



**DEPARTMENT OF ADMINISTRATIVE SERVICES
BUREAU OF ENTERPRISE SYSTEMS AND TECHNOLOGY
Legislative Office Building Room 1B
210 Capitol Avenue, Hartford, CT 06106
1:00 – 3:00 PM**

MINUTES

December 2, 2019

Commission Members in Attendance

Raymond, Mark – Commission Chair and Chief Information Officer, DAS-BEST
Mundrane, Michael — Commission Vice Chair and Vice President and Chief Information Officer, University of Connecticut
Baillie, Colleen — Director, West Haven Public Library
Caruso, Nick — Senior Staff Associate for Field Service, Connecticut Association of Boards of Education (CABE)
Casey, Doug – Executive Director, CT Commission for Educational Technology
Dillon, Tom — Principal, The David A. Fields Group
Elsesser, John — Town Manager, Town of Coventry (CT Council of Small Towns)
Gopalakrishnan, Ajit — Chief Performance Officer, State Department of Education
Shellard, Susan — Director of Administration, Department of Economic and Community Development (DECD)
Stephanou, Steve — Deputy General Manager, Town of Manchester (CT Conference of Municipalities)
Wiggin, Kendall — State Librarian, Connecticut State Library
Zak, Scott — Senior Director of Learning Technologies, Board of Regents

Others in Attendance

Chatterjee, Supriyo "SB"
Giammarco, Peter — Verizon Wireless
Kocsondy, Ryan — Director, Connecticut Education Network (CEN)
Racamato, Victoria — Assistant to the State Chief Information Officer

Video Archive

A digital video recording of the meeting was available at the time of this writing on the Connecticut Network, <http://www.ct-n.com/ctnplayer.asp?odID=16922>.



Welcome

Commission Chair Mark Raymond greeted members and others in attendance and called the meeting to order at 1:00 PM.

Approval of Meeting Minutes

Given the inclement weather, Mark swiftly proceeded to a review of the [September 9 quarterly Commission meeting minutes](#) as well as minutes from the [October 23 special meeting of the Commission](#). Nick Caruso made a motion to approve the September minutes, and Ken Wiggin offered a second. With no comments or discussion, Mark called a vote to adopt the minutes, with a unanimous approval and no abstentions. Regarding the October 23 meeting, Ken made a motion to adopt those minutes, with Scott Zak offering a second. The members had no discussion of those brief minutes, with a unanimous vote to adopt except for abstentions from Ajit Gopalakrishnan, Michael Mundrane, and Nick, who could not attend that meeting.

Report of the Executive Director

Mark turned the meeting over to Doug to share the [December Executive Director's Report](#), with progress updates on the Commission's [Strategic Goals and Plan](#).

- **Proposed Changes to Statute**

Following the Commission's vote to approve both sets of minutes, Doug began his report with a quick review of the October 23 special meeting. During that discussion, members reviewed and unanimously approved recommendations to modify the statute that governs the Commission ([CGS § 61a](#)) to increase representation of the K – 12 community, who most directly support students, the Commission's main beneficiaries. The recommendations would reinstate positions that were defined in previous versions of the statute, namely one (1) representative each from CAPSS, CECA, CEA (secondary teacher), and AFT (elementary teacher).

- **Open Education Resources (OER)**

On November 14, the Commission published the report "[Open Education Resources: Survey Results and Opportunities for Connecticut Schools and Universities](#)." The work comes out of a coordinated awareness and information-gathering campaign entitled "Go Open CT," around the use of OER in the state's colleges and schools. Through direct e-mail and social media, Doug solicited input through an online survey from leaders and educators on OER practice, promise, and challenges. Results show that 72 percent of respondents



create and 86 percent share OER. They see many benefits from using OER in their classrooms and lecture halls, including cost savings, flexibility, and quality. Respondents expressed their need for training and support in authoring, finding, curating, and licensing materials. Doug will pursue funding to help address these training needs as well as a shared platform for creating and sharing materials. A number of leadership organizations have already expressed support of this work, including the [State Department of Education \(SDE\) Academic Office](#), the [Connecticut Association of Public School Superintendents \(CAPSS\)](#), and the [State Educational Resource Center \(SERC\)](#).

Mark expressed his enthusiasm for the report and the positive reception it has received. He noted the promise of doing more with open resources and how this initiative directly supports the Commission's charge of facilitating the exchange of ideas and materials. Ken echoed these comments and suggested that it would be valuable to have the perspective of students around OER's benefits in future reports.

- **Advocacy**

The Commission occasionally submits public comments and letters of support regarding matters of interest to its constituents. Doug provided a review of recent outcomes from the Commission's advocacy. While not finalized, the Federal Communications Commission should likely not pursue a [proposed rulemaking](#) to combine the E-rate and Rural Healthcare programs. On July 29, the Commission filed [comments opposing this move](#), given that it would not lead to efficiencies or stronger oversight of either program and pit school and healthcare technology needs against each other.

In August, the Commission submitted [comments](#) to the Public Utilities Regulatory Agency (PURA) opposing the eligibility of individuals to receive funds through the [Public, Educational and Governmental Programming and Educational Technology Investment Account \(PEGPETIA\) program](#). The [Authority's decision](#) posted on October 23 supports the views of the Commission and others that limiting PEGPETIA awards to educational entities would most efficiently fulfill the program's design of serving the educational needs of Connecticut's students and residents.

In August, the Commission provided a letter of support to the Center for Applied Special Technology (CAST) to continue operating the National Center for Accessible Educational Materials (AEM Center). The U.S. Department of Education has since awarded these responsibilities to CAST. Finally, the Commission also endorsed a proposal from ReadyCT (formerly the Connecticut Council for Education Reform) to develop a model computer science curriculum in partnership with Newtown Public Schools. Unfortunately, ReadyCT did not



receive funding to support that work. Doug thanked the members for their continued efforts in sharing opportunities to advocate for causes that support effective teaching and learning in Connecticut.

- **Schools, Health & Libraries Broadband (SHLB) Coalition**

In October, the SHLB Coalition Board of Directors voted Doug in as a new member. The organization will provide another platform for insights and advocacy of access to broadband to anchor institutions, central to the Commission's purpose and activities.

- **PEGPETIA Grant**

In November, PURA opened applications to the PEGPETIA grant, which provides educational institutions with public access television and educational technology funds. Doug affirmed that the Commission intends to submit a proposal to support its initiatives. He mentioned a [letter of guidance](#) posted on PURA's site that provides clarification of what constitutes "educational technology." That document points to the objectives defined in the Commission's statute ([CGS § 61a](#)) and encourages organizations to submit applications aligned with the work defined in the Commission's five-year [State Technology Goals and Plan](#).

Concerning the allocation of funding, Ajit asked about the distributions between public access and educational technology initiatives, and what PURA may consider projects worth funding. Doug confirmed that the program's application package provides for a total of \$7.0 million, half of which goes to support public access television, and half to educational technology projects, with an emphasis on hardware purchases. He reiterated that PURA appears to favor proposals aligned with the Commission's charge and strategic plan.

John Elsesser recommended that the Commission's proposal be scalable in scope and funding. Given the competitive nature of the PEGPETIA program, it would serve the best interests of the Commission to design a plan that could accomplish measurable outcomes at various levels of funding, if actual awards represent a fraction of the original, proposed totals. In response to Tom Dillon's question about whether these funds are recurring or one-time, John provided some background on the program. The PEGPETIA funds come from a tariff on cable television services collected specifically to support educational purposes, yet members of the Legislature changed the law to allow the State to move those dollars to the General Fund over the past 5 – 7 years. John's understanding is that the \$7M in awards represents the end of the program.



- **Commission and Network Promotion and Awareness**

Doug concluded his report by sharing a few recent publications that highlight the impact of the Commission and CEN. Members received a printed executive summary of SETDA's "[Broadband Imperative III](#)" report. The document provides new benchmarks in per-student Internet connection speeds in schools and libraries, standards that CEN already meets. It also [points to the Network as a leader](#) not only in connectivity but also in providing novel ways of protecting its members, such as centralized distributed denial of service (DDoS) protection.

The recently released Education Super Highway [State of the States report](#) also touts the services that CEN delivers, providing 100 percent of districts with fiber connections that meet or exceed national benchmarks. Connecticut stands as [one of only four states](#) that have earned that commendation. Doug also mentioned the [video produced by Education Super Highway](#) that highlights the innovative digital learning opportunities in Norwalk Public Schools, enabled by CEN's services. In February 2020, the [Digital Learning Day](#) initiative will also feature Connecticut as one of eight states exemplifying 21st century learning.

On November 6, Doug presented at the U.S. Senate to members of Congress and the press. Along with SETDA leadership, he detailed the work of the Commission and CEN as part of an overview of the Broadband Imperative report. Several publications covered the story, including [Law 360](#), citing Doug's recommendations to continue funding E-rate and the importance of expanding the program's eligible services to include cybersecurity protections.

Mark thanked Doug for the updates and noted the Commission's broad impact on a state and national level, as reflected in the Executive Director's Report. He thanked the members as well as those serving in the Advisory Councils for their continued advocacy to make sure the voices and interests of the education community are widely heard.



CEN Updates

Mark turned the floor over to Ryan for a report highlighting CEN's [quarterly updates](#), aligned to [CEN's Strategic Plan](#).

- **Provide Value**

Ryan began by calling attention to the estimated annual cost avoidance to members of \$17 – 25 million. This range derives from (A) the differential from third-party estimates of service charges through CEN versus those in neighboring states and (B) the value-added services that members do not pay for directly, such as Web filtering and DDoS mitigation. Members continue to express great appreciation for DDoS services, which should total close to 1,000 incidents and more than 31 terabytes of mitigated traffic in calendar year 2019.

Regarding the estimated cost avoidance, Tom sought clarification on the DDoS mitigation services. Ryan explained that the range of savings spans, on the low end, the estimated cost of services entered into through a contract (~\$10M total statewide) to, on the upper end, the combined cost of on-demand, emergency mitigation services (~\$18M statewide). Tom appreciated the estimated direct cost avoidance. He also emphasized the enormous indirect value of DDoS mitigation. It remains difficult to gauge the true cost to a school or town of being disconnected through an attack over the course of hours or days. Mark also noted that mitigating attacks reduces the perception of school vulnerability to such incidents and so likely has resulted in fewer “copycat” incidents.

Michael asked whether the estimated \$6.6M in cost avoidance for Internet service that Ryan shared in his report reflects a net cost savings. In other words, he wanted to know whether the total represents the market value of these connections minus what members currently pay. Ryan acknowledged that the DDoS cost avoidance does not account for CEN’s expenses, though as Mark pointed out, at approximately \$100,000 per year, those fees amount to a rounding error, when compared with their true value.

In terms of district support, Ajit asked if CEN had helped Wolcott Public Schools, which suffered a cyber-attack this fall. Ryan explained that Wolcott suffered a ransomware attack, the result of inadequate firewall protections within the district, different from a DDoS attack. His team did offer assistance and directed Wolcott to work with the Connecticut Intelligence Center (CTIC) to restore operations in the district. The Network informally assists members during and following such attacks, and Ryan shared that he is considering the development of more formal cyber support services. John welcomed this idea and encouraged CEN to promote



standard and enhanced services with towns soon, as they are developing their fiscal year 2021 budgets.

Ryan also shared progress on the CT Library Fiber Consortium Project, with approximately 70 percent of Connecticut's libraries now connected to CEN fiber.

- **Ignite Innovation**

Initial planning continues to support the deployment of the Eduroam framework in Hartford and Middletown. Discussions with Metro-Hartford Information Systems (MHIS) and Trinity College as well as Middletown Public Schools have been productive. Ryan clarified that Eduroam provides free authentication through the existing wireless networks of anchor institutions. The solution will help students of all ages connect through these networks.

- **Foster Collaboration**

In addition to gathering feedback regarding member services through an online survey (bit.ly/CENSurvey19), CEN has been conducting town halls across the state. These facilitated sessions spur dialog around the Network's strategic plan and provide a forum to address member needs.

The Network hosted a Cyber Defense Clinic on October 3 at Central Connecticut State University (CCSU). Ryan thanked Infrastructure Advisory Council member and CCSU CIO George Claffey for hosting this event and for his continued engagement in Commission and CEN activities. A total of 83 members attended this session on best practices in protecting against, and recovering from, incidents such as ransomware attacks. Presenters included Rebecca Osleger of Suffield and Michael Skott of Middletown as well as representatives of the Department of Homeland Security, CTIC, and the Department of Emergency Services and Public Protection (DESPP) Computer Crimes Laboratory. Ryan noted that in speaking with its members, CEN will continue to promote the capabilities and resources that these agencies provide.

Ryan was recently elected as the Secretary of [The Quilt](#), the national organization for research and education networks. He was also elected to the advisory committee of [Northern Crossroads](#), a regional network connecting members throughout New England.



- **Enhance Core Services**

Michael Harris joined CEN on November 8, serving as the Network's Business Services Supervisor. Ryan is currently conducting candidate interviews for the Program Administrator position.

To upgrade end-of-life equipment for the Network's distribution layer, CEN's team is conducting proof-of-concept testing with two vendors. Ryan expects that CEN will select a provider in January to begin work on the buildout. Finally, work progresses on the New York City buildout, with the expectation of completing the project by mid-winter.

Infrastructure Advisory Council Report

Tom Dillon, Chair of the Infrastructure Advisory Council, provided some brief updates, noting that full details of the November 12 quarterly meeting of the Council appear in the [meeting minutes](#). He welcomed Brandon Rush, New Milford Public Schools' Technology Director, as a new member to the Advisory Council and expressed gratitude for his participation.

Tom focused his comments on progress to launch several Eduroam pilots across the state. As Ryan had mentioned earlier, the Eduroam framework allows students of all ages to connect to wireless access points in educational institutions across the world. Deployment of Eduroam authentication technologies has the potential to get all K – 12 students online outside of school, helping to close the “homework gap.” Tom listed Bridgeport, Hartford, Middletown, and Stratford as locations where superintendents, technology directors, and other stakeholders are designing plans to implement Eduroam. He promised to keep the Commission members updated on this important work in future meetings.

Digital Learning Advisory Council Report

As Chair of the Digital Learning Advisory Council, Nick Caruso focused his report on 5G cellular technology. Specifically, he raised the question of how the availability of 5G networks may enable and lead to innovations in new forms of digital learning. He also highlighted concerns around equity of access to technology such as 5G. The group discussed virtual reality and location-based applications as examples of what high-speed, high-capacity mobile networks might support. At a higher level, the Advisory Council members expressed a need to articulate what the future of learning might look like if such technologies were available to all students and citizens. Given that the Council on 5G serves as the State's advisory board on the technology, Nick shared the group's suggestion that someone from the Commission serve on or advise that group on equitable access and educational applications.



Based on a recent review of Connecticut statutes, John Elsesser noted that PURA can help close the digital divide by leveraging funds collected through levies on telecommunications services. He expressed concern that carriers are not pursuing universal availability of 5G service. He is working with several municipal leadership groups to advocate for the broadest availability of this new technology. To his knowledge, the Council on 5G has not met its responsibilities of reaching out to towns about the deployment of 5G, steps that body must take before the beginning of the next legislative session in January.

Mark thanked John for his comments and encouraged him to continue sharing issues of equity with the Commission. Mark suggested that members of the two Advisory Councils, perhaps in a combined meeting, address the key concerns around future technology applications and universal accessibility.

Statement on Role of New Technologies to Support Learning

As a continuation of the prior discussion on the rollout of new, 5G cellular networks, Mark asked Doug to provide background on the next agenda topic. In past Advisory Council meetings, members of those groups had expressed both hope for and concern about the role of new technologies to support teaching and learning. In the case of 5G, that technology's potential to connect students anywhere, anytime to immersive and personalized learning resources such as augmented and virtual reality applications spurred exciting dialogs. At the same time, concerns persist around these new forms and modes of technology, that inequities of access continue to widen the digital divide.

In the Digital Learning Advisory Council, members expressed a need for the Commission to consider a general statement technology and education stakeholders, that they thoughtfully include educational applications into the design and rollout of new technologies. The Commission could provide a vision for how teaching and learning can benefit from new forms of technology. Doing so would inform the work of legislators and public leaders as well as telecommunications providers and software developers to serve the broader interests of learning and civic engagement for all Connecticut residents.

Ken welcomed the conversation to help articulate the current reality of teaching and learning in schools. For example, the use of mobile, handheld technology will continue to grow. Ken underscored that efforts to advocate for effective teaching and learning are never "done," that providing the essential conditions for learning — such as the state broadband network and digital content collections — should remain a core focus of the Commission. Nick agreed and felt that the Commission should convey a broader vision for digital learning than a focus on current applications or those just over the



horizon. He saw this visioning as an ongoing process, acknowledging that what we plan today may need to change tomorrow to support students' needs. John Elsesser echoed this idea of having broad, inspiring language that remains relevant over time while translating these guiding principles into more tangible, short-term goals.

Tom tied the discussion back to questions of equity, noting the rapid pace of change in technology. He cautioned that the Commission should not develop prescriptive statements on the direction that digital learning should take, instead trusting teachers and educational leaders to help translate new forms of technology into meaningful educational applications. He encouraged boards of education, as they calculate the cost savings of moving to digital learning approaches, to include the cost of getting students online outside of school.

Michael welcomed the opportunity to say something substantive but that, in doing so, the Commission should mention technology as a means of decreasing friction to learning outcomes. While expressing historical, contemporary, and possible future developments in technology may fall in line with the Commission's purpose, these statements should always focus on sustained outcomes.

Doug shared the Commission's current vision statement: "That every learner in Connecticut benefits from the full potential of technology to support personalized and impactful teaching, learning, research, and advancement." Reflecting on how that statement articulates the purpose of the Commission, Mark noted the significant changes in how we define learning — forms, locations, frequency, etc. — that have taken place since the Commission's start 20 years ago. Learning can now take many forms and result not just in traditional credentials but also in badges and more incremental learning attainments. He encouraged the Commission to continue considering what we mean by "educational technology," what it is and how to ensure that all learners have access to it. Mark suggested that the Commission look at its current vision statement in terms of gaps, where attainment of that vision falls short, to help guide future activities.

Michael concluded the discussion by emphasizing that technology itself does not represent a benefit but a means to an end, the achievement of learning outcomes for students, educators, and institutions. Keeping a focus on outcomes, to echo Mark's earlier point about identifying gaps, should hold particular resonance among legislators and other decision makers.

Public Comment

Following this discussion on the strategic uses of technology in learning, Mark opened the floor for any visitors wishing to offer public comment. Supriyo "S.B." Chatterjee welcomed the opportunity to share some observations on the potential of artificial



intelligence (AI) in learning. He brought to the Commission's attention last year's [House Bill 6187, "An Act Requiring the Study of Commercial and Practical Applications of Artificial Intelligence."](#) The language of this bill addressed only the potential impact of AI on workforce displacement; future statute could also look at ways to avoid such impacts of automation by ensuring students graduate with higher-level competencies and skills for lifelong learning. He encouraged the Commission to include AI in its future recommendations and noted that a growing number of Connecticut high school teachers use resources from the CS for All (www.csforall.org) and AI for All (www.ai-4-all.org) programs. He thanked the Commission members for their consideration and offered to submit formal comments to Doug. Mark thanked S.B. for his continued engagement with the Commission and asked if the members had any questions for S.B. With none raised, Doug shared the video from Education Super Highway mentioned during the Executive Director's report, highlighting the exemplary digital learning programs taking place in Norwalk Public Schools, made possible through CEN's safe, scalable fiber connections: www.youtube.be/oQacTGRKXM0.

Acknowledgment of Ken Wiggin

While not on the formal agenda, Mark took a few minutes before the close of the meeting to thank Ken Wiggin, who will retire December 31, for his service to the Commission and the State. Governor Lamont offered words of appreciation by way of a [video recording](#) shared with the Commission members. In that message, the Governor recognized Ken's advocacy for libraries and efforts to close the digital divide.

Following the Governor's comments, Nick Caruso stated that it has been a privilege to work with Ken, harkening back to their days on the State's Joint Commission for Educational Technology (JCET), the Commission's precursor. He noted Ken's leadership, wisdom, and guidance as an active member and past Chair of the Commission. While passionately representing the interests of libraries, Ken always recognized the broader benefits of technology access to learners in schools and universities.

Mark expressed high regards for Ken on behalf of John Vittner, another Commission member who has worked with Ken for many years. Mark also thanked Ken personally, recognizing him as one of the most impactful public servants that he has worked with in his 30 years of government service. Ken understands the nuances of public institutions and how to get things done, always focusing on achievable outcomes in the face of limited resources. His body of work includes the creation of [researchIT](#) (formerly iCONN), the State's digital library; the addition of e-books to that collection; and, most recently, connecting libraries to CEN. While gifted with tremendous vision, Ken has always focused on incremental achievements that deliver value to learners across the state. Mark noted that Ken has taken on additional responsibilities, such as serving on the State's [Information Technology Capital Investment Program](#) as a steward of technology initiatives that benefit Connecticut citizens.



Ken thanked the members and stated that it has been a privilege to work for the State Library and serve on the Commission. He shared an excerpt from a 25-year-old memo he wrote as New Hampshire's State Librarian, asking a colleague to "tell me what this Internet thing is." He remarked on the amazing progress since then and defined the Commission as a group of dedicated individuals working together to accomplish common goals. He concluded his remarks with the encouragement that there is "no going back" and to "keep moving forward" with the important work that lies ahead.

Scheduled 2020 Meeting Dates

Mark noted the following Commission meetings scheduled for the 2020 calendar year:

- Monday, March 2
- Monday, June 1
- Monday, September 7
- Monday, December 7

Adjournment

Mark entertained a motion to adjourn, with Ken offering the first and Nick a second. The motion passed unanimously with no abstentions. The meeting adjourned at 3:00 PM.

Respectfully submitted,

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A handwritten signature in black ink that reads "Douglas Casey".