



CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives from around the globe gathered by CDAIT

(1300 entries since April 1, 2022)
https://cdait.gatech.edu/sites/default/files/2023-05/Digital_Transformation_Through_IoT_Technologies_May_31_2023.pdf

GOVERNANCE & THE INTERNET OF THING

John Edwards, "Chips, subsidies, security, and great power competition -- Motives in the tech competition between the United States and China pose increasingly difficult policy issues for other economies," Lowy Institute [Australia], May 28, 2023
<https://www.lowyinstitute.org/publications/chips-subsidies-security-great-power-competition>

Lucas Mearian, "G7 leaders warn of AI dangers, say the time to act is now," Computer World, May 22, 2023
<https://www.computerworld.com/article/3697154/g7-leaders-warn-of-ai-dangers-say-the-time-to-act-is-now.html>

U.K. Department of Science, Innovation and Technology, "Governance in a Box," gov.uk, May 16, 2023
<https://www.gov.uk/government/publications/secure-connected-places-playbook-documents/governance-in-a-box>

Jane Munga, "How the United States Can Effectively Implement Its New Digital Transformation With Africa Initiative," Carnegie Endowment for International Peace, May 17, 2023
<https://carnegieendowment.org/2023/05/17/how-united-states-can-effectively-implement-its-new-digital-transformation-with-africa-initiative-pub-89755>

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Biweekly IoT News Digest (05/23 – 2)

IoT News and Market Reports

(Second Half of May 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 – 16 entries:
https://cdait.gatech.edu/sites/default/files/2023-05/IoT_News_Filings_May_2023_Second_Half.pdf
- Sample list of IoT-related market reports gathered by CDAIT – 80 entries: https://cdait.gatech.edu/sites/default/files/2023-05/IoT_Market_Reports_May_2023_Second_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Mavridis, Christos N., Aris Kanellopoulos, Kyriakos G. Vamvoudakis, John S. Baras, and Karl Henrik Johansson, "Attack Identification for Cyber-Physical Security in Dynamic Games under Cognitive Hierarchy,"
https://people.kth.se/~kallej/papers/secure_ifac23mav.pdf
- Péralte C. Paul, "Georgia Tech Researchers Develop Wireless Monitoring Patch System to Detect Sleep Apnea at Home," [about a wearable sleep monitor patch developed by a team of researchers and clinicians, led by W. Hong Yeo, an associate professor and Woodruff Faculty Fellow in Georgia Tech's George W. Woodruff School of Mechanical Engineering,] Georgia Tech Research, May 24, 2023 <https://research.gatech.edu/georgia-tech-researchers-develop-wireless-monitoring-patch-system-detect-sleep-apnea-home>

OF NOTE: Scott J. Shapiro [founder of the Yale CyberSecurity Lab.], "The Strange Story of the Teens Behind the Mirai Botnet," (Mirai) was ruthlessly efficient in taking control of Internet of Things devices and excluding competing malware, IEEE Spectrum, May 23, 2023 <https://spectrum.ieee.org/mirai-botnet> ---- "The Mirai botnet exploited vulnerable Internet of Things devices, such as Web-connected video cameras, ones that supported Telnet, an outdated system for logging in remotely. Owners of these devices rarely updated their passwords, so they could be easily guessed using a strategy called a dictionary attack."

Special Reading Suggestions

- Kerem Gülen, "Exploring the dynamic fusion of AI and the IoT," Dataconomy, May 25, 2023 <https://dataconomy.com/2023/05/25/artificial-intelligence-in-internet-of-things/>
- Satyajit Sinha, "State of IoT 2023: Number of connected IoT devices growing 16% to 16 billion globally," IoT Analytics, May 24, 2023 <https://iot-analytics.com/number-connected-iot-devices/>
- Shiva Ganesh, "Top 10 5G-Enabled IoT Technologies Shaping the Future in 2023," Analytics Insight, May 23, 2023 <https://www.analyticsinsight.net/top-10-5g-enabled-iot-technologies-shaping-the-future-in-2023/>
- Joanna Fantozzi, "Confused about the 'Internet of Things'? Here's how IoT is changing restaurant tech forever," Nation's Restaurant News, May 2023 <https://www.nrn.com/technology/confused-about-internet-things-here-s-how-iot-changing-restaurant-tech-forever>
- Bentham Science Publishers [Book announcement], "Integrating IoT, AI, and machine learning for next-generation healthcare," Eurekalert, May 18, 2023 <https://www.eurekalert.org/news-releases/989706>
- Abigail Perry, "The impact of IoT on customer engagement (Reader Forum)," RCR Wireless News, May 18, 2023 <https://www.rcrwireless.com/20230518/internet-of-things-4/the-impact-of-iot-on-customer-engagement-reader-forum>
- Zac Amos, "How Cloud Computing Improves IoT Scalability," IoT for All, May 16, 2023 <https://www.iotforall.com/how-cloud-computing-improves-iot-scalability>

Selected IoT Perspectives

Open-Source IoT

"If you give customers something they can modify with ease, they will surely remember your brand and keep buying from you in the future," DeepSea Development, "Why You Should Build Open-Source IoT Devices," IoT for All April 26, 2023 <https://www.iotforall.com/why-you-should-build-open-source-iot-devices>

- Scott Amyx, "67 open source tools and resources for IoT," TechBeacon, n.d. <https://techbeacon.com/app-dev-testing/67-open-source-tools-resources-iot>
- Alex Handy, "Gothenburg, Sweden Used Open Source IoT to Drastically Cut Water Waste," The New Stack, May 24, 2023 <https://thenewstack.io/gothenburg-sweden-used-open-source-iot-to-drastically-cut-water-waste/>
- Cheryl Knight, "Navigating the intersection of open source, AI and security: Open Source Summit final analysis," SiliconANGLE, May 13, 2023 <https://siliconangle.com/2023/05/13/navigating-intersection-open-source-ai-security-open-source-summit-final-analysis-ossummit/>
- Michelle Dawn Mooney, "How Open-Source IoT Solutions are Redefining the Edge," Market Scale, March 23, 2023 <https://marketscale.com/industries/software-and-technology/how-open-source-iot-solutions-are-redefining-the-edge/>
- Gina Roos, "Open source dominates IoT and edge solutions," Electronic Products, February 23, 2023 <https://www.electronicproducts.com/open-source-dominates-iot-and-edge-solutions/>
- Devang Delvadiya, "Top 10 Open-Source IoT Frameworks," TutorialsPoint, January 4, 2023 <https://www.tutorialspoint.com/top-10-open-source-iot-frameworks>

Research background info (sample): Baldini, Andrea, Roberto Garofalo, Enzo Pasquale Scilingo, and Alberto Greco. "A Real-Time, Open-Source, IoT-like, Wearable Monitoring Platform," Electronics 12, no. 6 (2023): 1498 <https://www.mdpi.com/2079-9292/12/6/1498>; Tzerakis, Konstantinos, Georgios Psarras, and Nektarios N. Kourgiyalas. "Developing an Open-Source IoT Platform for Optimal Irrigation Scheduling and Decision-Making: Implementation at Olive Grove Parcels," Water 15, no. 9 (2023): 1739 <https://www.mdpi.com/2073-4441/15/9/1739>; Naik, Kevin, and Supriya Patel. "An open source smart home management system based on IOT," Wireless Networks 29, no. 3 (2023): 989-995 <https://link.springer.com/article/10.1007/s11276-018-1884-z>; Gabriel, Alex, and Fabio Cruz. "Open source IoT-based collection bin applied to local plastic recycling," HardwareX 13 (2023): e00389 <https://www.sciencedirect.com/science/article/pii/S254266052200107X>; Lazidis, Apostolos, Konstantinos Tsakos, and Euripides GM Petrakis. "Publish-Subscribe approaches for the IoT and the cloud: Functional and performance evaluation of open-source systems," Internet of Things 19 (2022): 100538v <https://www.sciencedirect.com/science/article/abs/pii/S2542660522000403> --- See Eclipse IoT (open source IoT projects) <https://iot.eclipse.org/> -- See also: Open Source IoT Windows Software, Sourceforge <https://sourceforge.net/directory/iot/windows/> and Internet of Things (IoT), n.d. <https://opensource.com/tags/internet-things-iot>