Submission to:
IEEE P802.11
Wireless LANS

Title: **SG on MAC Enhancements Report 09/13/99 to 09/17/99 Santa Rosa, CA**

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IEEE802.11 Study Group ,
On MAC Enhancements
Sept. 13-17 , 1999 Santa Rosa CA.

AGENDA

- Secretary Appointment
- Call to Order
- Policies overview
    - Voting Rights
    - Debates
    - Key Motions
        - Point of order
        - Point of information
        - Parliamentary inquiry
- Study/ schedule overview
- Call for Papers
- 5- Criteria Overview
- PAR
- Presentation of papers
        - Discussions
- New Business
- Presentation to WG Plenary.

STUDY AUTHORIZATION & CHARTER
Moved: To approve the Working Group Study Group initiated by 802.11
for 802.11 enhancements with the charter to Investigate for QoS and CoS

metrics, Enhanced Security mechanisms for supporting long keys, key negotiation & distribution and investigate enhancements to the authentication process with the aim to submit the related PAR(s) and 5 criteria. The goal is to approve the PAR at the March 2000 meeting.

For information, the chair is John Fakatselis.

SG SCHEDULE TO COMPLETION

- September 99: Generate Candidate Enhancement Projects
  - Initial Draft on Objective

- November 99 : Generate Candidate Enhancement Projects
  - Initial PAR Draft .

- January 00 : Finalize Enhancement Projects List
  - Update PAR Draft

- March 00: Finalize PAR
  - Submit PAR to EXCOM

SG MEETING SCHEDULE
Thues. 8:30-12:00
Wed. 10:30- 12:00
Thur: 8:30-10:00
DSRC1:00-3:00

PAPERS

Enhancing 802.11 with QoS Marteen 20 99-197
Requirements for IAPP Richard 30 99-198
Multimedia transport over wireless Amar 30 99- 196
Greater than 40-bit WEP Richard 10 99- 208
Voice over IP Bob 20 99- 228
Load Balancing and Beacon customization Maarten 10 99-227

CANDIDATE PROJECT	PROPOSER	SCOPE	COMMENTS
QoS Multimedia over wireless Voice over IP	Maarten, Amar, Bob	Enhance the 802.11 MAC to support streaming over wireless with Emphasis on enhancements in the areas of Latency, bandwidth, Priority, error correction, data streams, channel	Enhance the 802.11 MAC quality of service based o DCF. Soft real time servic prioritize traffic. Integrati in wireless.

		agility policies.	Enhance the 802.11 MAC and accommodate multim applications. Emphasis of enhancements in the areas BW, Priority, channel pro streams. Enhance the 802.11 MAC voice over IP capability.
Enhanced Privacy	Richard	Enhance the 802.11 MAC to implement stronger privacy protection. Enhance MAC management functions in the areas of algorithm negotiation , key length, key management to accommodate a more secure 802.11 system.	Enhance the 802.11 MAC implement stronger securi protection. Scalable mech security as applicable and form users and within reg restrictions. Eliminate exi algorithm flaws that comp security. Enhance MAC manageme in the areas of key manag length, negotiation , distri algorithm selection to acc more secure 802.11 syste Note: evaluate other exist i.e. IETF, BT
IAPP	Richard, Maarten	Enhance the 802.11 MAC to establish an inter AP protocol to maintain connectivity and ensure smooth hand off and continuity of services between APs.	Enhance the 802.11 MAC an inter AP protocol to ma connectivity and ensure sr off and continuity of serv between APs.
Load Balancing	Maarten	Enhance the 802.11 MAC to facilitate load balancing.	Enhance the 802.11 MAC accommodate load balanc avoid interoperability issu
Extend the MAC to include proprietary vendor specific information.	Maarten	Enhance the 802.11 MAC to accommodate proprietary vendor specific information without compromising interoperability.	Enhance the 802.11 MAC proprietary vendor inform without compromising interoperability.
Enhanced Authentication	Bob O	Enhance the 802.11 MAC to use stronger authentication mechanisms.	Enhance the 802.11 MAC stronger authentication m AP to server authenticatio with privileged classes.
			Enhance the 802.11 MAC
			Enhance the 802.11 MAC
			Enhance the 802.11 MAC

1. Backward compatibility with legacy 802.11 MACs
2. Are there any existing alternatives?
3. Is there another standards group addressing this issue or more appropriate to address the issue?

- Radius as an alternative to Authentication.
- 802.1x on Authentication.

Note: Forward to WG
Enhance existing state diagrams in the document.

Five Criteria

1. Broad Market Potential

A standards project authorized by IEEE Project 802 shall have a broad market potential. Specifically, it shall have the potential for:

a) Broad sets of applicability.
b) Multiple vendors, numerous users.

2. Compatibility with IEEE Standard 802

IEEE Project 802 defines a family of standards. All standards shall be in conformance with 802.1 Architecture, Management and Interworking.

All LLC and MAC standards shall be compatible with ISO/IEC 10039, MAC Service Definition at the LLC/MAC boundary. With the LLC Working Group there shall be one LLC standard, including one or more LLC protocols, with a common LLC/MAC interface.

3. Distinct Identity

Each IEEE Project 802 standard shall have a distinct identity. To achieve this, each authorized project shall be:

a) Substantially different from other 802 Projects

b) One unique solution per problem (not two solutions to a problem).

c) Easy for document reader to select the relevant specification.

4. Technical Feasibility

For a project to be authorized, it shall be able to show its technical feasibility. At a minimum, the proposed project shall show:

a) Demonstrated system feasibility.

b) Proven technology, reasonable testing.

c) Confidence in reliability.

5. Economic Feasibility

For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated), for its intended applications. At a minimum, the proposed project shall show:

a) Known cost factors, reliable data.

b) Reasonable cost for performance.

c) Consideration of installation costs.