

Wireless Personal Area Networks

Networks of the Internet of Things Strategic Market Analysis 2012-2016

New Report Examines The Impact Of Multiple Competing Technology Standards On Internet Of Things Market Development

Sensor And Device Network Technologies, Standards, Applications, Players And Market Potential Addressed

Our research examines the technologies, standards, applications, players and anticipated market growth for short range wireless networks including analysis of the competitive landscape as well as the conflicts between and amongst the many proposed standards in this segment of the Internet of Things (IoT).

The WPAN market is rapidly approaching a tipping point where many competing technology standards for wireless short-range networks are either going to converge or continue to be conflicted. Given this environment, Harbor predicts the Compound Annual Growth Rate (CAGR) could range from anywhere between 55% to 130% over the 2012-2016 time frame. Excluding consumer short-range standards such as ZigBee RF4CE for remote controls and Bluetooth audio, this could amount to a market differential of as few as 300 million WPAN connections in 2016 or as many as over 2 billion connections. Convergence and harmonization of standards would accelerate these markets to their potential scale sooner rather than later. Key related points from the analysis include:

- » Open, interoperable communications standards are why the Internet has succeeded. A unified interoperable architecture will be required for WPAN networks to succeed in the IoT;
- » Harbor's analysis strongly indicates that Internet Protocol (IP) is becoming the dominant most viable choice to link all IoT network types, including WPAN applications;
- » Because there are multiple, parallel standards competing for dominance for short-range wireless IoT networking, including IEEE802.15.4 and its many variants, proprietary standards as well as WLAN standard IEEE802.11 Wi-Fi, interoperability will be very difficult to achieve unless players quickly converge on fewer more universal standards; and,
- » Based on the research, many of the existing standards are unlikely to dominate the IoT and could evolve to become "specialist" or niche standards because they are not capable of performing all the required network functions, including streaming data, large file transfers and messaging across the diversity of devices that require WPAN technology.

Today's standards and technology conflicts, which are largely driven by diverse factions attempting to promote various competing standards that were not even designed to for the Internet of Things, would accelerate the market opportunity.

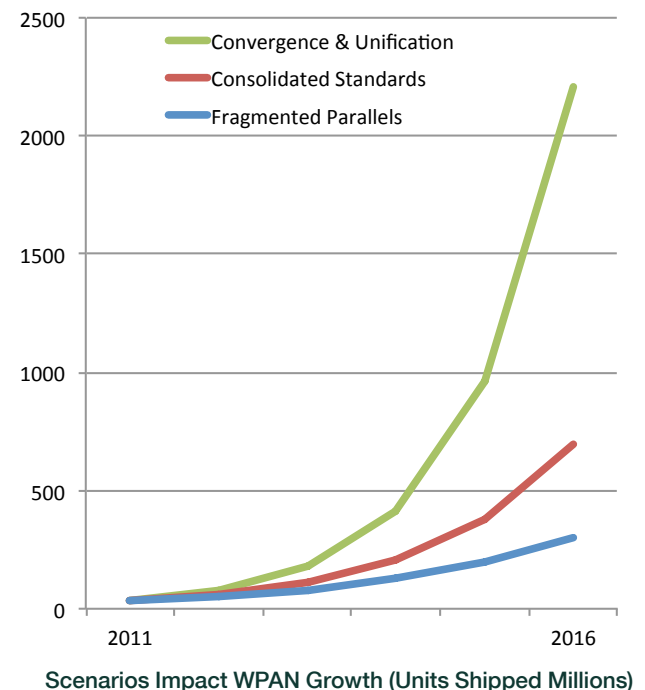
Key Questions Addressed By Report

Our analysis and research is focused on understanding the strategic market development implications within the emerging Internet of Things (IoT) arena as they relate to WPAN networks, including:

- » What are the requirements within the IoT arena for WPAN connectivity and what will the technical features be?
- » What standards are being used today and which do we believe will be used tomorrow?
- » What will the likely timing be for market adoption of WPAN technologies and which technologies will be successful? What are the significant challenges users, product OEMs, service providers and silicon players face in this arena?
- » How many WPAN enabled devices will there be in each market segment using which technologies?
- » Who are the key silicon players in the WPAN marketplace and how are they positioned to engage in this enormous growth opportunity?

Market Potential: What We Can Expect?

As a part of our report, Harbor Research examines three scenarios that portray future of WPAN growth.



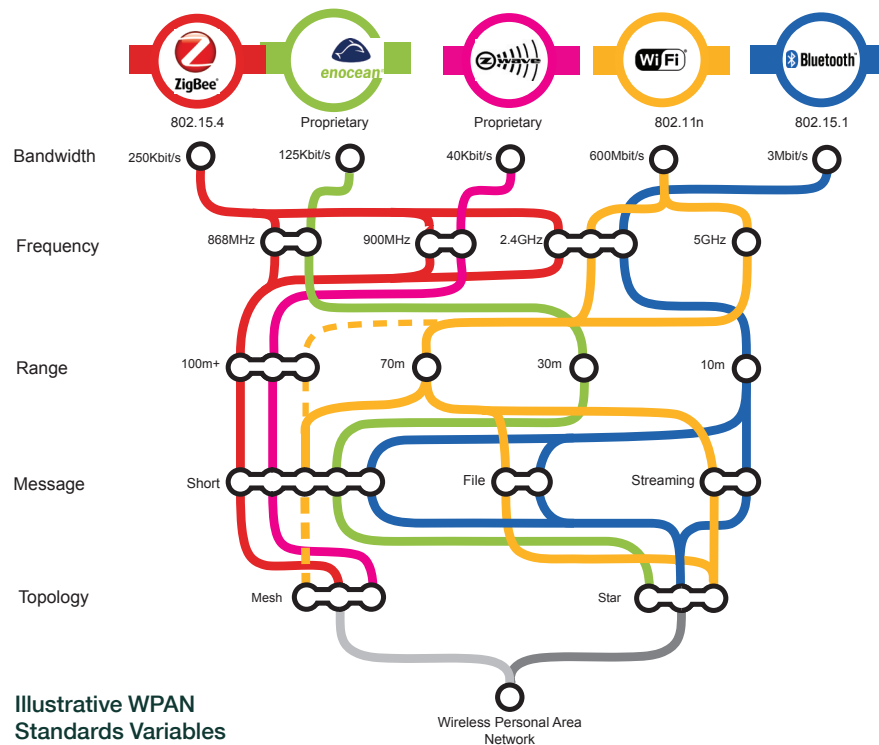
Blurring Line Between WPAN and WLAN Technologies

The line between WPAN and WLAN devices is already becoming blurred. Both networking technologies fulfill similar functions in the eyes of consumers, albeit with differing speeds and capabilities in the short term. It is likely that both technologies will coexist for the foreseeable future, it is in the medium to long term that wireless sensor technologies will become an undeniable force driving the Internet of Things.

In time we expect that one of two outcomes will come to pass. Either WPAN or WLAN will make a technological breakthrough, which renders the other useless, or the technologies will be combined and the distinction between a PAN and a LAN will be consigned to the history books.

WPAN Standards: Many Confusing Variables & Alternatives

In terms of WPAN and WLAN technology's importance in the IoT - this cannot be overstated. Choosing the "right" and more importantly the "winning" technology will be one of the most important decisions that suppliers and OEMs will make in this next chapter of the IoT market development. Users and product OEMs involved in designing and deploying WPAN technology are currently on the receiving end of this complex and fractious market, many trying to understand the path they should take which is often unclear and cluttered with misinformation about various standards.



Illustrative WPAN Standards Variables

Harbor Research Internet of Things Market and Quant Model

Harbor's extensive IoT market model provides strategic insight for device OEMs, component OEMs, network service providers, system applications providers, service providers, product OEMs, investment firms and associations.

The model maps the world of networked devices down to the silicon, operating system and network infrastructure level. We do this by aggregating the average selling price, shipment values and services generated from over 400 device types and segments. Such granularity gives unique insight into the underlying forces shaping the largest opportunity in the history of business.

We De-Mystify The Technology

This report is the first of a four-part series that explores all network technologies associated with the Internet of Things. Other reports coming available include:

- » Wireless Local Area Networks of the IoT;
- » Wireless Wide Area Networks of the IoT;
- » Wireline Networks of the IoT

The scope of our research and analysis covers the significant technologies, applications, players and major opportunities informed by smart systems.

Research & Retainer Services

In addition to our research reports, we provide research and retainer services aimed at supporting client market and business development goals. Our program consists of research services, creative interactions and on-going support. Clients are given the ability to tailor their own package to suit the goals of their organization.

Consulting Engagements

Harbor also offers strategy, business development and technology research consulting engagements. We emphasize interactive analyses, the incorporation of outside perspectives, time-efficient workshops, and action-oriented decisions. Our multifaceted approach, ranging from the research we publish to fully custom consulting engagements benefits from our on-going domain knowledge and market relationships. Our clients benefit from our ability and willingness to take an informed position that combines in-depth knowledge of the marketplace with rigorous strategic and development processes.

Contact Us

Contact our team today if you are also interested in learning about the players, strategies and underlying data associated with smart systems, services and the Internet of Things.

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