IEEE P802.11
Wireless LANs

Report from the Study Group to the 802.11 Plenary

Date: November 11, 1999

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Study Group Enhanced MAC
Nov. 11, 1999

John Fakatselis reported that the PAR draft has been completed. He brought forward several motions that were approved by the SG.

Motion 99/59P18	(144) To request extension of the MAC enhancement SG until March 2000 Plenary
Moved:	John Fakatselis for SG

Discussion: none
Motion passes: 27-0-0

Motion 99/59P18	(146) To approve MAC enhancements PAR and send to SEC and then to NesCOM.
Moved:	Bob O'Hara
Seconded:	Tim Godfrey

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Motion passes: 22-1-4

Motion 99/59P18	(149) To approve the IAPP PAR and forward to SEC and then to NesCOM.
Moved:	John Fakatselis for SG

Motion passes: 22-0-6

Motion :	To request extension of the MAC enhancement SG until March 2000 Plenary

MAC ENHANCEMENTS STUDY GROUP SUMMARY REPORT
NOV. 08-NOV11, 1999 KAUAI,HI

The Mac Enhancements study group approved the Draft for two PARs. These drafts will be submitted for approval to EXCOM which is expected at the March 2000 plenary meeting. The scope and purpose of the two PARs is as follows:

PAR 1 (MAC Enhancements):

Scope of Proposed Project (What is being done including the technical boundaries of the project?)

[Enhance the 802.11 Medium Access Control (MAC) to improve and manage Quality of Service, provide classes of service, and enhanced security and authentication mechanisms. Consider efficiency enhancements in the areas of the Distributed Coordination Function (DCF) and Point Coordination Function (PCF)]

Purpose of Proposed Project [Why is it being done, including the intended user(s) and benefits to that user(s)]

[To enhance the current 802.11 MAC to expand support for applications with Quality of Service requirements. Provide improvements in security, and in the capabilities and efficiency of the protocol. These enhancements, in combination with recent improvements in PHY capabilities from 802.11a and 802.11b, will increase overall system performance, and expand the application space for 802.11]

PAR 2 (IAAP):

Scope of Proposed Project (What is being done including the technical boundaries of the project?)

To develop recommended practices for an Inter-Access Point Protocol (IAPP) which provides the necessary capabilities to achieve multi-vendor Access Point interoperability across a Distribution System supporting IEEE P802.11 Wireless LAN Links. This IAPP will be

developed for the following environment(s):

1) A Distribution System consisting of IEEE 802 LAN components supporting an IETF IP environment.
2) Others as deemed appropriate

This Recommended Practices Document shall support the IEEE P802.11 standard revision(s) <fill in official title of docs>

Purpose of Proposed Project [Why is it being done, including the intended user(s) and benefits to that user(s)]

IEEE P802.11 specifies the MAC and PHY layers of a Wireless LAN system and includes the basic architecture of such systems, including the concepts of Access Points and Distribution Systems. Implementation of these concepts where purposely not defined by P802.11 because there are many ways to create a Wireless LAN system. Additionally many of the possible implementation approaches involve concepts from higher network layers. While this leaves great flexibility in Distributions System and Access Point functional design, the associated cost is that physical Access Point devices from different vendors are unlikely to inter-operate across a Distribution System due to the different approaches taken to Distribution System design.

As P802.11 based systems have grown in popularity, this limitation has become an impediment to WLAN market growth. At the same time it has become clear that there are a small number of Distribution System environments that comprise the bulk of the commercial WLAN system installations.

This project proposes to specify the necessary information that needs to be exchanged between Access Points to support the P802.11 DS functions. The information exchanges required will be specified for, one or more Distribution Systems; in a manner sufficient to enable the implementation of Distribution Systems containing Access Points from different vendors which adhere to the recommended practices.

Next Meeting

For the January 2000 meeting the Study Group will begin to review technical submissions and will start developing the requirements document for the enhancements, to be used by the Task Group upon its approval.

The papers that have been presented thus far addressed enhancements in the areas of:
QOS, COS, security, authentication, DCF / PCF improvements, proprietary extension provisions, Load Balancing, Dynamic Frequency allocation, TX power and Inter Access Point Protocol.
These areas will constitute the ground for initial technical discussions upon approval of the Task Group.