

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

CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES TECHNOLOGIES Some biweekly perspectives from around the globe gathered by CDAIT (2150 entries since April 1, 2022) https://cdait.gatech.edu/sites/default /files/2024-

02/Digital_Transformation_Through_ IoT_Technologies_February_15_2024 pdf

THE INTERNET OF THINGS

Heather Wright, ***Industrial** vulnerabilities highlight digitalisation challenge, ***** [*IoT and OT bug out... Operational technology and internet of things environments are being targeted with increasing sophistication with increasing numbers of vulnerabilities helping adversaries, "Start [Australia], February 13, 2024 https://istart.com.au/news-items/industrial-vulnerabilities-highlight-digitalisation-challenge/

Tsaaro, "Impact of DPDPA [Digital Personal Protection Act] on IoT in India," Tsaaro Consulting, February 12, 2024 https://tsaaro.com/blogs/impact-of-dpdpa-on-iot-in-india/

Chris Stokel-Wallker, "Europe's New AI Rules Could Go Global—Here's What That Will Mean," Scientific American, February 7, 2024 https://www.scientificamerican.com/a rticle/europes-new-ai-rules-could-go-global-heres-what-that-will-mean/

Prakash Sangam, "**Can IoT Devices** Become Ticking Time Bombs?" Broadband Breakfast, February 6,

/02/prakash-sangam-can-iot-devices-become-ticking-time-bombs/

U.S. Government Accountability Office (GAO), **"National Cyber Director Strategy**," February 2024 https://www.gao.gov/assets/d2410691 6.pdf

Lydia Kostopoulos, "With new tech comes new responsibilities," January 30, 2024 https://www.orfonline.org/expert-speak/with-new-tech-comes-new-responsibilities

GT CDAIT Biweekly IoT News Digest (2/24 - 1)

IoT News and Market Reports

(First Half of Februay 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-

02/IoT_News_Filings_February_2024_First_Half.pdf

Sample list of IoT-related market reports gathered by CDAIT - 65 ٠ entries: https://cdait.gatech.edu/sites/default/files/2024-02/IoT_Market_Reports_February_2024_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Cho, Yong K. "A Smart IOT Proximity Alert System for Highway Work Zone Safety," No. NCHRP IDEA Project 226. 2024 https://trid.trb.org/View/2325963
- Matthews, Jared, Ira Soltis, Michelle Villegas-Downs, Tara A. Peters, Anne M. Fink, Jihoon Kim, Lauren Zhou, Lissette Romero, Barbara L. McFarlin, and Woon-Hong Yeo, "Cloud-Integrated Smart Nanomembrane Wearables for Remote Wireless Continuous Health Monitoring of Postpartum Women, Advanced Science (2024): 2307609 https://onlinelibrary.wiley.com/doi/full/10.1002/advs.202307609
- Mudunuru, Maruti K., James Ang, Mahantesh Halappanavar, Simon D. Hammond, Maya B. Gokhale, James C. Hoe, Tushar Krishna et al. "**Perspectives on AI Architectures and Codesign for Earth System Predictability**," Artificial Intelligence for the Earth Systems 3, no. 1 (2024): e230029 https://journals.ametsoc.org/view/journals/aies/3/1/AIES-D-23-0029.1.xml

OF NOTE: The 10th anniversary of the IEEE World Forum on the Internet of Things (WF-IOT 2024), "Unleashing the power of IoT with AI," will take place in Ottawa, Canada, November 10-13, 2024. WF-IoT seeks submissions and proposals for original technical papers and presentations that address the Internet of Things. For more information see: https://wfiot2024.iot.ieee.org/ - Coming up: IoTBDS 2024 : 9th International Conference on Internet of Things, Big Data and Security, Angers, France, April 28-30, 2024 https://iotbds.scitevents.org/; and IoTDI 2024, 9th ACM/IEEE Conference on Internet of Things Design and Implementation, May 13-16, 2024, Hong Kong, China https://conferences.computer.org/iotDI/2024/

Special Reading Suggestions

- Tammilselvan Ponnuvel, "Seamless connectivity in transformative manufacturing: No-code plug-and-play IoT integration," Express Computer, February 13, 2024 https://www.expresscomputer.in/guest-blogs/seamless-connectivity-in-transformative-manufacturing-no-code-plug-and-play-iot-integration/109051/
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- Shikka Dhingra, "IoT Testing: Best Practices And Challenges in 2024," Kratikal Blogs, February 9, 2024 https://kratikal.com/blog/iot-testing-best-practices-and-challenges-in-
- Sudeep Srivastava, "Use Cases, Benefits and Roadblocks to Harnessing IoT in Aviation," Appinventiv, February 8, 2024 https://appinventiv.com/blog/iot-in-aviation/ Eve Thomas, "Innovation in IoT could shed new light on packaging life cycles," Packaging Gateway, February 7, 2024 https://www.packaging-
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- Ikhlas Patel, "How IoT can change the world of Education," Medium, February 6, 2024 https://ikhlaspatel.medium.com/how-iot-can-change-the-world-ofeducation-cc026deef60b
- Saumitra Jagdale, "How IoT platforms evolved in 2023," Fierce Electronics, Februay 5, 2024 https://www.fierceelectronics.com/iot-wireless/how-iot-platforms-evolved-2023
 - Linda Rosencrance, "Is Batteryless IoT the Future of Connected Devices?" Techopedia, January 31, 2024 https://www.techopedia.com/is-batteryless-iot-thefuture-of-connected-devices

Selected IoT Perspectives The Internet of Things and 6G

[Note: 6G is expected to launch commercially by 2030; with lab testing and pilots around 2028] "GG technology is expected to support up to 10 million IoT devices per square kilometer – a tenfold increase from the 1 million limit for 5G – and a

massive increase over 4 G's limit of around 2,000 devices per square kilometer," Nicole Willing, "When AI Meets 6G: How Next Gen Mobile Networks Will Change the World," Techopedia, November 13, 2023 https://www.techopedia.com/6g-and-ai-next-gen-mobile-networks-will-change-the-world

- Sarah LaSelva, "6G standards to get boost from 5G Advanced in 2024 (Reader Forum)," RCR Wireless, January 12, 2024 https://www.rcrwireless.com/20240112/reader-forum/6g-standards-to-get-boost-from-5g-advanced-in-2024-reader-forum
- Scholarly Community Encyclopedia posting, "6G-IoT Technologies," Scholarly Community Encyclopedia, August 4, 2023 https://encyclopedia.pub/entry/47659
- Stacey Higginbotham, "What to expect with 6G and the industrial IoT," April 4, 2023, Stacey on IoT, April 4, 2023 https://staceyoniot.com/what-to-expect-with-6g-and-the-industrial-iot/
- Pablo Valerio, "6G Set to Primarily Be an Industrial IoT Network," EE Times, April 3, 2023 https://www.eetimes.com/6g-set-to-primarily-bean-industrial-iot-network/
- Sree Lekshmi, "5G to 6G Transition: Road to Advanced Technology, IoT, Infrastructure and Distributed Intelligence," Calsoft, February 2, 2023 https://calsoftinc.com/blogs/2023/02/5g-to-6g-transition-road-to-advanced-technology-iot-infrastructure-and-distributedintelligence.html

Research background info (sample): Forthcoming (May/June 2024), "6G Non-Terrestrial Networks for Intelligent IoT Services," IEEE Communications Society https://www.comsoc.org/publications/magazines/ieee-network/cfp/6gnon-terrestrial-networks-intelligent-iot-services; A. F. M. S. Shah, M. A. Karabulut and K. Rabie, "Multiple Access Schemes for 6G Enabled NTN [Non-Terrestrial Network]-Assisted IoT Technologies: Recent Developments, Prospects and Challenges," in IEEE Internet of Things Magazine, vol. 7, no. 1, pp. 48-54, January 2024, doi: 10.1109/IOTM.001.2300234 https://ieeexplore.ieee.org/abstract/document/io396844; Wu, Jingjing, and Ruiyong Zuo, "Intelligent Computation Offloading Based on Digital Twin-Enabled 6G Industrial IoT," Applied Sciences 14, no. 3 (2024): 1035 https://www.mdpi.com/2076-3417/14/3/1035; Ahad, Abdul, Zheng Jiangbina, Mohammad Tahir, Ibraheem Shayea, Muhammad Aman Sheikh, and Faizan Rasheed, "6G and Intelligent Healthcare: Taxonomy, Technologies, Open Issues and Future Research Directions,' Internet of Things (2024): 101068 https://www.sciencedirect.com/science/article/pii/S2542660524000106; Kamath, Srikanth, Somilya Anand, Suyash Buchke, and Kaushikee Agnihotri, "A Review of Recent Developments in 6G Communications Systems," Engineering Proceedings 59, no. 1 (2024): 167 https://www.mdpi.com/2673-4591/59/1/167;



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