

Infrastructure Advisory Council

Meeting Minutes

October 30, 2019

Attendees

- Colleen Bailie — West Haven Public Library
- Joe Campbell — Connecticut Technical High School System
- Doug Casey — Connecticut Commission for Educational Technology
- George Claffey — Central Connecticut State University
- Tom Dillon — Independent
- Fred Kass — Trinity College
- Ryan Kocsondy — Connecticut Education Network (CEN)
- Michael Mundrane — University of Connecticut
- Brandon Rush — New Milford Public Schools
- Sabina Sitaru — Connecticut Health Information Exchange

Agenda

- 5G to Support Learning
- Volunteer Cyber Corps
- Eduroam Updates
- Homework Gap
- Network Management re. 1:1 and BYOD
- K - 12 Connection Speed Recommendations

Meeting Notes

The items below represent an assimilation of ideas rather than a strict verbatim or chronological record of points shared.

Welcome

The meeting convened at 1:00 PM with a welcome by Tom Dillon, Infrastructure Advisory Council Chair, and Doug Casey of the Commission. Tom provided the group with an overview of the agenda items.

5G to Support Learning

Doug opened the topic of 5G cellular service by relaying highlights from the discussion at the Commission's September 9 meeting (see pages 8 – 9 of the meeting minutes at CT.gov/EdTech). Members addressed the importance of equity of access to all forms of technology for learning, including cellular voice and data. Doug raised the question of whether the members of the Infrastructure Advisory Council felt that the Commission should issue any input or guidance to the Council on 5G Technology, a state advisory created out of [Public Act 19-163](#).

Ryan Kocsondy noted that the Federal Communications Commission this summer (see [release from July 10, 2019](#)) dropped the requirement to dedicate Education Broadband Spectrum (EBS) to educational purposes and now allows for its sale directly to private entities. This change serves as context for a discussion around assurances of equity of access to cellular service for educational purposes.

Colleen Bailie noted that data from the U.S. Census and [Pew Internet & Technology Center](#) point to Connecticut as having one of the largest digital divides in the nation. Introducing new technologies such as 5G that only some communities or demographic groups can access might further this divide. Kerri Kearney noted the strong dependence on mobile technology for K – 12 learning, given that many students get online outside of school using cellular connections. Michael acknowledged the importance of cellular technology to support teaching and learning but questioned whether the rollout of high-frequency 5G technology, likely only in urban areas, would influence learning any more than current or older cellular technologies.

Tom suggested that the Commission could encourage the Council on 5G to ensure that companies building 5G networks provide access to low-income neighborhoods and public housing as they prioritize development in population-dense areas such as Hartford, New Haven, and Bridgeport. However, the group came to a consensus not to suggest that the Commission make recommendations to the Council on 5G. They felt that imposing specific requirements on cellular carriers is not in the Commission's set of responsibilities, and that such a statement would not likely improve access among learners.

Volunteer Cyber Corps

In the wake of recent cyber-attacks on educational institutions, Ryan opened a discussion on establishing a peer group to assist colleagues with incident management. Not all schools have the skill sets among their technology staff to respond to attacks effectively, so establishing a network of peers on call for support in such instances might benefit the broader educational community.

The Infrastructure Advisory Council members agreed with the concept and discussed two key aspects of the proposed approach: target audience(s) and terms of support. The group agreed that K – 12 schools appear to have the highest needs and greatest vulnerabilities from cyber-attacks. In general, institutions of higher education have

deeper human resources and more advanced security practices than do schools and libraries.

Those available to help schools include their peers in other districts, especially those who are members of the Connecticut Education Network (CEN). Other resources that public institutions currently leverage and that might support a peer group include [the Connecticut Intelligence Center \(CTIC\)](#); the U.S. Department of Homeland Security [Cybersecurity and Infrastructure Agency \(CISA\)](#); and [the Multi-State Information Sharing and Analysis Center \(MS-ISAC\)](#), among others.

The Infrastructure Advisory Council members expressed concern about establishing terms that limit the scope and potential liability of assistance. For example, the actions of a well-meaning technology director from a neighboring town might cause additional harm to a district recovering from a cyber-attack. The group considered other forms of support, such as collective purchasing of cyber insurance and high-touch consulting services. Imposing an additional charge on CEN member dues could establish a fund out of which the Network could pay for technology and consulting services in the event of an attack. Taking this type of approach at the onset seemed too involved and risky for CEN to assume. In addition, the Connecticut Conference of Municipalities (CCM) already operates the Connecticut Interlocal Risk Management Agency (CIRMA) to offer towns [self-insured services, including cyber insurance](#).

Part of establishing a volunteer corps should include the creation of service and participation terms. Doing so would define and limit the liability assumed by those offering assistance and those receiving it. Senior district leaders (e.g., the superintendent or board) would need to issue prior approval of help from outside the school system (i.e., a peer volunteer).

Ryan raised the critical role that CEN or another public entity could provide, that of coordinating needs and resources. As attacks take place, a coordinator would need to engage in some type of case management and match-making to optimize support based on skill sets, timing, geographic location, and other factors. The coordinator might also look at outcomes and process improvements for future interventions. Such a role would have to take the form of a dedicated, skilled staff member and so require funding.

Michael acknowledged the collective needs that the group expressed and suggested that CEN engage with district technology leaders who have experienced cyber-attacks recently. Doing so would allow for an inventory of needs and vulnerabilities and help with the design of a solution. Doug suggested that any list of potential volunteers should include at least a high-level assessment of each individual's experience, capabilities, certifications, physical location, and other criteria to help match needs and resources.

The group concluded the discussion by acknowledging the ongoing need for all educational institutions to have cybersecurity plans and resources. A program to provide "burst capability" for incident management would offer much-needed support

to under-resourced institutions and lead to the strengthening of best practices and trust among technology leaders.

Eduroam Updates

Tom briefly shared updates on several pilot initiatives of [Eduroam](#), which allows students to access the Internet through a global network of participating institutions. He has made progress in speaking with leaders from Bridgeport Public Schools as well as his own town of Stratford. Colleen mentioned that her contacts at the University of Bridgeport and Bridgeport Public Library would have interest in participating. Enlisting the support of multiple anchor institutions allows for the rollout of Eduroam-enabled access points, thereby allowing learners across K – 12 and higher education to get online at multiple locations throughout a given community.

In Hartford, a successful kickoff meeting this summer among leaders of Metro-Hartford Innovation Systems (MHIS), Trinity College, and CEN has led to further planning conversations. At the time of the Infrastructure Advisory Council's meeting, Charisse Snipes, MHIS Acting Chief Innovation Officer, was meeting with leaders of Hartford Public Schools to discuss the pilot.

The members briefly discussed specific opportunities and potential barriers in these three communities as well as in Middletown. The Advisory Council and CEN remain committed to supporting these pilots through reasonable investments of time and planning, given the strong opportunity to help close the digital divide by leveraging existing Internet connections throughout these communities.

Homework Gap

Concerning the broader issue of connecting students to online resources outside of school, Joe Campbell asked about State efforts to provide online access to learners. He noted that the Technical High Schools loan wireless access points to students for use outside of school.

Doug reminded the group of the Commission's [Digital Equity Toolkit](#), published in December 2017, as a compendium of best practices and resources for communities to address the digital divide. He suggested that districts such as Joe's might help expand the document by providing case studies of solutions that other leaders could consider replicating in their own towns. Following the 2018 CEN Conference session on digital equity, which included presentations by Joe, Kerri Kearney, and Sabina Sitaru, Doug had made a similar request for case studies to expand and re-release the Toolkit.

Network Management re. 1:1 and BYOD

Joe raised another topic tied to off-campus connectivity, how schools ensure filtering at the device level. The group discussed several commercial solutions that districts use on Chromebooks and other devices. Doug noted that districts must comply with the requirements of the [Children's Internet Protection Act \(CIPA\)](#) in order to be eligible for E-rate funding. The CIPA provisions include content filtering through school and library networks but do not address end-point (i.e., device) filtering. That said, Doug, Kerri, Joe, and Ryan acknowledged that schools generally configure devices with filtering software, regardless of the networks that students use to reach the Internet.

Colleen articulated the widespread view among library leaders that filtering content stands as an infringement of patrons' freedom of speech. Yet she also noted that some patrons attempt to use libraries to access blocked content such as pornography that does not align with the purpose of libraries to support access to research and learning materials. Ryan pointed to pornography and hate speech as the two most common types of Web sites that CEN filters block at the state level for schools and libraries.

Michael expressed his opposition to the CIPA requirement to filter, and the disqualification of schools and libraries from E-rate eligibility if they do not do so. He argued for filtering to remain optional, deferring to schools and libraries to determine what types of content to block. For example, early elementary grades might see much more strict filtering than middle and high schools. He suggested that schools and libraries might adopt content monitoring rather than filtering practices, addressing abuses of school networks based on behavior rather than preventing access to pre-determined categories of sites. Michael suggested that the Commission consider proposing this change to the Federal Communications Commission (FCC), which oversees CIPA and E-rate.

K - 12 Connection Speed Recommendations

The group concluded the meeting by briefly discussing K – 12 connectivity benchmarks. The State Educational Technology Directors Association (SETDA) has leveraged the insights of its members, specialists in digital learning needs, to develop these standards. Joe asked about new standards, and Doug shared that SETDA will be releasing increased bandwidth benchmarks soon. These measures will scale by school size, given the efficiencies of connecting large numbers of learners. The group agreed that such measures should remain guidelines, given that each district has different digital learning tools and pedagogies that require varying levels of connectivity.

Adjournment

Tom thanked the members for their time and input and concluded the meeting at approximately 3:00 PM.