SESSION 1: ECONOMIST INTELLIGENCE UNIT RESEARCH ANALYSIS

SPEAKER:
Jason Sumner,
Senior telecoms analyst,
Economist Intelligence Unit

Kicking off the inSPiration Summit, Jason Sumner set the context for the day by sharing data about connectivity—specifically on the intersection of mobile providers, industry, application development, and the cultural atmospheres around them. Sumner shared high-level findings from two pieces of research on connectivity from the Economist Intelligence Unit that addressed two big questions: "What are some of the new broadband services out there?" and "How do those services become monetized?"

The first report focuses on the App Gap Index (newly released research); and the second report (published in June 2013) focuses on government broadband plans. The three industries focused on in the reports—finance, energy and health—were chosen because: they represent utilities that everyone requires access to globally; are the most regulated; and their sophistication on a national level correlates with potential of mobile penetration. Sumner shared that mobile penetration is impacted by quality of regulatory environments, service deficits and ubiquity of mobile broadband availability.

A few conclusions from the research are clear: 1) connectivity is about to explode; 2) the role of mobile providers is shifting; and 3) partnerships are needed among the players involved in connectivity.

KEY TAKEAWAYS:

Connectivity gaps in infrastructure globally

- 3G pilots are limited around the world, but becoming more and more common in developing countries and could be the first phase in leapfrogging to 4G video-capable systems for some areas. Both governments and private enterprises are funding some 3G & 4G pilots.
- South Korea is the current leader and is expected to really innovate. The country currently has a high service deficit, but nearly full

ubiquity in mobile broadbands with a very small gap in services provided.

Link between connectivity and basic needs related to finance, energy and healthcare

- Health care is slow moving. Despite huge potential in emerging markets, the healthcare gap seems to be the widest for two reasons: many cultures will only consider in-person medical care; and many doctors are conservative in their technology adoption out of fear of harming patients.
- Nations where governments have more control of health services could be seen as pure potential as adoption of apps could be implemented much more quickly.

Making data more valuable with analytics

- Mobile carriers are hesitant to sell location-based anoynymized data due to regulatory and public concerns around privacy. Some find the sales of anoynymized location-based mobile data helpful and cited the use of data in Tokyo as a great source for improving service over the JR as well as a source for tracking population movements during disasters.
- Mobile providers are beginning to think about adding an analytics layer to their capabilities to help interpret the massive amounts of data transmitted over their networks, in turn making that data more useable.

Regulation is an issue

- As early adopter countries advance, it's clear there will need to be some regulations around prioritization of data over networks to avoid overblowing those systems. The conversation around this has begun in the U.S.
- Progress in mobile in regards to healthcare apps is most likely slowed due to laws around health care data. Culturally, there is a push against those regulations emerging, specifically from new health cooperatives.

Privacy is an issue

- Privacy questions around data abound globally. The EU is currently working on net neutrality and privacy. The U.S. is dealing with huge Congressional privacy restrictions. Addressing the privacy question is only beginning to happen in developing regions.
- Many regions, such as the EU, are requiring that customers have the option to opt out of having any of their data shared.

Media distribution is a hot topic

- In the case of television and media distribution, providers are racing to keep up with their primary customers—various operators, device makers and operating systems, with operators in a position to bring their services to a wider population.
- From a consumer perspective in

regards to video, it's all about platform distributors like Netflix and Hulu and the chance to get content directly. However, consumers do want access to media conveniently and therefore too much direct contact could fractionalize the industry detrimentally.

- In media distribution, there are three main issues: 1) the consumer need for simplicity in getting content; 2) keeping up with early adopters; and 3) content owners being very risk adverse and moving slowly on distribution.

"What connectivity does is give us a chance to disrupt other industries—energy, financial services, education, and the list goes on and on. But what's really happening is that it's not just connectivity, but it's software being mobilized."

– Jason Sumner, Senior telecoms analyst, Economist Intelligence Unit

SESSION 2: TODAY'S GROUNDBREAKERS

MODERATOR:
Tom Standage,
Digital editor,
The Economist

SPEAKERS:
Rich Clow,
Global head of mobile strategy,
Citi

K.B. Chandrasekhar,
Chief executive & chairman,
Jamcracker

Greg Petroff,
Chief experience officer,
GE Software

Today's Groundbreakers built on the Economist Intelligence Unit's research findings by exploring best practices and the challenges and opportunities for companies in the mobility space. Panelists were chosen so real life examples of the mobile ecosystem could be examined from the perspectives of finance, energy, hardware construction and app developers. Mobility has helped the previously unbanked get banked, helped engineers monitor their customers equipment remotely, and for data collected from more and more sources, helped in centralization efforts.

The audience learned that corporations and telcos are much more open to acquiring small companies that have invented necessary technology for innovation; that telco infrastructure (aka "dumb pipes") are still critical; that telcos are great at hardware while developers are better at UX; that networks need to be more resilient and flexible; and that telcos have access to big data and should consider getting into analytics to make that data more valuable. It was abundantly clear by the end of the session that telcos, customers, and developers all need each other, but that the parameters of those relationships aren't always clear—sometimes to the detriment of product development or customer experiences.

The audience also learned that telco systems are more integrated and seen as technology partners outside of the United States, where telcos are regionally divided, making networks more complicated. The desire to make networks everywhere more connected has pushed for new technologies with sensors, network make-ups, cloud systems, apps, and cultural shifts to help more traditional companies become more innovative (though they realize that they're still having trouble becoming more creative). The entire panel agreed that no one has all of the answers when it comes to mobility and that partnering is necessary.

KEY TAKEAWAYS:

Partnering

- Some merging telcos are acting bank-like via enforced cooperation with banks, because it's easier to partner with an established ecosystem than build their own.
- In some markets, especially in the U.S., aggregation strategies are typically dependent upon local provider networks, typically fueled by software bundling. Now there is a push for telcos to become brokers for cloud services.

Development for efficiency

- Using HTML5 and being driven by rapid adoption, some big companies, like GE, have leap-frogged over web-based solutions to a bottom-up tech stack

Rich Clow, Global head of mobile strategy Citi; K.B. Chandrasekhar, Chief executive & chairman, Jamcracker; Greg Petroff, Chief experience officer, GE Software

approach, creating mobile apps first, then tablets and then desktop solutions. They're having faster, if not perfect releases, that can be fixed iteratively and easily with huge financial savings because of the faster development time with less need of piecemealed, external agency help.

- As noted by GE, mobile technology has allowed for the application of sensors on all sorts of machines so they can be constantly monitored, which results in improved machine maintenance via small technology tweaks and the ability to serve customers better. An example that GE gave was of jet engines for Emirates Airlines that all go into Dubai. Via the use of sensors, they realized that those engines needed more maintenance due to exposure to sand and were able to develop a water wash method to avoid more service calls.

Privacy & security are top of mind

- Big companies that managed assets into internal service providers that manage aggregation services, are essentially becoming

"We're definitely up for partnering and we [have] made some partnerships already."

– Greg Petroff, Chief experience officer, GE Software

"As a result of [cloud app providing], you will see people will be able to monetize those things much more easily"

– K.B. Chandrasekhar, Chief executive & chairman, Jamcracker

their own cloud brokers with much tighter security.

- There are huge privacy and regulation challenges in data collection and storing that telcos can help with, specifically: keeping data within the national boundaries it has been collected in; preventing cyber-attacks; implementing machine control; and regulations for various industries such as health, energy and finance.

Landscapes are shifting

- In banking and payments, standards are still a challenge because technologies haven't uniformly normalized yet. However, they see SIM cards as a strong possibility for mobile payments; POS is still relevant because of fees associated with services like Square. There is definitely room for a new disruption.
- Even in energy, which is geared towards creating long-term products, there's a push for a mindset shift from the more conservative "think lots, make second" mindset to a more innovative "make first, think second" mindset.

Developing countries present different obstacles and opportunities

- Sometimes governments of developing countries are involved in leapfrogging technologies, such as mobile payments, which helps make regulations easier for technology providers to navigate
- Two learned obstacles for developed markets: 1) know your customer; and 2) money laundering is a risk for telcos and banking alike.

SESSION 3: TOMORROW'S CONNECTORS

Shifting from a discussion around present working and revenue models, this session focused on some of the edgier things that are happening now, as well as possibilities for the future for telcos, app developers and corporations. Instead of completely re-inventing new revenue and infrastructure models, all of the panelists talked about pushing for incremental changes that would involve building on models that are in place already. Everyone agreed that the "dumb pipes" (aka telco infrastructures) aren't going away any time soon and that there isn't much competition for telcos when it comes to building infrastructure—though they've not quite built networks that are big enough and fast enough to support all of the innovation that consumers and developers desire. Hardware needs software to function—and those hardware systems, which are very expensive to maintain and innovate, don't always keep up. However, it again became clear that everyone in this space feels a need to pivot their offerings: Sprint is analyzing its data for advertising purposes, Dropcam realizes that hardware providers also need to provide software to add real value, and app developers (like CI&T) need to stay nimble as they navigate

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Tom Standage,
Digital editor,
The Economist

SPEAKERS:
Greg Duffy,
Chief executive,
Dropcam

Bruno Guicardi,
Chief executive, CI&T,
North America

Evan Conway,
Vice-president, Pinsight Media,
Sprint

Greg Duffy, Chief executive, Dropcam; Bruno Guicardi, Chief executive, CI&T, North America; Evan Conway, Vice-president at Pinsight Media, Sprint

"If you're going to build hardware today, you also have to be a software business. Otherwise someone will come eat your lunch by making better software in your category."

– Greg Duffy,
Chief executive, Dropcam

relationships with telcos and the fickleness of consumers' ever changing desires.

Partnerships were spoken about extensively. The panelists echoed other sessions by discussing the strengths of the different players: app developers are better at customer experience while telcos are generally better at hardware and building APIs. The reverse is also true: app developers, though enjoying cheaper costs of innovation, aren't really equipped to build large network infrastructures, and telcos frequently don't have the skills or creativity to build apps. However, these panelists seemed more open to mixing their roles up a bit: telcos are acquiring more and more app builders and developers to expand their services, and some software companies are getting into hardware (Dropcam and Google Fiber stated as examples).

It's clear that the landscape is getting ever more complicated, with different players jig-sawing together to create current network landscapes. These jig-sawed arrangements sometimes result in poor communications amongst the various entities, which can detract from customer service—frequently leading to scenarios where each player blames the other for service issues instead of helping customers. The panelists dream of a future where all players will be properly trained on each other's offerings, so help desks will have a more accurate understanding of where service breakdowns happen, so customers will have their issues solved seamlessly.

In the meantime, all of the partners involved, will continue to work together to help consumers get the three information technologies that underlie information processing: general-purpose computing; packet & service connectivity; and random access to storage. The market possibilities

"The challenge with outsourcing software development is that you kind of remove the ownership over UX...it's like hot potato of who's actually going to make this thing good."

– Evan Conway,
Vice-president,
Pinsight Media, Sprint

for providing those services are endless and require all partners to work together: a clear motivation, indeed.

KEY TAKEAWAYS:

Hardware & services can be bundled for more value

- Dropcam found that it was hard for them to create value when only building hardware—the true value of their offering became clear when their hardware was also bundled with cloud based service software.
- Telco acquisition of small companies that develop apps or manufacture hardware can create new revenue streams for them, like NTT's security-capability packages.
- There is a big opportunity for telcos to compete on the software side more and they should shift their organizations more to meet them, says Guicardi.

1+1=3 Small companies and large companies enjoy different advantages on their own, and even more advantages when they partner.

- Smaller companies don't have the bandwidth of the large companies and need to make trade-offs such as not white labeling in order to establish their own brands. White labeling is seen as only the way to short-term gains. Partnering is needed for long-term gains.
- Telcos are great at building APIs for app developers to build on, but not necessarily at creating apps themselves. The developers for those apps, in turn, frequently get paid for their work and the telco acts as an aggregator for the various apps.

"Hardware and software is the new software,"
– Tom Standage,
Digital editor,
The Economist

Are dumb pipes so dumb?

- With the proliferation of the cloud, telcos have the opportunity to move beyond just being "dumb pipes" through their role as a middleman for large amounts of data—something that most telcos haven't utilized yet. Eventually, those that can control and operationalize the connective tissue on the data side, and can thus direct search and context, will dominate it all. The short term is the creation of an API that helps use the data more intelligently. Uncertainty on which applications will survive frequently pushes telcos to spend so much time investing in so many small investments that they push themselves to the brink. Their fear of focusing on one to three big stretch bets makes them miss out. It can be hard for them decide on what not to do.
- Logical extension of what carriers should do, according to Conway, includes IT outsourcing, IT consulting, security and CDN.

What can be done with all that data?

- In an effort to utilize all the data going over their networks, Sprint acquired a smaller company to utilize technology that helps them interpret that data. Users have to opt-in versus opt-out and all of the data is anoynymized into demographic information for use by advertisers.
- Though Sprint now has full tracking data for those on its network, it's only using this data for marketing and advertising purposes.

User experience is key

- Telcos frequently lose to disruptors, who focus on better customer experience, because they are operating on more profit-oriented business models and don't evaluate their initiatives against customer experience wants.
- Some small company acquisitions by telcos are simply for improving phone functionality out-of-the-box—both the ability to preload front-end apps and beef up back-end capabilities.
- Cable providers are copying frontrunners in their space without really asking the big questions around why those frontrunners have done what they've done. They are forgetting to ask the big questions around the ways user experience can be intelligently improved beyond a simple spit and polish.

SESSION 3: FROM THE TECH TO WINE

TJ Rodgers, Chief executive of Cypress Semiconductor and Proprietor of Clos de la Tech, was asked how his deep expertise in tech helped him build a winery and create the most high-tech fermentation system for the Modavi Wine School at UC Davis. He also shared what effect knowing about wine has had on his understanding of tech. "***I do understand winemaking,***" said Rodgers. "***It's not an escape--it's an extension of technology,***".

TJ Rodgers, Chief executive of Cypress Semiconductor and Proprietor, Clos de la Tech