

# How Robotics can Assist in Automation of Tasks .....and where TPM<sup>3</sup> fits in



Clyde Campbell, Managing Director – Machinery Automation & Robotics (MAR) recently presented at CTPM’s TPM<sup>3</sup> – Australasian Lean Forum 2007, Case Study & Networking Conference. MAR were the first

equipment supplier in Australia to be accredited by CTPM as supplying TPM<sup>3</sup> “friendly equipment”.



Clyde introduced MAR, a 20 year old Australian company that focuses on industrial automation. MAR works with many suppliers of industrial automation components and deliver turnkey solutions (products and services) based on customer needs. MAR partner with various technology experts and promote open integration, allowing for a best fit approach to customer requirements. MAR recognises the need for reliability, quality and innovation. Additionally, comprehensive “Factory Acceptance Testing” (FAT) is undertaken on all systems prior to installation at a customer.

In a similar way to the origins of TPM, MAR constantly asks themselves, *“How do we do lots of simple little things well, everyday, for our customers? From concept to, design, building, FAT, commission, train and document”*.

Clyde discussed the driving forces in today’s industrial environment, which include;

- Availability of labour (skills and competencies)
- Cost of manufacture (throughput)
- Improved quality (rework / yield)
- OH&S Risk management
- International Competitive Edge

Clyde commented that for MAR to be successful, each and every one of the above driving forces needs to be incorporated in a project. MAR bring “islands of excellence together” to provide automation solutions to clients who themselves are not experts in the area.

Clyde spoke of the importance of documentation, the necessity of labelling, numbering and the integration of the entire offering. A 3D image often aids in the understanding of the layout and installation but a simulation can also be performed, say, to check the cycle time specification before any physical work is undertaken. This may then lead to a revision of the project in recognition of needs identified (ie. accumulation requirements or the elimination thereof, say with a conveying and palletising system).

Clyde showed numerous examples of installations that MAR had completed. He spoke of considerations such as network architecture, touch screen installations (HMI’s) and PLCs that make up most projects. Consideration of future requirements and expansion options are often incorporated up front where it can be done most cost effectively rather than afterwards (rework). Maintenance, operation, the work environment, training, visual controls and diagnostic capabilities are all considered (a holistic approach) in a project.

CTPM thanked Clyde and MAR for a most fascinating and engaging presentation and for jointly sponsoring the lunch session at CTPM’s TPM<sup>3</sup> – Australasian Lean Forum 2007.



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