GT CDAIT
Biweekly IoT News Digest (10/22 – 1)

February 2021 Highlights

GOVERNANCE & THE INTERNET OF THINGS

Per Beming, "**Innovation, digital transformation, decarbonization: Why the world needs telecom standards**," Ericsson website, October 14, 2022 https://www.ericsson.com/en/blog/2022/10/why-telecoms-standards-are-important

Mariam Baksh, "**White House's Internet of Things Security Initiative Gets an Official Meeting Date [i.e., October 19, 2022**]," nextgov, October 12, 2022 https://www.nextgov.com/cybersecurity/2022/10/white-houses-internet-things-security-initiative-gets-official-meeting-date/378354/

EY press release, "**Governments need new ways of working to seize digital opportunities – EY report**," PR Newswire, October 11, 2022 https://www.prnewswire.com/news-releases/governments-need-new-ways-of-working-to-seize-digital-opportunities--ey-report-301646583.html

Matt Ross, "**AccelerateGov: the digital goal for governments is clear, but the match is not yet won**," Global Government Forum, October 6, 2022 https://www.globalgovernmentforum.com/accelerategov-the-digital-goal-for-governments-is-clear-but-the-match-is-not-yet-won/

The White House Office of Science and Technology Policy, "**Blueprint for an AI Bill of Rights**," The White House, October 4, 2022 https://www.whitehouse.gov/ostp/ai-bill-of-rights/

Bill Siwicki, "**How HIMSS and WHO-Europe plan to boost digital health transformation**," Healthcare IT News, October 4, 2022 https://www.healthcareitnews.com/news/emea/how-himss-and-who-europe-plan-boost-digital-health-transformation

Tom Jackson & Ian r. Hodgkinson, "**'Dark data' is killing the planet – we need digital decarbonization**," The Conversation, September 29, 2022 https://theconversation.com/dark-data-is-killing-the-planet-we-need-digital-decarbonisation-190423

IoT News and Market Reports
(First Half of October 2022)

- Selected **IoT-related announcements and featured activities/topics** gathered by CDAIT from governments; agencies; consortia; alliances; associations; standards, research and other similar groups around the world – 15 entries - See: https://cdait.gatech.edu/sites/default/files/2022-10/IoT_News_Filings_October_2022__First_Half.pdf

- Sample list of **IoT-related market reports** gathered by CDAIT– 83 entries – See: https://cdait.gatech.edu/sites/default/files/2022-10/IoT_Market_Reports_October_2022_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Shaojun Ma, "**Learning Dynamics from Data Using Optimal Transport Techniques and Applications**," PhD dissertation, GT School of Mathematics, July 2022 https://smartech.gatech.edu/handle/1853/67233

- Voicu, Razvan Cristian. "**Cooperative Network Architecture For Next Generation Technologies**," PhD dissertaion., GT School of Electrical and Computer Engineering, , January 2022 https://smartech.gatech.edu/handle/1853/66521

- Gamero, David, Andrew Dugenske, Christopher Saldana, Thomas Kurfess, and Katherine Fu. "**Scalability Testing Approach for Internet of Things for Manufacturing (IoTfM) SQL and NOSQL Database Latency and Throughput**," Journal of Computing and Information Science in Engineering (September 2022): 1-33 https://doi.org/10.1115/1.4055733

OF NOTE: Philip Wegner, "**What CEOs talked about in Q3/2022: Economic slowdown, raw materials, and Industry 4.0**," IoT Analytics (Hamburg, Germany), October 6, 2022 https://iot-analytics.com/what-ceos-talked-about-q3-2022/; **Upcoming conferences on Internet of** Things https://www.clocate.com/conferences-on+industry-things/dHg=/

Special Reading Suggestions

- Beth Maundril, "**IP Cameras, VoIP and Video Conferencing Revealed as Riskiest IoT Devices**," Infosecurity, October 13, 2022 https://www.infosecurity-magazine.com/news/riskiest-iot-devices/
- Joaquin Victor Tacla, "**MIT Uses IoT, AI, and VR Systems to Aid Unsupervised Physical Therapy**," Tech News, October 10, 2022 https://www.techtimes.com/articles/281751/20221010/mit-uses-iot-ai-vr-systems-aid-unsupervised-physical-therapy.htm
- Liam Tung, "**The Internet of Things is still very messy. That could be about to change,**" [about CSA's Matter 1.0 standard release] ZDNet, October 5, 2022 https://www.zdnet.com/home-and-office/smart-home/the-internet-of-things-is-still-very-messy-that-could-be-about-to-change/
- Future IoT editors, "**SatIoT makes possible global IoT connectivity**," Future IoT, October 3, 2022 https://futureiot.tech/satiot-makes-possible-global-iot-connectivity/
- IDEMIA whitepaper, "**Combination of 5G, AI, M2M and IoT is bringing the world closer to a connected future,** " CXO Today, October 3, 2022 https://www.cxotoday.com/press-release/combination-of-5g-ai-m2m-and-iot-is-bringing-the-world-closer-to-a-connected-future/

Selected IoT Perspectives
The growing interest for serverless architectures (or functional computing) in IoT

"In contrast to either a virtual machine compute or even a container model for cloud computing, serverless computing is truly a consumption-based elastic service. Serverless computing functions only run when triggered and users only pay for precisely what they use. By definition, serverless computing architecture is about not running a server, virtual or otherwise, to execute a function as part of a modern application stack."
Michael Kerner, " An Overview of the Serverless Computing Architecture Trend," IT Po Today, January 11, 2021
https://www.itprotoday.com/serverless-computing/overview-serverless-computing-architecture-trend

- Abhishek Ghosh, "**Can Serverless Architecture Help Your IoT Solution**," The Customize Windows, August 24, 2022 https://thecustomizewindows.com/2022/08/can-serverless-architecture-help-your-iot-solution/
- John Lun, "**What is AWS IoT?**" Petri, August 11, 2022 https://petri.com/what-is-aws-iot/
- Research Nester press release, "**Global Serverless Apps Market to Record ~23% CAGR during 2022-2031**," Globe Newswire, August 4, 2022 https://www.globenewswire.com/en/news-release/2022/08/04/2492617/0/en/Global-Serverless-Apps-Market-to-Record-23-CAGR-during-2022-2031-Enterprise-Adoption-Targeting-Serverless-Architecture-and-Fast-Expanding-IT-Telecommunication-Industry-to-Magnify-M.html
- Tom Nolle, "**Should We Use Software Containers or Serverless for IoT?**" IoT for All, IoT World Today, August 2, 2022 https://www.iotworldtoday.com/2021/08/02/should-we-use-software-containers-or-serverless-for-iot/
- Richard MacManus, "**Early Days for Quantum Developers, But Serverless Coming**," The New Stack, August 1, 2022 https://thenewstack.io/early-days-for-quantum-developers-but-serverless-coming/
- Ben Kehoe, "**Serverless IoT @iRobot**," InfoQ, March 31, 2018 https://www.infoq.com/presentations/serverless-iot-irobot/

Research background info (sample): Dazhi Li, Jiaang Duan, Yan Yao, Shiyou Qian, Jie Zhou, Guangtao Xue, and Jian Cao, "**SoDa: A Serverless-Oriented Deadline-Aware Workflow Scheduling Engine for IoT Applications in Edge Clouds**," Wireless Communications and Mobile Computing, Volume 2022, published online October 7, 2022 | Article ID 7862911 | https://doi.org/10.1155/2022/7862911; Dantas, Jaime Cristalino Jales. "**On Performance Tuning of Serverless IoT Applications**," (2022) https://yorkspace.library.yorku.ca/xmlui/handle/10315/39639; Cassel, Gustavo André Setti, Vinicius Facco Rodrigues, Rodrigo da Rosa Righi, Marta Rosecler Bez, Andressa Cruz Nepomuceno, and Cristiano André da Costa. "**Serverless computing for Internet of Things: A systematic literature review**," Future Generation Computer Systems 128 (2022): 299-316 https://www.sciencedirect.com/science/article/abs/pii/S0167739X21004167; Elkholy, Mohamed, and Marwa A. Marzok. "**Light weight serverless computing at fog nodes for internet of things systems**," (2022) https://pks.pua.edu.eg/engineering_publications/30/; Antonio Castro, Jorge Machado, Matthias Roggendorf, and Henning Soller, "**How to build a data architecture to drive innovation—today and tomorrow**," McKinsey Digital, June 3, 2020 https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/how-to-build-a-data-architecture-to-drive-innovation-today-and-tomorrow --- Scholarly Encyclopedia Community "**IoT Serverless Computing at the Edge,**" n.d. (circa 2022) https://encyclopedia.pub/entry/15406

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October 15, 2022