

CSWG / NIST Smart Grid Users Guide Subgroup

October 12, 2012

Attendance:

- Mark Ellison (co-lead)
- Craig Rosen (co-lead)
- Marianne Swanson
- Neil Greenfield
- Reynaldo de Leon
- Ward Pyles
- Vicki Pilliteri
- Amanda Stallings
- Chuck Hunt
- Tanya Brewer
- Jody Fraser

GridSec is coming up the week after next. The intent is to go through section 9 so that Mark has something to go through at the workshop; make a copy of the document w/o the annotations. The copy is completely clean and put on Twiki.

The next meeting of the team is on the 26 of October? Due to other previously scheduled activities, reschedule to November 2nd.

Craig is presenting using the NISTR in practice, with a group of four. He will plan on having Vicki provide an overview of NIST. Mark will conduct a walkthrough the document; Craig will give practical perspective from PG&E and how this will be helpful and beneficial, and perhaps something as a use case from the RMP. The team will also post the slides on the TWIKI. The team also anticipates that the audience would also find it useful to have access to these slides. Mark Ellison, Craig Rosen and the PG&E CIO will be in attendance.

The team begins review of the document, starting with Section 1 of the document. Mark requests Craig to have a copy of the documents on local drives in case lose network functionality for the use during the conference.

In Section 3 the reader is directed to create spreadsheets. Request to make the size of the table and spreadsheet to be smaller. Marianne indicated that the team won't want to make the table much smaller, in order to retain the readability of the table.

Section 3 through 4, there is a table/spreadsheet. Mark indicated that it would be nice to provide an example with the spreadsheet or in the spreadsheet, and add the comment that we're adding example to show to reader how it is done.

Marianne and Mark discussed whether there was there anything in the RMP that can be used for an example. Mark inquired if Marianne, Vicki, Craig could potentially prepare an example Vicki will work on it, and send it out for review. Craig will be doing some work on the GridSec content over the weekend. The content that Craig will be working on for GridSec will subsequently add value to the user guide. Mark asked if Tanya could add a descriptor to the table.

Proceeding on to Section 4, the document identifies Smart Grid processes. The team addressed a point of housekeeping – members would typically include business unit management, and then in parentheses power system management, info sec manager. Team requested to change to the phrase to members should include business unit management, and in parentheses indicate power system management, information security management, because the document shouldn't make the language too weak. Over in the parentheses it indicates, "including such as," and get eliminate words "members would..."

Neil reviewed the level of authority of information security that needs to be involved for risk management government team. Mark suggested that the team make it more general. Craig clarified that the team is looking at the entire cyber security space. The context of the document assumes that there is some governance in place, and that organizations understand what you mean by that. Under operations risk, there's some discussion about the wording adjustment for the governance function, then some discussion around the logical diagrams.

The team proceeded on to a discussion about the interfaces and actors. They discussed the need to clarify to the readers regarding the actors as systems or processes. The team acknowledged that if it is having confusion about it, then the reader will likewise have confusion. Mark asked the team for their feedback about whether these actors are systems or are they processes. There was acknowledgement for adjusting the document to reflect that. The team agreed that if actors are a mix of systems and processes, then the document needs clarify that and adjust the applicable content about that.

Marianne used a Customer Energy Management System as an example. She inquired of the team whether a Customer Energy Management System would include a number of subsystems behind that. It was suggested that, why not say, in a footnote or something – the team didn't want to confuse the reader about process or system. The belief was that this example, like billing, is about business process.

Craig indicated that there is a layer of abstraction above this on the process side. Mark observed that, in this context the actors on the logical diagrams are more akin to systems to business processes. Marianne indicated that this approach will require that the document address this topic one more layer down. Craig clarified that when the document addresses billing it covers also a cloud of smart meter billing data and then..." Vicki indicates that she looks at billing as a noun, as a third party or vendor with which one contracts; likewise, it could be a system with which one is contracted through.

Mark indicated that under 21ai, the document notes " head in." The document currently lists the head-in as a process; he inquired whether this indicates that the team needs to go back into section 4 and move that up one level. The team gave meter to cash as a process, which now the team is considering from a different perspective. So now the team has a business function, and the associated business processes. But on the logical diagrams, the document shows systems, so if what is shown in the logical diagram is a system, then there may be a disconnect.

The team returned back to table 3, noting that it was jumping right to the cash register that implements capture of load usage data. To avoid confusion, there was a directive to take out the head-in about distribution, because it was causing confusion.

The question arose around where was the business function metering to cash found in the NISTR? The examples are from the RMP use case, which is a smaller set of the RMP group developed. The team inquired if those use cases also reference back to the NISTR? If they did not, they were still considered a good idea. The team re-aligned that it's focus it to write a user guide to the NIST; if these two don't reference each other tightly, the result would end up being a bit of a spin.

Craig noted that this is part of the usefulness of the guide. The team can take the logical diagram on the right hand, and the guide at the left hand, and determine the appropriate CIA mapping.

He further noted that the thing that the team continues to revisit is that it needs some very solid examples of how the mapping is executed, and reflect that in the user guide. As a consequence, the reader will have one very solid example of how this all fits together.

If the team chooses an example, then the team needs to choose one that is narrower. If the example chosen is meter-to-cash, then instead of smart meters, then probably use something like AMI infrastructure. Then the team can address at a level one up.

Craig suggested to insert one example, done as homework. If the team quickly establishes security profiles, then the group can put that out aligned to usefulness. The intent is not to take the team totally out of the RMP, but the intent is to get the group's thoughts on that.

Mark commented that this kind of boils back to what the team discussed previously about the standardized list of business processes. If one doesn't get it right, then the results have repercussions. Craig concurred and indicated that the team needs to nail it down. Marianne suggested that the team may want to use what is in the logical diagram (looking at figure 2-3). Craig inquired as to what would be the most productive, the most bang for the buck? Marianne indicated that AMI does have the SG Security Profile; Craig noted that the only counter thought to that is that a lot of people define AMI as Smart Grid, but it's much more than that. Vicki noted that, being a devil's advocate, people using the guide are not the general public, but are populace familiar with the AMI.

The team continued, that collectively they want to find what is a common entry point. Whatever is chosen must flow from point A to point B throughout the document. The team discussed what the reader will align to business process versus a system or hardware. Examples of differences included: (a) Smart Metering – business process; (b) Smart Meter – thing/device/system.

The team further discussed that examples 1 through 4 are systems rather than processes. Remote meter read is a process; remote connect, disconnect are processes. The team engaged in discussion about subprocesses.

The team continued its discussion about the definition of processes. Some processes are manual; some processes involve automated systems. If one thinks about the process and what the team is trying to drill down to are the automated components and the interfaces between those. The only thing that the team is trying to eliminate with the automation is the manual steps of a meter read, log entry, and human intervention. The team

members suggested that it collectively didn't need to focus so much on the difference between system and process, but rather simply acknowledge the difference. The user guide, as well as the reader, does not need to make a "bright line" distinction between system/function and business process.

The team examined Metering-to-Cash, and then proceeded to the next process downstream from metering. Billing supports the function of Smart Metering. For something for smart meter, there are number of different processes that support this business function. There was acknowledgement of Mark Ellison's concern about "getting too far into the weeds."

There was the inquiry as to whether the team could substantiate AMI infrastructure for smart metering if that would not cause too much of a problem. There was consideration as to whether AMI was too large a scope to cover. Mark and Craig discussed whether there would be any issue with using the term AMI infrastructure; they considered if there could be a more appropriate word than "infrastructure," but decided to use it for now.

The team discussed the terms to use and how to present them. If the example used was metering-to-cash, then what is the user guide presenting with the AMI metering infrastructure? The AMI metering infrastructure collects the usage data. One of the first high-level steps to do is to take that through the AMI infrastructure. Therefore, if the user guide shows this as "collect usage data," and then another column presents the AMI infrastructure, and then what goes on in the AMI infrastructure. So, perhaps what is missing from presentation is the step and what is occurring at that step.

Mark commented that the guide should leverage the AMI infrastructure to collect metering data. It would be hard to use the Advanced Metering System because the reader would be doubly-confused; the team discussed using the term Advanced Metering instead since it sounds more process-aligned.

The team returned to the comment that initiated the process discussion, which was the place within the user guide to insert the logical diagram. The team discussed editing of comments, insertion of content around Section 2, and modifying Table 2. The focus remained on the business function of metering to cash.

The team concurred that Section 5 was the right place to reference the logical diagram. Mark indicated a preference not to insert the entire diagram; Marianne suggested the possibility of extracting only the portion of that diagram, the portion that was necessary by zooming into a portion of the diagram, and inserting that into the section.

It was suggested that somewhere in NISTR Volume 1 there is a section by section description. Mark commented that this doesn't provide the context that is needed. Marianne volunteered to go back to the original Visio diagram and generate a chart, if she was provided the exact actors and interfaces desired. Looking at page 51 of the NISTR (figure 2-16), there is the nice start of one.

Craig commented that this was the most useful type of diagram in showing information and helping him determine the suggested CIA levels. Mark noted that the team needs to work on how to approach with referencing the logical diagrams, and the AMI tables. Marianne suggested the electric guys. Mark volunteered to take that section, and then run it past Craig. Marianne recommended to them to use the NISTR to map. Craig concurred that you need a mapping. Mark suggested that when he runs it past Craig, he will also run it past Marianne as well.

Mark noted that the spreadsheet is looking a lot like the tables the team identified, so the question is – are both the tables and spreadsheet needed?

Mark further noted that his challenge is explaining the content to 100 people at GridSec. He will need to keep the presentation and discussion at a high level, and explain that the team is still working out the details. Mark has about 25 minutes, with background and high-level, and issuing a caveat.

Marianne inquired why the content would not be at the business process level at the meter read. In addition, why the team is not going down to that level? Mark responded that the discussion could group the processes 4 or 5 levels; keeping it at a higher level reduces some of the complexity. Tanya commented that table 5 goes down to that level. Mark noted that if the team can make the smart meters match what the team has done, and they will match up. Tanya inquired if they should be matched through the entire document. Mark indicated that this not necessary now, but could be placed on the to-do list; the team would focus on adjusting Table 2, and then would continue on. The team agreed to circle back early next week and discuss the updates it has made, with Thursday, 10/22 as a target date with Mark and Marianne.

Next call: Friday, October 26, 2012; 2:00pm Eastern