GT CDAIT
Biweekly IoT News Digest (3/24 – 1)

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

Bohdan Savchuk, "**Cybersecurity for IoT devices: Myth or Truth - Part 1**," RSA Conference, March 12, 2024 https://www.rsaconference.com/librar y/blog/cybersecurity-for-iot-devices-myth-or-truth-part-1 and "**Cybersecurity for IoT devices: Myth or Truth - Part 2**," RSA Conference, March 13, 2024 https://www.rsaconference.com/librar y/blog/cybersecurity-for-iot-devices-myth-or-truth-part-2

Jim Love, "**AI presents an "extinction level threat" – US Gov't Report: Hashtag Trending for Tuesday, March 12, 2024**," IT World Canada, March 12, 2024 https://www.itworldcanada.com/articl e/ai-presents-an-extinction-level-threat-us-govt-report-hashtag-trending-for-tuesday-march-12-2024/560191

Jacob Livesay, "**NIST [National Institute of Standards and Technology] to release draft handbook on Internet of Things product development**," Insider Cybersecurity, March 11, 2024 https://insidecybersecurity.com/daily -news/nist-release-draft-handbook-internet-things-product-development-mid-march

Manish Tewari, "**AI, Blockchain & the IoT: the trifecta for smart cities**," Realty Plus, [India] March 7, 2024 https://rprealtyplus.com/interviews/a i-blockchain-iot-the-trifecta-for-smart-cities-114298.html

Alex Blair, "**Will IoT in defence continue to grow amid cybersecurity concerns?**"Army Technology, March 4, 2024 https://www.army-technology.com/features/will-iot-in-defence-continue-to-grow-amid-cybersecurity-concerns/?cf-view

Nathan Eddy, "**IT Leaders Lack Confidence in IoT Security Plans**," Security Boulevard, March 1, 2024 https://securityboulevard.com/2024/ 03/it-leaders-lack-confidence-in-iot-security-plans/

IoT News and Market Reports

(First Half of March 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/2024-03/IoT_News_Filings_March_2024_First_Half.pdf

- Sample list of IoT-related market reports gathered by CDAIT – 65 entries: https://cdait.gatech.edu/sites/default/files/2024-03/IoT_Market_Reports_March_2024_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Saad Ahmed, Bashima Islam, Kasim Sinan Yildirim, Marco Zimmerling, Przemysław Pawełczak, Muhammad Hamad Alizai, Brandon Lucia, Luca Mottola, Jacob Sorber, and Josiah Hester, "**The Internet of Batteryless Things**," Communications of the ACM, March 2024 issue, DOI 10.1145/3624718, Vol. 7, N03, pp. 64-73 https://cacm.acm.org/research/the-internet-of-batteryless-things/

- Woo, Jongseok, Kuchul Jung, and Saibal Mukhopadhyay, "**Modulation Recognition with Untrained Deep Neural Network for IoT and Mobile Applications**," In 2024 IEEE Radio and Wireless Symposium (RWS), pp. 54-57. IEEE, 2024 https://ieeexplore.ieee.org/abstract/document/10438608

- Van Hentenryck, Pascal, and Kevin Dalmeijer, "**AI4OPT: AI Institute for Advances in Optimization**," AI Magazine (first published, February 10, 2024) https://onlinelibrary.wiley.com/doi/full/10.1002/aaai.12146

- Bhattacharyya, Swagat, and Jennifer O. Hasler, "**Extrema-Triggered Conversion for Non-Stationary Signal Acquisition in Wireless Sensor Nodes**," Journal of Low Power Electronics and Applications 14, no. 1 (published February 17, 2024): 11. https://www.mdpi.com/2079-9268/14/1/11

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Special Reading Suggestions

- New Zealand Alliance posting, "**IoT plays pivotal role in addressing climate adaptation | IoT News**," New Zealand IoT Alliance, March 12, 2024 https://iotalliance.org.nz/iot-plays-pivotal-role-in-addressing-climate-adaptation-iot-news/

- Natalia Khan, Wei Deng Solvang, and Hao Yu, "**IIoT and Other Industry 4.0 Technologies in O&G [Oil & Gas],**" Scholarly Community Encyclopedia, updated March 11, 2024 https://encyclopedia.pub/entry/55810

- Richard Scarbrough, "**The Aviation of Things**," Flying, March 8, 2024 https://www.flyingmag.com/the-aviation-of-things/

- Donna Moore, "**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

- Julia Seredovich, "**How to monetize the IoT**," Embedded, March 6, 2024 https://www.embedded.com/how-to-monetize-the-iot/

- Jay Palter, "**Industrial Automation and IoT: What Are the Benefits?**" Real Time Networks, March 4, 2024 https://www.realtimenetworks.com/blog/industrial-automation-and-iot-what-are-the-benefits

- Asutosh Mohanty, "**IoT Dynamics in 2024: A deep dive into connectivity, challenges, and innovations,**" Organiser [India], March 3, 2024 https://organiser.org/2024/03/03/224747/sci-tech/iot-dynamics-in-2024-a-deep-dive-into-connectivity-challenges-and-innovations/

- Essa Q. Shahra, Wenyan Wu, Shadi Basurra, and Adel Aneiba," **Edge Intelligent with Internet of Things**," Schlolarly Community Encyclopedia, February 29, 2024 https://encyclopedia.pub/entry/55659

- Bob Tapscott, "**Trivergence: Accelerating Innovation with AI, Blockchain, and the Internet of Things**," [Book, 256 pages], Wiley, ISBN: 9781394226610 published on February 28, 2024 https://mitpressbookstore.mit.edu/book/9781394226610

Selected IoT Perspectives

Internet of Things Roaming

"The Internet of Things (IoT) has revolutionized the way we interact with the world around us. From smart homes to industrial automation, IoT devices are playing a pivotal role in enhancing efficiency and convenience. However, the growing IoT ecosystem has brought forth its own set of challenges. One such challenge is permanent roaming, a phenomenon that has gained significance due to the global nature of IoT deployments." Mohit Agrawal,
*"**Navigating Permanent Roaming for IoT: Challenges and Solutions**," Counterpoint, August 23, 2023*
https://www.counterpointresearch.com/insights/permanent-roaming-iot/

- Joe O'Halloran, "**5G, IoT roaming traffic soars in 2023**," Computer Weekly, February 26, 2024 https://www.computerweekly.com/news/366571312/5G-IOT-roaming-traffic-soars-in-2023

- Report Prime press release, "**IoT Roaming Market Size, Growth and Forecast from 2024 – 2031**," LinedIn, February 23, 2024 https://www.linkedin.com/pulse/iot-roaming-market-size-growth-forecast-from-2024-2031-gj5se?trk=article-ssr-frontend-pulse_more-articles_related-content-card

- Zita Goldman, "**The final stepping stones towards global IoT connectivity** - How a new standard is set to remove the barriers from roaming in IoT devices," Business Reporter, February 13, 2024 https://www.business-reporter.co.uk/industrial-innovations/the-final-stepping-stones-towards-global-iot-connectivity

- John Boitnott, "**5G IoT Roaming Connections Are About to Explode**," ReadWrite, July 12, 2023 https://readwrite.com/5g-iot-roaming-connections-are-about-to-explode/

Research background info (sample): Sadhukhan, Dipanwita, Sangram Ray, Mou Dasgupta, and Muhammad Khurram Khan, "**Development of a provably secure and privacy-preserving lightweight authentication scheme for roaming services in global mobility network**," Journal of Network and Computer Applications 224 (April 2024): 103831 https://www.sciencedirect.com/science/article/abs/pii/S1084804524000080; Vahdat-Nejad, Hamed, "**CAMID: architectural support of middleware for multiple-domain ubiquitous computing and IoT,**" The Journal of Supercomputing 79, no. 1 (2023): 573-590 https://link.springer.com/article/10.1007/s11227-022-04696-w; Hamnache, Mohamed, Rahim Kacimi, and André-Luc Beylot, "**Enabling an inter-operator roaming capability in LoRaWAN networks**," Ad Hoc Networks 139 (2023): 103025 https://www.sciencedirect.com/science/article/abs/pii/S1570870522001974 -- See GSMA website, "**Mobile IoT (LPWA) Roaming**," https://www.gsma.com/iot/mobile-iot/roaming/

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