

**From:** [Scholl, Matthew](#)  
**To:** [Williams, Carl J. Dr. \(Fed\)](#); [Montgomery, Douglas C. \(Fed\)](#); [Stine, Kevin M. \(Fed\)](#)  
**Cc:** [Oates, Chris](#)  
**Subject:** Re: Improved Timing and Cyber  
**Date:** Thursday, February 4, 2016 9:45:35 AM

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OK, lets shoot for another day.

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**From:** "Williams, Carl J. Dr." <[carl.williams@nist.gov](mailto:carl.williams@nist.gov)>  
**Date:** Thursday, February 4, 2016 at 9:44 AM  
**To:** Matt Scholl <[matthew.scholl@nist.gov](mailto:matthew.scholl@nist.gov)>  
**Cc:** "Oates, Chris" <[chris.oates@nist.gov](mailto:chris.oates@nist.gov)>, "Stine, Kevin" <[kevin.stine@nist.gov](mailto:kevin.stine@nist.gov)>, "Battou, Abdella" <[abdella.battou@nist.gov](mailto:abdella.battou@nist.gov)>, "Dodson, Donna F" <[donna.dodson@nist.gov](mailto:donna.dodson@nist.gov)>, "Romine, Charles H" <[charles.romine@nist.gov](mailto:charles.romine@nist.gov)>  
**Subject:** Re: Improved Timing and Cyber

Matt

Thursday is out since many of us are tied up in training. Including the networking people is quite reasonable.

Carl

Please excuse typos and auto-correction  
Sent from my iPhone

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On: 04 February 2016 09:23, "Scholl, Matthew" <[matthew.scholl@nist.gov](mailto:matthew.scholl@nist.gov)> wrote:

Carl,

Sounds like a plan. While we scope this in, I think I would like to include the folks working wireless (3GPP/LTE Security) and the Network Division at the start if that's OK.

Lets shoot for Thursday next week and I will ask folks about their availability. We can go for a quorum and fill folks in as they become available.

Let me know where you want to huddle for a VTC, I can also see if I can get 225 B111 which has VTC to boulder as well.

Matt

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**From:** "Williams, Carl J. Dr." <[carl.williams@nist.gov](mailto:carl.williams@nist.gov)>  
**Date:** Wednesday, February 3, 2016 at 4:48 PM  
**To:** Matt Scholl <[matthew.scholl@nist.gov](mailto:matthew.scholl@nist.gov)>  
**Cc:** "Oates, Chris" <[chris.oates@nist.gov](mailto:chris.oates@nist.gov)>  
**Subject:** Improved Timing and Cyber

Dear Matt,

As I mentioned to you earlier today we are working on a set of 2-pagers that we can be used both to inform the FY18 process and can be shared with the transition team come November or December of this year. One of these areas would be something like "Quantum-based cyber security" or "Improved Security in an Increasingly Complex World."

The latter probably being a little better title but the idea being PML works to improve timing dissemination both in fiber and things like cell towers or valuable internet nodes — basically small high stable and accurate clocks — because we are aware that improved timing allows everything from improved "computer forensics/fingerprinting", to improved encryption, reduced man-in-the-middle attacks, improved financial stamping, ... PML and predominantly Time and Frequency Division (Chris Oates) would love to team up with the Computer Security Division (CSD) because much of the application space is yours. I think together we could create a very powerful 2-pager.

If you have a few people in CSD who would like to spend a hour discussing the nature of such a two pager with Chris and a few of us from PML we think this would be great. Why not talk with Chuck and your staff and let us know if this is something of interest. If so the two sides can come up with a small group of people and we can have a video conference to discuss what would be the best hooks to use to make this compelling and the nature of the major piece of such an initiative so we can get a draft going.

PML is hoping to have drafts of 2-pager by the end of this month although they will clearly undergo changes beyond that. Thus if interested it would be great to have the video conference perhaps next week. If Friday morning next week works I will be in Boulder but other times work as well.

Carl

Carl J. Williams, Deputy Director  
Physical Measurement Laboratory  
Fellow, Joint Quantum Institute and QulCS  
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