

"Logic Filters" Focus Curriculum

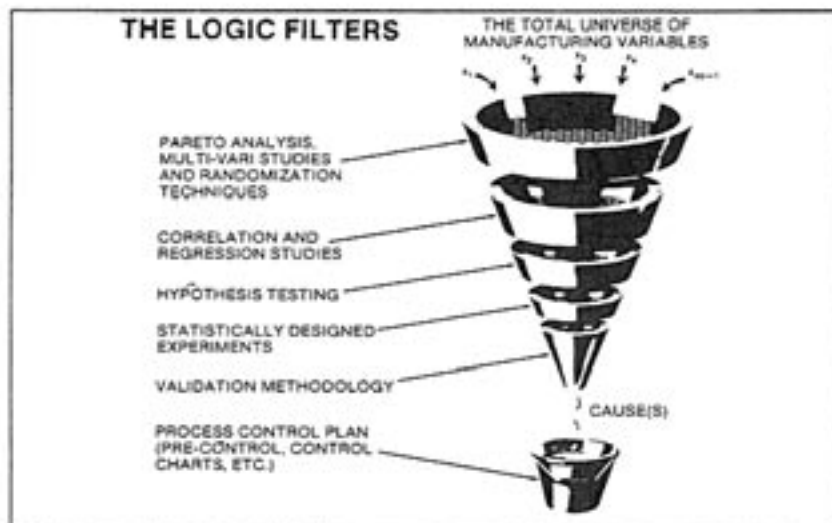
Translating statistical theory into everyday application for engineers at Arizona's Government Electronics Group (GEG) goes smoother with an idea termed "The Logic Filters."

The catchy concept weaves through all ten statistical training programs for technical people, managers and engineers. The programs are also enhanced by pertinent GEG examples and case studies. Both help create a common line of communication that ranges from simple awareness and understanding through literacy and a working knowledge of the statistical methods.

The result has been dramatic improvement in several GEG areas, including solving various critical problems within the divisions, according to Murry Allen, Administrator, Technical Training.

GEG's customizing of training was led by Dr. Mikel Harry, Senior Quantitative Analyst and Technical Instructor, who explained: "The programs are a unique combination of traditional and non-traditional parametric and non-parametric statistics. Our engineers are most comfortable with the system."

The Logic Filters' method takes all manufacturing variables, filters them first through Pareto analysis, multi-vari studies and randomization techniques. Next, theories and related variables are defined in rank order. Then, fractional factorial group screening methods are applied, followed by full factorial experiments to surface each major effect and interaction. The last steps involve yield optimization followed by the design and



implementation of statistical procedures to maintain the gained improvements.

One key program in the highly integrated series is "Diagnostic and Experimental Methods for Managers." It demonstrates the applicability of the statistical curriculum to the GEG environment. Managers have given it high scores: 80% rated it "very good to excellent," and 87% thought it met GEG's specific needs.

Along with the Logic Filters, Dr. Harry integrated other well-known training concepts and adapted them to GEG. These include Juran's philosophy on quality improvement; Shainin's techniques for product/process problems; proven traditional statistical methods; practical experiment designs; and computer intensive methods.

Aiming to train more than 400 engineers in 1985, Dr. Harry summed up: "Through the progressive application of these techniques and methods, we are able to scientifically isolate the vital few variables which exert undue influence in our operations. Then, we institute process control methods to keep the leverage variables under control across time."

Murry added: "This has given us a means to decrease the amount of time required to devise solutions to critical problems. Consequently, we are able to track down unwanted sources of product and process variability more quickly and accurately. As a result, our product yield and quality is greatly enhanced."

"In other words," said Dr. Harry, "the program helps people work smarter, not harder." *

Training Opportunities - August

Location	Program Title	Date
Government Electronics Group Scottsdale - Hayden Road Kathie Buffington Ditel: 225-3088	Conflict Management	August 8 — 7:45 a.m.-4:30 p.m. S120-B
	Financial Planning at GEG	August 15 — 8 a.m.-noon S120-B
	Influencing Groups through Effective Presentations	August 15 & 16 7:45 a.m.-4:30 p.m. S120-G
	Participative Delegation	August 19 — 12:30-5:00 p.m. S120-B
	Interpersonal Managing Skills	August 19 thru 23 8 a.m.-noon S120-G
	Influencing Groups through Effective Meetings	August 28 & 29 7:45 a.m.-4:30 p.m. S120-B