So Easy a Child Could Do It
Teaching Your Management About SCADA
Read Coil

- Robert M. Lee
- AF Cyberspace Operations Officer
  - My views/comments definitely only represent me
- Adjunct Lecturer at Utica College
- Co-Founder of Dragos Security LLC
- SANS Instructor Wannabe
SCADA and Me: A Book for Children and Management
The Purpose of the Book

• Venting a bit of frustration
• Educate others while having a bit of fun along the way
• Make leadership and those around us better
• Make the topic more available to other groups
The Purpose of the Talk

• Build on the “make leadership better” aspect
• With quite a bit of focus on having fun along the way
  – Story time
  – Things I Learned About Talking SCADA to Management
  – Ending RFC
Things I Learned About Talking to Management from Writing a Children’s Book
WHAT’S WRONG, LITTLE BOBBY?

MATT, I’VE BEEN ASKED TO PROTECT SCADA--

BUT I DON’T EVEN KNOW WHAT IT IS -- DO YOU ?!
Not Everyone in Charge...

- Sometimes people are asked to do things outside their normal expertise
- Leadership and management skills are important but that doesn’t necessarily mean technical leaders
- Everyone deserves all of your focus and effort but not everyone deserves all of your time
No One Believes They’re “the” Management

• Feedback I’ve received...
• You need to understand when you *are* the management and what that role means
• Clear the way for your people instead of cluttering it
• Be open to change but do so with reason and purpose
Understand Their Goals

- Technical Knowledge vs. Organizational Goals
- Good business decisions might not be good tech choices
- Return value on investments and goals they can use
IT STANDS FOR — **SUPERVISORY CONTROL AND DATA ACQUISITION.**

WHAT DOES THAT MEAN?!
Speak the Same Language

• CSAF General Welsh – avoid cyber talk
• It’s ok to ask “Do you need me to explain the terms?”
  – It’s ok to reply “yes please”
• Geek speak is cool but let’s be honest none of us understand it all so how would they?
Use Pretty Pictures When Needed

• Know how people learn or understand concepts
  – Some managers are visual learners
• Some people refuse to read or take the time to get better; simply put they exist...how do you react?
  – You cannot just not include them or count them out because of that; they are part of your process
• Some people have multiple jobs in your organization and do not have the time
  – BLUF statements and Pretty Pictures are key sometimes
IT DOESN'T LOOK VERY SECURE!

THAT'S BECAUSE IT ISN'T! THESE DEVICES HAVE VERY LITTLE PROTECTION.

CAN I PLUG ANYTHING INTO IT TO MAKE IT MORE SECURE?

IT'S BEST NOT TO DO THAT.
Be Involved in the Entire Process

• Some people will get the idea and then make bad choices; it’s not malice
  – How many people wake up and want to make things worse?
• Be involved with your management to make sure you help along the way
  – They will advocate what they THINK you want; make sure you voice your needs (vendor – owner – operator relationship as a perfect example)
IS SCADA IN THE CLOUD TOO?

NAAHH-- THAT WOULD BE SILLY.
Don’t be Condescending

• Being a bit of a cynic and joking can relieve tension
  – Take it too far and you’ll discourage people
  – Ripping on management can be fun but they’re trying too
• What’s obvious to you isn’t obvious to everyone
• There might be legitimate reasons to do things you wouldn’t normally do
  – You simply do not have all the information
Can these people protect SCADA for me?

No -- those people are very confused. You must protect it yourself.
Avoid FUD and Hype

• Respectfully challenge authority and “experts”
• Ask for facts and push through hype
• FUD/Hype can return value but it is often short term
  – Air Force Cyber Billets Example
  – Stuxnet example
Really pissed I wasted money on this., March 8, 2014

By Scott - See all my reviews
Amazon Verified Purchase (What's this?)
This review is from: SCADA and Me (Kindle Edition)

Don't waste your money on this. I really like the recent trend of illustrating traditionally dry subjects. This is not one of those efforts, but rather an illustration of a 500 word essay on what SCADA means. This was really dumb.

disappointed in it, November 13, 2013

By Z. Sand (California baby!) - See all my reviews
Amazon Verified Purchase (What's this?)
This review is from: SCADA and Me (Kindle Edition)

I expected more.
Good book, but surprisingly short.
Save yourself some money and just remember "Everyone needs SCADA". That's all you'll get out of the book...Sheesh!

Sucks big time, September 19, 2013

By Manohar Singh - See all my reviews
Amazon Verified Purchase (What's this?)
This review is from: SCADA and Me (Kindle Edition)

Doesn't inform, educate or illuminate. Just presents some really arcane opinions. Feel free to ignore, have an ice cream instead.
You’re Going to Get Critiques

- Some managers will make well founded critiques
  - Some will not
- Take critiques in stride
  - Don’t get down and give up
- Use what you can but do not get discouraged
  - Determine your target audience
And Bobby--above us in space there are satellites which help people communicate!

Wow!
Useless, October 25, 2013

By Osama Salah Ghazy "Uso" (UAE) - See all my reviews

Amazon Verified Purchase (What's this?)

This review is from: SCADA and Me (Kindle Edition)

Completely useless. Not sure why all the scada experts are tweeting about it. I can not figure out what the target group of this book is supposed to be. Save your sanity, money and time and stay away from this book. The author should have invested their time into something more meaningful.

A book for Management? Seriously?

How dull and boring! Even as a kids book., November 18, 2013

By R. Van Wagner "bvw" (Washington Crossing, Pennsylvania, United States of America) - See all my reviews

Amazon Verified Purchase (What's this?)

This review is from: SCADA and Me: A Book for Children and Management (Paperback)

Bought after reading about the book on Quartz.com. How dull and boring! Even as a kids book. I have many years of experience developing and installing SCADA systems in nuclear and fossil power plants, and for the electrical grid. I also read prolifically in many genres.
Things Will Go Over People’s Heads

- Some people will miss the point
- Is it their fault or yours?
- Were they involved in the process? Could they have been?
- Did you explain things clearly and correctly?
- If you’re confident continue on; but don’t let management lose faith in you because you are stubborn
- Know your target audience
What in the world is SCADA? Well, on the surface, it's straight forward enough. After all, the definition is in the name – Supervisory Control and Data Acquisition (SCADA). Apparently, it's so simple that even children can understand it, as evidenced by Robert M. Lee's successful book *SCADA and Me*, a 30-page illustrated guide to industrial control systems. But its complexity is obvious when you start looking at what SCADA actually is and what it does.

Source: Haley Wauson – Cimation Blog “What is SCADA Anyway?”

In her succinct post "What is SCADA Anyway?" Ms. Wauson uses infographic style visuals and multi-syllabic words to take readers to a level of depth that goes well beyond Robert Lee's Goodnight Moon-esque masterpiece.

Had my staff read @RobertMLee 's "SCADA and Me" so they'd know what I keep talking about.

By Chris Sistrunk - See all my reviews
This review is from: SCADA and Me: A Book for Children and Management (Paperback)
Finally...I have a book to help explain (with wonderful pictures) about what I do everyday at work (for the past 8+ years). Mr. Lee does a great job of covering the basics of SCADA, while throwing in some humor as well...especially on the hot topics of SCADA in the cloud or on a smartphone. He reminds me and my colleagues that it is our job alone to protect SCADA. I bought 4 copies of the book: I gave one away to a friend in infosec, one to my boss, one to keep at my desk, and one to read with my kids at home.

Cute book that makes an important point, September 22, 2013
By Ben Rothke "Information security professional" (USA) - See all my reviews
This review is from: SCADA and Me: A Book for Children and Management (Paperback)
When is the right time to talk to your kids about SCADA? According to the new book SCADA and Me, the time is now.

SCADA Book, January 7, 2014
By Kelly (NY) - See all my reviews
Amazon Verified Purchase (What's this?)
This review is from: SCADA and Me: A Book for Children and Management (Paperback)
Perfect book for kids and understanding SCADA. It's extremely kid friendly, easy read. Its a paperback, short read and I recommend.
Know Your Core Group

- Especially when talking to management know who you are speaking for and who you are NOT speaking for
- Be aware of your core group and who you value most
- Ask your management or those you respect for feedback
  - Honest feedback makes you better when used correctly
  - Compare where you think you are to where they think you are
PROTECTING SCADA SOUNDS SO HARD!!

YES! BUT IT IS WORTH DOING TO KEEP FACILITIES AND PEOPLE SAFE!

AND I'M HERE TO HELP YOU TOO!
Be the “Matt”

• We all need to take time to educate and make things better it’s the only way forward
• Compliance...products...security...how much do we need? What’s the investment and return?
  – Investing in education and your team is always a winning and long term strategy; educate others
HOW AM I EVER GOING TO PROTECT SCADA?!

IT REQUIRES YOU TO BE PATIENT AND WATCHFUL AT ALL TIMES.

IT REQUIRES A DEDICATION TO EDUCATION -- AND DISCUSSIONS WITH OTHER SMART PEOPLE.

THERE IS NO EASY OR FAST ANSWER.
Conclusion

• When talking to management:
  – Have a goal
  – Break things down
  – Know who you speak for
  – Be open to feedback
  – Don’t compromise what you value
  – Take things in stride
  – Have fun (like at SANS ICS Summit...it’s freaking Disney World!)
SCADA y yo
por Robert M. Lee
Ilustrado por Jeff Haas
Your Help...I Need It

• I’m not an expert...I’m a life long learner
  – You have things you know that I don’t
• Something unique to contribute?
• Case studies or examples (that are legally/morally ok to share) of cyber related incidents (first hand sources)?
• Doing my PhD with research in control system cyber security (heavy need on understanding past/current threats)
  – RobertMichael.Lee@gmail.com
Robert Lee!?! You let the author of a children's book speak at your conference!?!