From: Miller, Carl A. (Fed)
To: Slattery, Oliver T. (Fed)
Subject: Re: ITL engagement with QED-C
Date: Tuesday, September 28, 2021 6:36:03 PM

Hi Oliver –

Thanks a lot for this information – I would like to get more involved in QED-C (particularly the "Use Cases" committee – I'm interested in getting a broader, cross-sector view of some of the quantum applications in cryptography and communication). I wrote to Mary Scott and William Clark just now.

-Carl

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From: Slattery, Oliver T. (Fed) <oliver.slattery@nist.gov>
Date: Tuesday, September 28, 2021 at 12:26 PM
To: Sriram, Ram D. (Fed) <ram.sriram@nist.gov>, Keyrouz, Walid (Fed) <walid.keyrouz@nist.gov>, Garguilo, John J. (Fed) <john.garguilo@nist.gov>, Bajcsy, Peter (Fed) <peter.bajcsy@nist.gov>, Blattner, Timothy J. (Fed) <timothy.blattner@nist.gov>, Dima, Alden A. (Fed) <alden.dima@nist.gov>, Indovina, Michael D. (Fed) <michael.indovina@nist.gov>, Breiner, Spencer J. (Fed) <spencer.breiner@nist.gov>, Miller, Carl A. (Fed) <carl.miller@nist.gov>
Subject: ITL engagement with QED-C

Hello Ram, Walid, John, Tim, Peter, Dima, Mike, Spencer, Carl:

I have been asked to further spread the word about QED-C activities within ITL – previously you expressed at least possible interest in quantum related activities. The Quantum Economic Development Consortium (QED-C) (https://quantumconsortium.org/) was established with the support of NIST as part of the National Quantum Initiative. It is a consortium of more than 110 companies – large and small – representing every stage of the emerging quantum industry, as well as universities, FFRDCs and a number of govt agencies. Much of the fundamental quantum research and development currently being performed at NIST and within ITL will eventually be taken to the next – and ultimately the final application – stage by members of QED-C. As NIST employees, we have access to all of the benefits of a full member of the consortium. In particular, this is a great opportunity for two-way conversations where QED-C members guide NIST scientists on the applications needs for the quantum industry and NIST scientists and researchers provide expertise in technology and standards. If you or your staff are not already engaging with QED-C, then I have listed the 6 Technical Advisory Committees below – please have a look to see if you research overlaps and if so, I encourage you to engage by:

Sending an email to @Mary Scott asking to be added to the distribution for QED-C information, including biweekly newsletters, upcoming events, etc.

- Ask Mary to provide you access to the member-only website, with roadmaps, reports, archived presentations, contact information at members, etc.
- Attend events, such as the monthly Quantum Marketplace highlighting QED-C members and their technologies/products, periodic "e-poster sessions" by student researchers (who are also interested in future jobs, in case you are hiring), etc.
- Participate in a Technical Advisory Committee (TAC). There are six TACs on various aspects of quantum (see details below). This is where projects are undertaken and where you can both contribute and get the most benefit.

QED-C currently has 6 technical advisory committees (TACs) including: Enabling Technologies; Quantum for National Security; Quantum Law; Standards and Performance Metrics; Use Cases; and Workforce. (See brief descriptions below.) The QED-C executive director is Celia Merzbacher (celia.merzbacher@sri.com).

Enabling Technologies: Identify gaps and support enabling technology R&D to enhance the quantum ecosystem. Provide the Government with a collective industry voice in guiding R&D investment priorities. Provide a platform for communication and collaboration within the quantum supply chain. Contact: Scott Davis (davis@vescent.com).

Quantum for National Security: A forum for government and industry to exchange information related to advancing QIST for national security applications. Topics cross-cut with other TACs, but with a national security focus. Contact: Jay Lowell (john.r.lowell@boeing.com).

Quantum Law: A forum for government, industry and academia to exchange information about legal and legal-adjacent issues and policies related to QIST. Topics of interest include international engagement, workforce diversity, intellectual property and social/ethical matters of QIST applications. Contact: Christopher Savoie (cjs@zapatacomputing.com).

Standards and Performance Metrics: Identify ways to encourage development of standards and performance metrics in Quantum Information Science to accelerate commercialization of quantum-based products and services. Connect members with relevant standards development organizations worldwide. Contact: Tom Lubinski (tlubinski@quantumcircuits.com).

Use Cases: Identify and elaborate applications and use cases of quantum-enabled technologies. We segment quantum technologies into three categories: Computing, Sensing, and Communications & Security. The output will inform companies across the supply chain — from component suppliers to users — as well as policy makers, government program managers, and investors. Contact: William Clark (william.clark@gd-ms.com)
Workforce: Identify education and workforce development needs to support the emerging quantum industry, working with universities and other educational institutions. Contact: Dan-Adrian German (dgerman@indiana.edu).

A number of ITL staff are already actively involved in some of the areas represented by these TACs and the more specialized sub-committees within the TACs. Please forward this to any of your staff that are interested in quantum applications for their research and invite them to explore the website for more information. For more details or if you have any questions, contact @Mary Scott or @Celia Merzbacher.

Thank you
Ollie Slattery.