GT CDAIT
Biweekly IoT News Digest (05/23 – 2)

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

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 Researchy, 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, Februay 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. Kourgialas. "**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/S2468067222001341; Dr. Arun Chavan , Annanya Pingale, 2023, "**Open Source Hardware for IoT: A Review**," International Journal of Engineering Research & Technology (IJERT) Volume 12, Issue 01 (January 2023) https://www.ijert.org/open-source-hardware-for-iot-a-review; Domínguez-Bolaño, Tomás, Omar Campos, Valentín Barral, Carlos J. Escudero, and José A. García-Naya. "**An overview of IoT architectures, technologies, and existing open-source projects,**" Internet of Things (2022): 100626 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,** Suurceforge https://sourceforge.net/directory/iot/windows/ and **Internet of Things (IoT),** n.d. https://opensource.com/tags/internet-things-iot