

To the Press

C&G SYSTEMS INC.

**Utilizing IoT, Promotes “Smartification”
on the Mold & Die Manufacturing Shop Floor**
~ Overall Renewed “AIQ”, a Process Control System ~

In July, our company (President: Seiichi Shiota) will release “V11.1”, the latest renewal version of AIQ, a process control system for molds & dies.

(1) Utilization of IT Under the Initiative of “Shop Floor Automation”

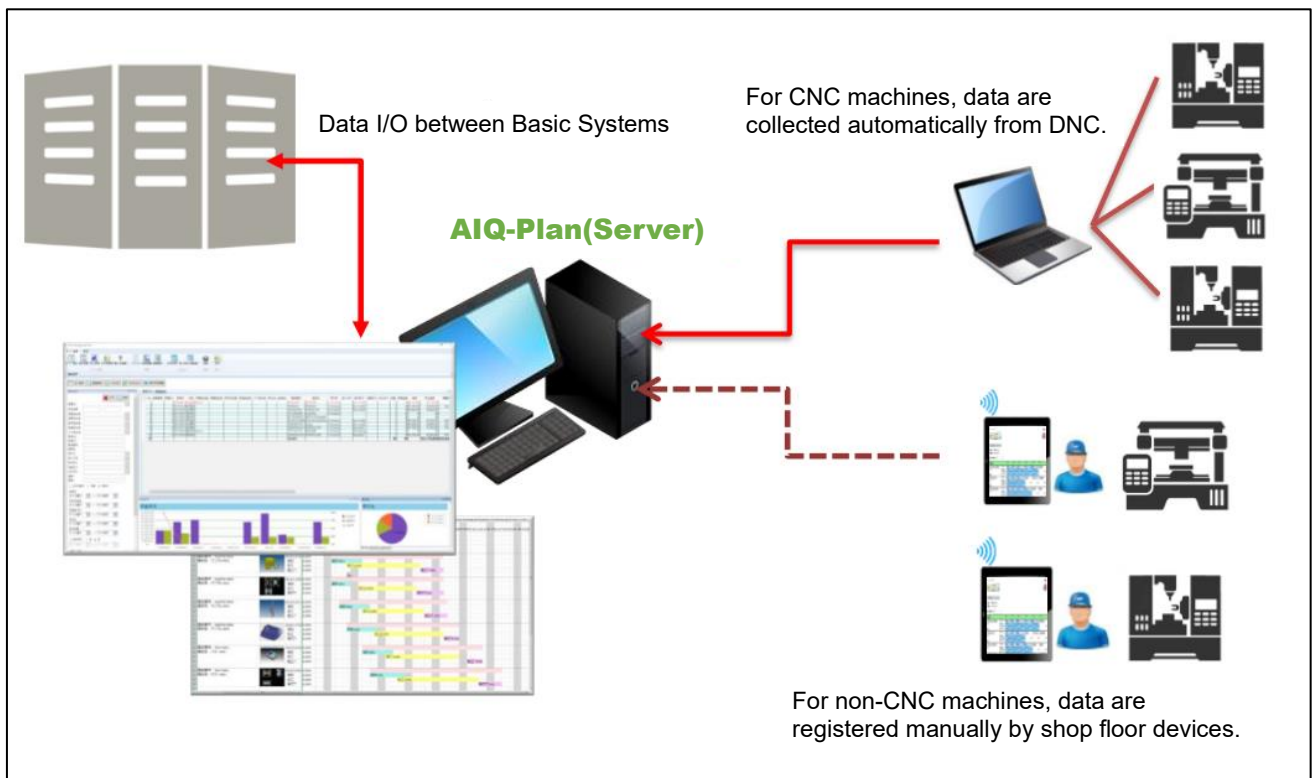
AIQ was first sold in 2004, as a process control system working with CAD/CAM system for molds & dies. Since then, we have been pursuing the resolutions using our software development technology, by sharing the problems that occur on shop floors on a daily basis and exchanging information with many mold & die companies including existing customers. Many mold & die shop floors, while busily dealing with special orders requiring expedited delivery and so on, are controlled by the experience and intuition of the workers utilizing whiteboards and Microsoft® EXCEL. We focused on solving those problems on shop floors and have completely reworked AIQ aiming for “IT Utilization on the Shop Floor”.

Most of the problems in utilizing IT on the shop floor are attributed to “Information Control Systems” within the company. AIQ categorizes those problems as management items of “Plan”, “Progress”, “Result” and “Evaluation”. AIQ provides a solution that realizes flexible system construction according to the priority levels of the problems the company wishes to solve or the requests for customization.



(2) Smartification by Utilizing IoT

IoT has become quite familiar in the manufacturing industry. However, the fact is that it hasn't bestowed enough benefits onto smaller manufacturers. IoT is like an infrastructure that connects things to the Internet and collects diverse data and by utilizing the data, improves business and quality. To utilize that infrastructure, it is important to construct a smarter shop floor by smoothing the information flow from the management to the shop floor, by first connecting the things (like machine tools, DNC devices and mobile terminals) and the information (like plant capacity and operational experience). AIQ becomes an IT tool that contributes to proper management and business judgement, promoting "KAIZEN" at the shop floor by "Visualizing" the accumulated data and the information becomes easier to analyze.

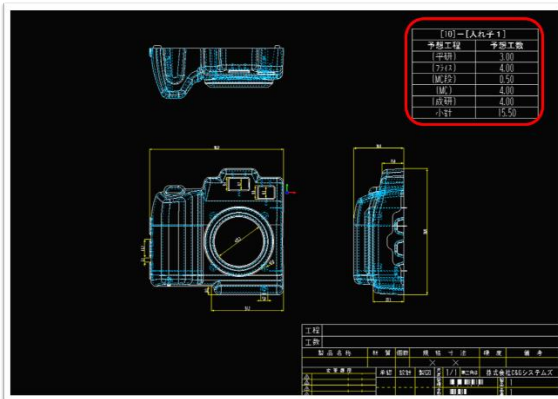


Example of In-house IoT Connection

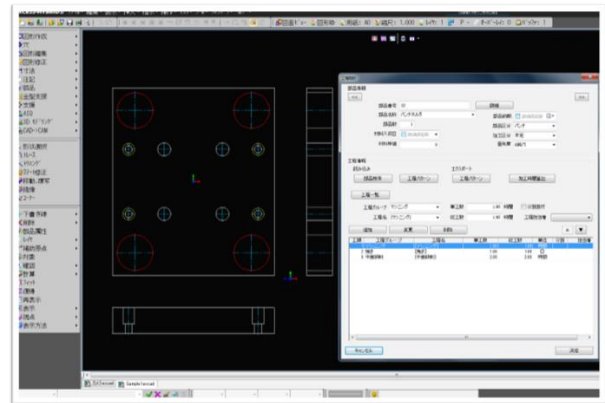
(3) Cooperation with CAD/CAM System

One of the special features of the process control system working with the CAD/CAM system, is the calculation of the estimated machining time from the drawing information. Unlike the traditional way of calculation relying on workers' experience and instinct, the calculation of high precision estimated time from drawings realizes more accurate workload estimates. Especially, the estimation of the machining time on machining centers or wire electric discharge machines, which is usually a bottleneck in the

manufacturing process. This is very effective in progress control and delivery planning. It is also possible to paste process specification and estimated time to component drawings which circulate through the shop floor along with materials and parts in progress, making the work flow on the shop floor smoother. Furthermore, setting estimated time as an objective target, induces the improvement of motivation on the shop floor; and after parts machining is completed, the unification of machining result with the drawing can be performed by pasting that actual result to the drawing.



Example of Result Feedback to Drawings



Calculation Image of Machining Time

(4) R&D of AI Technology

AI technology is improving every day, and we are promoting R&D setting the following which are expected to generate the merits of AI utilization for many mold & die manufacturing shop floors, as the present themes.

- Preservation-type AI (Prevention of Defective Products and Estimation of Machining Time of Maintenance Parts)
- Skill-type AI (Knowledge Management by Succession of Expertise)
- Proposal-type AI (Presentation of Sales Estimation and Priority Tasks)

Also, the effort to automate a part of routine work by utilizing RPA (Robotic Process Automation), which replaces simple and routine work done by men, is another usage.

Promoting the utilization of AI, RPA, and the like as future main themes, will further promote the improvement of the next generation of software that utilizes these advanced technologies. We will contribute to the improvement of productivity on the mold & die manufacturing shop floor by constructing the environment where workers can concentrate on “human work” that requires creativity and high communication skill.

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[Product Prices] (All prices below are in Japanese Yen.)

AIQ (Plan Control + Result Control)	: ¥ 3,800,000 -
AIQ (Plan Control only)	: ¥ 2,300,000 -
AIQ (Result Control only)	: ¥ 2,000,000 -

* Prices are subject to change depending on the server/client constructions.

Annual maintenance fees are not included.

[Company Information]

- Foundation : July 2, 2007 (*1)
- Capital : ¥500,000,000-
- Description of Business : Development/Sales/Support of CAD/CAM System for Mold & Die, and Production Management Systems

(*1) Our company is a CAD/CAM solution developer founded in 2010 as the result of a business integration and merger with Computer Engineering (founded in 1978) and Graphic Products (founded in 1981). Both of the 2 companies had more than a 30-year history, and we now have about 6,000 domestic customers and about 1,000 overseas customers.

Questions and Inquiries

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