

CommsWire

Essential daily reading for the communications industry executive

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MOBILE OPERATOR BOOM TIMES AHEAD FORECAST



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MOBILE OPERATOR REVENUES TO REACH US\$120 BILLION BY 2024

Revenue opportunities for mobile operators, outside of voice, messaging and mobile data termination, are forecast to reach US\$120 billion by 2024, up from US\$67 billion this year.

The report from Juniper Research – [Mobile Operator Business Models: Challenges, Opportunities & Strategies 2019-2024](#) - identifies a series of growing revenue opportunities for network operators that will help to combat declining revenues from voice and messaging termination – and predicting that mobile identity services, carrier billing and cellular IoT connectivity will be the fastest growing sectors for operators.

Juniper assessed 25 leading operators in its 'Operator Innovation Index'; scoring their level of agility and innovation, the breadth & quality of their solutions, and their anticipated future prospects in the field.

It ranked the five leading operators, with Vodafone ranked as the most innovative network operator, scoring highly for the level of network virtualisation implemented in its network, its involvement in the IoT sector, and its high level of investment in trials of 5G networks:

- 1) Vodafone
- 2) Verizon
- 3) AT&T
- 4) Telefónica
- 5) Telenor

According to research author, Morgane Kimmich, "Innovation must continue to focus primarily on reducing the capital expenditure on networks through virtualisation of core networks. Operators should also continue to explore new revenue streams that leverage the mobile networks they have in place."

Juniper says the growth of cellular data traffic will challenge operators, with the research predicting that average data traffic generated per user will rise from 49GB in 2019 to over 157GB by 2024.

In response, the research urged operators to optimise LTE networks for data services, while preparing for future 5G networks.

The research also predicted that growth of future cellular traffic would be driven by increasing usage of video streaming services, such as Netflix and Hulu – and that 56% of total cellular data generated by mobile handsets would be attributable to video streaming services, rising from 40% in 2019.

Peter Dinham

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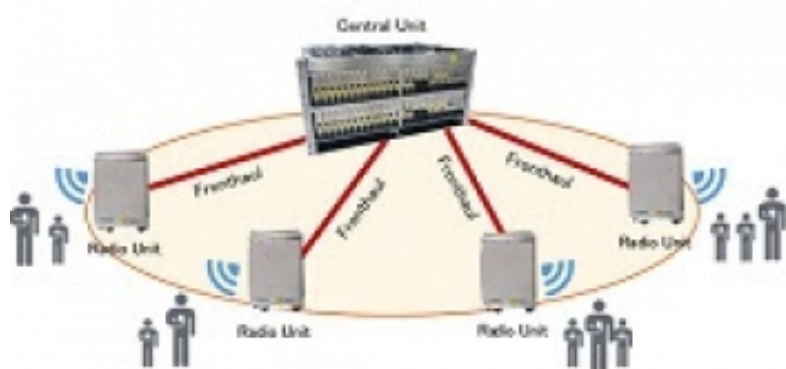
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NEC, FUJITSU FILL RAN AND CORE 5G GAP FOR NTT DOCOMO

Japan's dominant mobile operator NTT Docomo has started to plug gap left by the Abe government's banning of Huawei equipment for its 5G network build, using NEC and Fujitsu for core and radio access network (RAN) components.

Until the Japanese government decree banning Huawei from the 5G build in December 2018, Docomo had a close relationship with the Chinese telecommunications giant, having conducted several successful joint 5G trials only months earlier.

Announcing the 5G deployments from two Japanese vendors on the same appears to indicate that Docomo is keen to show that is getting on with the 5G rollout job despite the setback of being forced to ditch Huawei, the number one 5G equipment supplier globally.



Industry sources have told CommsWire that a number of operator customers of Huawei estimate that swapping out the Chinese company's kit for another vendor would likely add in the region of 30% to the cost of deployment.

The sources say that changing vendors is a major impost for the operators in terms of time and potential outages and this is leading them back strongly against banning Huawei.

NEC announced that it has begun shipping three types of small-cell RUs (radio units) that support the 3.7GHz, 4.5GHz and 28GHz bands and are compliant with O-RAN fronthaul interface specifications.

According to NEC, the RUs are light-weight with low power consumption, making them easy to install on rooftops and sides of buildings.

Meanwhile, on the same day Fujitsu announced that it is shipping both RU and CU (central unit) products for the same 3.7GHz, 4.5GHz and 28GHz bands.

Fujitsu says the 5G CU products realise the 5G system through a proprietary software design from the company using software-defined radio (SDR, 4) technology, which can implement different wireless technologies on the same hardware.

According to Fujitsu, this makes it possible to deploy 5G network quickly and at low cost, using existing 3G, LTE, and LTE-Advanced base station equipment with minimal hardware changes.

The Fujitsu 5G RU products have built-in antennas equipped with beam forming, which is necessary for effective millimetre wave propagation of signals.

Stan Beer



John de Ridder

Telecommunications Economist

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HUAWEI HAS BOOM H1 2019 DESPITE US ATTEMPTS TO SPOIL

Chinese telecommunications giant Huawei Technologies has defied the US Trump administration's best efforts to hamper its business through bans and restrictions as part of the current Sino-US trade war and recorded a bumper first half.

Huawei announced that for the first half of 2019 the company generated CNY401.3 billion (US\$58.29 billion) in revenues, a 23.2% increase over the same period last year.

The company's net profit margin for H1 2019 was 8.7%.



According to Huawei's Chairman, Liang Hua (above), operations are smooth and the organisation is as sound as ever. With effective management and an excellent performance across all financial indicators, Huawei's business has remained robust in H1 2019.

In a reference to the US restrictions on its business in that market, Liang acknowledged that it could affect the company's growth in the short term but he remained bullish about the overall long term and the company would maintain its massive R&D budget which dwarfs that of its rivals.

"Revenue grew fast up through May," said Liang. "Given the foundation we laid in the first half of the year, we continue to see growth even after we were added to the (US) entity list.

"That's not to say we don't have difficulties ahead. We do, and they may affect the pace of our growth in the short term.

"But we will stay the course.

"We are fully confident in what the future holds, and we will continue investing as planned – including a total of CNY120 billion (US\$17.43 billion) in R&D this year.

"We'll get through these challenges, and we're confident that Huawei will enter a new stage of growth after the worst of this is behind us."

In Huawei's carrier business, H1 sales revenue reached CNY146.5 billion (US\$21.28 billion), with steady growth in production and shipment of equipment for wireless networks, optical transmission, data communications, IT, and related product domains.

In the burgeoning 5G space, Huawei's contention that US and Australian bans on its participation in those markets have had little effect appears to have been born out by the facts.

In its report Huawei notes that the company has secured 50 commercial 5G contracts and has shipped more than 150,000 base stations to markets around the world.

In Huawei's enterprise business, H1 sales revenue was CNY31.6 billion (US\$4.59 billion) from multiple sources including cloud, artificial intelligence, campus networks, data centers, Internet of Things, and intelligent computing.

Huawei says that it remains a trusted supplier for government and utility customers, as well as customers in commercial sectors like finance, transportation, energy, and automobile.

US restrictions on companies such as Google and Qualcomm from doing business with Huawei in the smartphone space have yet to be reflected in Chinese company's results.

Huawei's consumer business, H1 sales revenue hit CNY220.8 billion (US\$32.07 billion) with smartphone shipments reaching 118 million units, up 24% YoY.

The company also noted "rapid growth" in its shipments of tablets, PCs, and wearables.

Huawei says that is beginning to scale its device ecosystem to deliver a more seamless intelligent experience across all major user scenarios.

To date, the Huawei Mobile Services ecosystem has more than 800,000 registered developers, and 500 million users worldwide.

Stan Beer



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REAL REASON FOR AUSTRALIA'S HUAWEI BAN IS OUT IN THE OPEN

COMMENT: The reason why the US has told Australia to ban Chinese telcos Huawei and ZTE from bidding for contracts in the 5G network rollout is now out in the open: Washington plans to build a US\$211.5-million military base for US Marines in Darwin.

Exactly why the US needs more bases in the area is a puzzle, given that the sole reason for bolstering American military muscle in the region is the rise of China. The US already has China ring-fenced with a number of bases, said to be as many as 40 in the region.



Given that the US now [plans](#) to have 2500 Marines training in Australia each year and intends to build a new port facility near Darwin, having Chinese vendors supply 5G equipment is not something that could be considered, mainly for political reasons.

The Australian Government, despite being elected by the citizens of this country, apparently owes more loyalty to the US Congress which is now debating the proposal for the Marine base. It was kept quiet until some impecunious ABC scribe started poking around. The American decision will be accepted with alacrity, of that one can be sure.

Despite all the scuttlebutt being spread around, nobody has advanced a single technical reason as to why Chinese 5G gear is any more dangerous than Swedish (Ericsson) or Finnish (Nokia) equipment.

The technical reason put out in public is that there is no separation between the core and the radio access network when it comes to 5G, as transparent a lie as ever was told. It has been shot down many a time, with the latest telco official to refute it being Andy Purdy, the chief security officer at Huawei USA.

Purdy, who addressed a conference in Sydney on Tuesday, pointed to [a report from the analyst firm Ovum](#) which pointed out that while 5G would mean that "core" parts of the network extended to the outer edges — traditionally the domain of the RAN — these could still be quarantined off.

The myth of no separation between the 5G core and RAN was started by the Australian Signals Directorate chief Mike Burgess who [told *The Australian*](#) in October 2018 that, "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."

Adding to this myth was the former Australian prime minister Malcolm Turnbull, reputed to be a person with deep technical knowledge, but one who has been to have very little in the way of facts in his arsenal. (Turnbull, incidentally, was the one who championed the use of HFC for the NBN rollout.)

He [boldly proclaimed](#) at a conference in London: "Network function virtualisation and mobile edge computing means processing, or intelligence, will be distributed throughout the network, and the old distinction between the core and the RAN (or edge) will no longer be applicable."

Nigel Phair director of UNSW Canberra Cyber has [joined](#) the choir as well.

They were all called out by Professor Mark Gregory of RMIT University, who [told](#) *CommsWire* some time back that this spreading of falsehoods by Burgess was "disappointing".

"Many nations have decided to utilise 5G equipment from one or more companies' separated core and radio access network solutions," said Gregory, a frequent commentator on network issues.

"There is flexibility afforded in the ITU standards for separation at the 5G edge if a network operator wishes to do so."

But then even if Gregory had kept quiet, seeing is believing and an actual 5G trial, [carried out](#) by New Zealand telco Spark and Huawei, demonstrated this separation for the world to see in 2018.

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.

But myths don't die easily and Burgess has form in this regard: it was he who claimed at the time when Australia passed its data retention laws in 2015 that this would provide hackers with a big honeypot to infiltrate. At that time, Burgess was the chief security officer of Telstra. The honey is still very much there and the only ones raiding it are a plethora of government agencies and NGOs.

However, evidence that there is nothing to fear from using Huawei equipment is of little use, when political decisions have been made. Australia has missed out on lower mobile prices due to this decision, with TPG Telecom [shelving plans](#) for a network after the Huawei ban was imposed. The telco had spent about \$100 million on gear by then but ditched its plans.

Apart from the US and Australia, New Zealand has not gone down the Huawei path either, but still claims that it has not banned the use of the company's gear. Japan and South Korea are other nations that will avoid using the Chinese firm's equipment.

For the rest, it remains to be seen how it all plays out. By the end of the year, things should be much clearer, though one should not expect to see any evidence for the decisions being made.

Sam Varghese

FORMER SENIOR TELSTRA MANAGER JOINS NBN CO IN CHANGE ROLE

NBN Co has appointed former Telstra business group managing director Will Irving as its chief strategy and transformation officer.

Irving (below) joins NBN Co after working at Telstra since 1997.

Initially working in legal and regulatory roles, he went on to the positions of Telstra Business group managing director, Telstra Retail acting group executive, Telstra Wholesale group executive, and most recently interim CEO of Telstra InfraCo.



After leaving Telstra in October 2018 he became chair of the Telstra Foundation (the telco's philanthropic arm) in March 2019.

Earlier in his career he was a solicitor at the Melbourne law firm Mallesons Stephen Jaques (now King & Wood Mallesons), and he holds BComm and LLB degrees from the University of Melbourne.

"I'm delighted to have someone of Will's calibre join us at such an exciting time. His depth of corporate experience and leadership will be critical to help NBN Co transform into a full-scale service delivery company," said NBN Co CEO Stephen Rue.

"Will's proven track record in telecommunications will allow NBN Co to evolve our operating model and maintain a sharp focus on our customer-led strategy".

Irving's appointment follows JB Rousselot's resignation from NBN Co, which will take effect in October once Irving has taken up his new position.

"I would like to thank JB personally, and on behalf of the company, for six years of outstanding service," said Rue.

"In that time JB has held a number of key roles across the company from leading our strategy team through to scaling our network operations.

"JB's contribution will be felt for many years to come.

"Since joining NBN Co he has been a key member of the leadership team and a driving force in ensuring that NBN Co is well positioned to complete the build by June 2020."

Stephen Withers

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