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BERKELEY, CALIFORNIA, UNITED STATES, October 23, 2023 /EINPresswire.com/ -- SRI works with AccuKnox to win prestigious National Science Foundation (NSF) <u>5G Security</u> Research Award

Project SE-RAN seeks to deliver a comprehensive security solution to protect mission-critical 5G networks

AccuKnox, Inc., today announced that they are working with SRI and The Ohio

State University, and their project, titled the Security-Enhanced Radio Access Network (SE-RAN) has received a Phase 2 project award from the National Science Foundation Convergence Accelerator's Track G: Securely Operating Through 5G Infrastructure. The NSF Convergence Accelerator is dedicated to leveraging basic research to fast-track solutions with the potential for profound societal impact. At its core, Project SE-RAN will revolutionize mobile network management services, granting 5G operators unparalleled capabilities in threat detection, policy enforcement, and compliance monitoring across the entirety of the 5G network landscape.

PHASE 1: An 1-year \$750K project (awarded in Aug 2022), enabled the SE-RAN team to design an advanced O-RAN compliant 5G-Native Asset Protection Platform for 5G RAN Security Posture Management. SE-RAN is based on four groundbreaking innovations. First, SE-RAN introduced a modular base station extension called the MobiFlow Auditor, which delivers security auditing to transform the ability of 5G operators to track the security-relevant state of every mobile device and base station in the network. Second, it introduced 5G-Spector, the first runtime malicious RF-drive exploit detector and ML-based threat monitor. Third, it introduced 5G-KubeArmor, the first near-real-time RAN Intelligent Controller (nRT-RIC) security policy generation and enforcement engine, enabling 5G administrators to secure the 5G control plane using application-layer least-permissive security policies. Finally, SE-RAN presented the first 5G-Native

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Ed Amoroso, Founder/CEO, TAG Cyber Application Protection Platform (5GNAPP), integrating all three technologies under a unified security incident and event management (SIEM) system. Together, these innovations position SE-RAN at the forefront of 5G network security.

PHASE 2: will provide the SE-RAN team with a 2-year, \$5M, project to create and commercially transition sophisticated edge and control-layer security services into the 5G network technology domain. The team's main objective is to usher the previously mentioned groundbreaking innovations from concept to production. This includes

integrating these advancements with pioneering ventures across both the open-source and commercial spheres of the 5G community. In fact, the SE-RAN team has already forged robust collaborations with top-tier 5G open-source O-RAN stakeholders in the U.S. Notably, they have successfully integrated SE-RAN elements into the Linux Foundation's 5G Super Blueprint initiative. Additionally, SE-RAN elements were recently prototyped into the Nephio R1 5G Telco-automation project, spearheaded by Google and now part of the Linux Foundation's open-source roster. Furthermore, this is a part of RedHat 5G BluePrint.

In Phase 2, the team will collaborate closely with leading 5G innovators in DoD and Industry. In addition, the team is working with the 5G Open Innovation Laboratory (5GOILab.com), a 5G-focused venture ecosystem dedicated to accelerating startups and industry leaders focused on edge computing and 5G.

"SE-RAN presents a pivotal opportunity to fundamentally redefine the protection mechanisms of mobile network infrastructures, especially against advanced threats targeting mission-critical 5G networks," stated Phillip Porras, program director and internet security scientist of SRI's Computer Science Lab. "We are committed to bolstering the reliability and security of 5G networks, emphasizing mobile device confidentiality, privacy, communication integrity, network survivability, accountability, and robust defenses against attackers employing advanced cloud-based intrusion techniques."

"SRI's ventures team views SE-RAN as a bold opportunity to fundamentally impact the edge and 5G marketplace with desperately needed leading-edge security solutions," said Todd Stavish, vice president of SRI's ventures group.

"The innovations SE-RAN will revolutionize mobile applications for industries, governments," remarked Nat Natraj, CEO of AccuKnox. "We feel privileged to be working with a seminal industry innovator like SRI to deliver comprehensive security for 5G and Future G networks."

"As 5G starts getting broad industry adoption, security is a very critical challenge. It is delightful

to see an amazing innovator like SRI work with AccuKnox to deliver critical innovations," said Jim Brisimitzis, General Partner, 5G Open Innovation Lab.

"This is a great testament to SRI's time-tested R&D Innovation, and AccuKnox's proven track record in delivering <u>Zero Trust Security</u> solutions to the industry. The industry will benefit from this and it will allow incumbent and new operators/carriers to offer market leading 5G solutions without impacting security," said Ed Amoroso, Founder/CEO, TAG Cyber, previously Chief Security Officer, AT&T.

5Gsec Website (<u>https://www.5gsec.com/</u>) houses latest innovation on this project. About AccuKnox, Inc.

AccuKnox provides a Zero Trust Cloud Native Application Security (CNAPP) platform. AccuKnox was formed because of its work with SRI and AccuKnox Zero Trust. AccuKnox is the core contributor to Kubernetes Run-time security solution, KubeArmor®, a very popular CNCF (Cloud Native Computing Foundation) project that has achieved 600,000+ downloads. AccuKnox technology is anchored on seminal inventions in the areas of Container Security, Anomaly Detection, and Data Provenance. AccuKnox delivers comprehensive Zero Trust security for Network, Application (K8, VM), and Data across Cloud, IoT/Edge, and 5G environments, and AccuKnox can be deployed in Public and Private Cloud environments. AccuKnox is funded by leading CyberSecurity Investors like National Grid Partners, MDSV, Avanta Venture Partners, Dolby Family Ventures, DreamIT Ventures, 5G Open Innovation Lab and Seedop. Visit www.accuknox.com or follow us on Twitter (@accuknox).

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