



CM Trends

News and Perspectives for CM Professionals

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May 2011
ISSUE 06

Configuration Management & the \$600 Toilet Seat

by Jeff Windham

In the early 1980's, a congressional staffer was reviewing procurement information from the Department of the Navy when he came across a curious line item:

Toilet Seat - \$640 ea.

The staffer thought this an unusually high price to pay for a toilet seat and released the story to the national press as an example of waste, fraud and abuse in the Department of Defense. The issue became a national news story for several weeks to the point that President Ronald Reagan held a press conference holding one of the seats and discussed it.



Because of this issue and a number of others in the 1980's, competition in contracting became the big buzzword in DOD. One method of ensuring competition in contracting is to have a fully defined

Technical Data Package (Level III TDP) in which to compete the item. "If we have competition in contracting via build to print TDPs, then there will be no more \$600 toilet seats" was the thought process. I was working for the Army Aviation command at the time, and it got to the point that if we purchased a broom to sweep the hanger where we kept the aircraft we had to have a Level III TDP for the broom. The mantra of the time, and repeat this after me, "TDPs good".

A few years later, a new regime came into office. It surveyed the status of acquisition policy in DOD and asked the question: why are we buying all these TDPs? They are expensive to procure and maintain and they limit creativity from our contractors. We should be buying everything to performance requirements and stop with all these TDPs. This will allow the contractors to change with technology and give us the best equipment at the lowest price. Everyone repeat after me, "TDPs bad".

How does this relate to CM?

It is my belief that Configuration Management's core purpose is to document the design of items and control changes to those documents.

CM's Core Purpose: Document the Design, Control the Documents

Pick any aspect of CM: identification, change control, status accounting, verification, interface management, vendor control, etc., and I contend it relates to accomplishing this core purpose. Therefore, how we document the design is a critical part of configuration management. There are three basic means or formats of documenting a design:

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1. **Fully defined, build to print TDP-** defines the detailed configuration down to materials, dimensions, tolerances, surface finishes, etc. (This format implies full configuration control by the customer/owner of the TDP).

2. **Performance specification-** defines the required performance requirements without detailed design information. (This format implies no detailed configuration control by the customer, but only control of the performance aspects of the item).

3. **Commercial item-** defines the item by vendor name and part number only. (This format implies no configuration control of the item by the customer whatsoever).

For example, if the US Army wanted to procure commercial type GPS devices (e.g. Garmin or Tom-Tom) for all trucks in the army, procuring these thru a government owned and controlled TDP would be nonsense. This would be a case where commercial item description would be the most logical definition format.

On the other hand, buying 155mm artillery ammunition from multiple sources as a commercial item would also be nonsense. This type item has no commercial equivalent and must be tightly configuration controlled for a variety of reasons, not the least of which is safety. Definition as a fully defined TDP would be the best format in this case.

Each of these three methods of documenting the design has advantages and disadvantages. The format chosen will impact procurement philosophy, logistics supportability, engineering, quality, and a host of other functional areas. It is critical that configuration management professionals understand each of these design documentation formats, the advantages and disadvantages of each, and be able to articulate this information to our program management such that the best format for any given situation be chosen.



PS: The toilet seat situation above was for the P-3C Orion antisubmarine aircraft. It turns out the toilet seat was actually the toilet shroud, the cover that fits over the toilet. These on-board toilets required a uniquely shaped, molded fiberglass shroud that had to satisfy specifications for the vibration resistance, weight, and durability. The molds had to be specially made with new tooling as it had been decades since their original production. The price reflected the design work and the cost of the equipment to manufacture them. [The contractor] charged \$34,560 for 54 toilet covers or \$640 each, which was determined by the Dept. of Defense to be a fair and reasonable price for the work involved. None of this information dissuaded the national press from their story of waste, fraud and abuse, however.

Jeff Windham has over 20 years experience as a systems engineer and configuration manager for the US Army, Armament Research Development and Engineering Center (ARDEC) at Rock Island Arsenal, Illinois. He is currently the chief of the Small Caliber Systems Configuration Management Branch. He is NDIA certified in Configuration and Data Management and teaches configuration management throughout the Army. He holds a BS in Aerospace Engineering from Mississippi State University and an MS in Business Administration from East Texas State University.

Signatures

by Steven Easterbrook

I'm often dumbfounded when I look at engineering drawings in many organizations and find they have to be signed off by a multitude of managers and others before they can be released. And in some instances those documents are later found to be wrong.

It is also bizarre to find that in these same organizations top level engineering specifications only have one or two signatures or the signatures don't even exist.

Why would a top level specification that drives a program have only one or two signatures when an engineering drawing created to achieve a specific requirement of that specification have many signatures?

This is backwards!

What is Supposed to Happen

The cross-functional team who developed the top-level specification should validate and sign off on the top-level specification. Those engineering drawings that are created to meet the requirements of the specification should be validated and signed by:

- The one (or the few) who best understands the requirement (i.e. design engineer) and who subsequently translated it into an engineering design drawing and
- The one (or the few) that must apply that drawing (i.e. manufacturing).

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A signature is supposed to mean that the drawing created meets its higher level requirements, as defined in the top-level specification, and that the drawing is clear, concise, and valid! Those individuals who best understand the flow-down of the requirements, and the use of the derived document, should be the people who should perform the validation and do the signing.

So Why is Everyone Signing?

Sometimes it's just tradition, no one has ever questioned the current process. I'm sure there are people where you work wondering why they are signing certain documents.

In other cases, people just want to sign things as a way of knowing what is going on. They have no real value-added input but often feel that they will be left in the dark if they don't sign.

There may also be a group protection thing going on. If there are a lot of signatures and an error is made the blame falls on the company not on specific individuals (accountability is compromised).

Of course, there are those few that have value-added input in the validation process and they should sign.

Note: I am using engineering drawings as an example, but the intent of this article applies to all documentation required to achieve consistent conformance.*

Need Some Ammunition to Change the Current Signature Process?

Calculate the length of time and cost it takes to go through the current process, and calculate savings if the process was streamlined.

Pull a random sample of 30 engineering drawings and take a look at all the changes that occurred after they were "validated" under the current process. You will find a high percentage had errors after validation and release.

Calculate the costs of fixing those documents. Determine the savings if the right people had caught mistakes during the initial validation process.

Point out that many of the documents individuals are signing are wrong and ask them if they would like to be on distribution instead of disposition.

The Bottom Line

The current signature process that exists in many organizations is not value-added. It adds unnecessary time to the validation and release process. It is costly and does not assure the integrity of the information released and it compromises accountability.

Get the right signatures!

Steve is President of the Configuration Management Process Improvement Center (CMPIC). Steve is also a former President of the Association of Configuration and Data Management (ACDM) and is currently on ACDM's Board of Governors. Steve has been working in configuration management for over 28 years. He has 12 years of experience as a Configuration Management manager in government and commercial organizations and another 16 years as a CM educator, lead assessor, and consultant. Steve has taught, lectured to, and/or consulted with thousands of individuals from hundreds of commercial and government organizations on the subject of CM process improvement.

What Does the Board Look Like?

By A. Larry Gurule

Imagine that you and I are playing a game of chess and the stakes we are playing for are extremely high. After hours of grueling competition we decide to take a break. While walking to clear my mind, I see a person coming toward me. How incredible is this, I've run into Bobby Fischer, unarguably one of the most skilled chess player's ever, back from the dead. Even more shocking, he stops to talk to me.

After I recovered, we exchange niceties and I seize my opportunity. I explained to Mr. Fischer what was happening between you and me, when amazingly he offers to help me with my game. What an opportunity, to get the upper hand by letting the one of the greatest chess players ever tell me what my next move should be.

So, with that offer I asked, "Mr. Fischer, what should my next move be?"

Typically, the question I ask next (to whoever happens to be listening to this story) is, "Tell me, what do you think his response would be? What would Bobby Fischer say?"

Most people I ask have a hard time answering this question. Some think it's a trick question, others think that it's too obvious.

My best guess as to what Bobby Fischer would say is, "What does the board look like?"

The reason I have confidence in my answer is that I know that Mr. Fischer knew, like every skilled player, you have to understand what the chessboard looks like before you can make the right move. By knowing precisely what the board looks like you can more accurately assess, map, strategize, plan, execute and improve on the elements needed to achieve your goals. Even though he's Bobby Fischer, without knowing where all the pieces are on the board, all he could offer me is a guess. Now remember this is a Bobby Fischer (one of the most skilled chess player's ever) guess, but still none the less a guess.



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It may or may not be valuable to me. But I also don't want to waste this opportunity because it is highly unlikely that it will ever happen again.

Every day companies, and the government that we pay for, move pieces around their own chess boards and do it without knowing precisely what these boards look like. Company executives and government leaders are continually making decisions based on half truths, supposition and innuendo. Surprisingly, they then wonder why their cash flow is suffering, why their margins are shrinking and why they can't make things faster, better and cheaper. And/Or they wonder what did we really spend our money on?

Despite their best intentions, private and government leadership are still struggling to achieve their goal of delivering effective, efficient, and responsible profitability. When they go to execute what they had promised and planned to deliver, they find that the information they used to make their decisions lacks the level of integrity they had been promised and were assured of.

Despite supporting efficiency and profit increasing initiatives such as project management, Lean, Six Sigma, CMMI, ISO, and others, their problems still exist and are more costly than ever.

Attempts by leadership at buying "solutions to their problems" from vendors and integrators has had limited success but are, many more times than not, more costly than predicted and do not hit the mark at initial introduction.

Companies and the government we support need to take the time to understand how they truly operate before they attempt to change or transform themselves. Like the previously described chess game, if we have incontrovertible facts at our disposal (we know what the board looks like), as well as the knowledge and capability to take advantage (the Bobby Fischer factor), we can plan, execute and manage the paths to success. Without it we are taking a risk and all we have to do is look around to know where that has gotten us.

A. Larry Gurule is a Principal with Computer Sciences Corporation's Federal Consulting Practice, as well as a CMPIC Associate. Mr. Gurule has over 25 years of hands on and leadership experience for a successful list of clients he has helped become more operational efficient and effective. Larry has also owned and/or held senior level positions in manufacturing, software and consulting based businesses, as well as lectured to and/or consulted with hundreds of individuals from Fortune 500 companies on process improvement and enterprise IT implementation initiatives. Larry holds a Mechanical Engineering degree from the University of Colorado and is a CMPIC and CMII Certified Professional.



NEW: CMPIC Course 8

Software Configuration Management: Strategies, Techniques and Tools

CMPIC is pleased to announce the release of their latest certification course, Course 8, *Software Configuration Management: Strategies, Techniques and Tools*.

CMPIC has taught this course once and already received great reviews from every student in the class! One student wrote in their evaluation that the course was “very comprehensive” and the instructor was “excellent” and “very knowledgeable” (March, 2011).

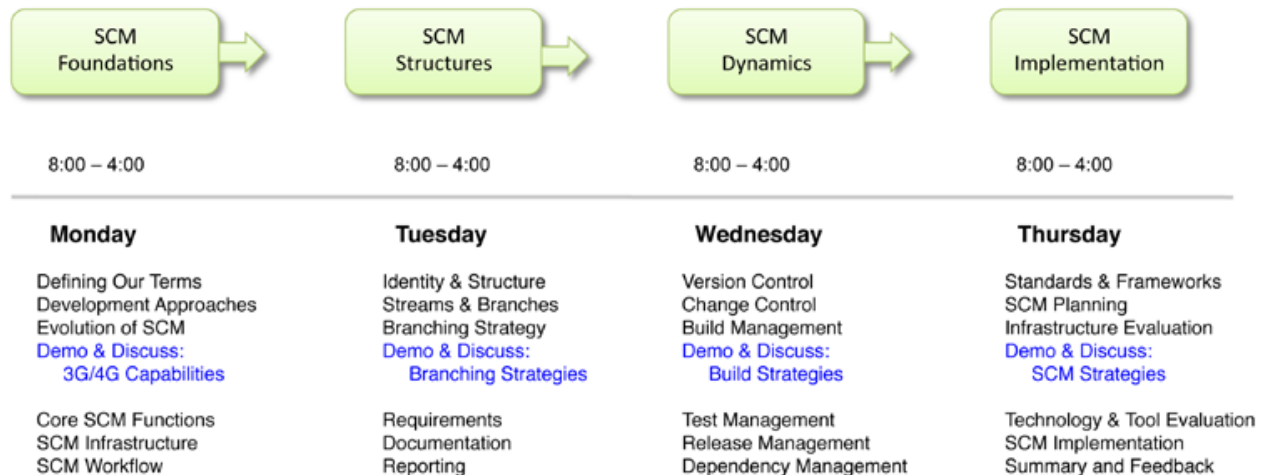
This four-day course provides a solid grounding in the principles and techniques of configuration management for a wide variety of approaches to software development and maintenance, from traditional

to agile. The course illustrates the SCM strategies, techniques, and required tool capabilities that support each of the activities in the software development life cycle. The student will gain a value-based understanding of which SCM techniques are most useful for the development approach and tool capabilities that currently exist in their company. The course concludes by providing an SCM implementation framework for planning and selecting the optimal SCM strategy and tool capabilities for both the project and organizational levels.

All students who successfully complete this course will be awarded with the SCM Certification and 3.0 Continuing Education Units (CEUs) from the accredited University of Houston.

This course is designed for SCM practitioners looking to broaden their SCM knowledge and for those directly involved in software development who are looking to realize the benefits of SCM in their projects. Organizational and project managers involved in SCM and process improvement initiatives will also benefit from the insights into SCM strategy and planning. Students will have the opportunity to discuss issues of common interest with an experienced practitioner and their peers in the class.

Prerequisites include the successful completion of CMPIC Courses 1 - 4 or SCM job experience prior to attending this class. Students should also be familiar with common SCM terms and software development practices prior to taking this course.



Visit www.cmpic.com to learn more about Course 8 and view the course schedule.

CM Trends 2011

Relevant

Informative

Learn More

Comprehensive

Entertaining

Educational

Up-to-Date



A Conference for CM Professionals
September 19 - 21
Orlando, FL





Overview

CMPIC's annual conference, "CM Trends", is a conference where CM Professionals from all over the world come together to discuss CM Standards, CM Processes, CM Tools, CM Best Practices, and more. This conference does not restrict itself to lecturing about one methodology, but instead focuses on applicable topics to facilitate continuous learning for all.

CM Trends 2011 will give attendees the opportunity to listen to CM experts discuss topics relevant in today's workplace. During the event, attendees will be given the opportunity to ask speakers questions and be provided with detailed, thought-provoking answers.

CMPIC Preferred Tool Vendors and other CM-related exhibitors will be present throughout this conference. Attendees will be provided with ample time every day to view demonstrations and talk with the vendors.

CMPIC instructors and personnel will also be present throughout this conference and able to answer any questions you may have. We look forward to meeting you this September in beautiful Orlando, FL.

Learn more at:

www.cmpic.com/CMPIC-2011-Conference-Overview.htm





Location

The Rosen Plaza Hotel

9700 International Drive
Orlando, FL 32819

The CM Trends 2011 Conference will be held in The Rosen Plaza Hotel, a luxurious, award-winning hotel located across the street from Pointe Orlando, an open-air shopping, dining and entertainment complex.

This hotel offers shuttles to and from Universal Orlando properties, Shingle Creek Golf Course, and the Orlando International Airport. It also includes 4 in-house restaurants.

RESERVATIONS

sleeping rooms: \$105 per night single/double. No resort fees! Government per diem rate: \$90 per night, credentials required at check-in. Taxes apply.

group rate available: September 18 - 23, 2011.

reservations: To receive the group rate, call 1 (800) 627-8258 with the code "Configuration Management Process Improvement Center". The CUT-OFF DATE for the Group Rate is 5:00 PM EST on Friday, **August 19, 2011**. Reservations after cut-off date will be accepted based on availability.

Learn more at: www.rosenplaza.com

Agenda

MONDAY SEPT. 19, 2011

7:30 - 8:30	Registration & Continental Breakfast
8:30 - 11:45	Presentations & Q&A with the Experts
11:45 - 1:00	Lunch Break (on own)
1:00 - 4:00	Presentations & Q&A with the Experts
4:00 - 5:00	Exhibitor Showcase

TUESDAY SEPT. 20, 2011

7:30 - 8:30	Continental Breakfast
8:30 - 11:45	Presentations & Q&A with the Experts
11:45 - 1:00	Lunch Break (on own)
1:00 - 4:00	Presentations & Q&A with the Experts
4:00 - 5:00	Exhibitor Showcase

WEDNESDAY SEPT. 21, 2011

7:30 - 8:30	Continental Breakfast
8:30 - 11:45	Presentations & Q&A with the Experts
11:45 - 1:00	End Conference / Lunch Break (on own)
1:00 - 5:00*	ANSI/EIA-649B CERTIFICATION COURSE or CM ASSESSOR CERTIFICATION COURSE

THURSDAY SEPT. 22, 2011

8:00 - 5:00*	ANSI/EIA-649B CERTIFICATION COURSE or CM ASSESSOR CERTIFICATION COURSE
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FRIDAY SEPT. 23, 2011

8:00 - 5:00*	ANSI/EIA-649B CERTIFICATION COURSE or CM ASSESSOR CERTIFICATION COURSE
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Register now at:

www.cmpic.com/CMPIC-2011-Conference-Overview.htm

* Optional: These courses offered in conjunction with the CM Trends 2011 Conference at a special discounted rate. See www.cmpic.com for more details.



Speakers

Larry Gurule, CSC "Introduction to CM Process Mapping"

Jeff Windham, US Army "Mil-Std 973 Update & Reinstatement"

Steve Easterbrook, CMPIC "Configuration Management: Preventing Process Meltdown"

Rob Stone, PSA "Growing and Tending Process Tress: Experiences & Insights
Implementing Processes in a CM/PLM Tool"

Ken Wallace, DRS-C3A "Closing the Loop"

Callum Kidd, University of Manchester "From Map Reader to Map Maker: Putting
Knowledge into Practice"

Lisa Fenwick, CMStat "How to Botch Up a Perfectly Good PLM Solution"

Marc Lind, ARAS "Enterprise Configuration & Change Management: New Complexities,
New Advancements"

Rebecca Rettig, Medtronic "What Drives CM in the Medical Device Industry"

Bob Aiello, CM CrossRoads "Emerging Trends in Software CM"

Leo Clark, CMPIC "Pros and Cons of Software Identification Techniques"

Wendy Norris, BAE Systems "How to Prepare for a Successful Career in CM"

More being announced every day!

Exhibitors



Registration



	Per Person Fee (USD)
Option 1: Conference Package CM Trends Conference, 2.5 days, Monday - Wednesday	\$895
Option 2: Conference & Course 6 or 7 Package CM Trends Conference, 2.5 days, Monday - Wednesday & Course 6 or Course 7, 2.5 days, Wednesday - Friday	\$1,595
Option 3: Course 6 or 7 Only Course 6 or Course 7, 2.5 days, Wednesday - Friday	\$995
*Note: Exhibitor fees are the same as above	

Use this unique opportunity to attend a comprehensive CM conference, be trained in an advanced CM Certification Course, and walk away with a reputable CM Certification in just one week.

Both Course 6 (*ANSI/EIA-649B Principles & Applications*) and Course 7 (*CM Assessor*) are CMPIC Certification Courses. Ordinarily, these courses are \$1,275 each and last 3 full days. To celebrate our third annual conference, these courses are being offered at a special discounted rate and last only 2.5 days.

Registering for Option 2: Conference + Course 6 or 7 package, could save you over \$500! Registering for Option 3: a post-conference course (course 6 or 7), will save you \$280 off the original price.

HOW TO REGISTER

Visit <http://cmpic.com/registration.htm>

Call 1 (434) 525.8648

Or email Kathy Easterbrook at kathy@cmpic.com



NEW REV. B

New ANSI/EIA-649B & Course

TechAmerica is in the process of releasing its latest revision to ANSI/EIA-649, Revision B. This revision presents a vast number of changes to this widely used standard. To follow in suit, CMPIC has updated their ANSI/EIA-649 certification course in order to reflect the most current version of this standard.

CMPIC is now teaching and offering certification in the newly released ANSI/EIA-649B.

Each student who successfully completes Course 6, ANSI/EIA-649B Principles and Applications Certification, will receive their own personal copy of ANSI/EIA-649B, a University of Houston diploma, and 3.0 Continuing Education Units (CEUs).

CMPIC's is the first and, currently, only CM

Course Provider to teach this latest revision.

Visit <http://www.cmpic.com/649.htm> to learn more about this standard and CMPIC's certification course.

~~PLAN A~~
PLAN B



Need Information?

Have a question you need answered by a CM Professional? Join CMPIC's LinkedIn group and post a question on our discussion board. Hundreds of CM Professionals from all over the world and nearly every industry are members of this group. They are more than willing to provide you with advice and answer any of your questions. Join LinkedIn and Search Groups for "CMPIC Configuration Management Trends".



CMPIC is also more than willing to answer all your questions as fully and quickly as possible. You can always email us at info@cmpic.com.

Need to research Configuration Management? Visit the CM Resource Guide. This guide provides you with links, articles, books, white papers, lists CM and related standards, CM Tool vendors, CM conferences, CM organizations and more. Visit it here: <http://cmpic.com/cmresourceguide.htm>.

Want different articles and topics covered in the CM Trends eZine? Submit your own article or email us with advice at kerri@cmpic.com.

Virtual Production Lines

by Leo Clark

Virtual production lines? Now what is Leo going to talk about? Does he mean the mythological factories that make futuristic weapons for your avatar in World of Warcraft? Or is he talking about 3D holographic robots that construct unavailable concept cars in cyberspace? I better read ahead to find out...



Part numbers uniquely identify Configuration Structures. These structures are defined by Parent-Child relationships in what is still called a Bill of Materials. Configuration Structures define more than just the Product that we are going to put in the customer's hands. We should use Configuration Structures

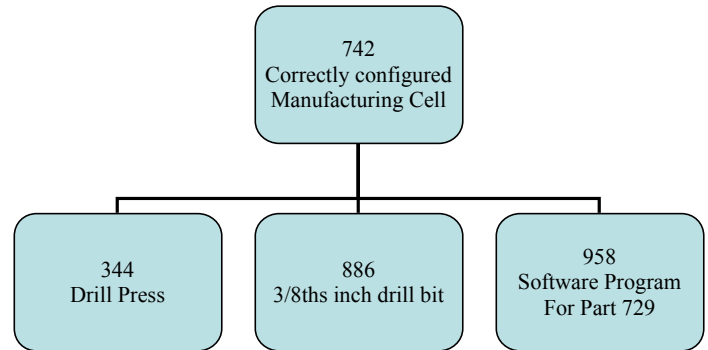
to define production equipment as well.

The Manufacturing Cell

There is a wide variety of manufacturing equipment available to produce parts. Some of that equipment includes mills, lathes, water jets, plastic injection molding machines, and my favorite, Waterbury progressive die stamping machines.

These machines can be configured to run different jobs to produce a certain uniquely identified part. A simplified manufacturing cell would consist of the machine, a tool and the software program to run the job.

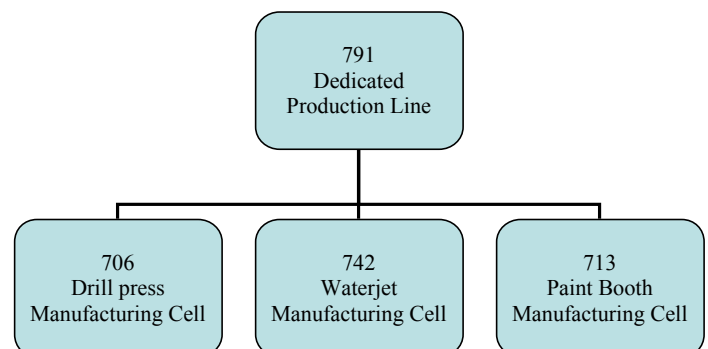
The Configuration Structure could look like this:



To produce Part 729, we would have to bring Cell 742 into conformance. This machine setup is an essential step in the manufacturing process. Creating a conforming manufacturing cell is just as important as creating a conforming part when you use this conforming equipment.

The Production Line

For some parts, the material must go through a series of manufacturing steps, using different manufacturing cells. This series of machines is known as a production line. Each machine in the series would need to be brought into conformance for the particular part that is being run.



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Of course, production lines must be cross referenced to the Part Numbers that they can produce. This will help with capacity planning, machine utilization, production scheduling and, most importantly, impact analysis as part of the change process.

If this production line is always used the same way, one machine after another, it could be considered a dedicated production line. Parts will go through each machine in series, never bypassing a machine, but each machine should be reconfigured for the job.

However, life is never that simple.

The Virtual Production Line

Not all parts need to go through the same series of machines. Some parts may bypass a certain step. Or I might have two different water jet machines and route some parts through one machine and some parts through the other.

In cases of high demand, I might set both water jets to the same configuration and route the same part numbers through both machines to provide better capacity and throughput. The combination of machines necessary to produce a single part number might have multiple routes through my factory floor. Each one of these routes is not a dedicated production line, but a virtual production line. These virtual production lines should be given unique identifiers to help cross reference the possible routes for each part number.

One virtual production line could be 742 #1 – 769 #1 – 744 #2 while another virtual production line could be 742 #2 – 769 #1 – 744 #3.

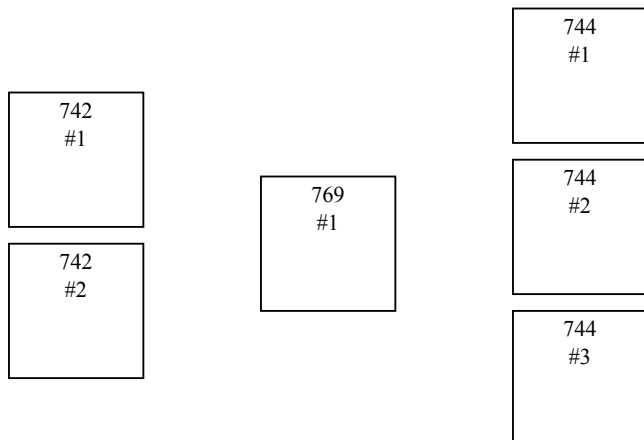
Some parts might be routed 742 #1 – 744 #3 and bypass cell 769 altogether.

The purpose here is to uncover available capacity, optimize factory throughput, improve flow of the manufacture, and manage constraints, such as attendance issues with certified operators.

Organizations rarely manage the configuration structures of these virtual production lines. To their detriment, they also fail to relate the uniquely identified parts to the uniquely identified virtual production lines. Production scheduling and machine utilization may suffer.

However the true benefit to managing all of your configurations, including virtual production lines, is in the change process. Impact analysis is greatly enhanced when you can determine the impact of a change to the part design on the production equipment, or a change to the production equipment on potentially orphaned parts which can no longer be manufactured.

Maybe next time we can talk about how this strategy of managing virtual production lines is important for building, testing and releasing software.



Leo Clark is CMPIC's SCM Expert. Leo has over 15 years of CM and related QA experience and ten years with the Institute of Configuration Management. He has taught configuration management to thousands of students and consulted on CM, SCM and QA implementations for over 100 companies. Leo has consulted with PDM/PLM software tool providers to improve workflows and functionality, and taught and consulted extensively on SPC, CIM, DNC, MES, ERP, preventive maintenance. He is the author of numerous articles, papers and presentations on SCM, SPC and management methodologies. Leo is a graduate of Marquette University, CMPIC Certified, CMIIC, CM Lead Assessor Certification, U.S. Marine Corps, member ACDM, and ASQ.

CM: A Personal Perspective

by Tina O'Dell

“Ms. O'Dell, you have a Choledochal Cyst and the only treatment plan is surgery at a major university hospital.”

That sentence changed my life and my perspective about Configuration Management (CM). The life change was immediate, however my perspective of CM hit me as I was lying in Johns Hopkins reflecting on last month and the changes that had been performed to my body.

You may ask how surgery relates to CM. Well, this is how I think they are related. The first thing we do as CM professionals is assess the need for change. A Choledochal cyst is very rare and highly cancerous. I was presented no choice at treatment; my biliary tree and gall bladder had to be taken out and my upper intestine had to be resected to my liver. There are medical terms associated with these procedures, but for the layman, I, in essence, had the same operation performed for liver transplants, sans the liver replacement. I could have chosen to not have the surgery and develop a rare, dangerous cancer, or I could choose to have the procedure, not develop a rare cancer, and live. As Chief Engineer of my body, I chose to live.

With that decision made, the change was approved. This was the time in my personal life when my systems engineering experience came into play. I organized all my medical records, read hundreds of medical journals, and stepped through



obtaining all the information I could about my condition. But that was not all I had to do. See, I am a single mother and have a ten year old son that I had to consider. Not only did I meet with the Director of Liver Transplants at Johns Hopkins to discuss my surgery and recovery options (yes, I was interviewing the doctor to ensure he had the requisite skills; crazy lead engineer that I am), but also had to put together the logistics tail for my personal life. I completed my Last Will and Testament, Living Will Directive, and reviewed my life insurance plans ensuring my beneficiary knew my wishes for this money and how it was to take care of my son. Also, I arranged care for my son and dogs during my stay in the hospital.

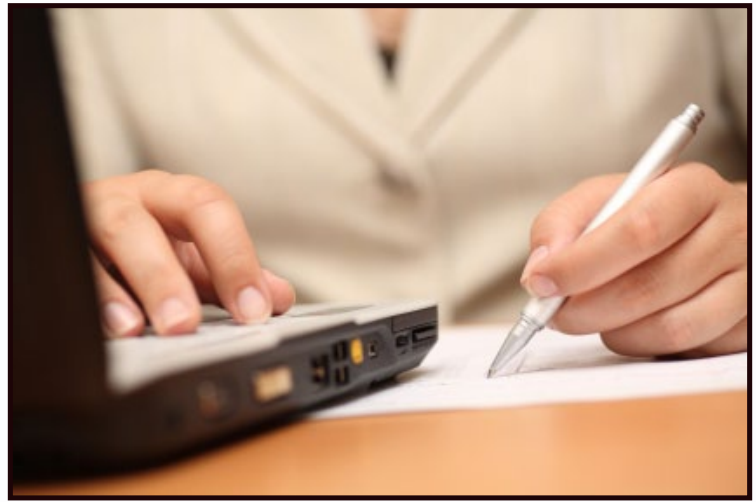
As we all know, we need to determine the funding for proposed changes. I immediately called my insurance company and found there is no cap for my plan and the doctor and Johns Hopkins were approved providers under my plan. If that had not been the case, I would have had to research other doctors and hospitals. But being a systems engineer, I had already contacted the leading hospitals for liver transplants to determine who

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and where I could go as contingency plans. This bit of knowledge allowed me to have peace of mind that my “change” would be covered except for the cost of hospital admission and any ancillary creature comforts that were not covered under the plan. I was not going to be bankrupt as a result of this “need for change.”

My “change request” substantiating data was now compiled. I had to put on my change control board Chair hat and approve it all. I scheduled my surgery for the following month, only 10 days after the initial consult. I entered the hospital for the first minor surgery, installation of a bile duct drain. This drain is important in the CM process in that it is part of the closed loop reporting aspect of conducting the surgery. Three days later, I sat in front of an eight inch stainless steel door to the operating room (OR). At that very minute I was acutely aware that what was about to happen to me was more than I had bargained for. But, once whisked into the OR, the staff was attentive and reassured me that I would be fine. Well, that was easy for them to say. They weren't the ones that woke up with an eighteen-inch incision across their torso and about fifty staples holding it together. I now know what a zipper feels like.

The “change” was a success; the cyst was benign. Now, a month later, I have an incision that is healing, my body functions are working normally (better than before the surgery), and my bile duct drain requires flushing while keeping my bile duct open as it heals. I am required to follow-up every four weeks until my drain is removed and the doctor is sure everything is progressing well. As we CM professionals would say, the closed loop reporting will not be complete until the drain is removed and I am cleared for work again.



Configuration Management, no matter what environment it is conducted, gives the Chief Engineer and change control board Chair the information necessary to implement changes, with the peace of mind that all aspects of the change were researched, presented, and implemented according to a plan that is scheduled, funded, and technically feasible. I never would have thought that being rushed to the emergency room and subsequent surgery would bring my chosen system engineering niche to the forefront of my personal life. But, I admit, I am very glad that my experiences in compiling, assessing, approving, implementing, and reporting on engineering changes gave me the tools to step through a life changing experience and remain calm in such a way that my son and I have been able to survive. CM – a personal perspective, keep it in mind when you are faced with life decisions, no matter their impact.

Ms. O'Dell is a 13 year veteran of the United States Marine Corps. During her service, Ms. O'Dell was responsible for managing Marines and maintaining the US Presidential Helicopter fleet. Since leaving the USMC, she has supported several United States Department of Defense Acquisition Programs as a Senior Systems Engineer. Ms. O'Dell's responsibilities included Test & Evaluation, Requirements Management, International Program Management, and Configuration Management. Ms. O'Dell is currently the CM Technical Director for QinetiQ North America, Systems Engineering Group, Defense Solutions. She is also the Lead Engineer in support of the USMC development and procurement activities for Communications, Networking, and Intelligence Systems. Ms. O'Dell is a CMPIC and CM Assessor Certified CM Professional.

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