

IEEE Engineering in Medicine & Biology Standards Committee Presents:

"A Day in the Life of a Working Group"

Ms. Cj Rieser Ph.D., IEEE P2795 Chair (cjrieser@ieee.org) 4/9/21

What motivated you to get involved in standards development work?

My interest in IEEE standards work stemmed from an aspiration to help build smart connected communities that help grow care and learning networks that could benefit all people, especially those in vulnerable populations. Clinicians often grapple with the burden and complexities around enabling standardized data exchange as well as the assumption that such patient or provider information by itself would one day be safely accessed with appropriate context. In the last decade clinical decision support capabilities and solutions have begun evolving to address a simple question regarding the promise of cognitive computing. My role as the chair of the IEEE P2795 shared analytics working group focuses on the following thesis: Could the next chapter in digital health, after the initial foundation of capturing electronic health data, now focus on safely sharing medical analytics thereby rapidly accelerating the process of medical discovery while preserving personal privacy?

Why is IEEE the right place for you to invest your time and energy in standards development?

A colleague recently equated the request to create a trusted national and maybe global IEEE P2795 analytic exchange network to years ago the challenge of deploying a power grid at scale that relied on standards in which power could be accessed regionally, nationally, then globally. I could relate to this since there are so many ways that we power our digital lives, some of which allow portable functions while others require more static but usually larger scale infrastructure. However, one of the challenges is how to develop standards that can scale trusted medical analytic insights through a standardized global exchange that respects privacy, security, and autonomy. This is especially evident in the midst of the COVID-19 pandemic in which the future of so many is dependent on a worldwide response in which insights needed for empathetic decisions must be made in very fluid environments. Over multiple decades I've seen the power of globally formed open IEEE digital standards, specifically for connected systems like the now ubiquitous IEEE Wifi 802.11 family of standards and other internet standards. IEEE's standards association has enabled the IEEE P2795 shared analytics working group to build on the academic, government, and industry momentum that helped MITRE and UVA Health launch the effort in a way that any individual contributor could provide ideas. The IEEE policies avoid proprietary issues and encourage innovation. For example, based on organic interest the shared analytics working group recently created multiple sub-working groups focused on shared analytics data models, quality of metrics and measures, analytic computation models, and trusted analytic exchange. In recent days participants expressed creative interest in a sub-working group also focused on standardized analytic models for distributed computations.

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What are some of the roles you play in your working group?

As the IEEE P2795 Chair my role is to “provide leadership and guidance during the standards development process, helping move towards completion of the finished standard. The Chair also serves as a point of contact for people who have technical questions or comments about the content of the standard. The Working Group Chair will plan the meetings and organize the work. It also helps if the chair delegates assignments for developing parts of the standard to members of the Working Group. The Working Group may have other officers, such as a Vice Chair, Secretary, or Treasurer. All of these roles could aid the Chair and the Working Group in moving their project forward.” Beyond that formal role as the Chair, I also work closely with the Vice Chair and Secretary as well as sub-working group chairs. The IEEE P2795 working group does not currently have a Treasurer as the effort does not collect any funds, in order to reduce any barriers to participation.

How do you see your working in IEEE standards development impacting or "raising the world's standards" for your industry and/or humanity?

Medical technology standards that are open, transparent, representative, and equitable can help democratize innovation and increase affordable access to knowledge as well as resources that help humans flourish freely. The healthcare field has some global examples of how emerging medical technologies can transcend boundaries for the overall good. Yet health disparities and bias persist, including in digital health environments. The IEEE P2795 shared analytics standard will hopefully one day help transform digital health, and especially around future medical cyber systems that must be resilient, privacy preserving, and inclusive of the care and learning needs of all people. There is great potential for the four-part handshake protocol being developed as part of the IEEE P2795 analytic exchange network standard to usher in the next chapter of smart connected care and learning while reducing the cost and risk associated with medical technologies needed to enable medical analytic transparency.