



HOT TELECOM

Research • Consulting • People



IPX COMPETITIVE ANALYSIS

Racing into 2015

Executive Summary

Objectives and Methodology

Through the course of this report, we aim to clarify the capabilities and service features of the IPX services being offered from the majority of the international providers with IPX offerings.

The research involved the completion of a survey by each IPX provider, followed by, in most cases, an interview with key decision makers in that company to expand on the survey and discuss thoughts and plans for development of their IPX services through 2015. A total of 19 companies participated in our survey, and each one was given the opportunity to correct or amend their section of the report.

A summary of the key findings of our analysis are outlined below.

Market trends

A number of market and service trends are currently impacting service providers' business and as a result their expectations towards wholesalers and what they offer. These are discussed in more detail in the main body of the report, but in summary, the following trends are significantly impacting the marketplace:

- Escalating fixed to mobile substitution
- Increasing TDM to IP migration
- Continuing 2G-3G to 4G migration
- Introduction of VoLTE
- Introduction of Voice over WiFi
- Video and content support growing in importance
- Introduction of RCS and IMS services
- Need for Machine to Machine traffic support

Underpinning all these trends (and also the result of these trends) is the increasing power of the end user to drive their own service experience, using the services they want to use, when they want to use them, and in the manner they want them to work.

IPX Evolution and Providers' offering

Providers

- Looking historically, there were two main groupings of IPX operators: Roaming Hubs and Voice Wholesaler.
- Roaming Hubs migrated their GRX networks onto larger and quality managed MPLS backbones, and added LTE roaming and signaling support to the mix to create their IPX. They had less background in international voice and hence planned to wait until Voice over LTE was launched to offer on-net termination.
- Voice Wholesalers came from a background of managing large international networks and routing calls cost effectively to their destination. They saw their evolution as adding in signaling and roaming support to the mix to provide a fuller range of services to the mobile operators, and hence they looked to form partnerships with GRX providers to meet the broader IP based needs of mobile operators. With their own global transmission networks they believe they can easily handle the increase in demand that will come from LTE Data roaming
- What is clear from this latest survey is that most IPX providers are gravitating to a common set of services and features. There have also been fewer announcements this year in terms of new IPX solutions – instead, we have seen more emphasis on reach, with both scale and peering agreements forming key elements of activity this past year. It is increasingly difficult to distinguish differences between the IPX providers at this basic service level, with almost all offering the key services that the GSMA defined.

Requirements

- 2014 marked a major expansion of LTE deployments and capacity in many mobile networks around the world with 360 LTE commercial networks in commercial service at the end of the year.
- As a result, LTE Roaming is increasing rapidly and the need to establish IP based Diameter Signalling support between mobile operators is seen as the major driver for IPX services in 2015.
- Mobile operators are now looking into the launch of VoLTE on a global scale and the establishment of VoLTE termination and particularly roaming should be the next big development for IPX in late 2015 and 2016.



- Direct voice routing to the destination operator, often with the support of HD voice, has continued to be a driver for IPX services during the year.

Services

- Comparing the results from this year's survey with the previous one shows an increasing consistency in service portfolios across a broad range of IPX providers.
- The key service is still seen as the support of LTE roaming and the associated diameter signalling. Trials and networks solutions to support VoLTE – both termination and roaming – are new services from many IPX operators although there is little commercial use of these new capabilities at the moment.
- Content, although discussed as a potential service offered by IPXs, has yet to make its appearance in the overall landscape although a few IPX providers are now including content distribution in their capability list.
- WiFi Roaming - authenticated and perhaps automated sign-on to WiFi networks internationally - is an increasingly popular offering.
- Fraud Management is becoming an increasingly popular option making use of the wider visibility of an international operation.
- Some providers are developing much deeper analysis of the roaming data and signalling itself through real time intelligence tools to help develop new services and solutions that can be offered to mobile operators.

Features

- Reporting against KPIs and performance against SLAs developed during the year, with more carriers offering online access to such information.
- HD Voice support and routing using number portability correction are gaining in popularity and most IPX providers who are not already supporting them have included them in their roadmap for 2015 and over half have them in service or available if the customer requires them. Transparency in routing and performance, and to a lesser extent, commercial rating has also been added to most offerings during the year

- There are some instances of solutions requiring interworking between LTE and 2G/3G services being offered by IPX providers in 2014.

Network and Access

- We see an increase in the number of Access PoPs across the board, but also an increase in IPX PoPs which host significant service equipment and have a major impact on the latency seen in some services.
- IPX peering has seen a great deal of activity during the year with many more providers establishing and announcing interconnect solutions with other providers. From a handful of peering agreements signed at the end of 2013, most IPX providers now boast around 10-15 IPX multi-service peering agreements.
- Overall, with the expected rapid growth in data roaming usage, IPX providers with underlying ownership in the transmission assets should have an advantage in terms of cost effectiveness.
- Over the course of 2014, IPX providers have been busy growing their pool of customers. The number of declared IPX customers has grown across the board, with many IPX providers almost doubling their number of IPX customers during 2014.

Mobile Operating Groups

- One major evolution worthy of note is the increase in the number of IPX networks formed by the international arm of a major Telecom Group with investments or ownership stakes in mobile networks
- Vodafone, with its acquisition of Cable and Wireless Worldwide has announced its own IPX and will connect directly with other similar groups of mobile operators, diminishing the need for third party IPX providers
- Commercially, these operating groups could make it difficult or expensive for IPXs that are not bringing a significant number of mobile operators to the table to interconnect



Business Model and Pricing evolution

- IPX operators coming from a Roaming Hub background appear to be open to stepping out of voice rating and settlement with an alternative that allows the mobile operators to form their own deals and simply charge for the IPX component – perhaps by capacity rather than per minute.
- There is an increasing interest in bundling of services together for commercial discounts. The IPX always supported multiple services, but some providers have discussed rolling in Diameter signalling into their LTE data roaming solution, for instance.
- At this stage, there are no commercial offers that we are aware of for VoLTE termination that are distinct from other high quality termination offers. As we discuss in the report, the complexities in this area may trigger a move away from the traditional per minute per call rating that has been used for voice for so many decades.
- Deep analysis of the data flowing across the IPXs – signalling and the browsing data itself using “Big Data” techniques could open up a wealth of opportunities for the mobile operators to understand the behavior of their roamers and monetize that information.
- Although so far IPX providers have focused on the needs and opportunities of mobile operators, most IPX providers will be also trying to attract fixed carriers, other international carriers, OTT operators and potentially enterprises to this IPX platform.
- Changes are on the horizon when it comes to IPX pricing models and the main trigger for this evolution will probably come with the introduction of VoLTE and RCS services, which will require a more flexible and transparent switch-over between voice and data services within the same session.

IPX Roadmap

- We expect VoLTE roaming to become a major requirement around 2016, once the service has been launched in a number of national networks and once a critical-mass of VoLTE enabled handsets are in use around the globe.
- A common feature appearing towards the end of the 2-3 year period will therefore be the handling of the complex signalling needed in VoLTE to offer various sorts of local breakout, some of which require the splitting of the signalling establishing the call from the actual call itself to the destination.
- IPX platforms will start to diverge and offer other services that depend on secure, high quality, high capacity global transmission networks and globally accessible services – early versions include the hosting of IMS and RCS components in a securely accessible cloud.
- It is more likely that the delivery of content over an IPX over the quality guaranteed path to end users will grow in importance.
- A global network of mobile operators interconnected via a secure and private IP network in the IPX could be used as a platform for a secure banking and money transfer service. This could be driven by an innovative IPX provider or by a grouping of mobile operators and banking interests.



Main Report Table of Content

Executive Summary

- Market trends
- IPX evolution
- IPX roadmap

Introduction

- Methodology

IPX Evolution - 2014

- Market and service trends
- Provider evolution
- Service and Feature evolution
- Network evolution
- Requirements evolution
- Pricing Evolution

IPX Evolution - The Future

- Service evolution - The future
- Business model evolution - The future

IPX Providers and their offering

- Competitive Analysis Summary

IPX providers' profiles

- BICS
- BT Wholesale
- Comfone
- Deutsche Telekom International Carrier Sales & Solutions (ICCS)
- Etisalat
- Hutchison Global Communications Limited
- iBasis

- NTT
- Orange
- PCCW Global
- SAP Mobile Services
- Syniverse
- Tata Communications
- Telefonica
- Telekom Austria Group Wholesale
- TeliaSonera International Carrier (TSIC)
- Telstra Global
- TI Sparkle
- Vodafone

Annex - Acronyms

List of Tables

- Table 1: summary table of IPX providers' offering
- Table 2: List of IPX services, capabilities and features
- Table 3: Network and Access table attributes definition
- Table 4: Service portfolio table attribute definition
- Table 5: Capabilities and features table attributes definition
- Table 6: Value added services or application table attribute definition
- Table 7: QoS Parameters table attribute definition
- Table 8: Network and Access attribute summary by IPX provider
- Table 9: Service portfolio summary by IPX provider
- Table 10: Summary of Capabilities and Features supported by IPX provider
- Table 11: Value added services or applications offered by IPX providers
- Table 12: Summary of QoS Parameters measured by IPX provider



More information

Our IPX report based on interviews and surveys with 19 IPX providers provides an in-depth view of who the main IPX providers are, how their offering is evolving in terms of services, network, access, peering and features. The objectives of this report therefore are to:

- Define the current status of the IPX providers' ecosystem
- Better understand how IPX providers' offering are evolving
- Identify new IPX services and features being developed
- Understand how peering agreements are evolving and how it may impact IPX going forward
- Define the differences in service providers' offering and capabilities

Who should purchase this report:

- IPX providers seeking to understand how the segment is evolving in terms of services, customers, competitors and how they are positioned within the overall IPX ecosystem.
- IPX customers needing to understand the different service offerings and providers to define how they can benefit from IPX, who to buy it from and how it can help them grow their business.
- IPX vendors looking to understand the needs of IPX providers and customers and where new opportunities will come from.

Report price: US\$1,800
Publishing date: March 2015
Format: pdf

For more information or to order this report, please contact us at:

Tel: +1 514 270 1636
e-mail: sales@hottelecom.com

or visit the following page: <http://www.hottelecom.com/reports/ipx-competitors-2015.html>

Other reports of interest

The Future of International Wholesale

<http://www.hottelecom.com/reports/wholesale.html>

The Future of IPX in Bahrain and the GCC

<http://www.hottelecom.com/reports/ipx-Bahrain-GCC.html>



About the authors



Isabelle Paradis
President, HOT TELECOM

Isabelle has worked for 20 years in the telecoms industry. Her personal experience ranges from International Wholesale through to Business Strategy, Marketing and Product Management along with extensive research and consulting experience. She has worked across all continents and has lived in North America, Europe and Asia.



Steve Heap
CTO, HOT TELECOM

Steve is a senior telecom executive with 30+ years experience leading companies from small technology start-ups to global service providers. He is a recognized expert in voice services and VoIP, Internet backbones and IP services, optical and submarine networks with significant additional experience in operations.

