



SUMMARY REPORT ON CommunicAsia2015 Summit

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Sands Expo and Convention Center,
Marina Bay Sands,
Singapore**

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**On Behalf
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FORUM BHD**

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Introduction/Background

The CommunicAsia 2015 Summit theme is "Defining What's Shaping The Future of The Global ICT World".

The CommunicAsia2015 Summit was held from 2-5 June 2015 and was hosted in Singapore's Marina Bay Sands for a 4-day gathering of the ICT industry's key experts and players. With 12 tracks and 3 workshops designed to address operational and strategic needs, CommunicAsia Summit was packed with executive insights, case studies and analysis to provide the answers and solutions to sustain the communications business continuity and increase ROI.

CommunicAsia, continues to strengthen and stay relevant to the ever changing info-communications technology industry. The event addressed the ENTIRE ICT ecosystem from 4G / LTE, AR and Innovations, Content Security Management, FTTx, Mobile Apps, Mobile Broadband, Mobile Devices, RF & Cables, Telecom Energy & Power System and many others. There were opportunities to gather experience, connections and learn the latest innovations.

Key conference topics/highlights include:

How 5G is really so different from 4G and what new applications can it bring forth?

Updates on latest broadband investments and regulations

Discover the different security issues across Cloud, IoT, Enterprise Mobility and how you can best implement your own policies

Harness Big Data and changing it to Smart Data for your organisation

How you can implement your own Mobile First strategy by learning from the best

Developments in Cloud Networking, and lessons to learn from organisations who have implemented cloud

Understanding the developments in Telecom Applications and how telcos and app developers can come together to create winning partnerships

Comprehend the value proposition of Software Defined Networks and Infrastructures

Opportunities in Asian Satellite Industry

Agendas/Topics

As outlined above, the CommunicAsia Summit covered the entire ICT ecosystem but for our purposes here we would present the proceedings in the morning entitled the Morning Plenary Session and the Conference on infrastructure held in the afternoon respectively.

The topics covered for the Morning Plenary are as follows:

1. Elevating Enterprise Mobility to The Next Level.
2. Changing Patterns in Delivery and Consumption of Information and Communication: The Role of Regional Public Sector.
3. Innovators Dialogue Changing Roles of Today's CIO/CTOs and CMOs in Charting the Future of the Enterprises in the Digital Age.

The discussions on the Morning Plenary were interesting as it covers a myriad of items focusing on bringing mobility at work to the next level, the increasing use of the web services by the public sector and the evolving roles of the CIO/CTOs and CMOs in determining the future of the enterprises.

For the infrastructure conference the theme is entitled Broadband – Maximising your Revenue Via DSL, Fiber and Wireless. The topics discussed are as follows:

1. Presenting a Business Case for Fiber in Asia's Developing Countries.
2. Panel Discussion: Are FTTH Deployments in Asia Uphill Struggles?
3. Panel Discussion: Measuring the Impact of Virtualisation on Wireless Network Developments
4. What Role Does Wifi Play in Providing Connectivity?
5. Developments in WiMAX: Wimax Deployments and its Future Prospects
6. Extracting More Bandwidth From Existing Copper to Transform Copper to Gold
7. Panel Discussion: FMC 2.0 – Deploying FTTH, Wireless and DSL to Provide Universal Network Coverage

The conference was an eye opener and presented options for deploying networks and optimizing the costs and extracting the maximum benefit from the technologies at hand to roll out network facilities. Policy and regulatory challenges were also discussed at length together with the virtualization of networks, alternatives to fiber like Wifi and innovation in fixed access technologies.

Findings

The Morning Plenary Session

The discussions on the Morning Plenary were interesting as it covers a myriad of items focusing on bringing mobility at work to the next level, the increasing use of the web services by the public sector and the evolving roles of the CIO/CTOs and CMOs in determining the future of the enterprises.

The findings from the Morning Plenary Session are as follows:-

Enterprise Mobility

It is significant that the two factors Leadership and Culture determines how fast an enterprise adopt mobility at their workplace. Embracing mobility at work depends not on how old or new the enterprise is but on the leadership and culture of the enterprise.

Trends in the Delivery and Consumption of Information and Communication

The trend shows that there is an increase in use of the web services by the public sector. The mantra is S3 which is labeled simple storage service.

The Shift in the Roles of the CIO/CTOs and CMOs in Steering the Future of Today's Enterprises

It is crystal clear that the "Customers now own the journey". We can navigate them, however, with analysis using their data through their searches and social media use.

What about the CMOs?

It was agreed that moving forward 3 matters needs to be the center of focus:

1. Data and technology
2. Emotion
3. Collaboration

How to use customer data through data analytics, telling a story to win the hearts and minds of the customer and how to get your brands into the hands of the customer need to be lasered on seems to be the road which needs to be traversed in the customer journey.

Conference – Broadband Track.

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The findings from the infrastructure conference on Broadband-Maximising your Revenue Via DSL, Fiber and Wireless are as follows:-

Fiberisation-Where is the value proposition?

Fixed Broadband in Developing Economies is a challenge and an opportunity

Although there is no doubt that the most powerful driver for connectivity growth is mobile, it is unanimously agreed that 4G and beyond will not be delivered without deep fiber penetration.

Presenting a Business Case for Fiber in Asia's Developing Countries.

The conclusions arrived at are as follows:

- Broad development of fixed access will not happen in Developing Economies without enlightened government involvement.
- Policy and regulation needs to be cleaned up to eliminate unnecessary hurdles and discriminatory practices.
- Real estate opportunities need to be seized through policies like mandatory wiring.
- Public investment or subsidies should only finance open-access initiatives. It should go primarily into national and regional back bones.
- The above conditions will unlock wireline (and wireless) deployment where the economic case makes sense.
- Then (and only then) can solutions be considered to finance access on a broader geographical basis.

Panel Discussion: Are FTTH Deployments in Asia Uphill Struggles?

The discussions highlighted the following:

- Infrastructure sharing has to be implemented. As 60 % of the costs is spent on civil works in the deployment of fiber, the network facilities

providers should be multi duct example, 6 or 8 way ducts to do away with trenching separately for each provider.

- There should be open access for the backbone
- How to reduce the costs of FTTH? Open access, shared ducts may be a part of the equation but training and the actual fiber installation; doing it right the first time is important because it is opex reduction.
- It is recommended that an infrastructure company be set up and not given to incumbents, for example, in Hong Kong. The argument was for 1 or 2 players who specializes in infrastructure but it was noted that it is not possible unless you have open access for ducts and manholes.

Panel Discussion: Measuring the Impact of Virtualisation on Wireless Network Developments

The Panel comprising academics, providers and vendors opined as follows:

- SDN (Software defined networks) is a game changer for wireless and it is inevitable.
- Software will triumph over hardware was the consensus.
- The benefits of “network softwarisation” are too manifold to be capitalized on: increasing the flexibility and agility of networks and the creation of new products and services faster.
- SDN is the magic glue which would seal the advancement in service creation and delivery.
- The providers are not willing to wait for standardization and are proceeding already to build prototypes.

Wireless – Playing Catch-up with Fiber

What Role Does Wifi Play in Providing Connectivity?

Although there is no doubt that the most powerful driver for connectivity growth is mobile, it is unanimously agreed that 4G and beyond will not be delivered without deep fiber penetration.

It is noticeable that the wireless industry TRENDS are as follows:

- o 1000x increase in wireless data traffic
- o “Wi-Fi First” movement
- o Rise of the Internet of Things
- o Business Driven by Analytics and Big Data
- o Convergence of Wi-Fi and Cellular
- o Industry Consolidation
- o Transition to Cloud for Scalability
- o Land grab – Rapid Deployment of Wi-Fi

In short, there is a **Renaissance in Wireless Infrastructure.**

The Carrier Wi-Fi Deployment Strategies are mainly about bandwidth density now. Demand density by venue, busy-hour Mbps per 10 m².

Wi-Fi provides new Business Models , inter alia,:

1. Wi-Fi First operators (Wi-Fi & Cell Service). Examples:

- Republic Wireless & Scratch Wireless
- Both operators fallback to Mobile Network
- Both operators are Sprint’s MVNO

2. Google Project-Fi

- o Project-Fi is a new MVNO wireless service for Nexus 6 only.
- o Project-Fi combines WiFi+Sprint+T-Mobile into single network.

**Wi-Fi Inspires New Innovations & Services.
(i.e. New Revenue Stream)**

- Wi-Fi Big Data Analytics
- Wi-Fi Calling
- Hotspot 2.0 (Secure Seamless Connection)
- 802.11ac Wave2

The Role of Wi-Fi in the Age of LTE

- The Value of Unlicensed Spectrum
- LTE-U vs LAA vs LWA

1. The Value of Unlicensed Spectrum

- o Wi-Fi has seen unprecedented success
- o Simple integration – over 10 Billion Wi-Fi enabled devices
- o Widespread adoption across virtually every market segment
- o Massive scale with ~\$140B/ year economic impact in US
- o LTE is jumping into 5GHz spectrum
- o LTE-U, LTE-LAA, LWA
- o Fair sharing is the future

2. LTE in Unlicensed Spectrum

- o Fair Access is critical to protecting Wi-Fi users and services
- o Listen before talk (LBT) is not supported in pre-standard LTE-U proposals
- o CSAT is an optional best effort technique
- o LBT must be mandatory to ensure fair sharing for LTE-LAA
- o Wi-Fi community will lobby for LBT as part of 3GPP standard
- o LWA utilizes 802.11 CSMA/CA for medium access

Wimax Deployments and its Future Prospects

The matters to consider are:

- 1) Funding sources
- 2) Spectrum dynamics
- 3) Ecosystem (affordable devices)

The Wimax Forum main initiatives:

- Affordable Broadband Access
- AeroMACS
- WiGRID

Definition of and Upcoming Whitepaper on WiMAX Advanced™ Concept

- WiMAX Advanced™ provides the roadmap for WiMAX industry and the existing WiMAX operators to leverage evolved 3GPP (e.g. LTE TDD) eco systems.
- In addition to detailed technical materials in WiMAX Advanced releases, WiMAX Forum® will publish a white paper providing the WiMAX industry players with high-level guidelines on WiMAX/ WiMAX Advanced™ co-existence approaches and WiMAX Advanced™ deployment scenarios.

Innovation in Fixed Access Technologies

Extracting More Bandwidth From Existing Copper to Transform Copper to Gold

Market moves to deployment of Vectored VDSL

1. Operators are moving towards VDSL vectoring, examples

- Deutsche Telekom- September 2012 DT announced Vectored VDSL coverage to 24 million homes by 2017. First Deployments in place.
- Telecom Italia- September 2012, TI announced plans for FTTC to 6.1 million homes by end 2016. Belgacom, KPN, Swisscom in Europe starting initial deployments of Vectored VDSL.
- AT&T- November 2012 announced its Project VIP to extend UVerse FTTN coverage by 8.5 million homes by 2015, and 1Gbps plans announced 2014.
- Australia- NBN Co, Sept 2013 election turns on FTTN to replace earlier FTTH plans
- Korea Telecom- now investigating 200-500 Mbps DSLs for their FTTB deployment (20+M homes)

2. Drivers for Vectored VDSL

Cost Advantage

- FTTC+ Vectoring is significantly cheaper than FTTH and vectoring likely to add only 50-100 USD per line

Time to Market Advantage

- Competition from Cable Operator
- Less Civil Works compared to FTTH

Stable Standards on ASSIA patented vectored technology

2 Vectored Chip Providers already licensed (Ikanos & Lantiq), more soon

Panel Discussion: FMC 2.0 – Deploying FTTH, Wireless and DSL to Provide Universal Network Coverage

The discussions concluded on some findings essentially, as follows:

- There is a need to put the fiber deeper and deeper into the network
- Content is KING. Service companies like Netflix succeed because of the bandwidth. They sit on top of the network.
- There is no doubt a move to ICT and IT convergence. No more boxes but only IT companies in 10 years time.
- The network operators must move on to the Service Providers model ,i.e., what kind of services they can offer e.g. IOT etc.
- Mix and match is based on standards.

Conclusion

The conference was an eye opener and presented options for deploying networks and optimizing the costs and extracting the maximum benefit from the technologies at hand to roll out network facilities. Policy and regulatory challenges were also discussed at length together with the virtualization of networks, alternatives to fiber like Wifi and innovation in fixed access technologies.



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