IEEE P802.11
Wireless LANs

802.11 Task Group E Teleconferences

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Minutes of the third IEEE P802.11 Task Group E Inter-Meeting Teleconference

June 22, 2000

Introduction

John Fakatselis, Chair

Roll Call

Greg Chesson – Atheros greg@atheros.com
Peter Ecclesine – Cisco petere@aimnet.com
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T K Tan – 3Com
Harry Worstell – AT&T hworstell@att.com

Objectives

Task Group decided to hold 3 teleconferences to accelerate the agenda.
Agenda as posted on the reflector:

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1.    (10 min)    Roll Call
2.    ( 5 min)    Teleconference overview / goals
3.    (30 min)    Report from evaluation criteria group and discussion (Greg
Parks)
4.    (30 min)    Report from simulation group and discussion (Evan Green)
5.    (20 min)    Report from requirements group and discussion (Tim Godfrey)
6.    (10 min)    Radio Link Control Sublayer (Peter Ecclesine)
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7. (15 min) Goals for July Meeting.

This is an Ad Hoc Group. No voting or decisions can be made. This is to prepare everyone with information on the topics. We will be ready to make motions in July.

The minutes will be published on the reflector tomorrow.

Agenda accepted without objection

No additional items to discuss.

Evaluation Metrics and Criteria Group Report

Presented by Greg Parks

Revision 1 to document 143 has been issued

Yesterdays discussion to be issued in rev 2

Original Rev 0 document has been enhanced with models for stream topologies.

There are four models, and no need is seen to go beyond that.

Issue with measurement of occupied airtime.

This is infeasible from the issue of simulation standpoint. We have come up with an alternative method.

Loads will be defined statically at all points, with dynamic load added, and then measure efficiency.

We will look at the airtime occupancy for a given load to determine efficiency.

We looked at the possibility of a third model for a "pathological overload" case, and decided to include it.

Attempting to strike a balance between simplicity and realism.

Cisco home networking has provided some MPEG traffic models.

We are also looking at a 1394 traffic model (low quality video model). MPEG will be used instead of HDTV directly for network connections.

Channel model and error model is being handled in simulation group.

Overlapped BSS has not been covered yet. It will be addressed in next two weeks. OpNet model has the ability to locate nodes at absolute positions.

Next version of document 143, rev 3, will be more descriptive.

Evaluation Metrics and Criteria Group - Discussion

.Since Op Net is the simulation environment, why not use their built in TCP/IP stack? We wanted to get a realistic snapshot of actual traffic. The NLANR.NET statistics were used.

Recent changes have shown a change in traffic distributions from bi-modal to tri-modal.

{Discussion of traffic mixes and traffic generators for bulk data. }

Coordination of evaluation criteria with Simulation group. Feedback from Simulation Group (Evan Green)

Sim group is waiting for next version, since it is being changed.

Sim groups thinks that the criteria is feasible, but there is a concern that the amount of work is daunting. Simplification or prioritization is requested.

Greg will work with Evan to reduce the simulation work load to correspond to our timeframe

Greg will begin prioritizing the evaluation criteria list.

Feedback from simulation group on requirement 137r2

Many are easily addressable

Some will have to be addressed by individual proposals, such as FEC.

Some need clarification,

Are the evaluation criteria simple enough yet? No objections.

Simulation Group - Report

Presented by Evan Green

The group has gone over the requirements and the metrics.

The requirements document has a section on security. This group does not simulate security. This was not the charter of the group.

The tool is capable, though.

The group has broken the job down into pieces which will be contributed by individual contributors.

The group has established contact with OpNet and they will fix any problems we find with their model of the existing spec. (DCF)

Two groups are working on channel models (Home and Enterprise)

The first revision has holes, but will be published anyway. A second revision will be published soon with more realistic effects of overlapping BSSs. (process all events of all stations simultaneously)

We will work on establishing the validity of the models we generate.

Web Site Documents

Sub Group leaders will forward output documents that they want to have on the TGe page of the 802.11 web site to Tim Godfrey.

Requirements Group – Report

Presented by Tim Godfrey

No updates to document 137r2 since last teleconference

Request for input on "QoS Taxonomy" chart.

The boxes need to be filled in to limit the combinations of traffic and services that are required.

Requirements Group – Discussion

John F - Are the requirements adequate and sufficient?

Bob O –

Doesn't feel that requirements are specific enough to be used to evaluate if a proposal meets the requirement or not.

What is necessary is to identify exact application to support, and what it involves. Quantitative measures.

Tolerances for jitter, latency, dropouts, errors…

Related back to human perception.

We don't want to turn the requirements into the evaluation criteria. We do need more specifics, but not go too far (low level).

Could Requirements be the input to evaluation criteria.

Distinction between functional and performance requirements.

Definitions of streaming audio, toll quality, etc. They have different traffic profiles.

Suggestion of process – use the testing criteria details from other groups to provide input into requirements.

Define quantitative measurements referencing other standards and/or authoritative sources.

Supposing we identify that there are 13 audio standards. We can't ask the simulation team to run them all. We have to make a synthetic traffic load to encompass the needed functions of the standards.

For that reason, we really don't care beyond that the simulation traffic load is a good enough representation of the real standards.

We need the smallest number of abstractions that reflect the real life traffic loads.

For everything on the requirements list: is this something that can be specified by a traffic distribution, or is it something harder? Suggest this as another way to look at the.

Requirements Teleconference – Monday. 1PM PDT 4PM EDT. Harry to set up call in.

Radio Link Control Sublayer

Presented by Peter Ecclesine

Regulatory limits on how fast frequencies can be changed.

Referring to document ETSI TS101 761-2 B1.1.1 (Radio Link Control Sublayer)

5.2.2.5, pages 82-84

DFS algorithm is out of the scope of the specification.

Transmit power control in 3dB steps, starting at –15dBM to +20dBM.

This is a very complex set of specifications that need to be simplified for our standard.

RISI (relative interference strength indicator)

Peter to develop candidate PHY SAP interface.

Greg Chesson will research and help on this.

Goals for July

Greg Parks to supply Rev 3 by July Plenary

Requirements group to hold teleconference on Monday, June 26th, and generate document 137r3.

Adjourn