Secure 5G

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Secure 5G Project In A Nutshell

"Delivery of an innovative solution for O-RAN which will reduce costs for owners, break single vendor dependencies, and, by disaggregating hardware and software suppliers, will enable innovation, flexibility and scalability without compromising security."

This is a disruptive project as it is a **'world's first'.** It brings together an RF power amplifier company (Slipstream) with an open source base station developer (Lime Microsystems), a company providing a future proof quantum encryption capability (Arqit), and a test and support facility, at CSA Catapult

Impact On The Market / Beneficiaries

slipstreamdesign
Wide band power amplifier

Software driven and frequency agnostic power amplification de-links spectrum availability from hardware requirement. Simplifies and speeds up network planning and deployment, opens new use cases and increases RAN sharing, thus driving down costs

Lime microsystems
Software defined radio

Highly integrated low power Radio chipsets and modules for a fully programmable RAN solution, enabling future proof agile deployment of networks at a fraction of cost and time

ARQIT
Quantum secure encryption platform

Future proof simple drop-in security solution, removes vulnerabilities to Public Key Infrastructure and assists the secure integration of open source components. Increases resilience.

Therefore, the main beneficiary is any organisation looking for an efficient scalable, low cost, secure 5G O-RAN system, without the limitation of a mainstream, traditional vendor

How are we doing it?

We are developing a truly open-source platform, by developing a flexible and scalable system, which is able to meet the 5G O-RAN challenges:

1. Developing an innovative wideband power amplifier focused on **Power Efficiency**

2. Wideband operation enables improved **Spectrum Management**

3. Using **open-source Software Platforms** and a common API, disaggregating software and hardware supply

4. **System Integration** is at the core of our modular approach

5. **Security** through open-source software, enabling e.g. Arqit's QuantumCloudTM encryption platform

Collaboration possibilities with FRANC Projects

We would like to discuss security challenges that each team are facing as part of their project, and identify if there are some risk mitigation strategies that could be documented, as a part of the Security Collaboration.

Proteus
Towards AI Powered and Secure Carrier-Grade Open RAN Platform
Best of British RAN Development
UK 5G DU-Volution
Energy-efficient Cloudlets for ORAN (ECORAN)
Accelerating RAN Intelligence in 5G (ARI-5G)
5G DRIVE
Flexible, Efficient and High-Performance 5G Open RAN (Flex-5G)
BEACON-5G
O-RANOS

A further online session beyond today's meet and greet, is likely necessary

Slipstream would like to discuss MMIC with

ORanGan