



CHRONICLE OF DIGITAL
TRANSFORMATION
THROUGH
INTERNET OF THINGS
TECHNOLOGIES

Some biweekly perspectives
from around the globe
gathered by CDAIT

(1700 entries since April 1, 2022)
https://cdait.gatech.edu/sites/default/files/2023-09/Digital_Transformation_Through_IoT_Technologies_September_30_2023.pdf

GOVERNANCE &
THE INTERNET OF THINGS

Michele Giunta, "New EU Legislation Proposals (Part I): A First Look at the Draft SEP [Standard Essential Patents] Regulation," Lexology, September 25, 2023 <https://www.lexology.com/library/detail.aspx?g=228dfae2-f176-44d7-9483-62e6bb0870fe>

Sudeep Srivastava, "How AI, IoT, and AR/VR Technologies are Helping Companies Achieve their Sustainability Goals," Appinventiv, September 21, 2023 <https://appinventiv.com/blog/technology-for-sustainability/>

U.S. Food & Drug Administration, "FDA's IT Strategy: Unlocking Potential, Leading Transformation," FDA, September 19, 2023 <https://www.fda.gov/news-events/fda-voices/fdas-it-strategy-unlocking-potential-leading-transformation>

Josh Farrell, "What Your Executive Team Needs to Know about Industry 4.0 Technologies: IoT, Artificial Intelligence, and Machine Learning," Manufacturers Monthly, September 19, 2023 <https://www.manmonthly.com.au/what-your-executive-team-needs-to-know-about-industry-4-0-technologies-iot-artificial-intelligence-and-machine-learning/>

Editorial Board, "Digital Divide," The International News [Pakistan], September 16, 2023 <https://www.thenews.com.pk/print/1110403-digital-divide>

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Biweekly IoT News Digest (09/23 – 2)

Georgia Tech IoT-related Info/Research Noticed by CDAIT

IoT News and Market Reports

(Second Half of September 2023)

- 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: https://cdait.gatech.edu/sites/default/files/2023-09/IoT_News_Filings_September_2023_Second_Half.pdf
- Sample list of IoT-related market reports gathered by CDAIT – 80 entries: https://cdait.gatech.edu/sites/default/files/2023-09/IoT_Market_Reports_September_2023_Second_Half.pdf

- Donlon, James, and Ashok Goel, "Looking back, looking ahead: Strategic initiatives in AI and NSF's AI Institutes Program," AI Magazine (2023) <https://onlinelibrary.wiley.com/doi/full/10.1002/aaai.12107>
- John Toon, "TRIAD Streamlines Edge Processing of Data in Phased-Array Antennas," GT Research, September 15, 2023 <https://research.gatech.edu/triad-streamlines-edge-processing-data-phased-array-antennas>
- Heidary, Roohollah, Jubilee Prasad Rao, and Olivia J. Pinon Fischer, "Smart Buildings in the IoT Era—Necessity, Challenges, and Opportunities," Handbook of Smart Energy Systems (2023): 1-21 https://link.springer.com/referenceworkentry/10.1007/978-3-030-72322-4_115-1

OF NOTE: Michael Toback, "Guide to IoT in 2023: What's New and Why It Matters?," Security Boulevard, September 18, 2023 <https://securityboulevard.com/2023/09/guide-to-iot-in-2023-whats-new-and-why-it-matters/>; Johan Treutiger, Dr. Michael Opitz, Agron Lasku, Ossian van Arkel, and Axel Leth, "Rethinking Product Connectivity," Getting Real, Arthur D. Little, September 2023 <https://www.adlittle.com/en/insights/prism/rethinking-product-connectivity>

Special Reading Suggestions

- Jamie Bennet, "NIST Cybersecurity Center of Excellence Invites Public Feedback on IoT Device Protection Guidance," ExecutiveGov, September 28, 2023 <https://executivegov.com/2023/09/nccoe-invites-public-feedback-on-iot-device-protection-guidance/>
- Jon Rice, "Pay-to-use blockchains will never achieve mass adoption," Cointelegraph, September 24, 2023 <https://cointelegraph.com/news/pay-blockchains-will-never-achieve-mass-adoption>
- Ben Shepardson, "How Is IoT Changing Smart Home Technology?" Realty Biz News, September 21, 2023 <https://realtybiznews.com/how-is-iot-changing-smart-home-technology/98779317/>
- Satyajit Sinha, "Cellular IoT module market Q2 2023: 66% of IoT modules shipped without dedicated hardware security," IoT Analytics, September 20, 2023 <https://iot-analytics.com/cellular-iot-module-security/>
- Wilderness Labs, "Navigating the Next Wave: The 10 Most Exciting Trends in IoT," IoT for All, September 20, 2023 <https://www.iotforall.com/navigating-the-next-wave-the-10-most-exciting-trends-in-iot>
- Sainud Abudheem K, "We see prevalence of robotics, IoT solutions across the globe: SIMPPLE CEO," e27, September 19, 2023 <https://e27.co/we-see-prevalence-of-robotics-iot-solutions-across-the-globe-simple-ceo-20230919/>
- Joe McKendrick, "How to Address the Supply-Chain Staffing Crisis," Harvard Business Review, September 18, 2023 <https://hbr.org/2023/09/how-to-address-the-supply-chain-staffing-crisis>
- Jeff Vance, "IoT startups fill security gaps," Network World, September 18, 2023 <https://www.networkworld.com/article/3707070/iot-startups-fill-security-gaps.html>
- Fran Hutchinson, "What Is IoT Technology In Simple Words," Robots.net, September 16, 2023 <https://robots.net/tech/what-is-iot-technology-in-simple-words/>

Selected IoT Perspectives

"Critical IoT"

"By contrast [with Massive IoT], critical IoT involves fewer endpoints that handle massive levels of data. More technically, critical IoT applications are described as Ultra-Reliable Low Latency Communications (URLLC). It represents the longer-term vision for high-bandwidth and low-latency applications and devices, going beyond just data collection and into more complex scenarios," Nokia, "Critical IoT vs. Massive IoT: How to spot the difference," Nokia website <https://www.nokia.com/thought-leadership/articles/critical-massive-iot/>

- James Blackman, "Postcards from the edge | The critical 5G edge is 'best of both worlds', says Siemens," RCR Wireless News, September 19, 2023 <https://www.rcrwireless.com/20230919/industry-4-0/postcards-from-the-edge-the-critical-5g-edge-is-best-of-both-worlds-says-siemens>
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- Matt Hatton "5G growth demonstrates cellular IoT market bifurcation," IoT Business News, May 16, 2023 <https://iotbusinessnews.com/2023/05/16/89700-5g-growth-demonstrates-cellular-iot-market-bifurcation/>
- Romil Bahl, "The Three Keys Of 5G: Critical IoT For A Real-Time Data Revolution," Forbes, January 25, 2023 <https://www.forbes.com/sites/forbestechcouncil/2023/01/25/the-three-keys-of-5g-critical-iot-for-a-real-time-data-revolution/?sh=37e2589547f1>
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- Jennifer Davis, "Massive IoT vs. Critical IoT," Geotraq, December 16, 2019 <https://geotraq.com/massive-iot-and-critical-iot/>
- Chetan Chaudhary, "Massive and critical IoT: Helping developers choose the right connectivity," TechTarget, August 30, 2018 <https://www.techtarget.com/iotagenda/blog/IoT-Agenda/Massive-and-critical-IoT-Helping-developers-choose-the-right-connectivity>

Research background info (sample): Xu, Dongyang, Lei Liu, Ning Zhang, Mianxiang Dong, Victor CM Leung, and James A. Ritey. "Nested Hash Access with Post Quantum Encryption for Mission-Critical IoT Communications," IEEE Internet of Things Journal (2023) <https://ieeexplore.ieee.org/abstract/document/10044961>; Ngo, Khac-Hoang, Giuseppe Durisi, Petar Popovski, Anders E. Kalor, and Beatriz Soret., "Un sourced Multiple Access with Common Alarm Messages: Network Slicing for Massive and Critical IoT," arXiv preprint arXiv:2302.11026 (2023) <https://arxiv.org/abs/2302.11026>; Pillai, Vysakh P., and Rajesh Kannan Megalingam, "System partitioning with virtualization for federated and distributed machine learning on critical IoT edge systems," In Congress on Intelligent Systems: Proceedings of CIS 2021, Volume 2, pp. 443-453. Singapore: Springer Nature Singapore, 2022 https://link.springer.com/chapter/10.1007/978-981-16-9113-3_33; Alriksson, Fredrik, Lisa Boström, Joachim Sachs, Y-P. Eric Wang, and Ali Zaidi. "Critical IoT connectivity ideal for time-critical communications," Ericsson technology review 2020, no. 6 (2020): 2-13 <https://ieeexplore.ieee.org/abstract/document/9905508>

