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ASD AT ODDS WITH TECH EXPERTS OVER 5G CORE



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ASD SAYS 5G NETWORK CLAIMS REFER TO 'MATURE' ARCHITECTURE

The Australian Signals Directorate claims that comments made by its director, Mike Burgess that there is no separation between the 5G radio access network and its core, are correct and referred to "mature" and "far more capable 5G network architectures".

The agency was responding to an inquiry from *iTWire*, made on 22 November, and pointing out that Burgess' comments appeared to be contradicted by <u>a 5G trial</u> in Auckland conducted jointly by Chinese telecommunications equipment supplier Huawei and New Zealand telco Spark.

<u>An article</u> on 23 November referred to the contradiction and also to the fact that ASD had not responded to the query at that time.

The trial used a Huawei 5G NR (New Radio on both the C-band and mmWave) and a 4G Radio Access Network, both of which were deployed by using dedicated hardware connected to the Cisco Evolved Packet Core, with each component isolated.

Burgess was <u>quoted</u> by *The Australian* in October as saying in what many dubbed a major speech: "The distinction between core and edge collapses in 5G networks. That means that a potential threat anywhere in the network will be a threat to the whole network."

In its response, sent to *iTWire* last week, the ASD said this demonstration was "an early version of '5G' which allows users faster mobile broadband".

It added: "Specifically, in a lab deployment Huawei has deployed 3GPP release 15 compliant Huawei 5G NR (new radio) RAN (radio access network) and 4G RAN connected to a Cisco EPC (evolved packet core, or 4G core). This is a non-stand-alone (NSA) 5G deployment, similar to how most mobile operators are initially deploying 5G.

"The Australian Government's concerns with the use of high-risk vendors in 5G networks focused on the risks posed to telecommunications critical infrastructure deploying 'mature' and far more capable 5G network architectures.

"Mature 5G enables functionality such as network function virtualisation, edge computing, automation and orchestration.

"These, in turn, break down the traditional notions of 'edge' and 'core' outlined in the article, and so the article does not change ASD's assessment of the risks posed by high-risk vendors in 5G networks."

But the ASD's assertions appear to be contradicted by <u>a 3GPP panel discussion</u> on 13 September where the following participated: Frank Mademann, chair of 3GPP Service and System Aspects Working Group 2; Valtteri Niemi, former chair of 3GPP Service and System Aspects Working Group 3 (SA3) and Nokia Fellow, professor at the University of Helsinki; Anand Prasad, chair of SA3; Giovanni Romano, co-ordinator for radio standards, Telecom Italia; and Adrian Scrase, ETSI CTO, leader of 3GPP Mobile Competence Centre. The ASD had said: "Mature 5G enables functionality such as network function virtualisation, edge computing, automation and orchestration."

The panel's take was: "The core/RAN distinction is maintained. The basic security architecture of mobile communications, including RAN/core separation, does not change in 5G. In particular, multi-access edge computing (MEC) on the network does not affect this separation; the MEC server interfaces with a user-plane function of the 5G Core (5GC).

"In a multivendor scenario, 5G RAN and 5G Core run on different hardware platforms, and Huawei equipment do not host virtual network functions of core networks. The placing of virtual network functions of the core network will be limited to Edge, Regional and Central point of presence (cloud platforms) of other vendors. The Huawei 5G RAN (base band units) will be co-located with LTE units (base stations) at Far Edge of the network using Huawei dedicated hardware."

Again, the ASD had asserted: "These, in turn, break down the traditional notions of 'edge' and 'core' outlined in the article, and so the article does not change ASD's assessment of the risks posed by high-risk vendors in 5G networks."

The panel take was: "The 5G RAN and 5G Core are and will be always separated by the standardised and unified NG interface, which makes possible a multi-vendor implementation and deployment using hardware platforms logically and physically separated."

These statements by a panel, whose technical competence and bonafides cannot be questioned, appear to again indicate that separation between the 5G radio access network and its core will be a part of all 5G implementations, right down to the final release which is expected at the end of 2019.

The ASD also referred to <u>the New Zealand decision</u>, to ban Huawei from participation in its 5G networks, as providing context to its statement. But New Zealand's spy agency, the Government Communications Security Bureau, did not make any mention of lack of separation between the 5G radio access network and its core, merely <u>telling</u> the telco Spark that <u>Spark's proposal</u> would raise significant national security risks.

Additionally, more recently, British telco BT <u>said</u> it would be removing Huawei gear from its 3G and 4G core networks as planned, saying: "We're applying these same principles to our current RFP for 5G core infrastructure. As a result, Huawei have not been included in vendor selection for our 5G core." And the BT statement added: "Huawei remains an important equipment provider outside the core network and a valued innovation partner", implying that there was indeed separation between the 5G radio access network and its core.

Sam Varghese





5G SPECTRUM BUYER DENSE AIR STARTS OPERATIONS FROM MARCH

London-based network densification service Dense Air says it will provide densification experiences to both businesses and residences in Australia, following its purchase in the 5G spectrum auction conducted by the Australian Communications and Media Authority.

A statement from the company said Dense Air had <u>won spectrum</u> in the six largest Australian cities. The acquired spectrum supports 5G operation in 3GPP band n77/78.



Dense Air is a wholesale network operator that "enhances and extends" coverage and capacity by offering neutral host "Carrier of Carriers" services, supporting multiple operators on the same physical 5G small cell or 5G femtocell.

It aims to extend 5G coverage and capacity to outdoor and indoor locations that are the hardest to reach.

The company has a fully managed service for both mobile and fixed network operators,

made possible by targeted mass deployment of small cells.

It will be able to start operating in Australia when licences are issued and handsets for the 5G eco-system, are available.

Dense Air chief executive Paul Senior said: "We are absolutely thrilled to have acquired 5G spectrum in the major metro areas of Australia.

"Our spectrum enables us to offer a completely new type of wholesale service to 5G network operators.

"Dense Air will complement planned 5G deployments, by allowing much greater densification than can be achieved with macro cells alone.

"By offering both 5G enterprise small cells and 5G residential femtocells, we can in-fill missing coverage and enhance capacity.

"Our mission is to help improve an operator's 5G business cases, which still remains very challenging for both MNOs and MVNOs alike."

Sam Varghese



John de Ridder Telecommunications Economist

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HUAWEI CFO GRANTED BAIL; CHINA ARRESTS EX-CANADA DIPLOMAT

Canada has granted bail to Meng Wanzhou, the chief financial officer of Chinese telecommunications company Huawei, who was arrested in Vancouver on 1 December.

In a related development, *Reuters* <u>reported</u> that former Canadian diplomat Michael Kovrig had been taken into custody on Monday.

Kovrig works for the International Crisis Group, a think-tank that claims to be involved in independent conflict resolution.



Meng (left) is the deputy chairperson of Huawei's board and the daughter of the company's founder, Ren Zhengfei.

Her bail conditions stipulate that she must reside at her Vancouver home while waiting for a decision on possible extradition to the US.

Bail was set at C\$10 million (A\$10.36 million) and she will be subject to electronic monitoring with security personnel to

accompany here if she goes out.

Meng's arrest is allegedly due to her involvement in sanctions busting through the sales of US products to Iran.

American authorities claim that she lied to banks about connections between Huawei and a company that did business in Iran.

News of the US Justice Department probe into whether Huawei has violated sanctions on Iran was **reported** by **The Wall Street Journal** in April.

Earlier this year, the US Department of Commerce imposed <u>a seven-year ban</u> on another big Chinese telco equipment maker, ZTE, claiming that the company had made false statements during talks in 2016 over a charge of shipping telco equipment to Iran and North Korea.

ZTE shut down its main business activities in the US on 9 May.

But following the intervention of US President Donald Trump, a deal was worked out for ZTE to return to business by paying a fine of US\$1 billion, changing its management team and depositing US\$400 million in an escrow account against possible future transgressions.

Sam Varghese

SSG INKS RESELLER DEAL WITH INDIA'S GLOBAL TELESERVICES

Australian-listed, UK-based satellite communications company Sky and Space Global has signed a reseller Memorandum of Understanding with Indian based international telecom services provider Globe Teleservices (GTS).

The deal will see Sky and Space (ASX: SAS) and GTS collaborating GTS become a key reseller of the SAS Solution, with the intent for GTS to include the SAS Solutions in its communications services offering.



SAS plans to deploy a constellation of 200 highly sophisticated nano-satellites over the Equatorial Belt, and the network of nanosatellites will provide around the clock affordable voice, data, instant messaging, M2M and IoT communications.

SAS says the signing of the MoU agreement with GTS

supports its business global rollout model of establishing a localised and international reseller network.

This will enable efficient provision of SAS's connectivity solutions to equatorial locations and "becoming a leading player in the satellite communication market".

Sky and Space Global managing director and CEO, Meir Moalem said: "We are happy to move forward with Globe Teleservices following our meetings at Africa last month.

"This agreement further expands our commercial coverage for the Indian peninsula and the surrounding region."

"We are excited to have announced this pro-competitive transaction and look forward to delivering benefits to customers from the enriched product offerings and the expanded networks of the merged entity," said founder and managing director of Globe Teleservices, Ashutosh Agrawal.

"The move would further strengthen the position of the company to give us a global recognition."

Peter Dinham

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ACCC STARTS TELSTRA FIXED LINE SERVICES ACCESS INQUIRY

The ACCC has commenced a public inquiry as it considers the terms and conditions under which other telecommunications companies can use Telstra's fixed line services.

The Australian Competition and Consumer Commission said on Wednesday it has started initial consultations ahead of making final access determinations (FADs) on regulations for Telstra's six fixed line services and for wholesale ADSL.



The fixed-line services allow other telecommunications companies to use Telstra's existing copper network facilities to provide voice and broadband services to retail customers.

Services to be examined by the inquiry are the six fixed line services, including the unconditioned local loop service (ULLS), line sharing service (LSS), local carriage service (LCS), wholesale line rental (WLR) service, fixed originating access

service (FOAS), fixed terminating access service (FTAS)), and the wholesale ADSL service.

Current final access determinations for the six fixed line services and for wholesale ADSL expire on 30 June 2019.

"Our inquiry will consider the terms and conditions that should be covered in the FAD, including the prices for the services and non-price terms and conditions of access," ACCC Commissioner Roger Featherston said.

As well as commencing initial consultations the ACCC is inviting submissions on issues concerning the next FAD.

"The ACCC would like to hear from stakeholders about a range of factors than can influence the cost of providing the fixed line services.

"It will also explore whether existing FAD prices should be continued. In addition, the ACCC is considering the structure and term of this arrangement," the ACCC says in Wednesday's statement.

Responses to the ACCC are being sought by 25 January 2019.

The Commission says it will release a more detailed consultation and position paper in February 2019 with submissions due by 31 March 2019.

Peter Dinham

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