February 2021 Highlights

GT CDAIT
Biweekly IoT News Digest (09/22 – 1)

GOVERNANCE & THE INTERNET OF THINGS

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https://militaryembedded.com/ai/deep-learning/iot-ai-and-the-future-battlefield

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Ahmed Banafa, "**Microchips in humans: consumer-friendly app, or new frontier in surveillance?**" The Bulletin of the Atomic Scientists, September 8, 2022 https://thebulletin.org/premium/2022-09/microchips-in-humans-consumer-friendly-app-or-new-frontier-in-surveillance/

Javier Espinoza, "**EU to impose tough rules on 'internet of things' product makers**," The Financial Times (London, UK), September 7, 2022 https://www.ft.com/content/cfa2e2be-8871-4b56-b7bf-c5d2c55e8ed5

Cate Burgan, "**NIST to Launch Standards, Practices for Telehealth Security** ," MeriTalk, September 7, 2022 https://www.meritalk.com/articles/nist-to-launch-standards-practices-for-telehealth-security/

Edgar Honning, "**Solve the problem of unstructured data with machine learning**," VentureBeat, August 27, 2022 https://venturebeat.com/data-infrastructure/solve-the-problem-of-unstructured-data-with-machine-learning/

IoT News and Market Reports
(First Half of September 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/2022-09/IoT_News_Filings_September_2022__First_Half.pdf

- Sample list of **IoT-related market reports** gathered by CDAIT– 90 entries – See: https://cdait.gatech.edu/sites/default/files/2022-09/IoT_Market_Reports_September_2022_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Yoon, J. H. , Pishdad-Bozorgi, P. , Sierra-Aparicio, M. V. & Quintana, E. J. 2022, **'Framework for Blockchain-Enabled Building Information Modeling (BIM) Data Sharing in Construction Supply Chain'** In:, Proc. 30th Annual Conference of the International Group for Lean Construction (IGLC). Edmonton, Canada, 27-29 Jul 2022. pp 762-771 https://iglc.net/Papers/Details/2005

- Tubesing, Jake, Helen Poole, Lucas Yu, and Yi-Chang Tsai. "**Proposing a Comprehensive Evaluation Method for AI-Based Traffic Detection System and Post-Processing Method Using Physical Constraints**." In International Conference on Transportation and Development (online August 31,2022) pp. 1-13. 2022 https://ascelibrary.org/doi/abs/10.1061/9780784484319.001

OF NOTE: Jonathan Goldberg, **"Trillion with a T: A word on the Internet of Things - *The world is awash with Things and Objects,***" *TechSpot***, September 5, 2022 https://www.techspot.com/news/95869-trillion-t-word-internet-things.html

Special Reading Suggestions

- ET CIO Southeast Asia, "**Top enterprise use cases of IoT devices and systems,:** CIO SEA, September 12, 2022 https://ciosea.economictimes.indiatimes.com/news/internet-of-things/top-enterprise-use-cases-of-iot-devices-and-systems/94132225
- Allan Tan, "**IoT software trends in 2023**," FutureIoT, September 8, 2022 https://futureiot.tech/iot-software-trends-in-2023/
- Scarlett Evans, "**6 Ways IoT is Transforming the NFL**," IoT World Today, September 7, 2022 https://www.iotworldtoday.com/2022/09/07/6-ways-iot-is-transforming-the-nfl/
- Robert Lemos, "**Skyrocketing IoT Bug Disclosures Put Pressure on Security Team,**" Dark Reading, September 1, 2022 https://www.darkreading.com/iot/iot-bug-disclosure-security-teams
- Michelle Russell, "**Is the Internet of Things (IoT) the new fashion and retail disruptor?**" Just Style, September 1, 2022 https://www.just-style.com/analysis/is-the-internet-of-things-iot-the-new-fashion-and-retail-disruptor/

Selected IoT Perspectives
Cellular IoT

"Cellular connectivity is becoming increasingly popular for implementing integrated machine-to-machine communications that facilitate wireless condition monitoring of industrial assets. This is because Cellular IoT connectivity offers high network reliability. The high data rates (10-100 Gbps) in which cellular IoT devices transmit data are not affected by either bad weather conditions and the distance between the base station and the device has much less impact than many other wireless communication options." (*)

*(*) Nanoprecise Sci Corp, "**Cellular Networks and Industrial IoT: Simple, Scalable, and Secure Connection**?" IoT for All, January 19, 2022 https://www.iotforall.com/cellular-networks-and-industrial-iot-simple-scalable-and-secure-connection*

- Teal Communications, "**eSIM Technology: Overcoming IoT Connectivity Challenges**," IoT for All, September 13, 2022 https://www.iotforall.com/esim-overcomes-connectivity-challenges
- Sequans Communications, "**5 Ways iSIM Reduces Manufacturing Costs for Cellular IoT Devices**," IoT for All, September 8, 2022 https://www.iotforall.com/isim-reduces-manufacturing-costs
- James Blackman, "**Behind the green curtain – Semtech reveals magic to merge cellular and non-cellular IoT**," Enterprise IoT Insights, August 25, 2022 https://enterpriseiotinsights.com/20220825/internet-of-things-4/behind-the-green-curtain-semtech-reveals-magic-trick-to-merge-cellular-and-non-cellular-iot
- James Blackman, "**What is 5G RedCap, and will it save cellular IoT? The skinny on the (skinny) new 5G tech,**" Enterprise IoT Insights, August 2, 2022 https://enterpriseiotinsights.com/20220802/internet-of-things/what-is-5g-redcap-and-will-it-save-cellular-iot-the-skinny-on-the-skinny-new-5g-tech-to-unite-cellular-iot
- *Research background info (sample)*: Sai, M. V., and G. Rama Naidu. "**A Short Study on IoT-Based Cellular Network**," In Proceedings of Second International Conference in Mechanical and Energy Technology, pp. 315-321. Springer, Singapore, 2023. https://link.springer.com/chapter/10.1007/978-981-19-0108-9_33; Vaezi, Mojtaba, Amin Azari, Saeed R. Khosravirad, Mahyar Shirvanimoghaddam, M. Mahdi Azari, Danai Chasaki, and Petar Popovski. "**Cellular, wide-area, and non-terrestrial IoT: a survey on 5G advances and the road toward 6G**," IEEE Communications Surveys & Tutorials 24, no. 2 (2022): 1117-1174 https://ieeexplore.ieee.org/abstract/document/9711564; Heins, Kersten. "**Cellular IoT Technology**," In NB-IoT Use Cases and Devices, pp. 17-44. Springer, Cham, 2022 https://link.springer.com/chapter/10.1007/978-3-030-84973-3_2; Ballal, Kalpit Dilip, Radheshyam Singh, Lars Dittmann, and Sarah Ruepp. "**Experimental Evaluation of Roaming Performance of Cellular IoT Networks**," In 2022 Thirteenth International Conference on Ubiquitous and Future Networks (ICUFN), pp. 386-391. IEEE, 2022 https://ieeexplore.ieee.org/abstract/document/9829590; Abbas, Muhammad Tahir, Karl-Johan Grinnemo, Johan Eklund, Stefan Alfredsson, Mohammad Rajiullah, Anna Brunstrom, Giuseppe Caso, Konstantinos Kousias, and Özgü Alay. "**Energy-Saving Solutions for Cellular Internet of Things–A Survey**," IEEE Access 10 (2022): 62073-62096. https://ieeexplore.ieee.org/abstract/document/9794675