IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Specification Framework for TGai | | | | |
| Date: 2012-01-19 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Tom Siep | CSR | 3779 Pecan Acres Drive, Farmersville, TX, USA | +1 214 558 4358 | Tom.Siep@CSR.com |
| Marc Emmelmann | Fraunhofer FOKUS | Kaiserin-Augusta-Allee 31 10589 Berlin GERMANY | +49 30 34637268 | emmelmann@ieee.org |
| Hiroshi MANO | AlliedTelesisRD Center K.K.  Root Lab | 8F TOC2 Bldg. 7-21-11 Nishi-Gotanda, Shinagawa-ku, Tokyo 141-0031 JAPAN | +81-3-5436-8350 | hmano@root-hq.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  | |
|  |  |  |  |  | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This document provides the framework from which the draft TGai amendment will be developed. The document provides an outline of each of the functional blocks that will be a part of the final amendment. The document is intended to reflect the working consensus of the group on the broad outline for the draft specification. As such it is expected to begin with minimal detail reflecting agreement on specific techniques and highlighting areas on which agreement is still required. It may also begin with an incomplete feature list with additional features added as they are justified. The document will evolve over time until it includes sufficient detail on all the functional blocks and their inter-dependencies so that work can begin on the draft amendment itself.

**Revision notes**

***R2:*** *Initial version accepted by 802.11ai TG*

# Definitions

1. **Link Setup**: the process of gaining the ability to send IP traffic with a valid IP address through the AP. Link Setup may involve more than one AP in an ESS. This includes AP/Network discovery and (secure) Association and Authentication. [1]
2. **Link-Attempt Rate** is the number of STAs attempting to establish a link for the first time to an AP within an ESS as measured over a one second time interval.
3. **Media Load** is the “busyness” of the wireless medium of the ESS. It is measured as the percentage of time the medium is in use.
4. **Link Setup Time** is defined as the process of gaining the ability to send IP traffic with a valid IP address through the AP. Link Setup may involve more than one AP in an ESS. This includes AP/Network discovery and (secure) Association and Authentication. Link Setup Time is the amount time required in the use case to establish link setup. Timing starts when the STA elects to perform Link Setup.

# Abbreviations and acronyms

FILS Fast Initial Link Setup

# Security Framework

# IP Address Assignment

# Fast Network Discovery

**References:**

[0] IEEE Std 802.11-2012

[1] 11-10/0238: TGai Use Cases

[2] 11-11/0811: TGai Evaluation Methodology

[3] 11-11/0745: TGai Functionl Requirements