



CM Trends

News and Perspectives for CM Professionals

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December 2012

ISSUE 11

High Tech Tools, Prehistoric Processes



In some organizations the ability to readily access, easily understand, and work with valid documentation is being compromised. As a result, we can expect an unacceptable level of corrective action that affects productivity, profit, and compromises the ability of automated tool investments to live up to their expectations.

An example can be found in environments where changes are regularly approved against various types of documents, but the documents themselves are never updated to reflect the change until months, or even years later. This makes the process of getting the “latest” document turn into a puzzle, piecing together documents with approved but not yet incorporated changes. This is sometimes referred to as hanging paper, e.g. AD 12345 Rev A + ECR 22145 = the most current “document”.

Until the point in time when the document is actually updated with the approved change, the organization will use mark-ups or red-lines to convey the intent of the change.

I have witnessed documents that have a few to nearly two hundred approved but unincorporated changes pending update.

by **A. Larry Gurule**
CMPIC

Why?

Some hang paper/redline because it takes too long to get documentation updated. This is usually the case in environments where there are a lot of corrective action-type changes and they just do not have the staff to manage the avalanche of changes (why that happens is another story).

Some hang paper because they have not budgeted for, or scheduled, the updating of documents as part of their change implementation planning.

Some do it because they have always done it that way (which was more the norm in pre-automated tool days).

In reality the extra expense, time, and confusion associated with delaying change incorporation into documents far exceeds the time it would take to update the document with the approved change as part of a well-planned change implementation plan.

One Example of How Hanging Paper Wastes Money

Many companies have invested, and will continue to invest, a lot of money on high tech automated systems that allow users to retrieve necessary information such as specifications, drawings, test plans, and other information. If that information is not “current” because approved changes have not been incorporated, then a manual approach to updating the information is required, e.g. each individual who needs a particular document will have to go to the million dollar automated system to get the “latest” rev, then print that document,



then search to identify any approved but unincorporated changes, and print them as well. Then the person must manually mark up the document in accordance with the content of the approved change.

By investing in automation, but not in the associated process improvements necessary to get current information on-line, I have now created a high tech automated solution that requires many hours of manual intervention.

Other Potential Problems with Hanging Paper / Redlines include:

1. The user may not know that there is a change approved against the document and may work to the wrong revision/version.
2. From a traceability standpoint, there is the question of what revision of a document was actually used.
3. The CM databases will need to be updated to show the current revision “plus changes” and then updated again as changes are actually incorporated into the documents.
4. If there is more than one change outstanding against a document a user might incorporate the changes in the wrong order which can sometimes can result in a disaster.
5. The time to find out what you need to work to, in terms of correct documentation, is greatly extended.
6. Manually redlining documents represents an additional



expense because an organization has to update their drawings or documents twice.

7. As-built data is difficult to interpret. Hundreds of changes listed against documents increases the time it takes to figure out the actual configuration of an item.

The Bottom Line

If documentation updates were planned properly, as part of a well-defined, carefully thought out change process, it would be possible to achieve a higher integrity level for documentation and to have updated documents available for use as they are required.

A. Larry Gurule is a Principal with Computer Sciences Corporation, 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 service 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.

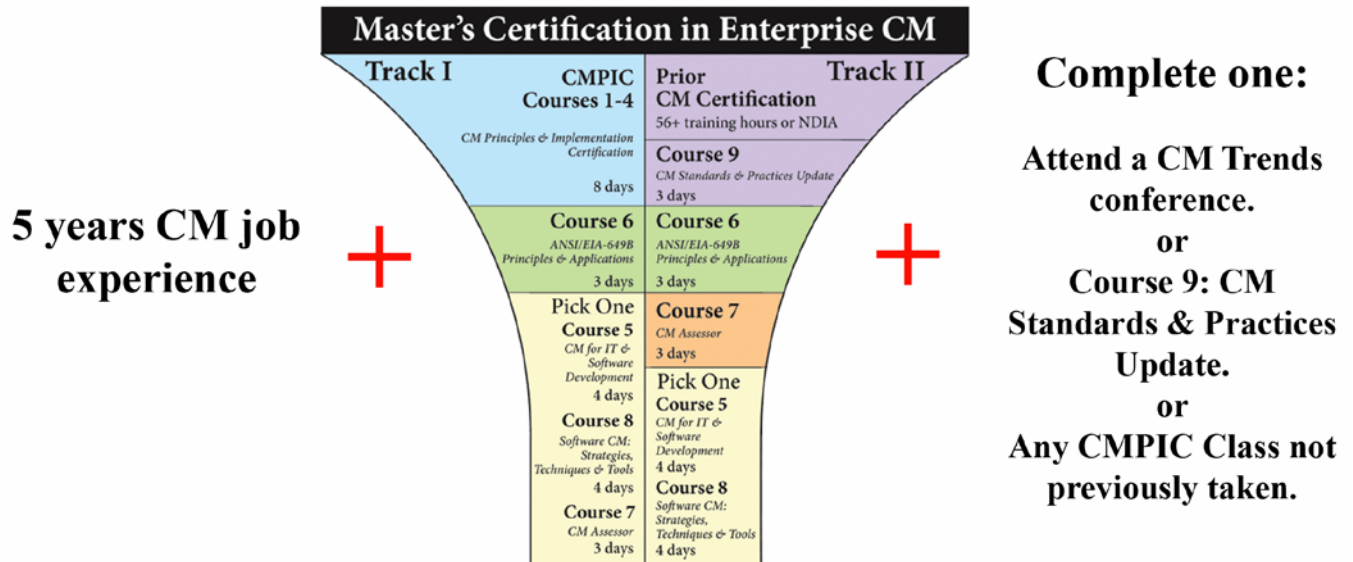
A. LARRY GURULE

CMSME Program

CM Subject Matter Expert



Are you a CM Expert? You can be! Successful completion of the “CMSME” program signifies that you have met the program requirements of learning the many Configuration Management (CM) principles and techniques required to implement CM in various functional areas within an organization. Becoming an active member in this program demonstrates your commitment to remaining current in all aspects of Configuration Management and an advanced achievement in continuous CM education. <http://cmpic.com/CMSME>



ANNOUNCING: A new program is now available to configuration management and related professionals who have worked directly with configuration management for 5 or more years.

CMPIC is now accepting students into the CMSME Program who apply and meet the following requirements:

1. Currently hold a CMPIC Master's Certification, *and*

2. Have five (5) years experience in configuration management or a related field working with CM processes, *and*

3. Have completed one or more of the below **Maintenance Requirements:**

- Successfully complete CMPIC Course 9, Configuration Management Standards & Practices Update, *or*
- Successfully complete an additional CMPIC course not previously taken (standards courses

like ANSI/EIA-649A changing to ANSI/EIA-649B count as different courses) , *or*

- Attend a CM Trends event.

To remain in the CMSME program, one or more Maintenance Requirements must be completed once every three years.

If you qualify and wish to enroll in this program, please apply online at: http://cmpic.com/CMSME_application.htm

ANSI/EIA-649

Why Bother?



Should you be familiar the 649 Configuration Management Standard? The answer is: YES. ANSI/EIA-649 is the “Mothership” of all CM standards.

The following is a partial list of standards, guidelines, and other documents that reference the 649 standard. This list was compiled using a Google search focusing on government agencies. References come from an array of organizations such as: DoD, Army, NASA, FHA, FAA, DOE, DOT, USCG, FDA, UDOH.

This list does not include the multitude of similar references we have seen in various other government and commercial organizational CM plans and procedures.

The standard itself is compiled by government and industry CM gurus. Every CM professional should be intimately familiar with 649’s content and requirements.

Draft MIL-STD-3046(AR), Department of Defense Standard Practice: Configuration Management *Currently out for review and comment, not yet approved.*

“1.1 Scope. This standard defines Configuration Management (CM) requirements for DoD acquisition programs which apply throughout the lifecycle of systems and their Configuration Items (CIs) and provides the principles to acquire CM processes and products consistently across the DoD. This standard implements the principles of ANSI/EIA-649 Configuration Management Standard and the requirements of DOD Instruction 5000.02 for DoD CM practices.”

“1.2 DoD activities and organizations will give maximum latitude to supplying activity’s processes and procedures, provided those processes and procedures are compliant with the principles of ANSI/EIA- 649 and meet the acquiring activities requirements. The principles of ANSI/EIA-649 are identified throughout this document for reference.”

MIL-HDBK-61A

“DoD has adopted ANSI/EIA-649, “National Consensus Standard for Configuration Management,” as the guiding document providing the basic principles of Configuration Management... ANSI/EIA Standard 649 provides the basic configuration management principles and the best practices employed by industry to identify product configuration and effect orderly management of product change.”

ARMY, NAVY, AIR FORCE ADOPTION NOTICE

“ANSI/EIA-649, “National Consensus Standard for Configuration Management,” was adopted on February 1, 1999, and hereby supersedes EIA/IS-649, “National





Consensus Standard for Configuration Management,” that was adopted on 22 November 1996 for use by the Department of Defense (DoD).”

NASA Standard 5

“The principles from EIA-649...were adopted and incorporated into this standard.”

Federal Highway Administration, CM Handbook

“This handbook was written to supplement the “general” configuration management standard, EIA 649, from a transportation perspective.”

Federal Aviation Administration, CM Policy 1800.66

“Note: All definitions taken directly from EIA-649 are marked with an asterisk.”

Department of Energy, DOE 0413.3

“DOE O 413.3 requires contractors to use ANSI/EIA-649 for configuration management. Wherever the provisions of DOE O 413.3 apply.”

Department of Transportation, A Guide to Configuration Management for Intelligent Transportation Systems

“There are two key standards... (ISO) ISO 10007:1995, Quality management: Guidelines for configuration management and... ANSI/EIA 649-1998, National Consensus Standard for Configuration Management. Both of these documents are equally applicable to hardware or software configuration management.”

NOTE: The latest version of this standard is ANSI/EIA-649B, published by TechAmerica Standards & Technology Department, 601 Pennsylvania Ave., NW North Building, Suite 600 Washington, DC 20004-2650.

US Coast Guard, COMDTINST 4130.6A, CM Standards

“The CG shall implement CM in accordance with reference (b) EIA 649A 2004 National Consensus Standard for Configuration Management with guidance from references (c), (d) and (e). See enclosure (2) for a list of the EIA-649 principles and enclosure (3) for key definitions of CM terms as they relate to the CG. References (a) through (j) are available at the CG Configuration Management site on the CG Portal.”

USDA, Configuration Management DM 3520-000 OCIO, Cyber Security

“The following regulations, directives and standards mandate this policy... A Project Managers Guide to Applications Systems Life Cycle Management; Carnegie Mellon, Software Engineering Institute (SEI), System Engineering/Software Integrated Capability Maturity Model (CMMI-SE/SW) version 1.1.; ANSI/EIA-649-1998 National Consensus Standard for CM and MIL Handbook-61.”

US Department of Health and Human Services, AHRQ CM Plan, Section 1.5 “Referenced Documents”

The following documentation was used in the creation of the AHRQ Configuration Management Plan: “Electronic Industries Alliance (EIA) Standard 649 National Consensus Standard for Configuration Management (ANSI/EIA-649/-1998).”

... and these are just a few examples.

CM Trends 2012

Presentation Highlight



About Past CM Trends Events

Last year's CM Trends 2012 attracted over 100 CM Professionals from around the world, working at both government and commercial organizations. CM Professionals attend this event because CM Trends examines numerous aspects of configuration management through detailed presentations, group discussions, and discounted post-event training classes.

Attendees have noted that from the 2012 event alone they have learned more about CM Standards, Requirements Management, Software CM, Procedural ideas, how to facilitate organizational change, how to be a successful CM Manager, how to implement proper CM, and brought back many ideas for improvement.

[Click here](#) to learn more about past CM Trends events and CMPIC's upcoming CM Trends 2013: Seminars, Workshops, And Training.

Marc Lind, of Aras Corp, was one of CMPIC's 24 speakers at last year's event. He gave the presentation titled "Integrated Requirements Management for Systems Engineering". He has since put together a video summarizing this presentation.

Presentation Overview

"Integrated Requirements Management for Systems Engineering" by [Marc Lind, Aras Corp.](#)

As technology advances, so does the complexity of the products it produces. In the 1970s, a typically luxury car had around 2,000 parts in it and most were mechanical. Today, there are more than 30,000 parts in the average car and they are blend of mechanical, electrical, software and firmware.

Product requirements are no longer a one to one relationship, but a dizzying array of integrated cross-discipline processes and organizational relationships. And as these product requirements become increasingly integrated, so too must the requirements management systems that support them.

An overview of this presentation can be viewed on the [Aras website here](#) or on [YouTube here](#).

Marc Lind is a Sr. Vice President at Aras Corporation with over 17 years in configuration management, product development, manufacturing, and supply chain operations. At Aras Mr. Lind is responsible for the enterprise-wide CM strategy, global marketing and strategic alliances along with corporate responsibilities. Prior to joining Aras, Mr. Lind worked as an automotive industry supply chain provider for inventory reduction and forecast improvement, before that he was responsible for configuration & data management and quality systems, and earlier in his career, Mr. Lind was a consultant on the Toyota Production System, Lean methodologies, and quality standards. Mr. Lind is a member of APICS, AME and the PDMA, and is a frequent presenter on Configuration Management practices.

Presentation by MARC LIND

CM Trends

2013 S.W.A.T.

Seminars, Workshops, And Training

Orlando, FL
August 5 - 7

This interactive event invites CM professionals from around the world to discuss topics and trends in configuration management. Attendees will be given ample time each day to network, view presentations from CM experts, participate in CM workshops, ask questions of the speakers, and visit with PLM tool vendors.

Topics and trends discussed may include: CM Process Metrics, CM Standards, Success Stories, CM Plans, CM Implementation, PLM Tool Implementation, Software CM, Enterprise CM, International CM, Systems Engineering, CM Training, Interface Management, Change Management, Data Management, and more.

Learn more at: CMPIC.com/configuration-management-conference

Experience the Full Spectrum
of CM



CM Trends

2013 S.W.A.T.

Registration & Fees

	Per Person Fee (USD)
Option 1: CM Trends 2013 Seminars & Workshops 2.5 days, Monday - Wednesday	\$950
Option 2: CM Trends 2013 Seminars, Workshops, And Training 5 days, Monday - Friday	\$1,695
Option 3: CMPIC Training Course Only 2.5 days, Wednesday - Friday	\$995
*Exhibitor fees same as above	

Register for CM Trends 2013 here: <http://cmpic.com/registration.htm> or
Contact the CMPIC office at (434) 525-8648, info@cmpic.com.

Hotel Reservations

The Rosen Plaza Hotel

9700 International Dr.
Orlando, FL 32819
(800) 627-8258



\$105.00 per night, per room.

Make your sleeping room reservations by calling 1-800-627-8258
and mention "CMPIC LLC - CM Trends 2013".

This discounted rate will not be accepted after Friday, July 5, 2013.

CMTrends

2013 S.W.A.T.

2012 Testimonials

“I found [this event] to be very insightful as it added so much to my CM Knowledge. I am now back at work and excited to start implementing some of the things I learned.”



“Excellent opportunity. I learned a lot!”

“Good conference. Lots of information. I hope to attend future conferences.”

“Learned about other companies’ products. Got ideas for improvement. Inspired to do things better.”

“Great conference. Lots of variety of passion and many valuable stories.”

“Excellent conference format, as it is great to listen to the [variety of] presentations. Outstanding emcee!”

“Best conference to date!! CM is constantly changing and it’s nice to come and learn from other CM Professionals”

“[I learned] how important proper CM is and how I can sell it to others.”

“CM Topics [and] presentations were very beneficial. Great job.”

“This was the best and most informative CM conference I have ever attended.”

**All testimonials on file at the CMPIC office.*



Doing Things Twice Syndrome

by **Steve Easterbrook**
CMPIC



Many organizations are expending excessive resources on doing things twice. They have what I call “DTTS” - Doing Things Twice Syndrome. In this article I would like to point one example of “DTTS” and offer a solution.

A good example of “DTTS” is the incorrect use of a “Deviation”. Some definitions of “Deviation” include:

- “Deviation: A specific, before-the-fact, written authorization to depart from a particular performance or design requirement of a contract, specification, or referenced document. A deviation differs from an engineering change in that an approved engineering change requires corresponding revision of the documentation defining the affected project, whereas a deviation does not contemplate revision of the applicable specification or drawing.”
- “Deviation: A specific written authorization, granted prior to the manufacture of an item, to depart from a particular requirement(s) of an item’s current approved configuration documentation for a specific number of units or a specified period of time.” (MIL-STD-973 Notice 2, now canceled).

NOTE: “Deviations” are now bundled with “Waivers” under the term “Variance” in ANSI/EIA-649B.

It is obvious from the definitions that a deviation was meant to be temporary and not intended to be a method for circumventing the permanent change proposal process.

But many companies needing to make permanent changes are using the deviation process first to incorporate a change “right now” because their processing time for a deviation is quicker than the processing time for a permanent change.

These companies are creating a deviation request in parallel with writing a change proposal. It is this change proposal that will ultimately result in the permanent change and updated documentation.

Why would an organization do this? Well, it allows the organization to “legally” make a temporary change to a product, right now, while the same permanent change is





being processed (which takes longer to process).

It is obvious that companies like this are doing things twice. They have two types of forms, two types of processing, two of everything. The argument for DTTS is they need to get product out the door and the “normal” change process takes too long.

Solution: Do it Once

It is my opinion that doing things twice like this, is an indication of deficiencies in the current change process.

An organization in this mode should determine what types of changes are both being prepared as deviations and simultaneously proposed on change requests.

Next, Categorize Them

Determine the categories of deviations that always get approved (100% of the time) as permanent changes (i.e. change requests) at a later date. All future changes of the types identified could be prepared as change requests (not deviations) and approved following the similar expedited path as the deviation process offered.

In environments where doing things twice is part of the norm, the result from doing things once could be a substantial cost savings.

I am not an advocate for deviations, waivers, variances, concessions, etc., but sometimes “stuff happens”... so,

let’s leave the deviations, waivers, variances, etc. for what they were meant to be used for and stop relying on them to be quick fixes bypassing the normal change process.

The Bottom Line

Adjust the change process to accommodate various types of changes. Not all changes need to follow the same path.

Do it once.

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 32 years. He has 12 years of experience as a Configuration Management manager in government and commercial organizations and another 20 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.

STEVE EASTERBROOK

ACDM Conference

Walt Disney World® Resort, Florida

April 7-10, 2013



ACDM is excited to host their 18th annual Conference and Training Event for CM and DM Professionals. This event will take place April 7-10, 2013 at Walt Disney World's Contemporary Resort. We welcome your attendance and involvement!

ACDM is honored to have NDIA, Millennium Data Management, and CMPIC attending and conducting classes following this event. CMPIC Certification Course 6, "ANSI/EIA-649B Principles & Applications" will run 2.5 days from Wednesday, April 10 to Friday, April 12, 2013. [Click here to learn more, or register for this CMPIC class.](#)

If you would like to be a speaker, we welcome all abstracts. Everyone who submits an abstract will be entered to win a \$150 gift card! The submittal deadline is December 6, 2012. Please visit www.acdm.org for more details.

The ACDM Conference agenda will be heavily focused on workshops and interactive events, with a keynote from a surprise presenter that we know you'll enjoy hearing. Workshops will discuss the differences and similarities between CM and SCM, and how to introduce expanded and enriched CM in a challenging environment. We are working on our Starfleet Academy for an interactive CM game to introduce to you at the Conference. We will also share our new website functions and features, showing you how the new [ACDM.org](http://www.acdm.org) website will combine information, news, and valuable features for you, a CM and DM practitioner. We are excited about this year, and pumped about the new

strategic direction the ACDM executive board is taking us in presently and in the future. Once the agenda is finalized, you will receive email notifications from both ACDM and CMPIC.

Like past events, Tuesday night is a complimentary event which will include a chocolate dessert buffet as we watch the Illuminations event, including fireworks and a laser show at EPCOT.



If you would like to register for the ACDM Conference, please visit www.acdm.org. There you will find information on booking your room with Disney for a fabulous \$209 per night (plus tax). This rate is available over the dates of April 4 – 13, 2013. Accommodations are at the Contemporary Resort, including the Garden Wing area out near the pool and overlooking the Lagoon where the Disney Light Show Parade occurs nightly at 10:00PM - a treat to see! And you will have access to free transportation between Disney and the Orlando Airport via the Disney Magical Express. With this service, you can check your bags at your departure airport, and the next time you see them they will be delivered to your room at the Contemporary Resort! On the way out, same process! We even have specially priced park tickets available for your enjoyment.

Where else are you going to get this technical conference and training value as well as the opportunity for a family vacation?

We hope to see you there! If you have any questions, don't hesitate to ask - please email Cindy Hauer at hauercc@aol.com, or Bonnie Johnson, at bjohn4223@aol.com.

CINDY HAUER, ACDM

Greatest CM Songs of All Time



CMPIC “Configuration Management Trends”



“You don’t have to say you love me”

“Return to Vendor”

“Imagine there’s no changes...”

“Gimme Just a Little More Time”

“When will they ever learn?”

“Simply Interchangeable”

“Who put the BOM in the BOM sha Bom sha Bop”

“Urgent, Urgent, Emergency”

“Don’t go changing to try and please me”

“Easier said then done”

and many more! With your help, we can add dozens more songs to this list and finally have music all CM Professionals can enjoy.

To read more Greatest CM Songs of All Time, or to add your own, please join CMPIC’s LinkedIn® discussion [here](#). Log in now or register for free at [linkedin.com](#).

Like many CM professionals, you have probably wondered why there aren’t any good CM songs out there! Thankfully, CMPIC is working hard to create music inspired by configuration management principles, put to the beat of popular music. Some of these songs include:

“Cha-cha-cha-cha-Changes”

“Rikki don’t lose that Number”

“You can’t always get what you want... but you can always use a deviation”

“Please, release me, let me go”



CMPIC's CM Training & Certification Courses



To register, please visit: www.cmpic.com/registration.htm
or contact the CMPIC office at: info@cmpic.com, (434) 525-8648



- **CM Principles & Implementation Certification Series, Courses 1 - 4**

Upcoming Series:

Stafford, VA starting Feb. 25, 2013

Ottawa, ON CANADA starting March 18, 2013

Myrtle Beach, SC starting April 23, 2013 - Less Than 2 Consecutive Weeks

- **CM for IT & Software Development Certification, Course 5**

Stafford, VA June 24 - 27, 2013

- **ANSI/EIA-649B Principles & Applications Certification, Course 6**

Orlando, FL April 10-12, 2013

Stafford, VA June 10 - 12, 2013

Orlando, FL Aug. 7 - 9, 2013*

- **CM Assessor Certification, Course 7**

Stafford, VA April 29 - May 1, 2013

Orlando, FL Aug. 7 - 9, 2013*

- **SCM: Strategies, Techniques and Tools Certification, Course 8**

Orlando, FL May 20 - 23, 2013

Ottawa, ON CANADA June 17 - 20, 2013

- **CM Standards & Practices Update, Course 9**

Stafford, VA April 15 - 17, 2013

Orlando, FL Aug. 7 - 9, 2013*

View CMPIC's public course schedule at: CMPIC.com/configuration-management-training-schedule

* Discounted Course held in association with CM Trends 2013.

All CMPIC Courses are Sponsored by:

UNIVERSITY of HOUSTON

On-Site Certification

Did you know that CMPIC offers onsite certification and training for as few as five attendees? This is a great way to train your staff and eliminate the need for a large travel expenditure. Call us to find out more, or visit www.cmpic.com.

Submit an Article For This Newsletter

Do you have a CM story to tell? Would you like your CM article published in this newsletter? Send us an email and we'll provide details on how to get your article published. Please email: kerri@cmpic.com.

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