Questions from the Trenches
What Over 1000 Students Want to Know Most About the CMMI®

Bill Smith CEO
Leading Edge Process Consultants LLC
www.CmmiTraining.com
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Ground rules

10:30 – 11:15
at the end
set to stun
and yes...
Flying Monkeys!
Who am I?
I’ve taught *Intro to CMMI®*...
62 times, to 1102 students
1102

> 

The number of hours Lindsay Lohan has spent in court!
In class, I’ve been asked 100’s of...
Some before class even starts...
Does your class have a **dress code**?
Obviously not.

(Name Withheld)
I’ll be presenting a sampling of those questions with help from...
Some of my favorite students!

- Vishal Agarwal; Project Manager; REI Systems Inc.
- Bill Altman; Principal Engineer; SCRA/ATI
- Dale Bingham; Director of Quality Management; PSI Pax
- Susan Carlson; SVP & Chief Operating Officer; A+ Government Solutions
- Matthew Carney; IT Specialist; U.S. Department of Education
- Judy Engle, PHR; HR Manager; Tribalco, LLC
- Gayle Giblin; Industry Standards Lead; IBM
- Tim Gollner; Quality Manager, HES Director; G&B Solutions
- Ned Gubbi; Quality Manager, Sunhillo Corporation
- Sharon Howington; Technical Writer; SMS Data Product Group, Inc.
- Sandra Kinsey; PI/QA Engineer; Primus ASRC
- Erika Kohnke; Staff Tech, Inc.
- David Kresheck; Senior CMMI Specialist; CGI
- Andy Lisko; Mgr IT Processes, Quality & Compliance; United Illuminating
- Mike Mezeul; Sr. Director, Adva Optical Networking, Inc.
- Shannon Quinn; Quality Management Specialist; Delta Solutions and Technologies
- Felicia Stuckey; Principal Strategist; Visions Strategic Marketing
- Will Swann; Director; Technatomy Corporation
- Lindsey Swanson; Society for Human Resource Management
- Bob Swenson; Director of Quality; C-Far Services
From some very cool organizations

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- Bob Swenson; Director of Quality; C-Far Services
who’ve given me...
A mild disclaimer

In this presentation, I’ll associate each student with a question that I’ve actually been asked in class. In most cases, that specific student did not ask that specific question...
except for Susan...
I have an important meeting on Thursday. Is it okay if I miss part of class?
No problem.
I’ll just give you a make-up assignment
I have a brand new SUV...

...that could really use a nice hand-waxing!
Let’s get started
Why do you think requirements are so hard to get right?
So many reasons!
Here’s one: the English language...
...and write “Happy Birthday” on the sides.
If you can mess up the requirements for what to write on a birthday cake is it any wonder we can have problems with
...harder things?
Speaking of requirements, why is REQM at ML2, when RD is at ML3?
I wasn’t at that meeting, but...
When considering the PAs that are at ML2 vs. ML3 don’t think *What comes first in the life cycle.* Think *Level of risk to a project.*Scope creep is a major risk.
Can you take out the trash, hun?

Sure, no problem!

Scope creep: a quick example
The next morning...

Did you take out the recycling?

Scope creep!
So, wouldn’t the best validation environment always be the operational environment?
No.
Say you’re developing ruggedized equipment that must...
survive high temperatures...

...and sandstorms
You could just...
find a convenient desert...
sit there...
and wait...

for days... weeks... months...
for your target temperature...
And when that special day arrives and it’s finally 130 degrees and your equipment works and you’re ready to leave and you showered for the first time in 60 days, you realize you can’t go home because...
You still need a freakin’ sandstorm!
Or you could just…
stick the equipment in an oven...

...and throw sand at it

(An oversimplification, of course. But you get the point.)
The operational environment may not provide you with all the environmental characteristics you want to test, in a reasonable timeframe at a practical cost.
I’m a DJ. One of my buddies attended your class and said you applied DAR to selecting music. Really?
Glad you asked...
The situation:

– I targeted a retro-style, CD-playing jukebox for my basement

– The capacity is 100 CDs

– 50 CDs will be dedicated to classic rock artists – one CD of each artist’s best songs

Which 50 artists should have a CD in my jukebox?
Identify candidate artists

I searched through lists for potential artists:

- Rock & Roll Hall of Fame inductees
- *Rolling Stone* Magazine
  - “100 Greatest Artists”
  - Cover of 1000th issue
I decided:

which criteria were important

how important each was

how I’d measure each

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Critical Acclaim</th>
<th>Popularity</th>
<th>My Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stone Magazine ranking</td>
<td>• Rolling Stone Magazine ranking</td>
<td>• Billboard magazine singles ranking</td>
<td>• #of 5-star songs</td>
</tr>
<tr>
<td>Rock &amp; Roll HOF?</td>
<td>• Rock &amp; Roll HOF?</td>
<td>• RIAA* album sales</td>
<td></td>
</tr>
<tr>
<td>Cover of Rolling Stone #1000?</td>
<td>• Cover of Rolling Stone #1000?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Establish the evaluation method

I decided how to combine all this information...

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<td></td>
<td>Critical Acclaim</td>
<td>Popularity</td>
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</tr>
<tr>
<td></td>
<td>Points (0 to 1)</td>
<td>Points (0 to 1)</td>
<td>Points (0 to 1)</td>
</tr>
</tbody>
</table>

...including the formulas that I’d use to derive each artist’s final rating
Perform the evaluation

I ended up with a sorted list of over 200 artists.

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<th>Popularity</th>
<th>My Taste</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Rock and Roll Hall of Fame? (Thru 2006)</td>
<td>Cover of Rolling Stone Magazine #1000? (5/18/06)</td>
<td>Rolling Stone Magazine Ranking (4/15/04, 4/22/05)</td>
</tr>
<tr>
<td>The Beatles</td>
<td>●</td>
<td>●</td>
<td>1</td>
</tr>
<tr>
<td>Elvis Presley</td>
<td>●</td>
<td>●</td>
<td>3</td>
</tr>
<tr>
<td>The Rolling Stones</td>
<td>●</td>
<td>●</td>
<td>4</td>
</tr>
<tr>
<td>Led Zeppelin</td>
<td>●</td>
<td>●</td>
<td>14</td>
</tr>
<tr>
<td>Bob Dylan</td>
<td>●</td>
<td>●</td>
<td>2</td>
</tr>
<tr>
<td>The Beach Boys</td>
<td>●</td>
<td>●</td>
<td>12</td>
</tr>
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<td>●</td>
<td>●</td>
<td>15</td>
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<td>●</td>
<td>●</td>
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<td>●</td>
<td>23</td>
</tr>
<tr>
<td>Prince</td>
<td>●</td>
<td>●</td>
<td>28</td>
</tr>
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</table>

Here are the Top 10.
# My top 50 rock ‘n roll artists

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<th>#</th>
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<td>1.00</td>
<td>18</td>
<td>Eric Clapton</td>
<td>0.64</td>
<td>35</td>
<td>CCR</td>
<td>0.51</td>
</tr>
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<td>2</td>
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<td>0.95</td>
<td>19</td>
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<td>0.64</td>
<td>36</td>
<td>Van Halen</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>The Rolling Stones</td>
<td>0.89</td>
<td>20</td>
<td>Aerosmith</td>
<td>0.64</td>
<td>37</td>
<td>Chuck Berry</td>
<td>0.49</td>
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<tr>
<td>4</td>
<td>Led Zeppelin</td>
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<td>21</td>
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<td>0.80</td>
<td>22</td>
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<td>Prince</td>
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<td>27</td>
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<td>0.57</td>
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<td>Ray Charles</td>
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<td>28</td>
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### CHANGE REQUEST

**Originator**
CMMI Student

**Description of Proposed Change**
Eminem!? How about Metallica instead?

**Rationale**
Metallica rocks!

**Disposition**
Accepted

### CHANGE REQUEST

**Originator**
Mrs. K. Smith

**Description of Proposed Change**
Please add Barbra Streisand.

**Rationale**
It’s my basement, too.

**Disposition**
Rejected

Per 2001 agreement
Can you do a quick walkthrough of the engineering PAs again?
No problem, Tim.
The following slides use graphics I’ve adapted from "How Projects Really Work" available at www.projectcartoon.com
What the customer really needed
Requirements Development

How the customer explained it

What the customer really needed

Elicit Needs
What the customer really needed

How the customer explained it

Requirements Development

How the project leader understood it

Establish Product and Component Requirements
Technical Solution

How the analyst designed it
What the customer really needed

How the customer explained it

How the customer really needed

RD

How the project leader understood it

RD

How the analyst designed it

TS

Technical Solution

How the programmer wrote it

www.projectcartoon.com

TS

SP 3.1

Implement the Design

www.projectcartoon.com

What the customer really needed
Validation

How it performed under stress

What the customer really needed

How the customer explained it

How the project was documented

How the project leader understood it

How the analyst designed it

How the programmer wrote it

How it performed under stress

Perform Validation

SP 2.1
Product Integration

What operations installed

What the customer really needed

How the analyst designed it

How the programmer wrote it

How it performed under stress

How the project was documented

How the project leader understood it

How the customer explained it

Package and Deliver the Product or Product Component

SP 3.4
What the customer really needed
What operations installed
How the project was documented
How it performed under stress
What operations installed
What the customer really needed
What the customer really needed

What operations installed

How the project was documented

How it performed under stress

What operations installed

What the customer really needed
What marketing advertised

How the customer was billed

Tim -
You may not want to share this particular image with your customers.

- Bill
You said institutionalization is when you can say “that’s the way we do things around here.” Is that always good, though?
Excellent point, Lindsey! Not always...
When you institutionalize processes, they become organizational habits.
Habits can be good...
You can use the CMMI® to create processes that are repeatably...
Stupid!
Just say no!

to bad processes
Check out...
My 2010 NDIA CMMI® Conference Presentation

WHAT DOESN'T KILL YOU MAKES YOU STRONGER:
MY PROCESS IMPROVEMENT
LESSONS LEARNED

Bill Smith, CEO
Leading Edge Process Consultants LLC
www.CmmITraining.com
Or one of the many books written by... 

...people much smarter than me!
Could you say a little more about the different types of appraisals?
This is not a class on appraisals, and I’m not a Lead Appraiser. But since we have a few extra minutes...
The next four slides are based on quotes from *CMMI SCAMPI Distilled: Appraisals for Process Improvement*. Ahern et al, Addison-Wesley, 2005.
Fat-Free SCAMPI

an appraisal in which the objective evidence presented to the team is very thin.
an appraisal in which the team is swamped with objective evidence for every model subpractice

All-You-Can-Eat SCAMPI
an appraisal whose lead appraiser comes from within the company being appraised
Sushi SCAMPI
an appraisal whose results seem fishy
What are some characteristics of a maturity level 1 organization?
I thought you’d never ask.

Thanks, Dale, for setting up...
The grand finale!
You Know You’re ML 1 When:

You think a subpractice is a test run for an underwater boat.
You Know You’re ML 1 When:

You believe an operational scenario involves an ill-fitting gown that ties in the rear.
You Know You’re ML 1 When:

Your integration procedures use the phrase “duct tape” three or more times.
Your primary causal analysis tool is the Blame Allocation Matrix.

You Know You’re ML 1 When:
Your formal **decision making** process typically involves a chimpanzee, a dartboard, and a six-pack of beer.
You think a maturity level is something you attain when you’re old enough to join the AARP.
The End

(kind of)
Join me again right here at 2:15!
Rock’n CMMI Training  ...and Appraisals!

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