

Speaker



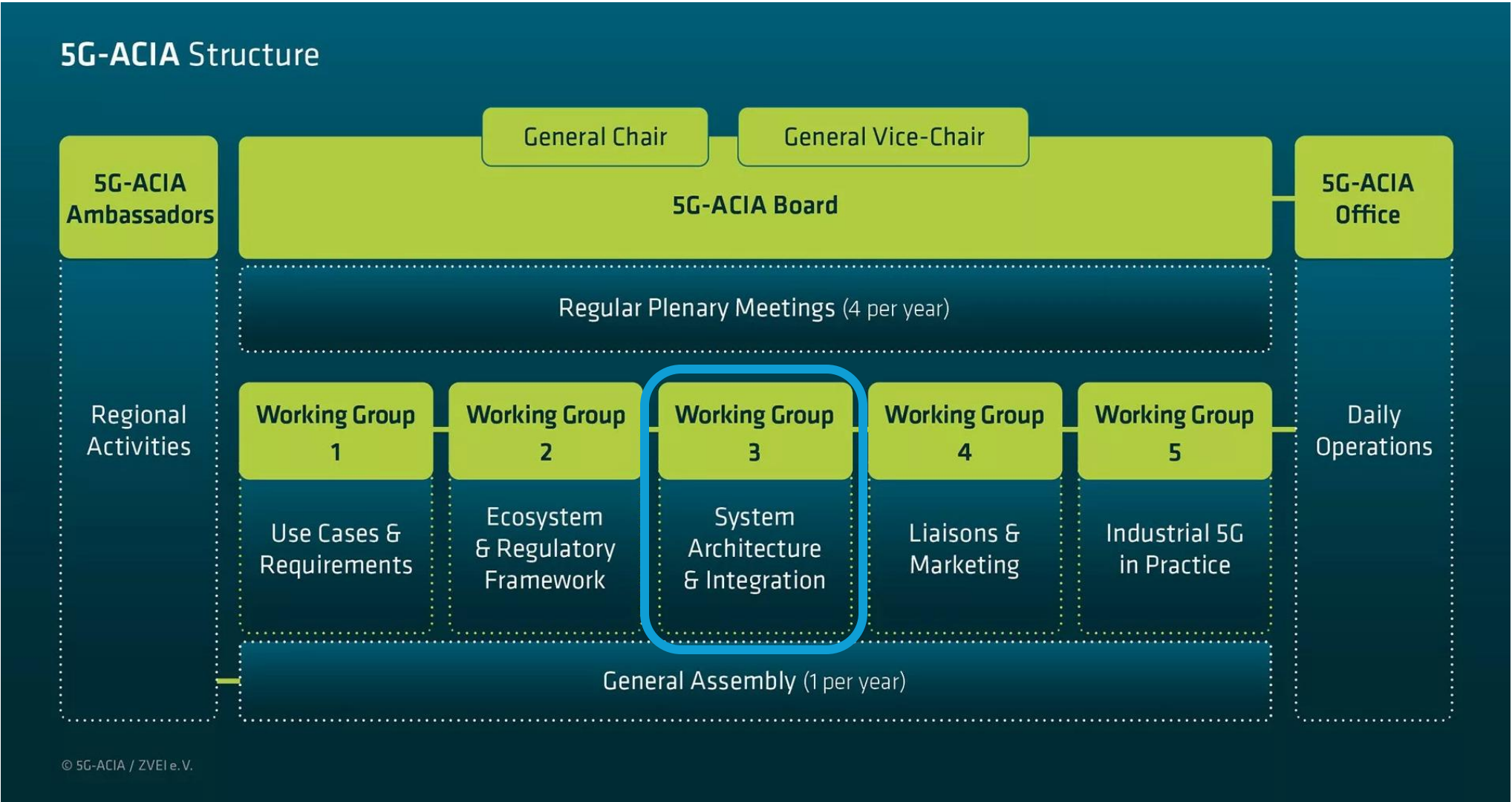
Atte Länsisalmi
Principal Standardization Lead
Nokia

5G-ACIA

Sensing Assisted Positioning in 5G-ACIA WG3

Atte Lämsä, 5G-ACIA WG3 Chair (Nokia)

5G-ACIA WG3 - System Architecture and Integration Aspects

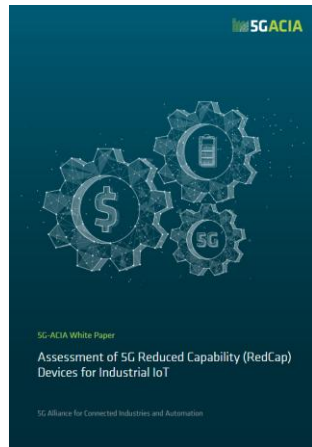


Chair
Atte Lämsä
Nokia

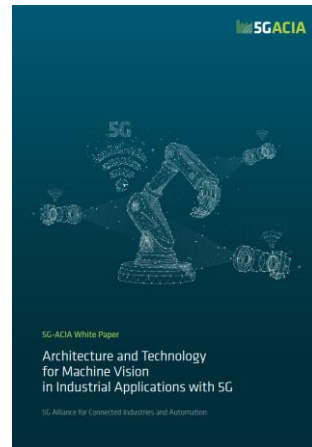


Vice chair
Dr. Ahmad Rostami
Ericsson

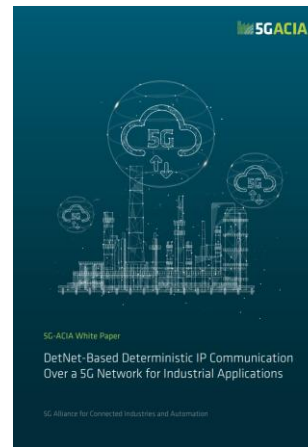
Recent White Papers from WG3



RedCap



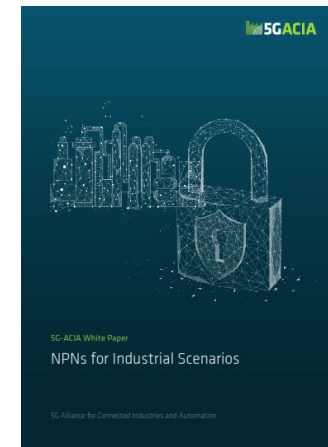
Machine Vision



DetNet over 5G



OPC UA in 5G



**NPNs for Industrial
Scenarios**

Recently started:

Whitepaper | Integrated Sensing and Communication (ISAC) – sensing assisted positioning

[White Papers - 5G-ACIA](#)

Positioning - Key Enabler for Digitalization and Optimization

- Real-time and accurate location information of assets, vehicles, and people is a key enabler for digitalization and automation (e.g., situational overview, digital twins, predictive analytics)
- Enables many applications e.g.: risk management, emergency response management, marketing and customer experience management, remote monitoring, predictive asset analytics and inventory management
- Supporting positioning is a must have feature for a multi-use case wireless system such as 6G!



Time savings
from locating
assets in real time



Improved
utilization rate for
shared assets



Location-based
billing for
shared assets



Layout
optimization



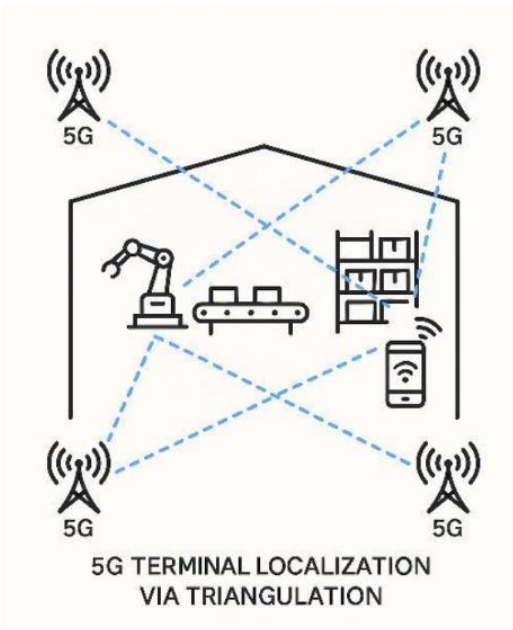
Prevention of
loss and theft



Data for proof
in legal matters

Sensing Assisted Positioning

- New Work Item 093 approved in September for a white paper produced during 2026 (planned publication in March 2027)
- Whitepaper discusses various aspects of sensing and positioning
- The main purpose is to present how sensing can be used to improve positioning and what its potential and application in industrial domain are



Teaser text:

"Academia, industry research, and SDOs are shifting focus towards 5G-Advanced and 6G, in which integrated sensing and communication (ISAC) has been introduced as a new key capability of the mobile radio system. If ISAC is integrated with a conventional localization service, mobile machines (such as AMR, AGV and robots) or goods can be localized much more reliably and with high accuracy. Building on the industrial ISAC application "Sensing for Improved Localization in Industrial Environment" as sketched in the 5G-ACIA white paper on use cases for ISAC in connected industries, this WI will examine methods for sensing-assisted positioning, aiming to achieve high-accuracy positioning at any location in the industrial environment, and investigate their feasibility. Key objective is to enable a positioning of a desired accuracy anytime and everywhere, i.e., independent of the actual radio propagation conditions (LOS or NLOS)."

Web Seminar Series 2025

Thank you for your attention!

