



White Paper

# AxonPulse

## Increasing End User Productivity

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## Evolving Users

In 1946, the first vacuum tube-based computer was produced with the help of universities. Times have changed quite dramatically since the days of that first computer. Not only has the technology changed, but the capabilities and needs of the users have changed as well. We've experienced a constant technological evolution since. The Internet, smartphones, touch-screen tablets and IP enabled voice and video have made a huge impact to our life style.

We've now experienced two generations of users that have grown up using computing technologies. These users require little training and have very distinct views about what they expect from computing environments.



This expanding population of well-connected users has grown up with office applications running in homes and schools, simplified network appliances, integrated home automation solutions, cloud computing and smartphones. These users have grown dependent on constant network connectivity.

## BYOD – Bring Your Own Device

The growth of BYOD has helped advance today's user expectations of enterprise working environments. In the past, they were provided corporate based devices and computers attached to the corporate network. If there was an issue or failure, the understanding was the company had made decisions on what technologies to use and they were responsible for fixing it.

It is predicted that the BYOD trend will further progress as wearables become more prevalent in markets. <sup>1</sup>With the rise of wearable devices, pioneered by Google and Samsung, more OEMs, original design manufacturers and electronics manufacturing service companies are exploring the market to develop products for the Internet of Things in the long term. By 2016, this market is expected to top \$10 billion.

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<sup>1</sup> Gartner, 2013: *Top 10 Strategic Technology Trends For 2014*

Today, users are accustomed to their own devices both in and out of the workplace. They know how their devices and apps perform when they are not at the office and expect the same quality of experience at work. For example, when they take their corporate and personal devices to a conference room for a meeting, they expect to be able to access their email and other applications that allow them to continue getting their normal workload accomplished during the meeting.

Additionally, most users have Wi-Fi networks in their homes. They're not used to being tethered by an Ethernet cord and they have immediate access to the Internet, allowing communications and interactions with others as soon as they touch their Wi-Fi based device, no matter what room of the house they're in.

## BOA – Bring Your Own Application

The Client/Server architecture has been reborn once again, with Cloud-Client applications. Companies are becoming increasingly dependent on cloud based applications and so are their users. In fact, most users today use Personal Cloud based applications routinely and they don't have any expectations of not being able to do so as a normal part of everyday life.

Gartner states this as the<sup>2</sup> **Era of the Personal Cloud** - As the personal cloud rises in importance, IT organizations will find current approaches to dealing with users will fail. IT leaders must be flexible and respond with new techniques, tools and policies, or risk irrelevance with their user base.”

New and interesting trends are developing inside corporate walls when companies don't have applications that allow users to get their jobs done easily and swiftly so they can be more productive. If users can't find a low-cost app among the myriad of apps publicly available, they begin searching out ways to get the app created that they need.

Departments are quickly working to develop their own applications for specific business functions rather than relying on developers to translate their business needs. Employees look to applications as a means of boosting efficiency and productivity and they look to the IT department to facilitate solutions.



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2 | Gartner, 2013: Top 10 Strategic Technology Trends For 2014

This is an Enterprise IT trend that spans entire organizations. Users are translating their technology experiences at home into how they manage their work schedules, contacts, content and team management. If the IT department can provide the platform, employees will use their experience and priorities to build apps that are timely, secure and tailored for their use.

## Wi-Fi/Wireless LAN

The wireless user experience while using technologies such as laptops, tablets, smartphones and wearables is critical. Enterprise companies need versatile and scalable Wireless LAN solutions as more users are accessing the enterprise network via mobile devices. As an example, over 14 million enterprise Wi-Fi access points shipped in 2013 and Wireless LAN remains the fastest growing network equipment segment.

Interestingly, it's estimated that –

- 70% of enterprise companies allow BYOD<sup>3</sup>
- 65% of users prefer Wi-Fi to cellular
- 50% of PCs shipped in 2014 will be tablets
- 93% of tablet users will use Wi-Fi only<sup>4</sup>
- 60% of business travelers would prefer good Wi-Fi over a comfortable bed
- 90% of business traveler say no hotel Wi-Fi is a deal breaker and they will book elsewhere

Wi-Fi technology, supported by wireless LAN infrastructure has become extremely significant to users and productivity in the workplace. Enterprise IT is in need of a new solution that enables them to monitor the performance and availability of network services and applications, while being simple to deploy and easy to manage.

## QoE – Quality of Experience

Enterprise companies are using Social Media and Public Cloud technologies for marketing, customer relations, business transactions and day-to-day tasks. Facebook, YouTube, Twitter, Dropbox, Gmail and Tumblr are top examples of the many applications that are available and broadly embraced. Not surprisingly, many users take advantage of these applications in their personal lives as well.

This has become, the “people” layer that goes beyond the traditional 7 layer OSI network model is now becoming paramount. QoE looks at services and applications from the standpoint of the user and provides an assessment of what changes need to be made to enhance the total experience.

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<sup>3</sup> IDC

<sup>4</sup> Deloitte

## Proactive Network Testing and Monitoring



Automated proactive network testing and monitoring are now becoming more important than ever, and it's not just about network speed anymore. It's about the QoE (Quality of Experience) users perceive and helping them become more agile and productive.

Spirent Communications has been named as the Global Leader in Ethernet Testing by Frost and Sullivan<sup>5</sup>. We recognize proactive network testing and monitoring needs to be based on the actual user experience of using a specific application or service. Spirent's AxonPulse, employs proactive testing and monitoring to reveal the performance of some of the world's most popular apps running across both wired and Wi-Fi enterprise networks. Additionally, with AxonPulse enterprise companies can effortlessly add other apps (internal and external), DNS and TCP throughput tests as needed for their environments.

AxonPulse provides the ability to run automated tests continuously during both peak and off-peak hours. Enterprise IT can now be sure users are getting the best QoE when at the workplace and gain much deeper insights into network services and applications behaviors than ever before.

Spirent's AxonPulse solution is comprised of three components –

1. **AxonCore** – A portable and rack mountable appliance that delivers simple yet powerful network performance test and measurement, monitoring, and troubleshooting capabilities for corporate and Data Center locations.
2. **AxonPoint** – A small form-factor, lightweight, rapidly deployable probe for wired and Wi-Fi networks. AxonPoint is designed for testing Wi-Fi, LAN, WAN, Internet and cloud services and applications. AxonPoint probes can also be used to run throughput tests to an AxonCore to ensure users have high performance access to data center resources.
3. **AxonCloud Control** – A centralized, cloud based, easy to use management and analytics portal that runs in a browser.

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5 Frost & Sullivan, 2012 - Frost & Sullivan Names Spirent Communications the Global Leader in Ethernet Testing



## Rapidly Deployed

AxonPoint probes can be rapidly installed throughout multiple locations and be brought online quickly via the cloud based, intuitive and simple to use AxonCloud Control web interface.

## Simple Centralized Management

AxonCloud Control provides centralized, cloud based management and analytics for the deployed AxonPoint probes.

## Scalable

AxonCore and AxonPoint probes can run automated tests over wired and Wi-Fi connections, providing proactive analytics for your entire network.

## Powerful

AxonCore can be installed at corporate and data center locations and supports testing up to line rate 10G.

Today's users require a highly satisfying QoE that enables productivity. AxonPulse enables Enterprise IT to maintain highly available network services and applications from a user's perspective with less management and more efficiency.

Find out more about increasing your company's productivity at [www.spirent.com/Axon/AxonPulse](http://www.spirent.com/Axon/AxonPulse)

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