IEEE P802.11 Wireless LANs

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| Draft TGaq Terminology | | | | |
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Abstract

This document defines terminology for 802.11 TGaq.

# Introduction

This document includes a collection of terms and definitions related to IEEE 802.11aq Pre-Association Discovery. The purpose of this document is to promote consistent use of terminology to describe Pre-Association Discovery throughout the development process of the 802.11aq project [1] [2] [3]. The definitions in this document will eventually be integrated into the 802.11aq amendment draft.

# Revision History

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| --- | --- | --- |
| Revision | Date | Comments |
| R0 | 3/18/2013 | First draft. |
| R1 | 7/18/2013 | Added IEEE-STD-100 based term definitions |
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# Definitions, acronyms, and abbreviations

## Definitions

**3GPP Access Network Discovery and Selection Function (ANDSF):** An entity within a 3GPP Evolved Packet Core (EPC) of the system architecture evolution (SAE), for 3GPP compliant mobile networks. The purpose of the ANDSF is to assist user equipment (UE) to discover non-3GPP access networks, such as Wi-Fi, that can be used for data communications in addition to 3GPP access networks, such as HSPA or LTE, and to provide the UE with rules policing the connection to these networks.

**Application**: A software program or process that causes a computing device to perform useful tasks beyond the running of the computing device itself.

[Wikipedia]: **Application software** is all the computer software that causes a computer to perform useful tasks (compare with Computer viruses) beyond the running of the computer itself. A specific instance of such software is called a **software application**, **application** or **app**.

**Bonjour:**

(1) [Wikipedia]:Apple’s implementation of Zero configuration networking (Zeroconf), a group of technologies that includes service discovery, address assignment, and hostname resolution. Bonjour locates devices such as printers, other computers, and the services that those devices offer on a local network using multicast Domain Name System (mDNS) service records.

(2) [Apple.com] Bonjour, also known as zero-configuration networking, enables automatic discovery of devices and services on a local network using industry standard IP protocols. Bonjour makes it easy to discover, publish, and resolve network services with a sophisticated, yet easy-to-use, programming interface that is accessible from Cocoa, Ruby, Python, and other languages.

**Proximity:** The quality or state of being within the reception range of radio frequency (RF) signal.

Oxford Dictionary definition:- (noun) :

nearness in space, time, or relationship:

*Example:* do not operate microphones in **close proximity** to television sets

Macmillan Dictionary

[how](http://www.macmillandictionary.com/search/british/direct/?q=how) [near](http://www.macmillandictionary.com/search/british/direct/?q=near) [something](http://www.macmillandictionary.com/search/british/direct/?q=something) [is](http://www.macmillandictionary.com/search/british/direct/?q=is) [to](http://www.macmillandictionary.com/search/british/direct/?q=to) [another](http://www.macmillandictionary.com/search/british/direct/?q=another) [thing](http://www.macmillandictionary.com/search/british/direct/?q=thing), [especially](http://www.macmillandictionary.com/search/british/direct/?q=especially) [in](http://www.macmillandictionary.com/search/british/direct/?q=in) [distance](http://www.macmillandictionary.com/search/british/direct/?q=distance) [or](http://www.macmillandictionary.com/search/british/direct/?q=or) [time](http://www.macmillandictionary.com/search/british/direct/?q=time)

**examples:**

* **proximity to:** [the](http://www.macmillandictionary.com/search/british/direct/?q=the) [town's](http://www.macmillandictionary.com/search/british/direct/?q=town%27s) [proximity](http://www.macmillandictionary.com/search/british/direct/?q=proximity) [to](http://www.macmillandictionary.com/search/british/direct/?q=to) [the](http://www.macmillandictionary.com/search/british/direct/?q=the) [mountains](http://www.macmillandictionary.com/search/british/direct/?q=mountains)
* **in close proximity:** [All](http://www.macmillandictionary.com/search/british/direct/?q=all) [of](http://www.macmillandictionary.com/search/british/direct/?q=of) [my](http://www.macmillandictionary.com/search/british/direct/?q=my) [family](http://www.macmillandictionary.com/search/british/direct/?q=family) [live](http://www.macmillandictionary.com/search/british/direct/?q=live) [in](http://www.macmillandictionary.com/search/british/direct/?q=in) [close](http://www.macmillandictionary.com/search/british/direct/?q=close) [proximity](http://www.macmillandictionary.com/search/british/direct/?q=proximity).

**(1) Service:** A software process that provides functionality to other Services or Applications.

**(2) Service**: An independently operable component of a peer unit that processes requests and associated data from clients in other peer units (peer services).

*- IEEE Std 1394.3â¢-2003 IEEE Standard for a High Performance Serial Bus Peer-to-Peer Data Transport Protocol (PPDT): Definitions More Info*

***(3) Service:*** *An action or response initiated by a process (i.e., a server) at the request of some other process (i.e., a client) (client services)*

*- IEEE Std 1232.2-1998 IEEE Trial-Use Standard for Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE): Service Specification: Definitions More Info*

**Service Discovery**: The process of finding services that match the requirements of the service requestor.

*(1) Procedures for querying and browsing for services offered by or through another device.*

*- IEEE Std 802.15.1â¢-2005 IEEE Standard for Information technologyâTelecommunications and information exchange between systemsâLocal and metropolitan area networksâSpecific requirements and Part 15.1: Wireless medium access control (MAC) and physical layer : Definitions More Info*

**(2) service discovery**

The function of providing transport clients with the ability to dynamically query service availability within a peer transport entity.

* - IEEE Std 1284.4-2000 IEEE Standard for Data Delivery and Logical Channels for IEEE 1284 Interfaces: [Definitions](http://dictionary.ieee.org/definitions/1284.4-2000/) [More Info](http://standards.ieee.org/findstds/standard/1284.4-2000.html)

**(3) service discovery**

Procedures for querying and browsing for services offered by or through another Bluetooth device.

* - IEEE Std 802.15.1â¢-2002 Part 15.1: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Wireless Personal Area Networks (WPANs): [Definitions](http://dictionary.ieee.org/definitions/802.15.1-2002/) [More Info](http://standards.ieee.org/findstds/standard/802.15.1-2002.html)

**(4) Service discovery (SD)**

Procedures for querying and browsing for services offered by or through another device.

* - IEEE Std 802.15.1â¢-2005 IEEE Standard for Information technologyâTelecommunications and information exchange between systemsâLocal and metropolitan area networksâSpecific requirements and Part 15.1: Wireless medium access control (MAC) and physical layer : Definitions

**Service Discovery Protocols (SDPs):** Network protocols that allow automatic detection of devices and services offered by these devices on a computer/wireless network. Service discovery requires a common language to allow software agents to make use of one another's services without the need for continuous user intervention. Examples of service discovery protocols include Bluetooth Service Discovery Protocol (SDP), DNS Service Discovery (DNS-SD) as used in Bonjour, Dynamic Host Configuration Protocol (DHCP), Internet Storage Name Service (iSNS), Service Location Protocol (SLP), Simple Service Discovery Protocol (SSDP) as used in Universal Plug and Play (UPnP), Universal Description Discovery and Integration (UDDI) for web services, Web Proxy Autodiscovery Protocol (WPAD), WS-Discovery (Web Services Dynamic Discovery), and XMPP Service Discovery (XEP-0030).

**Universal Plug and Play (UPnP):**

1. [Wikipedia] A set of networking protocols that permit networked devices, such as personal computers, printers, Internet gateways, Wi-Fi access points and mobile devices to seamlessly discover each other's presence on the network and establish functional network services for data sharing, communications, and entertainment. UPnP is intended primarily for residential networks without enterprise class devices.
2. [UPnP Forum website] The UPnP architecture offers pervasive peer-to-peer network connectivity of PCs of all form factors, intelligent appliances, and wireless devices. The UPnP architecture is a distributed, open networking architecture that leverages TCP/IP and the Web to enable seamless proximity networking in addition to control and data transfer among networked devices in the home, office, and everywhere in between.   
   UPnP technology targets home networks, proximity networks and networks in small businesses and commercial buildings. It enables data communication between any   
   two devices under the command of any control device on the network. UPnP technology is independent of any particular operating system, programming language, or network technology.

## Definitions specific to IEEE 802.11

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## Abbreviations and acronyms

ANDSF Access Network Discovery and Selection Function

App Application

SDP Service Discovery Protocol

SLP Service Location Protocol

SSDP Simple Service Discovery Protocol

UPnP Universal Plug and Play

# References:

[1]. 11-12-1081-06-0pad-draft-par-proposal

[2]. 11-12-1416-00-0pad-use-cases-and-requirements

[3]. 11-13-0125-03-00aq-use-case-analysis

[4]. IEEE Standards Definition Database online : http:// <http://dictionary.ieee.org/>