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1 Introduction

This contribution provides status updates for current work on security and WLAN-WWAN interworking in IEEE 802.11 and WECA. A background to and general information about WECA is also given.

2 IEEE 802.11

2.1 802.11i Task Group (Enhanced Security)

The Enhanced Security Task Group (802.11i) is making steady progress and is estimated to finish in September 2003. Most work relevant to WLAN-3G interworking is already in place, i.e. security in infrastructure networks. Currently efforts are spent on e.g. security in 802.11 ad-hoc networks.

2.2 Wireless LAN Interworking Group (WIG)

ETSI/BRAN in Europe and MMAC in Japan have for some time been working on a standard for interworking between Hiperlan 2 (as well as the corresponding HiSWAN system) and 3G cellular and other public systems. ETSI/BRAN and MMAC have invited IEEE 802.11 to create a joint Wireless LAN Interworking Group (WIG). IEEE has accepted the invitation and the first joint ETSI/BRAN-IEEE-MMAC WIG meeting was hosted by IEEE at the last IEEE meeting in September 2002. The scope of the WIG group is:

- To be an integral part in the production of a generically applicable interworking standard for WWAN and other public networks. The standard is to be applicable for IEEE 802.11 family, MMAC HiSWAN family and ETSI HIPERLAN/2
 - To be the point of resolution for ETSI, IEEE and MMAC on issues related to interworking with WWAN and other public networks.
 - To be the single point of contact for the above mentioned WLAN standards on questions related to interworking with WWAN and other public networks. More details about the WIG will be presented in another contribution.
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3 WECA

3.1 Background

WECA (Wireless Ethernet Compatibility Alliance) is an industry group with around 170 member companies dedicated to the IEEE 802.11 family of products. The mission statement of WECA has two ingredients: certification of interoperability and promotion:

“WECA’s mission is to certify interoperability of Wi-Fi (IEEE 802.11) products and to promote Wi-Fi as the global wireless LAN standard across all market segments.”

Certification of 802.11 products is done under the brand “Wi-Fi” and a Wi-Fi logo is printed on certified products. The test requirements for Wi-Fi are defined by WECA and the tests are pass/fail-tests of end-to-end traffic under different conditions, e.g. with and without encryption, packet fragmentation, handover etc. The test-plans are updated once a year and the intent is that coming standards (802.11e, g, i, h etc) will be included in future compatibility tests.

WECA also works for promoting Wi-Fi (i.e. IEEE 802.11) by e.g. participating in trade shows, conducting press tours etc.

WECA was founded in 1999 by 3Com, Cisco, Intersil, Agere, Nokia and Symbol and today has approximately 170 member companies. More than 450 products have been Wi-Fi certified so far.

3.2 WECA Interim Security Specification

Because of the failure of 802.11 WEP, security has become one of the major issues with 802.11. Due to the long wait for 802.11i (expected to be approved in Sep. 2003), WECA has decided to issue an interim security specification. This specification is currently worked on and not yet released to the public. The specification will essentially be a snapshot of the current 802.11i draft and be constructed in such a way that the interim specification can coexist with the future 802.11i standard.

The interim specification will use 802.1X and EAP for mutual network-user authentication and also include a new encryption protocol called TKIP (Temporary Key Integrity Protocol). Functionality not yet addressed by 802.11i will not be included in the interim specification, e.g. ad-hoc networks and fast handover.

WECA plans to release the interim specification before then end of 2002 and to start interoperability tests in the beginning of 2003.