



Digest is compiled by Alain Louchez,
CDAIT Co-founder & Director Emeritus

CHRONICLE OF DIGITAL
TRANSFORMATION (DT)
THROUGH
INTERNET OF THINGS
TECHNOLOGIES

Some biweekly perspectives on DT from around the globe gathered by CDAIT - 50 added for this Digest (3150 entries since April 1, 2022) https://cdait.gatech.edu/sites/default/files/2024-12/Digital_Transformation_Through_IoT_Technologies_December_15_2024.pdf

GOVERNANCE &
THE INTERNET OF THINGS

Travis Williams, "Curious Conversations' podcast: Christine Julien talks about Internet of Things safety during the holiday season," Virginia Tech News, December 9, 2024 <https://news.vt.edu/articles/2024/12/research-curiousconversations-Julien.html>

Lars Daniel, "DoD Digital Forensics: Unlocking Evidence in Cars, Wearables, and IoT," Forbes, December 6, 2024 <https://www.forbes.com/sites/larsdaniel/2024/12/06/dod-digital-forensics-unlocking-evidence-in-cars-wearables-and-iot/>

Matt Bracken, "Several agencies haven't met IoT cybersecurity requirements, GAO [Government Accountability Office] says," FedScoop, December 5, 2024 <https://fedscoop.com/internet-of-things-cybersecurity-requirements-federal-agencies-gao/>

Derrick Henry, "FCC Selects UL Solutions for IoT Cyber Labeling Program," ExecutiveGov, December 5, 2024 <https://executivegov.com/2024/12/fcc-ul-solutions-lead-admin-iot-cyber-labeling-program/>

Brian Scriber, "Why Technology Interoperability is the Key to a Safer Internet of Things (IoT)," Security Boulevard, December 4, 2024 <https://securityboulevard.com/2024/12/why-technology-interoperability-is-the-key-to-a-safer-internet-of-things-iot/>

EE Times interview with Vikram Gupta, SVP and GM for IoT processors, Synaptics (video 8:39), "IoT Processors: 'Everyone Is Experimenting with Adding Intelligence'," YouTube, December 3, 2024 <https://www.youtube.com/watch?v=3Wv6FaSjPzY>

GT CDAIT

Biweekly IoT News Digest (12/24 - 1)

Georgia Tech IoT-related Info/Research Noticed by CDAIT

IoT News and Market Reports

(First Half of December 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 - 15 entries: https://cdait.gatech.edu/sites/default/files/2024-12/IoT_News_Filings_December_2024_First_Half.pdf
- Sample list of IoT-related market reports gathered by CDAIT - 50 entries: https://cdait.gatech.edu/sites/default/files/2024-12/IoT_Market_Reports_December_2024_First_Half.pdf

OF NOTE: Thomas Claburn, "FTC urges smart device makers to disclose software update lifecycles -- You need to know in advance when your kit will be bricked or downgraded - it's the law," The Register, November 27, 2024 https://www.theregister.com/2024/11/27/ftc_smart_product_makers/ -- FTC paper is here: https://www.ftc.gov/system/files/ftc_gov/pdf/smart-device-makers-failure-to-provide-software-updates-may-leave-you-smarting.pdf

Special Reading Suggestions

- Anthony Wall, "9 essential IoT security trends: safeguarding the future of connected devices," IoT Business News, December 13, 2024 <https://iotbusinessnews.com/2024/12/13/12011-9-essential-iot-security-trends-safeguarding-the-future-of-connected-devices/>
- Ryan Daws, "IoT takes the wheel: Telematics is transforming construction," IoT Tech News, December 11, 2024 <https://iottechnews.com/news/iot-takes-wheel-telematics-transforming-construction/>
- Gareth Mitchell, "Rolling away with retail budgets - how IoT helps with lost shopping carts (Reader Forum)," RCR Wireless News, December 10, 2024 <https://www.rcrwireless.com/20241210/uncategorized/iot-shopping-carts>
- Fabio Zaniboni, "How Smart Hotels Leverage IoT Tech to Optimize Energy Consumption, Reduce Waste and Boost Guest Loyalty," Hotel Technology News, December 9, 2024 <https://hoteltechnologynews.com/2024/12/how-smart-hotels-leverage-iot-tech-to-optimize-energy-consumption-reduce-waste-and-boost-guest-loyalty/>
- Jake Hertz, "Crop of New SoCs, Eval Kits, and Modules Support Booming IoT Demand," All About Circuits, December 6, 2024 <https://www.allaboutcircuits.com/news/crop-new-socs-eval-kits-modules-support-booming-iot-demand/>
- Joe Madden, "Op-Ed: Please stop writing new C-IoT standards," Fierce Network, December 5, 2024 <https://www.fierce-network.com/wireless/op-ed-please-stop-writing-new-c-iot-standards>
- Carl Ford, "A Look at the Future: IoT Predicts, and AI Prescribes," IoT Evolution, December 3, 2024 <https://www.iotevolutionworld.com/iot/articles/461327-look-the-future-iot-predicts-ai-prescribes.htm>
- Miller Victor, "Artificial intelligence Revolutionizing IoT Billing: The Power of Automation," TechBullion, December 3, 2024 <https://techbullion.com/revolutionizing-iot-billing-the-power-of-automation/>
- Nick Earle, CEO of Eseye, and Ryan Chacon, "The State of IoT adoption," IoT for all (podcast), December 2, 2024 <https://www.iotforall.com/podcast/e362-the-state-of-iot-adoption>

Selected IoT Perspectives

The Internet of Things and Digital Twins in 2024

"Digital twins are virtual replicas of physical devices that IT pros and data scientists can use to run simulations before actual devices are built and deployed. Digital twins can also take real-time IoT data and apply AI and data analytics to optimize performance. The use of digital twins - digital representations that mimic the structure and behavior of physical objects or systems - is on the rise. Digital twin technology has moved beyond manufacturing, where it got its start, and into many other industries, driven by advances in sensor technologies, artificial intelligence and data analytics." Josh Fruhlinger and Keith Shaw, "What is a digital twin and why is it important to IoT?" Network World, May 9, 2024 <https://www.networkworld.com/article/965860/what-is-digital-twin-technology-and-why-it-matters.html>

- Saurabh Singh, "Optimizing Operations with Digital Twin in Oil and Gas: Use Cases, Benefits, Challenges, Solutions and More," - "The synergy between digital twins and IoT is powerful, to say the least," Appinventiv, December 2, 2024 <https://appinventiv.com/blog/digital-twin-in-oil-and-gas/>
- Research and Markets press release, "Europe Digital Twin Industry Research Report 2024: Market to Grow by Over \$295 Billion During 2023-2033, Fueled by Hyper-Personalization Trends, Project PLATEAU, and Evolving Role in Industry 5.0," Globe Newswire November 27, 2024 <https://www.globenewswire.com/news-release/2024/11/27/2988083/0/en/Europe-Digital-Twin-Industry-Research-Report-2024-Market-to-Grow-by-Over-295-Billion-During-2023-Fueled-by-Hyper-Personalization-Trends-Project-PLATEAU-and-Evolving-Role-in-In.html>
- Research and Markets press release, "Digital Twin Industry Research Report 2024-2029: Market to Grow by Over \$100 Billion, Driven by Demand for Real-Time Data, IoT Adoption, and Utilisation in Healthcare," Globe Newswire, November 4, 2024 <https://www.globenewswire.com/news-release/2024/11/04/2973935/28124/en/Digital-Twin-Industry-Research-Report-2024-2029-Market-to-Grow-by-Over-100-Billion-Driven-by-Demand-for-Real-Time-Data-IoT-Adoption-and-Utilisation-in-Healthcare.html>

Research background info (sample) - 2024 sources: Manocha, Ankush, Sandeep Kumar Sood, and Munish Bhatia, "IoT-digital twin-inspired smart irrigation approach for optimal water utilization," Sustainable Computing: Informatics and Systems 41 (2024): 100947 <https://www.sciencedirect.com/science/article/abs/pii/S2210537923001026>; Sciallo, Luca, Alberto De Marchi, Angelo Trotta, Federico Montori, Luciano Bononi, and Marco Di Felice, "Relativistic Digital Twin: Bringing the IoT to the future," Future Generation Computer Systems 153 (2024): 521-536 <https://www.sciencedirect.com/science/article/pii/S0167739X23004788>; Jiang, Li, Yi Liu, Hui Tian, Lun Tang, and Shengli Xie, "Resource Efficient Federated Learning and DAG Blockchain With Sharding in Digital Twin Driven Industrial IoT," IEEE Internet of Things Journal (2024) <https://ieeexplore.ieee.org/abstract/document/10413495>; Akshay, M. J., B. G. Premasudha, and Seema B. Hegde, "IoT to Digital Twin: A Futuristic Smart Farming," In 2024 International Conference on Smart Systems for applications in Electrical Sciences (ICSSSES), pp. 1-6. IEEE, 2024 <https://ieeexplore.ieee.org/abstract/document/10561335>

<https://cdait.gatech.edu>



Georgia Tech • Center for Advanced Communications Policy
Center for the Development and Application
of Internet of Things Technologies

December 15, 2024