and stage events in stunning detail and with zero-time difference. The 8K environmental documentary "Water with Life" has toured dozens of shows throughout Asia since its premiere at the Taichung Science and Technology Museum last March. It also received an excellent response at Delta's VIP Night at Mori Tower.

The audio-visual artwork presented with Delta's leading 8K projection technology is "Deep Meditation", which was created by the artist Memo Akten using deep learning artificial intelligence (AI) for the "Future and the Arts" exhibition. It applies the 25,000 lumens DLP® 8K projector Digital Projection INSIGHT Laser 8K technology co-developed by Delta and its subsidiary Digital Projection International Ltd. It projects the artwork using an ultra-high resolution of 33 million pixels onto a 280-inch large screen, offering a perfect combination of cutting-edge imaging technology and future art.



Oslo housing development co-op company invests in 1.29MW PV project with Delta inverters

Text by EMEA

The largest housing and property co-op in Norway, OBOS Group, invested in PV plants on six of their buildings in Oslo. OBOS Group is a Norwegian housing co-op association that began operating in 1929 in Oslo to offer housing development at a time when it was difficult to get bank financing for the average worker. In the past years, the environmental building regulations have been getting stricter and the members of OBOS have growing interest in more environmental solutions. As part of what they call green responsibility, OBOS is pursuing green initiatives and offering sustainable energy solutions for their customers in order to face the upcoming climate change challenges.



15 Delta H5A solar inverters are installed at Tveita Senter shopping center in Oslo



One of the objectives for initiating the 1.29MW PV solar pilot project was for OBOS to gain experience with PV rooftop plants and suppliers. The long term goal after gaining experience with PV was to potentially roll out similar measures on other buildings or housing companies in Norway that wanted to install solar modules on their own roofs. The pilot project was an important part of OBOS' commitment to green and sustainable energy. Investment in hydro-power as well as PV will help the company become self-sufficient with sustainable energy by 2021.

Delta was proud to be a supplier of the inverters for the OBOS project and support the distribution of more PV capacity in Norway. It was especially rewarding since we share the same green mission as OBOS. According to Mr. Andreas Hoischen, Delta Senior Director Business Unit Photovoltaic Inverters, "Delta had a very good cooperation on the OBOS projects and is expecting to see more growth with Delta inverters in large rooftop applications within all of Europe as this sector is growing due to the trend to build more net-zero buildings."



Delta assists Xiangyang East Railway Station in founding a smart high-speed rail stations

Text by DGC



Delta LOYTEC's smart building management system assists Xiangyang East Railway Station in establishing smart high speed rail station

The largest train station in China's prefecture-level cities, Xiangyang East Railway Station, has officially opened. It uses Delta LOYTEC's BAS, an energy consumption based system built on an open framework, to link up cooling and heating systems, a fresh air system, a smart lighting system, an arrival and departure information system, elevator systems, and others, through a communication interface. It enables centralized management and linkage of different sub-systems, attaining an optimal balance between energy efficiency and comfort of the entire station through smart computing and smart control. It fulfills the requirements of smart and high efficiency, comfort and energy efficiency, and safety and convenience of a "smart high-speed rail station".

Xiangyang East Railway Station will become the new "Gateway to Xiangyang". Based on the requirements for a smart high-speed rail station, the BAS system must comprehensively monitor the operations of all equipment, and precisely control temperature, humidity, air quality, and illumination of the high-speed rail station. To efficiently reduce the buildings' energy consumption, it adopts various energy-saving measures, which include:

Smart lighting system

Delta's modular smart lighting system uses linkage control to automatically integrate an outdoor light source and self-adjust to the most comfortable light threshold. The illumination of the area will not change due to changes in external sunlight, maintaining about the same default illumination value throughout. The system also integrates the illumination information of the entire high speed rail station with real-time monitoring and resource management to facilitate administrators in establishing energy efficiency strategies.

Smart control system for rail station equipment

Delta LOYTEC's smart building management system provides 7x24 uninterrupted management of the equipment monitoring system. When an error or hidden risk is detected, the system immediately sends alert information to relevant personnel who can take prompt measures to ensure users' safety.

Rail station's energy consumption management system

Delta LOYTEC's smart building management system incorporates an energy consumption management module to integrate energy consumption management and control of the equipment. It uses more than 400 smart electric meters to record the energy consumption of various systems, displaying the proportion of energy consumption by categories, providing reports for analysis, and carrying out energy efficiency optimization.



Delta holds "Smart Green City Solutions Fair" in Shenzhen

Text by Delta Corporate Management



Deputy Director of Shenzhen Longhua District Government Information Administration, Zhi-Cong Zhang (3rd from left); Executive Chairman of China Smart City Construction Investment, Professor Xiao-Xing Zhang (2nd from left); Delta's Chief Brand Officer, Shan-Shan Guo (4th from left); General Manager of Delta Greentech's Industrial Automation Business Unit (IABU), Min-Ren Chen (5th from left); Senior Director of Delta Building Automation Business Unit, Wen-Xing Jiang (leftmost); these guests attend the event and share their experiences

As a core city of Guangdong-Hong Kong-Macao Greater Bay Area, Shenzhen has an increasingly significant amount of influence over surrounding areas' development. With the strongest foundation for electronic information industry, Shenzhen takes a leading position especially in smart city construction in China. Recently, Delta held "Smart Green Cities Solutions Fair" in Shenzhen, focusing on topics of smart building, smart monitoring and the demand for building 5G network infrastructure, and the transformation and upgrades in manufacturing industry and green growth versus sustainable development. It shared cutting-edge technologies and information across various domains concerning building smart green city with related industries' personnel, industrial experts and associations' leaders. "Smart Green Manufacturing Mobile Exhibition — Delta's national touring exhibition truck" also visited Shenzhen, providing practical solutions for manufacturing transformation and upgrading for more than 300 personnel guests of mid and top-level management ranging from technological, research and development, and management domains in the manufacturing industry of Shenzhen and surrounding regions.

In addition, Delta's display and mission critical infrastructure solutions also make substantial contribution to the construction of smart city. With the rise of smart city and smart park, Delta's display solutions aims to establish better management and decision-making capabilities by innovative data visualization and smart display control. By integrating Delta's products that have been applied in municipal administration and the construction of a park's infrastructure, such as smart power supply, electric vehicle charging, data center and smart building solutions, etc., the goal of providing smart operation, energy efficiency and emission reduction in the construction of smart green park can be attained.



Delta's exhibition truck provides guests with practical solutions of transformation and upgrades in manufacturing industry



Delta Foundation shares water conservation practice and education in COP25

Text by Delta Foundation

Delta Foundation has been participating in UN Climate Change Conference (COP) over the years, and 2019 marks its 13th executive year of participation. During the 25th session of the Conference of the Parties (COP25) of the United Nations Framework Convention on Climate Change (UNFCCC) held on December 2nd in Madrid, Spain, Delta Foundation held a side event in the UN Negotiations zone, responding to the scientific report on climate change published by "Intergovernmental Panel on Climate Change (IPCC)", which targets on ocean, polar regions and water resources. CEO of Delta Foundation, Wim Chang, shared with the international communities on how to respond to the water issues of climate crisis, through Delta's experience in implementing water saving and promoting water resource protection. Other speakers include Anaíd Velasco, the Mexican Centre for Environmental Law, Susana Velez Haller, Senior Consultant at South Pole, an environmental consultancy company, and Chen Jui-Wen, Chairman of Taiwan Ecological Engineering Development Foundation. The event received great response from dozens of decision makers at the side event, who are concerned about water resources issues.

Wim said during the side event, that the Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) published by IPCC points out that humans are facing serious situations such as ocean heat wave, acidification, reduction of dissolved oxygen, diminishing catch and coral extinction. Many experts even believe that a state of climate emergency has arrived. Delta has always been trying to raise public awareness on this topic, taking actions such as delegating Japan NHK Enterprises in producing the world's first 8K Ultra HD environmental documentary, "Water with Life in Taiwan", to let the public better understand warming trend through video, teaching and exhibitions, and convey the importance of water resources. Also, it has set ambition water-saving targets for companies within the Group, and has made an external commitment to reducing water use intensity by 30% before 2020, with 2015 as the base year. With the execution of 111 water saving projects in 2018, the water use intensity of the main plants has reduced by 19.8% compared to 2015, showing quite impressive results.

Facing the grim challenges of global climate change, Delta assumes the responsibilities of a world-class corporate citizen through concrete actions by actively participating in international carbon reduction initiative. It shares its experiences in the water resources project with the United Nations domain and climate communities, so that the public can understand the connection between water and electricity. Delta not only values energy efficiency, but also hopes to play a role in water resource issues.



CEO of Delta Foundation, Wim Chang, shared in COP25 side event, Delta's experience in implementing water conservation and promoting water resources protection



Delta launches DIAStudio Smart Machine Suite at SPS 2019

Text by EMEA



Group photo at Delta's booth at SPS 2019

Delta launched its new integrated engineering software DIAStudio Smart Machine Suite along with a broad range of advanced automation products at this year's SPS—Smart Production Solutions at SPS in Nuremberg, Germany. The DIAStudio Smart Machine Suite provides an all-in-one platform for selecting models, programming (IEC61131-3 standard), and setting up PLCs, HMIs, drives, and more to enable effective, time-efficient machinery systems development. In addition to this new software, Delta will also be exhibiting its industrial power supplies and automation products, including the new DMV3000G-series machine vision system which supports up to two cameras with GigE interfaces for precise color, shape, position inspection, quality assurance, and other critical tasks for smart equipment and production lines.

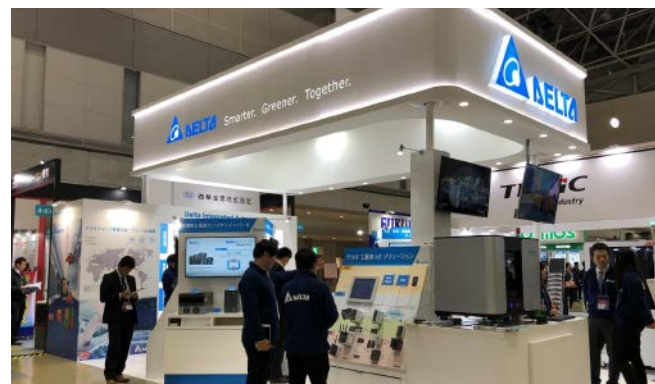
"This year's SPS in Nuremberg was very exciting because we've unveiled a new software suite that is going to save users mountains of time designing automation systems in factory settings all over the world. The great thing about the DIAStudio software is that it puts detailed technical information on Delta products right at the engineer's fingertips and allows them to use it seamlessly in the engineering process. You can literally click together the desired Delta products and their parameters, then send all that data on to your CAD software. We're also exhibiting our line of cutting-edge machine vision products that are used on production lines in conjunction with robots," said Patrik Hug, Senior Director of Industrial Automation for Delta in Europe, Middle East, and Africa (EMEA).

Delta presents smart manufacturing & IoT solution at IIFES 2019 in Japan

Text by IABG

Delta has attended the Innovative Industry Fair for E x E Solutions (IIFES) 2019 from 27th ~ 29th November in Japan, and showcased various industrial automation products, advanced equipment, and solutions for smart manufacturing. Delta's exhibits included: the Smart Manufacturing & IoT Solution with the Equipment IoT Platform DIALink to collect machine operation data and the DIAMMP Manufacturing Management Platform for data analysis, visualization & management; advanced equipment such as the new Six-sided Inspection Machine and Industrial CT Scanner for inspections of various components and workpieces in optics, electronics, the medical industry, and more; as well as the Compact Vector Control Drive M300 Series family of focused automation components with an extension model for fan & pump control applications.

Delta, with its abundant range of industrial automation products and advanced solutions for smart & green manufacturing, earned the attention of around 250 visitors during the 3-day fair. Delta also exhibited its advanced HMI DOP-100 Series, High Frequency Drive C2000-HS Series for high speed fluid systems, AC Servo Drive ASDA-A3/B3 Series, and elevator drive to meet the needs of machine making industries in Japan. Delta's products and solutions earned the attention of many potential customers and partners at the show, building greater brand awareness for Delta in Japan.



Delta attended the IIFES 2019 in Japan, and showcased various industrial automation products, advanced equipment, and solutions for smart manufacturing



Delta participates 2019 "Smart Manufacturing in China" summit

Text by DGC

In recent years, Delta actively promotes the development of smart manufacturing. Based on years of experience in automation and energy-efficiency management system solutions and the study of customer demands from a range of industries, Delta established its smart factory total solutions. At the recent 2019 "Smart Manufacturing in China" summit, CTO of Delta's Industrial Automation Business Group (IABG), Chien-Tan Lien, used Delta's green smart manufacturing solutions as blueprint and gave an in-depth interpretation of the values of green smart manufacturing in driving transformation and new technological revolution in manufacturing industry.

Chien-Tan Lien also said that in order to understand the trend of automation market, we should look at the big picture of smart manufacturing industry and create market space for some emerging high-growth industries, such as 5G, integrated circuit, infrastructure hardware, etc. As the main provider of smart manufacturing, Delta uses its integration experience in factory development and combines its experience with equipment networking, data collection of production equipment, visualization management platform for manufacturing process, and data monitoring solutions for factory equipment and energy consumption. The features of Delta's green smart manufacturing solutions cover all aspects of smart factory such as factory equipment, manufacturing process, production line and energy consumption. Lien provided industrial customers with a complete turnkey smart solution for fully-conceived plants and highlighted the customers' heavy responsibilities of completing industrial upgrading.



CTO of Delta's Industrial Automation Business Group (IABG), Chien-Tan Lien, gave an in-depth introduction of Delta's green smart manufacturing solutions

Delta Industrial Automation wins five major awards

Text by DGC

Delta has earned recognition for its active implementation of smart manufacturing, and contribution of digital transformation to manufacturing companies. Delta's performance has been praised by the market during the year and earned it five major awards in the last month of 2019. Following three awards were an acknowledgement of Delta: Delta was awarded "2019 Chinese Association of Automation Enterprise Innovative Award", "CMCD 2019 the Most Promising Brand in Motion Control Award", and "Gao Gong Golden Globe Award - 2019 Top Ten Trusted Brands". And the other two awards strongly recognize Delta's innovation capabilities for developing new products: "CMCD 2019 New Product in Motion Control Award" was given to Delta Servo System ASDA-B3 Series, and SCARA DRS80LC Robot Series was awarded "Gao Gong Golden Globe Award - 2019 New Product Award".

To provide customers with high efficiency, reliable and energy-efficient integrated solutions and services, Delta actively invests in product research and development, and technological innovation in recent years. With its own experience of the implementation of smart factory in electronics manufacturing industry and deep industry know-how, Delta has assisted many manufacturing companies in upgrading automation infrastructure, from automation equipment to assembly line, and to factory intelligentization. As the winner of these five awards, Delta is once again recognized as the leading brand in the market.

Winners of "2019 Chinese Association of Automation Enterprise Innovative Award" are selected by the Chinese Association of Automation. The award category provides an opportunity to showcase enterprises with outstanding innovation capabilities and advanced mechanisms to promote innovation. On the other hand, winners of the "Most Promising Brand in Motion Control Award" and "New Product in Motion Control Award" of CMCD in 2019 are jointly selected by ChuanDong.com and China Motion Control Industry Alliance. The two award categories acknowledge brands that serve as a benchmark in China's servo system and motion control market, as well as innovative products that show a significant influence on the industry. In addition, Gao Gong Robot Golden Globe Award is awarded by Gao Gong Robot Association during its annual meeting. The award category celebrates the outstanding performance in promoting the development of robotics industry and product innovation of an enterprise.



Delta's performance has been praised by the market during the year and earned it five major awards in the last month of 2019



Delta premieres IoT integration solutions for future-proof smart buildings at Japan Build

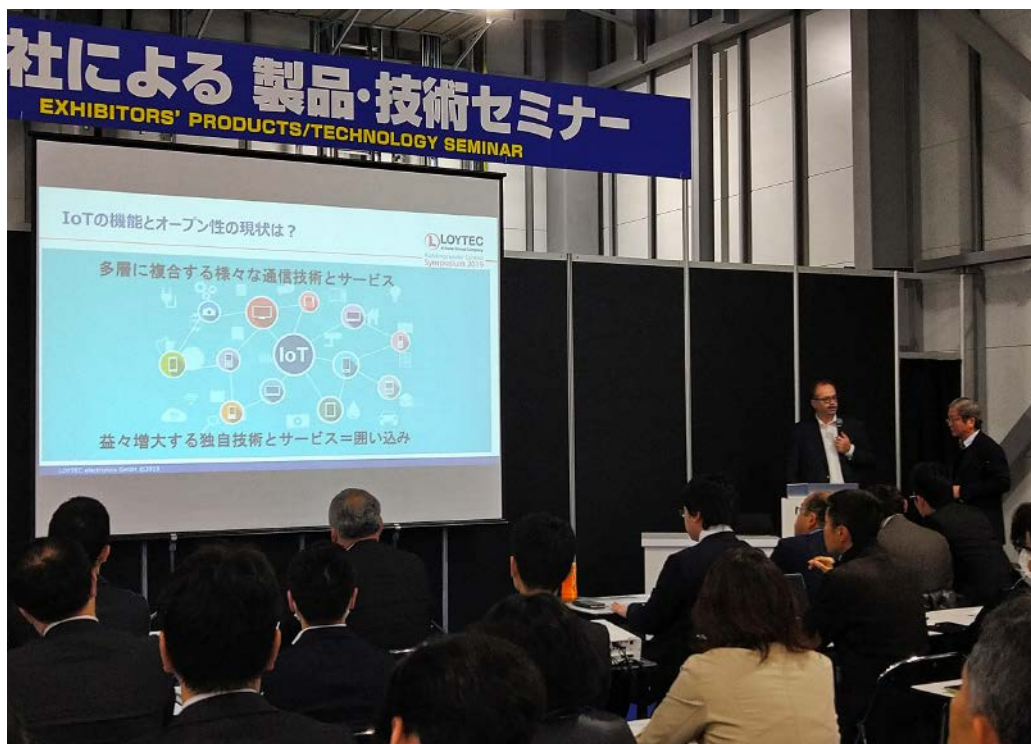
Text by EMEA

Delta showcased the IoT-enabled Building Automation Solutions of its subsidiary LOYTEC at Japan Build 2019 — 4th Smart Building EXPO. With advanced support of IoT integration interfaces, LOYTEC's open Building Automation systems can seamlessly extend to the IoT network by integrating IoT devices and building equipment such as lighting, security, and EV charging systems on a single building management and control platform, bringing occupants a more convenient and smarter environment.

As the innovative leader in the field of building automation, LOYTEC has come out with the IoT integration function, supported by JavaScript (Node.js) for its management platform.

Typical applications are meeting rooms or auditoriums with scene control of lighting and shading, integration of third-party devices, and operation of multimedia equipment with the touch of a button. The IoT integration function (Node.js) allows connecting the system to almost any cloud service, such as scheduling based on web calendars or booking systems. Processing Internet information such as weather data for forecast-based control is also possible.

The IoT-based building management and control platform has made LOYTEC one of the preferred solutions for Japan's building retrofit market especially with the support of BACnet/IP over IPv6 and BACnet IEIEJ starting from this year. Delta also hosted a seminar at its booth. Mr. Hans-Jörg Schweinzer, CEO of LOYTEC, gave a presentation on "IoT-base BA System Creates Integrated Delta Building Solutions", which attracted more than 50 participants to join this event.



Mr. Hans-Jörg Schweinzer, CEO of LOYTEC, gave a presentation on "IoT-base BA System Creates Integrated Delta Building Solutions" at Delta's booth



Delta showcases industrial automation solutions at International Air Rail Transport Summit

Text by Delta Electronics (Thailand)



Mr. Kasemson Kreuatorn, Delta's Senior Regional Manager for Industrial Automation, introduced the product details, benefits and successful applications

Delta Electronics (Thailand) showcased its industrial automation solutions for smart industrial operations and industrial cloud control at the International Air Rail Transport Summit Bangkok. Delta highlighted its industrial internet and cloud solution that leverages Industrial Cloud Routers to communicate with PLC and AC Motor Drives via the DIACloud internet cloud service, Delta's proprietary solution. The solution leverages the Delta Industrial Cloud Router and Industrial Wireless LAN (WLAN) integrated with HMI, PLC and AC Motor Drives for precise and flexible control.

At the summit, Mr. Kasemson Kreuatorn, Delta's Senior Regional Manager for Industrial Automation, presented Sustainable Construction in Property and Infrastructure. He introduced Delta solutions for the government's Thailand 4.0 smart city development with a focus on industrial automation solutions. Mr. Kasemson shared product details, benefits and successful applications of Delta's Managed Switches and Unmanaged Switches, Industrial WLAN and Cloud Platform and M2M products.

The International Air-Rail Transport Summit is a platform for the region's leading industry and public sector figures to explore challenges facing infrastructure planning, funding and delivery. This year's event focused on major transportation infrastructure projects that are key targets of Thailand 4.0 development plan. As an industrial automation provider, Delta is expanding its footprint in Thailand and the region to help customers improve performance and energy-efficiency as they transition to smart operations.

Delta and KMUTT open EV charging station at KX Building

Text by Delta Electronics (Thailand)

Delta Electronics (Thailand) attended an EV charging station opening at Knowledge Exchange for Innovation Center (KX) in Bangkok with the Delta DC Wallbox EV Charger donated to the King Mongkut's University of Technology Thonburi (KMUTT). The latest EV charging station will add to Delta's country-wide network supporting EV drivers across Thailand.

"Over 30 years, we have built a sustainable business in Thailand that invests in solutions for the future. As the world's top power supply producer, we are experts in power conversion and management for total EV charging solutions," Mr. Dick Hsieh, Delta Electronics Thailand President, said at the ceremony. "We are one of the first companies to manufacture EV parts like on-board chargers and DC/DC converters for the world's global car brands in the US and Europe. We believe that EVs are an important part of our mission to provide clean and energy-efficient solutions for everyone to enjoy."

As a green solutions pioneer in Thailand, Delta works with industry organizations and top global EV manufacturers to provide local EV charging solutions and encourage EV adoption.



Delta and KMUTT open EV charging station at KX Building. Mr. Dick Hsieh (right), Delta Electronics Thailand President, attended the ceremony on behalf of Delta



Together, We Achieve More - EMEA region partner event 2019

Text by EMEA



2019 EMEA partner event took place in Tenerife, Spain to celebrate the success together during the past two years

On the first day of December 2019, partners of Delta EMEA region made their way to the Gran Meliá Palacio de Isora hotel in Tenerife to celebrate their success together during the past two years, to gain new insights into future technologies, and to discover new opportunities. In total there were 170 partners with Delta employees from 40 countries to participate in this grand event.

The event was a great chance for Delta's partners in EMEA to learn more about Delta's solutions, to relax over dinner, enjoy the sunshine and other interesting activities. The theme of the event was "Together, we achieve more." Partners were able to learn and understand much more about Delta as an energy-efficient solution provider, and discover synergies both with Delta and with other partners through the various face-to-face interaction opportunities.

Mr. Yancey Hai, Chairman of Delta Electronics, explained the company's global vision and mission. Mr. Dalip Sharma, EMEA's president and regional head, described the outlook for Delta's future development in the EMEA region, and how we need to tightly co-work with our partners to "ride" together to achieve better. Aside from the greater vision, seven EMEA business directors presented detailed insights into the trends, opportunities, achievements and challenges in three important application areas: 5G and Datacenter; Energy Infrastructure and EV Charging Infrastructure; and IIoT, Industry 4.0 and Smart Manufacturing. 3 of Delta's partners also presented their success stories and shared with the participants on the projects they have worked on.

After the fruitful presentations, a series of team-building activities were conducted on a local beach. 16 teams fought it out for Olympic-style first, second and third places. The closing gala dinner was held in a local banana plantation, with an award ceremony incorporated which 11 partners received performance awards. All of the participants have enjoyed the unique experience in dining at such a unique place and everyone had a pleasant evening to celebrate the success achieved in the past and the better future we will work together to achieve.

By the end of the event, the partners had a fresh understanding of Delta's wide range of products and solutions, new insights into future technology directions and, in many cases, some embryonic business relationships with partners and previously unfamiliar parts of Delta.

For the recap of the event, please click [here](#) for the video.



IABG hosts customer event & new product launch in Turkey

Text by IABG

IABG held its customer event & new product launch in Istanbul, Turkey, on Dec. 12th. Over 350 partners, channel representatives, and customers from markets in Turkey joined the grand event to learn about Delta's business plans and distribution for Turkey and worldwide. The theme of the event was "More than You Know" and the slogan for the new industrial automation products was "The World's Technology". After the new product launch Delta hosted a dinner party to entertain the guests, bringing the successful event to a delightful ending.



Mr. Dalip Sharma, President and Regional Head for Delta Electronics EMEA gave a welcome speech and shared Delta's plans for the EMEA markets via video

The event began with a video of Mr. Dalip Sharma, President and Regional Head for Delta EMEA, giving a welcome speech. Mr. Sharma shared Delta's planning for the EMEA markets, he pointed out that Delta listens to the voices of its customers in Turkey and responds to customer requirements with the best products, development capabilities, and technical support. This ensures the competitiveness and brand value of Delta's industrial automation products in Turkey and other EMEA regions.

Mr. Mehmet Sonmez, Country Manager of Delta IABG Turkey, shared Delta's future plans for business development, sales & service channel expansion, and logistics management in Turkey. He also brought up a discussion of potential opportunities and operations with channel partners, which received a lot of positive feedback.

Delta IABG's product team gave an introduction to the new motion, drive, control, sensing and communication products, including: Basic Compact Drive ME300 Series, Advanced Vector Control Drive C2000 Plus Series, Compact Modular Mid-range PLC AS Series, PLC-Based Multi-axis Motion Controller DVP-50MC Series, Advanced Ethernet HMI DOP-100 Series, AC Servo Drive & Motor ASDA-B3 Series, PC-Based Motion Controller AX-8 Series, Lathe Controller NC200 Series, and the Industrial Ethernet Switch DVS Series. All of the new products were presented on-site with detailed product functions and application information.

See more about the event at Youtube:

<https://www.youtube.com/watch?v=py7BkOxU-Do>



Amerlux weather-proof step light win Product Innovation Award

Text by BABG

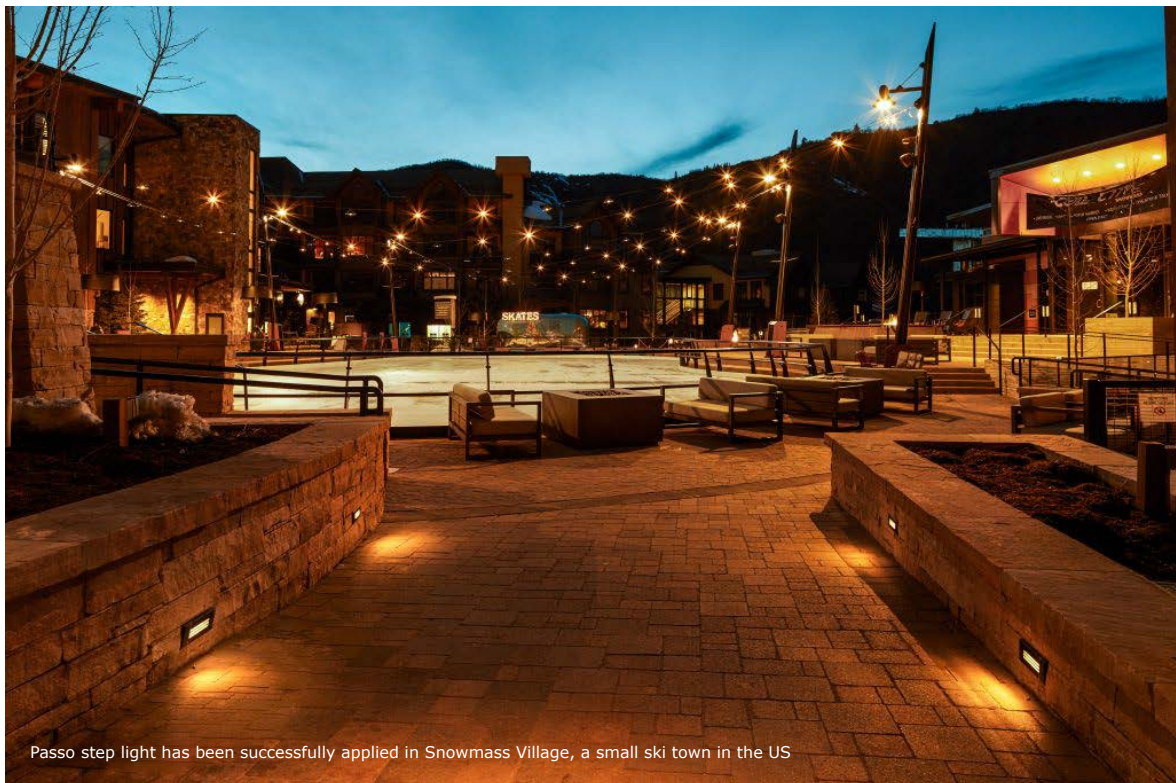
Amerlux weather-proof step light, which prevents water seepage, has been recognized as one of the most innovative solution in the industry by Architectural Products magazine.

The judging panel consists of 14 independent professionals from various industries such as architecture and media. They evaluated the architectural products based on their developmental and comprehensive innovation and recognized the companies that take sustainability, functionality, lifetime, and pricing all into consideration. Amerlux weather-proof step light, which prevents water seepage, solves the main cause of light failure. Along with the top-shelf aesthetics, the product adds warmth to any project.

Step light is usually used in steps, stairs and on the wall to illuminate the passage and provides aesthetic value for the building's facade. Water seepage gives a headache to lighting designers, landscape architects and energy service companies when recommending step lights to users such as facility managers. Facility managers are responsible for addressing the ongoing maintenance issues and safety problems associated with fixing devices.

Weather-proof Passo step light has an independently-sealed LED optical chamber, which prevents light failure and the associated manpower cost due to water infiltration. In addition, the advanced LED core technology has significantly lower energy consumption than traditional ones, increasing the return on investment.

Passo step light has been successfully applied in Snowmass Village, a ski town near Aspen, Colorado. When the town wanted to redevelop its town center, it needed affordable wayfinding while preserving the area's iconic alpine skyline and starry nights. The town chose Amerlux Passo LED step lights and a total of 125 step lights have been installed around the plaza and neighboring hotels so far. As more buildings are being constructed, it is estimated that 500 more step lights will be installed.



Passo step light has been successfully applied in Snowmass Village, a small ski town in the US



Delta Controls and LOYTEC both win the award of China's Top 10 Building Automation Brands

Text by BABG

In "China Intelligent Building Brand Awards 2019" held jointly by QJ Smartech and QianJia Brand Lab, Delta Controls won the great honor of Top 10 Building Automation Brands, ranking fifth in the comprehensive evaluation of year-round brand value index, market survey score, user feedback and expert review, and LOYTEC of Delta Group was also named one of TOP 10 Building Automation Brands for its IoT-based open integrated building control platform.



Delta Controls and LOYTEC win the award of China's Top 10 Building Automation Brands

This year Delta Controls has launched a new O3 Room Control System Solution, triggering a heated discussion in the industry in its first appearance with its people-oriented intelligent sensing and control and centralized control of HVAC, access control, intelligent lighting and curtain within a specific area. The Version 2.0 to be upgraded will have the functions of IoT, which can be used as an independent domain control station to further integrate temperature sensing, occupancy detection, humidity and wireless network. This innovation uses sensor fusion to strengthen room control, improve user experience and reduce user detection errors. The control of the system can be realized by installing O3 APP or enteliWEB building management software.

Delta's LOYTEC building control system is based on IoT technology, and adopts an open and all IP network architecture, which not only supports a variety of international standard communication protocols, but also has RS-485 (Modbus RTU/BACnet MS/TP), and can integrate BACnet IP/Modbus TCP for fast cross-system integrated control. Taking the Shanghai Oriental Hospital as an example, IoT-architecture LOYTEC building automation solution not only realizes the intelligent and energy-saving integrated building management of the electromechanical equipment in the hospital, but also connects with the BIM operation and maintenance platform in the hospital, and shares equipment operation parameters, so that maintenance personnel can quickly and intuitively carry out the maintenance and troubleshooting, optimize the overall operation efficiency and reduce the management cost.



Delta Singapore team building event 2019

PEOPLE

An introduction to Delta Singapore

Text by Delta Singapore

Delta Singapore, a 100% owned subsidiary of Delta Group, a public listed company in Taiwan. Delta started its footprint in Singapore from 2010. We started out as a Research and Development centric company and grown to be the global principal of international trade for Delta Group.

Delta Singapore with a bit more than 200 professionals, we focused on advanced research, solution business for telecom power, industrial automation, building automation and data center. In 2019, extending from our core capability, Delta Singapore signed a MoU with Singapore government agency, JTC, to promote and assist JTC's customers embarking their industrial 4.0 journey. In 2019, we established our solution teams for industrial automation and building automation in Singapore. Also in 2019, we signed an agreement with Soilbuild, a reputable builder of green building in Singapore, to build our One Delta building. We are excited about these new endeavors and can't wait to explore new milestone and future of Delta Singapore.



PEOPLE & PRODUCT

Our diverse pool of talents, from R&D, sales and marketing, solution engineers, FAEs, to support functions, a group of diligent professionals tirelessly transforming processes, systems to support automation and solution businesses, enable us to take on many bold endeavors in Singapore. With such a concoction of talents, how do we understand each other and make things work? I think our secret recipe is not what most business books preach about, it is our commitment to serve one another. Since each member's work are so intricately linked, we are determined to help each other to succeed and also practice flexibility when challenges arise. In such an interdisciplinary environment, there is potential for immense growth – work professionalism and team spirit!



Delta Singapore participated in 1st Advanced Manufacturing Day hosted by JTC in their innovation district



Delta Singapore Appreciation Night 2019

Working in Delta Singapore, you immediately sense an intriguing blend of Western modernity and Asian culture, we are exposed to intercultural communication and cross-cultural management.

We make “work-life balanced” happen as well! The Company plan in a series of health care initiatives, for example, we partnered with AIA and create a program to reward employees who exercised. Rewards include discounts in groceries, air tickets, hotels and gym memberships. This is to ensure employees’ physical health are properly maintained. Medical care and health-screening programs are other examples.

Regularly, we plan in people events with the aim to foster bonding among employees at across department and functional level. Most employees love our mid-year team-building and year-end celebration. Purposeful-planned activities at the team-building promotes employees collaboration. The year-end event is fun-filling and celebrative! Normally, in these non-work type events, are opportunities to spot the other sides of employees – different personality types and entertaining talents! This is truly diversity embracement – people of different age, nationalities and races which are unique and valuable. Truly, these are some of the ways that Delta Singapore creates such space to recognize the hard work and contributions of its employees!



PEOPLE & PRODUCT

DRC Life Science Singapore

DRC Life Science Singapore was set up in 2014; given a mission to create a new market for Delta in the area of molecular diagnostics. DRC, Delta Research Center, focuses on advanced technologies in Smart Manufacturing, Smart Living, Smart Learning & Smart Commercialization. They are our eyes from the future; with DRC, we see the world 10 to 20 years from now and envisioned their implication on Delta. What we embarked on is an ambitious project - to shrink a diagnostics laboratory with a whole suite of equipment and army of technicians into a single bench-top plug and play laboratory instrument. This highly advanced instrument miniaturizes the existing laboratory equipment and automates all the steps into one single closed system instrument (which uses our own proprietary detection kits) and requires just one technician for operation. A true melting pot of professionals, molecular biologists, optical engineers, software and firmware engineers, biochemists, microfluidics engineers, electric engineers, quality assurance manager and so on...

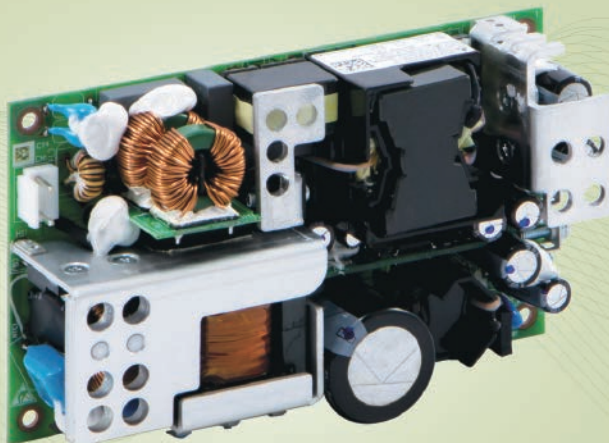
ELTEK Singapore

Eltek, our proud addition since 2014. A leader in Telecom power and data centers. Eltek Singapore was established in 1997. What started out as the first sales office in South East Asia, Eltek Singapore has grown both in size and stature to become the regional headquarters for the Asia Pacific. Leveraging on the tremendous economic growth in this exciting region, Eltek BU Singapore has grown from strength to strength and has established our market foothold not only in Singapore, but also into Malaysia, Thailand, Philippines, Indonesia, Laos, Cambodia, Myanmar, Hong Kong, Sri Lanka, Vietnam, Bangladesh, India and Australia. Being the APAC headquarters, it handles all matters relating to distribution, system assembly, technical support, customer services, marketing and sales.

2020, a new year with new potentials.....we can't wait to embark on our new journey and create new milestones in Singapore!



Team photo of ELTEK Singapore



Delta introduces the new PJH series of open frame power supply

PRODUCT

New PJH series open frame power supply for household applications

Text by Delta Electronics (Thailand)

Delta introduces the new PJH series of open frame power supply with 300W output power. PJH-24V300WBCA and PJH-36V300WBCA provide up to 240W power convection cooled without additional metal plate. With external fan cooling, it can provide 300W output power across a wide operating temperature range from -25°C to +70°C. The design is one of the few to meet both IEC 60335 and IEC 61558 in a compact 240W 3" x 5" convection cooled design, suitable for limited space in household applications.

Highlights & Features:

- ▶ 300W fan cool, 240W convection cool
- ▶ Built-in active PFC, remote On/Off, remote sense, power good signal and 12VSB (6W) or optional 5VSB (6W)
- ▶ Class I or Class II (double isolation) configuration with universal AC input voltage range
- ▶ High efficiency up to 94.0%
- ▶ Extreme low temperature cold start at -40°C
- ▶ Approval for Pollution Degree 3
- ▶ Major safety approvals include IEC/EN/UL 60950-1, IEC/EN/UL 62368-1, IEC/EN 60335-1, IEC/EN 61558-1 and IEC/EN 61558-2-16



The cover of "Emission Gap Report 2019" depicts the current situation and the future (source: Emissions Gap Report 2019)

The ideal and reality of carbon emission: Emission Gap Report 2019

Text by Tino Wang / Delta Foundation

Comparing current carbon emission growth to car racing, the situation is equivalent to a car dashing out of the runway without braking, and getting out of control. It is unlikely that we can return to the original path of carbon reduction and try to catch up. With the current situation, we are far from the original Paris Agreement goal.



This year, the United Nations Environment Programme (UNEP) published “Emissions Gap Report” for the 10th consecutive year. Comparing global greenhouse gas emissions forecast with Paris Agreement goal, the result is not favorable. Let’s take a look at what happened.

Greenhouse gas emissions continue to rise despite scientific warning and political commitments

In the last decade, greenhouse gas emissions have risen at a rate of 1.5% per year, with only a brief stabilization between 2014 and 2016. In 2018, greenhouse gas emissions, including those from land-use change, reached 55.3 gigatons carbon dioxide equivalent (CO₂e), a new historical record; and carbon emission generated from fossil energy and industry reached 37.5 gigatons CO₂e, a 2.0% increase and another historical high.

The worst part is, there is no sign that carbon emission has reached its peak at present. According to estimates, if carbon emission reaches its peak in 2020, 2030 emission has to be 25% lower than that of 2018 in order to control global warming within 2°C; to further control global warming within 1.5°C, a 55% reduction has to be attained. Unfortunately, according to current carbon emission trend, it is unlikely that the world has any solutions in reducing carbon emissions every year starting from next year.



Global greenhouse gas emissions continue to increase

Reduction of carbon emissions by one-third in 2030; the gap is large

The report also estimates that with no changes in the countries’ policies, 2030’s global carbon emissions will be 60 gigatons CO₂e. In 2015 Paris Agreement, the countries submitted their own carbon emission targets, where unconditional NDCs can only reduce 2030 carbon emissions to 56 gigatons, which is still far from the target of 41 gigatons for 2°C, not to mention a gap of 32 gigatons for the 1.5°C target.

Based on the estimates of unconditional NDC, even if the carbon reduction commitments in Paris Agreement are fulfilled, the world will still see an increase of temperature by 3-3.2°C at the end of this century. Comparing such situation to car racing, the current carbon emission growth is equivalent to an out-of-control car which has dashed out of the runway without breaking. Returning to the original path of carbon reduction and catching up is highly unlikely, as the gap between the current situation and the original Paris Agreement goal is huge.

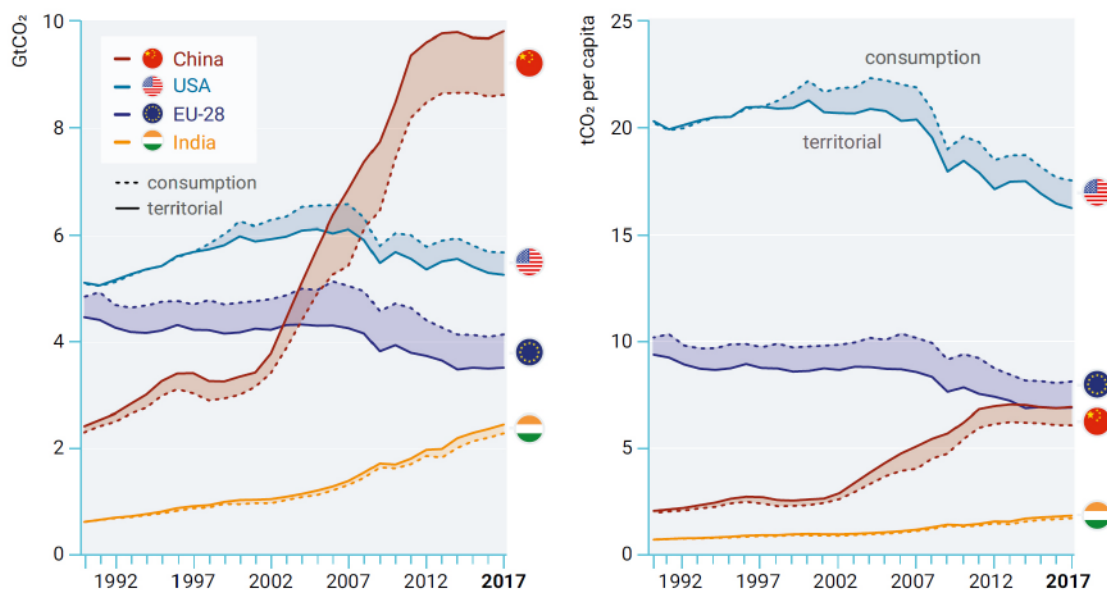


The difference of one degree Celsius relies on the countries' determination

In summary, the reason for such a big gap is the inadequate unconditional NDCs by the countries, resulting in the inability to achieve the goals. It is estimated that the countries need to increase their contribution commitments by 3 times, and the world's annual carbon emissions reduction need to reach 3% in order to realize the 2°C goal. To achieve the 1.5°C goal, unconditional NDCs have to be increased by more than 5 times, and the annual carbon reduction has to be 7%.

In view of this, many countries have successively submitted further reduction commitments in recent years to show their determination. A total of 65 countries and local governments such as that of US California, including five G20 members, have set net-zero emissions targets.

Figure 2.4. CO₂ emissions allocated to the point of emissions (territorial) and the point of consumption, for absolute emissions (left) and per capita (right)



After including carbon emissions from manufacturing end into consuming countries, we can see the changes in carbon footprint in consuming countries like Europe and USA, and in manufacturing countries such as China and India (source: Emissions Gap Report 2019)

Let's take a look at what the countries can do. The report listed six aspects of solutions to work on, including in-depth transformation to narrow the emissions gap, urban climate governance, digitalization, land use, food security, and bioenergy. In terms of energy, the report proposes expanding the use of renewable energy, increasing electrification, phasing out coal for rapid decarbonization of the energy system, as well as decarbonizing transport and industrial sectors with high electrification. It seems that the world has many solutions at present, and what left to be done is for us, who live in the same global village, to show our determination and execution power.

Source: Emissions Gap Report 2019

