

MECHATROLINK News "MMA-FLASH" brings the latest MECHATROLINK information.

Feature Article

An Interview with Delta Tau Korea Inc.

Bringing High Efficiency and Reliability Field Networks to Machinery Manufacturing

We deliver the latest news and information to MMA member companies and MECHATROLINK users in our feature articles. For this edition, we asked Park JooYong, President of Delta Tau Korea Inc., to talk about how Delta Tau came to the decision to adopt MECHATROLINK, and what he expects from the MMA.

Q1. First, can you tell us a little about your company?

— Delta Tau Korea Inc. is a local subsidiary of Delta Tau Data Systems Inc. in the U.S., which develops and supplies motion controllers. In addition to the high-performance controller PMAC/UMA products of our parent company, Delta Tau in the U.S., we also develop unique Korean products, such as Cruiser and PCI Cruiser.

Our business is not limited to product development and sales. We also provide technical support and services engineering. Last year, we developed MECHATROLINK-III interface-based Cruiser products to build a product lineup that efficiently supports a wide range of applications.

MECHATROLINK, the Key to Solutions for Machinery Manufacturing

Q2. As a controller manufacturer, your company is well acquainted with various industries. What are your thoughts on users' needs for networks?

— We have gained strong support from users in a wide range of industries in Korea, starting from FPD and secondary battery manufacturing machinery and extending to industrial robots and machine tools, and general automation for packing equipment and printing machinery.

What we feel about the current market is that efficiency is regarded as increasingly important from the perspective of manufacturing costs and terms, as well as maintenance.

Because of this, much focus is being placed on field networks. In comparison with analog/pulse control methods, field networks can provide higher efficiency for manufacturing and maintenance. Big advantages include cost reductions for parts and production, shortening of manufacturing lead times for multi-axis machinery, and improved reliability with digitalized reference data.

The application of MECHATROLINK-III is the key to meeting these needs, and improves efficiency particularly in manufacturing multi-axis machinery. Another major advantage of MECHATROLINK-III is that electrically sensitive analog/pulse signal circuits are no longer needed, which increases reliability and reduces the potential for failure.

MECHATROLINK's Rich Selection of Highly Reliable Compliant Products

Q3. Tell us why you selected MECHATROLINK-III for your developed product from among the many communications networks?

— The reason we adopted MECHATROLINK-III for our unique controllers is because of its wide selection of highly reliable compliant products. FPD and secondary battery manufacturing machineries are often expected to be reliable from the development stage. Therefore, we need facts that can convince users that our products can lead to the production of reliable products.

For example, a certain field network has been marketed as being more open than MECHATROLINK. However, we selected MECHATROLINK because the reliability and results of manufacturers that have adopted MECHATROLINK are higher than those who used other networks.

Through the development of Cruise-series controllers, we were able to create a link between the collection of various motion control functions that our products are equipped with and MECHATROLINK-III compliant products, which gave us the capability to broaden the application range of our products.

The combination of the MECHATROLINK-III high-speed data communications of 100 Mbps and the multi-axis synchronous control that are a mainstay of our products makes it possible to efficiently manufacture, maintain, and manage equipment.



Park JooYong,
President of Delta Tau Korea Inc.

Q4. Tell me about your future expectations for MECHATROLINK and the MMA?

— The current MECHATROLINK-III data communications speed is fast enough for many applications, however, it is evident that faster data communications will be demanded for position data and speed/torque reference data. The demand for both increasing the speed of communications becomes more important as time goes on. Therefore, we expect the development of a next generation communications just as MECHATROLINK-III was released following to MECHATROLINK-II.

We believe that compatibility in communications functions between different versions should be maintained so that the market can rely on and easily adopt newer versions. For management and in case of failure during the transfer process to new version products, compatibility between different versions is very important. We strongly request that the MMA consider compatibility when developing newer versions of MECHATROLINK since compatibility is an important factor in the

decision to transfer to newer versions.

We also think it would be useful if the MMA creates an online discussion space where MECHATROLINK-III slave developers all over the world can freely join. We expect that the MECHATROLINK-III developer bracket will be expanded with developers sharing various successful experiences and failure cases and collecting data through the online discussion space.



MECHATROLINK-III equipped Cruiser-series controller developed in Korea

News & Topics

Exhibition & Event Information

CCMT2014

Event Information

- **Dates:** February 24 (Mon) to 28 (Fri), 2014
- **Place:** Shanghai New International Exhibition Center (No. 2345 Longyang Rd., Pudong New District, Shanghai, P.R. China)
- **Booth No.:** N4-304
- **Information:** Access the following website of the organizer.
URL: <http://www.ccmtshow.com/>

The MMA will participate in the China CNC Machine Tool Fair (CCMT2014) held at the Shanghai New International Exhibition Center from February 24 (Mon) to 28 (Fri), 2014.

In the MMA booth this year, we will display the demonstration products of MMA member companies in China, such as MECHATROLINK compliant CNCs, servo drives, and spindle motor drivers, and demonstrate the increasing needs and effective performance control of MECHATROLINK in the machine tool market. At the same time, we will explain in detail the advantages of MECHATROLINK including its openness, high-reliability, high-performance, and low-cost.

We are looking forward to seeing everyone at the fair.



Tentative design of the MMA booth

aimex 2014

Event Information

- **Dates:** March 4 (Tues) to 7 (Fri), 2014
- **Place:** Hall A and B at COEX Exhibition Center, Seoul, South Korea
- **Booth No.:** D172
- **Information:** Access the following website of the organizer.
URL: <http://www.aimex.co.kr/>

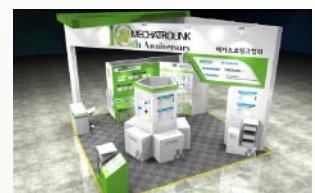
The MMA will be exhibiting at the aimex 2014 in Seoul, South Korea. We will display the popular panel that demonstrates the MECHATROLINK network system connected with MECHATROLINK compliant products at the MMA booth. MECHATROLINK compliant products of Korean manufacturers will also be on display to introduce the rich product lineup. We will also organize a seminar on MECHATROLINK during the exhibition. We are looking forward to seeing many of you at the exhibition.

MMA Participants:

- Beijing CTB Technology Co., Ltd.
- Chengdu Gunt Industrial Co., Ltd.
- Hangzhou HZK Co., Ltd.
- JIASING DEALOUR ELECTRIC TECHNOLOGY CO., LTD.
- Minjia CNC EQUIPMENT CO., LTD.
- Nanjing Washing CNC Technology Co., Ltd.
- Shenyang Golding NC TECH CO., LTD.
- SINO L. DIGITAL LTD.
- SYNTEC TECHNOLOGY CO., LTD.
- Taizhou Eastern CNC Technology Co., Ltd.
- THINKVO AUTOMATION CO., LTD.
- YASKAWA ELECTRIC (CHINA) CO., LTD.

MMA participants:

- AJINEXTEK CO., LTD
- COMIZOA
- DELTA TAU KOREA Inc.
- MG KOREA Co., LTD
- SAMWON ACT CO., LTD
- FASTECH



Tentative image of MMA booth

Invitation to the MECHATROLINK Seminar in Taiwan

Seminar Information

- **Date:** March 21 (Fri), 2014 from 13:00 to 17:00 local time
- **Place:** Windsor Hotel Taichung (78-3, Sec. 3, Taichung Port Road, Taiwan)
URL: <http://m.windsortaiwan.com/>
- **Information:** Contact the MMA Taiwan TEL: +886-2-8913-1778 e-mail: mma-tw@mechatrolink.org

Report of Exhibitions and Seminars

System Control Fair 2013

The MMA attended the System Control Fair 2013, a three-day exhibition at Tokyo Big Sight from November 6 (Wed) to 8 (Fri), 2013.

This year, we delivered a presentation entitled "The Beat of the Machine" to introduce MECHATROLINK's total solutions. Groups of visitors were attracted to the demonstration of the dynamic performance of the products manufactured by MMA corporate members that are controlled through the MECHATROLINK message communications function.

The MECHATROLINK compliant product exhibition corner had a great number of visitors including MECHATROLINK users, product developers, and visitors from overseas, who are all impressed with the rich product lineup.

More than 1400 people visited the MMA booth during the three-day exhibition and new members joined the MMA. As one of the major events this year during the MMA's 10th anniversary, we keenly felt the overwhelming response from visitors to our MECHATROLINK promotion activities during the exhibition.



MMA booth

MECHATROLINK Seminar 2013 in Shenzhen

The MMA organized the 3rd MECHATROLINK Seminar in Shenzhen, China on December 5 (Thurs), 2013.

The seminar started with an introduction of MECHATROLINK by the MMA-SH (MMA China Shanghai office). Five member companies, YOKOGAWA ELECTRIC CORPORATION, YASKAWA ELECTRIC CORPORATION, Googol Technology Limited, GSK CNC EQUIPMENT Co., Ltd., SHANGHAI Inrevium SOLUTIONS LIMITED, and M-System Co., Ltd., introduced their products.

In the seminar room, MECHATROLINK compliant products of MMA member companies were displayed. Many participants asked the manufacturers for detailed information on each product during break time.

There were about 80 participants at the seminar, including development engineers and end users of PLCs, controllers, servos, and drives, which was more than expected. Twelve new companies joined the MMA during the seminar. This successful result of seminar stimulated us into another forward step to promote the use of MECHATROLINK in China.



Seminar



Demonstration of products

IMTEX2014

The MMA, for the first time, participated in IMTEX2014, a six-day fair held at Bangalore International Exhibition Centre in India from January 23 (Thurs) to 28 (Tue), 2014.

MECHATROLINK-II and -III compliant products were displayed at the MMA booth. In addition to the product display, we used a video to introduce the MMA and MECHATROLINK.

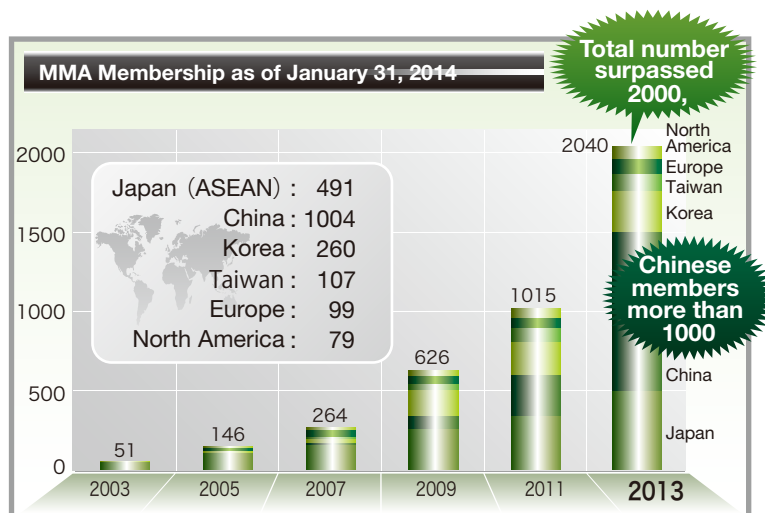
More than 700 people visited the MMA booth during the six-day fair, which showed the high level of interest in field networks. We will continue our promotion activities to expand the use of MECHATROLINK in the Indian market.



Display of products

MMA at over 2000 Members! Including More than 1000 Chinese Members!!

The MMA membership has topped 2000 as of January 2014. At the same time, the number of member companies located in China whose markets are rapidly growing surpassed 1000, which shows the overwhelming growth of the MMA in Asia. The 2000th member is FUJI MACHINERY CO., LTD, a packaging machine manufacturer, and the 1000th Chinese member is Guangdong China Southern Institute of Computing Technology. The MMA plans to make a visit to welcome our 2000th member and 1000th Chinese member.



New MECHATROLINK Products

KUNSHAN FUJIX ELECTRONIC CO., LTD.

“MECHATROLINK-III Communication Cable”

Features

- High-quality cable to assure high-speed communications for MECHATROLINK-III system
- Slim-type cable of AWG26 conductor size and 5.2 mm sheath outer diameter
- TIA/EIA 568 Cat 5e compliant
- UL20379 safety standard compliant
- Heat-resistant oil-proof PVS sheath
- RoHS compliant



Inquiries

KUNSHAN FUJIX ELECTRONIC CO., LTD.

77 Lisheng Road, Huaqiao Town, Kunshan, Jiangsu, 215332 China
e-mail: taneike@fuji-net.co.jp

Column

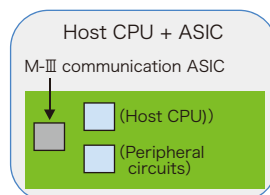
Methods to Install MECHATROLINK-III

The most common method to install MECHATROLINK-III bus stations has been to install application specific integrated circuits (ASIC) chips customized for MECHATROLINK-III communications. However, MECHATROLINK-III bus stations can now be installed in various forms.

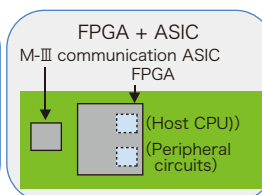
Recently, the number of products that uses FPGA (Field Programmable Gate Array) has been increasing. The MECHATROLINK-III IP core (M-III IP core) that adds MECHATROLINK-III communications functions to FPGA is available.

The use of the MECHATROLINK-III IP core facilitates implementation of the MECHATROLINK-III network system and allows you to incorporate FPGA features.

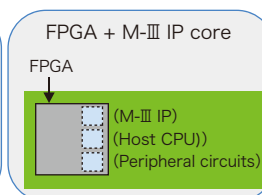
Selectable methods



- Hardware design is simple because the circuit can be designed on the base of an already proven standard circuit.



- The use of FPGA in the hardware for communications allows you to develop products that support different networks by only replacing the M-III IP core on the FPGA without changing the hardware.
- Inserting more than one IP core into an FPGA makes it possible to create two or three communications lines using a single FPGA.
- Integrating CPU functions and user circuits into an FPGA can integrate the required functions as one chip.



*: Contact your FPGA manufacturer for IP core type.

Editor's Comment

The fiscal year 2013 of the MMA has come to an end. It was a satisfying year filled with new experiences, including the creation of the MMA logo for the 10th anniversary and the organization's first time participating in some events. Being open to new experiences and challenging yourself in new fields brings new discoveries. New experiences serve as a stimulus. In the coming year, the MMA will move on to the next stage and expand our activities. Written by Hiranuma.

Inquiries

For questions about joining MECHATROLINK Members Association and other inquiries, please contact the MMA.

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Publishing Office: MECHATROLINK Members Association

480 Kamifujisawa, Iruma, Saitama, 358-8555 Japan

Tel: +81-4-2962-7920 Fax: +81-4-2962-5913

e-mail: mma@mechatrolink.org

URL: <http://www.mechatrolink.org/>