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A Secure Wireless and 5G IoT Solution

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Abstract:

Today, I would like to share with you the criteria of how you can Secure IoT Ecosystems endpoints. With imminent deployment of large scale IoT Sensors, hackers who have traditionally relied on vulnerabilities of switches, routers and networks have now have another entry point through IoT sensors – this is the Achilles heel of the Internet of Things (IoT). Existing encryption and authentications systems are no longer suitable to provide Security for IoT sensors. This is due to their large footprint and a heavy CPU and network load. A new approach is needed.

The solution has to be: a simple, lightweight, secure, cost-effective technology that addresses all security weaknesses associated with wireless IoT devices and Machine to Machine (M2M) devices. In addition, any new solution should result in minimal changes to existing network architecture or infrastructure.

The solution is platform and application agnostic which ensures it is independent of underlying protocols. Additionally we have made sure that all major design considerations for securing low-complexity endpoints and network traffic are not compromised. Key features of the solution are:

- ✓ Low complexity and legacy impact
- ✓ Small encryption footprint
- ✓ Low battery drain and Low cost
- ✓ Fast and easy to install
- ✓ Proven strong encryption
- ✓ Reliable and highly scalable

Our proposed StarDust solution provides a security wrapper without accessing user data. It simply acts as a gatekeeper to control access by pre-registered devices. Any unauthorised access will be automatically blocked by solution through validation against a white list of registered devices.

One of the USP of the solution is a low chat profile making it very difficult for potential sniffers to collect enough packets to identify any predict any patterns which makes the system vulnerable. This is achieved through the use of short bursts of infrequent messages sent as non-IP unframed data. This in turn reduces battery drain and cost whilst ensuring a tiny CPU footprint.

At the heart of the solution is a need for Security and scalability in order of billions and the ability to retrofit to legacy smart devices. It can be installed on ANY device or platform, and works over ANY type of wireless, e.g. BLE, ZigBee, Z-Wave, 4G/5G Cellular IoT, LoRa, etc. This is being provided by our patented StarDust Security wrapper.

The new approach is here today.

Biography:

Mike Cawley, TMIET CEO Xrossfire Ltd



Mike Cawley is architect of XrossFire's strategy, bridging top Japanese and American technology to Europe, Africa and Middle East (EMEA) by organising large-scale partnerships for vertical markets in smart energy, health, and wireless broadband infrastructures.

Mike has through his 35+ years career developed personal relationships with many of EMEA's top-flight companies, operators, and governments. He has helped innovate and implement market leading EMEA telecommunications "firsts" for several top global networking companies. He continues to serve as board member for prominent companies bridging US technology companies seeking EMEA markets.

Co-Founder and CEO of Total Optical Networks (TON) AG, a Swiss broadband carrier, Mike led the formation and highly successful launch of this 1st to market multi-gigabit operator for Fortune 500 multinationals demanding 24x7 availability. TON continues to dominate this highly lucrative Swiss market through its popular "6 Sigma Service Reliability".

Mike most recently formulated an impressive string of successes for Sorrento Networks (DWDM/optical switching) in the complex markets of Algeria and South Africa. Prior to this he was Director/Principal with ixAssociates Ltd a consultancy in the network security and audit software market place.

At VC Worldview, Mike formed panels and consortiums in partnership with EMEA CTO's and Marketing teams from France Telecom, Deutsch Telecom, Telefonica, and BT to identify strategic technologies to fuel future growth and reduce subscriber churn.

Mike is a Technical Member of the Institute of Engineering and Technology (TMIET) in London, UK.

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Rohit Prabhakar



Rohit Prabhakar has been working in the Mobile Telephony and Defence Avionics industries in excess of 30 years of which more than twenty have been in the Mobile industry. During this time Rohit has successfully performed a number of Senior Consultancy roles with both Vendors and Operators in UK as well as in Europe.

Rohit has worked in the field of wireless technologies for over twenty years, which includes GSM, GPRS and UMTS. He has a wide range of technical expertise from Radio, Access Transmission, BSCs, switching and all the way to current IP networks. Lately Rohit has developed the requisite skills for Packet Switched Core IP networks which make up the backbone of today's global Service Providers.

His breadth of experience within the Mobile Telecoms industry has been gained through a variety of consulting roles. Apart from his technical skills, Rohit has successfully managed large business critical Programmes, Projects, Products, Engineering Trials, Technical teams, Network Operations and has excellent customer facing skills. In all his consultancy roles, Rohit has repeatedly demonstrated his exceptional soft skills in building relationships with Customers, Vendors and Outsourced partners.