



~ *Quality Management System at GMD* ~

An Inside Look at Fujitsu Microelectronics Quality Management System

Paul W. Gladieux

In 1998, GQM was engaged to assist Senior Management during their efforts to achieve ISO 9000 QMS re-certification at the Gresham Manufacturing Division (GMD) state-of-the-art semiconductor Fab facility in Gresham, Oregon. As a part of the effort, the following was prepared for the client's newsletter.

What is the Quality Management System?

The Quality Management System describes policies set by top management and includes procedures and instructions implemented by all departments for ensuring operational effectiveness.

There are a variety of methods used at the Gresham Manufacturing Division (GMD) for ensuring operational effectiveness that include, but are not limited to: vendor evaluations, training, vendor material sampling, GMD product inspection and testing, failure analysis, statistical process control, and quality auditing. Using these and other Quality Management Tools will help GMD achieve plant as well as FMI corporate quality goals.

Quality System Audits

The quality system audit, as a management tool for determining operational effectiveness, began in the '50s. The formal audit process was refined during the '60s and '70s across a number of business sectors.

The term audit has been known to cause various reactions from people since the fundamental idea behind the audit process is to determine how well something is performing (or meeting requirements). The spectrum of reactions range from fear to unconditional support.

In the financial sector, Certified Public Accountants (CPA's) perform audits to provide fiscal accountability and ensure appropriate funding for continuing operations. One of the audit procedures used to verify the results of the operations is to analyze operational costs vs. cost projections. Consequently, an audit will manifest resource needs for maintaining and improving performance.

Auditing management systems is typically mandatory in safety-related applications for ensuring public safety (e.g., hospital emergency rooms, air and rail transportation, building and bridge construction / maintenance, chemical and gas plant operations, ocean going vessels, space craft, and environmentally sensitive areas) – thank goodness for each and every one of us.

If people would take a moment and think in terms of running a company based on the number of requirements, the number could be staggering (perhaps millions of requirements). One question should be asked: "What does the company do to ensure that requirements are met or exceeded?" The quality system audit is more than a systematic process; it is a rare opportunity for determining how well requirements are being met and finding areas for improvement.

GMD Quality System Internal Audits

Since the initial audits, the process has been refined in a number of ways. GMD plans and schedules two team-based quality system audits every year. The Audit Plan and Master Schedule (approved by senior management) demonstrates their commitment and describes the departments and Quality System elements to be audited. To date, Teams have audited all GMD departments against a large number of

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requirements. The last Internal Quality System Audit was performed in February and resulted in some findings that will help improve our operations.

GMD Auditors and Audit Team Leaders

The “team approach” has proven to be quite successful. Using this approach requires teamwork, good communications, and expedient planning by each team and cross-functional involvement among all the teams. Additionally, proper and timely communications with audited departments is essential.

Auditors and audit team leaders each play a significant role in the audit process. Auditors must complete an eight-hour training course, which provides an overview of the audit process and details each person’s responsibilities during the audit.

What it takes to be a GMD Auditor?

As GMD continues to compete in the global market and make advances in manufacturing capabilities, the company will need to continually evaluate its operating requirements and improve its management system.

As a result, the company will need to continue to build a pool of qualified Auditors and Team Leaders to effectively perform system audits. Here are a few attributes of Auditors and Team Leaders, plus some benefits of audit participation.

Attributes

- **Curiosity** – A desire to see what is being done in other parts of the company.
- **Commitment** – A personal resolve to do things right and help the company improve its effectiveness.

- **Patience** – Detail oriented, with the willingness to painstakingly verify conformance to requirements and the desire to actively listen to persons in the audited departments.
- **Integrity** – A professional attitude at all times when participating in the audit process.

Benefits of Audit Participation

- **Basic Analytical Skills** – Even if you participate in just one audit, you will gain fundamental skills in evaluating management systems.
- **Knowledge** – You will most certainly increase your knowledge of company operations.
- **Understanding** – You will gain a clear understanding of what Auditors and Team Leaders are doing on behalf of the company.
- **Contacts** – You will invariably meet people in the company you have not met before, thus expanding communication with more members of the “Fujitsu family.”

About the author ~

Paul W. Gladieux is CEO & Founder of Global Quality Management Associates. GQM provides full-service quality management consulting and training to companies worldwide. He has over 30 years experience in the profession in a wide range of business sectors. Visit GQM’s Web site at www.GQMassociates.com.

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