ML STRATEGIES

FCC and NSF Workshop on AI for Communications Networks and Consumers — AI: The Washington Report

July 20, 2023 | Article | By **Christen B'anca Glenn**

VIEWPOINT TOPICS

- Artificial Intelligence
- Telecommunications & Technology
- AI: The Washington Report

SERVICE AREAS

- Telecommunications & Technology

Welcome to this week's issue of *AI: The Washington Report*, a joint undertaking of Mintz and its government affairs affiliate, ML Strategies. The accelerating advances in artificial intelligence ("AI") and the practical, legal, and policy issues AI creates have exponentially increased the federal government's interest in AI and its implications. In these weekly reports, we hope to keep our clients and friends abreast of that Washington-focused set of potential legislative, executive, and regulatory activities.

This week, Of Counsel Christen B'anca Glenn of the firm's Technology, Communications & Media (TechComm) Practice reports on the July 13, 2023 Federal Communications Commission's ("FCC") workshop on "The Opportunities and Challenges of Artificial Intelligence for Communications Networks and Consumers." During the workshop, panelists discussed AI's potential to improve network reliability and resiliency. The tone of the panelists' discussion suggests that in the immediate future, the FCC has little appetite to promulgate regulation on AI.

FCC and NSF Workshop Explores Opportunities and Challenges Related to AI

On July 13, 2023, the Federal Communications Commission ("FCC") and the National Science Foundation ("NSF") co-hosted a half-day workshop on "The Opportunities and Challenges of Artificial Intelligence for Communications Networks and Consumers." The workshop featured speakers from both the FCC and NSF, as well as panelists representing the telecommunications and technology industries, academia, and public interest groups. The tone of the workshop was a positive one, with panelists noting AI's potential to enhance communication network efficiency; there was little suggestion that the FCC is contemplating an AI regulatory role in the near future.

FCC Chairwoman Jessica Rosenworcel, FCC Commissioner Nathan Simington, and NSF Director Dr. Sethuraman Panchanathan each provided opening remarks.

In her remarks, **Chairwoman Rosenworcel** expressed optimism about the future of AI. She explained that AI has the potential to enhance communications networks by improving network efficiency and effectiveness and by increasing network trust. For example, Chairwoman Rosenworcel noted that AI can be used to improve spectrum efficiency in the increasingly congested radio frequency environment by "teach[ing] our wireless devices to manage transmissions on their own," thus enabling the "best use of spectrum" without the use of a central, spectrum-sharing administrator.

Chairwoman Rosenworcel also announced that the FCC will **initiate a proceeding** to explore ways to increase the agency's knowledge and understanding of non-federal spectrum use. As part of the proceeding, the FCC will examine how technologies such as AI can improve spectrum management by providing insight into large and complex datasets. Chairwoman Rosenworcel explained that the FCC has historically relied on third parties for metrics regarding spectrum usage, which provided a limited picture. AI, however, will enable the FCC to identify new opportunities to facilitate greater spectrum use. Chairwoman Rosenworcel also recognized that AI can improve network resiliency through software and

virtualization, which can help a network detect and resolve issues on its own before such issues reach a consumer. In addition, Chairwoman Rosenworcel noted that AI can be leveraged to protect consumers from robocalls and robotexts, restoring consumer trust in communications networks.

Commissioner Simington discussed how AI, as we are experiencing it today, has actually been in development for decades, and he argued that further AI innovation should not be constrained by regulatory mandates. Citing the development of the semiconductor market and the exponential growth of consumer and commercial internet-based applications, Commissioner Simington explained that US technological innovation has been able to thrive in the past with little to no regulatory involvement. In contrast, he argued that AI regulations similar to the EU's General Data Protection Regulation would not only stifle future US AI innovation but also compromise US technological leadership. Commissioner Simington urged the United States to protect AI innovation from competitors and foreign adversaries through, for example, the use of the International Traffic in Arms Regulations (ITAR) and the Committee on Foreign Investment in the United States (CFIUS).

Dr. Panchanathan discussed how continued collaboration between the FCC and the NSF will drive AI innovation. Similar to Commissioner Simington's remarks, Dr. Panchanathan explained that the AI and network solutions available today are the result of several decades of research supported by sustained investment from the NSF.

Following the opening remarks, Margaret Martonosi, NSF's Assistant Director for Directorate for Computer and Information Science and Engineering, gave the keynote address, which focused on the NSF's past and future support for AI research. Dr. Martonosi noted that the NSF is the nation's largest non-defense funder of AI research, investing around $800 million each year toward making AI more trustworthy, explainable, and safe. Dr. Martonosi noted that the NSF anticipates that AI — specifically advanced machine learning — will have various uses in the wireless industry, including interference mitigation, network optimization, and network management, among other things.

The first panel of the workshop explored AI's current and future uses in communications networks and technologies. The panelists reiterated Chairwoman Rosenworcel's point that AI can be used to maximize the reliability and robustness of communications networks. The panelists discussed how future applications of AI in communications networks could, for example, include optimizing network slicing, detecting network inefficiencies, and predicting network congestion. With respect to whether the United States should develop a national AI strategy, the panelists' answers were divided. Some of the panelists expressed support for regulations for the purpose of AI standards development and regulations to create accountability. Other panelists pointed out that regulations could have the unintended effect of stifling innovation, as Commissioner Simington noted.

Before the second workshop panel began, FCC Commissioner Geoffrey Starks gave remarks. He explained that intersectionality and cross-agency collaboration is critical for the government to understand the risks and opportunities associated with AI. Commissioner Starks noted that he is considering how AI can be used to improve US wireless networks. In particular, he is considering how AI can be used to predict which frequencies will be used, where they will be used, and how long they will be used as spectrum availability becomes scarcer. He is also considering how AI can enhance wireless network planning by making virtualized deployments more efficient and how AI can help people with disabilities benefit from modern-day communications. Commissioner Starks noted that AI has raised the stakes for defending US networks against security risks.

The second panel of the workshop examined AI as both a tool and a source of challenges for consumers. The panelists discussed how AI could be used to ensure that all consumers are subject to fair and reasonable prices for communications services, protect consumers from robocalls and robotexts through fraud detection techniques that use algorithms and voice biometrics, and enhance the accessibility solutions of telecommunications products and services for people with disabilities. The panelists discussed the various limitations associated with AI, including introducing human error and building data-driven biases into AI systems.

Authors

Christen B'anca Glenn