

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

CHRONICLE OF DIGITAL
TRANSFORMATION THROUGH
INTERNET OF THINGS
TECHNOLOGIES
Some biweekly perspectives from

TECHNOLOGIES

Some biweekly perspectives from around the globe gathered by CDAIT

(2350 entries since April 1, 2022) https://cdait.gatech.edu/sites/default /files/2024-04/Digital_Transformation_Through_10T_Technologies_April_15_2024.pdf

GOVERNANCE & THE INTERNET OF THING

Gargi Sarkar, "[Indian] Government Forms Five Working Groups [including lot] To Address Key Digital Challenges," Startup News, April 9, 2024 https://startupnews.fyi/2024/04/09/g overnment-forms-five-workinggroups-to-address-key-digitalchallanges/

Watson Farley & Williams (WFW) posting, "The EU data act: when aviation meets the Internet of Things," WFW, April 9, 2024 https://www.wfw.com/articles/the-eudata-act-when-aviation-meets-the-internet-of-things/

Steven Farmer, Scott Morton and Mark Booth, "The EU and UK Introduce New IoT Security Standards," Interenet and Technology Law, April 9, 2024 https://www.internetandtechnologyla

https://www.internetandtechnologyla w.com/eu-uk-new-iot-securitystandards/

Joseph Madzimure, "Govt

[Zimbabwe] steps up effort to
promote IoT growth," The Herald,
April 5, 2024

https://www.herald.co.zw/govt-steps

Alex Joel, "Why We Need a National Data Protection Strategy," Just Security, April 4, 2024 https://www.justsecurity.org/94249/w hy-we-need-national-data-protectionstrategy/

Christopher Boniface, Lachlan Urquhart, Melissa Terras, "Towards a right to repair for the Internet of Things: A review of legal and policy aspects," Computer Law & Security Review, Volume 52, April 2024, 105934, ISSN 0267-3649, https://doi.org/10.1016/j.clsr.2024.10

Japan's Ministry of Economy, Trade and Industry (METI), "IoT Product Security Conformity Assessment Scheme Policy Draft," METI, March 15, 2024 Public comments: March 15 - April 15, 2024 https://www.meti.go.jp/english/press/2024/0315_001.htm

GT CDAIT Biweekly IoT News Digest (4/24 – 1)

IoT News and Market Reports

(First Half of April 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/2024-04/IoT_News_Filings_April_2024_First_Half.pdf

 Sample list of IoT-related market reports gathered by CDAIT – 65 entries: https://cdait.gatech.edu/sites/default/files/2024-04/IoT_Market_Reports_April_2024_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Jeong, Hyunmin, Nohgyeom Ha, Apostolos Georgiadis, Manos M. Tentzeris, and Sangkil Kim, "Polarization Diversity and Transfer Learning Based Modulation Optimization for High-Speed Dual Channel MIMO Backscatter Communication," IEEE Internet of Things Journal (2024) https://ieeexplore.ieee.org/abstract/document/10477275
- Cao, Yaxing, Erming Su, Yanshuo Sun, Zhong Lin Wang, and Leo NY Cao, "A
 Rolling-Bead Triboelectric Nanogenerator for Harvesting
 Omnidirectional Wind-Induced Energy toward Shelter Forests
 Monitoring," Small 20, no. 10 (2024): 2307119
 https://onlinelibrary.wiley.com/doi/abs/10.1002/smll.202307119
- Fei, Yiyun, Shu Wang, Mulang Song, and Jianxin Roger Jiao. "Design and Operation of a GPT-powered Smart Manufacturing System," Proceedings of the Second Australian International Conference on Industrial Engineering and Operations, Management, Melbourne, Australia, November 14-16, 2023 https://ieomsociety.org/proceedings/2023australia/273.pdf

OF NOTE: NIST [National Institute of Standards and Technology] CSWP [Cybersecurity White Paper] 33 (Initial Public Draft), "Product Development Cybersecurity Handbook: Concepts and Considerations for IoT Product Manufacturers," NIST, April 3, 2024 https://csrc.nist.gov/pubs/cswp/33/product-development-cybersecurity-handbook/ipd --Initial Public Draft can be accessed here: https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.33.ipd.pdf

Special Reading Suggestions

- Laurenz Dallinger, "IoT in InsurTech: Revolution of the Insurance Industry," RT Insights, April 10, 2024 https://www.rtinsights.com/iot-in-insurtech-revolution-of-the-insurance-industry/
- Anail Kempanna, "Connecting IoT with 5G network through innovative approaches," Techcircle, April 8, 2024 https://www.techcircle.in/2024/04/08/connecting-iot-with-5g-network-through-innovative-approaches
- TuxCare team, "Expert Insights on IoT Security Challenges in 2024," Security Boulevard, April 5, 2024 https://securityboulevard.com/2024/04/expert-insights-on-iot-security-challenges-in-2024/
- Sudeep Srivastava, "The Intersection of IoT and Robotics: Transforming Industries and Workforce," Appinventiv, April 4, 2024 https://appinventiv.com/blog/iot-in-robotics/
- Antoinette Hodes, "Two sides of AI in the Industrial Internet of Things," TechRadar Pro, April 4, 2024 https://www.techradar.com/pro/two-sides-of-ai-in-the-industrial-internet-of-things
- Ryan Miller, "IoT in Supply Chain Management: Streamlining Logistics and Distribution," CEO World Magazine, April 1, 2024 https://ceoworld.biz/2024/04/01/iot-in-supply-chain-management-streamlining-logistics-and-distribution/
- Embedded Computing Design Staff, "The Evolution of AIoT from AI Experts," Embedded Computing [Podcast 53:57], April 1, 2024 https://embeddedcomputing.com/technology/ai-machine-learning/the-evolution-of-aiot-from-ai-experts

Selected IoT Perspectives

The Internet of Things and Industry 5.0 as of 2024

"Industry 5.0 represents the next evolutionary phase of the industry, focusing on the integration of advanced technologies with human abilities to enhance both productivity and worker well-being. It builds on the efficiency and productivity targets of Industry 4.0 with responsible business practices to enhance sustainability, profitability, and employee welfare. Industrial IoT (IIoT) is a critical enabling technology to achieve these goals; the ability to monitor and measure nearly anything will allow businesses to successfully pursue digital transformation to enable Industry 5.0." Donna Moore, CEO and Chairwaoman, LoRa Alliance, "IWD 2024: How Industrial IoT Can Enable Industry 5.0." IT Brief Australia, March 7, 2024 https://itbrief.com.au/story/how-industrial-iot-can-enable-industry-5-0

- Asutosh Mohanty, "Industry 4.0, industry 5.0 & digital transformation revolutionising manufacturing sector," Organiser [India], April 2, 2024 https://organiser.org/2024/04/02/230601/sci-tech/industry-4-0-industry-5-0-digital-transformation-revolutionizing-manufacturing-sector/
- Rihika Pawar, "Industry 5.0: A Step Toward Mankind," Timestech, March 13, 2024 https://timestech.in/industry-5-0-a-step-toward-mankind/
- Pablo Valerio, "Industry 5.0: Human-Centric, Fueled by Wireless," EPS News, March 14, 2024 https://epsnews.com/2024/03/14/industry-5-o-human-centric-fueled-by-wireless/
- Allied Market Research press release, "Industry 5.0 Market to Reach \$637.4 Billion, Globally, by 2032 at 17.3% CAGR," PR
 Newswire, March 6, 2024 https://www.prnewswire.co.uk/news-releases/industry-5-0-market-to-reach-637-4-billion-globally-by-2032-at17-3-cagr-allied-market-research-302081779.html

Research background info (sample): Sharma, Megha, Abhinav Tomar, and Abhishek Hazra, "Edge Computing for Industry 5.0: Fundamental, Applications and Research Challenges," IEEE Internet of Things Journal (2024) https://ieeexplore.ieee.org/abstract/document/10462492; Singh, Akhilesh Kumar, Ajeet Sharma, Pradeep kumar Singh, Surabhi Kesarwani, and Amit Pratap Singh, "Internet of Things and Sensor Networks in Industry 5.0: Connecting Devices and Machines," In Emerging Technologies in Digital Manufacturing and Smart Factories, pp. 67-78. IGI Global, 2024 https://www.igi-global.com/chapter/internet-of-things-and-sensor-networks-in-industry-50/336123; Hassan, Muhammad Ali, Shehnila Zardari, Muhammad Umer Farooq, Marwah M. Alansari, and Shimaa A. Nagro, "Systematic Analysis of Risks in Industry 5.0 Architecture," Applied Sciences 14, no. 4 (2024): 1466 https://www.mdpi.com/2076-3417/14/4/1466; Adel, Amr. 2024. "The Convergence of Intelligent Tutoring, Robotics, and IoT in Smart Education for the Transition from Industry 4.0 to 5.0" Smart Cities 7, no. 1: 325-369., published January 30, 2024 https://doi.org/10.3390/smartcities7010014 -- See: IoTI5 2024: 6th International Workshop on IoT Applications and Industry 5.0, Abu Dhabi, UAE, April 29-May 1, 2024 http://ioti5-2024.cs.ihu.gr/



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of Internet of Things Technologies