GT CDAIT
Biweekly IoT News Digest (10/24 – 1)

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

CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES
Some biweekly perspectives from around the globe gathered by CDAIT - 50 added for this Digest (2950 entries since April 1, 2022)
https://cdait.gatech.edu/sites/default/files/2024-10/Digital_Transformation_Through_IoT_Technologies_October_15_2024.pdf

GOVERNANCE & THE INTERNET OF THINGS

Check Point Team, "**October Cyber Awareness | IoT security – beyond connectivity into risk," Check Point, October 14, 2024** https://blog.checkpoint.com/security/october-cyber-awareness-iot-security-beyond-connectivity-into-risk/

Amy Sarah John, "**CEO conversations shift focus in Q3 2024: Key insights from IoT Analytics report**," Wire19, October 9, 2024 https://wire19.com/ceo-conversations-shift-focus-in-q3-2024-key-insights-from-iot-analytics-report/

Arthur Herman, "**The Internet of Things: Friend or Foe?**" The National Interest, October 8, 2024 https://nationalinterest.org/blog/techland/internet-things-friend-or-foe-213134

Elevate, "**How Internet of Things (IoT) technology helps address climate change and environmental challenges**," WebWire, October 8, 2024 https://www.webwire.com/ViewPressRel.asp?aId=327928

Marlon Dumas, "**Why no code and process mining are the future of digital transformation**," TechRadar, October 7, 2024 https://www.techradar.com/pro/why-no-code-and-process-mining-are-the-future-of-digital-transformation

Matt Burgess and Dhruv Mehrotra, "**License Plate Readers Are Creating a US-Wide Database of More Than Just Cars**," Wired, October 4, 2024 https://www.wired.com/story/license-plate-readers-political-signs-bumper-stickers/

Open Access Government posting, "**EU digital economy policy, including AI**," Open Access Government, October 2, 2024 https://www.openaccessgovernment.org/eu-digital-economy-policy-including-ai/183230/

IoT News and Market Reports

(First Half of October 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/2024-10/IoT_News_Filings_October_2024_First_Half.pdf
- Sample list of IoT-related market reports gathered by CDAIT – 50 entries: https://cdait.gatech.edu/sites/default/files/2024-10/IoT_Market_Reports_October_2024_First_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Ramesh, Ramamoorthy, Sayeef Salahuddin, Suman Datta, Carlos H. Diaz, Dmitri E. Nikonov, Ian A. Young, Donhee Ham et al. "**Roadmap on low-power electronics,**" APL Materials 12, no. 9 (2024) https://pubs.aip.org/aip/apm/article/12/9/099201/3312945/Roadmap-on-low-power-electronics
- Ameta, Gaurav, Satish Bukkapatnam, Dan Li, Wenmeng Tian, Mark Yampolskiy, and Fan Zhang, "**Cybersecurity in Manufacturing**," Journal of Computing and Information Science in Engineering 24, no. 7 (2024) https://asmedigitalcollection.asme.org/computingengineering/article/24/7/070201/1200726
- Rostami, Mohammad, Alan Liu, and Karthikeyan Sundaresan, "**Scalable Acoustic IoT through Composable Distributed Beamforming Tags**," In 2024 23rd ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN), pp. 39-50. IEEE, 2024 https://ieeexplore.ieee.org/abstract/document/10577304

OF NOTE: Examples of **open access** IoT-related research publications: **Internet of Things; Engineering Cyber Physical Human Systems, Volume 28 (December 2024) in progress** https://www.sciencedirect.com/journal/internet-of-things/vol/28/suppl/C; **Journal on Internet of Things, Tech Science, Volume 6, 2024 Press** https://www.techscience.com/journal/jiot; IoT, MDPI, 2024 https://www.mdpi.com/journal/IoT; **Advances in Internet of Things, Scientific Research, 2024** https://www.scirp.org/journal/journalarticles?journalid=476; **Internet of Things and Artificial Intelligence Journal** https://pubs.ascee.org/index.php/iota/about

Special Reading Suggestions

- Anshul Jain, "**From warehouse to customer: how IoT is revolutionising supply chains**," YourStory, October 13, 2024 https://yourstory.com/2024/10/from-warehouse-to-customer-iot-revolutionising-supply-chains
- Carsten Rhod Gregersen, "**Are IoT Hardware Vendors Finally Going Open Source?**" RFID Journal, October 9, 2024 https://www.rfidjournal.com/expert-views/are-iot-hardware-vendors-finally-going-open-source/221823/
- Ralph Moore, "**Will the Small IoT Device OEM Survive?**" The Hacker News, October 7, 2024 https://thehackernews.com/expert-insights/2024/10/will-small-iot-device-oem-survive.html
- Leury Picardo, "**From AI To IoT: How Technology Developments Are Redefining The Driving Experience,**" Hackernoon, October 4, 2024 https://hackernoon.com/from-ai-to-iot-how-technology-developments-are-redefining-the-driving-experience
- Dan Robinson, "**Cisco is abandoning the LoRaWAN space, and there's no lifeboat for IoT customers**," The Register, October 3, 2024 https://www.theregister.com/2024/10/02/cisco_exiting_lorawan/
- John Hopping, "**Using IoT applications in your organisation? Zero trust is a must,**" IT News, October 1, 2024 https://www.itnews.com.au/feature/using-iot-applications-in-your-organisation-zero-trust-is-a-must-612056

Selected IoT Perspectives
5G RedCap (Reduced Capability) and the Internet of Things

*"5G RedCap, also known as 5G NR-Light or New Radio-Lite, is a simplified version of the 5G standard that bridges the gap between 4G and 5G. It is designed for use cases with minimal hardware requirements, where ultra-high data rates, ultra-low latency, or extremely low power are not essential, but reliable throughput is still necessary. RedCap devices are less complex and more cost-effective compared to baseline 5G devices defined by the 5G Release 15 standard" – "5G RedCap and its enhanced version, eRedCap [enhanced reduced capability], represent the future of mid-end cellular IoT connectivity." Rashi Bajpai, "**Powering the Future of IoT: The Role of 5G RedCap in Expanding Device Connectivity**," ELE Times, August 9, 2024 https://www.eletimes.com/powering-the-future-of-iot-the-role-of-5g-redcap-in-expanding-device-connectivity*

- Emre Çıtak, "**How the RedCap API elevates traditional 5G IoT connections**?" Dataconomy, October 14, 2924 https://dataconomy.com/2024/10/14/what-is-redcap-api-vs-iot-5g/
- Dan Jones, "**AT&T, T-Mobile prep first RedCap 5G IoT devices,**" Fierce Network, October 9, 2024 https://www.fierce-network.com/wireless/att-t-mobile-plan-1st-redcap-5g-iot-devices-soon
- James Blackman, "**A billion RedCap connections by 2030, reckons Omdia,**" RCR Wireless News, October 3, 2024 https://www.rcrwireless.com/20241002/internet-of-things-4/a-billion-redcap-connections-by-2030-reckons-omdia
- Baburajan Kizhakedath, "**5G RedCap for IoT gains momentum, but where is commercial deployment?**" Telecom Lead, October 3, 2024 https://telecomlead.com/telecom-services/5g-redcap-for-iot-gains-momentum-but-where-is-commercial-deployment-118320
- Zariot, "**How 5G RedCap Will Pave the Way for Mass IoT Deployment**," IoT for all, September 17, 2024 https://www.iotforall.com/how-5g-redcap-will-pave-the-way-for-mass-iot-deployment
- IoT Now posting, "**5G RedCap paves the way for IoT's 5G transition,**" IoT Now, September 6, 2024 https://www.iot-now.com/2024/09/06/146342-5g-redcap-paves-the-way-for-iots-5g-transition/
- Ian Scales, "**RedCap puts a spring into IoT's 5G step,**" TelecomTV, August 29, 2024 https://www.telecomtv.com/content/5g/redcap-puts-a-spring-into-iot-s-5g-step-51135/

Research background info (sample) – 2024 sources: Emmanuel Ogbodo, Adnan M. Abu-Mahfouz, Anish A. Kurien, "**5G RedCap Enhancement Towards Improved Cellular LPWAN/5G-IoT for Smart Cities and Industrial IoT Using Genetic Algorithm-Based Neural Network,**" International Journal of Sensors, Wireless Communications and Control, June 25, 2024 (In Press, - this is not the final "Version of Record") https://www.eurekaselect.com/article/141272; Damuddara Gedara, Champaka, Muhammad Danyal Khattak, Muhammad Asad Ullah, and Konstantin Mikhaylov, "**Direct-to-Satellite Connectivity for IoT: Overview and Potential of Reduced Capability (RedCap)**," In 2023 IEEE World Forum on Internet of Things: The Blue Planet: A Marriage of Sea and Space, WF-IoT 2023. IEEE, 2024 https://oulurepo.oulu.fi/handle/10024/52124; Anbalagan, Sabari Nathan, Alessandro Chiumento, and Paul Havinga, "**Fine Grained vs Coarse Grained Channel Quality Prediction: A 5G-RedCap Perspective for Industrial IoT Networks,**" In 2024 IEEE 20th International Conference on Factory Communication Systems (WFCS), pp. 1-7. IEEE, 2024 https://ieeexplore.ieee.org/abstract/document/10540787