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**IEEE  
INGR))**

**International Network  
Generations Roadmap**  
*2022 Edition*

# Edge Services and Automation



*An IEEE 5G and Beyond Technology Roadmap*  
[futurenetworks.ieee.org/roadmap](https://futurenetworks.ieee.org/roadmap)

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## ABSTRACT

The Key drivers have certainly changed, and the 5G-hype has reached the cycle of disillusionment globally in 2021-2022. Communication Service Providers have started re-focusing on few use cases that can leverage the markets for better average revenue per unit (ARPU) for both consumers & Enterprises.

The list is short includes

1. 1.Service based use cases based on Service constraints (low latency, high throughput, low jitter)
  - a. IIOT (Industry 4.0)
  - b. V2X (Autonomous Vehicle/ Intelligent Transportation/Traveling Edge)
  - c. Telehealth / Telemedicine / Remote diagnostics
  - d. Content delivery (with Caching, Realtime, Reach Media Internet Applications)
  - e. Ad hoc, Temporary or as needed basis Specific mission Edge services (Emergency, ad hoc major events, DoD combat mission,and more)
2. Radio Based Multi-Access Edge (MEC) with different flavors
  - a. Real Time / Near Real Time enabled Radio Control, Management and XApps based on O-RAN
  - b. Constrained based Edge Infrastructure to optimize Power,Form Factor and Updates to NFV-SDN with OneM2M from ETSI to cover IoT Applications
  - c. The focus on Data Privacy, Security, Data Localization & Analytics Big or Small
  - d. Smart Edge with Containers and Compute & Network acceleration are emerging from Infrastructure and Semiconductor players.

We name item 1 in above as Edge Service Platform Framework (ESPF-2021) supplementary updates and item 2 in above as Edge Automation Platform Framework (EAPF-2021) updates for INGR.2021 efforts released here in 2022.

Key words: ESPF, ENS, IIOT, V2X, XApps, EAPF, O-RAN, MEC,OneM2M, IoT, 5G



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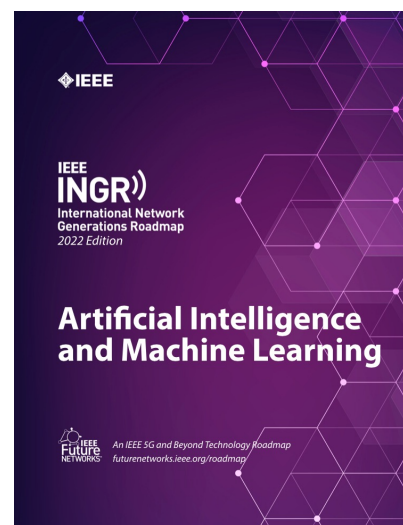
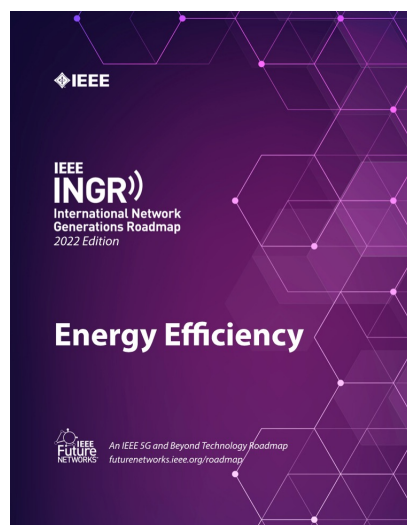
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