



TACconnect

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UTAC's Participation in the Electronic Device Forum Kyoto

NEDIA (Nippon Electronic Device Industry Association) hosted an Electronic Device forum in Kyoto, Japan on Nov 1, 2019. This is one of the biggest forums for electronics and semiconductors in Japan. NEDIA and one of our potential customers, Sharp, approached UJP and invited us to do a presentation after reading about UTAC's paper on CMOS Image Sensor in an IEEE publication. Sharp seems very interested in UTAC's iBGA technology for automotive area.

The Forum was a 2-day event and the topics covered Auto Driving, Sensing, Power devices, 5G communication, Nano technology, and Fan out packaging. UTAC's session was in the category of Mobility Key Devices. The audience came from a very wide range of industries and universities. The conference room was fully occupied. Many of the key members and participants in this forum are our current and potential customers such as RENESAS, SONY, Sharp, ROHM, muRata and Panasonic. Equipment/materials companies such as Tokyo Electro, TORAY and Academic institutes such as Kyoto University, Osaka University were also involved as program organizers.

IK Shim, our Chief Technology Officer, presented a paper at the Forum on "CMOS IMAGE SENSOR PACKAGING TECHNOLOGY FOR AUTOMOTIVE APPLICATIONS". Akifumi Yoshimura participated as the English to Japanese interpreter. There were many questions from the audience posed to us regarding our presentation such as how to control contamination, how to achieve automotive product quality, what is unique about the process control for automotive products etc.

This Forum proved to be a very good opportunity to introduce UTAC's image sensor packaging technology for automotive application to Japanese customers. UJP is now working closely with SONY and Sharp to engage in their image sensor business.



An ESD Snapshot of UTAC

The ESD Association (ESDA) is an organization that sets the ESD global standards (ANSI/ESD S20.20) for Electrostatic Discharge Control. Three of our UTAC sites USG, UDG, and UTC are certified with ANSI/ESD S20.20.

UTAC Singapore members, Jeremy Ong and Maurice Goh have been involved in several ESDA events to promote UTAC as one of the reputable semiconductor companies with good ESD control program in place. These events have enabled us to gain very good experience through meeting and exchanging knowledge with other ESD representatives from various semiconductor companies.

ESDA events also serve as a platform to present papers. Two papers from UTAC Singapore ESD engineers were presented by their co-authors at the EOS/ESD Manufacturing Symposiums in Penang, Malaysia (2019). Two others were presented by Jeremy Ong in Singapore (2017) and Xi'an, China (2016). A summary of each is presented below.

2019 EOS/ESD Manufacturing Symposium in Penang

- ESD Event Detection Technology for Fine tuning ESC/ ESD Control -Wafer mount and De-taping Process:** [ESD event detectors were mounted on automated handling equipment (AHE) to acquire ESD triggering event data under dry (with ESD Sensitive (ESDS) devices) and wet (without ESDS devices) running conditions. Multiple scenarios over pre-determined time duration with super-imposed data observations were used to identify the real ESD events.]
- Smock & Human Body Grounding through Wrist Straps** [Its objective is to unify ESD Control and Cleanroom protocol by resolving the disharmony between the two practices]

2019 EOS/ESD Manufacturing Symposium Penang, Malaysia	2019 EOS/ESD Manufacturing Symposium
<p>ESD Event Detection Technology for Fine tuning ESC/ ESD Control -Wafer mount and De-taping Process</p> <ul style="list-style-type: none"> • Author#1 Ong Wai Kong (Jeremy), Company#1 UTAC • Author#2 Yeo Chee Keong (Benson), Company#2 Dou Yee • Author#3 Goh Chin Bee (Maurice), Company#3 UTAC <p> </p>	<p>Smock & Human Body Grounding through Wrist Straps</p> <p>Maurice Goh, UMS Singapore Bernard Chin, Qorvo</p> <p> </p>

2019 EOS/ESD Symposium Topic

2017 EOS/ESD Manufacturing Symposium in Singapore

Evaluation of ESD garment with Conductive Ribbon [Enhance the current market designed garment to ensure there is no failure in ESD requirement after years of repeated washing before the fabric gets worn out.]



Jeremy presenting a paper at the 2017 EOS/ESD Symposium in Singapore

2016 EOS/ESD Manufacturing Symposium in Xi'an, China

Dummy versus Live ESD sensitive devices charge analysis for automated handling equipment ESD qualification. [The objective was to study and establish whether dummy units are truly representative of live units; that is, should live units be used in actual AHE qualification instead of dummy units.]



As for the Dummy versus live ESD sensitive devices charge analysis for AHE ESD qualification and Evaluation of ESD garment with Conductive Ribbon, the earlier papers were subsequently recognized by IEEE and documented in its website.

2015 EOS/ESD Symposium for Factory Issues in Munich, Germany

Probabilistic analytical benchmarking for ESDS manufacturing process

[Using probabilistic analytical technique, this paper proposes ESD capability benchmarking indices for semiconductor manufacturer' supply-demand of ESD sensitive devices (multiple-production lined). Through mathematical modeling, formulation and optimization, factory planners can have a better quantitative understanding of ESD risk analysis of devices they supplied; thereby managing ANSI/ESD S20.20 Control Program exceeding customers' expectations.]

2015 EOS/ESD Factory Symposium

Probabilistic Analytical Benchmarking for ESDS Manufacturing Process

Marcus KOH (ESDA Certified Professional-Program Manager, Exemplar Global INARTE Certified ESD Engineer),
 Email: marcus.koh@everfeed.com.sg
 Maurice GOH, Email: mgohcb@gmail.com
 Yohan GOH, Email: Yohan_goh@everfeed.com.sg

Papers presented in China, Singapore and Germany published on IEEE's website

The Corporate ESD team would like to encourage the rest of the other UTAC sites to obtain ANSI/ESD S20.20 certification and to participate in EOS/ESD Symposium events. These are held several times a year in different country venues.

Only by continuing to work together will this help maintain the ESD control program compliance that will impact our business where future ESDS devices are increasing in damage sensitivity and susceptibility to electrostatic discharge.

UTL Quality Week 2019

In November 2019, UTL organized Quality Week 2019 for employees to share and showcase the meaning of “quality” in their projects. This Quality Week event was held in all 3 factories and the objective was to enhance the employee’s quality awareness, as well as campaigning for safety at the workplace. Many employees participated and enjoyed this event which had great support from the management team.

มารวมพลัง กับกิจกรรม UTL Quality Week 2019
เพื่อจะเติบโตขึ้น ความสุข ความพึงพอใจ และแรงจูงใจ

Hero of Quality
ในบทบาท: โดแล่ฝึกกับ Super Hero ที่ทันสมัย

กิจกรรมภายใน

- ฝึกอบรมด้านคุณภาพ
- การประกวด
- เกม
- กิจกรรมสร้างสรรค์

กิจกรรมนอก

- แสดงงานด้านคุณภาพ
- ประกอ Mr. & Ms. Quality Excellent

Zero Defects & Accidents

ฟรี! ของที่ระลึก, เครื่องดื่ม, อาหารว่าง, ขนมอร่อยๆ มาร่วมอยู่ในบรรยากาศแห่งคุณภาพ และความประทับใจด้วยกัน

“เราทุกคน คือ Hero of Quality”

UTL1: Nov'14 '19, UTL2: Nov'27 '19, UTL3: Nov'20 '19
ตั้งเวลา 11.00 น. เป็นต้นไป



Internal Quality Audit Year 2020

An **Internal Quality Audit (IQA)** is one of the **ISO 9001 & IATF** requirements to assure that an organization's risk management, governance, and internal control processes are operating effectively.

As continuous compliance to the requirement, UMY performed the IQA on 24th to 27th February 2020. The audits were conducted by the UMY Internal Audit team. The group comprised 13 UMY employees from various departments, led by UMY Lead Auditor from Quality Reliability Assurance department. The audits covered all the Quality Management System and Manufacturing processes, and also product audit, involving all departments and disciplines i.e. Quality Reliability Assurance, Process Engineering, NPI, Maintenance, Facility, Production, Planning, Warehouse & Logistics, Supply Management, Finance, Human Resource and Information Technology.

As a result, ZERO Major and 5 Minor non-compliances were found. During the Internal Audit review meeting, UMY DGM, Mr Sunny Aw conveyed his appreciation to all departments for the tremendous reduction in the number of NCR compared to previous years. This achievement was due to high levels of dedication by everyone in reducing non-compliance to external and internal standard requirements.

Moving forward, all the teams are committed to preparing for the up-coming Surveillance Audit by the certification body, TUV SUD, in June 2020.





COVID-19: UMY Actions

Since January 2020 and throughout February and March, UMY has taken fast and immediate action to increase awareness on curbing the spread of COVID-19 by implementing necessary measures such as temperature-taking for all employees and visitors, providing hand-sanitizers, and social distancing in the factory.

The management and staff have been following all the steps and taking precautionary actions. Everyone understands the need to socially distance themselves from each other to avoid COVID-19 infections. To date, there are **no** reported cases in UMY.

From 18th March 2020, the whole nation was under the Malaysian government’s Movement Control Order (MCO). UMY was closed from 18 March 2020 and resumed operations on 21st April 2020 with some limitations on the number of workers and compliance to SOP. Since 30th April 2020, operations have been back to normal with strict SOP compliance being a MUST even until now.

As well as keeping ourselves safe and healthy, we also pray and hope that all our UTAC families around the world will remain safe and positive in combating this global pandemic.

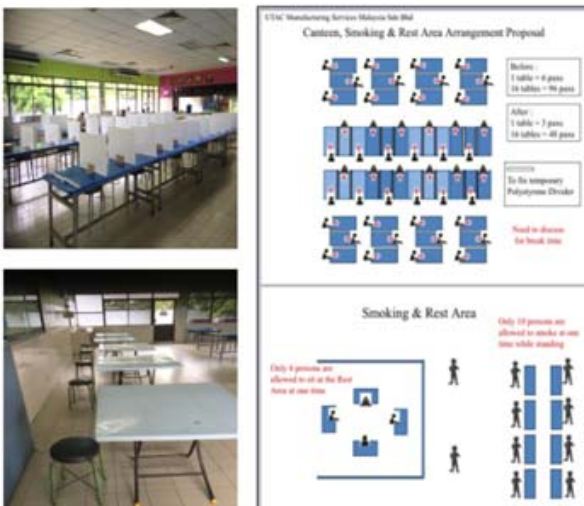
Hand Sanitizers Station



Body Temperature Scanning



Social Distancing



Premises Disinfectant Activity



Kathin Ceremony 2562

On 2 November 2019

Dr. Nathapong Suthiwongsunthorn (GM of UTL), UTL's non-profit foundation representatives, the management team and employees made offerings at the Kathin Ceremony at Mon Khao Kaew Temple, Lampang Province. Even though this temple was far from the company, over 800 kilometers away in northern Thailand, everyone was determined to join this very meaningful activity for society.



Donations to Build a Temple

On 14 August 2019, UTL's non-profit foundation and UTL representatives donated THB 10,000 to the funds to make merit at the Mae Tha Luang Temple in Lampang Province to rebuild parts of temple that was previously destroyed by fire.



Merit Making for 108 Novice Buddhist Monks

On 5 December 2019, UTL management and employees jointly went to make merit and offer food to 108 novice Buddhist monks at the La Salle Factory, Bang Na. This is considered a good activity for society and to remember the birthday of our beloved His Majesty King Rama 9.



Donation of Flu Vaccines for Buddhist monks

On 13 December 2019, UTL staff and representatives from UTL's non-profit foundation donated vaccines to prevent influenza to the monks, novice monks at Phrapariyatti School of Phong Phloi Wiriyaram temple. The total of 215 syringes of the influenza vaccine was donated.

As part of UTL's efforts to keep employees well and healthy, the company also provides influenza vaccinations to its staff every year. This activity is one of the many CSR activities for the benefit of our local and wider communities.



UTAC Family Day



The 2019 UTC Family Day event was held at Mike Farm on 19th Oct 2019. There is a local tourist attraction and also a multi- function place that is suitable for use by all ages. Over there you can have the chance to experience making Hakka food, learning about the traditional culture and reflecting on the traditional rural life in ancient times.

On that day, the weather was great, and colleagues came excitedly with their family and friends to take part in the well organised activities.



Each team had their own barbecue grill and some had larger brick kilns to cook some of the food. There was also tea making and hands-on red turtle cake making activities. Everyone had the chance to take part in interactive team work. We rarely have the opportunity to have such fun with family and colleagues at the same time.



We enjoyed the happy occasion with our families, especially all the children who were so happy to play on the grass and be close to the animals on the farm.

At the end of the day, everyone left the place with a good experience and happy memories. Our colleagues deeply felt that it was events like this that generates happiness when working in UTAC. This has increased our expectations for the UTC Family Day next year!



UTAC Family Day

(Continued)

What a remarkable and cheerful day! For today, the 19th of October, UTAC (Taiwan) hosted an activity for its employees, their family and friends. A little time away from the regular routine, balancing work and life took less than a minute for me to make a choice to enjoy them both with a grateful heart.

Being a migrant worker from the Philippines is a bit of a challenge especially when it was my first time to go overseas. As a new employee in this company I am so honoured to be part of it and thankful for giving me an equal opportunity to experience such outdoor fun with colleagues, friends and their families.

Truth is, how I wished my family was with me to enjoy this great deal of adventure with an amazing group of people who make each moment more worthwhile, being part of the UTAC Family. But there is no reason to be teary-eyed as UTAC is now also my family. "Family" is not only defined by blood relations. It is also the special bonds and relationships that grow beyond from being just colleagues and acquaintances.

It was my first time ever to participate in this UTAC outdoor event. The experience and feeling was so overwhelming. The food was mouth-watering (I loved the barbecues) and the activities were equally fun as well. We all had our fair share of laughter. It was not also not only a "meet and greet" experience but it opened my eyes to the fact that life and work can be much easier and more fulfilling when time is well-spent with our loved ones.

To see everyone with their happy faces, released some good vibes knowing we all need time to relax and unwind. I believe that Mike Farm is just one of those amazing destinations that I should include on my bucket list to explore further in the future.

UTAC's hosting of this Family Day has not only given me the opportunity to see Taiwan's beautiful scenery, it has also shown me how welcoming my colleagues are. Kudos to UTAC!!!



UTAC Bowling Competition

This year, UTC hosted its first bowling competition. It was held in the Tiger Sports Compound Sports Hall on November 15, 2019 from 15:00 to 18:30.

The competition was divided into men's individual, women's individual and team groups (four in one) and the top three in each group were awarded with prizes.

To encourage people to sign up, there was a chance for contestants to get a NT\$100 worth of 7-11 vouchers and meal boxes. Obviously, this generated very enthusiastic participation! A total of 86 participants signed up: 15 for the Men's Individual category; 15 for the Women Individual category; and 56 people were divided in 14 groups.



On the day of the event, enthusiastic participants came extra early to warm up. At the check-in counter, mineral water, biscuits, snacks and bento boxed meals were provided for the participants as well as other physical accessories. The organisation was well thought out.



At the start of the competition, our deputy general manager, KC, and HOD, Andy, threw the opening balls to kick off the event. Andy was also the best photographer to capture the wonderful moments. Whether it was a gutter ball or a strike, there was laughing and cheering throughout the games. What struck me was the special relationship between the supervisor and the subordinates during the game. There was no supervisor/subordinate relationship as in a typical work-setting. Instead, there was a healthy partnership with sportsman rivalry. The atmosphere was lively and joyous.

Whether you were good at bowling or not, everyone enjoyed this rare opportunity to have fun together.



Bowling is a great sport that everyone can enjoy regardless of age or gender. UTC believes such activities can encourage colleagues to achieve more work-life balance through sports. At the same time, it creates more opportunities for staff from different departments to meet and mingle with each other.

Whether you win a prize or not, it's more valuable to spend a happy time together. Everyone is now looking forward to the next event!

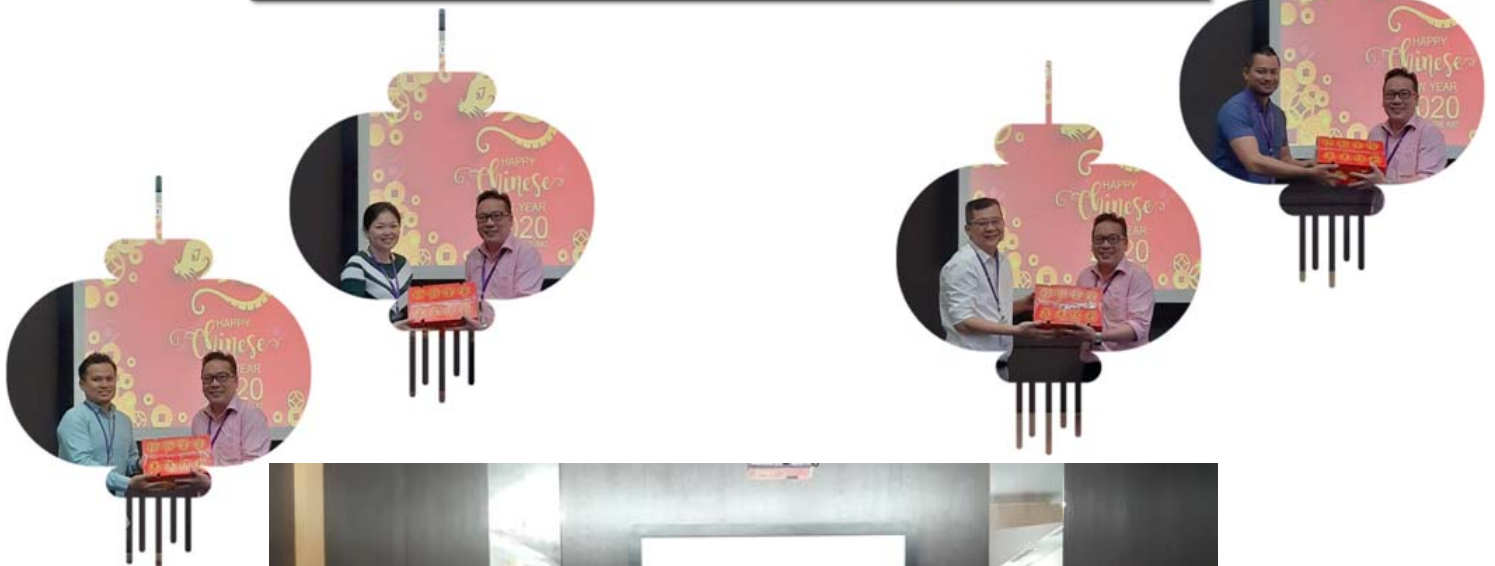


2020 Chinese New Year Celebration



Chinese New Year for Year 2020 was on 25th January 2020. UMY's yearly event and distribution of mandarin oranges to all employees in the spirit of celebration and upholding the Malaysian cultures and customs was held on 22nd January 2020.

Employees joined hands to purchase, deliver, unpack and repack the oranges in to smaller gift bags for distribution. This activity has enlivened our UTAC Values, the spirit of celebration and togetherness among UMY employees.



2019 UTL Charity Golf

On 15 November 2019, UTL in collaboration with the UTL's non-profit foundation organized the 2019 UTL Charity Golf at the Northern Rangsit Golf Club, Phra Nakhon Si Ayutthaya Province.

The UTL Charity Golf is an annual event to raise funds from our suppliers and vendors, but more importantly to engage and enhance the partnerships between UTL and its suppliers and vendors.



Health & Wellness Concert at UTL2

On November 20, 2019, UTL in collaboration with the GMM Grammy Public Company Limited, a famous media conglomerate entertainment company in Thailand, held a concert at UTAC Factory 2, Wellgrow Industrial Estate.

The concert featured artists “Ewan Kwan Waranya” and “7Days Crazy”. At the same time, there was a singing contest for employees to win prizes.

This event created a lot of excitement, happiness and fun for our employees and was a welcome change after a tiring day of hard work. The concert and activities were held after work hours so that the shift operation employees were able to participate.



UTL Mini Marathon #3

Our UTAC management realizes that employee health and wellness is very important, the rationale being that good quality work comes from healthy people. The company, therefore, arranges activities for employees to focus their attention on their personal health.

On 3 December 2019, UTAC Thai organized the 3rd Mini Marathon. The event was called **“UTL Fun Run for DAD Around the Home”** and consisted of running 10 laps around UTL factory #1 at Lasalle, covering 4.5 kilometers. Many employees and executives enjoyed participating in this activity.



UTL Sports Day Tournament

On 22 December 2019, UTL held qualification rounds for sports day at the Samut Prakan Naval Gymnasium. We grouped the staff in to 4 different teams named after colors: Purple, Green, Pink, and Blue. The sports played were soccer, volleyball, chair ball, table tennis, and badminton.



UTL **New** Employee Team Building **activity**

On 27 September 2019, UTL organized team building activities for the newly hired employees to learn and know how to work well as a team.

UTL pays attention and gives importance to effective teamwork. We organize activities to enhance teamwork by having targeted groups consisting of employees who have 0 - 1 year of service to get to know each other and to build good relationships to enable more efficient teamwork cross-functionally.

