UPnP: The Discovery & Service Layer for IoT

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Overview

- UPnP is one of the most widely adopted connectivity standards worldwide
- The Internet of Things requires a robust discovery, service & service framework
- The UPnP Forum developed UPnP+ with the Internet of Things in mind
- UPnP+: Builds upon the foundation of UPnP with increased focus on cloud, security, scalability and services
UPnP: A Proven Foundation For Connectivity

- Over 2 billion devices powered by UPnP
- The UPnP Forum has 15 years experience developing connectivity frameworks
- Built on a foundation of flexible and scalable data models
- Existing device control protocols for home automation devices
- Available in open source and commercial environments, across every major operating system and programming language
The Next Frontier: Internet of Things

- The Internet of Things is expected to be a $19 trillion market opportunity
- Every industry across the industrial, enterprise and consumer market sectors will be impacted by the Internet of Things
- There is no universal standard for discovery and service delivery in the Internet of Things
- UPnP’s maturity and market acceptance make it the logical choice for the Internet of Things
UPnP+: Expanding UPnP Beyond The Connected Home

Original UPnP Focus

Scope of UPnP+

Industry
Work
Car
Home
Person

Industry
Work
Car
Home
Person
UPnP+: Expanding UPnP Beyond The Connected Home

- Established protocol for smart home
- Backwards Compatible
- Cloud services using XMPP
- Established Data Model
- Scalable
- Open Source
- Mature
- Robust security
- Support for every major OS

Industry

Work

Car

Home

Person

Established Data Model

Scalable

Open Source

Mature

Robust security

Support for every major OS

Backwards Compatible

Cloud services using XMPP

Established protocol for smart home
UPnP+: The Discovery & Service Layer for the IoT

• Bridging & Sensor Management
  – Low power bridging of IP & non-IP technologies
• Cloud & Anywhere Access
  – UPnP+ uses well-recognized XMPP framework for cloud connectivity
• Established Data Model Scalable at Speed of Internet
  – UPnP+ enables defining new IoT devices in minutes while using certifiable ISO specification
• Robust Security Required For Certification
  – UPnP+ certification requires implementation of role-based security service
Key Takeaways

- UPnP is a proven connectivity framework used by thousand of manufacturers today
- UPnP’s wide availability across every major OS, in open source and commercial environments, and in every major programming language, lays the foundation for UPnP+
- UPnP+ incorporates widely accepted industry technologies to enable the robust and modern connectivity and service framework that the Internet of Things needs to deliver on its promise
- UPnP+ is a modern, backwards compatible framework that is more widely adopted than any of the newer frameworks targeting the IoT