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Brunner: What we find Yum about problematic China

Citywire
708 words
15 April 2022
Citywire
CWIRE
English

Matthew Tillett, fund manager of Brunner (BUT) **investment** trust, answers an investor question about what he holds in China after having to sell China Mobile last year.

This is the fourth video excerpt from our Citywire-Brunner **virtual event** last week. If this has whetted your appetite, you can watch the entire one-hour broadcast.

Can't watch now? Read the transcript

Jeremy Gordon:

What do you hold in China after having to sell China Mobile after it was placed on the UK sanctions list? Also, what's your broad view on China? They say one of your competitor investment trusts has recently sold out due to political risk.

Matthew Tillett:

It was a very active area of discussion last year, as you can imagine. It still is. Huge falls in the likes of Alibaba and Tencent. Companies that, on paper, look very high quality or are very high quality and have delivered great growth over the years and potentially have a lot of growth going forward.

We looked quite closely and, in the end, decided not to because we felt that the issues around the regulatory crackdown were not it just wasn't quite clear where the government was going to go with it. It's probably a helpful reminder for investors that when you're investing in these sorts of countries, it's not the same as investing in Western markets. You can come in one day and suddenly, everything has changed in terms of the regulatory framework and the market framework.

There's the example of the education companies, where the government decided overnight that they could no longer make profits. So the cost of capital has to be higher as a result of that. In terms of what we own there and what we're interested in, we do still think that China is a big market; it's likely to continue growing over the years.

You can find good quality companies that can benefit from that and aren't exposed to some of the risks out there. We own Yum China in the portfolio and we did add to that at the end of last year and again, more recently. That's a very interesting company. It operates the Yum brands in China. So that's Pizza Hut, KFC and a few others. They've been there since the 1980s, so are very much established within the culture over there. They're the largest quick-service restaurant chain in China now, which is what matters.

In that industry, if you're going to have any chance of making a good return on capital over the long-term, you need to have scale because it's such a competitive industry and they have that in terms of logistics and distribution and huge numbers of stores. It's been heavily impacted by zero-Covid [policies]. They've not been able to open all their stores, so profits have been impacted in the last year or two, but we think that's temporary, that will phase out over time. Obviously, it's food rather than technology or security so, the sensitivity of what they're doing is less than in other areas. It's been embroiled in this delisting issue that's happened recently because its main listing is in the US and they also have a listing in Hong Kong.

If there's a company that the Chinese government is willing to hand over audit information, which is what the controversy is about, it's likely to be this company because they're selling food, it's not sensitive. The other thing I really like about it is the fact that management have not only continued to invest, they accelerated their investment, their growth investment plans during this difficult period, which says to me that's a company that's confident in what they're doing, as opposed to just hanging on or cutting costs. So, I think that's a company that should be quite well positioned for a recovery in the end-market as hopefully, the Covid rules are eventually relaxed.

Jeremy Gordon:

As long as the Chinese government doesn’t ban Pizza Hut!

Document CWIRE000202204l6ei4f00002

2Africa Deployment Underway with First Landing in Genoa, Italy

1,936 words
14 April 2022
Ventures Africa
VENAF
English

The 2Africa consortium, comprised of China Mobile International, Meta (www.Facebook.com), MTN GlobalConnect, Orange, stc, Telecom Egypt, Vodafone and WIOCC, announced today the first landing of the 2Africa cable – in Genoa, Italy. The landing sets the tone for more landings in the coming months as the cable is extended to a total of 46 locations by the completion of the project in 2024.

Announced in May 2020, the 2Africa subsea cable system together with its Pearls extension are designed to deliver seamless international **connectivity** to approximately 3 billion people, representing 36% of the global population and connecting three continents, Africa, Europe and Asia.

At 45,000km, it will be the longest subsea cable ever deployed, serving communities that rely on the internet for services from education to healthcare and business, with all experiencing the economic and social benefits that come from this increased connectivity.

Vodafone, the 2Africa landing party in Genoa, has partnered with Equinix to land the cable directly into the Equinix Carrier Neutral Data Center (CNDC), with Retelit delivering the fronthaul. As with all 2Africa cable landings, capacity will be available to service providers in Genoa on a fair and equitable basis, encouraging and supporting the development of a healthy internet ecosystem.

Working with a local Italian operator, 2Africa has also developed a new terrestrial route connecting the Genoa cable landing station (CLS) directly to major CNDCs in Milan.

Good progress on the survey work and manufacturing continues with the 2Africa project remaining on track for completion in 2024.

Distributed by APO Group on behalf of Meta.

About China Mobile International Limited:

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Leveraging the strong support by China Mobile, CMI is a trusted partner that provides comprehensive international information services and solutions to international enterprises, carriers and mobile users. Headquartered in Hong Kong, China, CMI has expanded its footprint in 36 countries and regions. For more information, please visit www.CMI.ChinaMobile.com, or to connect with us on LinkedIn at: http://bit.ly/3jAA8do.

About Meta:

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About MTN GlobalConnect:

GlobalConnect is a Pan-African digital wholesale and infrastructure services company, and an operating company in the MTN Group. GlobalConnect manages MTN's international and national major wholesale activities, in addition to offering reliable wholesale and infrastructure solutions for fixed connectivity and wholesale mobility solutions that include international mobile services, Voice, SMS, signalling, roaming and interconnect. The MTN Group launched in 1994 is a leading emerging market operator with a clear vision to lead the delivery of a bold new digital world and is inspired by the belief that everyone deserves the benefits of a modern connected life. Embracing the Ambition 2025 strategy, MTN is anchored on building the largest

and most valuable platform business, with a clear focus on Africa. The MTN Group is listed on the JSE Securities Exchange in South Africa under the share code “MTN”.

For more information, please visit www.GlobalConnect.solutions – www.MTN.com

About Orange:

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For more information on the internet and on your mobile: www.Orange.com, www.Orange-business.com or to follow us on Twitter: @orangegrouppr.

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For more information, contact: The investor relations team, Email:

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We have revolutionised fintech in Africa through M-Pesa, which celebrates its 15th anniversary in 2022. It is the region's largest fintech platform, providing access to financial services for more than 51m people in a secure, affordable and convenient way.

Our purpose is to connect for a better future, enabling an inclusive and sustainable digital society. We are taking significant steps to reduce our impact on our planet by becoming net zero by 2040, purchasing 100% of our electricity from renewable sources in Europe and across our entire operations by 2025, and reusing, reselling or recycling 100% of our redundant network equipment. Vodafone proactively works to expand access to connectivity for rural communities, students and jobseekers. For more than 30 years, Vodafone's Foundation has supported communities in Europe and Africa in the areas of health, education, and equality.

We support diversity and inclusion through our maternity and parental leave policies, empowering women through connectivity and improving access to education and digital skills for women, girls, and society at large. We are respectful of all individuals, irrespective of race, ethnicity, disability, age, sexual orientation, gender identity, belief, culture or religion.

For more information, please visit www.Vodafone.com, follow us on Twitter at @VodafoneGroup or connect with us on LinkedIn at http://bit.ly/3vlHWoC.

About WIOCC:

WIOCC is building Africa's first, truly hyper-scale network infrastructure. With the ability to efficiently deliver 100Gbps capacity and an extensive investment programme to develop our pan-African solution even further, WIOCC is the natural partner for OTTs, content providers, telecom operators, and ISPs looking to take advantage of Africa's opportunities. The company utilises more than 55,000km of terrestrial fibre and in excess of 75,000km of submarine cable assets to offer affordable, reliable, managed connectivity to over 550 locations across 30 African countries. WIOCC's international reach extends to key commercial centres in Europe, Asia, and North America, providing a one-stop shop for fully-scalable international connectivity into, within, and out of Africa. Operating exclusively as a wholesaler, the company's focus is on putting you, our client, first. Building and maintaining strong, long-term relationships means WIOCC can develop bespoke solutions to meet your current requirements, with the flexibility to match future demands for growth and extra resilience and geographical expansion. You will find that only WIOCC has the depth of experience, local expertise, capacity, flexibility, and scalability to take you where you want to be. For more information, please visit www.WIOCC.net

About Alcatel Submarine Networks:

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Document VENAF00020220416ei4e0000b

2Africa makes first landing in Genoa

342 words
14 April 2022
Optical Networks Daily
OBSERV
English

The first landing of the 2Africa cable was completed in Genoa, Italy. Vodafone, the 2Africa landing party in Genoa, has partnered with Equinix to land the cable directly into the Equinix Carrier Neutral Data Center (CNDC), with Retelit delivering the fronthaul. As with all 2Africa cable landings, capacity will be available to service providers in Genoa on a fair and equitable basis, encouraging and supporting the development of a healthy internet **ecosystem**.Working with a local Italian operator, 2Africa has also developed a new terrestrial route connecting the Genoa cable landing station (CLS) directly to major CNDCs in Milan.

At 45,000km, 2Africa is expected to be the longest subsea cable ever deployed. A total of 46 cable landing locations are envisioned for the project before completion in 2024.

The 2Africa consortium, comprised of China Mobile International, Meta, MTN GlobalConnect, Orange, stc, Telecom Egypt, Vodafone and WIOCC

Equinix and Vodafone to build subsea hub in Genoa for 2Africa cable

Thursday, February 25, 2021 Africa, Equinix, Italy, Subsea

Equinix and Vodafone announced a plan to build a new subsea hub in Genoa, called GN1, to serve as a strategic interconnection point for the 2Africa cable system.2Africa is a consortium cable project backed by China Mobile International, Facebook, MTN GlobalConnect, Orange, stc, Telecom Egypt, Vodafone and WIOCC. At 37,000km long, 2Africa will be one of the world's largest subsea cable projects and will interconnect Europe (eastward via Egypt), the...

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2Africa subsea cable boasts design capacity up to 180 Tbps

Thursday, May 14, 2020 Africa, ASN, Egypt, Facebook, Submarine Cable, Subsea, Telecom Egypt

2Africa, a new subsea cable to serve the African continent and Middle East region, promises to deliver more than the total combined capacity of all subsea cables serving Africa today, with a design capacity of up to 180Tbps on key parts of the system. Consortium partners include China Mobile International, Facebook, MTN GlobalConnect, Orange, stc, Telecom Egypt, Vodafone and WIOCC. Alcatel Submarine Networks (ASN) has been selected to build...

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2Africa Deployment Underway with First Landing in Genoa, Italy; Highly Anticipated Subsea Cable System Set to Connect 3 Billion People Upon Completion

1,948 words
14 April 2022
18:38
African Press Organization
APOENG
English

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Xinhua
Silk Road Information Service

China accelerates new infrastructure construction to unleash vitality of digital economy

925 words
8 April 2022
Xinhua Silk Road Information Service
XHSILK
English

A worker maintains equipment at China Mobile's data center in a **cloud** computing base in Zhongwei City, northwest China's Ningxia Hui Autonomous Region, May 31, 2019. (Xinhua/Wang Peng)

BEIJING, April 8 (Xinhua) -- China is seeing the bustling construction of a number of data centers and 5G projects, as central and local governments are speeding up deploying new **infrastructure**.

The move is not only a key measure to stabilize economic fundamentals, but also an investment targeting long-term growth and the transformation of economic development mode, according to industry insiders.

China will continue developing new infrastructure in advance and expand application scenarios to keep releasing the vitality of digital economy.

-- Projects under construction

In the China Unicom (Huailai) innovation industrial park located in Huailai County of Zhangjiakou City in north China's Hebei Province, a supersized data center that can accommodate 22,500 standard cabinets is being constructed.

Staff members are moving on faster to ensure the principal part of the project can be delivered by the end of June, said an executive of China Unicom, one of China's leading telecom operators, adding that upon completion, the data center will provide computing services for industrial internet companies, financial securities enterprises, etc. in the Beijing-Tianjin-Hebei region.

In Zhongwei City of Ningxia Hui Autonomous Region in northwest China, construction of the phase II of the data center project of China Mobile, another telecom giant in China, has been fully unfolded, with a capacity of more than 3,000 racks on completion.

China Mobile will invest 334 million yuan in the data center in three years to improve intelligent application of data in various industries, Duan Li, executive of the computing network operation center of China Mobile in Ningxia.

China is also witnessing an accelerated application of new infrastructure. There are more than 2,000 5G + industrial internet projects under construction across the country, with new digital formats and models such as smart mining, smart transportation, smart greenhouse and telemedicine emerging one after another.

The popularity of new infrastructure can also be seen in the development plan for 2022 of many places. More than 20 provinces, autonomous regions and municipalities including Shandong and Guangdong have specified the development plans of 5G network, industrial internet and data center in 2022.

-- Promoting healthy development of digital economy

The reason why China endeavors to promote construction of new infrastructure such as 5G network, artificial intelligence, and big data is to propel the healthy development of digital economy.

Although economic development is facing downward pressure, digital economy as a whole is still relatively robust, said He Baohong, director of cloud computing and big data institute of China Academy of Information and Communications Technology (CAICT), adding that in the first two months, the production index of information transmission, software and information technology services increased by 16.3 percent year on year, indicating the urgent demand of economic development for digital infrastructure.

He said that new infrastructure represented by 5G and data center is the base and cornerstone for the development of digital economy. Building a solid digital foundation will help further release the potential of digital economy in boosting consumer demand, expanding foreign trade and stimulating effective investment.

The role of new infrastructure in driving economy can be reflected by data from the CAICT. For example, the total economic output indirectly driven by the commercial use of 5G in China is expected to amount to 24.8 trillion yuan from 2020 to 2025, according to a research by CAICT.

Looking ahead, Zhang Zhiqian, director of the investment research institute of China Jianyin Investment Ltd., said that with 5G, industrial internet and other next generation information technologies fully embedded in all fields of economic development, new infrastructure will transform technologies into productivity and then to growth engine, further driving industrial transformation and upgrading.

-- Deployment in advance

Multiple departments have taken a series of measures to deploy new infrastructure in advance.

The Ministry of Industry and Information Technology has made it clear that efforts will be made to build more 5G base stations this year, with application scenarios enriched.

The National Development and Reform Commission proposed to accelerate the construction of 10 national data center clusters.

Meanwhile, local governments also roll out preferential policy packages regarding capital, land use and other resource elements for new infrastructure construction.

For example, Shanghai will make good use of more than 100 billion yuan of new infrastructure credit at preferential interest rate to guide social capital to increase investment in new infrastructure, while southwest China's Yunnan Province will coordinate the implementation of preferential policies concerning land use for information and communication infrastructure as well as power consumption for data centers and 5G network.

To seize opportunities brought by the development of digital economy, priority will be given to the application of new infrastructure. For instance, the MIIT will focus on promoting the use of 5G in 15 industries in three areas of information consumption, real economy and people's livelihood services during the 14th Five-Year Plan period from 2021 to 2025.

Some industry insiders call for new paths to spur vitality of digital economy. He Baohong said that efforts need to be made to further guide the whole society and all industries to strengthen the application of 5G and industrial internet, with focus on promoting the transformation and upgrading of traditional industries and improving production and operation efficiency. (Edited by Su Dan with Xinhua Silk Road, sudan@xinhua.org)

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FCC Adds Russian And Chinese Companies To High-Risk Cybersecurity Companies!

Peter Vogel
271 words
1 April 2022
Mondaq Business Briefing
BBPUB
English

BankInfoSecurity.com reported that “The U.S. Federal Communications Commission's Public Safety and Homeland Security Bureau voted unanimously to ban Kaspersky Lab, China Telecom (Americas) Corp., and China Mobile International USA Inc., stating the companies posed a national security threat. In addition, the bug bounty **platform** HackerOne suspended Kaspersky's access to the **platform**.” The March 28, 2022 report entitled “FCC Adds Kaspersky, Chinese Telecoms to High-Risk Companies” included these comments:

As soon as the FCC announcement was published, Kaspersky released a statement saying the company's bug bounty **platform** hosted with HackerOne was indefinitely suspended and that it has frozen existing funds and discussions for already-reported vulnerabilities (see: Sanctions Halt Rewards for Bug Hunters in Belarus, Russia).

Reacting to the development, Kaspersky tells Information Security Media Group that the firm is disappointed with the decision by the FCC to prohibit certain telecommunications-related federal subsidies from being used to purchase Kaspersky products and services.

Spokespersons for China Telecom (Americas) Corp. and China Mobile International USA Inc. were not immediately available to comment.

No surprises by the FCC!

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Document BBPUB00020220401ei4100002

Global Times
China’s telecom carriers expand network capacity in Shanghai

Global Times
519 words
31 March 2022
Global Times
GLOTNE
P08
English

On Kangding road, Jing'an district of Shanghai, street barriers are placed to manage traffic outside the neighborhood communities. Some residents were jogging, while sanitation workers were busy collecting garbage.Photo: Hu GongChina's three major telecom carriers are scaling up efforts to provide stable networks in Shanghai, including expanding computer **cloud** servers, increasing coverage of 5G networks and upgrading telecom communication speeds, as the financial and economic hub enters a partial "pause" amid new COVID-19 wave, driving up demand for online networks ranging from **education**, medical care and epidemic prevention to office work.

In a statement sent to the Global Times on Wednesday, China Mobile's Shanghai subsidiary said that it had expanded its network capacity by 300 servers on a contingency basis, and set up a special 24-hour on-site team to guarantee the provision of **cloud** technology services for the first time.

At the beginning of March, the carrier also ran a trial pressure test for situations under which multiple high telecom demand erupts simultaneously.

In the downtown Huangpu district located in the city's Puxi area, China Mobile upgraded a wireless network for a local hospital in 12 hours, so as to provide telecom support for anti-epidemic work.

The internet speed of the district's education institutions has also been upgraded to 10 gigabits per second to ensure online education is able to be delivered seamlessly.

China Mobile also helped build a 5G and wired broadband network for certain Shanghai companies in the suburban Baoshan district, which remains operational with employees living on-site under closed-loop management.

A spokesperson of China Mobile told the Global Times on Wednesday that the company also set up a team of technological experts to ensure the stable operation of government cloud service platforms, as access demand for mobile apps that track the local health code has also exploded.

China Telecom also sent its emergency 5G station base vehicles out multiple times to set up telecom networks for nucleic acid test sites and concentrated isolation sites, the Global Times learned.

In one instance, the vehicles were sent four times within a day, and it only took a night for the company to complete the optical fiber deployment and telecom network set-up at the Shanghai Chongming People's Stadium - which was later used as a temporary nucleic acid testing site.

Shanghai authorities announced on Sunday night that they were splitting the city roughly into two zones along the Huangpu River for a total of nine days to allow for "staggered" citywide nucleic acid testing.

Some of the city's manufacturing and business services have been suspended, while others moved online, resulting in a sudden hike in network demand.

"As the combat against the coronavirus outbreak enters a crucial stage, digital technology plays a key role. For example, we also developed a cloud-message system, which helps frontline officials get a real-time update on the situation of local communities, and send notification messages to residents 'point-to-point'," the China Mobile spokesperson said.

Document GLOTNE0020220331ei3v0000j

Regulation Asia

Feature
New Manager Announced for Hong Kong Tracker Fund

Manesh Samtani, Regulation Asia
565 words
29 March 2022
Regulation Asia
REGASI
English

Hang Seng **Investment** Management will become TraHK's new manager in Q3 2022, replacing State Street, which has managed the ETF for 22 years.

State Street Bank and Trust Company, the trustee of the Hong Kong Tracker Fund (TraHK), has filed a stock exchange notice informing unitholders that Hang Seng **Investment** Management has been selected as the new manager of the fund.

Established in 1999, TraHK is an ETF designed to provide investment results that closely correspond to the performance of the Hang Seng Index. It currently has assets under management of around HKD 105 billion, and has been managed by State Street Global Advisors Asia for the past 22 years.

The notice said the selection of Hang Seng Investment Management was made by TraHK's Supervisory Committee following a manager review, which was conducted with the help of an independent professional consultant with expertise in manager selection. The selection was made from seven ETF managers that were invited to submit their credentials and proposals.

"As a result of that review, Hang Seng Investment Management Limited, a wholly-owned subsidiary of Hang Seng Bank Limited and an SFC licensed investment manager, has been selected by the Supervisory Committee as the new manager of TraHK," the notice says.

"The Trustee is supportive of this decision and also regards the change in manager to be in the best interests of unitholders." State Street Bank and Trust Company will keep its role as the trustee of TraHK.

The change in manager follows a sequence of events that began with Donald Trump’s November 2020 ban on US ownership of Chinese state-owned companies. The ban included China Mobile, China Unicom and CNOOC - constituents of the Hang Seng Index, which TraHK tracks.

State Street said in January 2021 that it would stop making new investments in Hong Kong-listed companies blacklisted, a decision it later reversed, although Hong Kong officials remained concerned about the firm’s stance on US sanctions. In May 2021, the government was said to be considering dismissing State Street as the manager of TraHK.

Hang Seng Investment Management was selected as the new manager due to its "experience, expertise and sizable presence in Hong Kong", considerations over the latest market developments and TraHK’s future development, and Hang Seng's fee proposal.

Hang Seng Investment Management currently manages a total of 48 ETFs and retail funds, out of which 17 are index or index-related funds and nine are ETFs.

The Supervisory Committee’s statement, published here, says the transition to the new manager will be completed in Q3 2022, subject to regulatory approvals, and the management and operation of TraHK will not be impacted during the transition.

There will be no change to the investment objective of TraHK as a result of the change in manager, however a new management fee schedule will apply upon Hang Seng Investment Management's appointment.

The current tiered management fee of TraHK is set at 0.025 to 0.05 percent per annum. This will be adjusted to 0.015 to 0.045 percent per annum, lowering the effective management fee of

TraHK to 0.022 percent per annum in the first three years, and to 0.019 percent per annum from the fourth year onwards. The effective trustee fee will also be lowered accordingly.

THE WALL STREET JOURNAL.

Markets Main
Markets

State Street Loses Hong Kong Role After U.S. Blacklist Controversy; The $14 billion Tracker Fund follows the city's benchmark Hang Seng Index

By Clarence Leong
565 words
29 March 2022
14:03
The Wall Street Journal Online
WSJO
English

The American financial institution State Street Corp. lost its role managing Hong Kong's largest exchange-traded fund, after being criticized last year for briefly following a U.S. **investment** ban on some Chinese shares.

The Boston-based company's State Street Global Advisors Asia Ltd. unit has managed the $14.3 billion Tracker Fund of Hong Kong, or TraHK, since its inception more than two decades ago.

In January 2021, the Tracker Fund stopped making new investments in stocks, such as the telecoms giant China Mobile Ltd., that had been put on a U.S. blacklist. The U.S. ban was intended to stop Americans investing in companies that Washington said were aiding China's military, intelligence and security services.

The fund manager backtracked two days after, and later amended its prospectus to say the fund wasn't suitable for U.S. investors and wouldn't be offered in the U.S., but the episode angered officials and lawmakers in the Asian financial hub.

Hong Kong's secretary for financial services and the treasury, Christopher Hui, said the volte-face caused "unnecessary market chaos" and the situation was highly unsatisfactory, while the former head of the city's monetary authority also criticized the move.

The fund said Tuesday it will now be managed by Hang Seng Investment Management Ltd. The new manager is a subsidiary of Hang Seng Bank Ltd., which in turn is majority owned by HSBC Holdings PLC, the London-headquartered lender. The handover is likely to conclude in the third quarter and is subject to regulatory approvals, the fund said.

The new manager was chosen after a review by an independent consultant, taking into account the firm's experience and sizable presence in Hong Kong, as well as the "latest market developments and TraHK's future development," the fund's supervisory committee said.

The Hong Kong-listed fund was set up in November 1999 to track the movement in the benchmark Hang Seng Index, which today covers 66 stocks. It was formed to help the government divest itself of shares it had bought the previous year in an unprecedented market intervention to fend off speculators.

State Street Global Advisors said it was proud of its work with the city's monetary authority and the fund's overseers. "We are confident that our experience, scale and global footprint will enable us to serve investors in HKSAR, Greater China overall and across Asia-Pacific long into the future," it said, referring to the Hong Kong Special Administrative Region. The investing unit of State Street, which pioneered ETFs, managed $4.14 trillion of assets as of end-December.

Hang Seng Investment Management, which oversees 48 ETFs and retail funds, said it was honored to be selected.

The fund paid State Street an annual management fee of up to 0.05%, which equated to about 30 million Hong Kong dollars in 2020, or about $3.8 million, according to the fund's annual report.

The effective fees charged by the new manager will be 31% lower in the first three years and 40% lower after that.

Write to Clarence Leong at clarence.leong@wsj.com

State Street Loses Hong Kong Role After U.S. Blacklist Controversy

Document WSJO000020220329ei3t001up

即市頭條- Latest News
C Suisse Chops CHINA MOBILE (00941.HK) TP to $80.9, Rated Outperform

136 words
29 March 2022
AAStocks Financial News
AASFNE
English

Credit Suisse raised the 2022-24E EPS forecasts on CHINA MOBILE (00941.HK) by 6-11%, but lowered the telco's target price by around 5% to $80.9 on higher **investment** need on digital transformation operations. The stock was retained at Outperform. The broker continued to like the entire sector for its solid and lucrative yields, fundamental improvement and enticing valuation.

CHINA MOBILE's FY21 mobile services revenue was 1.3% above Credit Suisse's estimate, given better ARPU growth momentum. Its cloud and IDC revenues delivered a sector-leading growth and will likely continue to thrive as the telco keeps investing in capex and R&D expenses.

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AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020220329ei3t006mx

Computer ResellerNews

Kaspersky backlash continues as US comms regulator lists vendor as threat to national security

josh.budd@incisivemedia.com(Josh Budd)
485 words
28 March 2022
CRN
PCDLR
English

The United States' communications regulator has added Russian **cybersecurity** firm Kaspersky and both China Mobile and China Telecom to its list of threats to national security.

America's Federal Communication Commission (FCC) said the three companies had been added to the list under the Secure and Trusted Communications Networks Act of 2019.

The law requires the commission to "publish and maintain a list of communications equipment and services that pose an unacceptable risk to national security or the security and safety of US persons".

"Last year, for the first time, the FCC published a list of communications equipment and services that pose an unacceptable risk to national security, and we have been working closely with our national security partners to review and update this list," said chairwoman Jessica Rosenworcel.

"Today's action is the latest in the FCC's ongoing efforts, as part of the greater whole-of-government approach, to strengthen America's communications networks against national security threats, including examining the foreign ownership of telecommunications companies providing service in the United States and revoking the authorization to operate where necessary.

"Our work in this area continues."

The FCC is not the first organisation to issue a warning about Kaspersky following Russia's invasion of Ukraine. Earlier this month, Germany's cybersecurity authority - the Federal Office for Information Security (BSI) - issued a notice advising organisations that are using Kaspersky's security products to find BSI-approved replacements.

Kaspersky's CEO, Eugene Kaspersky, came under fire for a tweet in which he stopped short of criticising Russia's actions in Ukraine.

"We believe that peaceful dialogue is the only possible instrument for resolving conflicts. War isn't good for anyone," he said.

In response to the FCC's announcement, Kaspersky said it was "disappointed with the decision by the FCC to prohibit certain telecommunications-related federal subsidies from being used to purchase Kaspersky products and services".

"This decision is not based on any technical assessment of Kaspersky products - that the company continuously advocates for - but instead is being made on political grounds," the company added.

"Kaspersky believes today's expansion of such prohibition on entities that receive FCC telecommunication-related subsidies is similarly unsubstantiated and is a response to the geopolitical climate rather than a comprehensive evaluation of the integrity of Kaspersky's products and services."

China Mobile and China Telecom , meanwhile, are the latest Chinese companies to be added to the list, joining Huawei, ZTE, Hytera , and video surveillance systems vendors Hangzhou Hikvision Digital Technology Company and Dahua Technology Company.

The listing means these companies are unable to access certain federal funds in the US.

In 2017, it was made a requirement that US government agencies remove Kaspersky products and the use of Chinese communications was already heavily restricted.

To view photo, click here.

Document PCDLR00020220328ei3s00004

即市頭條- Latest News
CHINA MOBILE Hikes Investment in Computing Network This Yr; 2022 Last Peak Yr for 5G Investment

132 words
24 March 2022
AAStocks Financial News
AASFNE
English

As to the slim annual decline in the group's 5G **investment**, CHINA MOBILE (00941.HK) (600941.SH) Chairman Yang Jie explained that 2020-2022 is the peak period for the related **investment**, which will gradually reduce from 2023. In terms of computing network, the group will hike **investment** in mobile **cloud**, business network and data center slowly.

Regarding whether the telecom will consider a spin-off listing, Yang Jie said that the company has always kept doors open to the idea and will consider it in a timely manner as long as it is conducive to the development of the company.

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AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020220324ei3o005mt

THE JOURNAL
OF ENGINEERING
IET Open Access Research

Networks - Wireless Communications and Networks; Findings from Beijing University of Posts and Telecommunications in the Area of Wireless Communications and Networks Reported (Causality Graph Construction of Fault Alarms for Wireless Sensor Networks)

447 words
21 March 2022
Journal of Engineering
JOENG
40
English

2022 MAR 21 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Fresh data on Networks - Wireless Communications and Networks are presented in a new report. According to news originating from Beijing, People's Republic of China, by VerticalNews correspondents, research stated, "The running time statuses of IoT (Internet of Things) systems are monitored from their wireless sensor networks. When faults occur in the IoT system, their influence may spread to the whole system and trigger a large number of alarms on sensors, forming alarm storms."

Funders for this research include National Natural Science Foundation of China (NSFC), Ministry of Education and China Mobile Joint Fund, National Postdoctoral Program for Innovative Talents, China Postdoctoral Science Foundation, Beijing University of Posts and Telecommunications-China Mobile Research Institute Joint Innovation Center.

Our news journalists obtained a quote from the research from the Beijing University of Posts and Telecommunications, "In order to locate the root cause of faults and reduce the number of alarms to be handle, we proposed an approach to constructing the causality graph for alarms to extract the key information of alarm storms in this paper. The long-term propagation mode of alarms during faults is analyzed to build a corresponding directed acyclic graph which expresses the causal relationships between different types of alarms in the system. Two datasets of alarms collected from China Mobile are used in experiments of extracting summaries for alarm storm cases."

According to the news editors, the research concluded: "With ensuring a high recall of 0.96, the compression rate has reached 1.504."

This research has been peer-reviewed.

For more information on this research see: Causality Graph Construction of Fault Alarms for Wireless Sensor Networks. Ad Hoc & Sensor Wireless Networks, 2022;51(4):261-284. Ad Hoc & Sensor Wireless Networks can be contacted at: Old City Publishing Inc, 628 North 2ND St, Philadelphia, PA 19123, USA.

The news correspondents report that additional information may be obtained from Wei Li, Beijing University of Posts and Telecommunications, State Key Laboratory of Networking and Switching Technology, Beijing, People's Republic of China. Additional authors for this research include Yuhan Jing, Jing Wang, Bo He, Qi Qi, Jingyu Wang, Lei Zhang and Cong Liu.

Keywords for this news article include: Beijing, People's Republic of China, Asia, Wireless Communications and Networks, Engineering Companies, Sensor Networks, Beijing University of Posts and Telecommunications.

Document JOENG00020220321ei3l0009a

Regulation Asia

China
State Street to Be Dismissed as Manager of HK Tracker Fund

Editors, Regulation Asia
348 words
21 March 2022
Regulation Asia
REGASI
English

Hong Kong's government commenced a review last year to assess State Street's role as the manager of TraHK, the city's largest and most-popular ETF.

Hang Seng **Investment** Management is set to replace State Street Global Advisors Asia as the manager of Hong Kong's largest and most-popular ETF, Caixin has reported.

State Street, part of US-based State Street Global Advisors, has been the sole manager of the Tracker Fund of Hong Kong (TraHK) for more than 22 years, but the company has come under growing pressure as a result of deepening tensions between the US and China.

Last May, the Hong Kong government was said to be considering dismissing State Street as the manager of TraHK, after the asset manager had said in January 2021 that it would stop making new investments in Hong Kong-listed companies blacklisted by the US - including China Mobile, China Unicom and CNOOC.

Although State Street reversed the initial decision, Hong Kong officials remained concerned about the firm's stance on US sanctions, which ban US individuals and companies from investing in products linked to mainland Chinese companies with links to China's military.

State Street manages TraHK while its sister company, State Street Bank and Trust Company, is the trustee. Officials were said to be looking into whether to replace both institutions, which are US-regulated.

Last July, ahead of new US sanctions against 59 Chinese companies coming into effect, State Street amended the TraHK prospectus to prohibit investment from US investors.

It said the change would not affect TraHK's operation and the interests of unitholders, also clarifying that its Asian arm and TraHK did not constitute a 'US person' under the Biden executive order which provided a one-year divestment period for US investors to exit their positions in the blacklisted Chinese companies.

Nevertheless, Caixin says the dismissal of State Street and appointment of Hang Seng Investment Management will be formally announced within the next one or two weeks.

Document REGASI0020220321ei3l00002

Business is booming at China Unicom

Robert Clark
498 words
14 March 2022
Light Reading
LITEREAD
English

Strong growth in enterprise and **cloud** services have helped drive China Unicom to a 15% increase in full-year earnings.

The operator reported net income of 14.4 billion yuan (US$2.26 billion), with total revenue 7.9% higher at 327.9 billion yuan.

The buoyant result launches the reporting season for the three state-owned operators, with China Telecom and China Mobile issuing guidance ahead of their full announcements later this month.

Click here to view Figure 1.

China Telecomexpects to report a 23% to 25% rise in profit and 10% to 12% higher revenue, while China Mobile has forecast flat earnings on 10% to 11% higher sales.

China Unicom's industry Internet unit led the way, overtaking fixed-line broadband to become its second largest segment. The unit recorded a 28% spike in revenue to 55 billion yuan, with the cloud services business jumping 46% to 16 billion yuan.

Smaller enterprise segments also did brisk business, with IoT up 43% to 6 billion yuan and the big data group, which includes blockchain and AI, up 49% to 2.6 billion yuan.

But network and operations costs grew 15%, double the rise in aggregate costs, the result of higher fees for sites and equipment, energy and network maintenance, the company said.

Steady progress

Liu Liehong, chairman and CEO, said China Unicom had made steady progress in key businesses and in developing economies of scale.

It had enhanced its innovation capability and significantly improved operational efficiency, he said in a filing to HKEx.

He said Unicom was interested in expanding its "co-build co-share" partnership with China Telecom to encompass data centers and other infrastructure including "transmission lines, pipes and fibers, equipment rooms and antennae, DAS, etc."

Without elaborating, he said he also hoped to promote cooperation with China Telecom in "technological innovation."

Unicom and Telecom jointly added 310,000 5G basestations last year and now own and operate 690,000 5G sites and 660,000 4G sites. This has meant cumulative capex savings of 210 billion yuan for the operators over the past three years, Unicom said.

Its core mobile business grew 4.8% to 164 billion yuan, with ARPU improving 4.3% to 43.9 yuan. It added a net 11.3 million mobile customers, a turnaround from 2020 when it lost 12.7 million.

It now has 155 million 5G package subscribers, accounting for just under half the total customer base.

In 2022, Unicom said its priorities were to continue rolling out its premium 5G and gigabit broadband networks, its government-enterprise network and its computing power network.

Related posts:

* Huawei shines spotlight on China Unicom 5G Private Network PLUS

* China Unicom finally falls to the FCC with US market ban

* China's telcos join race for computing supremacy

- Robert Clark, contributing editor, special to Light Reading

rclark@electricspeech.com

Document LITEREAD20220314ei3e0002u

THE WALL STREET JOURNAL.

Journal Reports: Technology
Business

China Leads the Way With Private 5G Networks at Industrial Facilities; Among the projects: a coal mine where 5G allows remote inspections of mines and the automation of mining activity

By Dan Strumpf
751 words
13 March 2022
09:30
The Wall Street Journal Online
WSJO
English

China is racing ahead in building the **infrastructure** of 5G networks, but it is inside factories, coal mines, shipyards and warehouses where the technology is really taking off.

The country is widely seen as being out front in the deployment of localized, high-powered 5G networks in sprawling industrial sites, which aim to use the technology to help automate labor-intensive or dangerous industrial processes, and hopefully boost productivity.

These sites include 5G coal mines with remote-operated drilling machinery, so-called smart factories that automate production and quality control, and seaports with internet-connected cameras that process and tally freight containers.

These 5G private networks are different from the consumer-oriented networks that blanket towns and cities, in that they are dedicated to specific enterprise sites with tailor-made hardware and software. Isolated from public networks, they can be adjusted to specific requirements and handle more complex jobs and processes.

Big plans

Many such projects are under construction in the U.S., Europe and other parts of the world. But analysts say the construction and deployment of private networks is further along in China, where the government has set aggressive targets for building high-tech work sites powered by next-generation networks.

"China is quite ambitious in terms of developing their 5G—basically putting 5G as a national priority and targeting the digital transformation and connectivity of the economy," says Sihan Bo Chen, head of Greater China for the telecom industry group GSMA.

Last year, companies involved in their deployment generated $1.2 billion of revenue from 5G private networks serving businesses and governments in China, accounting for about a third of the global total and more than the revenue generated in Europe and North America combined, according to ABI Research, a technology research firm. The figure is a proxy for the scale of the deployments of such networks in China, says Leo Gergs, an analyst with ABI who studies the use of 5G networks by businesses.

The research firm expects China's lead to widen in the coming years, given aggressive government targets. This year, it expects private-network revenue generated in China to rise about 60%. By 2025, it will top $5 billion, ABI forecasts.

China leads the world in 5G deployment in general. As of the end of last year, the country had installed more than 1.4 million 5G base stations, accounting for 60% of the world's total, according to the Ministry of Industry and Information Technology, the government agency that oversees China's tech sector.

In April last year, Beijing set out a series of goals for the country to meet in 5G by 2023. In a plan called "Set Sail," it aims for more than 560 million individual 5G users across the country, with the 5G subscriber rate exceeding 40% of the population. For major industries, the government wants the penetration rate for 5G to exceed 35%. It also has a goal to build more than 3,000 private 5G networks by that year.

"This shows how deeply involved the government is" in China's 5G deployment, Mr. Gergs says.

Going underground

Several such projects in China are already up and running. One example: the Xinyuan Coal Mine in China's coal-rich Shanxi province. Last year, telecom vendor Huawei Technologies Co. and state-owned operator China Mobile developed an underground 5G network to allow remote inspections of mines and the automation of mining activity, with tunneling equipment operated by remote control deep underground.

Similar technology is at work at the Xiangtan Iron & Steel plant in the southern Chinese city of Xiangtan. In 2019, Huawei and China Mobile built 5G coverage for the plant, which now runs 5G-connected cranes and video surveillance cameras to help operate and monitor the plant, according to a report on the project by GSMA. At the port city of Ningbo, the companies built a similar 5G network to help automate the tallying of freight containers and power unmanned container trucks, GSMA says.

"Private network deployments are really just starting and China is already a bit of an outlier," Mr. Gergs says.

Mr. Strumpf is a Wall Street Journal reporter in Hong Kong. He can be reached at daniel.strumpf@wsj.com.

China Leads the Way With Private 5G Networks at Industrial Facilities

Document WSJO000020220313ei3d0002v

BARRON'S

Daily

Metaverse Fever Is High in China. Regulators Are Watching.

By Tanner Brown
664 words
4 March 2022
14:18
Barron's Online
BON
English

If China's internet is any sign of how walled off its **metaverse** will be, expect a firm hand from authorities, strict rules forbidding certain **content**, and plenty of fines and warnings when companies go astray.

China's internet is often called an intranet because it is so censored that it resembles a completely separate network of sites, apps, and financial technology offerings. It is strictly monitored by sophisticated technology and an army of thousands of human "sanitizers."

The metaverse in general is envisioned to be a virtual world through which the internet facilitates cutting edge interactive and computer-generated experiences. The concept has gained such momentum—and the prospects are so lucrative—that Facebook renamed itself Meta Platforms (ticker: FB).

While Goldman Sachs has estimated the metaverse could be worth $8 billion globally once it begins disrupting current technologies, Morgan Stanley said last month that China's market alone would be worth that much.

Over the last few months, we've gotten glimpses of what a Chinese metaverse might eventually look like, with the latest coming this week.

State-owned Bank of China's securities arm recently published a document saying "that the metaverse is a potential path to common prosperity, and the evolution of the metaverse-related organizational route cannot be separated from the top of the government."

The latter utterance is an obvious nod to the top ranks in Beijing, but so too is the phrase "common prosperity," a sort of mantra Chinese President Xi Jinping has been touting to do several things—among them impart a chilling effect on overly large corporations and individuals whose extravagant wealth appears to make a mockery of the "communist" part of the Communist Party.

Thus the Chinese metaverse must be a contributor to the common good, refrain from creating monopoly-level players, and fall under the same strict control as other forms of digital media in the country.

According to the document, one way this will be done is by granting special power to the three big state-owned telecoms: China Mobile (941.Hong Kong), China Unicom (762.Hong Kong), and China Telecom (728. Hong Kong). Dozens of Chinese news outlets ran with the story.

In fact, quietly in October, the China Mobile Communications Association's metaverse industry committee was set up in part to help select metaverse-related companies. But the latest news reinforces that the major telecoms will be big players, if not steerers, of the nascent industry.

Furthermore, the government embrace of the metaverse is both incentive and warning. Late last year, an influential government think tank published a report laying out all the possible ills the technology could bring, from the "corruption and addiction of youth," to "technological hegemony." In January, the National Intellectual Property Administration began a spate of metaverse trademark applications.

But recently, regulatory rhetoric put enough fear into investors to cause a fall in the share prices of some of China's biggest players.

A metaverse-only think tank—Yuanchuang Metaverse Research Institute—recently rated the contenders for success in the emerging field, based on a number of metrics, including technology, capital, and trademark approvals. The top six were Tencent Holdings (700.Hong Kong), telecom giant Huawei, e-commerce leader Alibaba Group Holding (BABA), search and AI specialist Baidu (BIDU), gaming and music company NetEase (NTES), and Tik-Tok developer ByteDance.

"The market sees the new vistas of possibility. These technologies may be combined and merged to shape a new digital world, which could have a fundamental impact on the existing digital life," Li Zheng, a researcher at think tank China Institutes of Contemporary International Relations (CICIR), told Chinese media recently.

New players are sure to emerge with meteoric rises, as Chinese corporate dynamics is known for. Time will tell just how tight the government grip squeezes the sector.

Write to editors@barrons.com

Metaverse Fever Is High in China. Regulators Are Watching.

Document BON0000020220304ei34000xd

Macro economics
Interview: GSMA director general speaks highly of China's innovation edge

427 words
2 March 2022
01:29
Xinhua's China Economic Information Service
XNHA
English

BARCELONA, March 1 (Xinhua) -- China is a mass market, and its actors are very innovative, Mats Granryd, director general of GSMA, the organization that represents the interests of mobile network operators worldwide, said in a recent exclusive interview.

Granryd talked to Xinhua during the 2022 Mobile World Congress (MWC) here, an event that is expected to attract between 40,000 and 60,000 visitors under the theme "**Connectivity** Unleashed." MWC 2022 runs until March 3.

Granryd highlighted the role China has played in rolling out 5G services, which "will be the enabling capacity for us to reach out to more businesses and enterprises," recalling the keynote speeches delivered at the congress by high-level managers of China Mobile, China Telecom and China Unicom, which all focused on their respective companies' plans to leverage 5G.

Granryd said the COVID-19 pandemic has "shown the importance of connectivity," which helped to "keep the world going" through two difficult years. The pandemic has shown how important it is for people to be able to remain in contact with each other, even though many nations have imposed strict lockdowns.

"We're very proud of the fact that we have kept this world going in a way with all the team meetings and all working from home or everyone being online," he said.

Asked about the effects the pandemic could have on the global telecommunications sector, he said that although it "maybe a bit too early" to tell, a post-pandemic world would see "more flexible working arrangements" and it would be "more acceptable to work from home."

The tools that enable people to work from home "will be better," he predicted. However, he noted that despite the advances, "3.4 billion people are still not using mobile internet, and we as an industry and as a society need to address that."

Granryd was upbeat on the mobile industry's growth prospects. "The world will be more connected, the world will be safer, the world will be taking more care of the planet. We believe that by using mobile technologies we can reduce CO2 and carbon emissions by 11 gigatonnes by 2030."

"The enabling effect of what we as mobile operators can contribute to society is huge. We will be more connected; we will be smarter. We're going to use more of artificial intelligence (AI), it's going help us make better decisions and we will be more efficient in the way we do things," he said.

Enditem

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Macro economics
GSMA director general speaks highly of China's innovation edge

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BARCELONA, March 1 (Xinhua) -- China is a mass market, and its actors are very innovative, Mats Granryd, director general of GSMA, the organization that represents the interests of mobile network operators worldwide, said in a recent exclusive interview.

Granryd talked to Xinhua during the 2022 Mobile World Congress (MWC) here, an event that is expected to attract between 40,000 and 60,000 visitors under the theme "**Connectivity** Unleashed." MWC 2022 runs until March 3.

Granryd highlighted the role China has played in rolling out 5G services, which "will be the enabling capacity for us to reach out to more businesses and enterprises," recalling the keynote speeches delivered at the congress by high-level managers of China Mobile, China Telecom and China Unicom, which all focused on their respective companies' plans to leverage 5G.

Granryd said the COVID-19 pandemic has "shown the importance of connectivity," which helped to "keep the world going" through two difficult years. The pandemic has shown how important it is for people to be able to remain in contact with each other, even though many nations have imposed strict lockdowns.

"We're very proud of the fact that we have kept this world going in a way with all the team meetings and all working from home or everyone being online," he said.

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Macro economics
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Enditem

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China - Mobile Phones - Five Forces

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The mobile phones market will be analyzed taking mno's and mvno's as players. The key buyers will be taken as consumers and businesses , and mobile phone manufacturers, government organizations and mobile **infrastructure** businesses as the key suppliers.

There is a high degree of rivalry within the Chinese mobile phones market. There are just a handful mobile network operators (MNO) that provide cellular and mobile broadband services across China, including large brand names such as China Mobile, China Telecommunications Corporation, and China Unicom. These companies are highly competitive with each other, providing the same core wireless services, making it difficult to differentiate from each other. Market consolidation and the roll-out of 5G technology has intensified rivalry in recent years.

There is little threat from new entrants as a result of the high cost associated with cellular infrastructure and maintenance, as well as the limited availability and access to spectrum – radio frequencies allocated to the mobile industry and other sectors for communication over the airwaves.

Buyers, which include end-consumers, have limited choice when choosing their mobile network and weak financial power means their bargaining power is weak. Smartphones are becoming integrated parts of everyday life, particularly in developed markets. However, consumers are price sensitive and have a tendency to switch to the most affordable mobile packages.

Supplier power is strong. MNOs have limited options when securing suppliers of mobile devices and 5G infrastructure companies. However, changing consumer trends have meant players rely less on mobile handsets to drive sales, which has reduced expenditure on mobile phone suppliers.

Alternatives to mobile phones are limited. Fixed line services are the only reasonable substitute but lack mobility and many of the attractive features associated with mobile phones, such as high-quality cameras, access to social media, and entertainment applications.

This market consists of large mobile network operators (MNO) and mobile virtual network operators (MNVO) that sell post-paid and prepaid mobile subscriptions to the end user. These companies tend to serve millions of customers. In the Chinese market, there are three state-owned MNOs (China Mobile, China Telecommunications Corporation, and China Unicom) that serve that majority of consumers. The largest of the three mobile carriers, China Mobile, provides mobile services for almost 1 billion Chinese end-consumers, with all three network operators having access to a customer-base of over 1.6 billion. The large number of potential customers weakens buyer power, as individual buyers have little influence on the performance of the business. Buyers are also restricted by the availability of cellular services. While most markets have nationwide mobile data coverage, some areas may only be supplied by a single network, significantly reducing the available options for consumers to choose from. For example, China Unicom’s 1.41 million 4G base stations were built to cover 93% of the population and 84% of administrative villages, leaving some areas without coverage.

MNOs benefit from their wireless network infrastructure, which it sells to MVNOs which lease mobile coverage and data bandwidth at wholesale prices and then resell mobile services to customers at wholesale prices. MVNOs wield little buyer power, as leasing infrastructure is the only way the companies can operate mobile services. High fixed costs and limited radio wave spectrum prevent MVNOs from backward integrating and creating their own mobile infrastructure. The presence of MVNOs in the market increases the buyer power wielded by the end consumer by increasing the number of available mobile brands, which encourages competition. However, many of these brands are owned by larger MNOs.

Buyers usually display little loyalty to mobile operators and often shop around for the best valued deal before committing to a new mobile contract. This increases buyer power and forces MNOs and MVNOs to compete and offer consumers better value mobile deals. Many mobile operators record churn rate, the rate at which customers stop doing business with a company over a given period.

Switching mobile provider is relatively easy and sometimes cost free, particularly for prepaid subscribers that pay for the services they use and are not locked into lengthy contracts. However, for post-paid customers, mobile service providers can often charge exit fees if a consumer chooses to upgrade or switch to an alternative provider before their mobile contract has ended. In 2019, the China's telecommunications ministry introduced a mobile number portability program that allows mobile users to keep their phone numbers when switching to a new network provider. This is a program that has been active in the US and European markets since 2000. Allowing consumers to keep their mobile number when changing mobile carrier will encourage switching by making it easier for consumers to seamlessly transfer to a new mobile network. By increasing the likelihood of switching, buyer power is increased.

Market players generally provide the same wireless services, including calls, texts, access to data and data roaming. However, network operators often try to differentiate their products to appeal to end-users and increase their market share. Convergence plans have become increasingly popular, combining mobile services with broadband and TV services to create a more valuable product for customers. Demand for mobile data is growing rapidly and new technologies cause consumers to consume more data than ever before. This has caused players to create more data centric mobile packages, including unlimited data plans, often competing on price. The end-consumer is highly price sensitive and often searches for the cheapest deals. New phone models help encourage customers towards higher value mobile plans; however, generally, consumers search for plans with high data allowances at low costs. This price sensitivity increases the consumer's tendency to switch and increases buyer power, as operators often must find ways to reduce costs, to create more competitive mobile packages.

While mobile phones are not essential for survival, but they are considered an essential item by many people, particularly in developed markets where mobiles have become integrated parts of everyday life. China has the world's largest smartphone population and a relatively high penetration rate, with 1.22 billion unique mobile subscribers in 2020, according to the GSMA, which equates to a subscriber penetration rate 83%. Demand for mobiles continues to grow as they are increasingly seen as an essential part of work, communication, and everyday life. Therefore, buyer power is weakened.

Overall, buyer power is assessed as weak.

Mobile phone manufacturers are some of the most significant suppliers for mobile service providers. Large mobile companies, such as Apple, Samsung, and Huawei, sell products directly to consumers, but generate the majority of sales through indirect distribution channels, including third party mobile network carriers, wholesalers, retailers, and resellers. Mobile carriers usually purchase handsets upfront and receive an inflow of cash to cover the cost of the handset over the length of the contract. Alternatively, carriers can also sell handsets as a third party seller and then offer SIM contracts, which allows consumers the freedom of choice when choosing their mobile phone and contract.

In recent years, consumer habits have changed, causing the elongation of the handset upgrade cycle. Consumers are holding onto their phones in response to new smartphone releases becoming increasingly expensive, with less notable improvements. As a result, mobile carriers have experienced a decrease in wireless equipment expenses as sales are driven by data centric mobile plans instead of new mobile releases. This has weakened supplier power, with mobile carriers becoming less reliant on new handset models to drive sales.

Infrastructure costs are high and essential for mobile network operators to maintain operations. Building network infrastructure requires supplies of building materials, software development, and other advanced technologies used for communication services. The emergence of 5G technologies has increased supplier power as network operators compete to launch the most advanced 5G networks with the largest coverage. This is expected to be detrimental to future business growth over the forecast period as 5G technologies facilitate consumers' growing demand for data. 5G infrastructure, such as radio access units, are built by a limited number of companies. Finnish firm Nokia, Sweden's Ericsson, and Chinese mobile manufacturer Huawei are the main providers of 5G technology. However, the state-owned MNOs are likely to favor Chinese made 5G infrastructure developed by domestic mobile phone manufacturer Huawei. Some of the world's leading economies, including the US, UK, Germany, Spain, France, and Japan, have imposed restrictions on using Chinese made 5G infrastructure after growing security concerns associated with Huawei's 5G technology, fearing it could be used by the Chinese government for espionage. China is considering retaliating against telecom gear makers Nokia and Ericsson if the EU follows the US and UK in banning Huawei, which could limit the availability of resources even further. Because of the small number of available suppliers, the failure of any part of the supply chain, such as suppliers or distributors, may have an adverse effect on the business and financial condition of each market player.

Mobile network operators also rely on a supply of radio wave spectrum, a specific frequency allocated to the mobile industry and other sectors for communication over airwaves. Spectrum is a sovereign asset; therefore, the government or designated national regulated authority is responsible for its allocation. In China, the Ministry of Industry and Information Technology (MIIT) is the body that promotes and ensures the proper

operation of all markets in the interest of consumers and corporations. This includes the regulation of the telecommunications market and the distribution of available spectrum for mobile network operators. In contrast to Western markets, where spectrum is awarded to the highest bidder during a series of auctions, China allocates spectrum according to the requirements and capabilities of telecom carriers. By doing so, incumbents are able to accelerate the development of network construction, and this stops the companies from acquiring large sums of debt. However, spectrum allocation also gives MNOs little power and can prevent them from acquiring the frequencies they want most. The MIIT issued nationwide 5G trial licenses during December 2018.

Overall, supplier is assessed as strong.

Entry into the Chinese mobile phones market is limited by high fixed costs and the existence of strong brand names already competing within the market. There are just three MNOs operating in China: China Mobile, China Telecommunications Corporation, and China Unicom. These companies operate large infrastructure networks that provide nationwide mobile and mobile broadband coverage. To create a new mobile network infrastructure would involve significant capital expenditure, unaffordable for most companies.

Secondly, there is only a limited amount of spectrum allocated for mobile communications, including 5G. This means just a small number of mobile operators can purchase the airwaves needed to provide mobile services. Furthermore, spectrum is only likely to be allocated to companies that already have the infrastructure and technology in place to readily provide communication services. In China's case, this will be one of its three mobile network operators.

The most common method through which MNOs can infiltrate the market is through the acquisition of an existing incumbent. The largest threat of acquisition comes from large multinational MNOs or domestic or international telecommunication companies looking to expand into the mobile communications market. The Chinese state will authorize the acquisition of any of its MNOs, but the risk of acquisition is extremely low due to the size and amount of capital required to purchase existing Chinese incumbents.

Market entry is more achievable for MVNOs. These companies do not own mobile infrastructure and rely on cellular coverage purchased at wholesale prices from MNOs. The consumer’s tendency to switch to affordable mobile phone services means new entrants can acquire customers with attractive and affordable mobile packages and strong customer services. Virtual networks traditionally offer contracts much cheaper than their parent networks and offer some good value SIM-only deals, which have grown in popularity because of handset fatigue. Successful MVNOs often use existing market assets such as media, telecom brands, customer databases, and other channel infrastructure.

MVNOs can often face retaliation from larger network operators that have the financial power to acquire competitors and launch their own competitive MVNO brands. MVNO acquisitions help network operators increase their customer base and product offerings. Until recently, access to the Chinese market has been obstructed by strict regulations and legislation preventing foreign ownership, but recently, China has opened its telecommunications market to foreign investment and has liberalized its mobile market, allowing easier access for new entrants. In 2019, BT Group was the first non-Chinese telecoms firm to get a nationwide operating license in China from the MIIT. The group was awarded a China nationwide domestic IP-VPN license and China nationwide internet service provider (ISP) license, allowing it to compete with the country's domestic mobile service providers. However, the company has targeted foreign companies operating in China and has not yet had access to China’s domestic mobile customers.

China is a mature and highly penetrated mobile market, with one of the highest smartphone penetration rates (83%) in the world. However, the country is still experiencing significant growth in new mobile subscribers, which makes it easier for newcomers to attract customers.

Overall, the threat from new entrants is assessed as weak.

One possible substitute for mobile phones is fixed-line telephones. However, this threat is seen as minimal, as mobile phones offer the advantage of being able to use them over a much wider geographical area – wherever they pick up a signal. Not only this, but there has been an observed increase in households that have substituted fixed-line telephones with mobile phones. Moreover, many mobile phones now offer benefits that have enabled them to become substitutes for many other electrical appliances, including laptops, televisions, MP3 players, and cameras.

Whilst laptops also offer many of the features that mobile phones are marketed on, such as internet access, video calling through programs such as Skype, email, TV, GPS, music, entertainment, and portability, they are not a strong substitute, as they do not possess many of the benefits of a mobile phone, such as size, weight, and the seamless ability to call others. As smart phones have developed, they have gradually eaten into PC sales, with consumers showing a preference towards mobile devices.

Tablet computers could be seen as a substitute for smartphones, but large-screened smartphones (known as "phablets") negate this threat to a large extent. The fact that tablet sales have declined globally for the last several consecutive years supports this. This has led to many players operating in the tablets market, such as HTC and Dell, pulling out of that market, emphasizing the fact that the mobile phones market has successfully been able to counter the impact of this potential substitute.

Overall, the threat of substitutes is assessed as weak.

A small number of large mobile network operators competing within a commercial, sales driven market creates a highly competitive environment with a strong degree of rivalry. China Mobile, China Telecommunications Corporation, and China Unicom are the primary MNOs competing in the Chinese mobile phones market and all of them compete intensely for a share of mobile subscribers and mobile service revenues. Leading players are continuously trying to improve customer experience, price, quality of service, scope of services, network coverage, sophistication of wireless technology, breadth of distribution, selection of devices, and branding and positioning to gain a competitive edge over rivals.

Competition remains intense because of high rates of smartphone penetration in the wireless market. The mobile market is one of the most mature segments of the Chinese telecommunications industry. It is characterized by high penetration rates, leading to increased competition, and leaving MNOs battling to retain existing and attract new customers. This competitive landscape is one of the most influential factors continuing to impact the mobile market. The Chinese mobile phone market is highly saturated; therefore, incumbents need to try to attract new customers by causing them to switch from rival operators. Innovation, new technology, designing new mobile packages, and adding value to postpaid subscriptions helps to reduce customer churn and attract new customers. This kind of direct competition for consumers creates fierce rivalry.

In 2018, the Chinese government considered a merger between the country's second and third largest MNOs, China Telecom and China Unicom, to accelerate the development of nationwide 5G mobile services. If it goes ahead, the companies active in the Chinese mobile market will go from three to two and create a stronger rivalry between the new company and China Mobile, which is currently way ahead of the competition in terms of revenue and customer base.

The similarity of players and their products also encourages rivalry. Each of the market's leading players provide the same core wireless services: calls, texts, data, and data roaming. Companies can attempt to differentiate themselves from competition in terms price, and value added services. As a result of the similarity of players, consumer choice is usually dictated by price, which creates a highly competitive market, with the companies offering the lowest priced mobile packages expected to attract the highest number of subscribers. This can be offset somewhat by the quality of services provided, including mobile coverage, device selection, and the availability of data. Consumers may be willing to pay premium prices for services such as unlimited data plans. In recent years, the market has slowed in response to a surge in competition, including price competition between major operators, the re-emergence of unlimited plans, and active promotion by new MVNOs.

Previously, this market was heavily driven by handset launches. Today, while handset innovation continues, the cost of a new mobile device has increased substantially, leading to consumers keeping their handsets for longer. This has also had an impact on store footfall. An increase in demand for SIM-only contracts and large data bundles is driving market growth.

5G technology has intensified competition in recent years. The performance of the mobile phone market is becoming increasingly reliant on data consumption trends. Consumers are demanding more data and 5G is a necessary technology for mobile operators to provide fast, low latency cellular broadband that better facilitates consumer data consumption and digital services. Competition has become increasingly fierce as mobile operates race to deploy nationwide 5G coverage. However, in China, competition is weakened by the allocation of spectrum according to the requirements and capabilities of telecom carriers. Existing MNOs are unable to compete for access to spectrum, which makes it difficult for competitors to increase their share of the market.

Overall, rivalry is assessed as strong.

Market Definition

The Mobile Phones market includes mobile phone service revenues and average minutes of use (MOU). Market values are made up of total mobile revenues containing revenues from mobile service providers and other members of the mobile service value-chain for the provision of mobile telephony services, excluding revenues from the sale of devices. Market volumes are made up of two segments: prepaid and postpaid, which consist of prepaid average monthly MOU and postpaid average monthly MOU. Minutes of use are

made up from the average of voice minutes used in mobile subscriptions, including both incoming and outgoing calls, but not including M2M/IoT voice services.

All market data and forecasts are represented in nominal terms (i.e. without adjustment for inflation) and all currency conversions used in the creation of this report have been calculated using constant 2021 annual average exchange rates.

Forecast figures in this report have taken into account the estimated impact that the COVID-19 pandemic will have on the market, though the length of the pandemic and restrictions imposed by governments around the world is not certain, therefore the impact on the market is difficult to predict.

For the purposes of this report, the global market consists of North America, South America, Europe, Asia-Pacific, Middle East, South Africa and Nigeria.

North America consists of Canada, Mexico, and the United States.

South America comprises Argentina, Brazil, Chile, Colombia, and Peru.

Europe comprises Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

Scandinavia comprises Denmark, Finland, Norway, and Sweden.

Asia-Pacific comprises Australia, China, Hong Kong, India, Indonesia, Kazakhstan, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.

Middle East comprises Egypt, Israel, Saudi Arabia, and United Arab Emirates.

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China - Mobile Phones - Competitive Landscape

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28 February 2022
MarketLine Industry Profiles
DMRP
English

The Chinese mobile phone market is dominated by three state owned corporations, meaning the market experiences little competition between incumbents and experiences little threat from new entrants or market disruptors. The largest of the three state owned communication corporations is China Mobile Limited which has close to one billion mobile customers and is recognized as the world's largest mobile service operator. However, the competition in the delivery of 4G services among China Unicom, China Telecom and China Mobile continues to intensify due to market saturation and tariff reduction. China is currently accelerating the construction of new **infrastructure** such as 5G network and data centers, and promoting in-depth integration of information communication technologies into the economy.

Who are the leading players?

China Mobile Limited is the leading telecommunications services provider in the mainland of China. The group provides full communications services in all 31 provinces, autonomous regions and directly administered municipalities throughout the mainland of China and in the Hong Kong Special Administrative Region. Its businesses primarily consist of mobile voice and data business, wireline broadband and other information and communications services. As of December 31, 2020, the group had a total of 454,332 employees, and a total of 942 million mobile customers and 210 million wireline broadband customers, with its annual revenue totaling RMB768.1 billion ($120.75 billion).

China Telecommunications Corporation is one of the largest mobile telecommunication providers in China. The company provides wireline and mobile telecommunications services, internet access services, information services and other value-added telecommunications services primarily in the People's Republic of China. As of December 2021, the company served 372.43 million mobile subscribers. In 2020, the group's mobile service revenues amounted to RMB181.7 billion ($28.56billion), representing an Y-o-Y increase of 3.5% and accounting for 48% of the company's total revenue for the year which amounted to RMB378.1bn ($59.4billion).

China United Network Communications Group Co. (China Unicom) is China's third-largest mobile service provider by subscriber base and revenues. The company has 317.1 million mobile billing subscribers as of December 2021. In 2020, the company registered service revenue of RMB275.8 billion ($40.5 billion).

What strategies do leading players follow?

The emergence of the 5th generation mobile network (5G) - a new global wireless standard designed to connect machines, objects, and devices - has created a strong demand for new mobile phones. Therefore, providing customers with 5G coverage has become a priority for most mobile phone service companies. China Mobile has taken steps to encourage customers to subscribe to 5G packages, using 5G devices, accelerated 5G migration and promoted the development of 5G through the companies '5G+'. As of the end of June 2020, China Mobile has accumulatively deployed and put in use 188,000 5G base stations in over 50 cities in China to provide commercialized 5G services. The number of 5G package consumers totaled 70.2 million, around 7.4% of the company's mobile subscribers.

China Mobile has adjusted its business model to focus on four core markets: the customer market, the home market, the business market and the new market (CHBN). The market focus is primarily on the development of 4G and 5G networks to maintain the company's market leading position in China in terms of handset data traffic and leading position in the commercialization of 5G technologies.

China Telecommunications Corporation has achieved 187.8 million 5G subscriptions, while this is lower than China Mobile, it accounts for 50% of the company's total mobile customers and leads the market in terms of the percentage of customers it has transferred onto 5G packages. In comparison, during 2020, China Unicom's 5G package subscribers reached 70.83 million, and the penetration rate of 5G package subscribers reached 23%. Applications such as e-Surfing ultra HD, cloud gaming and cloud VR are becoming increasingly popular in China which is driving demand for fast speed 5G networks.

China Telecom and China Unicom entered into a strategic cooperation agreement in 2016 to promote resource-sharing between the two companies. The areas of strategic cooperation include sharing capital expenditures such as their new rural 4G network, promoting a new smartphone standard, and jointly negotiating international roaming rates. In 2019, China Telecom collaborated with CUCL, a wholly-owned subsidiary of China Unicom. Together the companies have accelerated the roll-out of 5G networks by co-building and co-sharing. This has enabled them to leverage their complementary network and spectrum resources to save costs on network construction, operation and maintenance. In response China Mobile is also considering external cooperation for 5G network construction and sharing and has been in discussion with certain third parties to explore the potential cooperation arrangement.

This section contains brief overviews of the leading companies in the Chinese mobile phones market.

Company

Company Name: China Mobile Communications Group Co., Ltd

China Mobile Communications Group Co., Ltd (CMC) is telecommunication service provider. The company provides mobile voice communication services through its subsidiary China Mobile Limited. It offers data, internet protocol telephone and multimedia services. CMC provides services such as local call, domestic long-distance call, domestic roaming, international long-distance call, international roaming, e-mail communication, caller identity, reminder, call forwarding, mobile newspaper, call conceal, CRBT, conference call, mobile Internet, voice mailbox, call barring, GSM and GPRS roaming, mobile short messages, multimedia message, mobile data application and wireless music club services. The company also provides support center services such as service hall, on-line service center, hotline and text message service center. CMC is headquartered in Central, Hong Kong.

Head office: 60 Floor The Center, 99 Queen’s Road Central, Central, Hong Kong Special Administrative Region of China

Website: www.chinamobileltd.com

Financial Year End: April

Company Overview

China Mobile Communications Group Co., Ltd (CMC) is telecommunication service provider. The company provides mobile voice communication services through its subsidiary China Mobile Limited. It offers data, internet protocol telephone and multimedia services. CMC provides services such as local call, domestic long-distance call, domestic roaming, international long-distance call, international roaming, e-mail communication, caller identity, reminder, call forwarding, mobile newspaper, call conceal, CRBT, conference call, mobile Internet, voice mailbox, call barring, GSM and GPRS roaming, mobile short messages, multimedia message, mobile data application and wireless music club services. The company also provides support center services such as service hall, on-line service center, hotline and text message service center. CMC is headquartered in Central, Hong Kong.

Company

Company Name: China Telecom Corporation Limited

China Telecom Corporation Limited (China Telecom or ‘the company’) is an integrated information service provider. The company offers a range of telecommunications services including wireline voice services, mobile voice services, internet access services, value-added services, integrated information application services, information application services, outsourcing services, and network equipment services and other related services. China Telecom also provides wireline, internet and mobile value-added services including super cordless telephone services, SMS, caller ID services, color ring tone services, and telephone payment services. China Telecom through its subsidiaries operates in various geographical regions including the Americas, Europe, Asia-Pacific and Africa. The company is headquartered in Beijing, China.

The company reported revenues of (Renminbi) CNY393,561 million for the fiscal year ended December 2020 (FY2020), an increase of 4.7% over FY2019. In FY2020, the company’s operating margin was 7.3%, compared to an operating margin of 7.7% in FY2019. In FY2020, the company recorded a net margin of 5.3%, compared to a net margin of 5.5% in FY2019.

The company reported revenues of CNY110,004 million for the third quarter ended September 2021, a decrease of 2.1% over the previous quarter.

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Number of Employees: 281192

Website: www.chinatelecom-h.com

Financial Year End: December

Ticker: 728

Stock Exchange: Hong Kong Stock Exchange

Company Overview

China Telecom Corporation Limited (China Telecom or 'the company') is an integrated information service provider. The company offers a range of telecommunications services including wireline voice services, mobile voice services, internet access services, value-added services, integrated information application services, information application services, outsourcing services, and network equipment services and other related services. China Telecom also provides wireline, internet and mobile value-added services including super cordless telephone services, SMS, caller ID services, color ring tone services, and telephone payment services. China Telecom through its subsidiaries operates in various geographical regions including the Americas, Europe, Asia-Pacific and Africa. The company is headquartered in Beijing, China.The company reported revenues of (Renminbi) CNY393,561 million for the fiscal year ended December 2020 (FY2020), an increase of 4.7% over FY2019. In FY2020, the company's operating margin was 7.3%, compared to an operating margin of 7.7% in FY2019. In FY2020, the company recorded a net margin of 5.3%, compared to a net margin of 5.5% in FY2019.

The company reported revenues of CNY110,004 million for the third quarter ended September 2021, a decrease of 2.1% over the previous quarter.

Business Description

China Telecom Corporation Limited (China Telecom or 'the company') offers a range of telecommunications services, including wireline voice services, mobile voice services, internet access services and value-added services. The company also offers integrated information application services, telecommunications network resource services and lease of network equipment services and other related services. It primarily operates in China.

The company classifies its business operations into five reportable segments: internet services, voice services, information and application services, telecommunications network resource and equipment services, and others.

Under internet services segment, it provides wireline internet access services, including dial-up and broadband services, and wireless internet access services. As of December 2020, the company had 153.5 million wireline broadband subscribers. In FY2020, the internet services segment reported revenue of CNY208,019 million, which accounted for 52.9% of the company's revenue.

Under voice services segment, the company offers services such as local calls, domestic long distance calls, international long distance calls, intra-provincial roaming, inter-provincial roaming and international roaming. As of December 2020, the company had a mobile subscriber base of 351 million and 107.9 million wireline telephone subscribers. In FY2020, the voice services segment reported revenue of CNY40,866 million, which accounted for 10.4% of the company's revenue.

Under information and application services segment, it provides various services such as Internet protocol TV, Whole-home WiFi, Family Cloud, e-Surfing Webcam, IDC, cloud computing, content delivery networks, Big Data, digital platform and system integration related services. It also provides caller display, SMS, multimedia messaging services, email services and music related content and applications services. As of December 2020, the company had 115.9 million e-surfing HD subscribers, and 237.6 million IoT connected devices. In FY2020, the information application services segment reported revenue of CNY96,885 million, which accounted for 24.6% of the company's revenue.

Under telecommunications network resource and equipment services segment, the company provides services relating to optic fiber and circuits such as the use of optic fiber and circuit; virtual private network; and use of bandwidth. It offers its services to large enterprise customers such as government authorities, large corporations and institutions. It also collaborates with various international telecommunications service

providers to build global communications networks for multinational corporations. In FY2020, the segment reported revenue of CNY22,623 million, which accounted for 5.7% of the company's revenue.

Under others segment, the company is involved in sales, repairs and maintenance of customer-end equipment. In FY2020, the others segment reported revenue of CNY25,168 million, which accounted for 6.4% of the company's revenue.

Company

Company Name: China United Network Communications Ltd

China United Network Communications Ltd (China United Network Communications) is a provider of broadband communications and information services. The company offers services related to fixed and mobile communications, domestic and international communications, satellite international private leased circuit (IPLC), data communications, network access, and value-added telecom services. It is also involved in providing voice, data, image and multimedia communications and information services. It provides services under the WO brand. The company primarily operates in China and Hong Kong. China United Network Communications is headquartered in Beijing, China

The company reported revenues of (Renminbi) CNY303,838.1 million for the fiscal year ended December 2020 (FY2020), an increase of 4.6% over FY2019. In FY2020, the company's operating margin was 5.1%, compared to an operating margin of 4.6% in FY2019. In FY2020, the company recorded a net margin of 1.8%, compared to a net margin of 1.7% in FY2019.

The company reported revenues of CNY80,314.7 million for the third quarter ended September 2021, a decrease of 1.9% over the previous quarter.

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Financial Year End: December

Company Overview

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The company reported revenues of CNY80,314.7 million for the third quarter ended September 2021, a decrease of 1.9% over the previous quarter.

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All market data and forecasts are represented in nominal terms (i.e. without adjustment for inflation) and all currency conversions used in the creation of this report have been calculated using constant 2021 annual average exchange rates.

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Scandinavia comprises Denmark, Finland, Norway, and Sweden.

Asia-Pacific comprises Australia, China, Hong Kong, India, Indonesia, Kazakhstan, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.

Middle East comprises Egypt, Israel, Saudi Arabia, and United Arab Emirates.

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Asia-Pacific - Mobile Phones - Five Forces

3,541 words
28 February 2022
MarketLine Industry Profiles
DMRP
English

The mobile phones market will be analyzed taking mno's and mvno's as players. The key buyers will be taken as consumers and businesses , and mobile phone manufacturers, government organizations and mobile **infrastructure** businesses as the key suppliers.

There is a high degree of rivalry within the Asia-Pacific mobile phones market. There are just a handful of mobile network operators (MNO) that provide cellular and mobile broadband services in each mobile phones market, including large brand names such as China Mobile, SK Telecom, Jio, and Singtel. These companies are highly competitive with each other, providing the same core wireless services, making it difficult to differentiate from each other. The roll-out of 5G technology has intensified rivalry in recent years, while competition from smaller MVNO and mobile operators has had the opposite effect.

There is little threat from new entrants as a result of the high cost associated with cellular infrastructure and maintenance, as well as the limited availability and access to spectrum – radio frequencies allocated to the mobile industry and other sectors for communication over the airwaves.

Buyers, which include end-consumers, have limited choice when choosing their mobile network and weak financial power means their bargaining power is weak. Smartphones are becoming integrated parts of everyday life, particularly in developed markets. However, consumers are price sensitive and have a tendency to switch to the most affordable mobile packages.

Supplier power is strong. MNOs have limited options when securing suppliers of mobile devices and 5G infrastructure companies. However, changing consumer trends have meant players rely less on mobile handsets to drive sales, which has reduced expenditure on mobile phone suppliers.

Alternatives to mobile phones are limited. Fixed line services are the only reasonable substitute but lack mobility and many of the attractive features associated with mobile phones, such as high-quality cameras, access to social media, and entertainment applications.

This market consists of large mobile network operators (MNO) and mobile virtual network operators (MNVO) that sell post-paid and prepaid mobile subscriptions to the end user. These companies tend to serve millions of customers. China’s market leading MNO, China Mobile, provides mobile services for almost 1 billion Chinese end-consumers. The large number of potential customers weakens buyer power, as individual buyers have little influence on the performance of the business.

Buyers are also restricted by the availability of cellular services. While most markets have nationwide mobile data coverage, some areas may only be supplied by a single network, significantly reducing the available options for consumers to choose from.

MNOs benefit from their wireless network infrastructure, which it sells to MVNOs, which lease mobile coverage and data bandwidth at wholesale prices and then resell mobile services to customers at wholesale prices. MVNOs wield little buyer power, as leasing infrastructure is the only way the companies can operate mobile services. High fixed costs and limited radio wave spectrum prevent MVNOs from backward integrating and creating their own mobile infrastructure. The presence of MVNOs in the market increases the buyer power wielded by the end consumer by increasing the number of available mobile brands, which encourages competition. However, many of these brands are owned by larger MNOs.

Buyers usually display little loyalty to mobile operators and often shop around for the best valued deal before committing to a new mobile contract. This increases buyer power and forces MNOs and MVNOs to compete and offer consumers better value mobile deals. Many mobile operators record churn rate, the rate at which customers stop doing business with a company over a given period.

Switching mobile provider is relatively easy and sometimes cost free, particularly for prepaid subscribers that pay for the services they use and are not locked into lengthy contracts. However, for post-paid customers, mobile service providers can often charge exit fees if a consumer chooses to upgrade or switch to an

alternative provider before their mobile contract has ended. Most mobile subscribers across the Asia-Pacific purchase mobiles using post-paid monthly contracts. However, in less economically developed countries, mobile carriers still rely on prepaid packages as consumers are less likely to commit to long mobile contracts without reliable income.

Market players generally provide the same wireless services, including calls, texts, access to data and data roaming. However, network operators often try to differentiate their products to appeal to end-users and increase their market share. Convergence plans have become increasingly popular, combining mobile services with broadband and TV services to create a more valuable product for customers. Demand for mobile data is growing rapidly and new technologies cause consumers to consume more data than ever before. This has caused players to create more data centric mobile packages, including unlimited data plans, often competing on price. The end-consumer is highly price sensitive and often searches for the cheapest deals. New phone models help encourage customers towards higher value mobile plans; however, generally, consumers search for plans with high data allowances at low costs. This price sensitivity increases the consumer’s tendency to switch and increases buyer power, as operators often must find ways to reduce costs, to create more competitive mobile packages.

While mobile phones are not essential for survival, they are considered an essential item by many people, particularly in developed markets where mobiles have become integrated parts of everyday life. According to the GSMA, Asia-Pacific had a unique mobile subscriber penetration rate of 58% at the end of 2020, and is expected to grow to 62% by 2025, indicative of a growing demand for and dependency on mobile phone services.

Overall, buyer power is assessed as weak.

Mobile phone manufacturers are some of the most significant suppliers for mobile service providers. Large mobile companies, such as Apple, Samsung, and Huawei, sell products directly to consumers, but generate the majority of sales through indirect distribution channels, including third party mobile network carriers, wholesalers, retailers, and resellers. Mobile carriers usually purchase handsets upfront and receive an inflow of cash to cover the cost of the handset over the length of the contract. Alternatively, carriers can also sell handsets as a third party seller and then offer SIM contracts, which allows consumers the freedom of choice when choosing their mobile phone and contract.

In recent years, consumer habits have changed, causing the elongation of the handset upgrade cycle. Consumers are holding onto their phones in response to new smartphone releases becoming increasingly expensive, with less notable improvements. As a result, mobile carriers have experienced a decrease in wireless equipment expenses as sales are driven by data centric mobile plans instead of new mobile releases. This has weakened supplier power, with mobile carriers becoming less reliant on new handset models to drive sales.

Infrastructure costs are high and essential for mobile network operators to maintain operations. Building network infrastructure requires supplies of building materials, software development, and other advanced technologies used for communication services. The emergence of 5G technologies has increased supplier power as network operators compete to launch the most advanced 5G networks with the largest coverage. This is expected to be detrimental to future business growth over the forecast period as 5G technologies facilitate consumers' growing demand for data. 5G infrastructure, such as radio access units, are built by a limited number of companies. Finnish firm Nokia, Sweden’s Ericsson, and Chinese mobile manufacturer Huawei are the main providers of 5G technology.

Mobile network operators also rely on a supply of radio wave spectrum, a specific frequency allocated to the mobile industry and other sectors for communication over airwaves. Spectrum is a sovereign asset; therefore, the government or designated national regulated authority is responsible for its allocation. While governments receive a significant amount of revenue from leasing spectrum to mobile operators, the cost is usually reasonably priced to prevent the inflation of mobile phone costs for the end-consumer. However, spectrum is a finite resource and access to radio frequency can help determine the market position of a mobile network operator, making it one of the most valuable supplies in the market. The cost of spectrum can vary from country to country depending on the competitiveness of the market, the amount of available spectrum at auction, and the design of the auction itself.

In contrast to Western markets, where spectrum is awarded to the highest bidder during a series of auctions, China allocates spectrum according to the requirements and capabilities of telecom carriers. By doing so, incumbents can accelerate the development of network construction, and this stops the companies from acquiring large sums of debt. However, spectrum allocation also gives MNOs little power and can prevent them from acquiring the frequencies they want most. The Ministry of Industry and Information Technology (MIIT) issued nationwide 5G trial licenses in China during December 2018.

Elsewhere, 5G spectrum auctions have been more competitive, which has increased the cost for market players. During 2018, the South Korean government held a frequency auction and a shared 5G deployment and network agreement was signed, which aimed to avoid a very costly launch campaign. However, South Korea's three leaders still spent KRW3.6 trillion ($3.3 billion). SK Telecom spent the most, close to KRW1.2 trillion ($1.1 billion) for 100 MHz of spectrum. KT paid KRW968 billion ($870 million) for the same amount. Finally, LG Uplus acquired an 80 MHz license in this range for KRW810 billion ($728 million).

Overall, supplier is assessed as strong.

Entry into the Asia-Pacific mobile phones market is limited by high fixed costs and the existence of strong brand names already competing within the market. There are just a handful of MNOs operating in each market, including recognizable brands such as China Mobile, SK Telecom, Jio, and Singtel. These companies operate large infrastructure networks that provide nationwide mobile and mobile broadband coverage. To create a new mobile network infrastructure would involve significant capital expenditure, unaffordable for most companies. Secondly, there is only a limited amount of spectrum allocated for mobile communications, including 5G. This means just a small number of mobile operators can purchase the airwaves needed to provide mobile services. Furthermore, spectrum is only likely to be allocated to companies that already have the infrastructure and technology in place to readily provide communication services.

The most common method through which MNOs can infiltrate the market is through the acquisition of an existing incumbent. The largest threat of acquisition comes from large multinational MNOs or domestic or international telecommunication companies looking to expand into the mobile communications market.

Generally, across Asia-Pacific, communications legislation does not limit foreign investments or foreign ownership in the telecommunications sector. However, MNOs tend to be large brands with extensive customer-bases; therefore, a significant amount of capital is needed to purchase an incumbent.

Some markets are more heavily regulated but are beginning to show signs of liberation, which could encourage new entrants over the forecast period. Until recently, access to the Chinese market has been obstructed by strict regulations and legislation preventing foreign ownership, but recently, China has opened up its telecommunications market to foreign investment and has liberalized its mobile market, allowing easier access for new entrants. In 2019, BT Group was the first non-Chinese telecoms firm to get a nationwide operating license in China from the MIIT. The group was awarded a China nationwide domestic IP-VPN license and China nationwide internet service provider (ISP) license, allowing it to compete with the country's domestic mobile service providers. However, the company has targeted foreign companies operating in China and has not yet had access to China’s domestic mobile customers.

Market entry is more achievable for MVNOs. These companies do not own mobile infrastructure and rely on cellular coverage purchased at wholesale prices from MNOs. The consumer’s tendency to switch to affordable mobile phone services means new entrants can acquire customers with attractive and affordable mobile packages and strong customer services. Virtual networks traditionally offer contracts much cheaper than their parent networks and offer some good value SIM-only deals, which have grown in popularity because of handset fatigue. Successful MVNOs often use existing market assets such as media, telecom brands, customer databases, and other channel infrastructure. For example, Japanese electronic commerce and online retailing company, Rakuten, launched its mobile services company, Rakuten Mobile, in 2018, utilizing its pre-existing online retail customer base and low prices to attract consumers from leading companies.

MVNOs can often face retaliation from larger network operators that have the financial power to acquire competitors and launch their own competitive MVNO brands. MVNO acquisitions help network operators increase their customer base and product offerings.

The Asia-Pacific mobile phones market is approaching maturity. However, the GSMA expects 663 million new mobile internet users across Asia-Pacific by 2025. This increase in mobile users and mobile internet users will drive growth in mobile subscriptions and revenues over the forecast period, which will encourage new entrants to infiltrate the market.

India has a particularly attractive mobile phones market. Indian government initiatives have support growth of the mobile phones market. Digital India is a flagship program of the Indian government, with a vision to transform India into a digitally empowered society and knowledge economy. Providing cheap and affordable mobile plans was central to the initiative's strategy to increase the adoption of digital infrastructure in India. India’s young demographic and the increased access to and affordability of mobile and internet services is driving growth in this market. In addition, a fall in smartphone prices has been stimulated by increased local manufacturing, encouraged by the government’s Phased Manufacturing Program. Cheaper smartphone prices will drive hardware sales and demand for mobile services will increase. Because of the country’s rapidly growing smartphone penetration, the market is expected to experience significant growth in new

mobile subscribers, which will make it much easier for new entrants to acquire customers by reducing the need to compete with the market's leading players.

Overall, the threat from new entrants is assessed as weak.

One possible substitute for mobile phones is fixed-line telephones. However, this threat is seen as minimal, as mobile phones offer the advantage of being able to use them over a much wider geographical area – wherever they pick up a signal. Not only this, but there has been an observed increase in households that have substituted fixed-line telephones with mobile phones. Moreover, many mobile phones now offer benefits that have enabled them to become substitutes for many other electrical appliances, including laptops, televisions, MP3 players, and cameras.

Whilst laptops also offer many of the features that mobile phones are marketed on, such as internet access, video calling through programs such as Skype, email, TV, GPS, music, entertainment, and portability, they are not a strong substitute, as they do not possess many of the benefits of a mobile phone, such as size, weight, and the seamless ability to call others. As smart phones have developed, they have gradually eaten into PC sales, with consumers showing a preference towards mobile devices.

Tablet computers could be seen as a substitute for smartphones, but large-screened smartphones (known as "phablets") negate this threat to a large extent. The fact that tablet sales have declined globally for the last several consecutive years supports this. This has led to many players operating in the tablets market, such as HTC and Dell, pulling out of that market, emphasizing the fact that the mobile phones market has successfully been able to counter the impact of this potential substitute.

Overall, the threat of substitutes is assessed as weak.

A small number of large mobile network operators competing within a commercial, sales driven market creates a highly competitive environment with a strong degree of rivalry. China Mobile, SK Telecom, Jio, and Singtel are some of the primary MNOs competing in the Asia-Pacific mobile phones market and compete intensely for a share of mobile subscribers and mobile service revenues. However, rivalries often remain at a national scale, with mobile operators across the region focusing exclusively on the domestic market. Leading players are continuously trying to improve customer experience, price, quality of service, scope of services, network coverage, sophistication of wireless technology, breadth of distribution, selection of devices, and branding and positioning to gain a competitive edge over rivals.

In saturated markets such as Japan, South Korea, and Singapore, competition remains intense because of high rates of smartphone penetration in the wireless market. The mobile market is one of the most mature segments of the Asia-Pacific telecommunications industry. It is characterized by high penetration rates, leading to increased competition and leaving MNOs battling to retain existing and attract new customers. This competitive landscape is one of the most influential factors continuing to impact the mobile market. When a market is saturated, incumbents need to try to attract new customers by causing them to switch from rival operators. Innovation, new technology, designing new mobile packages, and adding value to postpaid subscriptions helps to reduce customer churn and attract new customers. This kind of direct competition for consumers creates fierce rivalry.

In comparison to Europe, the Asia-Pacific mobile market has experienced little consolidation and many markets have experienced an increase in the number of competitors in recent years as an attempt to lower mobile prices for the end consumer. In Japan, stronger market competition has weakened the existing rivalry between the MNOs as they start to switch their attention to managing competition from smaller emerging mobile carriers.

The similarity of players and their products also encourages rivalry. Each of the market's leading players provide the same core wireless services: calls, texts, data, and data roaming. Companies can attempt to differentiate themselves from competition in terms price and value-added services. As a result of the similarity of players, consumer choice is usually dictated by price, which creates a highly competitive market, with the companies offering the lowest priced mobile packages expected to attract the highest number of subscribers. This can be offset somewhat by the quality of services provided, including mobile coverage, device selection, and the availability of data. Consumers may be willing to pay premium prices for services such as unlimited data plans. In recent years, the market has slowed in response to a surge in competition, including price competition between major operators, the re-emergence of unlimited plans, and active promotion by new MVNOs.

Previously, this market was heavily driven by handset launches. Today, while handset innovation continues, the cost of a new mobile device has increased substantially, leading to consumers keeping their handsets for longer. This has also had an impact on store footfall. An increase in demand for SIM-only contracts and large data bundles is driving market growth.

5G technology has intensified competition in recent years. The performance of the mobile phone market is becoming increasingly reliant on data consumption trends. Consumers are demanding more data and 5G is a necessary technology for mobile operators to provide fast, low latency cellular broadband that better facilitates consumer data consumption and digital services. Competition has become increasingly fierce as mobile operates race to deploy nationwide 5G coverage. 5G deployment is gathering pace across the Asia-Pacific region. There are nine markets that have launched commercial mobile 5G services and 12 more have officially announced plans to do so. Australia, China, Japan, Malaysia, Singapore, and South Korea all aspire to be global leaders in 5G.

Overall, rivalry is assessed as strong.

Market Definition

The Mobile Phones market includes mobile phone service revenues and average minutes of use (MOU). Market values are made up of total mobile revenues containing revenues from mobile service providers and other members of the mobile service value-chain for the provision of mobile telephony services, excluding revenues from the sale of devices. Market volumes are made up of two segments: prepaid and postpaid, which consist of prepaid average monthly MOU and postpaid average monthly MOU. Minutes of use are made up from the average of voice minutes used in mobile subscriptions, including both incoming and outgoing calls, but not including M2M/IoT voice services.

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Scandinavia comprises Denmark, Finland, Norway, and Sweden.

Asia-Pacific comprises Australia, China, Hong Kong, India, Indonesia, Kazakhstan, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.

Middle East comprises Egypt, Israel, Saudi Arabia, and United Arab Emirates.

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Huawei; China's Guangdong-Hong Kong-Macao Greater Bay Area Is Building an All-Optical Network Cluster to Drive Green Digital Economy

1,003 words
28 February 2022
Global Warming Focus
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English

2022 FEB 28 (VerticalNews) -- By a News Reporter-Staff News Editor at Global Warming Focus -- As one of China's most economically developed and internationalized regions, the Guangdong-Hong Kong-Macao Greater Bay Area has a complete industry system and is vigorously promoting the development of green and low-carbon network technologies. In recent years, Huawei and China Mobile Guangdong have jointly built an all-optical network cluster for the Greater Bay Area. The world's largest green all-optical switching hub network is built based on continuous ICT innovation and aims to help thousands of industries enjoy advanced network technologies while further saving energy and reducing emissions, thereby making the digital economy greener.

All-optical networks are deployed to replace legacy **devices**, reducing carbon emissions

As the communication medium of all-optical network clusters, optical fibers have an unparalleled advantage over copper lines when it comes to bandwidth, latency, anti-interference, and reliability, in addition to reducing power consumption by 60% to 75%. Indeed, optical fibers are the greenest communication medium. By using Huawei OTN devices that apply optical communication technologies, China Mobile Guangdong is promoting the retirement of power-hungry and inefficient SDH devices in multiple cities such as Huizhou and Shaoguan. Currently, SDH modernization has been implemented for about 5000 SDH devices, saving 3000 square meters of space. Additionally, about 7.9 million kWh of electricity is saved and over 5000 tons of carbon emissions are reduced each year, which is equivalent to planting 196,000 trees.

Moreover, China Mobile Guangdong has introduced Huawei's innovative all-optical cross-connect (OXC) and deployed more than 110 OXC devices in the Greater Bay Area, building the world's largest "green all-optical switching hub." This reduces the number of cabinets per site from 5-8 to only one, reducing equipment room footprint by about 70% and power consumption by around 30%. At the same time, the grooming capability of a single node is improved 10 fold, and 3D and mesh networking of up to 32 directions is implemented. This reduces electricity use by about 2.3 million kWh and carbon emissions by over 1400 tons every year, which is equivalent to planting 49,000 trees.

The 2000 OTN optical nodes deployed on the all-optical network cluster cover 21 cities and more than 130,000 villages in Guangdong province, enabling ultra-low latency circles in the Greater Bay Area. Specifically, 1ms intra-city latency circles, 2ms inter-city latency circles, and a 3ms latency circle within the entire Greater Bay Area have been built.

All-optical network cluster drives the development of the high-quality green digital economy in China

In 2021, Guangdong proposed the Digital Government 2.0 Plan to provide leading government services and achieve 100% local processing of high-frequency services, intra-province services, cross-province services, and other services in the Greater Bay Area.

Take the city of Zhongshan in Guangdong as an example. In the past, each functional department built and managed its own network, resulting in information silos. Data could not be converged, making cross-department data exchange difficult and affecting the service experience of enterprise and individual customers. In 2021, Zhongshan successfully integrated multiple networks of different departments into one all-optical e-Government extranet through the OTN premium private network. This network connects 24 towns/subdistricts and extends to 277 village nodes, providing nearby, one-off service handling anytime. In this way, 3387 administrative approval items can be handled online and require no more than one visit, while 3206 items can be handled locally.

Shenzhen, one of the three major financial centers in the Chinese Mainland, has a strong demand for network services that enable financial transactions. To meet this demand, China Mobile Guangdong cooperated with China Mobile International Limited to explore product innovation and built financial private lines featuring ultra-low latency, ultra-high reliability, ultra-fast provisioning, and ultra-high assurance. These private lines have advantages including high bandwidth and convenient capacity expansion, better satisfying the requirements of financial customers on latency, security, and reliability.

Due to the pandemic, offline activities have been greatly affected. However, online activities, such as cloud-based exhibitions, shopping, and music festivals, have presented new opportunities for the digital economy. In southern China, a large number of flowers and plants are sold around the Spring Festival, as many people use them to decorate their homes during this time. Against this backdrop, the Cloud Flower Fair was launched, allowing one-click flower delivery. This not only promotes consumption, but also avoids overcrowding and reduces the risk of contact during the pandemic. During the Spring Festival in 2022, 114 million pots of flowers were delivered in Guangdong, half of which were sold through the Cloud Flower Fair. The sales revenue was nearly CNY1.6 billion.

Another example is a Cantonese opera festival that has been held based on the all-optical network cluster. Network media technologies are used to promote opera arts, enabling more young people to become aware of traditional Chinese culture. The number of live broadcast views exceeded 18 million.

So far, the all-optical network cluster in the Greater Bay Area has served over 110 million individuals, 18 million households, and 2million enterprises, while reducing electricity use by over 10 million kWh and carbon emissions by over 6400 tons for local communication networks each year. Also, the network supports the digital transformation of 17,000 industrial enterprises and helps 550,000 MSMEs to implement cloudification, improve their service speed and quality, reduce costs, and enhance efficiency. Overall, the network has reduced carbon emissions by over 800,000 tons.

Keywords for this news article include: Asia, China, Business, Cybersecurity, Climate Change, Global Warming, Greenhouse Gases, Network Technologies, Huawei Technologies Co. Ltd., Information Technology Companies, Telecommunications Equipment Companies.

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Global Times
Metaverse group partners with Asia Digital Bank

GT staff reporters
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P09
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A concept photo of **metaverse** Photo: VCG

The China Mobile Communications Association (CMCA)'s **metaverse** council, the country's first **metaverse** industry group, has signed a strategic **partnership** with the Asia Digital Bank, in a bid to jointly explore the new digital finance and trade **ecosystem** in the **metaverse** era, an official said on Tuesday.

The move will also focus on promoting cooperation in the digital economy's development with countries and regions along the routes of the Belt and Road Initiative (BRI), an executive director of the industry body told the Global Times.

According to a post on the council's official website, the metaverse council and the Asia Digital Bank will cooperate in five key directions following regulations in both China and Malaysia.

Apart from fostering cooperation with BRI participants, both sides aim to interconnect China's economy with the global digital economy through blockchain, while facilitating the issuance, trading and circulation of high-quality assets of the world's second-largest economy in the global market.

The two sides will offer more business services and support for metaverse-related projects under the offshore financial policy framework.

As for future cooperation with BRI economies, the metaverse council will continue to explore innovative models that empower industries through cutting-edge digital and financial technologies such as blockchain, Yu Jianing, executive director of the China Mobile Communication Association Metaverse Industry Council, told the Global Times on Tuesday.

Yu said that the council will seek to integrate both domestic and international digital and financial resources to offer diversified, customized, international and digital services, pushing for metaverse partnerships among China, ASEAN members and the rest of the world.

The Asia Digital Bank is the world's first digital bank with a self-financing system built on blockchain technology approved by the Malaysian authorities, while being guided and initiated by Chinese institutions based on digital and financial strategic cooperation under the BRI.

Analysts pointed out that China will be able to achieve more effective global cooperation with BRI economies and the rest of the world, as cooperation in the metaverse does not face physical limitations.

The strategic cooperation will provide a platform for connecting digital assets and banks with the metaverse following its integration with blockchain, Liu Dingding, a Beijing-based independent analyst, told the Global Times.

China is placing a strong emphasis on deepening the development of the digital silk road with a variety of measures, including digital economy cooperation with global partners, cooperation with BRI countries to ensure network infrastructure interconnection, and other areas, under a plan targeting the development of China's digital economy during the 14th Five-Year Plan period (2021-25) issued by the State Council, China's cabinet.

Liu added that digital collections involving non-fungible tokens are a typical format of the integration, while the digital product can help reduce circulation and printing costs and contribute to the construction of a low-carbon economy.

The Metaverse Industry Council released a convention on regulating the sector on Monday, which proposed that businesses related to the industry should be based on serving the real economy, while resisting the use of the metaverse for capital speculation and guarding against market bubbles.

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Up and Comers
China's fourth state 5G carrier to open cellphone number registration in May

Ward Zhou
376 words
21 February 2022
TechNode
TENOEN
English

China Broadcasting Network (CBN), a new state-backed 5G operator, announced on Feb. 17 that it will start operating a new line of mobile network services from mid-May.

Why it matters: CBN is a newcomer to China's telecom market and faces competition from three established state carriers (China Mobile, China Telecom, and China Unicom). Compared to existing players, CBN has access to an extensive broadcast **content** library.

* The network is funded and overseen by the National Radio and Television Administration (NRTA), China's official media regulation agency. The government agency provides basic public broadcast services across the country, including to remote rural areas, allowing the network to access an extensive content library, a large user base, and tap into the agency's existing infrastructure.

Details: CBN announced on Feb. 17 that it will start operating a new mobile phone number network from mid-May. It will issue cellphone numbers that begin with 192.

* CBN tested its mobile network services via the 192 numbers with a small number of users last year.

* The operator gained a radio bandwidth of 700 MHz N28 with a 5G license issued by the Ministry of Industry and Information Technology, one of China's internet and telecom regulators.

* CBN's radio band is considered low-frequency, generally lower than 1 GHz or 1000 MHz, which tends to have broader coverage, better indoor range, and is cheaper to build. However, low frequency also has a slower transiting speed.

Context: Formed in May 2014, CBN was approved by the State Council, China's cabinet, and funded by the state.

* In early 2021, CBN partnered with established state 5G operator China Mobile and reached an agreement to build and share the 700 Mz 5G network. CBN will also acquire China Mobile's 2.6 GHz network.

Of the three established Chinese telecom providers, China Mobile leads the 5G market with 386.8 million users, China Unicom follows with 187.8 million, and China Telecom has 154.9 million, according to C114, a Chinese media platform focused on the telecoms industry.

Fiber Optic cables connected to an optic ports and Network cables connected to ethernet ports.

Document TENOEN0020220221ei2l00003

Changyou Alliance Group Ltd
MarketLine Company Profiles, 17 February 2022, 1660 words, (English)
Changyou Alliance Group LtdChangyou Alliance Group Ltd (Changyou) is engaged in the trade of goods through operation of an electronic distribution platform and mobile applications. The company also operates electronic platform to facilitate...

China's Guangdong-Hong Kong-Macao Greater Bay Area Is Building an All-Optical Network Cluster to Drive Green Digital Economy

HUAWEI; PR Newswire
975 words
17 February 2022
02:16
PR Newswire Asia
PRNASI
English

SHENZHEN, China, Feb. 17, 2022 /PRNewswire/ -- As one of China's most economically developed and internationalized regions, the Guangdong-Hong Kong-Macao Greater Bay Area has a complete industry system and is vigorously promoting the development of green and low-carbon network technologies. In recent years, Huawei and China Mobile Guangdong have jointly built an all-optical network cluster for the Greater Bay Area. The world's largest green all-optical switching hub network is built based on continuous ICT innovation and aims to help thousands of industries enjoy advanced network technologies while further saving energy and reducing emissions, thereby making the digital economy greener.

All-optical networks are deployed to replace legacy **devices**, reducing carbon emissions

As the communication medium of all-optical network clusters, optical fibers have an unparalleled advantage over copper lines when it comes to bandwidth, latency, anti-interference, and reliability, in addition to reducing power consumption by 60% to 75%. Indeed, optical fibers are the greenest communication medium. By using Huawei OTN devices that apply optical communication technologies, China Mobile Guangdong is promoting the retirement of power-hungry and inefficient SDH devices in multiple cities such as Huizhou and Shaoguan. Currently, SDH modernization has been implemented for about 5000 SDH devices, saving 3000 square meters of space. Additionally, about 7.9 million kWh of electricity is saved and over 5000 tons of carbon emissions are reduced each year, which is equivalent to planting 196,000 trees.

Moreover, China Mobile Guangdong has introduced Huawei's innovative all-optical cross-connect (OXC) and deployed more than 110 OXC devices in the Greater Bay Area, building the world's largest "green all-optical switching hub." This reduces the number of cabinets per site from 5–8 to only one, reducing equipment room footprint by about 70% and power consumption by around 30%. At the same time, the grooming capability of a single node is improved 10 fold, and 3D and mesh networking of up to 32 directions is implemented. This reduces electricity use by about 2.3 million kWh and carbon emissions by over 1400 tons every year, which is equivalent to planting 49,000 trees.

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All-optical network cluster drives the development of the high-quality green digital economy in China

In 2021, Guangdong proposed the Digital Government 2.0 Plan to provide leading government services and achieve 100% local processing of high-frequency services, intra-province services, cross-province services, and other services in the Greater Bay Area.

Take the city of Zhongshan in Guangdong as an example. In the past, each functional department built and managed its own network, resulting in information silos. Data could not be converged, making cross-department data exchange difficult and affecting the service experience of enterprise and individual customers. In 2021, Zhongshan successfully integrated multiple networks of different departments into one all-optical e-Government extranet through the OTN premium private network. This network connects 24 towns/subdistricts and extends to 277 village nodes, providing nearby, one-off service handling anytime. In this way, 3387 administrative approval items can be handled online and require no more than one visit, while 3206 items can be handled locally.

Shenzhen, one of the three major financial centers in the Chinese Mainland, has a strong demand for network services that enable financial transactions. To meet this demand, China Mobile Guangdong cooperated with China Mobile International Limited to explore product innovation and built financial private lines featuring ultra-low latency, ultra-high reliability, ultra-fast provisioning, and ultra-high assurance. These private lines have advantages including high bandwidth and convenient capacity expansion, better satisfying the requirements of financial customers on latency, security, and reliability.

Due to the pandemic, offline activities have been greatly affected. However, online activities, such as cloud-based exhibitions, shopping, and music festivals, have presented new opportunities for the digital economy. In southern China, a large number of flowers and plants are sold around the Spring Festival, as many people use them to decorate their homes during this time. Against this backdrop, the Cloud Flower Fair was launched, allowing one-click flower delivery. This not only promotes consumption, but also avoids overcrowding and reduces the risk of contact during the pandemic. During the Spring Festival in 2022, 114 million pots of flowers were delivered in Guangdong, half of which were sold through the Cloud Flower Fair. The sales revenue was nearly CNY1.6 billion.

Another example is a Cantonese opera festival that has been held based on the all-optical network cluster. Network media technologies are used to promote opera arts, enabling more young people to become aware of traditional Chinese culture. The number of live broadcast views exceeded 18 million.

So far, the all-optical network cluster in the Greater Bay Area has served over 110 million individuals, 18 million households, and 2million enterprises, while reducing electricity use by over 10 million kWh and carbon emissions by over 6400 tons for local communication networks each year. Also, the network supports the digital transformation of 17,000 industrial enterprises and helps 550,000 MSMEs to implement cloudification, improve their service speed and quality, reduce costs, and enhance efficiency. Overall, the network has reduced carbon emissions by over 800,000 tons.

SOURCE HUAWEI

Tianhan Chen, chentianhan@huawei.com

Document PRNASI0020220217ei2h000jh

China's Guangdong-Hong Kong-Macao Greater Bay Area Is Building an All-Optical Network Cluster to Drive Green Digital Economy

HUAWEI; Canada NewsWire
1,017 words
17 February 2022
02:16
Canada NewsWire
CNNW
English

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SOURCE HUAWEI

https://rt.prnewswire.com/rt.gif?NewsItemId=C3071&Transmission_Id=202202162116CANADANWCANADAPR_C3071&DateId=20220216

Tianhan Chen, chentianhan@huawei.com

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(PR) China's Guangdong-Hong Kong-Macao Greater Bay Area Is Building an All-Optical Network Cluster to Drive Green Digital Economy

990 words
17 February 2022
02:16
PR Newswire
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English

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https://www.prnewswire.com/news-releases/chinas-guangdong-hong-kong-macao-greater-bay-area-is-building-an-all-optical-network-cluster-to-drive-green-digital-economy-301484393.html

SOURCE HUAWEI

/CONTACT: Tianhan Chen, chentianhan@huawei.com

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China's Guangdong-Hong Kong-Macao Greater Bay Area Is Building an All-Optical Network Cluster to Drive Green Digital Economy

HUAWEI; PR Newswire
974 words
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02:16
PR Newswire Europe
TWOTEN
English

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Tianhan Chen, chentianhan@huawei.com

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China's Metaverse Industry Committee admits 17 new firms

203 words
16 February 2022
00:50
Reuters News
LBA
English

SHANGHAI, Feb 16 (Reuters) - China's **Metaverse** Industry Committee said on Wednesday it has admitted 17 new firms, including three listed companies, according to a post on an official website.

The state-backed China Mobile Communications Association's **Metaverse** Industry Committee was set up in October, although analysts say the country's **metaverse** will be subject to more control than elsewhere.

The committee said it had admitted listed firms including Inly Media Co Ltd and two Shenzhen bourse-listed companies Beijing Topnew Info&Tech Co Ltd and Beijing Quanshi World Online Network Information Co Ltd .

The notice was posted on the China Mobile Communications Association Metaverse Consensus Circle website.

Experts say China's metaverse efforts lag countries such as the United States and South Korea, citing less investment by domestic tech giants.

But interest has begun to surge. In the past year, more than 1,000 companies including heavyweights such as Alibaba Group Holding and Tencent Holdings Ltd have applied for around 10,000 metaverse-related trademarks, according to business tracking firm Tianyancha. (Reporting by Engen Tham and Wang Jing in Shanghai; Editing by Sherry Jacob-Phillips)

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China's Metaverse Industry Committee admits 17 new firms

201 words
16 February 2022
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Reuters News
LBA
English

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I-CITY TO INVEST RM10 MLN TO ENHANCE THEME PARK WITH 3D METAVERSE

NORSYAFAWATI AB WAHAB
225 words
10 February 2022
Bernama: The Malaysian National News Agency
AIWBRN
English

SHAH ALAM, Feb 10 (Bernama)-- i-City Malaysia is embarking on a RM10 million digital transformation plan to enhance its theme park with an immersive 3D **Metaverse** experience.

i-City's head of Leisure, Tang Soke Cheng said the project will be implemented together with China Mobile International (CMIM), which is currently building the technology **platform** for the infusion of **Metaverse** in the i-City theme park.

"The new experience will be unveiled at the 2023 New Year countdown, and the Metaverse experience is expected to draw 10 million visitors to the theme park in 2023," she said in a statement today.

CMIM's Enterprise director Jackie Chen Jiang Long said that the introduction of the 5G network this year is timely for the project.

“Metaverse requires 3D modalities to be transmitted digitally. This can be in the form of avatars and structures, among others. The more life-like the 3D model is, the more details it will require and the more data it will consume.

“As such, the implementation of 5G together with the hyperscale cloud computing infrastructure -- which i-City is currently building -- will be instrumental to the success of this project," said Chen.

--BERNAMA

TAG: i-City, theme park, China Mobile International, metaverse

NSF TLC NII

Document AIWBRN0020220211ei2a0002c

All-optical networks bring harmony between humans and Asian elephants

A Knowledge Network Article by Total Telecom
817 words
9 February 2022
Total Telecom Plus
TOTEL
English

With next-generation information technologies such as intelligent wireless network and gigabit optical network, **connectivity** has expanded in definition and application.

Today, many are turning to technology to unearth its limitless potential in bettering lives, enriching our environment and protecting natural resources. The project in Xishuangbanna is a case in point in demonstrating the use of the latest technology solutions to help in accelerating our **ecosystem** conservation efforts.

Initiated by China Mobile Yunnan and Huawei, the “1-3-9” All-Optical Smart Cities project has enabled a real-time observation and warning system for Asian elephants in the region. The combination of “1-3-9” is derived from the latency within Kunming that is less than 1 ms, the latency in city groups in central Yunnan that is less than 3 ms, and lastly the latency in South Asia and Southeast Asia that is less than 9 ms.

Understanding the human-wildlife equation in Xishuangbanna

One of the world's most well-preserved tropical ecosystem, Xishuangbanna is where many of China's protected species reside. The area, locally known as the “emerald belt”, is also home to the remaining Asian elephants, who have lived in perfect harmony with the local population for the last two decades. The number of wild Asian elephants has gone up from 170 in the 1980s to more than 300 now.

However, living in close proximity with the human population means that the behaviour and feeding pattern of the Asian elephants has also changed over the years, and the elephants have lost their fear of humans and vice versa. So much so that it is not uncommon to see giant elephants roaming around villages and farms and dining on farmers' crops.

The growing number of elephants means there is a need to prevent any conflict between hungry elephants and residents to ensure that they continue to live in harmony. This is crucial to maintain the ecological balance of the region.

Against this backdrop, preventing conflicts between hungry elephants and local residents has become a top priority in Yunnan's ecosystem conservation efforts. Even so, Asian elephant protection remains an essential task in the ecological development of the province.Leveraging technology to enable coexistence with wildlife Powered by an all-optical network, China deployed its first connected Asian elephant observation, protection, and warning system in November 2019. Real-time data collection and transmitting warnings demand highly reliable communications networks. Therefore, to ensure that there is no lag in the transmission, China Mobile Yunnan collaborated with Huawei to carry out the “1-3-9” All-Optical Smart Cities project to create a digital Yunnan by leveraging innovative smart wireless networks, optical network, cloud, Internet of Things (IoT), and other technologies. The project covered Kunming, central Yunnan, South Asia and Southeast Asia, as well as supported the digital transformation of cities in Yunnan, which enabled the holistic Asian elephant protection initiative as one of its key innovative applications. Made possible by the all-optical network, the observation and warning system has been able to collect 1.43 million images and send more than 6,000 warnings since its deployment in 2019. The deployment of the all-optical network has ensured that unplanned human-elephant encounters have significantly been reduced, with zero incidents of injured humans or any other conflict in the areas covered. High-quality (OTN premium) private lines ensure real-time and ultra-reliable backhaul of high-definition videos and observation data, greatly improving the intelligent elephant identification efficiency and enabling real-time warning for local residents. In addition, the “1-3-9” all-optical network helps achieve collaborative management for Asian elephant protection in different regions and counties. Further, an ultra-low-latency optical transmission link from the data centre to a research centre in Kunming helps the two organizations to seamlessly work together and use the real-time data to boost research to enhance their understanding of Asian elephants.Conclusion The all-optical network has made it possible to ensure the safety of the Asian elephants while at the same time protecting human lives as well. It is a win-win scenario where both humans and wildlife are able to live freely without jeopardizing the

security of the other. Latest technologies, when used innovatively, have the power to protect nature better and ensure that we can harmoniously coexist with the millions of species that share our home. The Xishuangbanna project can serve as a guide for other organizations looking to use technology to conserve the environment and leverage intelligent all-optical networks to bridge the digital divide. Buoyed by the success of this project, Huawei now plans to implement over 100 projects over the next five years across different fields, including educational equity, environmental protection, health and well-being, to continue to make lives better.

512367

Document TOTEL00020220209ei2900001

China Politics
5G rollout in China set to accelerate

636 words
9 February 2022
People's Daily Online
PEODEN
English

Technicians from China Mobile check a 5G base station in Tongling, Anhui province. [Photo by Guo Shining/for China Daily]

Local govts build 'new **infrastructure**' while FCC moves hurt US consumers

Local governments in China are doubling down on plans to accelerate 5G rollout this year. This is in sharp contrast to the situation in the United States where the federal government is likely to face a shortfall in funding for its plan to replace Chinese equipment in telecom networks, posing connectivity challenges to people in rural areas in the US, experts said.

More than 20 provincial and municipal governments in China have emphasized efforts to accelerate construction of "new infrastructure" like 5G and data centers in their work plans for this year.

Shanghai, for instance, said it plans to build more than 25,000 5G base stations this year to push forward the in-depth coverage of the superfast wireless network. The city also has ambitions to build super large computing power platforms to meet growing demand.

Zhao Zhiguo, spokesman for the Ministry of Industry and Information Technology, China's top industry regulator, said earlier:"2022 is a critical year for the large-scale development of 5G applications. We will continue to improve 5G network coverage and accelerate the in-depth integration of 5G and vertical industries."

One of the priorities is to moderately speed up the coverage of 5G in counties and rural towns, Zhao said.

Ten ministries, including the Cyberspace Administration of China, recently unveiled a digital rural development action plan for the period from 2022 to 2025, which called for an intensified push to promote digital infrastructure upgrades in rural areas.

Telecom operators are also moving fast. China Mobile, the nation's largest telecom carrier, for instance, said it aims to achieve continuous 5G coverage in rural towns across the country by the end of this year.

Telecom carriers' 5G plans seek to harness the power of more than 1.4 million 5G base stations that stood in China by the end of last year. 5G signals are already available in urban areas of all prefecture-level cities, more than 98 percent of county-level towns and 80 percent of rural towns, MIIT data showed.

But, in the US, the scene is a contrast. The US Federal Communications Commission found a shortfall in funding for its plan to replace Chinese telecom equipment. Inadequate finance is likely to pose connectivity challenges to people in remote areas in the US, experts said.

According to a report on MobileWorld Live, a telecom industry website, the FCC said local telecom operators' requests for funding to replace network equipment made by Chinese companies Huawei and ZTE totaled $5.6 billion, almost three times the $1.9 billion allocated by the US federal government.

The FCC banned US telecom carriers from buying Huawei and ZTE's equipment via federal subsidies, citing what it alleged were national security concerns. The two Chinese companies have repeatedly denied the accusations, which they said are groundless.

Xiang Ligang, director-general of the Information Consumption Alliance, a telecom industry association in China, said Huawei and ZTE's products are currently used by US telecom carriers to offer network and broadband services in some of the most remote regions in the US.

The US government is wasting big money on replacing Chinese telecom equipment, and consumers in rural areas in the US will suffer from the lack of quality telecom services, Xiang said.

Steve Berry, president and CEO of the Competitive Carriers Association, a trade group for about 100 wireless providers in the US, issued a statement calling on the US government to ensure the FCC program is fully funded so that connectivity is maintained during the operators' transition to new equipment for their networks.

Document PEODEN0020220209ei2900025

即市頭條- Latest News
CICC Rates CHINA MOBILE (00941.HK) at Outperform, High Payout Likely Sustainable

102 words
9 February 2022
AAStocks Financial News
AASFNE
English

CICC rated CHINA MOBILE (00941.HK)'s H-shares at Outperform, with a price target of $70. The telecom operator posted an uptick in both user size and ARPU, bolstering its basic telecom business. The company would focus on industrial internet innovation, likely riding on the new **infrastructure** wave.

The telco should maintain stable earnings and high dividend payout, opined the broker.

CICC initiated CHINA MOBILE (600941.SH) at Outperform, with a price target of $81.

~

AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020220209ei29004s9

China Mobile shares rise in Shanghai debut after US exit:

90 words
30 January 2022
Pakistan and Gulf Economist
ASGULF
41
English

China Mobile shares have risen as they started trading in Shanghai after raising $7.7bn (£5.7bn) in China's biggest public offering in a decade. The shares opened 9.4% higher before ending the day just 0.5% higher. China Mobile's smaller rivals, China Telecom and China Unicom, have already made the move to their home country. The three firms were delisted from the New York Stock Exchange after a Trump-era decision to restrict **investment** in Chinese technology companies.

Document ASGULF0020220204ei1u0000v

I-Berhad to build Malaysia's first smart green corporate tower

340 words
27 January 2022
New Straits Times
NSTRAT
16
English

SHAH ALAM: I-Berhad is stepping up its RM10 billion i-City development by building the country's first smart green corporate tower in collaboration with China Mobile International (CMIM). I-Berhad non-executive director Datuk Eu Hong Chew said the **partnership** with CMIM is part of the company's plan to "reinvent" i-City 2.0. He said the first thing that I-Berhad hopes to achieve immediately with CMIM is to position i-City as a green smart city. "When we first started working on i-City 20 years ago, we were known as an information technology developer. When we expanded into property development, we used our technology background to build the company. "The landscape for i-City has changed in the intervening 20 years. The development has shifted from the American model to a China-centric model.

In terms of property development, China is home to half of the world's smart cities, so we believe we are on the right track with our collaboration with CMIM." The strategic alliance agreement was signed between I-Berhad's subsidiary, i-City Properties, and CMIM on Tuesday. Monica Ong, director of i-City, signed on behalf of the company, while CMIM was represented by its director of enterprise, Jackie Chen Jiang Long. According to Ong, the corporate tower would be outfitted with 5G-enabled cameras and sensors to collect data on the environment, energy consumption, and human traffic flow. She said with the 5G rollout this year, i-City will be working on several AI enhancements to ensure that the ultrapolis maintains its position as Malaysia's first and most progressive smart city. Meanwhile, Chen said CMIM is encouraged by i-City's commitment to optimise AI in environmental conservation. "We've been operating in Malaysia for six years and are familiar with the local concept of a smart city. China Mobile is involved in numerous smart city projects in China. We will share our knowledge with I-Berhad."

(END)

Document NSTRAT0020220127ei1r0000k

ECIPE

Digital Economy
China's Participation in O-RAN

1,848 words
19 January 2022
European Centre for International Political Economy (ECIPE) - Blogs
ECBLO
English

In recent months, it has become evident how the US sanctions against Chinese technology suppliers seem inconsistent, especially when it comes to the critical 5G **infrastructure** and participation in related standard-setting. Whereas Huawei – the principal target of US policy – has undeniably weakened. But the Chinese 5G behemoth never supplied any of the US mobile networks – and as such, it never posed a direct security threat to the US. Instead, the sanctions have indirectly helped Chinese state-owned and military-linked companies like ZTE who benefitted from bullish purchases and exclusion by China Mobile and other state-owned telcos at home. Exclusion of European suppliers in China have also helped Huawei to recoup whatever it may have lost in Japan, Australia, Singapore, and the UK.

The US tech lobby has successfully advocated for the O-RAN Alliance, establishing its misconception as the 'western' alternative standard to bring new non-Chinese alternatives to secure our networks. The O-RAN Alliance is a merger of two Chinese and US organisations, C-RAN and xRAN. China Mobile, China's largest state-owned operator, does not just retain permanent board seats and veto rights as a founding member of O-RAN, it also co-chairs ten out of its fourteen working groups.

Under the dual China-US leadership, 'western' and Chinese military contractors are currently developing some key software in a manner that did not occur in 3GPP, ITU, or other standard development organisations. Nokia, Ericsson, Samsung and Huawei's equipment may be interoperable, but 3GPP manufacturers do not have access to each other's source code. And under no circumstances do they collude to review or write any portion of the code together.

The joint software developed under the O-RAN Software Community may be limited to the virtualisation and automation specifications (such as the near or non-runtime reconfiguration platforms). But these strategic functions are deeply embedded in the equipment to handle large amounts of traffic with very little supervision. US Government Accountability Office reports how the 'attack surface of the network expands considerably' with O-RAN – and for that reason, the risk-avert regulators in China are unlikely to allow its use in any larger scale. Instead, its principal interest for participation is access to western know-how, source code or a potential entry into the US market.

Despite the code-sharing between strategic adversaries, lawmakers in the US and Japan promise billions in subsidies and tax incentives. It seems market liberals are willing to pursue the same kind of industrial policy they once criticised in China. The same hawks who are usually (and rightly) dogmatic about Chinese market distortions (or criticise antitrust measures against US platforms) are now fiercely advocating for state intervention to break Europe's lead on 5G.

If O-RAN claims of its 'western' provenance does not hold true and involves unprecedented software cooperation among strategic adversaries, who are some of its lesser-known members? The alliance comprises of over two hundred members, of which 36 are headquartered in Mainland China and subjected to its disciplines. In comparison, the European standardisation organisation – ETSI – has fifteen Chinese members who also tend to be more well-known. While the general argument can be made that any entities under Chinese jurisdiction may be subject to undue state interference through its National Intelligence Law, the following lists provide some background to some of these participants, looking primarily to their ownership, and known contracts with defence-related work.

Notably among these Chinese O-RAN members, there are:

* Three firms sanctioned by the US Government under the BIS Entity List for their proximity to the Communist Party of China and the People's Liberation Army: Inspur, China's leading cloud and data service provider, was added to the US Entity List in June 2020, while both Kindroid and Phytium followed suit in 2021. Licensing O-RAN's commonly developed software is a clear violation of these sanctions. Another member (H3C) is a subsidiary of another Entity listed business.

* Another three companies are subject to US financial sanctions, including China Mobile, which is a founding member of the O-RAN consortium and one of the five companies holding a veto power in all its decisions. Also, the state-owned operators of China Telecom and China Unicom are also O-RAN members are also under US Treasury OFAC sanctions.

* At least two-thirds of the Chinese contingent in the consortium has state-ownership. Six O-RAN members are outright public institutions or agencies. At least 16 O-RAN members have publicised links with military or security activities.

Who are the sanctioned Chinese O-RAN members?

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* Inspur Group is China's largest data service provider, that develops server hardware, as well as services in data storage, cloud, AI, and big data. Inspur was placed on the US entity list in June 2020 for its ties to the People's Liberation Army. It has retained a number of contracts with the China Public Security Bureau. Also, according to the New York Times, "Chinese military uses Inspur computers, mobile mapping systems and communications systems" and has a client roster that includes China Air-to-Air Missile Research Academy and the China Academy of Engineering Physics. Its principal owner is likely to be the Shandong government.

* (Tianjin) Phytium Information Technology was placed on the Entity List for collaborating with the People's Liberation Army (PLA) on advanced missile work in April 2021 by the Biden administration. As a key chipset developer, it develops critical components such as designs for high-performance and massively parallel ARM-based microprocessors. The company originated from the Ministry of Industry and IT (MIIT) but is now held under the China Great Wall Technology Group (CGT) as a part of the China Electronics Corporations (CEC) group of companies, which is listed as a state military company by the Chinese State Administration for Science, Technology, and Industry for National Defence and placed under US sanctions.

* Kindroid has been sanctioned by the Biden administration, for acquiring US-origin items for the technological upgrade of the People's Liberation Army. The true ownership of the company is veiled by complicated corporate structure and cross holdings, involving Beijing municipalities and China Development Bank. Note that Kindroid appears to have left the consortium after failing to pay the membership fees on time.

Other O-RAN members with defence and security ties

* ZTE – Huawei's bitter rival from Shenzhen – is a self-admitted state-owned company of military origins. It was briefly added to BIS Entity List for selling US technology to Iran and North Korea in 2018 but was delisted by the Trump administration after a settlement negotiated on its behalf by the Chinese government.

* Sichuan Juizhou, or Jezetek, touts a civilian portfolio on its English website including smart city, electronic aeronautic components, and electronic weighing equipment. However, on its Chinese website lists security and military work, while celebrating Xi Jinping thought and the anniversary of the Chinese Communist Party.

* Grentech is a wireless communications and antenna provider. The company mentions its involvement with the Chinese military in its materials, and also attests its loyalty to the Party. The company has undergone an IPO via British Virgin Islands but later taken private with unclear ownership today.

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* SageRAN provides RAN protocol stacks for 5G and lists its work with Chinese municipalities and local law enforcement.

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* Sunwave specialises in network design that has works with Chinese security agencies, including IT solutions for prisons.

* Tsinghua University is a well-renowned science and engineering university where its staff advice on national defence and security research. Financial Times alleges that cyber-attacks regularly stem from IP addresses originating at Tsinghua University.

* H3C is a subsidiary of the Tsinghua Unigroup. The Obama administration blocked the group's acquisition of Micron. New York Times alleged that a subsidiary (Tsinghua Tongfang) supplies military communications control, electronic countermeasures and satellite navigation equipment to the People's Liberation Army. Another subsidiary, NucTec, is on the US Entity List.

Examples of O-RAN members with various degree of state-ownership

* China Academy for Information and Communications Technology (CAICT) is a government think tank that plays a role in R&D and telecom regulation under the purview of the Ministry of Industry and Information Technology (MIIT).

* China Institute of Computing Technology under the Chinese Academy of Sciences is a fully state-controlled research institute.

* Guangdong Communication and Network Institute (GDCNI) and Peng Cheng Laboratories are research institutes operated by the Guangdong provincial government in Shenzhen.

* Purple Mountain Laboratories is a recently created government research institute connected to the Southeast University.

* SGIT is the IT and telecommunication department of the State Grid Corporation of ChinaState Grid Corporation of China, the world's largest public utility company, which is a state agency.

* AsiaInfo is a major telecoms applications provider, with products in e.g. data management, network analytics or billing. The company is listed in Hong Kong via Cayman Islands. CITIC (the state-owned private equity firm) and China Mobile (O-RAN founding member) hold a majority ownership.

* Chengdu ArrayComm is a Chengdu-based company manufacturing BBUs, RUs, DUs, and physical layer technology for 5G. The company takes its name from an US company but was recently reactivated in China. Today, it has an opaque ownership structure that likely involves state investment and Fosun International, the conglomerate that also invested in another small O-RAN member,

* CertusNet provides enterprise network applications. There is some local state ownership through an investment firm that ties back to the Shenzhen government.

* Chengdu NTS Technology is at least partially owned by a Sichuan and Chengdu state investment vehicle.

* Lenovo faces accusations by US Department of Defenseas a state-owned entity with "nearly 30% owned by state-controlled Legend Holdings" that "poses a cyberespionage risk".

* Raisecom is a minor manufacturer of access network equipment. The company is approximately 25% state owned through a Chongqing government investment vehicle.

* Zealync is a recent startup with a minority state-linked investors, including Tsinghua.

Document ECBLO00020220321ei1j00003

China's Cloud Gaming Ecosystem Starts to Form

844 words
19 January 2022
EqualOcean
EQOCEN
English

The Chinese **gaming** industry has been restless in the year 2021, with tightening up of regulatory standards and intensified competition. Meanwhile, another factor has contributed to the vibes in this space. **Cloud gaming** has been on everyone's lips for several years, but experts warn that its prevalence is highly dependent on the universal use of 5G. Since 2019, China has been leading in developing 5G technology and building base stations across the country. By the end of 2021, China had installed nearly 1.4 million stations (link in Chinese), and China Mobile vowed in November 2021 to deploy national coverage of 5G signals by the end of 2022.

According to Newzoo, the global Cloud gaming market will grow at a CAGR of 101%, while the same figure for the Chinese market should reach 135%. It seems China's national endeavor on 5G is to generate positive externalities on the development of Cloud gaming in the country and would further strengthen China's global leadership in this space.

Cloud 1.jpg.jpg

Novel projects and startups comprise China's Cloud gaming ecosystem

As rapid infrastructure development provides fertile ground for Cloud gaming in China, many major players in the industry have initiated their own projects in the growing space.

For example, Tencent has developed two Cloud gaming platforms – GameMatrix and START. GameMatrix, formerly known as CMatrix, focuses on mobile Cloud games. START is currently a free platform for PC and console Cloud games, best known for its Cloud version of Fortnite, a famous battle royale shooting game on PC and console. Yet, Tencent's major competitors in China also started deployment in Cloud gaming in the past three years. In late 2019, NetEase began its beta test for NetEase Cloud Game, while ByteDance announced a closed test for its Cloud gaming platform Aoligame in January 2021. Seasun, another large game firm in China, developed a Cloud game client for its popular MMORPG – JX online III, reducing the game client size from 80GB to only 26MB. Cloud gaming also drew attention from live-streaming platforms. Huya and Douyu, the two biggest streaming platforms in China, introduced their Cloud gaming services in July and March separately.

Apart from game companies, leading Chinese tech firms have also spearheaded towards the upstream of Cloud gaming, releasing tech-driven Cloud platforms one after the other. China's telecom big three – China Mobile, China Telecom and China Unicom have all invested in Cloud-based gaming services. Huawei has also cast its power on gaming in its Huawei Cloud segment, aiming for "innovative technologies for low costs and improved experience" in Cloud gaming.

Cloud 2.jpg.jpg

Aside from tech giants, some startups providing Cloud gaming solutions in China look promising as well, with several obtaining funds from famous VCs in China, as well as from renowned game publishers. With an earlier round of financing by Xiaomi of CNY 150 million, WELL-LINK completed its CNY 400 million Series B in December 2021, led by Future Capital, followed by Xiaomi and miHoYo. In August 2021, the company helped miHoYo launch the Cloud version of Genshin Impact, a globally renowned ARPG mobile game owned by miHoYo. Another platform worth mentioning is Haima Cloud. The firm, featuring full-stack Cloud gaming solutions, gained CNY 280 million investment from UCloud (688158:SH) and Migu, a subsidiary wholly owned by China Mobile.

Forbidding expenses and limited network speed

However, Cloud gaming is a fairly risky business, especially for startups. The reasons are two-fold. First, there are so-called 'three mountains' in terms of the cost of Cloud gaming – the cost for servers, the cost for bandwidth and the cost for game IPs. Startups that do not possess their original games must either invest in developing new games or purchase IPs from large game publishers. Both require vast funds. Besides, as the

number of players on the platform expands, upgrading servers to contain the increasing traffic becomes another source of financial burden.

On the other hand, Cloud gaming is powered by the ability of platforms to receive real-time commands from players and transmit the in-game feedbacks back to the players in the form of video streams. Therefore, to ensure an experience equivalent to playing with downloaded games, neck-snapping network speed and low latency are a must, especially for MOBA and FPS games that involve constant feedback. However, the current 5G services have not reached the promised speed yet. Currently, Cloud gaming platforms are still unable to replace the traditional way of playing games and the user base is quite limited.

Last notes

While the market is still attracted to the idea of the metaverse, the Cloud gaming space in China has seen many tangible projects in process. With the commercialization of 5G networks and emerging projects driving up the size of the supply chain, the market is generally optimistic: the high latency problem is likely to be solved, while the bandwidth costs are set to decrease in the near future.

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Document EQOCEN0020220119ei1j0002v

ECIPE

Digital Economy
China's Participation in O-RAN

1,844 words
19 January 2022
European Centre for International Political Economy (ECIPE) - Blogs
ECBLO
English

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* China Academy for Information and Communications Technology (CAICT) is a government think tank that plays a role in R&D and telecom regulation under the purview of the Ministry of Industry and Information Technology (MIIT).

* China Institute of Computing Technology under the Chinese Academy of Sciences is a fully state-controlled research institute.

* Guangdong Communication and Network Institute (GDCNI) and Peng Cheng Laboratories are research institutes operated by the Guangdong provincial government in Shenzhen.

* Purple Mountain Laboratories is a recently created government research institute connected to the Southeast University.

* SGIT is the IT and telecommunication department of the State Grid Corporation of China, the world's largest public utility company, which is a state agency.

* AsiaInfo is a major telecoms applications provider, with products in e.g. data management, network analytics or billing. The company is listed in Hong Kong via Cayman Islands. CITIC (the state-owned private equity firm) and China Mobile (O-RAN founding member) hold a majority ownership.

* Chengdu ArrayComm is a Chengdu-based company manufacturing BBUs, RUs, DUs, and physical layer technology for 5G. The company takes its name from an US company but was recently reactivated in China. Today, it has an opaque ownership structure that likely involves state investment and Fosun International, the conglomerate that also invested in another small O-RAN member,

* CertusNet provides enterprise network applications. There is some local state ownership through an investment firm that ties back to the Shenzhen government.

* Chengdu NTS Technology is at least partially owned by a Sichuan and Chengdu state investment vehicle.

* Lenovo faces accusations by US Department of Defenseas a state-owned entity with "nearly 30% owned by state-controlled Legend Holdings" that "poses a cyberespionage risk".

* Raisecom is a minor manufacturer of access network equipment. The company is approximately 25% state owned through a Chongqing government investment vehicle.

* Zealync is a recent startup with a minority state-linked investors, including Tsinghua.

Document ECBLO000202201l9ei1j00001

Global Times
China’s top telecoms carriers to boost digital economy, focus on new infrastructure

Global Times
433 words
18 January 2022
Global Times
GLOTNE
P09
English

China Telecom Photo:CFP

China's three main telecommunications operators - China Mobile, China Unicom and China Telecom - will further promote the digital economy and establish new digital **infrastructure** in 2022, as they seek to accelerate the integration of new technologies like 5G with the real economy and take many industries digital, according to their annual work meetings.

Analysts said that the three major carriers are promoting self-reliant digital upgrading and transformation, and have made great progress in digital infrastructure across the country, as the US has been relentlessly cracking down on the three carriers and other Chinese technology firms.

As of October 2021, China Telecom and China Unicom had commercially deployed more than 600,000 shared 5G base stations, accounting for more than 40 percent of the world's 5G bases. China Mobile had built more than 500,000 5G base stations by the end of June 2021, ranking first in the world.

"China is at the forefront of the world in 5G core technology… In 2022, the three carriers will focus on the integration of new technologies, including 5G and artificial intelligence, with China's industries to promote a digital transformation," Ma Jihua, a telecommunications industry veteran analyst, told the Global Times on Monday.

In 2022, China Mobile will build a top-quality 5G network, achieving continuous coverage in townships across the country by the end of this year. China Unicom said that it will focus on big data and network security, striving to sell more than 150 million terminals, including smart home and industry applications.

China Telecom said by 2035, it will become a leading enterprise and a national strategic force in science and technology. The company has proposed increasing investment in research and development (R&D) to more than 4 percent of overall spending, with the proportion of R&D personnel to exceed 15 percent, and the contribution of science and technology innovation to revenue growth to exceed 70 percent.

The carriers will also focus on digital transformation and expanding the application of new technologies in the country's industries, including electronics manufacturing, education, healthcare and transportation.

Ma said that the goals of the carriers are in line with a digital economy development plan for 2021-25 released by the State Council on January 12. Under the plan, the added value of the core industries of the digital economy will account for 10 percent of GDP by 2025, and the digital transformation of the industry will reach a new level.

Global Times

Document GLOTNE0020220118ei1i0000j

Chinese cities are piling into the metaverse

Jane Li
558 words
13 January 2022
Quartz
QUARTZ
English

No one knows what the **metaverse** is yet, but that hasn't stopped global tech giants such as Facebook, which rebranded as Meta, Google, and Tencent from being caught up in the **metaverse** craze. Not to be left out, several Chinese cities are peppering their official economic plans with mentions of the concept.

There is no clear definition of what the **metaverse** actually is, but generally the idea is that it involves a three-dimensional experience of the internet that combines the real and the virtual worlds.

In December, Shanghai officials said at a key economic meeting that the city will guide corporations (link in Chinese) in studying the "important platform that contains the intersection between the virtual world and the real world," seen widely as a reference to the metaverse. Days later, Shanghai officially mentioned the metaverse in its five-year plan for the tech industry, saying the concept should be applied in areas including public services, entertainment, and manufacturing.

Following Shanghai's steps, the affluent Zhejiang province, home to e-commerce giant Alibaba, early this month said it will focus on (Chinese) future technologies ranging from the metaverse to advanced semiconductors.

Then this week, Chinese cities Anhui and Wuhan announced separately in their annual government work reports they too would work on developing the metaverse. The government of Hefei province, where Anhui is located, says it wants to cultivate a cluster of cutting-edge tech pioneers (Chinese) in areas such as the metaverse, according to Chinese publication 21 Caijing. Wuhan, meanwhile, says it will accelerate the integration of the online economy, including the metaverse, big data, cloud computing, and blockchain, with the real economy.

The cities' quick embrace of the metaverse illustrates local Chinese authorities' desire to signal to Beijing they're up to date with emerging technologies. Blockchain, the underlying tech for cryptocurrency, for example, was mentioned by around 20 Chinese provinces and cities (Chinese) in their work reviews last year.

China's rush to the metaverse

Although the local governments have yet to release timelines and specific plans for developing the metaverse, the growing mentions of it in official reports are a reflection of China's surging interest in the area, which Beijing sees as the next crucial frontier it needs to develop and dominate.

In November, China established its first industry metaverse association, which is under the state-supervised China Mobile Communications Association (CMCA). Chinese tech giants including Tencent and Baidu have either indicated their capacity to develop the metaverse, or rushed to register trademarks related to it. The term is also among China's top memes last year, according to a state-backed language research center.

Meanwhile China's retail investors are also trying to figure out how to trade or invest in the metaverse, with some buying virtual homes in the form of NFTs, or non-fungible tokens, at a time when China is trying to curb financial risk in the real-world real estate sector.

Amid the surging passion towards the metaverse, state publication the Economics Daily last week issued a warning about the hype surrounding it. In an article published on Jan. 4, the outlet said it is a long way off (Chinese) for the concept to be industrialized, and that hyping it excessively will be like "overdrafting" its future.

Document QUARTZ0020220113ei1d00001

THE WALL STREET JOURNAL.

IPOs
Markets

China Mobile Makes Debut in Shanghai After $9 Billion Stock Sale; Cellphone carrier was booted from the New York Stock Exchange after it was added to U.S. investment blacklist

By Rebecca Feng
694 words
5 January 2022
10:08
The Wall Street Journal Online
WSJO
English

Eight months after China Mobile Ltd. was booted from the New York Stock Exchange, the giant cellphone carrier made its debut in Shanghai on Wednesday after raising close to $9 billion in a blockbuster homecoming listing.

Shares of the state-owned mobile operator closed slightly above their Shanghai stock-offering price of 57.58 yuan, the equivalent of $9.06, after climbing earlier in the day.

While the first-day move wasn't large, China Mobile's newly listed shares traded at more than a 40% premium to the price of the company's existing Hong Kong-listed shares, which rose 3.3% on Wednesday.

That gap reflects how investors in mainland China's market, dominated by individual investors, have attached a much higher valuation to the 24-year-old company. As of Wednesday's market close, China Mobile's market capitalization was more than $130 billion, according to calculations by data provider Wind.

China Mobile is the country's largest wireless carrier by revenue and subscribers, with more than 950 million customers as of September. The Beijing-based company and two smaller rivals, China Telecom Corp. and China Unicom (Hong Kong) Ltd., had to give up their U.S. listings in May after they were added to an investment blacklist that bars Americans from investing in Chinese companies alleged to help China's military, and intelligence and security services.

Last month, China Mobile raised the equivalent of $8.8 billion from its domestic share offering, making it the biggest listing in the Chinese onshore market in the past decade and the fifth-largest ever, according to Wind data. The four larger domestic deals were from state-owned banks and state-owned energy companies in 2007 and 2010.

China Mobile's Shanghai listing was also the world's second largest in 2021, behind that of American electric-vehicle maker Rivian Automotive Inc., which raised $13.7 billion in a Nasdaq initial public offering in November, according to Dealogic.

The newly listed shares of other blacklisted Chinese companies such as SenseTime Group Inc. and China Telecom Corp. have also climbed following their debuts in Hong Kong and Shanghai, showing how the companies have been able to raise capital closer to home from investors who are more familiar with their businesses and growth prospects. SenseTime shares have surged since their Hong Kong listing last week and on Wednesday traded at more than 80% above their IPO price.

China Mobile said it would use the proceeds from its recent stock sale to expand its 5G network, cloud infrastructure and smart-home projects. In its blockbuster offering, the mobile operator earlier exercised a green-shoe option, a provision that allows underwriting banks to sell investors more shares than originally planned and provides additional price stability.

Individual investors in China had flocked to the deal, which ended up being vastly oversubscribed.

On Tuesday, a day before China Mobile's mainland market debut, the company said it would buy back no more than 10% of its Hong Kong-listed shares, using up to $12.6 billion of its own working capital.

China Mobile was founded in 1997 and is incorporated in Hong Kong, making it one of the few red-chip companies whose shares now trade on the mainland. Before last year, only red-chip companies in a selected few industries were allowed to list onshore.

"The A-share listing of this major offshore company suggests China's capital-market reform and opening are well under way, regardless of the China-U.S. relations," said Qi Wang, chief executive officer of MegaTrust Investment (HK), a boutique asset manager specializing in China A-shares.

China Mobile recorded the equivalent of $102 billion of revenue in the first nine months of last year, a 13% increase from the year-ago period. Its net profit rose around 7% to $13.7 billion.

Write to Rebecca Feng at rebecca.feng@wsj.com

China Mobile Makes Debut in Shanghai After $9 Billion Stock Sale

Document WSJO000020220105ei1500105

In Focus
Shanghai on route to become a global digital hub by 2035

Zhu Shenshen
1,162 words
4 January 2022
12:33
Shanghai Daily Online
SHNDOL
English

Shanghai is building itself into a "globally influential digital hub" by 2035, with major information technology upgrades for a range of industries.Its more than just a red-tape slogan.The city has a blueprint with the 2035 plan and a near-term plan as the Shanghais five-year digitalization plan by 2025 was released last month. Shanghai has established an **ecosystem** to boost innovation and digitalization, such as booming artificial intelligence and telecommunications network infrastructures, data usage and transaction policies, and a professional exchange and improved business environment and capital market for tech firms and talent."The digital city upgrade is a national strategy to strengthen Chinas abilities in manufacturing and broadband.

It also offers tools for us to better serve people and their daily lives," said Wu Jincheng, director of the Shanghai Commission of Economy and Information, the citys top industry regulator.Local government officials, including Wu and higher-ranking officials, have drafted the digital infrastructure blueprints, covering the 14th Five Year Plan for 2025 and Shanghais longer-term plan for the citys economic development for 2035.The digital targets include building faster 5G and broadband networks, construction of intelligent factories and digitized hospitals, developing AI and data-driven services, and boosting applications for aged and disabled groups.It will make Shanghai a "globally-leading digital city," covering digital infrastructure, economic development, livelihood improvement and urban management.In detail, it includes digital transformation covering at least 80 percent of large local manufacturers; over 100 benchmark digital tools to improve peoples lives; over 80 percent e-governance applications available online, and construction of 100 million Internet of Things sensors and devices, according to the latest government blueprint.AI and 5G are two key digital infrastructure pieces and dual growth engines for Shanghais digital plan which help the city deal and transfer data in smart and efficient ways.By 2025, the scale of Shanghais artificial intelligence industry output will hit 400 billion yuan (US$62.5 billion), with 12 percent annual growth on average, more than double the citys GDP growth rate, according to Shanghais AI development blueprint for 2025 released recently.Shanghai will become a hotspot for AI innovation and development with international influence, covering original achievements and cutting-edge theories, a batch of national and municipal innovation platforms, and a localized regulation system known as "Shanghai Format."Shanghai has national artificial intelligence application innovation fields, such as intelligently-connected vehicles, medical imaging assisted diagnosis, visual image identification, and smart sensors. AI has been widely used in industrial manufacturing, medical and anti-pandemic measures, transportation, education, culture, finance and commerce, business services, and other fields.Broadly, the city will have 10 AI-powered sub-divided fields with an annual output of over 10 billion yuan each, 500 digitized firms with leading AI applications, over 1,000 new AI invention patents, and over 300,000 AI-specialized employees in Shanghai by 2025.For Xu Li, SenseTimes chief executive, Shanghai is a city "of the highest importance for growth and career development," said the graduate of Shanghais Jiao Tong University during the ringing ceremony of the companys Hong Kong listing.SenseTime, whose share price has almost doubled since its HK market debut last week, is one of the biggest listed AI firms in Asia. It has chosen Shanghai as the location of the headquarters of SenseTime China. In 2022, SenseTime will build a AI computing center in Shanghais Lingang Special Area, and it will be one of the few with the most powerful AI calculation capabilities in Asia.In Shanghai, there are more than 3,000 firms with "data" in their names; one-third of which have been founded since 2020. This indicates the great potential of the whole data-driven and AI ecosystem, said Fudan University, citing industry sources.Besides AI, Shanghai has leading positions on 5G and broadband networks nationwide and globally.The 5G network makes resources and data flow better and more efficiently and boosts the digital economic development of the city.Shanghai has been recognized as one of Chinas One-Gbps cities, offering some of the fastest Internet in the country. The city is one of 29 cities in Chinas first batch of One-Gbps cities, meaning both 5G and broadband bandwidth surpass 1 gigabyte per second, according to the Ministry of Industry and Information Technology.By November, Shanghai had built 52,000 outdoor 5G base stations to cover the city. As of September, Shanghais latest 1 Gbps broadband network covered 9.6 million families, with download speeds ranking No. 1 nationwide, local officials said.China Mobile, China Telecom and China Unicom all chose Shanghai to debut their 5G products and services

nationwide.The carriers, encouraged by government regulators, have upgraded networks to boost speed and ensure telecommunication service prices remain the same or decrease.Shanghai consumers will be able enjoy faster and more affordable 5G and family broadband services with a free upgrade to one Gbps bandwidth. China Mobile is offering free upgrades in broadband bandwidth in Shanghai of up to one gigabyte per second (Gbps), said the worlds biggest mobile carrier, with about 1 billion users.China Telecom also introduced an upgraded 2 Gbps family broadband service in Shanghai recently, giving the city the fastest broadband network in the nation.The city has developed 600 applications powered by 5G, including applications covering information consumption, vertical industries, citizens livelihood, digital governance, and other areas.China Mobile recently displayed its latest digital and 5G applications in Shanghai, covering eight areas, such as smart transportation, virtual reality, and intelligent agriculture.Mobile networks are a key part of information infrastructure to help Shanghai boost innovation, push economic transformation, and build the city into a global digital hub.Shanghai-based chip designer Unisoc started large-scale production of its latest mobile platform and chip with partners and clients including China Telecom, ZTE, Hisense, and TSMC. It offers strong functionality and more affordable pricing of 5G chips. Smartphones will be more affordable with the companys strategy of "Everyones 5G," said Chu Qing, Unisocs chief executive.Unisoc is applying to be listed in the Shanghai STAR Market while China Mobile is going to be listed on the Shanghai main board on Wednesday (January 5), the biggest IPO of the decade so far.China Mobile, which raised about 56 billion yuan in its Shanghai IPO, will use the proceeds on network construction, data centers, cloud networks, and Internet of Things technologies.Shanghais strong capital and finance market fuels innovation and digital development, helping the city to achieve the global digital hub goal.In 2021, Shanghai firms raised 150.7 billion yuan through IPOs via the STAR Market, 30 percent of the national level and ranking No. 1 in China. On the STAR Market, total market value of Shanghai firms reached 1.47 trillion yuan by years end, ranking No. 1 nationwide, according to government figures.

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Document SHNDOL0020220105ei1400006

Tech
Shanghai leads nation in 5G network and applications

Zhu Shenshen
363 words
27 December 2021
13:06
Shanghai Daily Online
SHNDOL
English

Shanghai has been recognized as one of Chinas One-Gbps cities, offering some of the fastest Internet in the country thanks to the citys booming development of 5G and broadband.Shanghai is one of 29 cities in Chinas first batch of One-Gbps cities, meaning both 5G and broadband bandwidth surpass 1 gigabyte per second, according to the Ministry of Industry and Information Technology.By November, Shanghai had built 52,000 outdoor 5G base stations to cover the city. As of September, Shanghais latest 1 Gbps broadband network covered 9.6 million families, with download speeds ranking No. 1 nationwide, local officials said.China Mobile, China Telecom and China Unicom all chose Shanghai to debut their 5G products and services. Prices have remained the same or fallen.Mobile networks are a key information **infrastructure** to help Shanghai boost innovation, push economic transformation and build the city as a global digital hub.

China Mobile recently displayed its latest digital and 5G applications in Shanghai, covering eight areas, such as smart transportations, virtual reality and intelligent agriculture.The 5G network makes resources and data flow better, is more efficient and boosts the digital economic development of the city, China Mobile said.Shanghai is developing over 600 5G applications and innovations, offering other cities a "Shanghai Format" on 5G, said the Shanghai Commission of Economy and Informatization, the citys top industry regulator.Unisoc, a chip designer based in Shanghai, announced large-scale production of its latest mobile platform and chip with partners and clients including China Telecom, ZTE, Hisense and TSMC.It offers strong functions and an affordable price, the company said.It aims to develop chips for "Everyones 5G," said Chu Qing, Unisocs chief executive.In the first half, Unisoc had an 8.4 percent market share in the global mobile chip sector, compared with 4.8 percent a year ago. It has become one of the top five vendors, along with Qualcomm, Huawei HiSilicon, MediaTek and Samsung, according to researcher Counterpoint.Besides Unisoc, tech giants like Huawei and ZTE have set up smartphone and device headquarters in Shanghai.

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Document SHNDOL0020211227ehcr0002w

BRIEF-China Mobile Says China's Social Security Fund, JD.Com Among Strategic Investors For Its A-Share Offering

80 words
23 December 2021
11:30
Reuters News
LBA
English

Dec 23 (Reuters) - China Mobile Ltd:

* SAYS CHINA'S NATIONAL SOCIAL SECURITY FUND, JD.COM AND BRUNEI **INVESTMENT** AGENCY ARE AMONG STRATEGIC INVESTORS FOR ITS A-SHARE OFFERING Source text http://static.sse.com.cn/disclosure/listedinfo/announcement/c/new/2021-12-24/600941_20211224_1_QTBsxkrS.pdf Further company coverage: (Reporting by Hong Kong newsroom)

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Innovative technology approaches to building a 5Gigaverse Society

by Gagan Kaur, Total Telecom
1,464 words
22 December 2021
Total Telecom Plus
TOTEL
English

5G **ecosystem** continues to grow at a fast pace in all geographies. In this year alone, 5G networks grew by 22 times, 5G users increased by 500 times, and **devices** recorded a growth of 32 times. The good news is that this growth will continue over the next few years.

"The next ten years are the years of mobile data. New 5G-powered Fixed Wireless Access (FWA) users will be ten times more than wired broadband. By 2030, the cellular network will be transmitting more data than wired networks. More data means more revenue," says Qiu Zheng, Wireless Marketing Director, Huawei, during a recent webinar on 5Grows Together: Wireless Innovation for a 5Gigaverse Society. However, more data comes with its own challenges for the service providers. The network architecture needs to change to be able to address this growing data consumption. It is crucial to maximize the value of macro sites to address the problem of the limited spectrum and limited power. This is also important to build a high bandwidth foundation for network coverage. Several new technology approaches are helping the telcos get the maximum mileage from deploying 5G: Meta AAU for improved network performance and lower energy consumption Typically, telcos follow the strategy of adding a new network layer for every new technology. This leads to network complexity. Further, this strategy is not possible with 5G since it uses spectrum from multiple frequency bands, and it is not possible to add several new boxes on the tower. A combination of ultrawideband and massive Multiple Input Multiple Output (MIMO) is the only way out. The next innovation direction of mMIMO is better performance and lower energy consumption. Huawei's Meta AAU marks a breakthrough in mMIMO coverage and energy efficiency by combining the concept of Extreme Large Antenna Array (ELAA) technology and the AHR Turbo solution. It is helping telcos reduce energy consumption by 30% and improve coverage radius by 30%. "Compared with traditional AAUs with 192 antenna array, ELAA uses 384 antenna array, leading to more coverage but with reduced energy consumption. It is much lighter and integrated with ultra-light integrated array and SDIF technologies to enhance both coverage and integration," explains Qiu. Since its launch earlier this year, it has already been deployed in 20 cities in China, covering 20 million people. It is helping telcos to increase coverage, bring down energy usage by 30% while enhancing the customer experience. Meta AAU also enables service providers to reduce costs by reducing the need to put up more towers. FDD gigaband module enables green & high-efficiency sub-3GHz sites towards 5Gigaverse For legacy sub-3GHz spectrum evolution to ultrawideband 4T/8T and Massive MIMO is the way to go."If we use ultrawideband technology, three boxes can become one box, thus saving space (rental), reducing power consumption and allowing the telcos to extend the channel from 4T to 8T in the FDD bands to increase capacity, coverage and performance," explains Qiu. Huawei's FDD Gigaband Module has a built-in wide-band Power Amplifier which leads to better power management between spectrum from different frequency bands, different users and different beams, resulting in 30% energy power reduction. In addition, the unique intelligent beam shaping and TM4, TM9 scheduling, as well as the coordination algorithm across different bands (SingleCell), increase the Sub-3GHz spectral efficiency by up to 10 times. The FDD Gigaband module has been commercialized in more than 100 countries with more than 100,000 shipments. Distributed massive MIMO to address Indoor coverage challenges Several new 5G use cases also demand ultra-high-speed, more bandwidth, and extremely low latency in the indoor environment. There are three main challenges in the 5G era in indoor coverage. First is the Quality of Service (QoS) in traditional public scenarios, like hospitals, where indoor 5G networks demand high capacity for both consumer and enterprise use cases. The second is the difficulty for telcos to proceed in-building implementation of capacity expansion when data consumption is booming fast, and the third challenge is the enterprise market, which is new for telcos and has critical demands. Distributed mMIMO coordinates indoor 4T4R small cells to perform joint beamforming and multi-user MIMO in the indoor environment. "It is helping telcos with elastic capacity in high-traffic venues and ubiquitous Giga experience, as well as dynamic resource allocation for enterprise applications. This year we have deployed Distributed Massive MIMO on 5G lamp sites in five countries in seven scenarios and more than 1000 sites," says Qiu. Connecting the unconnected to achieve UN SDGs 5G is growing in popularity in most cities, but 450 million people are still not covered by the mobile network in rural areas. Since 2017, Huawei has connected more than 50 million people in more than 60 countries. In Ghana, the Government will deploy more than 2000 Huawei's RuralStar sites in the first phase, and the ROI is expected to be achieved in 3 years. Data from the 400 RuralStar sites shows that voice traffic grows 100%,

while data traffic grows 400%. It has led to an increase in GDP, employment and mobile penetration. We helped Ghana in fulfilling SDG goals. 5G RAN intelligence to maximise spectrum efficiency and improve optimisation efficiency Rollouts of 5G networks across the world picked up pace throughout these years. As operators boost their CAPEX budgets to reap the potential benefits of 5G networks, they also face the blunt reality of rising network complexity. In addition to rising OPEX, maintenance efficiency drops while network complexity significantly increases. This further highlights the urgency of developing intelligent wireless networks. Huawei is the industry's 1st vendor to release the 5G RAN Intelligence during MBBF in Dubai in 2021. 5G RAN Intelligence covers SingleBAND and Capacity Turbo, to promote intelligent wireless networks. SingleBAND enables site-level multi-band convergence through intelligence in site. The solution helps operators converge multiple bands onto a single network in the 5G era. It allows flexible full-band decoupling, which through the FDD band enhances uplink, extends the TDD band coverage, and improves network capacity through full-band and multi-beam 3D coordination. Capacity Turbo is a network-level mechanism that takes the multi-band convergence concept beyond a single site. It uses intelligent algorithms to do coordinated optimization between multi-sites and multi-band to improve network performance, enhance user experience and minimize network routine optimization costs. Through iterative parameters optimization, together with expert experience, Capacity Turbo can enable close-loop, data-driven and on-line network optimization. Learning from green 5G projects Earlier this year, Huawei and China Mobile initiated the Green 5G project to reduce 40billion KWH of 5G energy savings. The project also entails increasing the green energy supply by 3200 million and reducing 1600 million tons of CO2 for society. The path-breaking initiative has helped in the overall energy reduction by 50%. "China Mobile launched `Harmony Education' to use 5G to provide education to 400 million students in remote areas. This has brought down carbon emissions by 23 million. As part of this initiative, China Mobile also launched the Cloud Life app that helped reduce travelling by 50%. In addition, our DICT (ICT + Database) solution launched 100 applications for 15 vertical industries. Together, these initiatives have helped China Mobile to reduce carbon emissions by 400 million," says Qiu. Deployment of 5G is also helping several business verticals to enhance production and efficiency while enabling them to adopt more sustainable practices. For instance, 5G enables the steelmaking company XISC (Hunan Valin Xiangtan Iron and Steel Co) to increase efficiency by 15%, leading to $15 million annual benefits. Further, China Mobile and Huawei helped Jinneng Holding Group pilot 5G mining helped bring down the failure rate by 20% and increase labour efficiency by 300%. These are just some examples of how enterprises from different business verticals are using 5G for enhanced operational efficiency. The coming few years will lead to a massive increase in data consumption, and 5G is going to enable this growth. If the right network strategies are used, 5G can help the telcos provide a high-quality digital experience to more and more people while empowering businesses and people to lead a more sustainable life. The onus is then on telcos to adopt these strategies for more optimal use of the 5G spectrum and more sustainable operations. Want to keep up to date with the latest developments in the world of telecoms? Subscriber to receive Total Telecom's daily newsletter here Also in the news: Three and EE first to sign up to London Underground 4G networkChina Mobile seeks $8.8bn as it migrates to Shanghai Stock ExchangeSingtel loses legal battle against Australian taxman

512054

Document TOTEL00020211222ehcm00002

China Mobile Aims to Raise USD 7.6 Billion in Shanghai after US Delisting

220 words
22 December 2021
EqualOcean
EQOCEN
English

In November 2020, the US government ordered Americans to be blacklisted for investing in Chinese companies deemed to have links to the Chinese military, including three of China's major mobile operators: China Mobile, China Unicom, and China Telecom. In the context of continuing tensions in Sino-US relations, a growing number of US-listed Chinese companies seek to list back to China or Hong Kong.

China Mobile said it expects to reach a net profit of CNY 114.3 million to CNY 116.46 million this year, with a growth rate of 6% to 8% year-over-year. According to its prospectus, the world's largest wireless carrier by subscriber figures will sell 845.7 million shares at the price of CNY 57.58 per share. CICC and Citic are the joint sponsors of this stock offering. The telecom giant said the fund raised would go toward 5G network expansion, **cloud infrastructure**, smart living projects, and tech development.

The listing price in Shanghai Stock Exchange will be sold with a 52% premium versus its Hong Kong-listed stock based on its closing price of HKD 46.45 last Friday. The company's stock will trade under the code 600941 in Shanghai.

Click to view image.

Document EQOCEN0020211222ehcm00003

PR Newswire
a CISION company

READEN HOLDING CORPORATION (OTC PINK: RHCO) ANNOUNCES MAJOR SHARE TRANSACTION WITH COCOON HOLDINGS AFTER THE TRANSACTION WITH TIGER SUPER FUND

652 words
22 December 2021
13:30
PR Newswire
PRN
English

HONG KONG, Dec. 22, 2021 /PRNewswire/ -- READEN HOLDING CORPORATION (OTC PINK: RHCO), a Venture Capital Corporation which is active in the Fintech, Online Payment and E-commerce industries, today announced another major share transaction. Readen **Investment** Limited, a major shareholder of RHCO, has sold 28,600,000 shares of RHCO to IT Star Limited.

IT Star Limited is fully owned by Cocoon Holdings Limited (0428.HK), a Venture Capital Company listed on the main board of HKEX. Cocoon Holdings held multiple equity investments in Hong Kong and US, including Tencent (0700.hk), Alibaba (9988.hk), China Mobile (0941.hk), SMIC (0981.hk) and AAC Tech (2018.hk), etc. The transaction is part of the synergy between RHCO and Cocoon Holdings, as both parties strongly believe in the unlimited growing capacity of RHCO's own OkeApp and OkePay. OkeApp is expected to sign up 8,000 and 10,000 new Merchants in 2022 as the continuously growing discount referral app launched earlier this year, and OkePay will be benefited from the 4 million monthly transactions brought by OkeApp. The two make a unique combo in Payment and Fintech sectors, and RHCO is expecting a major breakthrough in revenues. Due to their success, expansion plans are underway for other markets besides Hong Kong.

After the transaction, IT Star Limited would hold 8.6% of total RHCO shares issued. In an earlier announcement, RHCO also announced that Tiger Super Fund SPC has bought 32,703,152 shares of RHCO, holding 9.9% of total RHCO shares issued and would follow up with a loan to RHCO. Both investments have further solidified the funding of OkeApp and OkePay's development and their expansion to other markets.

Readen Holding Corp. (www.readenholdingcorp.com) is a publicly traded Venture Capital Corporation, with major holdings in the Fintech Industry and has been increasing its investment in E-commerce and E-payment sectors, such as;

www.okepay.biz

www.readies.biz

www.okepartners.com

www.neckermanndirect.eu

www.twopercent.hk

www.fligrofood.com

RHCO is a diversified holding company, with an operating history of over 30 years, which seeks opportunities to acquire and grow businesses that can generate long-term sustainable free cash flow and attractive returns, in order to maximize value for all shareholders. RHCO has subsidiaries and liaison offices in Europe and Asia.

For further information please contact RHCO at info@readenholdingcorp.com

or +852 3950 5911

The RHCO corporate email address is info@readenholdingcorp.com

The RHCO corporate website can be accessed at www.readenholdingcorp.com

The RHCO Twitter account can be accessed at https://twitter.com/readenrhco

This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, which are

intended to be covered by the safe harbors created thereby. Investors are cautioned that, all forward-looking statements involve risks and uncertainties, including without limitation, the ability of Readen Holding Corp. to accomplish its stated plan of business. Readen Holding Corp. believes that the assumptions underlying the forward-looking statements contained herein are reasonable, any of the assumptions could be inaccurate, and therefore, there can be no assurance that the forward-looking statements included in this press release will prove to be accurate. In light of the significant uncertainties inherent in the forward- looking statements included herein, the inclusion of such information should not be regarded as a representation by Readen Holding Corp. or any other person.

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SOURCE Readen Holding Corporation

/CONTACT: Readen Holding Corp., info@readenholdingcorp.com, +852 3950 5911

(END)

Document PRN0000020211222ehcm00083

即市頭條- Latest News
CHINA MOBILE Unveils VR Scenario Interaction Patents

50 words
15 December 2021
AAStocks Financial News
AASFNE
English

Companies like CHINA MOBILE (00941.HK) are filing for making public the patents for interaction technique, installation, computing equipment and storage medium of **virtual reality** (VR) scenarios, showed the Tianyancha app.

~

AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020211215ehcf005mt

THE AUSTRALIAN

Agribusiness
Behind Geoff Wilson's war on funds

Eric Johnston
1,214 words
12 December 2021
07:29
The Australian - Online
AUSTOL
English

It's the scrappy one-time Sydney stockbroker versus the funds management veteran. At stake is a $67m cashbox and a whole lot of pride.

The former stockbroker – Geoff Wilson – is used to getting his way, although in this case he is likely to fall short in Monday's shareholder vote to acquire the underperforming PM Capital Asian Opportunities Fund (PAF), which is backed and managed by former BT funds veteran Paul Moore, who runs **investment** manager PM Capital.

Instead, an agreed merger between PAF with its bigger sister fund – the PM Capital Global Opportunities Fund – is set to secure the shareholder vote.

But victory for the $580m PM Capital Global will come at a cost and should send a message to all listed investment companies that Wilson is serious in his determination to start a fight when it comes to targeting underperformers.

Wilson, the one-time stockbroker with McIntosh and Potter Partners who has a personal fortune of $526m according to The Australian's The List, sits on top of the Wilson Asset Management family of funds. These have $5.5bn in assets under management and count more than 120,000 retail investors across eight listed vehicles.

Wilson propelled himself into the mainstream becoming the face of the potent campaign against Labor's now-defunct policy to scrap franking credits during the 2019 federal election. In the public's mind at least, that puts him squarely in the pro-investor corner.

At last count there were 97 listed investment companies on the ASX, the bull market means many have been trading at a discount to their net tangible backing all while collecting hefty management fees.

And it's the proliferation of funds, usually as a spin-off from a master manager is becoming an increasing blind spot. This is a worry because the investment dynamics of the funds means they are widely held by self-funded retirees for an income stream.

Friendly mergers between associated funds often leave a sour taste amid questions around in whose interest is the fund really working — for shareholders or the fund manager.

The fund in the middle of Wilson's latest battle, PAF, is a relative minnow. It is a $67m low-profile cashbox with a mandate to invest in Asian-based shares excluding Japan.

PAF, which listed in 2014, has exposure to up to 35 shares and is currently sitting on holdings in companies such as iCar Asia, MGM China, Freeport-McMoRan and China Mobile. Nearly half the shares are in Hong Kong-based companies.

Wilson is not holding back in arguing the proposed merger of the PM Capital-linked funds is riddled with conflicts and takes aim at the $500,000 break fee entered into by PAF and PM Capital Global.

Their merger, which has been agreed to by the way of a scheme of arrangement, will push PM Capital Global's assets above $640m.

The battle has already gone several rounds with the takeovers panel, but will push ahead on Monday.

Wilson labels the transaction as "robbing Peter to pay Paul" in reference to the PM Capital Global shareholders paying a relatively full price for the PAF assets.

“They are buying pre-tax assets for essentially the same value as after tax assets. PM Capital Global shareholders will be diluted by this deal. The only person it is a good deal for is the investment manager PM Capital,” Wilson says.

But Moore, who points out he is not on the board of either PM Capital Global or the merger target PAF, says Wilson has a “big incentive” to win Monday’s vote.

“If they were successful in their offer, the size of WAM Capital goes up which increases the management fees,” Moore says in an interview on Sunday.

Moore, a former GWS Giants board member, argues he is just watching on the sidelines as a shareholder in both funds. He also notes an independent expert has taken into account all factors including the break fee and still back the PM Capital Global proposal.

For its part PM Global is urging investors to look through the share-based valuation on offer and focus on a measure of returns measured by pre-tax net tangible assets.

“I look at it as a shareholder it makes a huge difference,” Moore says. “Stay away from all the noise … There is one clear issue that stands out. If you look at the alternative offers under one (PM Capital Global) you get accretion to your pre-tax capital of approximately $1.14 whereas the alternative [Wilson] offer you get around 95c.

“From a shareholder perspective the only thing that really matters is how much capital do you have at work as an investor and the returns you will get on that over time.”

Wilson is going for a scrip takeover that offers 1 share in his flagship WAM Capital share for every 1.99 PM Capital Asian Opportunities fund, this represented a 10.6 per cent premium to the pre-bid closing share price for PAF.

In terms of valuation on Friday’s close, Wilson’s scrip offer represents $1.115 a share. PM Capital Global’s offer is more complicated given it is based on a NTA measure. At current values PM Global values the target at $1.14 a share. PAF closed on Friday at $1.10 a share.

Listed investment funds with less than $200m in assets are general struggling in the current bull market and are trading at sharp discounts to their underlying assets.

This is the market’s way of saying – that in any given moment of time it doesn’t believe the manager is creating value from the assets sitting in the fund.

“We’re proud that a number of our listed investment companies have been able to trade at a premium because it means over time we perform,” Wilson says.

“It’s understandable why PAF was looking to delist “given its poor performance,” he adds.

Prior to the takeover PAF was trading as much as at a 17 per cent discount to its net tangible assets. PAF last year delivered a 12.2 per cent outperformance of the MSCI AC Asia ex-Japan index but has fallen short of the index for each of the three, five and seven years. Indeed, over seven years PAF’s has underperformed the index by 3 per cent over this period.

Wilson’s flagship fund, with more than $2bn in assets is trading at a hefty 18 per cent premium. That’s why its using the power of its share price to buy cheaper assets. PM Capital Global shares are trading on par with their pre-tax NTA of $1.62.

PM Capital Global has just under a 20 per cent stake in PAF, but it can’t vote in Monday’s meeting. Paul Moore can vote his own stake of just under 10 per cent which he intends to vote in favour of PM Global offer on Monday.

At last count Wilson had 13.8 per cent of PAF. Not enough to defeat the vote on its own, but if a number of PAF shareholders sit out of Monday’s meeting, it could go down to the wire.

Document AUSTOL0020211212ehcc0015q

Tech
Free 5G network upgrades available to Shanghai consumers

Zhu Shenshen
299 words
9 December 2021
10:56
Shanghai Daily Online
SHNDOL
English

Shanghai consumers will be able enjoy faster and more affordable 5G and family broadband services, thanks to the "smart city" strategy, with a free upgrade of one Gbps bandwidth, China Mobile said on Thursday.The carrier is offering free upgrades in broadband bandwidth in Shanghai of up to one gigabyte per second (Gbps). A sole family broadband service now costs about 100 yuan (US$16) a month in Shanghai, with normal bandwidth between 100 to 300 megabyte per second or Mbps. One Gbps equals to about 1,000 Mbps.Soon, a family package of mobile data and voice calls, together with broadband, **cloud** storage, up to six numbers and various digital services, will cost from 109 yuan a month in all, more cost effective for users, the carrier said.Qualified family users will receive calls or messages for the upgrade. By 2023, at least half of China Mobiles users in Shanghai will enjoy 500 Mbps or faster broadband service, Shanghai Mobile said.

Its the latest update to advance digital infrastructure in Shanghai which aims to build a "global digital hub" by 2025 as part of an official digital blueprint.China Mobile has 12 million 5G users in Shanghai, with 20,000 5G base stations offering 5G signal coverage citywide. The carrier has 3.5 million family broadband users in the city, with a network coverage of 8.5 million users in 13,000 communities.Also on Thursday, China Mobile signed a digital education partnership with Shanghai Education Commission, to make Shanghai lead the nation in innovation and information infrastructure. China Telecom also introduced an upgraded 2 Gbps family broadband service in Shanghai recently, giving the city the fastest broadband network in the nation.

Click Here to View Image

Document SHNDOL0020211210ehc900008

WSJ PRO CYBERSECURITY

WSJ Pro
Cyber Daily: Inside Intel's Secret Warehouse in Costa Rica

1,218 words
29 November 2021
13:57
WSJ Pro Cybersecurity
RSTPROCY
English

Good morning. Intel plans to expand a warehouse and lab it set up to run **cybersecurity** tests on its products, including old and discontinued **hardware** and software, WSJ Pro's James Rundle reports.

Legacy technology is a big concern for companies: old software and products can introduce **cybersecurity** problems. Intel's lab in Costa Rica stores around 3,000 pieces of the company's **hardware** and software for remote security research. The lab, which runs 24 hours a day, 7 days a week, has been open since 2019 and is set to expand next year. Getting old tech into the lab was challenging. Engineers who had moved onto other projects or even left the company contributed their know-how about products from years ago. Intel's security researchers even looked for discontinued platforms on eBay because they were so hard to find.

Anders Fogh, a Germany-based Intel engineer, said the lab is crucial for his work, especially when he tries to replicate security flaws that external researchers report through Intel's bug-bounty program.

Intel employees around the world can ask for a specific machine in the configuration of their choice. Technicians make it available through cloud services. The lab gets around 1,000 requests a month to build equipment for remote tests.

More below.

5 Steps for Improving Collaboration Between IT and Security

The need to defend and protect vital assets and network systems grows more urgent each day. Learning these tried-and-true techniques will ensure better communication, cooperation and security results.

Get Started

Top News

A few years ago, executives at Intel Corp. began to realize they had a problem. The company was making dozens of new products each year, from chips to software platforms, but it didn't have a formal method for cataloging and storing older technology so engineers could test it for security flaws.

Some devices, such as Sandy Bridge microprocessors—launched in 2011 and discontinued in 2013—were so scarce that Intel's security researchers resorted to combing the internet for them.

"We had to actually go on eBay and start looking for these platforms," said Mohsen Fazlian, general manager of Intel's product assurance and security unit.

Intel's issue reflects a wider concern: Legacy technology can introduce cybersecurity weaknesses. Tech makers constantly improve their products to take advantage of speed and power increases, but customers don't always upgrade at the same pace. This creates a long tail of old products that remain in widespread use, vulnerable to attacks.

Intel's answer to this conundrum was to create a warehouse and laboratory in Costa Rica, where the company already had a research-and-development lab, to store the breadth of its technology and make the devices available for remote testing. After planning began in mid-2018, the Long-Term Retention Lab was up and running in the second half of 2019.

Read the full story.

Cybersecurity

Chinese state-run companies limit use of Tencent. Managers at at least nine state-run Chinese companies, including China Mobile Ltd., China Construction Bank Corp. and China National Petroleum Corp., told employees that any chat groups set up for work purposes on Weixin could contain sensitive information and should be shut down and deleted. Weixin is Tencent's dominant messaging app in China and the domestic sister app of WeChat. The companies also warned employees to be cautious about using Weixin for work-related communications. The companies haven't publicly disclosed security concerns over the app.

Beijing has recently stepped up scrutiny of internet giants including Tencent. On Wednesday, the Chinese Ministry of Industry and Information and Technology told app stores that Tencent needs government approval before it updates existing apps or launches new ones. (WSJ)

New tech poses challenges for U.S. spies. Omnipresent surveillance cameras, biometric border controls and location trackers on smartphones and other devices are obstacles for the Central Intelligence Agency and other intelligence officers. Artificial intelligence is making it easier and faster for foreign adversaries to sort through data and identify spies. While advanced technologies will also help U.S. authorities gather intelligence, the same technologies will likely give authoritarian societies such as China and Russia an advantage because they can exert greater control over them, a January report by the Center for Strategic and International Studies think tank said.

Recent examples show how technology can expose spies. A suspected U.S. intelligence officer held a supposedly clandestine meeting with Kim Jong Nam, the half brother of North Korean leader Kim Jong Un in 2017, days before Kim Jong Nam was assassinated. That meeting was captured by a hotel's security camera and became public knowledge. In December, investigative website Bellingcat named and published photographs of three Russian intelligence officers who it said shadowed and attempted to kill Russian opposition politician Alexei Navalny. Bellingcat used phone and travel data to track the intelligence operatives. (WSJ)

Israel restricts spyware exports. Israel reduced the number of countries where its companies can export hacking tools and cyberweapons to exclude countries that aren't democracies. Companies can continue to export to countries in Europe and members of the Five Eyes alliance. The U.S., U.K., New Zealand, Australia and Canada are members of the Five Eyes alliance. The U.S. Department of Commerce also recently added two Israeli companies, NSO Group and Candiru, to its entity list, making it more difficult for them to access technology and products made by American companies. NSO Group has faced increased criticism since reports about its Pegasus software came out in July. (PC Mag)

Civilians in Iran and Israel get caught up in cyberwar. Israel and Iran have engaged in a covert cyberwar that has widened to include civilian targets on a large scale. Two U.S. defense officials, speaking on the condition of anonymity, attributed a recent cyberattack on Iran's nationwide fuel distribution system to Israel. That attack paralyzed 4,300 gas stations, and it took 12 days to have service fully restored. Days later, there were cyberattacks against a major medical facility and a popular LGBTQ dating site in Israel, which officials there attributed to Iran. The latest attacks are thought to be the first to do widespread harm to many civilians.

U.S. authorities have warned of Iranian attempts to hack into computer networks of American critical infrastructure including hospitals. (New York Times)

Privacy News

Bipartisan momentum grows in the Senate for antitrust tech bills. Lawmakers in both parties are endorsing bills that would introduce legal constraints on search engines, e-marketplaces, app stores and other online platforms. There was an earlier push in the House for antitrust legislation, and the House Judiciary Committee passed far-reaching bills in June. Now, twelve Senators are backing the proposed American Innovation and Choice Online Act, which would treat large marketplaces such as Amazon's or Google's search engine like a dominant railroad operator that is central to commerce.

The growing momentum for antitrust legislation targeting tech giants comes as lawmakers push for greater privacy protections for children and others. (WSJ)

Big Number

$17 Million

Amount that the Australian Federal Police recently prevented cybercriminals from stealing from Australians' retirement savings accounts. The amount is equivalent to $24 million Australian dollars.

Document RSTPROCY20211129ehbt0002t

BRIEF-Mango Excellent Media's Unit Signs Strategic Cooperation Agreement With Digital Content Provider Migu

83 words
28 November 2021
09:19
Reuters News
LBA
English

Nov 28 (Reuters) - Mango Excellent Media Co Ltd:

* SAYS UNIT SIGNS STRATEGIC COOPERATION AGREEMENT WITH CHINA MOBILE'S UNIT MIGU CULTURE TECHNOLOGY, COOPERATION AMOUNT OF AT LEAST 3.5 BILLION YUAN ($547.53 million)
Source text
http://www.szse.cn/disclosure/listed/bulletinDetail/index.html?7341d491-8544-4842-8c1c-c21de4fc6ce5
Further company coverage: ($1 = 6.3924 Chinese yuan renminbi) (Reporting by Hong Kong newsroom)

Released: 2021-11-28T10:19:44.000Z

Document LBA0000020211128ehbs00dcl

BRIEF-Tongding Interconnection Information Expects To Win China Mobile's Bids

74 words
23 November 2021
12:58
Reuters News
LBA
English

Nov 23 (Reuters) - Tongding Interconnection Information Co Ltd:

* SAYS IT EXPECTS TO WIN CHINA MOBILE'S BIDS WORTH A COMBINED 983.7 MILLION YUAN ($154.03 million) Source text https://statics.teams.cdn.office.net/evergreen-assets/safelinks/1/atp-safelinks.html Further company coverage: ($1 = 6.3865 Chinese yuan renminbi) (Reporting by Hong Kong newsroom)

Released: 2021-11-23T13:58:26.000Z

Document LBA0000020211123ehbn0265z

PR Newswire
a CISION company

OpenInfra Software Adoption Surges, Spurred by Growth in OpenStack Deployments, Which Now Exceed 25 Million Cores

1,118 words
17 November 2021
19:00
PR Newswire
PRN
English

Seven Companies Join Ranks of '1 Million Core Club' as Largest OpenStack Deployments Grow by Order of Magnitude Over Last Year

AUSTIN, Texas, Nov. 17, 2021 /PRNewswire-PRWeb/ -- The Open **Infrastructure** Foundation's annual survey of users, released today, confirms significant OpenStack growth and overall adoption momentum among OpenInfra projects. There are now more than 25 million cores of OpenStack compute in production, marking a 66% increase in total cores year on year. Seven companies have joined the ranks of the "1 Million Core Club," including China Mobile, Line, Walmart Labs, Workday and Yahoo. OpenStack's momentum also extends to the growing public **cloud** footprint, which now includes more than 180 OpenStack-powered public **cloud** data centers spanning the globe.

In the opening of the OpenInfra Live: Keynotes today, Jonathan Bryce, executive director of the OpenInfra Foundation, talked about LOKI: Linux OpenStack Kubernetes Infrastructure. This is the *OpenInfra Standard* which is based on the momentum of not only OpenStack, but also Linux and Kubernetes, three of the most active open source projects in existence. Combined, contributors to these three projects merge over 150,000 changes per year. Organizations like AT&T, CERN, China Mobile, China Telecom, Verizon, Vodafone, and Yahoo have adopted the OpenInfra Standard and run it in production today.

The 2021 OpenInfra User Survey report summarizes the responses of hundreds of organizations and highlights the growth in OpenInfra use cases, ranging from organizations evaluating the software to those who are running in production, and from micro to hyperscale deployments. It covers five OpenInfra projects: OpenStack, Airship, Kata Containers, StarlingX and Zuul.

OpenInfra--i.e., open source software projects that contribute to the advancement of today's digital infrastructure--continues to gain traction among organizations wanting to operate faster, more efficiently and at a fraction of the cost.

Check out a full copy of the 2021 OpenInfra User Survey Report.

Additional Highlights

OpenStack - Cloud infrastructure for virtual machines, bare metal, and containers:

-- OpenStack is the most widely deployed open source cloud software in the world.

-- Almost 80% of OpenStack clouds are in production, 13% are under development and 8% are in the proof of concept stage.

-- Over 70% of OpenStack users have indicated they are running Kubernetes for container orchestration. Combined with Linux, the open source operating system standard, the combination of these technologies create LOKI--Linux OpenStack Kubernetes Infrastructure--the OpenInfra standard. Organizations around the world including AT&T, LINE, Workday, Verizon, and Yahoo are running LOKI in production.

-- OpenStack users documented explosive growth among clouds of all sizes. For example, Australia's ARDC Nectar Research Cloud, with 33,000 physical

cores and approximately 160,000 vCPUs, reported over 140% growth in OpenStack production deployments since 2020. T Systems reported growth of their Open Telekom Cloud to 6,000 servers across 3 availability zones in Europe. Schwarz, Europe's largest retailer, began the year with 180 compute nodes and 5,000 VMs and has already grown its footprint to 300 compute nodes and increased VMs by 20%.

-- OpenStack users also reported the establishment of more than 100 new OpenStack clouds in the past 18 months. For example, Exaion, which specializes in blockchain technologies, uses OpenStack to power its green data center solution, providing customers with information on CO2 impact for each service they deliver. Infomaniak in Switzerland uses OpenStack to deliver high-performance web hosting services boosted by AMD 32-core EPIC processors, 6th generation NVME storage and NVidia T4 GPUs. OneQode launched an OpenStack public cloud for more than 1.5 billion games in the Asia Pacific region. OneQode chose OpenStack to integrate with all major tech stacks, including support for Kubernetes, Terraform and Ansible.

Airship - a collection of loosely coupled but interoperable open source tools that declaratively automate cloud provisioning:

-- Airship adoption continues to increase, particularly within the telecommunications industry. Users include Ant Group, AT&T, Halvelsan and SK Telecom.

-- Of the User Survey respondents, 70% indicated they are running both VM workloads on OpenStack-helm and Kubernetes workloads, a common benefit respondents shared as to why they adopted the software.

Kata Containers - an open source container runtime, building lightweight virtual machines that seamlessly plug into the containers ecosystem:

-- Respondents to the Kata Containers User Survey span numerous industries including academic/research, telecommunications, consumer goods and manufacturing/industrial. Users include Adobe Advertising Cloud, Ant Group, AstroKube, Baidu, Huawei, IBM Research and Qualogy.

-- The majority of respondents indicated that they are integrating Kata Containers with Kubernetes.

-- While 57% of organizations said their workloads are a mixture of both short and long-running workloads, 24% said theirs are long-running (greater than one minute) and 10% indicated theirs were short-lived (less than one minute).

StarlingX - a complete cloud infrastructure software stack for the edge:

-- Proof of concept environments for StarlingX are on the rise, with almost half of respondents indicating this stage.

-- The top three use cases for StarlingX, accounting for over 75% of responses, are Multi-Access Edge Computing (MEC) 32%; Industrial Automation 26%; and Universal Customer Premise Equipment (CPE) 20%.

-- Other use cases cited by StarlingX users include Virtual Radio Access Network (RAN) 3% and Factory Automation/Industrial IoT 3%.

-- Users of StarlingX include T Systems, Verizon and Vodafone.

Zuul - a project gating system that drives continuous integration, delivery, and deployment systems:

-- Zuul has 69% of User Survey environments running in production, spanning industries including automotive, retail and public cloud providers.

Another 17% of respondents are evaluating Zuul and 14% are considering using Zuul.

-- Gating, speculative merge and cross-project dependencies continue to be features praised by users, which include BMW, Cesnet, Just Eat, Leboncoin, T Systems, Volvo and Wazo Platform.

Airship, Kata Containers, OpenStack, StarlingX and Zuul are supported by the OpenInfra Foundation, whose mission is to build open source communities who write software that runs in production.

The Return of the In-Person OpenInfra Summit

The OpenInfra Foundation's flagship, in-person event, the OpenInfra Summit, returns to Berlin June 7-9, 2022, at the Berlin Congress Center. Information on registration and sponsorship opportunities will be available in November 2021, and activities for media and analysts will be shared shortly thereafter.

About the Open Infrastructure (OpenInfra) Foundation

The OpenInfra Foundation supports the development and adoption of open infrastructure globally, across a community of 100,000 individuals in 187 countries, by hosting open source projects and communities of practice, including datacenter cloud, edge computing, NFV, CI/CD and container infrastructure.

###

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SOURCE Open Infrastructure Foundation

/Web site: http://www.openinfra.dev

(END)

Document PRN0000020211117ehbh000x5

China, Pacific
China's first metaverse industry group inaugurated

392 words
16 November 2021
Silkroute News
SILREN
Issue 229
English

China's first **metaverse** industry group held its unveiling ceremony on Thursday, marking an important first step for the country's pursue of healthy and sustainable development of the **metaverse** industry.

The **Metaverse** Industry Committee under the China Mobile and Communications Association (CMCA) officially announced its establishment on Thursday, after receiving approval on October 15. During the announcement it released a new book called **Metaverse**, expressing the new logic for the development of the next generation internet and the future digital economy in which **metaverse** is deeply involved.

As the only national social organization in the field of Chinese mobile communications industry, CMCA's members include state-owned industry conglomerates such as China Mobile and China Unicom.

The so-called metaverse is widely understood as an alternate digital reality where people work, play and socialize. The metaverse is a collective virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual space, including the sum of all virtual worlds, augmented reality, and the internet.

While this fancy concept may still be a new thing for many people, it has already been on the radar of domestic and overseas technology companies, including Facebook, Microsoft and ByteDance.

Yu Jianing, executive director of the committee, said that their major tasks ahead will include strengthening technological innovation and application integration for the industry, organizing the training of professionals, and promoting new thinking related to metaverse. Talking on the sideline of the opening of the committee, an industry insider surnamed Zheng told the Global Times that the Metaverse is now on the high speed lane in China and will primarily focus on the development of corresponding infrastructure.

The CMCA also proposed on Thursday that the metaverse, as the third generation of the internet, will be a new milestone for global innovation and competition.

The infrastructure of the metaverse includes a large variety of 5G communication networks, VR, AR, WIFI6, wearable devices, blockchain, cloud computing, edge computing and AI+GPU, analysts said.

As an integrated body of cutting-edge digital technology, the metaverse is to be applied to various operating scenarios of the whole society as part of the efforts to achieve high-quality development of the digital economy, according to the CMCA.

Reported on November 12 2021 by the Global Times (China).

Document SILREN0020211122ehbg00013

即市頭條- Latest News
C Suisse Keeps Top 3 CN Telcos at Outperform, Top-pick CHINA TELECOM (00728.HK)

220 words
5 November 2021
AAStocks Financial News
AASFNE
English

All three major Chinese telecommunication companies predicted that the strong 1H momentum will extend into 2H, with the competition remaining stable, reported Credit Suisse, after meeting with the three companies. Also, the three telcos mentioned that the average revenue per user (ARPU) has been showing signs of recovery and that immense growth potential could be seen in the **cloud** business.

Credit Suisse remarked that this year's earnings forecasts of CHINA MOBILE (00941.HK), CHINA TELECOM (00728.HK) and CHINA UNICOM (00762.HK) were lowered by 1% each, while the 2022 forecasts were cut by 2%, 3% and 5%. The downward revision was made to reflect the potential power tariff hike, the broker added. Given that the financial impact from the possible tariff hike is projected to be minimal, the target prices of CHINA TELECOM and CHINA UNICOM's H-shares were kept at $6.1 and $6.5, while that of CHINA MOBILE was slightly reduced from $85 to $84.9.

Also, Credit Suisse maintained the Outperform rating for the three major Chinese telecommunication players, stating CHINA TELECOM as its top pick, followed by CHINA MOBILE and then CHINA UNICOM.

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AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020211105ehb5003ux

Tech
China Mobile approved to list on Shanghai Exchange

Zhu Shenshen
198 words
4 November 2021
13:04
Shanghai Daily Online
SHNDOL
English

China Mobile has been approved to list on the Shanghai bourse – the largest domestic IPO in a decade – after being forced to delist in the United States.The delistings in the US in May stem from **investment** restrictions put in place by former President Donald Trump targeting Chinese technology firms. President Joe Biden has left the rules in place amid continuing tensions between the worlds two largest economies, despite objections from businesses.China Mobile received approval to list on Shanghais main board on Thursday night, the China Securities Regulatory Commission said on its website .China Mobile will issue a maximum 965 million shares, to raise 56 billion yuan (US$8.75 billion) – eclipsing recent major IPOs such as SMIC and China Telecom.

Many of Chinas biggest tech and telecom firms listed their shares on US stock markets in the early 2000s as they sought access to more funding, but since then the political tide has turned.China Mobile will use the proceeds on network construction, especially 5G. By 2022, China Mobiles 5G networks will cover the nation China Mobile chairman Yang Jie said recently.

Click Here to View Image

Document SHNDOL0020211105ehb40000f

China securities regulator approves China Mobile's application to list in Shanghai

79 words
4 November 2021
10:43
Reuters News
LBA
English

SHANGHAI, Nov 4 (Reuters) - China's securities regulator on Thursday approved China Mobile's application to list in Shanghai, clearing the last hurdle for a potential $6 billion share sale.

China Mobile, which was delisted by the New York Stock Exchange due to U.S. **investment** restrictions, approved its Shanghai listing plan in May.

(Reporting by SHANGHAI NEWSROOM; Editing by Toby Chopra)

Released: 2021-11-4T11:43:46.000Z

Document LBA0000020211104ehb401yg5

China Mobile HK Invests HK$649M to Acquire 700 MHz, 2.5/2.6 GHz and 4.9 GHz Bands

205 words
1 November 2021
Ma'an News Agency
MANEWS
English

China Mobile Hong Kong (CMHK) recently announced that it has successfully acquired for a total of 90 MHz of radio spectrum in the 700 MHz, 2.5/2.6 GHz and 4.9 GHz frequency bands, representing an **investment** of HK$649 million.

Together with the 26/28 GHz frequency bands previously assigned by the Office of the Communications Authority (OFCA), and 120 MHz of radio spectrum in the 3.3, 3.5 and 4.9 GHz frequency bands acquired in 2019, CMHK will lead the market as the mobile network operator with the most radio spectrum resources in Hong Kong.

The 700 MHz frequency band of radio spectrum acquired is a low-frequency band, which will help strengthen the overall coverage of the CMHK network. Meanwhile, a new bid for an additional 40 MHz of radio spectrum in the 4.9 GHz frequency band will greatly enhance CMHK's 5G network speed. CMHK is dedicated to providing customers with a better quality, faster and more stable 5G mobile network, as it continues to take a leading role in the development of Hong Kong's smart city framework.

Document MANEWS0020211101ehb100002

China Mobile Gansu adopts no-compressor integrated energy-saving cabinet
CCM China Fluoride Materials Monthly Report, 29 October 2021, 186 words, (English)
China Mobile Group Gansu Co., Ltd. (China Mobile Gansu) became the pilot unit to adopt China's first no-compressor integrated energy-saving cabinet to respond the state's call for carbon peaking and carbon neutrality. Base station network ...

THE AUSTRALIAN

Commentary

Far more than just the money, Digicel is a very big deal

Jonathan Pryke, Mihai Sora
849 words
26 October 2021
14:00
The Australian - Online
AUSTOL
English

By underwriting Telstra's purchase of Digicel Pacific, the region's largest telco, the Australian government is making the largest single foreign policy **investment** in decades, perhaps ever. The $US1.33bn deal eclipses Australia's annual aid program to the Pacific and rivals Defence's flagship 30-year Pacific Maritime Security Program – all in one transaction.

The deal is an extraordinary departure from the way Australia "does business" in the Pacific.

Digicel's arrival from the Caribbean into the Pacific between 2006 and 2008 revolutionised telecommunication services, cementing the telco as the dominant player in six of the largest economies of the Pacific. Digicel retains a 92 per cent share of the mobile phone market in regional giant Papua New Guinea alone.

Taking advantage of this near monopoly, the business has been wildly successful. Earnings before interest, tax, depreciation and amortisation last year came in at $US223m, equalling 54 per cent of revenue before costs.

Digicel's Pacific success has been overshadowed by debt, with Digicel founder Denis O'Brien forced to hive off its Pacific business while restructuring to protect the rest of the company's interests in the Caribbean and Central America. It didn't take long before rumours – never publicly substantiated – began circulating that China Mobile might be buying those Pacific assets.

Digicel's near-monopoly on telecoms is of clear strategic importance. Controlling the telco would enable the owner to spy on and directly shape the information ecosystem to suit their needs. As we move into an interconnected 5G world, telecoms networks will become the backbone for public utilities and financial services. Controlling telecoms gives any actor tremendous power as a spoiler in these interconnected systems. It is clearly not in Australia's interests for Digicel to fall into China's hands.

The government is also eager to reverse a worrying trend of Australian corporate retreat in the Pacific. Businesses and state-owned enterprises are at the forefront of China's growing presence in the Pacific, while risk-averse Australian businesses see the region's markets as too small and too complicated in the face of comfortable profits at home.

It's a bold play, and one we should all hope succeeds. But it does come with considerable risk, to say nothing of the impact it will have on the state of the broader bilateral relationship between Australia and China. A lot of sweeteners were needed to get a blue-chipper like Telstra involved. By funding cheap debt and equity, and guaranteeing any regulatory, foreign exchange and sovereign risk – all while giving Telstra full ownership – the government presented the company with an offer too good to refuse.

The government is quick to emphasise its confidence in making money from this deal, and the Digicel numbers back that up. Still, it all depends on Telstra maintaining Digicel's financial performance in a market well outside its comfort zone.

There are broader reputational risks for Australia. Digicel is routinely accused of engaging in predatory and monopolistic practices. Of course, Digicel should remain profitable, but Telstra must guard against perceptions of unfair pricing and use its market power judiciously.

As Australia already spends $1.4bn in aid a year to improve the welfare and wellbeing of Pacific peoples, it is essential the government secures guarantees from Telstra in this deal that costs and services will improve.

The company's operations in the region are also far from perfect, and its infrastructure is in need of upgrading. If choosing between China Mobile, private equity investors or Telstra, we should hope that Digicel being owned by an ASX-listed company will make it easier for Digicel's business practices to come under scrutiny and result in improved service delivery and a better deal for Pacific consumers.

Buying Digicel doesn't buy Australia an indefinite strategic monopoly over Pacific telecommunications. China Mobile – if it ever was really interested in the first place – could still decide to enter the market, but the cost of doing so would be much higher. PNG's state-owned provider is already heavily indebted to China, and is one to keep an eye on. Finally, Australia has now set a precedent with Australian business. Companies that are still hanging on in the Pacific, or those looking to re-engage, might now look to the government for measures like the remarkable support Telstra has received, although it is unlikely the government has many more multi-billion-dollar wildcards up its sleeve.

Was Digicel angling for a deal and did Australia get duped into bankrolling the purchase? Perhaps the "threat" of a Chinese purchase was exaggerated. Unfortunately, we can't call up Beijing to ask directly – and the CCP wouldn't take our call if we tried. But if Telstra runs the business well and improves connectivity in the Pacific, the pay-offs for Australia and Pacific islanders could be real and long-lasting.

Jonathan Pryke is director and Mihai Sora a Research Fellow of the Pacific Islands Program at the Lowy Institute.

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THE AUSTRALIAN

TheNation
Telstra deal thwarts China

BEN PACKHAM FOREIGN AFFAIRS AND DEFENCE CORRESPONDENT
652 words
26 October 2021
The Australian
AUSTLN
Australian
2
English

The federal government has dramatically intervened to prevent China gaining control of the South Pacific's biggest mobile phone carrier, providing nearly $1.8bn towards Telstra's purchase of Digicel in one of the nation's biggest investments in the region.

The massive public spend was needed to convince Telstra – which will outlay $361m but take full control of the company – to take on the risk of Digicel's far-flung operations and deteriorating **infrastructure**.

The move followed rumoured interest in the company by China Mobile, but there was no firm offer on the table from the Chinese state-owned telco.

Digicel, founded by Irish billionaire Denis O'Brien, operates 3G and 4G networks across Papua New Guinea, Fiji, Samoa, Vanuatu and Tahiti, with about 2.5 million subscribers.

In a joint statement, Foreign Minister Marise Payne, Trade Minister Dan Tehan and Pacific Minister Zed Seselja said the deal was "consistent with Australia's longstanding commitment to growing quality investment in regional infrastructure".

"Telstra's acquisition sends an important signal about the company's potential and about wider business confidence in the future of the Pacific region," the ministers said.

But senior government sources privately justified the investment on national security grounds, saying it would have been against Australia's interests for the company to fall into Chinese hands. "No one thought China Mobile was immediately going to buy the company, but we didn't want to leave a vacuum either," one senior official said.

Hardware from Chinese companies Huawei and ZTE is used throughout the Digicel network, but would eventually be replaced, the source said.

The government has committed funding to the deal through Export Finance Australia, in an arrangement designed to secure taxpayers a long-term return.

The Australian Strategic Policy Institute's Fergus Hanson said if China had gained control of the company, Beijing would have secured an intelligence and propaganda "pathway into the lives of elite and everyday Pacific islanders".

"The law in China compels private companies to assist the state in national intelligence work, so there is an obvious pathway to misuse there," said Mr Hanson, who heads ASPI's International Cyber Policy Centre. "But the opportunity to shape the information ecosystem is probably even more important, given phones are such an important means of receiving news. If you own that gateway you own the message." Lowy Institute Pacific program director Jonathan Pryke said the government was genuinely interested in getting Australian businesses back into the Pacific, but the purchase carried serious risks. "This deal significantly ups the cost for China to get involved in telecommunications services in the Pacific, but it doesn't buy Australia a monopoly. China could still set up their own rival service provider." The move is expected to ratchet up tensions with Beijing as it seeks to expand its influence in the region.

Chinese commentator Chen Hong, an Australian studies academic stripped of his Australian visa last year on national security grounds, said Canberra was overcome by "neurotic anxiety" over China's presence in the Pacific.

"As the second-largest economy in the world, China is not interested in pointless competitions with Australia in the Pacific," he said.

“China’s collaboration efforts with Pacific island countries are based on mutual interest and benefits, without Australia’s geopolitical obsessions.” CEO Andy Penn said Telstra was initially approached by the Australian government to provide technical advice in relation to Digicel Pacific, and subsequently considered acquiring the business with government support. The deal is expected to be completed within six months.

The deal follows Australia’s 2018 move to elbow aside Huawei to build the Coral Sea Cable between Australia, PNG and the Solomon Islands. But the Chinese have been key providers of communications technology throughout the region, striking deals with governments to build terrestrial broadband networks.

EDITORIAL P10 BUSINESS P13 TICKY FULLERTON P13

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THE AUSTRALIAN

Nation
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BEN PACKHAM
640 words
25 October 2021
10:56
The Australian - Online
AUSTOL
English

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Huawei Smart IDC Energy Saving Catalyst Project wins the 2021 TM Forum Sustainability Impact Award

894 words
25 October 2021
ENP Newswire
ENPNEW
English

Release date - 22102021

Recently, the project 'Smart IDC-Intelligent Energy Saving for Data Centers' co-incubated by Huawei, China Telecom, China Unicom, and China Mobile won TM Forum's Catalyst Team Award for **Sustainability** Impact.

TM Forum's Catalyst Awards celebrate the most revolutionary successes in advancing the telecoms industry, proof-of-concepts for industry standards, impact on global sustainability goals and noteworthy contributions to the acceleration of digital transformation throughout the industry.

the 2021 TM Forum Sustainability Impact Award

Smart IDC Energy Saving Catalyst Project Wins the 2021 TM Forum Sustainability Impact Award

'Congratulations on the achievements of the Smart IDC project.' Adriano Poloni, the managing director of the TM Forum Review Team commented, 'The Smart IDC project effectively uses technologies such as AI, big data, and digital twin. The project proposes an impactful yet feasible solution for energy saving, carbon emission reduction, and efficient utilization of water resources. This solution has been piloted in multiple carriers and data provided has verified the strong results. A comparison of effects from different stakeholders shows that the project meets expectations.'

Huawei BestDC@NAIE

Huawei BestDC@NAIE as the Digital Service Platform of Smart IDC Energy Saving Catalyst Project

The impact of global carbon neutrality is driving the development of new 'green' considerations in the data center construction process. In this project, Huawei's Global Technical Service Dept and General Development Dept, together with the AI R&D Center of China Telecom Research Institute and the Network AI Expert Team of China Unicom Intelligent Network Innovation Center, completed the cloud-edge-end Smart IDC energy-saving solution by combining simulation, AI, big data, and the experience of many experts in the data center integration service field of Huawei. The AI energy-saving solution is applicable to mainstream large-scale data centers, such as IDCs of different cooling systems (air-cooled system, water-cooled system, and indirect evaporative cooling system). The BestDC@NAIE Digital Service Platform of Smart IDC project has been deployed and verified in data center energy-saving projects in China Telecom Guangxi and China Unicom Shanghai.

'I am pleased that we won the 2021 Sustainability Impact Award with Huawei, an important partner of China Telecom. ' said Dr. Zeng Yu, head of the Smart IDC Energy Saving Team at the AI R&D Center of China Telecom Research Institute. 'With the rapid development of the digital economy, China Telecom is constantly improving energy efficiency. It is of great significance to actively utilize AI, big data, and simulation capabilities to improve the operating efficiency of traditional equipment rooms and achieve green and sustainable development of data centers. We are grateful to TM Forum for choosing us as the recipient of this important award.'

Gao Jingting, senior product manager of the Network AI Center of China Unicom Intelligent Network Innovation Center, stressed, ' It is very meaningful to work with Huawei to explore the energy saving solutions of data centers in the context of achieving carbon neutrality. The Network AI Center has been dedicated to building a one-stop AI platform to enable our market department and network department to improve operational efficiency and reduce operation costs. Energy saving in data centers is the successful application of AI in specific scenarios. We are very grateful to TM Forum for its recognition of us. It also strengthens our determination to increase investment in AI and energy saving.'

'China Mobile has deployed energy saving and emission reduction as a strategic task. ' said Guo Zhibin, the project manager of the Information Technology Center of China Mobile. 'As the construction and maintenance

department of IT infrastructure, the Information Technology Center is dedicated to promoting research on infrastructure energy saving. The Smart IDC Catalyst project has shown us the research achievements of the industry in this regard. The experience of working with the project team is very helpful to us in further research on energy saving in data centers.'

The results of the energy saving pilot programs show that the energy saving solutions based on simulation, AI, and expert experience can help medium and large IDCs save power by 10 to 15%. The development and economic benefits of this solution are impactful, especially when implemented at scale. Take a data center with 1000 cabinets of 5 kW/rack as an example. Assume that the actual operating load rate is 40%, the operating PUE is 1.57, and the electricity price is $0.093/kWh. If the load rate remains unchanged, the Smart IDC energy saving solution is expected to save 2.8 million kWh of electricity each year and the electricity cost is about $270,000, reducing 2,600 tons of carbon emission, which is equivalent to planting 110,000 trees.

Over the years, the Catalyst Team Award has been revolutionary in advancing the telecommunication industry, proof of concept for industry standards, impacting global sustainability goals, and accelerating digital transformation across the industry. Based on the concept of improving the digitalization of global data centers, Huawei provides practical technical paths based on carrier grade services, integration, and operation capabilities. Huawei is devoted to accelerating the green & energy-saving transformation of data centers, promoting sustainable development of society, and benefitting the public.

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Document ENPNEW0020211025ehap000a4

即市頭條- Latest News
CHINA MOBILE, Nokia Extend Strategic Alliance to Explore New Opportunities Incl. 6G

85 words
25 October 2021
AAStocks Financial News
AASFNE
English

CHINA MOBILE (00941.HK) and Nokia extended the strategic alliance agreement through video signing. The two parties will, based on the satisfactory cooperative relationship, jointly explore the development opportunities in emerging segments and implement in-depth cooperation on aspects such as fundamental business, 6G, **cloud** network integration implementation and international operation, etc., with the aim to propel sustainable development for the sector.

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AAStocks Financial News

Web Site: www.aastocks.com

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Public.

Huawei Technologies Co. Ltd. - Huawei Smart IDC Energy Saving Catalyst Project wins the 2021 TM Forum Sustainability Impact Award

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22 October 2021
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English

* Click here to view this document in its original format

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China Mobile Group Gansu Co., Ltd. adopts no-compressor integrated energy-saving cabinet

CCM Industry News Snapshots, 21 October 2021, 229 words, (English)

China Mobile Group Gansu Co., Ltd. (China Mobile Gansu) became the pilot unit to adopt China's first no-compressor integrated energy-saving cabinet to respond the state's call for carbon peaking and carbon neutrality. Base station network ...

Tech
Network upgrade supports smart city applications

Zhu Shenshen
280 words
15 October 2021
13:56
Shanghai Daily Online
SHNDOL
English

Shanghai will push smart city applications, like autonomous driving, 4K broadcasting and intelligent logistics and warehousing, with **infrastructure** construction of a citywide fiber network, industry officials said on Friday.Compared with traditional mobile networks, the fifth-generation fixed network (F5G) delivers fiber technology and upgraded bandwidth of 1 to 5 gigabytes per second and much lower latency.It supports fast access, **cloud** and smart operations for digital transformation and smart city construction, officials from the State Information Center (SIC), China Mobile and Huawei told the Smart City Expo 2021 forum.A full-coverage, fiber network-powered city is a key piece of **infrastructure** for computing capacity and operation efficiency for digital economies, Shan Zhiguang, SICs Informatization and Industry Development department director, told the forum in Shanghai on Friday.Several cities are leading F5G network construction nationwide, including Shanghai, Tianjin, Beijing

and Qingdao. With huge broadband width and low latency up to 0.2 mini-second, the cities are becoming Chinas digital hubs, according to SIC and China Mobile.Shanghai is testing F5G applications on autonomous driving, smart logistics and financial innovation, as the city has unique advantages in the related industries, said China Mobiles Shanghai branch.Shanghai is integrating the new services and applications with other cities in the Yangtze Delta to boost the entire regions digital economy.The F5G network supports sectors like 4K broadcasting, wildlife protection and energy-efficiency improvement, industry officials told the forum.F5G is also essential infrastructure for a smart city, covering e-government, online medical systems, fintech, enterprise cloud, online education, livestreaming, city security and smart manufacture, industry experts said.

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Document SHNDOL0020211016ehaf00008

Telstra and Australian govt finalising bid for Digicel's Pacific assets -sources

362 words
14 October 2021
07:58
Reuters News
LBA
English

CANBERRA/SYDNEY, Oct 14 (Reuters) - Telstra Corp Ltd is close to completing a deal to buy the Pacific operations of telecommunications firm Digicel Group in **partnership** with the Australian government, two sources familiar with the bid told Reuters on Thursday.

Telstra said in July it was in talks to buy the Pacific business in a deal that would see Australia contribute the bulk of the **funding** - a plan widely viewed as a political move to block China's influence in the region.

"It is fairly imminent. I can't put a timetable on it but the deal is almost done," said an Australian government source. The sources declined to be named as they are not authorised to talk about the deal.

Digicel, founded by Irish billionaire Denis O'Brien, is the largest mobile phone carrier in the Pacific with operations in Papua New Guinea, Fiji, Samoa, Vanuatu and Tahiti - the most lucrative being those in Papua New Guinea.

Australian broadcaster Nine Entertainment has previously reported that Telstra will spend between A$200 million and A$300 million of its money and the government will contribute A$1.5 billion ($1.1 billion).

A Telstra spokesperson declined to comment. Telstra's CEO Andrew Penn last month told investors that any outlay from the company would likely be limited to the "low hundreds of millions".

Digicel last year denied an Australian newspaper report it was considering a sale of its Pacific business to state-owned China Mobile Ltd.

A sale to a Chinese company would be a cause of concern for the Australian government amid strategic competition between U.S. allies and China in the Pacific region.

Australia has ramped up its presence in the Pacific through the creation of a A$2 billion ($1.5 billion) infrastructure financing facility and via its membership of the Quad group - which includes the United States, India and Japan - to counter China's expanding interests in the Indo-Pacific.

($1 = 1.3545 Australian dollars) ($1 = 1.3528 Australian dollars) (Reporting by Colin Packham and Paulina Duran; Editing by Edwina Gibbs)

Released: 2021-10-14T07:58:02.000Z

Document LBA0000020211014ehae00yst

BRIEF-Ntegrator International Proposed Business Collaboration With China Mobile To Develop 5G Infrastructure In Southeast Asia

47 words
5 October 2021
15:15
Reuters News
LBA
English

Oct 5 (Reuters) - Ntegrator International Ltd:

* PROPOSED BUSINESS COLLABORATION WITH CHINA MOBILE TO DEVELOP 5G INFRASTRUCTURE IN SOUTHEAST ASIA Source text for Eikon: Further company coverage:

Released: 2021-10-5T15:15:32.000Z

Document LBA0000020211005eha502mwr

THE AUSTRALIAN

Nation
Aussie super funds cop heat for Chinese investments

RICHARD FERGUSON
580 words
23 September 2021
05:15
The Australian - Online
AUSTOL
English

Australia's major superannuation and **investment** funds are facing calls to reconsider billions invested into Chinese firms linked to human rights abuses.

A global report by human rights group Hong Kong Watch – which counts the last British governor of Hong Kong, Chris Patten, as its lead patron – has found pension funds around the world are heavily backing Chinese companies from tech giants to Communist Party state banks to black-listed surveillance firms.

Australian super funds including Australian Super and the Commonwealth Super Scheme have been targeted by HK Watch for investments of up to $562m in Chinese companies facing allegations.

The superannuation sector is now facing calls from within Labor to consider its position on Chinese investments with Labor senator Kimberley Kitching saying that the HK Watch report raised serious questions about the investment in firms linked to abuses.

"There are three reasons why Australian investors and fund managers need to ask themselves some tough questions. They need to ask whether their money is safe there in a country where the state can confiscate any asset at any time," she told The Australian.

"They need to ask whether they are enabling human rights abuses in Xinjiang, Hong Kong and Tibet.

"And, they need to ask whether they are supporting a regime that seems to be more and more hostile in its rhetoric aimed at neighbours, at our region and at our values. History teaches us to take threats from authoritarian regimes very seriously."

Questions about 'closeness' to Beijing

The major investments made in Australia are in tech giants Alibaba and Tencent, which the HK Watch report says now face major questions about their closeness to the Beijing regime.

But there are also investments in firms directly linked to allegations of human rights violations in Xinjiang and major money flows into the CCP's state organs.

Australian Super had invested heavily in Alibaba and Tencent with $563m and $409m in investments respectively.

The major super fund also has investments in Chinese state banks including $4.9m in Bank of China and $9m in China Construction Bank.

The HK Watch report also says that Australian Super has put $3.2m into surveillance company Hikvision which is on a US sanctions list over links to persecution of Uyghurs in China.

An Australian Super spokesman said consideration of human rights issues were part of its decision-making process, despite the controversial Chinese investments.

"The Fund has a longstanding program of integrating labour supply chain and human rights considerations into the equity investment process and identifies sectors where these issues can materially affect value. This is part of a broader program where we consider ESG factors both before we make an investment and also throughout the life of the investment," he said.

The federal government's Commonwealth Superannuation Scheme – which was created for the pensions of government employees – counts Alibaba and Tencent among its largest holdings, accounting for $51m and $71.5m respectively.

ANZ pension funds – now owned by IOOF – all include Alibaba, Tencent, China Mobile, China Telecommunications Corporation, and China Petroleum and Chemical Corporation in their holdings.

Macquarie Wealth's Emerging Markets Fund – operated outside the bank by Walter Scott & Partners — was found to have Tencent as its second largest holding (3.91 per cent of the fund) and Alibaba as its fifth largest holding (3.58 per cent of the fund).

UniSuper and Aware Super also have investments in Alibaba and Tencent.

Document AUSTOL0020210923eh9n001up

ZTE wins largest share in bid section 4 of China Mobile's high-end router centralized procurement

ZTE Corporation; PR Newswire
437 words
17 September 2021
14:28
PR Newswire Asia
PRNASI
English

SHENZHEN, China, Sept. 17, 2021 /PRNewswire/ -- ZTE Corporation (0763. HK / 000063.SZ), a major international provider of telecommunications, enterprise, and consumer technology solutions for the mobile internet, today announced that it has secured the share of 50% in section 4 of China Mobile's high-end router/switch centralized procurement 2021-2022, ranking No. 1 by virtue of its high-end routers ZXR10 M6000-18 S and ZXR10 M6000-8S Plus. This section is the largest one in the high-end router centralized procurement of China Mobile, containing the largest number of equipment.

ZTE will provide the routers to take the role of SR (Service Router) and PE (Provider Edge) in such scenarios as **cloud** private network, network **cloud**, 5G UPF (User Plane Function), IP private network and MAN (Metropolitan Area Network). Besides, ZTE will provide necessary equipment for the future IP network of China Mobile, especially **cloud** private networks and 5G transport networks.

Based on ROSng, the router operating system with its independent intellectual property rights, ZTE's high-end router ZXR10 M6000-S supports SR/EVPN/SRv6/BIER and boosts the evolution of IP networks towards simplicity and intelligence. The router employs the in-house NP (Network Processor) to enable the single-slot 1T performance, and reaches the industry-leading standards in forwarding performance, energy saving and SDN (Software Defined Network).

In June 2021, ZTE's high-end routers ZXR10 T8000 and ZXR10 M6000-3S ranked No. 2 in the comprehensive assessment, and were respectively selected for the bid section 3 & 5 of this procurement. In addition, in China Mobile's high-end router centralized procurement 2019-2020, ZTE's ZXR10 M6000-S ranked No. 1 in section 2 (for 2T high-end routers) and No. 2 in section 3 (for 400G high-end routers). So far, the ZXR10 M6000-S ranked top 2 in market share of the country.

As a driver of the digital economy, ZTE has been committed to delivering the leading digital infrastructure solutions. With its continuous innovation, the company has built up core competitiveness in standard patents, key technologies and product solutions to accelerate 5G network constructions.

Moving forward, ZTE, in partnership with China Mobile, will further innovate its 5G network technologies, and expedite commercial deployments of 5G networks to embrace a digital future.

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SOURCE ZTE Corporation

https://rt.prnewswire.com/rt.gif?NewsItemId=AE10728&Transmission_Id=202109170928PR_NEWS_ASPR__AE10728&DateId=20210917

Document PRNASI0020210917eh9h002jp

ZTE wins largest share in bid section 4 of China Mobile's high-end router centralized procurement

ZTE Corporation; PR Newswire
435 words
17 September 2021
12:23
PR Newswire Europe
TWOTEN
English

SHENZHEN, China, Sept. 17, 2021 /PRNewswire/ -- ZTE Corporation (0763. HK / 000063.SZ), a major international provider of telecommunications, enterprise, and consumer technology solutions for the mobile internet, today announced that it has secured the share of 50% in section 4 of China Mobile's high-end router/switch centralized procurement 2021-2022, ranking No. 1 by virtue of its high-end routers ZXR10 M6000-18 S and ZXR10 M6000-8S Plus. This section is the largest one in the high-end router centralized procurement of China Mobile, containing the largest number of equipment.

ZTE will provide the routers to take the role of SR (Service Router) and PE (Provider Edge) in such scenarios as **cloud** private network, network **cloud**, 5G UPF (User Plane Function), IP private network and MAN (Metropolitan Area Network). Besides, ZTE will provide necessary equipment for the future IP network of China Mobile, especially **cloud** private networks and 5G transport networks.

Based on ROSng, the router operating system with its independent intellectual property rights, ZTE's high-end router ZXR10 M6000-S supports SR/EVPN/SRv6/BIER and boosts the evolution of IP networks towards simplicity and intelligence. The router employs the in-house NP (Network Processor) to enable the single-slot 1T performance, and reaches the industry-leading standards in forwarding performance, energy saving and SDN (Software Defined Network).

In June 2021, ZTE's high-end routers ZXR10 T8000 and ZXR10 M6000-3S ranked No. 2 in the comprehensive assessment, and were respectively selected for the bid section 3 & 5 of this procurement. In addition, in China Mobile's high-end router centralized procurement 2019-2020, ZTE's ZXR10 M6000-S ranked No. 1 in section 2 (for 2T high-end routers) and No. 2 in section 3 (for 400G high-end routers). So far, the ZXR10 M6000-S ranked top 2 in market share of the country.

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Document TWOTEN0020210917eh9h0028l

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ZTE Corporation; Canada NewsWire
475 words
17 September 2021
11:40
Canada NewsWire
CNNW
English

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https://www.prnewswire.com/news-releases/zte-wins-largest-share-in-bid-section-4-of-china-mobiles-high-end-router-centralized-procurement-301379469.html

SOURCE ZTE Corporation

https://rt.prnewswire.com/rt.gif?NewsItemId=C4190&Transmission_Id=202109170640CANADANWCANADAPR_C4190&DateId=20210917

Document CNNW000020210917eh9h001b9

PR Newswire
a CISION company

(PR) ZTE wins largest share in bid section 4 of China Mobile's high-end router centralized procurement

452 words
17 September 2021
11:40
PR Newswire
PRN
English

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SOURCE ZTE Corporation

/Web site: www.zte.com.cn

(END)

Document PRN0000020210917eh9h0003g

Tsinghua Unisplendour Secures USD93.09 Million in Venture Funding

144 words
15 September 2021
MarketLine Financial Deals Tracker
FDTRA
English

Deal In Brief

Tsinghua Unisplendour Co Ltd, a China-based company which deals with electronic equipment and IT services, has secured CNY600 million in venture **funding** led by China Mobile Capital.

Deal Value (US$ Million)	93.1
Deal Type	Venture Finance
Sub-Category	Growth Capital/Expansion
Deal Status	Completed: 2021-09-15

Deal Participants

Target (Company)	Tsinghua Unisplendour Co., Ltd
Acquirer (Company)	China Mobile Capital Holding Co., Ltd

Deal Rationale

Tsinghua Unisplendour will use the proceeds for cloud computing and cloud service-related technology research and development, market expansion, and node construction.

Document FDTRA00020210925eh9f000bo

即市頭條- Latest News
CHINA MOBILE Initiates Tens of Billions of RMB Optic Cable Procurement Project

87 words
11 September 2021
AAStocks Financial News
AASFNE
English

CHINA MOBILE (00941.HK) announced to start the centralized procurement project of ordinary optical **cables** for 2021-22 as the market expects the sector's demand-supply dynamics to see further improvement.

The highest bidding price for this procurement project is set at RMB9.859 billion, with the procurement scale expanded by 20% and 36% respectively, compared to 2020 and 2019.

~

AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020210911eh9b0015p

BRIEF-Trigiant's Unit Successful Bidder For China Mobile's Centralised Procurement Project

53 words
6 September 2021
11:18
Reuters News
LBA
English

Sept 6 (Reuters) - Trigiant Group Ltd:

* UNIT SUCCESSFUL BIDDER FOR CHINA MOBILE'S CENTRALISED PROCUREMENT PROJECT IN RESPECT OF FEEDER **CABLES**

* TRIGIANT TECHNOLOGY'S BIDDING PRICE EXCLUDING TAX IS RMB2.69 BILLION Further company coverage:

Released: 2021-9-6T11:18:24.000Z

Document LBA0000020210906eh9601duh

Company
China Telecom surges 35 percent in Shanghai debut

Zhu Shenshen
250 words
20 August 2021
07:52
Shanghai Daily Online
SHNDOL
English

China Telecom surged almost 35 percent on Friday in its debut on the Shanghai stock market, bringing its market value close to 558 billion yuan (US$87.1 billion). The carrier, one of Chinas three biggest, raised 54.1 billion yuan in its initial public offering, the biggest IPO in a decade in the domestic capital market. The listing occurred several months after the company was delisted in the United States.China Telecom closed at 6.11 yuan, 34.9 percent above opening price. Also on Friday, China Telecom signed a strategic cooperation agreement with the Shanghai government covering areas such as 5G and smart city. China Telecom, China Mobile and China Unicom will all be listed on the Chinese market this year after being delisted from United States markets. They are all currently listed in Hong Kong.Through the IPO, China Telecom plans to finance a 5G industrial Internet project, expand its **cloud** business and make other innovations, the company said.

China Mobile has also applied to list on the Chinese mainland. In May, the three carriers were asked by US authorities to delist from the American market. China Telecoms domestic pivot is designed to neutralize the impact of that delisting.Many of Chinas biggest tech and telecom firms listed their shares on US stock markets in the early 2000s as they sought access to more funding, but since then the political tide has turned.

Click Here to View Image

Document SHNDOL0020210821eh8k0000m

Telecom Review; Telecom Review finds that 700 MHz 5G network construction drives investment and brings benefits to telecom vendors in China

383 words
20 August 2021
Investment Weekly News
INVWK
63
English

2021 AUG 28 (VerticalNews) -- By a News Reporter-Staff News Editor at **Investment** Weekly News -- Telecom Review finds that Chinese telecom carriers are making significant progress in constructing low-band 5G networks, and much of the attention is drawn to the 700MHz frequency which is part of the wider ultra-high frequency (UHF) band.

At the beginning of 2021, China Mobile and China Broadcasting Network (CBN) had announced a 5G strategic cooperation agreement to construct and share a 700 MHz 5G network. As a combined effort, they have purchased 480,400 700 MHz 5G base stations this year. According to Guang Yang at Strategy Analytics, this increase of base stations in 700 MHz will be a significant boost to the 5G **infrastructure** market and also a catalyst for the 5G development in China, since most of the 5G base stations in China so far are deployed in the 2.6 GHz or 3.5 GHz band.

China Telecom and China Unicom have also jointly launched the centralized procurement of 242,000 5G base stations and have recently released the announcement on public bidding involving the 2.1 GHz wireless primary device needed in the 5G SA construction project in 2021.

Telecom Review reports the increased 5G activities in 700 MHz band will drive 5G investment in China and benefit domestic equipment vendors like Huawei. In China Mobile and CBN bidding, Huawei, as the major infrastructure vendor in China's 5G market, has won around 60% of the total share. It is expected that Huawei will continue to be the biggest winner in the Chinese market in 2021 and the main vendor beneficiary of 5G CAPEX spending in China.

With the strength of wider coverage and low propagation loss, Telecom Review expects the low band 5G frequencies will enable a better 5G network experience and help companies like Huawei to demonstrate the true value of 5G, which will keep boosting the confidence of clients in its business continuity under the current circumstances.

Keywords for this news article include: Asia, China, Telecom Review, Investment and Finance.

Document INVWK00020210820eh8k000tg

Facebook, telcos to extend subsea cable to four countries

330 words
16 August 2021
11:38
Reuters News
LBA
English

JOHANNESBURG, Aug 16 (Reuters) - Facebook and a team of African and global telecoms companies will add four more countries to its world's largest subsea cable project, widening the build project in Africa earlier than planned, they said in a joint statement on Monday.

Internet **connectivity** will be expanded to the Seychelles, the Comoros Islands, Angola and bring a new landing point to south-east Nigeria. This is in addition to the recently announced extension to the Canary Islands, the companies said.

The consortium of the project, called 2Africa, comprises South Africa's MTN GlobalConnect, Facebook, Mauritius-based infrastructure provider WIOCC, China Mobile International, France's Orange SA, Saudi Arabia's stc, Telecom Egypt and Vodafone.

Alcatel Submarine Networks (ASN) has been selected to deploy the new "branches", which will increase the number of 2Africa landings to 35 in 26 countries, further improving connectivity into and around Africa, they added.

"Most of the subsea route survey activity is now complete. ASN has started manufacturing the cable and building repeater units in its factories in Calais and Greenwich to deploy the first segments in 2022," the companies said.

The consortium launched the cable, which is expected to go live in late 2023, in May 2020 to connect those countries in Africa, the Middle East and Europe.

Subsea cables form the backbone of the internet, carrying 99% of the world's data traffic.

Africa's big economies have a large and fast growing population of internet users, with growth in internet use fuelled by rapidly expanding mobile broadband networks and more affordable phones.

However, with a population of just above 1.3 billion, Africa is still a laggard in internet connectivity, with average mobile internet users at around 26% against a world average of 51%.

The companies said 2Africa will be the largest subsea cable project in the world. (Reporting by Nqobile Dludla; editing by David Evans)

Released: 2021-8-16T11:38:32.000Z

Document LBA0000020210816eh8g01nex

Facebook, Amazon seek U.S. approval to operate undersea data cable

136 words
13 August 2021
17:50
Reuters News
LBA
English

WASHINGTON, Aug 13 (Reuters) - Facebook Inc and Amazon.com Inc have asked the U.S. government for approval to operate a new undersea data cable between the Philippines and California after China Mobile agreed to exit the plan, a government agency said Friday.

The companies told the Federal Communications Commission they intend to start commercial operation by late 2022 and said the new data connection will "provide significant new capacity on routes where capacity demand continues to increase substantially each year." The company said the new cable will help support Facebook applications and provide Amazon and its affiliates with "capacity to support Amazon's **cloud** services offerings and connect its data centers." (Reporting by David Shepardson Editing by Chizu Nomiyama)

Released: 2021-8-13T17:50:20.000Z

Document LBA0000020210813eh8d033hx

Telecom Review finds that 700 MHz 5G network construction drives investment and brings benefits to telecom vendors in China

335 words
12 August 2021
Mmegi
MEWMMR
English

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Document MEWMMR0020210812eh8c0002t

BRIEF-Beijing Tongtech Signs MoU With China Mobile And Its Investment Subsidiary

53 words
11 August 2021
15:14
Reuters News
LBA
English

Aug 11 (Reuters) - Beijing Tongtech:

* SAYS IT SIGNS MOU WITH CHINA MOBILE AND ITS **INVESTMENT** SUBSIDIARY TO COOPERATE IN INTERNET BUSINESSES Source text in Chinese: https://bit.ly/3jFHD2e Further company coverage: (Reporting by Zhecheng Qian)

Released: 2021-8-11T15:14:45.000Z

Document LBA0000020210811eh8b02wv1

Telecom Review finds that 700 MHz 5G network construction drives investment and brings benefits to telecom vendors in China

Telecom Review; PR Newswire
458 words
11 August 2021
13:38
PR Newswire Asia
PRNASI
English

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editorial@tracemedia.info

SOURCE Telecom Review

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editorial@tracemedia.info

Document PRNASI0020210811eh8b001md

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Telecom Review; PR Newswire
456 words
11 August 2021
13:18
PR Newswire Europe
TWOTEN
English

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editorial@tracemedia.info

Document TWOTEN0020210811eh8b002ut

Company
China Telecom aims to raise US$8.5 billion in China market IPO

Zhu Shenshen
182 words
6 August 2021
12:09
Shanghai Daily Online
SHNDOL
English

China Telecom is set to raise up to 54.2 billion yuan (US$8.5 billion) as one of the biggest IPOs in China this year after setting its initial public offering price on Friday. The carrier set its IPO price at 4.53 yuan and plans to take online subscriptions on the Shanghai Stock Market on Monday, it said. China Telecom, China Mobile and China Unicom will be listed on the Chinese market this year after they were delisted from United States markets. They are all currently listed in Hong Kong.Through the IPO, China Telecom plans to finance a 5G industrial Internet project, **cloud** business expansion and other innovations, the company said.China Mobile has applied to list on the Chinese mainland and may be the biggest domestic IPO in the recent years.In May, the three carriers were asked by US authorities to delist from the American market. China Telecoms domestic pivot is to neutralize the impact of that delisting.

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Document SHNDOL0020210807eh860000a

即市頭條- Latest News
CHINA MOBILE, Huawei Sign 5G-Advanced Joint Innovation Partnership Memo

76 words
5 August 2021
AAStocks Financial News
AASFNE
English

CHINA MOBILE (00941.HK) and Huawei held the 5G-Advanced innovation industry summit meeting in Beijing on 3 August, signing the memorandum on 5G-Advanced joint innovation **partnership**. Cooperating with partners, CHINA MOBILE and Huawei will constantly construct, expand and activate the innovation chain and endeavor to lower the entry barrier of the industry.

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AAStocks Financial News

Web Site: www.aastocks.com

Document AASFNE0020210805eh85003pd

AML / KYC
US Investment Ban on 59 Chinese Companies Takes Effect

Editors, Regulation Asia
339 words
4 August 2021
Regulation Asia
REGASI
English

US persons that have not yet divested their holdings in 59 companies that operate in the defence or surveillance technology sectors have until 3 June 2022 to do so.

A ban on US persons investing in 59 Chinese companies with alleged ties to the country's military took effect on Monday (2 August).

The ban was originally imposed through EO 13959, enacted by former US president Donald Trump in November 2020. In June, President Joe Biden amended EO 13959 through EO 13974 to modify, expand upon and clarify the investment ban.

Effective from 2 August, US persons are prohibited from investing in the 59 Chinese companies that operate in the defence or surveillance technology sectors - including China Telecom, Huawei, Hikvision and SMIC.

US persons are prohibited from investing in these companies through their publicly-traded debt and equity securities, funds that contain the securities in their portfolios, and any related publicly-traded derivatives.

US persons that have not yet divested their holdings in the 59 companies have until 3 June 2022 to do so.

Only entities whose names exactly match the names of the entities on the list are subject to the prohibitions.

US persons are not prohibited from providing investment advisory, investment management, or similar services to a non-US person, including a foreign entity or foreign fund, in connection with the non-US person’s purchase or sale of the covered securities.

US persons employed by non-US entities are not prohibited from being involved in or facilitating purchases or sales related to a covered security on behalf of their non-US employer in the ordinary course of their employment.

Ahead of the ban taking effect, State Street Global Advisors Asia amended the prospectus of the Hong Kong Tracker Fund (TraHK) - which it manages - to prohibit investment from US investors.

TraHK tracks the Hang Seng Index, which includes China Mobile, China Unicom and CNOOC - which are named on the list of 59 companies.

Document REGASI0020210804eh8400003

Mobile IoT connections up 12% to reach over 1.7 bln in 2020

268 words
2 August 2021
Telecompaper World
TELWOR
English

The global number of cellular IoT subscribers increased by 12 percent during 2020 to reach 1.74 billion, according to a new report from the IoT market research firm Berg Insight. The regional markets Western Europe and North America recorded the highest growth rates at over 15 percent. By 2025, Berg Insight projects that there will be 3.74 billion IoT **devices** connected to cellular networks worldwide.

The top ten mobile operators reported a combined active base of 1.49 billion cellular IoT connections at the end of 2020, accounting for 86 percent of total connections. China Mobile is the world's largest provider of cellular IoT **connectivity** services with an estimated 658 million cellular IoT connections. China Unicom and China Telecom ranked second and third with 240 million and 238 million connections respectively.

Following China Mobile's decision to stop adding new IoT connections to its 2G network in the first half of 2020, it has embarked on a programme to migrate 2G users to NB-IoT and 4G LTE Cat-1 services.

Vodafone ranked first among the Western operators and fourth overall with 118 million connections, followed by AT&T with 81 million in fifth place. Verizon, Deutsche Telekom and Telefonica had in the range 26-48 million cellular IoT connections. Orange and Telenor were the last players in the top ten with about 18 million and 17 million connections respectively. Apart from Deutsche Telekom, year-on-year growth rates for the mentioned Western operators were in the range of 8-22 percent.

Document TELWOR0020210802eh820008g

即市頭條- Latest News
CHINA MOBILE's Migu, XIAOMI-W Launch 'Cubic Meter Project' to Invest Over RMB10B in Cloud Games

96 words
2 August 2021
AAStocks Financial News
AASFNE
English

CHINA MOBILE (00941.HK)'s Migu and XIAOMI-W (01810.HK) initiated the "Cubic Meter Project" (literal translation of "立方米計劃") with all participating parties purportedly investing over RMB10 billion to build an ecology for **cloud gaming** industry.

CHINA MOBILE will provide the developing and operating environment to the cloud native games, while XIAOMI-W, on the other hand, will supply user traffic service.

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THE AUSTRALIAN

Business
China investment story over as risks become elevated

James Kirby
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The Australian - Online
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Is the China **investment** story as we know it finished? In the same week China-dependent Rio Tinto delivered the biggest half-year dividend in Australian corporate history, the issue is unavoidable.

For a generation, Australian investors have warmed to the theme: as China develops, we invest to partake in the rich rewards for co-prosperity.

The problem is that China increasingly shows no regard for this narrative. “Market intervention” is now the name of the game: the Communist Party comes first and no stock or sector is safe.

It’s one of the reasons the tech titans Amazon and Apple were sold off this week even after record-breaking results. It’s the context behind A2 Milk’s share price almost halving this year, or why a “country fund” such as the iShares China Large Cap ETF is down 7 per cent in the past week.

The story that seduced investors goes back to the 1980s reign of Deng Xiaoping and what Harvard’s Richard Vietor tagged as among “the most successful development strategies ever” as China liberalised the economy while maintaining state power.

Now under President Xi Jinping, the narrative has changed.

In recent weeks the drama has been about the clampdown on tech stocks and the spoiled floats of groups such as Alibaba or Uber-rival Didi. This week the clampdowns took a new direction into private education – the listed industry saw huge losses after a rule change that rewrote the rules for this sector, mandating that it must now become “non-profit”.

According to Goldman Sachs, Chinese shares listed on overseas markets have lost $US1 trillion ($1.35 trillion) since February.

Talk about regulatory risk! This is a new dimension. It is elevating risk in relation to all China-related investments, and for Australian investors that means not just the sharemarket but all two-way commercial activity.

In many ways, the cost of the deterioration in Australia’s relationship with China has been masked by our iron ore miners. Unlike coal, wine or barley, China is not in a position to ban Rio, Fortescue or BHP because it does not yet have an alternative source of supply.

But that won’t last forever. This week, CBA commodity analyst Vivek Dhar warned of China “accelerating measures to reduce their dependence on Australian iron ore”. As Dhar points out, 50 per cent of all iron ore into China comes from Australia. But that dominance has most likely peaked, with China set to reduce its Australian dependence by increasing imports from Brazil and, ultimately, from Africa.

More importantly, Dhar suggests China will progressively use less iron ore as the economy matures from commodity-intensive projects to a service-based economy. And in many ways that’s the kernel of the issue – times have changed, the China that investors bought into 10 or even five years ago is no more. “China is more emboldened now and can better afford isolation on some issues,” says Peter Cai, project director, Australia-China relations at the Lowy Institute.

That’s why China has stood by as the Hang Seng index in Hong Kong has sunk by 10 per cent over the past six months while many of the world’s leading markets posted useful gains. As former prime minister (now UK trade adviser) Tony Abbott warned in widely reported comments midweek: “The Beijing government sees trade as a strategic weapon to be turned on and off, like a tap.”

Of course, there are two sides to the story. With each clampdown, China puts forward a justification – the clampdown on tech stocks is related to data, with ride-share stocks its to do with worker conditions, with private education it all relates to undue pressure on students.

But investors are not listening to these explanations. Rather, they fret over which shares or funds will be pummelled in the next “reform”. On the ASX, investors more lately have discovered how China – or even fears concerning China – can change the outlook. Our biggest listed telco, Telstra, was recently approached to co-invest with the government in bidding for Digicel Pacific. The imperative was political, not economic.

Intelligence agencies in Canberra are worried that Digicel Pacific may be bought by China Mobile. But there is no available evidence as yet that China Mobile is even interested in these South Pacific assets. No wonder Telstra chairman John Mullen is obfuscating on the issue. It’s an unlikely story but one that smacks of how deeply China’s aggressive tone has changed the game for all investors.

Where will it stop? “If you look at fund flows, international money is still pouring into China, but the risks have clearly become elevated,” says Cai at the Lowy Institute.

The momentum remains in China’s favour. But it’s hard to believe it will remain so – especially if China keeps closing its doors.

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HUAWEI -China Mobile Guangdong and Huawei Deploy the First OTN P2MP Cloud Access Private Line

595 words
28 July 2021
ENP Newswire
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English

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On July 25, the Guangdong branch of China Mobile (Guangdong Mobile) and Huawei took the lead in provisioning the OTN point-to-multipoint (P2MP) **cloud** access private line, providing low-latency and highly reliable differentiated **cloud** access experience for SMEs and helping them achieve digital and **cloud**-based transformation.

This private line further diversifies the enterprise private line products of China Mobile.

In 2019, the State Council of China officially released the Development Plan for Guangdong-Hong Kong-Macao Greater Bay Area. This document specifies the plan to promote rapid economic development and embrace emerging services and demands in the Greater Bay Area, cultivating a hotbed of innovation and growing the capabilities of new industries. By the end of 2020, there were 53,000 national high-tech enterprises in Guangdong province. One result of this digital and cloud-based transformation is that these enterprises have higher requirements on the latency and packet loss rate of private lines.

With 'Responsibility makes perfection' as its guideline, China Mobile strives to surpass itself and continuously provides premium communication services for enterprises and individuals. Following this guideline, Guangdong Mobile has always been committed to building premium basic communication networks for the Greater Bay Area. In 2018, Guangdong Mobile built the world's largest all-optical cross-connect network, including 81 OXC grooming hubs and implementing all-optical mesh and direct connections between nodes. Moreover, Guangdong Mobile has deployed over 2,000 OTN nodes to build a premium OTN private line network covering 21 prefecture-level cities in the province. This network is connected to Hong Kong and Macao operator networks as well as China Mobile's premium enterprise network to support fast private line access, providing enterprise customers with secure, on-demand, and flexible services.

The OTN P2MP cloud access private line solution launched by Guangdong Mobile and Huawei is an important piece in the existing enterprise private line product portfolio and meets the increasing quality requirements SMEs have for networking and cloud access private lines. By integrating OLTs and OTNs, this solution comprehensively converges gigabit access and all-optical networks, providing industry customers, such as SMEs, with a premium cloud access experience. This solution has the following advantages:

Fast network coverage: The OTN P2MP private line uses existing ODNs that have covered business buildings to implement fast coverage and provisioning of enterprise private lines.

Quality cloud access: OLTs innovatively use upstream OTN boards to transmit services over exclusive OTN channels. This prevents service congestion and ensures zero packet loss. In addition, innovative dual-channel isolation technology for service and management signals ensures that private lines achieve deterministic E2E low latency and provides premium cloud access experience for SMEs.

E2E smart management and control: This solution uses iMaster NCE, Huawei's management and control engine, to implement cross-domain management and control of OTNs and OLTs, fast E2E service provisioning, SLA visualization, and self-service bandwidth adjustment, offering self-service and e-commerce experience.

During the 14th Five-Year Plan period, the digital economy in the Greater Bay Area will develop rapidly. Guangdong Mobile will continue to increase their network quality and use wide-coverage OTNs to provide ubiquitous optical connections for various industries such as finance, healthcare, and education, as well as support business buildings. Together, this brings convenient, agile, and premium connections to facilitate the digital transformation of SMEs and promote the prosperity of the information society.

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

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Huawei Technologies Co. Ltd. - China Mobile Guangdong and Huawei Deploy the First OTN P2MP Cloud Access Private Line

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China Mobile Guangdong and Huawei Deploy the First OTN P2MP Cloud Access Private Line

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即市頭條- Latest News
CMHK Launches 24-hr Streaming Platform UTV Live

81 words
23 July 2021
AAStocks Financial News
AASFNE
English

CHINA MOBILE Hong Kong announced to launch a 24-hour streaming **platform** UTV Live, with over 30 hosts hired already.

The new platform will cover various lifestyle and entertainment aspects with a live chat feature, with the hope to become a local video-sharing and streaming social platform, said Waynffly Zhong, chief marketing officer at CHINA MOBILE Hong Kong.

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AAStocks Financial News

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Forum
High-tech rescue efforts in Henan

By GT staff reporters
575 words
23 July 2021
Global Times
GLOTNE
P09
English

Endian rescue team helps save elderly, children trapped in a university in Zhengzhou Photo:Li Hao/GT

Chinese technology companies are supporting flood rescue efforts in Central China's Henan Province, with drones, unmanned boats, remote water supply systems and **cloud**-logging services functioning as a much-needed, life-saving force to minimize the damage of the deadly natural disaster.

Responding to an emergency dispatch by the Ministry of Emergency Management, China Mobile, the world's largest telecom operator by subscribers, arranged for a large-scale Wing Loong drone to fly from Southwest China's Guizhou Province to Gongyi, one of the most battered areas in Henan, on Wednesday.

The drone, using the operator's wireless telecommunications base stations and stable communications signal with coverage of over 50 square kilometers, is capable of providing long-term, stable and continuous mobile network coverage for 24 hours without pausing, China Mobile told the Global Times on Thursday.

The offering of phone functionality by drones in disaster areas underscored the capability of China's tech workers, according to a note sent to the Global Times on Thursday by Hangkongwuyu, an aviation influencer.

Shenzhen-based drone giant DJI told the Global Times on Thursday that it was organizing local drone operators and resources to support quarantine and disinfection work.

In addition, unmanned vessels developed by Yunzhou Tech in Zhuhai, South China's Guangdong Province, were seen assisting with rescue work. Yunzhou has dispatched 118 rescue boats to support Henan's rescue efforts.

Such unmanned ships can carry three adults and be controlled from up to 800 meters away, Huang Wenting, director of Yunzhou Tech's marketing department, told the Global Times on Thursday.

Drones and unmanned ships - among other autonomous facilities that are readily available to the flood rescue task force - point to abundant technological reserves China has in mitigating natural disasters, Wang Peng, an assistant professor at the Gaoling School of Artificial Intelligence at the Renmin University of China, told the Global Times on Thursday.

On top of that, rescue equipment and remote water supply systems produced by Weihai Guangtai Airport Equipment Co in East China's Shandong Province were also deployed into flood-affected areas.

Weihai Guangtai's remote water supply system enables water supply from more than 6 kilometers away, as well as water drainage, and it can run 24/7, the Shenzhen-listed firm said on Thursday.

China Aerospace Science and Technology Corp said on Thursday that its weather monitoring, communication and navigation satellites provided related information for the province's rescue work.

Another example of the power of tech-aided rescue efforts was the sharing of valuable rescue information via cloud logging from the Chinese rival to Google Docs.

A widely circulated online Tencent Docs, named Information about People Waiting for Rescue, created by a university student named Manto, quickly spread. It has become a life-saving document for people stranded in the flood.

The shared document, which can be updated by several people at the same time, also became an information distribution center for both organizations and individuals who are willing to provide temporary shelter, medical assistance and other help.

Tencent said in a statement to the Global Times on Thursday that in coping with the torrential rain in Zhengzhou, Henan, Tencent Docs urgently launched the template of "Rescue Mutual Assistance Information Registration" and doubled the number of participants in simultaneous collaboration.

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