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The telecom capacity industry's daily

Regulating the cloud: an inevitability?

Cloud-based services are likely to become increasingly regulated by governments, according to a panel at PTC '10 in Honolulu. With more and more personal and commercial information being stored 'in the cloud', the panel said that regulators may be forced to step in as real-world legal issues start to take shape over information stored in clouds.

Columbia Business School economics professor Eli Noam said that laws regarding foreign ownership or workforce offshoring could soon become issues for cloud services. "Privacy and security are just two [issues], there's the issue of who can do what – call it 'cloud neutrality', there's the issue of media content, quasi-broadcasters, media laws, there's the issue of offshoring, industrial policy, offshoring of electronic commerce and technology jobs, and also sovereignty to foreign companies [under] potentially hostile foreign governments, payment imbalance issues, domestic ownership issues... all these issues we've been dealing with in other contexts will be issues for the cloud," he said.

Telecom New Zealand International GM Anthony Briscoe said that governments globally will be more inclined to regulate cloud services as public funds are put towards broadband rollouts. Briscoe cited the New Zealand government's ultra-fast broadband policy as well as Australia's A\$43b National Broadband Network plan, saying that governments will be keen to ensure that they maintain some aspect of control over how the network is used.

"Unfortunately people like to believe [we're working towards] less regulations – I think in this context it could be really easily the opposite," he said. "If the government's going to spend that kind of money, then guess what? They're going to want to get involved in how it's run, how it's administrated. I mean, governments exist to make rules."

Briscoe warned that while governments will be inclined to play a greater role in network and cloud-service regulation, interfering could have adverse effects on the market. "People said that this network would bring an enormous [amount] of freedom, governments don't like that. You break down borders, you break down sovereignty. They don't like that so I think you're going to find more regulation. And the danger is that regulation will actually stifle the whole development."

Noam said that cloud services combined with faster broadband would allow companies to offshore IT jobs – something which governments would oppose, particularly if they had invested public funds in the network. "Once a government is called upon increasingly to provide infrastructure... then if those pipes become dumb pipes and are exit routes for IT services that end up in Bangalore and Silicon Valley then they'll say 'hey wait a moment, that's not why we built this'," he said.

WHO OWNS THE CUSTOMER? Briscoe said regulations regarding how telcos handle customer data would have to be changed. With telcos currently obliged to keep call records and other information, Briscoe said telcos could not be held responsible for the failings of cloud services. "If you put things on Facebook, they have that relationship. So how can they expect then the customer owner, which is really now a dumb pipe, to have responsibility for all privacy issues? In the global cloud... where does that information sit?"

"The telco doesn't have the relationship now. All you are is the pipe supplier – if the customer decides goes to Google and if [personal information] leaks from Google then that's the customer's problem," he said.

Luke Coleman



Industry long way from complete IP voice migration

VoIP migration may have seen rapid growth in a decade but there is still more work to do, according to iBasis and Tata Communications. Speaking on a 'point-counterpoint' session at PTC '10, iBasis COO Paul Floyd and Tata product marketing and business development SVP Christian Michaud said the industry still had work to do in migrating to voice over IP, which promises to unlock a raft of benefits for operators.

"I think there's still a lot of work to do and I think it's going to have to increase substantially," Michaud said. "Why are we doing [it]? We're doing it to reach efficiencies [in the] network, and reducing our costs of changing traffic, and until we get that momentum of really transferring everything on an IP interconnect, it's going to be tough to get the full benefits of that migration."

“There’s certainly a lot of advantages in moving to IP,” Floyd added. “In 2008 there was 60% growth in traffic going to voice over IP for international wholesale, and voice over IP now represents 20% of the total international wholesale traffic. That’s really quite substantial when you look at a technology that really just started being introduced in the late 90’s, so in ten years it’s gone from zero to 27%... that doesn’t include all of the voice over IP traffic that’s going from computer to computer like Skype, and that’s representing a fair amount of traffic also.”

“We’d like to see it move faster, there are a lot of advantages to voice over IP that we’ll get as we get further and further penetration of it,” Floyd said.

Both Michaud and Floyd said that international voice outsourcing would also lead to greater efficiencies for many players. “[If] it’s not their core business, they don’t have total focus, they don’t have the scale they need to achieve those economies of scale then I think outsourcing is a good potential solution for them,” Michaud (right) said. “It can also be a good solution to address complexity, because the large carriers have established solutions to address number portability, e-num, route management and so on. For the carriers that are dealing with their retail markets and need to stay focussed... I think the scale and complexity you need to be winning the game in the international area is very complex for them so outsourcing is a good solution.”



Luke Coleman

Floyd said that while large carriers were using outsourcing when volumes were low, new mobile companies and voice over broadband players were proving big fans of outsourced international voice. “With that group of customers, international may be fairly new to them... it can be very attractive to them rather than trying to get their own international network, trying to get their own agreements around the world or investing in their own systems which can get quite complex, they can just outsource it.”

Aid and development agencies back broadband

Broadband rollouts are becoming a focus for aid and development agencies globally, according to George McLaughlin, former executive director of Australian research network AARNet. Speaking at PTC ’10, McLaughlin said that aid agencies had been investing in broadband networks in developing nations due to the gamut of resulting social benefits.

“Over the last few years [one thing] we’ve seen happen is a much greater interest by aid and development agencies in funding network-related projects, particularly for developing countries,” he said. Agencies like EuropeAid have been backing broadband network rollouts in Bhutan, Bangladesh and Cambodia, with broadband enabling doctors to be trained via video conference and computer tracking of natural disasters.

“One of the important things about improving and saving lives is the ability to get critical information on the instigation and tracking of natural disaster paths, particularly things like typhoons. You’ve got to get that information to people who need to know as quickly as possible,” McLaughlin said.

He described how broadband was already being used to more effectively treat patients in developing countries. “An orthodontist from Melbourne in Australia goes to Vietnam three times a year to treat Vietnamese children with cleft palate problems,” McLaughlin said.

“[The orthodontist] has developed a broadband-enabled dental assessment chair, complete with intra-oral and external cameras. Two of these have now been shipped to Vietnam... the plan is that in the future, before [he] goes to Vietnam he will have pre-examined the kids he’s going to treat, he will have spent some time helping the training of people, the practitioners in Vietnam, he will go there, hit the ground running, be able to use his time more productively and then when he comes back to Australia he’ll be able to participate in follow up action. There is a certain irony that we’re now getting closer to being able to do this between Melbourne and the appropriate outstations in Vietnam, but we still have extreme difficulty doing it between Melbourne and outer parts of [the state of] Victoria in Australia.”

Luke Coleman

Facebook wants to cut out IP transit costs

Transport is becoming increasingly challenging for major Internet content providers, according to attendees of this year’s Pacific Telecommunications Council. “My goal is to cut out the Internet,” announced Facebook network engineering manager Dan Williams. The company currently splits traffic equally between peering and IP transit but hopes to phase out the latter approach. Williams said the driver was performance rather than cost.

Yahoo infrastructure and operations strategy vice president Raj Patel said IP providers would remain part

of the company's ecosystem. Peering ensures route diversity, he said. Google engineering and architecture senior manager Vijay Gill said content providers' needs largely corresponded with those of their carrier partners, although sometimes Google's requirements leapt ahead of carriers' upgrade cycles.

Patel said content transport challenges varied regionally. "What's on my mind is maturing infrastructure in Asia Pacific," he said. "Obviously there's growth. Everybody knows the statistics of where the next half a billion Internet users are going to come from." Williams concurred, revealing costs to access some Asia Pacific markets were twice as high as securing a spot on European rings.

Major content suppliers also face a second major expense. "Power is the dominant cost," said Gill, noting it made sense for major content providers to invest in owned assets once electricity consumption approached the 4MW mark. This in turn has spurred Google to begin looking at "systems" rather than data centers. "Really what you're building is a warehouse-scale computer."

Williams echoed this sentiment, noting Facebook would soon be forced to build its own facilities as growth had made leasing too expensive. But he declined to be drawn on a speculated Facebook capacity play, stating the company would continue to rely on partners for at least the next few years. PoPs are a different story. Williams cited a 40% increase in regional response time after Facebook deployed its first European point of presence – a move he credited with jumpstarting continental uptake.

Growing costs present an opportunity for new transport ideas. Patel said Yahoo was keen to see suppliers develop cost-effective non-blocking networks outside the data center.

Patrick Neighly



From left: Facebook's Williams, Google's Gill

PTC'10 panel: the cloud is a three-way win

Cloud computing is likely to accelerate ICT revenues even as disruptive business models shake up traditional income streams, according to carrier bosses speaking at PTC'10. "It's a three-way win," claimed AT&T business development head Joe Weinman. "It's a win for infrastructure. It's a win for enterprises. It's a win for service providers. Perhaps counter-intuitively, it's also a win for hardware vendors who are selling computing equipment into both of those environments."

OpSource CEO Treb Ryan said overall spend would rise but providers' individual share may fall. "We're all spending more on technology than we were 10 years ago, and it's hard to believe our children will spend less than we do today. But value shifts to a different part of the equation," he said.

"When people are using an Amazon cloud environment, one of the things they get from Amazon is data transfer. When you're transferring data off of Amazon out to users of your own system, you're no longer putting that on your own network anymore." That has two implications for carriers: loss of direct enterprise revenue and weaker income per bit thanks to Amazon's leverage. "Amazon has a much greater buying capability and a much greater utilization curve than any individual hardware provider."

Ryan warned the rise of cloud computing was likely to have significant revenue impact, referring again to an enterprise shifting to Amazon services. "The question is whether [carriers] want to give that to Amazon. Its bandwidth cost is what, a quarter what you're selling to enterprises? Or do you want to sell directly? The point being, if you want to take advantage of that increased spend, you cannot get shoved down to the bottom of the stack."

Ryan said OpSource pays about \$7 per Mb for bandwidth. Would carriers rather have that \$7 or the \$50 billable directly to enterprises - to say nothing of large cloud providers. "How do I as a provider not get pushed down to the \$2 Amazon will give me as opposed to the \$50 someone else will?"

Weinman insisted savvy carriers would succeed. He compared AT&T to Amazon and said it could leverage its global infrastructure to deploy new revenue generators. "We have a global service capability," he said. "But even without that, I would suggest that there is no problem. More and more bandwidth is utilized, because more and more stuff moves into the cloud. You have enterprise to cloud data center linkages you



FROM LEFT: XO Communications VP carrier services operations Don MacNeil, TW Telecom SVP business development strategy Michael Rouleau, OpSource CEO Treb Ryan

didn't have, as well as greater use through the available cloud services."

He said AT&T was already registering a cost displacement effect. "Instead of hopping on a plane and spending thousands of dollars, I just use TelePresence, which is a cloud service. So I have reduced my total cost, but I have also shifted money away from airlines and hotels to telecoms service providers. And as costs go down, you begin to do things you hadn't thought of before."

Weinman said the market would evolve around cloud services and argued the importance of revenue per bit would fall away. "If you look at the total spend on IT and telecommunications, it went from zero a hundred years ago to a \$2 trillion market because prices have come down. Network, hardware and software companies will win," he insisted. "Now which ones win will depend on which ones can plan for that environment."

Patrick Neighly

iBasis, Sparkle migrate voice traffic to IP

iBasis and Telecom Italia unit Sparkle migrated their bilateral voice traffic to IP earlier this week, an industry first the company believes presages a wider shift. "I think we'll see a lot more of these kind of conversions going on to IP," iBasis marketing communications senior director Chris Ward told CommsDay.

"To the best of our knowledge, it is the first bi-lateral to be migrated to IP in accordance with the I3 Forum specifications. There's been a lot of work done by members of the I3 Forum - including iBasis - on defining the specifications and guidelines for establishing secure IP interconnects and migrating bilaterals over."

Ward said the move was "the beginning of not just proof of concept, but proof that technically this can really work." iBasis is trumpeting the migration at this week's PTC '10. "It triggers a lot of interest from other parties about how this is working, and exactly what kind of traffic are you exchanging, and what are you providing, and just how the process came about."

This year marks the first PTC attendance by iBasis as a wholly owned unit of KPN. "When we did the first transaction of KPN in October of 2007, they became majority shareholder. So we became a KPN affiliate. So we were sort of part of the family, but also independent of the family. When we did that, that really caught a lot of people by surprise," Ward explained. "They were really surprised to see iBasis do this kind of a deal with KPN and vice versa. A major part of that transaction was a long-term outsourcing agreement with KPN in which we carry all the international voice traffic for KPN, including the KPN mobile entities in Germany and Belgium. The initial wave of surprise in the industry happened two and a half years ago."

Ward said the union had positive implications for iBasis moving forward. "I think now the first reaction in the industry is how is this different, and what does it really mean? I think the answer to that is that as a wholly owned subsidiary of KPN there's much more transparency between the company and the various companies within the family," he said. "There's a much smoother path to cooperation with those other businesses within KPN and our ability to leverage the resources at KPN, whether it's product lines or markets that they're in, is much enhanced. In addition to that, we have the full support of the KPN management. They fully support the existing strategy of the company, in terms of our very strong focus on outsourcing. They're very eager to have iBasis grow and contribute sustainable growth to KPN."

Ward told CommsDay that iBasis was optimistic about 2010, wagering the KPN deal will offset any recessionary impact by opening up new opportunities. "I think the global economy is improving slowly. Recessions can only last for so long, and then people just get tired of hunkering down and they start spending again. Things start moving again," he said. "So we're very optimistic about the year. I think we'll see growth in all lines of our business. We have opportunities to partner with other businesses within KPN. I think a year from now we'll see things like us working much more closely with the data side of KPN. We're occasionally selling to the same customers, to different people within those customers. We can go with a more consolidated offering and be more of a strategic partner for them. I think we'll see more of that."

Any headwinds are likely to be economic rather than technological, Ward predicted. "I don't think there are any technology storm clouds on the horizon. If anything, from the technology perspective things look really bright. The migration to IP favors us; we have a lot of experience in IP. We're quite far along in our IPX development. That kind of movement bodes really well for our business and the industry. As long as the industry continues to innovate, it continues to create opportunities for growth and for new businesses to emerge. I see a lot of promise on the horizon. The storm clouds were a year ago and are starting to pass."

Patrick Neighly



It's official: SingTel joins SJC

As anticipated, SingTel has joined the consortium that is building the 17 Tbps SJC cable connecting South Asia to Japan. SJC is backed by a Google and a number of Asian operators, including Globe Telecom, KDDI, Network i2i (Bharti), Reliance Globalcom, Telemidia Pacific and PT Telekomunikasi Indonesia.

The system is expected to cost around US\$400 million and span 8,300 kilometres connecting Singapore, Philippines, Indonesia, Hong Kong and Japan. The initial announcement put the design capacity of the 6-fibre cable at 17Tbps – upgradeable to 23Tbps, making it the highest capacity for any cable ever announced. The system is expected for RFS by the second quarter of 2012.

According to the consortium, the cable will be designed to avoid disaster prone areas like the earthquake zone off the coast of Taiwan, and connect directly to the Google-backed trans-Pacific cable Unity.

SJC consortium members SingTel, Bharti and KDDI are also members of the Unity consortium. Not surprisingly, the other major Unity backer, Pacnet, who owns two intra-Asia cable systems, is not part of the SJC project.

China Telecom, Tinet in global Ethernet pact

China Telecom Europe has signed a partnership agreement with Tinet that will expand the international Ethernet capabilities of both operators.

The combined Layer 2 carrier Ethernet service of the operators will now reach more than 220 POPs in China, over 70 POPs in Europe and more than 15 POPs in other regions.

According to the operators, the partnership offers mutual benefits to both Tinet and China Telecom.

“China Telecom customers will be able to connect their offices in Europe and the rest of the world through standard Ethernet interface on a point-to-point or point-to-multipoint International Ethernet connectivity with speeds ranging up to 1000Mbps,” the operators said. “

Tinet will provide its Ethernet Extension – a layer 2 service with end-to-end VPLS support and bandwidth and latency guarantees, to facilitate the international Ethernet connectivity requirements of China Telecom’s customers. Tinet’s Ethernet Extension service delivers Ethernet-based local access across global markets through NNIs with local providers.

“It is a wholesale service aimed at supplying last mile connectivity into international destinations to those regional service providers that have a need to fulfill the global networking requirements of their enterprise customers,” Tinet said.

The deal should also mean that customers of Tinet’s Ethernet Extension service will conversely be able to access China Telecom’s domestic POPs.

“Tinet has the capability to satisfy China Telecom’s stringent technical requirements, including VLAN Tag support, Q in Q, large MTU size requirements and VPLS support with a global service level agreement,” states Yan Ou, MD of China Telecom Europe.



NTT Com launches VPN-based multipoint video conferencing

NTT Communications will launch a multi-point video conferencing service in Japan on 20 January. The solution will combine a cloud-based multipoint control unit with NTT Com’s VPN offering, Arcstar IP VPN and e-VLAN, NTT said.

The new solution is expected to alleviate the heavy investment required for high quality video conferencing systems for companies with geographically dispersed locations within Japan.

“Thanks to NTT Com’s new service, customers now can introduce video conference systems quickly and easily, and for a much lower initial cost,” NTT Com said. “The MCU, a high-cost piece of hardware if purchased outright, is offered as a cloud-based solution via NTT Com’s Application Gateway Service, which connects applications to the VPN. Once up and running, the system is operated for flat-rate monthly charge.”

The solution will also offer one-stop management with dedicated engineers standing by at NTT Com’s video conferencing operation centre.

According to NTT Com, the service will be expanded for global customers over its international VPN infrastructure by 2010.

HUAWEI TO BUILD DWDM LINK FOR GLOBENET

Huawei Technologies has been selected by US-based backbone operator GlobeNet, to supply a DWDM backbone between its cable landing station in New Jersey to its POP in sites in New York City. These links allow GlobeNet to seamlessly offer high availability services from NYC to its cable landing sites in Brazil, Venezuela, Bermuda, Florida and beyond, the companies said. Under the agreement, Huawei will provide its OSN 6800 NG-DWDM OTN optical platform hardware and also upgrade the software of GlobeNet's existing iManager T2000 Network Management System. The new solution will support 10G, 40G, and future 100G wavelengths.

GLOBE REVEALS SECOND FIBRE BACKBONE

Philippines' Globe Telecom says it has put a second fibre backbone network in the country into operation. The FOBN2 network was completed in November 2009 at a cost of US\$70 million, a Globe statement said this week. The DWDM-based FOBN2 network will support the continuing demand for broadband services in the country, as well as serve as diversity for Globe's initial fibre backbone, FOBN1, the operator said. FOBN2 will have an initial design capacity of 400Gbps, spanning 1,900 km to cover major locations in Luzon, Visayas, and Mindanao.

ERICSSON APPOINTS NEW BUSINESS HEADS

Ericsson has named Magnus Mandersson head of Global Services and Rima Qureshi head of CDMA Mobile Systems. In the services division, Magnus now leads operations in areas such as managed services, systems integration and consulting. Services is one of the firm's growth areas and the segment grew 20% in the first nine months of 2009 with good profitability. "Services has an increasingly important role in the company and supports operators in increasing their operational efficiency. We now have access to North American CDMA customers whom we'll support in their transition to LTE. I have appointed two highly competent people with broad experience and excellent leadership skills to lead these businesses. In addition, Magnus has key insights from our customers' realities and Rima adds deep knowledge from R&D and operations," said president and CEO Hans Vestberg. Meanwhile, for CDMA mobile systems, which Ericsson acquired in North America in November 2009 together with the LTE business, Rima Qureshi will head operations in North America and China. Both Magnus and Rima will be members of the Group Management Team.

TATA TO BUY BT'S MOSAIC BUSINESS

Tata Communications is set to acquire Mosaic business of BT Group. The business provides an on-demand digital media management platform that manages content and workflow from production to distribution across collaborative market ecosystems. The acquisition will strengthen Tata Communication's global media and entertainment portfolio with cloud-based digital media management applications that can be accessed over the web. It will also enhance its existing portfolio of services that it is offering to the media and entertainment sector.

BRAZIL TO AUCTION WIMAX SPECTRUM IN 2010

A Brazilian WiMAX market is expected to emerge this year with auctions expected for the 3.5GHz, 2.5GHz, 450MHz bands and remaining 3G spectrum, according to a report from Maravedis. "As the largest market in Latin America, Brazil offers attractive opportunities for 4G operators. Demand for wireless broadband access is intensifying, but lack of sufficient spectrum has delayed many commercial network deployments. With two public consultations held in 2009 for 2.5GHz and 3.5GHz spectrum allocation, Anatel could release spectrum for the development of 4G this year," explained report author and senior analyst for Latin America Cintia Garza.

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