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

CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives from around the globe gathered by CDAIT - 50 added for this Digest (2900 entries since April 1, 2022)

https://cdait.gatech.edu/sites/default/files/2024-09/Digital_Transformation_Through_IoT_Technologies_September_30_2024.pdf

GOVERNANCE & THE INTERNET OF THINGS

Juan Perez, "**Cybersecurity Snapshot: NIST Program Probes AI Cyber and Privacy Risks, as U.S. Gov't Tackles Automotive IoT Threat from Russia, China**," Tenable, September 27, 2024 https://www.tenable.com/blog/cybersecurity-snapshot-nist-program-probes-ai-cyber-and-privacy-risks-as-u-s-govt-tackles

Malavika Magdula, "**IoT and its role in energy transition**," Sify.com, September 25, 2024 https://www.sify.com/iot/iot-and-its-role-in-energy-transition/

Major Sunil Shetty, "**Weaponizing IoT: The next frontier in conventional and asymmetric warfare**," Bizz Buzz [India], September 23, 2024 https://www.bizzbuzz.news/politics/weaponizing-iot-the-next-frontier-in-conventional-and-asymmetric-warfare-1337282

William Payne, "**IoT Policy Index**," for Europe, East Asia, Middle East/Africa and Americas, IoT M2M Council, September 23, 2024 https://www.iotm2mcouncil.org/iot-library/news/iot-in-public-policy/

CompTIA posting, "**Cyber threats against critical infrastructure heighten demand for skilled professionals**," CompTIA, September 20, 2024 https://www.comptia.org/blog/cyber-threats-against-critical-infrastructure-heighten-demand-for-skilled-professionals

Fred Whipp, "**Enhancing Facilities Management Through IoT Audits," Facility Executive, September 20**, 2024 https://facilityexecutive.com/enhancing-facilities-management-through-iot-audits/

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Biweekly IoT News Digest (9/24 – 2)

IoT News and Market Reports

(Second Half of September 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/2024-09/IoT_News_Filings_September_2024_Second_Half.pdf

- Sample list of IoT-related market reports gathered by CDAIT – 50 entries: https://cdait.gatech.edu/sites/default/files/2024-09/IoT_Market_Reports_September_2024_Second_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Kacmarcik, A., and M. Prvulovic, "**Securing CPS through Simultaneous Analog Side-Channel Monitoring of Cyber and Physical Domains**," IEEE Access (date of publication, September 10, 2024) https://ieeexplore.ieee.org/abstract/document/10675362
- Greenlee, Eric, Blaine Rothrock, Hyeonwook Kim, Ellen Zegura, and Josiah Hester, "**"The Devil You Know": Barriers and Opportunities for Co-Designing Microclimate Sensors**," ACM Journal on Computing and Sustainable Societies (published September 16, 2024) https://dl.acm.org/doi/full/10.1145/3685695
- **Wednesday, November 13, 2024: 10th Annual IoT for Manufacturing (IoTFM) Symposium** hosted by the Georgia Tech Manufacturing Institute (GTMI), 813 Ferst Drive Northwest Atlanta, GA 30332. Complimentary light breakfast, full lunch & snacks to be provided by Georgia Tech. Please see the IoTFM Symposium 2024 Website at https://sites.gatech.edu/iotfm2024/ for additional details. Registration is here: https://www.eventbrite.com/e/10th-annual-iotfm-symposium-at-gtmi-tickets-1012774845827?aff=oddtdtcreator

OF NOTE: GSMA, "**IoT Guide: Global IoT Regulations**," Copyright © 2024 GSMA [40 pages], published by GSMA in August 2024 https://www.gsma.com/solutions-and-impact/technologies/internet-of-things/wp-content/uploads/2024/08/IoT-Guide-Global-IoT-Regulations-1.pdf --- *"This report provides a guide to the various regulations that affect deployments of the Internet of Things and the associated provision of connectivity, device functionality, and management of data, as well as regulatory drivers and barriers to adoption."*

Special Reading Suggestions

- Vanilla Plus posting, "**IoT connectivity providers need a VoLTE [**Voice over LTE]**/VoNR [**Voice over New Radio] **strategy to avoiding missing out,"** Vanilla Plus, September 27, 2024 https://www.vanillaplus.com/2024/09/27/87471-iot-connectivity-providers-need-a-volte-vonr-strategy-to-avoiding-missing-out/
- Svetlin Todorov, "**IoT devices will be the catalyst for the 4th industrial revolution**," Fast Company, September 26, 2024 https://www.fastcompany.com/91197379/iot-devices-will-be-the-catalyst-for-the-fourth-industrial-revolution
- Kit Redwine, **"Transforming Food Safety with the Internet of Things**," Food Poisoning News, September 20, 2024 https://www.foodpoisoningnews.com/transforming-food-safety-with-the-internet-of-things/
- IoT Business News posting, "**G+D** [Giesecke+Devrient] **identifies key trends in IoT evolution**," IoT Business News, September 19, 2024 https://iotbusinessnews.com/2024/09/19/07508-gd-identifies-key-trends-in-iot-evolution/
- John Gallagher, "**Training Your Team on the Security of CPS & IoT Systems**," Security Boulevard, September 19, 2024 https://securityboulevard.com/2024/09/training-your-team-on-the-security-of-cps-iot-systems/
- William Payne, "**Eseye 2024 State of IoT Adoption Report,"** IoT M2M Council, September 18, 2024 https://www.iotm2mcouncil.org/iot-library/news/iot-newsdesk/eseye-2024-state-of-iot-adoption-report/
- Interview of Matt Hatton, Founding Partner at Transforma Insights, "**IoT Connectivity: Trends and Strategies**," IoT for all, September 17, 2024 https://www.iotforall.com/podcasts/e359-iot-connectivity-trends-and-strategies

Selected IoT Perspectives
The Internet of Nano-Things

*"The inevitable end point is the internet of nanothings. We don't want to be aware of the devices that help us in our lives, he argues, so the sensors would have to be much smaller than the microsensors and Radio Frequency Identification tags we see around us now. That would mean they could use much less power, surviving on energy harvested from the environment," Professor Ian F. Akyildiz in Roland Pease, "**Internet of things: Trash talk signals mobile future**," BBC, November 12, 2014 https://www.bbc.com/future/article/20130314-trash-talk-signals-mobile-future*

- Oliver Guridham's post about press release from the Business Research Company, "**Newly Released Insights in to the Internet Of Nano Things Market Research,"** WhatTech, September 23, 2024 https://www.whatech.com/og/markets-research/it/885389-internet-of-nano-things-market-research.html
- Mordor Intellignece press release, "**Internet Of Nano Things - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029),"** Global Information, September 2, 2024 https://www.giiresearch.com/report/moi1549709-internet-nano-things-market-share-analysis.html
- Caio Castro, **"How the Internet of Nano-Things Will Enhance Our Bodies,"** [Professor Josep Jornet talks about the Internet of Nano-Things and how connectivity will enhance our lives at the cellular level], 6G World, April 25, 2024 https://www.6gworld.com/exclusives/podcast-how-the-internet-of-nano-things-will-enhance-our-bodies/

Research background info (sample) – 2024 sources: Petrov, Vitaly, Sergi Abadal, Chong Han, Laura Galluccio, Ian F. Akyildiz, and Josep M. Jornet, "**Guest Editorial: Electromagnetic Nanonetworks: From On-Chip Communication to Wearable and Implantable Networks**," IEEE Journal on Selected Areas in Communications 42, no. 8 (2024): 1963-1966 https://ieeexplore.ieee.org/abstract/document/10601513; Panagiotis, Bahadur, Preeti Singh. "**Analysis on Various Aspects of Internet of Nano-Things (IoNT), Its Integration in Machine Learning, and Its Diverse Applications**," In Next Generation Materials for Sustainable Engineering, pp. 297-315. IGI Global, 2024 https://www.igi-global.com/chapter/analysis-on-various-aspects-of-internet-of-nano-things-iont-its-integration-in-machine-learning-and-its-diverse-applications/340867; Rana, Aryan, Deepika Gautam, Pankaj Kumar, and Ashok Kumar Das. "**Architectures, Benefits, Security and Privacy Issues of Internet of Nano Things: A Comprehensive Survey, Opportunities and Research Challenges**," IEEE Communications Surveys & Tutorials (2024) https://ieeexplore.ieee.org/abstract/document/10584514; Zahmatkesh, Hadi. "**A Comprehensive Overview of Internet of Nano-Things (IoNT) in the Next-Generation Heterogeneous Networks: Deployment Aspects, Applications, and Challenges,"** Intelligent Communication Networks: 39-70, first published 2024 https://www.taylorfrancis.com/chapters/edit/10.1201/9781003303114-3/comprehensive-overview-internet-nano-things-iont-next-generation-heterogeneous-networks-hadi-zahmatkesh; Prajapat, Sunil, Aryan Rana, Pankaj Kumar, and Ashok Kumar Das. "**Quantum safe lightweight encryption scheme for secure data sharing in Internet of Nano Things**," Computers and Electrical Engineering 117 (July 2024): 109253 https://www.sciencedirect.com/science/article/abs/pii/S0045790624001812; Sahin, Emre, Mustafa Alper Akkas, and Orhan Dagdeviren, "**Low-cost and high-performance channel access strategies for Internet of Nano-Things applications**," Future Generation Computer Systems 153 (April 2024): 477-491 https://www.sciencedirect.com/science/article/abs/pii/S0167739X2300479X;