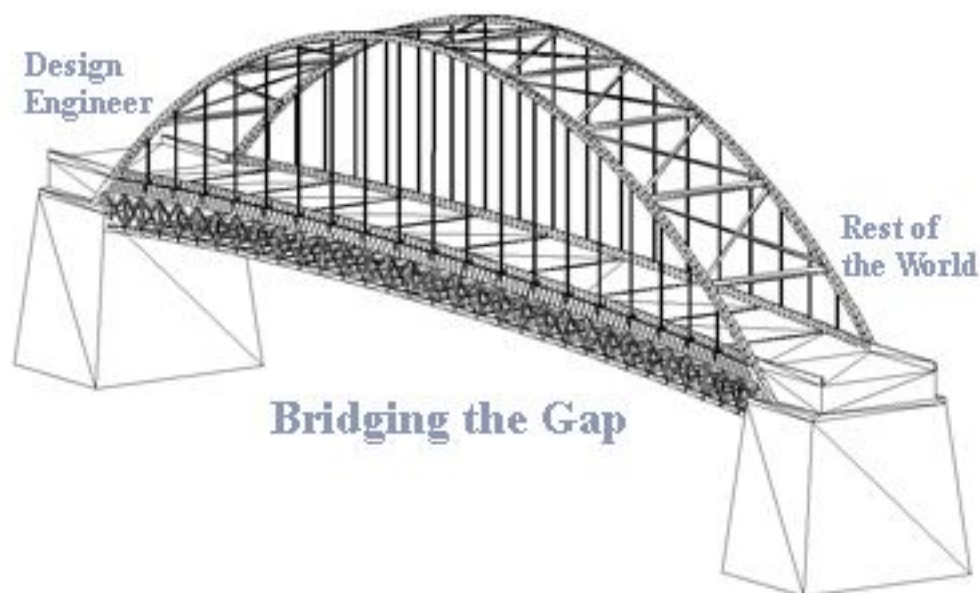


Third Annual - Two Day Seminar

Engineering Documentation Control

Configuration & Product Lifecycle Management

Bridging the Gap 3.1



Winter Park Colorado
Sept 15 – 16, 2011

An interactive seminar/workshop on the basics of EDC, CM , PLM and much more. Invaluable for commercial or military product manufacturing. Two hours from the Denver airport to the “Island in the Rockies” – at the height of the aspen color.

By Frank Watts, Author of the *EDC Handbook*, *CM Metrics* and consultant to over seventy manufacturing companies.

Engineering Documentation Control (Configuration and Product Data Management) “Bridging the Gap”

EDC/CM

There are only four “raw materials” needed for successful product manufacturing. They are **money** (seed and profits), **people** (and the processes they choose), **tools** (including software) and **design documents**. Engineering Documentation Control (CM/PLM) is thus a **strategic company discipline** because it deals with design documents and the processes people choose to surround them. It is **the bridge** between Engineering and the rest of the company. Well done, EDC/CM **sets the stage for innovation** in Engineering and Manufacturing.

Course Focus/Objectives

- Acquire the basics of technical documentation control and configuration management for commercial or military product manufacturing.
- Set the stage for innovation in Engineering and Manufacturing.
- Provide numerous ideas for real process cost reductions, thru-put time reduction and real reduction in operating costs.
- Understand what Configuration & Product Lifecycle Management mean in relation to product documentation control.
- Appreciate the potential reduction of product release time to capture more of the market sooner while minimizing risk.
- Minimize the time consuming debates over interchangeability and part number changing.
- Reduce the release, change, bill of material and documentation process costs.
- Balance the costly chaos of under-control against stifling the engineer’s creativity by over control.
- Streamline the CM processes before spending tons of money on new software to get bad processes executed faster.
- Find out how to avoid having a quarter million dollars of bad parts show up on the dock.
- Learn why ISO certification is only the first step out of chaos.
- Discover effective ways of reducing the number of changes and the real cost of changes.
- Minimize change process time to mitigate safety and liability exposure while improving the quality of your changes.
- Eliminate multiplicity – multiple BOM databases/inputs, multiple BOM levels, multiple BOMs for similar products, multiple change methods and multiple cross-references.
- Learn how to establish key meaningful metrics on the CM processes for volume, time and process quality - reporting which, in and of itself, will improve performance.
- Learn from others attending the seminar.

Who Attends?

- Those interested in operating/improving the Document Control/CM /PLM processes.
- Engineering Services/Doc Control managers and technicians.
- Engineers and Technicians from any company engineering function.
- Supply Chain practitioners - Master Schedulers, Planners, Buyers, etc.
- Team members involved in the Release, BOM or Change Processes.
- Team members involved in ERP or PLM implementations.
- Managers, Project Leaders & Designers responsible for technical docs.
- Anyone involved in product change management.
- Chief Engineers and Managers of the above professionals.

Outline: (ample time for discussion and short exercises included)

- 1 General**
 - Introduction**
 - Setting the Stage**
- 2 Managing Documents**
 - Document Types**
 - Design Document Formats and Signatures**
 - Document & File Control**
- 3 Identification**
 - Configuration Identification & Part Numbers**
 - Marking Product and Parts**
 - Approved Manufacturers and Sources**
 - Interchangeability and Spares**
- 4 Bills of Material**
 - BOM and Parts Lists**
 - Modular BOM**
 - Product Structuring**
- 5 Release/Product Lifecycle Management**
 - Release of a Product / Document / Part**
 - Stages of Release**
 - Non-Conforming Material / Deviations / Waivers**
- 6 Change Request and Control**
 - Change Requests**
 - Change Control**
 - Change Forms**
 - Effectivity**
 - Implement and Trace the Change**
 - Fast Change**
 - Change Cost**
- 7 Potpourri**
 - Writing Standards & Flow Diagramming**
 - Mfg Fabrication and Assembly Instructions**
 - CM as Quality Assurance for Engineering**
 - Process Improvements**

Course History & Notes

This course has been evolving since 1989. Pressure on manufacturing concerns to accelerate product development, reduce costs, clarify and streamline change control, simplify bills of material and integrate software systems with manual processes has made this course very popular.

The discipline, done well, sets the stage for innovation in both Engineering and Operations and will serve your needs for managing technical documentation in your demanding environment.

Each participant will receive a free copy of Frank Watts' book – *CM Metrics*, first edition. The seminar and the course notebook will be a valuable reference for your continuous improvement of your CM processes.

Course Schedule

Day 1	7:30 am	Registration, drinks, snacks get acquainted (See motel lobby for seminar room location)
	8:00 am	Presentation and Discussion
	11:30 am	Subway lunch brought in
	5:00 pm	Adjourn (optional open forum)
Day 2	8:00 am	Presentation and Discussion (drinks and snacks)
	11:30 am	Lunch (on your own - several fine near-by restaurants)
	12:30 pm	Course continues
	4:00 pm	Adjourn

Certificate:

EC3 Corp certificate which certifies the course to be equivalent to university courses for which participants receive 1.6 CEUs.

Seminar Site

Best Western Alpenglo Lodge and Conference Center. Winter Park CO 80482, 970-726-8088. **Continental breakfast served.** Stay there, at other motels within walking distance or search for fine resort accommodations in easy driving distance.

About the Instructor

Frank Watts BSME, CCDM

Frank received a University of Illinois engineering education and has more than 49 years of industrial and consultation experience. He founded his own company to specialize in configuration management, with specific expertise in product release/lifecycle management, change control, bills of material, and other EDC/CM issues.

Formally a Director of Engineering Services, Director of Operations and a Director of Manufacturing Engineering, Frank has also managed Configuration Management, Cost Estimating, Industrial Engineering, Test Engineering, Pilot Production and Repair Operations. He has contributed as a design engineer, industrial engineer, manufacturing engineer, systems analyst and project manager.

Frank has consulted for more than 70 manufacturing companies. He has guided the development of the engineering change control process, made significant contributions toward improving the new product release process, installed MRP/ERP systems and new numbering systems, helped companies attain a single BOM database, and guided reengineering of the CM /PLM processes. His industrial experience has been with Caterpillar, Collins Radio, Control Data, Storage Technology, UFE and Archive. He is an NDIA Certified Configuration and Data Manager, and author of *Engineering Documentation Control Handbook* (over 11,000 EDC Handbooks sold - now in the fourth edition) and author of *CM Metrics*, released in 2009.

Fees / Payment / Cancellation

Registration fee for the course is **\$925 per person**. Payment of the full registration fee must be received by **Aug 10, 2011**. **Registrations after Aug 10 will be accepted but the fee will be \$1025**. Fee includes cost of the course notebook and F. Watts’ book. See Schedule for food included/not included - individual participants are responsible for other meals, travel and lodging expenses. Reduced fee for two or more registrations; \$725 per person or \$825 after Aug 10. An income tax credit may be allowed for education expenses undertaken to maintain or improve professional skills – see your tax professional.

Payment by check only please - to EC3 Corp.

Send to EC3 Corp, P O Box 205, Winter Park CO 80482.

If you register and cannot attend, telephone Frank at 970-887-9460. The course may be cancelled by EC3 Corp at anytime with full refund to all paid participants. Individuals may cancel at any time with a full refund given prior to Aug 16. After that date \$100 will be withheld for expenses incurred. A substitute may be sent in your place.

Suggested Attire

Mountain-casual at seminar and anywhere in the valley. Please be prepared for moderate temperature variation in the seminar room and significant temperature variations in the mountains.

Registration Form (Check Only Please. Make check out to EC3 Corp.)

First Name _____ **Initial** _____ **Last Name** _____

Company/Organization _____

Job Title _____ **Telephone** _____

Street / PO Box Address _____

City _____ **State** _____ **ZIP** _____

e-mail address _____

Contact Person if different than above _____