MECHATROLINK NEWS
MMA-FLASH
August. 2011 Vol.23

MECHATROLINK News MMA-FLASH brings the latest MECHATROLINK information.

**Feature Article** *An Interview with the General Secretary of the MMA*

# Expanding Our Network to Bring in over 1000 Registered Member Companies

We deliver the latest news and information to MMA member companies and MECHATROLINK users in our feature articles.
For this issue, we spoke with Takeshi Tanaka, General Secretary of the MECHATROLINK Members Association (MMA), to learn about the current status and prospects of the MMA.

**Q** Almost ten years have passed since the establishment of the MMA, and it appears that the MMA is well on target to become an association of over 1000 member companies. Could you tell us about the current status of the MMA and MECHATROLINK?

The MMA began promoting the use of MECHATROLINK as an open network in January, 2003. Time has passed so fast since then that only one and half years remain before we celebrate our tenth anniversary. As of July 2011, 850 companies have joined the MMA from all over the world. And MECHATROLINK has now evolved into its third generation using Ethernet technology.
In comparison with the 4-Mbps communication of the first generation, the third generation is capable of multi-node communications at higher speeds, with greater reliability at a lower cost.
Customer needs for networks and expectations for reduced wiring costs are increasing. In particular, the demand for an open network defined by open standards is increasing. To meet these demands, the MMA is taking various actions to make it possible to use MECHATROLINK technology in more open environments.

## Accelerated Development in Asia, and Other Approaches to Meeting User Needs

**Q** Could you tell us about the promotion strategies of the MMA for overseas markets, including emerging Asian markets?

For Asian countries including Japan, the MMA carries out its promotional activities mainly through MMA booths at various exhibitions, MMA seminars, magazines and our website.
This year, the MMA participated for the first time in SEMICON China, in Shanghai, and through this exhibition many customers from the semiconductor market in China became familiar with MECHATROLINK. During the 2011 Industrial Ethernet Technology Forum, which took

Takeshi Tanaka,
General Secretary
of the MMA

place in June in Shanghai, the MMA gave lectures to over 300 attendees.

I remember the Hannover Messe (Fair), the first international exhibition the MMA ever participated in. The MMA got together with Yaskawa Electric Corporation for the exhibition space, and the seminar only had 5 participants. When I think of that, I'm filled with emotion at finding the greatly increased numbers of participants at current MMA seminars.

**Q** What types of users have recently adopted MECHATROLINK?

MECHATROLINK has been adopted for various systems that require motion control. The range of these systems is expansive, and includes production systems with cutting-edge technologies, such as those for semiconductor, LCD, LED, and machine tools, sheet metal processing machines, winding machines, robots, and clean machines such as food production machinery, food packaging machines, and drug testing equipment.

Recently, the trend for machine control systems in China is to use an open network. As a result, MECHATROLINK is being increasingly adopted for various built-in controllers and PC based controllers.

## Consistent Steps to Make MECHATROLINK a Global Standard

**Q** Could you tell us about the current situation and the prospects for international standardization for MECHATROLINK?

The Japanese National Committee for IEC presented a proposal to approve MECHATROLINK specifications as an IEC standard to the International Liaison of the IEC head office. In February 2011, this NP (New Proposal) unanimously passed the vote of the international standardization community, represented by the committees of many nations, and advanced to the next stage. It can be approved and brought to the final publication stage in 2013.

Following IEC standardization, the MMA will be proactive in making MECHATROLINK a standard in numerous countries, including Japan.

In addition, the newly developed MECHATROLINK-Ⅲ Safety protocol has received TÜV certification. This is the result of the efforts of Safety Working Group. The Safety Working Group will continue to investigate how best to implement these MECHATROLINK safety protocols.

**Q** Could you tell us what activities the MMA has planned, and do you have a message for MMA members and MECHATROLINK users?

The MMA develops promotional activities for the use of MECHATROLINK based on three keywords: 1) Openness, 2) Reliability, and 3) Cost Reduction. For openness, the MMA will make MECHATROLINK an easy-to-use network by making its technology more open. For reliability, the MMA will improve connectivity between masters and slaves, and develop new functions such as Safety functions. For cost reduction, the MMA will carry out node and development cost reduction activities to improve the competitiveness of the products.

Recently, European and American technologies have spread rapidly into Japanese industries. Under these circumstances, we need to devote ourselves to developing Japanese technologies to a higher level than those European and American technologies. For this reason, the MMA believes we should draw the maximum performance from manufacturing machines not only in Japan, but all over the world, by connecting unique control devices of various companies to one another on the basis of the open source MECHATROLINK standard.

The MMA helps to connect member companies to one another, and is deeply committed to making device-to-device, company-to-company, and people-to-people connections.

By keeping in close touch with member companies, the MMA will consistently take steps forward toward making the MECHATROLINK field network a global standard.

MMA staff from the US, Germany, Korea, China, and Japan
At the 2011 MMA Global Meeting held in Korea on Jul. 26, 2011

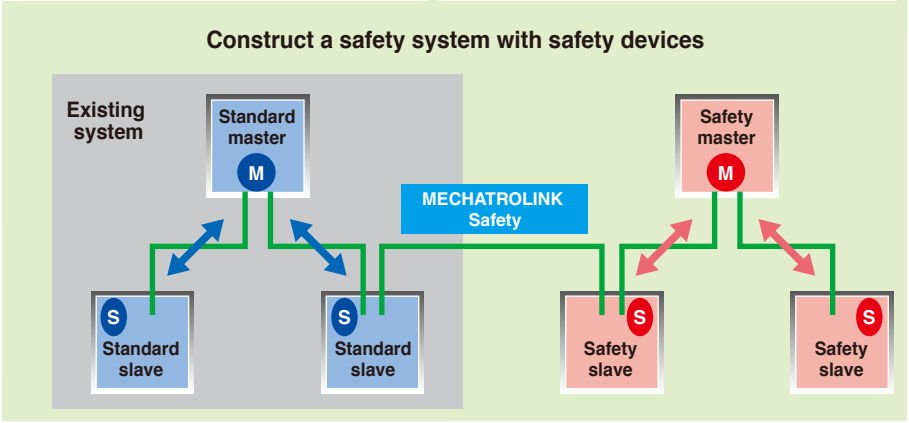
# News & Topics

## Certification of MECHATROLINK Safety Protocol!

The Safety Working Group authorized by the MECHATROLINK Members Association consists of 7 corporate members: Inter Factory Partners Co., Ltd.; Digital Electronics Corporation; Nikki Denso Co., Ltd.; HIMA JAPAN; Magnescale Co., Ltd.; YASKAWA ELECTRIC CORPORATION; and YOKOGAWA ELECTRIC CORPORATION. The Safety Working Group completed a list of specifications for the communications protocol of the MECHATROLINK field network that meets safety standards. Certification was received after an independent third party, TÜV Rheinland, confirmed that these specifications satisfied the requirements of IEC61508 safety integrity level SIL3.

The MMA's next step will be a study on the implementation of these MECHATROLINK Safety protocols for a safety master and safety slaves.

The MECHATROLINK Safety protocol and the MECHATROLINK standard protocol can co-exist on the same network. A safety system can be constructed by simply adding a safety master such as safety PLC and safety slaves such as safety I/O devices to the existing system. Also no special cable is required for connecting MECHATROLINK Safety compliant devices, but standard MECHATROLINK cables can be used. Up to 61 Safety slave devices can be connected.




## Membership Campaign to Celebrate the Revamped MMA Website

The MMA website has been totally revamped. To celebrate this, the MMA has launched a regular membership campaign.

Take this opportunity to join the MMA and enjoy the rights of regular member to develop your products.

**For new regular members who join during the campaign, the annual fee of 100,000 JPY will be waived for FY 2011 (Apr. 1, 2011 – Mar. 31, 2012).**

**Deadline: Oct. 31 (Mon), 2011**
**(Only completed applications received by this date will be accepted.)**

**Benefits: No annual fee needed for FY2011 (Apr. 1, 2011 – Mar. 31, 2012)**

**Terms and Conditions**

- The campaign period will end on Oct. 31, 2011.
- The campaign is limited to regular memberships only.
- The membership category will remain the same in succeeding years, unless the member sends a request for a change.
- An annual fee of 100,000 JPY will be charged starting in April 2012.
- If you are not satisfied with the services offered with a regular membership, you can change your membership category to registered membership (no annual fee).
- If you have any questions or need any assistance, please contact the MMA office.

Revamped MMA website

# Taipei International Industrial Automation Exhibition 2011

The MECHATROLINK Members Association (MMA) will participate in the Taipei International Industrial Automation Exhibition, August 31 (Wed.) – September 3 (Sat.), 2011 at the Taipei World Trade Center (TWTC) Nangang Exhibition Hall.

This is a comprehensive exhibition for manufacturing automation technologies, and many visitors and participants from all over the world are expected. The MMA will demonstrate MMA members' products that are connected to a MECHATROLINK network, and display MECHATROLINK-compliant products of MMA corporate members. On Sep. 2, the MMA will hold the MECHATROLINK general meeting.

We are looking forward to seeing many of you there.

MMA booth

**Event Information**

**Dates: August 31(Wed.) – September 3 (Sat.), 2011**
**Place: Taipei World Trade Center Nangang Exhibition Hall**
**Booth No.: J426 to J432**

For more information, visit the official website of the organizer:
**URL: http://www.chanchao.com.tw/show/automation/en/**

**MECHATROLINK General Meeting (Taiwan)**

**Date & Time: September 2 (Fri.), 14:00 - 17:00**
**Place: Conference Room No. 502,**
**Taipei World Trade Center Nangang Exhibition Hall**

### MMA Participants:

- ALGOSYSTEM CO., LTD.
- ANYWIRE CORPORATION
- Art Control System Inc.
- Digital Electronics Corporation
- LNC Technology Co., Ltd.
- Micronet Co.
- M-SYSTEM.CO., LTD.
- ORIENTAL MOTOR CO., LTD.
- Sankyo Seisakusho Co.
- TIETECH CO., LTD.
- YASKAWA ELECTRIC CORP.
- YOKOGAWA ELECTRIC CORP.

### Schedule of the Day's Events

| | |
|---|---|
| 13:30 to 14:00 | Registration |
| 14:00 to 14:10 | Welcome speech by General Secretary of the MMA |
| 14:10 to 14:45 | MMA report |
| 14:45 to 15:00 | Break |
| 15:00 to 15:30 | Introduction of New Products |
| 15:30 to 15:45 | Lecture by Taiwanese user |
| 15:45 to 16:00 | Lecture by Taiwanese manufacturer |
| 16:10 to 17:00 | Reception |

# Report of 2011 MECHATROLINK Members Association General Meeting

The MMA general meeting was held at Mita NN Hall in Tokyo, on Tuesday, June 21, 2011. Despite the heavy rain, the meeting was a success with 118 participants from 54 member companies.

The meeting kicked off with a welcome speech by Hiroshi Ogasawara, the president of the Executive Committee of the MMA. Takeshi Tanaka, the General Secretary of the MMA, then reported on the activities of FY2010 and plans for FY2011. This was followed by a FY2010 financial report delivered by the MMA Secretariat. Thereafter, the Marketing Group reported on MECHATROLINK Fairs, and announced an invitation to new members to join the MMA for FY2011 to realize success.

Two special lectures followed the general meeting. The first speaker, Keisuke Shinoda from AMADA Co., Ltd., gave a speech titled "The Latest Bending System." The second speaker, Yasuhiro Miyamoto from YASKAWA ELECTRIC CORPORATION, gave a speech titled "Wind Power Market Trends and Yaskawa's Approach." The theme was very timely, and the audience listened intently.

After the lectures, some new MECHATROLINK compatible products were introduced. Following the introduction of the new products, the newly organized Safety Working group reported on its activities and presented its safety policy. We believe that every participant now understands the safe network that MECHATROLINK aims to be.

Finally, the future plans for MECHATROLINK were presented, and that completed the general meeting.

Many participants attended the reception following the meeting, which offers a once-a-year opportunity for MMA members to exchange information in person. The meeting concluded on a high note.

Preparing occasions to exchange information with MMA member companies, the MMA will continue to promote worldwide activities in the pursuit of making MECHATROLINK a standard network.

*MECHATROLINK Members Association*
**2011 General Meeting**

# Report on 2011 Industrial Ethernet Technology Forum

The MMA Shanghai office (MMA-SH) participated for the first time in the 2011 Industrial Ethernet Technology Forum, which took place in Shanghai, China, on Wednesday, June 15, 2011.

Despite the typically overcast rainy season, the forum welcomed more than 300 people, and the MMA greatly promoted the use of MECHATROLINK during the forum.

During the forum, Takeshi Tanaka, the General Secretary of the MMA introduced the MMA, and then Q. M. Gao of the MMA-SH, presented the MECHATROLINK technology and reported on the future trends. An entire MECHATROLINK network system, with MECHATROLINK compliant products connected for demonstration, was displayed to allow visitors to experience the MECHATROLINK network firsthand. The MMA received positive reactions from many participants of the forum, which is accompanied by the successful spread of MECHATROLINK into Chinese markets. While organizing various events, the MMA will aggressively promote MECHATROLINK in Asian markets.

Presentation of MECHATROLINK technology by Q.M. Gao from MMA-SH

Visitors observing the MECHATROLINK network system

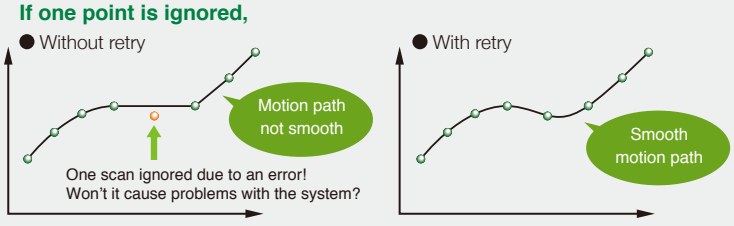
## Column The Importance of the MECHATROLINK Retry Function

The most important part of successful communications is to accurately transmit data without missing even a bit of it. In digital data transfer, if only one bit of data is missing or erroneous, the entire message can be corrupted or completely destroyed.

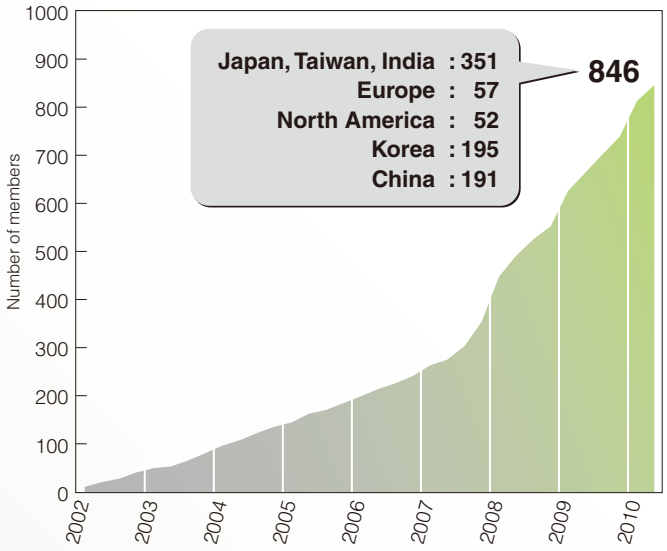
If the destroyed message contains the destination coordinates commanded from a controller to a motor, the motor will not reach the commanded destination.

In addition to standard noise interference prevention measures, MECHATROLINK is provided with a retry function that automatically detects an error if a command or response is not properly received, and resends the command or response. Moreover, the retry function is executed within the same transmission cycle so that synchronization is maintained.

**If one point is ignored,**




## MMA Membership as of July 31, 2011




**Editor's Comment**

MECHATROLINK News has gotten a makeover! It is now called "MMA-FLASH" because the MMA publishes it to deliver instant information in a flash to all members. Your constructive suggestions and advice are always welcome.

The MMA will continue to globally promote MECHATROLINK by participating in exhibitions and by organizing seminars.

**Inquiries**

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

Issued: August 11, 2011
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