



Digest is compiled by Alain Louchez,  
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### CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives from  
around the globe gathered by  
CDAIT - 50 added for this Digest  
(3000 entries since April 1, 2022)  
[https://cdait.gatech.edu/sites/default/files/2024-10/Digital\\_Transformation\\_Through\\_IoT\\_Technologies\\_October\\_31\\_2024.pdf](https://cdait.gatech.edu/sites/default/files/2024-10/Digital_Transformation_Through_IoT_Technologies_October_31_2024.pdf)

### GOVERNANCE & THE INTERNET OF THINGS

Billy Mitchell, "The US is leading its counterparts in digital transformation at scale, GSA [General Services Administration]'s Shive says," Fedscope, October 28, 2024 <https://fedscope.com/us-leader-digital-transformation-at-scale-gsa-dave-shive/>

Zac Amos, "How Can the IoT Industry Regain Consumer Trust?" IoT for all, October 28, 2024 <https://www.iotforall.com/how-can-the-iot-industry-regain-consumer-trust>

Miami Law Blog Contributor, "Legal Issues in the Internet of Things (IoT): How an M.L.S. [Master of Legal Studies] Can Help," University of Miami School of Law, October 24, 2024 <https://news.miami.edu/law/stories/2024/10/legal-issues-in-the-internet-of-things-how-an-mls-can-help.html>

Gareth Mitchell, "Streamlining [U.K.'s local] council waste management with IoT and LPWAN," RCR Wireless, October 22, 2024 <https://www.rcrwireless.com/2024/10/22/reader-forum/streamlining-council-waste-management-with-iot-and-lpwan-reader-forum>

Vishal Badshah, "Revolutionising the automotive industry: Embracing Industry 4.0 with AI and IoT," Manufacturing Today, October 22, 2024 <https://www.manufacturingtodayindia.com/revolutionising-the-automotive-industry-embracing-industry-4-0-with-ai-and-iot>

Jennifer Lawinski, "EU Adopts Cyber Resilience Act to Regulate Internet of Things," Dark Reading, October 20, 2024 <https://www.darkreading.com/ics-ot-security/eu-cyber-resilience-act-regulate-internet-of-things>

Annette Lee, "The hidden risks of IoT: Why businesses need to modernize mobile security," Techradar, October 15, 2024 <https://www.techradar.com/pro/the-hidden-risks-of-iot-why-businesses-need-to-modernize-mobile-security>

# GT CDAIT Biweekly IoT News Digest (10/24 - 2)

## IoT News and Market Reports

(Second Half of October 2024)

- 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 - 16 entries: [https://cdait.gatech.edu/sites/default/files/2024-10/IoT\\_News\\_Filings\\_October\\_2024\\_Second\\_Half.pdf](https://cdait.gatech.edu/sites/default/files/2024-10/IoT_News_Filings_October_2024_Second_Half.pdf)
- Sample list of IoT-related market reports gathered by CDAIT - 50 entries: [https://cdait.gatech.edu/sites/default/files/2024-10/IoT\\_Market\\_Reports\\_October\\_2024\\_Second\\_Half.pdf](https://cdait.gatech.edu/sites/default/files/2024-10/IoT_Market_Reports_October_2024_Second_Half.pdf)

## Georgia Tech IoT-related Info/Research Noticed by CDAIT

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- Colosimo, B. M., Jones-Farmer, L. A., Megahed, F. M., Paynabar, K., Ranjan, C., & Woodall, W. H. (2024), "Statistical Process Monitoring from Industry 2.0 to Industry 4.0: Insights into Research and Practice," Technometrics, 1-24. <https://doi.org/10.1080/00401706.2024.2327341>
- Sang, Fan. "Hardening and Adapting Trusted Execution Environments for Emerging Platforms," PhD dissertation., Georgia Institute of Technology, August 2024 <https://gts3.org/assets/papers/2024/sang.thesis.pdf>
- Hegde, Chaitra, Yashar Kiarashi, Allan I. Levey, Amy D. Rodriguez, Hyeokhyen Kwon, and Gari D. Clifford, "Feasibility of assessing cognitive impairment via distributed camera network and privacy-preserving edge computing," arXiv preprint arXiv:2408.10442 (2024) <https://arxiv.org/abs/2408.10442>

**OF NOTE:** Katerina Megaw and Alison Kahn, "IoT Assignment Completed! Report on Barriers to U.S. IoT Adoption," National Institute of Standards and Technology (NIST), October 22, 2024 <https://www.nist.gov/blogs/cybersecurity-insights/iot-assignment-completed-report-barriers-us-iot-adoption> -- 147 page report is here: [https://www.nist.gov/system/files/documents/2024/10/21/The%20IoT%20of%20Things%20Oct%202024%20508%20FINAL\\_1.pdf](https://www.nist.gov/system/files/documents/2024/10/21/The%20IoT%20of%20Things%20Oct%202024%20508%20FINAL_1.pdf)

## Special Reading Suggestions

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- Sean Ashcroft, "Industrial IoT Behind Data-Driven Mining Tech Innovation," Mining Digital, October 29, 2024 <https://miningdigital.com/digital-transformation/industrial-iot-behind-data-driven-mining-tech-innovation>
- Aman Moudgil, "AI, IoT and robotics integration revolutionising industries," Hindustan Times, October 28, 2024 <https://www.hindustantimes.com/ht-insight/future-tech/ai-iot-and-robotics-integration-revolutionising-industries-101730097371099.html>
- Marc Berman, "The Future of Blockchain Integration in Enterprise IoT," Programming Insider, October 22, 2024 <https://programminginsider.com/the-future-of-blockchain-integration-in-enterprise-iot/>
- Harry Baldock, "IoT Now Magazine Q3 2024: The relationship between IoT and cellular connectivity is SIMbiotic," Total Telecom, October 22, 2024 <https://totaltele.com/iot-now-magazine-q3-2024-the-relationship-between-iot-and-cellular-connectivity-is-simbiotic/> [Free registration needed]
- Neil Trim, "Global IoT Providers Under Pressure To Deliver More Than Just Connectivity," Technology Reseller [U.K.], October 22, 2024 <https://technologyreseller.uk/global-iot-providers-under-pressure-to-deliver-more-than-just-connectivity/>
- Zubair Murtaza, "AI, IoT is Transforming Surprising Industries Like Construction," RFID Journal, October 22, 2024 <https://www.rfidjournal.com/expert-views/how-iot-is-transforming-surprising-industries-like-construction/221928/>
- Emily Newton, "Four Key Technologies Driving Data Analytics in Industrial IoT," MachineDesign, October 21, 2024 <https://www.machinedesign.com/automation-iiot/article/55236852/four-key-technologies-driving-data-analytics-in-industrial-iiot>
- Ryan Daws, "5G RedCap to revolutionise IoT, but hurdles remain," IoT Tech News, October 17, 2024 <https://iottechnews.com/news/5g-redcap-revolutionise-iiot-hurdles-remain/>

## Selected IoT Perspectives

### Wi-Fi HaLow (IEEE 802.11 ah) and the Internet of Things

"HaLow Wi-Fi is a promising technology for Internet of Things devices, offering a low-energy, long-range wireless connection solution. Indeed, a new record for data transmission over a distance of 16 kilometers has now been set, paving the way for many practical uses in the future," ETX Studio, MSN, September 17, 2024 <https://www.msn.com/en-ca/money/other/halow-wifi-can-provide-wireless-connectivity-over-distances-of-several-kilometers/ar-AA1qJABC?ocid=BingNewsVerp>

- David Maliniak, "Wi-Fi HaLow Gains Community Forum and Open-Source GitHub Repositories," Microwaves and RF, October 22, 2024 <https://www.mwrf.com/markets/iiot/article/55236914/microwaves-rf-wi-fi-halow-ieee-80211ah-boosts-linux-based-development>
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- Michael De Nil, "What's the Difference Between Wi-Fi HaLow and LoRaWAN?" Electronic Design, June 29, 2023 <https://www.electronicdesign.com/technologies/communications/article/21268720/morse-micro-whats-the-difference-between-wi-fi-halow-and-lorawan>
- Barley Li, "How is Wi-Fi HaLow different from traditional Wi-Fi," Digikey, August 12, 2024 <https://forum.digikey.com/t/how-is-wi-fi-halow-different-from-traditional-wi-fi/44038>

**Research background info (sample) - 2024 sources:** Alam, Mehbub, Nurzaman Ahmed, Rakesh Matam, and Ferdous Ahmed Barbhuiya, "Analyzing the suitability of IEEE 802.11 ah for next generation Internet of Things: A comparative study," Ad Hoc Networks 156 (2024): 103437 <https://www.sciencedirect.com/science/article/abs/pii/S1570870524000489>; Pebrian, Delfin Daffa, Devita Rahma Safitri, Fikri Nizar Gustiyana, Alfin Hikmaturokhan, I. Ketut Agung Enriko, and Muhammad Imam Nashiruddin, "Comparison LoRaWAN and Wi-Fi HaLow: Study Case for Smart Metering in Urban Area," In 2024 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communications Technology (IAICT), pp. 246-252. IEEE, 2024 <https://ieeexplore.ieee.org/abstract/document/10617581>; Komatnani Govindan, Shanthi, Hema Vijayaraghavan, Kolandairaj Kishore Anthuvan Sahayaraj, and Alphonse Mary Joy Kinol, "Optimizing Internet-Wide Port Scanning for IoT Security and Network Resilience: A Reinforcement Learning-Based Approach in WLANs with IEEE 802.11 ah," Fiber and Integrated Optics (2024): 1-29 <https://www.tandfonline.com/doi/abs/10.1080/01468030.2024.2342275>; -- See also Wi-Fi Alliance, "Wi-Fi CERTIFIED HaLow™ for IoT," <https://www.wi-fi.org/discover-wi-fi/wi-fi-certified-halow>

<https://cdait.gatech.edu>



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