IEEE P802.11
Wireless LANs

802.11y Sponsor Ballot Report

Date: 2008-04-29

Author(s):

Name	Affiliation	Address	Phone	email
Peter Ecclesine	Cisco Systems	170 W. Tasman Dr., San Jose, Ca 95134-1706	+1-408-527-0815	petere@cisco.com

Abstract

This is the report documenting the results of the Sponsor Ballots on IEEE P802.11y. This report is to be submitted to the IEEE 802 Executive Committee to support the request to forward IEEE 802.11y to RevCom for publication.

1. <u>Introduction and Summary</u>

This is the report to the IEEE 802 Executive Committee documenting all the Sponsor Ballots of IEEE 802.11y, including voting results, comment statistics, and unresolved negative comments.

The total number of sponsor voters on IEEE 802.11y is 128. The final results of the voters on IEEE 802.11y are 98-3-6, for an approval percentage of 97%, a return percentage of 83%, and an abstain percentage of 5%.

There are eleven outstanding negative comments from three remaining negative voters; none of these outstanding negative comments are from the final recirculation ballot, seven are previously recirculated negative comments from initial sponsor ballot, three are previously recirculated negative comments from the first recirculation ballot.

Based on results of the Sponsor recirculation ballots about P802.11y as documented in this report, we are asking for approval from the IEEE 802 Executive Committee to forward IEEE P802.11y to RevCom for publication.

Agenda Items and motions requesting conditional approval to forward when the prior ballot has closed shall be accompanied by:
• Date the ballot closed
• Vote tally including Approve, Disapprove and Abstain votes
• Comments that support the remaining disapprove votes and Working Group responses.
• Schedule for recirculation ballot and resolution meeting.

Initial Sponsor Ballot was a vote on Draft 7.0, and ran for 40 days starting 21 December 2007, and ending on 30 January 2008. Seventy required comments were received.
98 voted, 87 yes, 7 no, 4 abstained, 92.9% approval rate

Sponsor Recirculation-1 Ballot on Draft 8.0 and resolutions in 11-08-0226-08, and ran for 10 days from 27 Feb 2008 until 8 Mar 2008. There were no new negative voters and fifteen required comments were received.
102 voted, 91 yes, 5 no, 6 abstained, 94.9% approval rate

Sponsor Recirculation-2 Ballot on Draft 9.0 and resolutions in 11-08-0277-02 ran for 15 days from 12 March 2008 until 27 March 2008. There were no new negative voters and two required comments were received.
105 voted, 95 yes, 4 no, 6 abstained, 95.9% approval rate

Sponsor Recirculation-3 Ballot on Draft 10.0 and resolutions in 11-08-0467-01 ran for 15 days from 3 April 2008 until 18 April 2008. There were no new negative voters and no negative required comments were received. Two comments were received.
107 voted, 98 yes, 3 no, 6 abstained, 97% approval rate

At this time there are three Negative voters, with comments recorded in the comment database.

There are five Required Comments on Draft 7.0 from a commenter who did not subsequently vote or respond about SB comment resolutions; three comments requested to define terms already defined in the base standard, the others were Accepted in Principle and changes made in Draft 8.0.

One negative voter wants P802.11y to adapt P802.11k measurements and text, but does not say how 11k measurements can be changed and communicated from the enabling STA to dependent STAs, and responses returned to the enabling STA.

One negative voter has one unsatisfied comment about the relaying of commands and status between the enabling STA and dependent STAs. We chose to change the definition to note that "An enabling STA may choose for other DSE messages to be exchanged over the air, over the DS, or by mechanisms that rely on transport via higher layers." The other unsatisfied comment is Editorial, was accepted, and changes were made to D9.0 and recirculated.

SB	Comment	Accept	Accept in Principle	Reject
Initial	Technical Required	19	31	16
Recirc-1		2	6	7
Recirc-2		1		
	Total	22	37	23

The Comment Resolution Committee responses to all of the unsatisfied comments are on the following pages:

Cl **05**   *SC* **5.1.1.1**   *P* **14**   *L* **46**   # 109
Palm, Stephen   Individual

Comment Type   **TR**   *Comment Status*   **R**
    Hidden STA not defined

SuggestedRemedy
    Clarify the term and why it is needed

Response   *Response Status*   **U**
    REJECT. the term "hidden station (STA)" is defined in section 3.64 of 802.11-2007

Cl **05**   *SC* **5.1.1.1**   *P* **14**   *L* **40**   # 110
Palm, Stephen   Individual

Comment Type   **TR**   *Comment Status*   **R**
    Portable STA term not defined nor is is the term used.

SuggestedRemedy
    clarify

Response   *Response Status*   **U**
    REJECT. the term "portable station (STA)" is defined in section 3.109 of 802.11-2007

Cl **05**   *SC* **5.1.1.1**   *P* **14**   *L* **40**   # 111
Palm, Stephen   Individual

Comment Type   **TR**   *Comment Status*   **R**
    Mobile STA term not defined nor is is the term used

SuggestedRemedy
    Clarify and use

Response   *Response Status*   **U**
    REJECT. the term "mobile station (STA)" is defined in section 3.86 of 802.11-2007

Cl **07**   *SC* **7.4.7.7**   *P* **14**   *L*   # 121
Kwak, Joseph   Individual

Comment Type   **TR**   *Comment Status*   **R**
    The DSE measurement function duplicates the functionality already defined in the TGk Frame Request measurement.

SuggestedRemedy
    Use and modify the TGk Frame Request measurement in Tgy. A new optional sub-element in the frame measurement request may be used to specify a tailored level of detail for Tgy purposes.

Response   *Response Status*   **U**
    REJECT. TGk measurement functions are optional and within a BSS. 802.11y measurement functions are mandatory, and requests come from the enabling STA, which may be outside the BSS. Commenter is encouraged to provide a proposed resolution in sufficient detail so that the specific wording of the changes that will cause the negative voter to change his vote to "approve" can readily be determined.

Cl **17**   *SC* **17.3.10.5**   *P* **47**   *L* **62**   # 132
Kwak, Joseph   Individual

Comment Type   **TR**   *Comment Status*   **R**
    Received signal strength (RSSI) cannot be used for any quantitative and verifiable performance requirement. RSSI is not defined in base standard. CCA-ED performance (which relies on RSSI) is not defined in base standard and cannot be used for any new Tgy performance requirements.

SuggestedRemedy
    Suggest that Tgy modify the TGk defined IPI measurments (in 12.3.5) to include new performance spec for accuracy of idle power measurement. Then Tgy should modify CCA-ED to rely on measurement of IPI values (in place of RSSI) for its specified and testable performance. Otherwise strike out all references to CCA-ED in the TGy draft. Repeating the errors of the past will only further degrade the baseline standard going forward.

Response   *Response Status*   **U**
    REJECT. Regulators decide what homologation tests to perform independent of IEEE 802.11y. RSSI for the clause 17 PHY and CCA-ED as defined for operation in 3650-3700 MHz band are testable in the same way as RSSI and CCA for the clause 17 PHY in the 5 GHz band is testable.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID   *Comment ID #*   **132**

Page 1 of 2
4/28/2008 2:47:19 PM

CI **09**   *SC* **9.8.1**   *P* **28**   *L* **60**   # 145

Palm, Stephen   Individual

Comment Type   **TR**   *Comment Status*   **A**

"accross" seems to have specialized but undefined regulatory meaning

SuggestedRemedy

Clarify

Response   *Response Status*   **U**

ACCEPT IN PRINCIPLE. Will delete the first insertion "that is enabled for operation across regulatory domains" as it changes no meaning of the first two paragraphs.

CI **09**   *SC* **9.8.4**   *P* **29**   *L* **46**   # 146

Palm, Stephen   Individual

Comment Type   **ER**   *Comment Status*   **A**

use a non-breaking hyphen in aSlot-Time

SuggestedRemedy

use a non-breaking hyphen in aSlot-Time

Response   *Response Status*   **U**

ACCEPT IN PRINCIPLE. Editor will use 'Esc n s' to surpress hyphenation of aSlotTime.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Page 2 of 2
Comment ID #   **146**   4/28/2008 2:47:21 PM

Cl **00**   *SC* **0**   *P* **1**   *L* **64**   # 1

Stephens, Adrian P   Individual

Comment Type   **TR**   *Comment Status*   **A**

"An enabling STA communicates an enabling signal to its dependants over the air, but all other DSE
messages may be exchanged over the DS."

This assumes that a serving AP and an enabling STA can communicate over the DS. Is this always true?

I am concerned that there is the assumption DSE messages may be exchanged over the DS - because I see no mechanism that makes this work.   OK we have an MLME interface, but how does an enabling STA magically cause a dependent AP's SME to generate specifc MLME-DSE* primitives?

Abstract interfaces are not implementation interfaces. This interface is not exposed in an AP, and there is no interoperable way that an enabling STA can access this interface across the wire.

SuggestedRemedy

Either limit the extent of the distribution to single-hop relaying of DSE public action frames, or define an interoperable interface between an enabling STA and a dependent AP across the wire - i.e. by tunnelling DSE public action frames using a specific Ethertype.

Response   *Response Status*   **U**

ACCEPT IN PRINCIPLE. Will change to: "enabling STA: A registered STA that is authorized to control when and how a dependent STA can operate. An enabling STA may choose for other DSE messages to be exchanged over the air, over the DS, or by mechanisms that rely on transport via higher layers."

Cl **07**   *SC* **7.4.7.7**   *P* **14**   *L*   # 17

Kwak, Joseph   Individual

Comment Type   **TR**   *Comment Status*   **R**

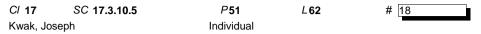Comment#121 from prior ballot: DSE measurement request not fully specified.

SuggestedRemedy

As indicated in TGk draft, there is a very high overhead of procedure specification text (see TGk 11.10.0 - 11.10.5) needed to unambiguously specify the function of any measurment; Tgy draft does not include such required procedure detail and without such detail, no "standard" STA operation will result. Modify PICS to indicate that TGy STA is required to be TGk STA and will thus implement the already defined procedures for measurement request and report. ADDITIONAL DETAIL: Need to copy TGk sections 11.10.0-11.10.5 and include tailored version of these clauses in clause 11 of TGy draft. Without these procedures important issues including scheduling of measurement, prioritization of measurement tasks vs other services, off channel measurement scheduling, non-availability of measurement resources, non-continuous measurement duration, inability to perform requested measurement and other measurement issues will remain unspecified. No "standard" measurement behavior should be expected without complete measurement procedure specification.

Response   *Response Status*   **U**

REJECT. There are none of the issues commenter raises, no scheduling, prioritization or non-availability of measurement resources issues in 802.11y. TGk measurement functions are optional and within a BSS. 802.11y measurement functions are mandatory, and requests come from the enabling STA, which may be outside the BSS. Details of any modification to TGk text are missing from commenter's proposed change. Commenter is encouraged to provide a proposed resolution in sufficient detail so that the specific wording of the changes that will cause the negative voter to change his vote to "approve" can readily be determined.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID # **17**

Page 1 of 2
4/28/2008 2:49:00 PM

Cl **17** *SC* **17.3.10.5** *P* **51** *L* **62** **#** 18

Kwak, Joseph Individual

Comment Type **TR** *Comment Status* **R**

Comment#132 from prior ballot: Received signal strength (RSSI) cannot be used for any quantitative and verifiable performance requirement. RSSI is not defined in base standard. CCA-ED performance (which relies on RSSI) is not defined in base standard and cannot be used for any new Tgy performance requirements.
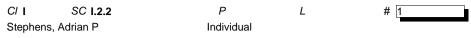
SuggestedRemedy

Suggest that Tgy modify the TGk defined IPI measurments (in 12.3.5) to include new performance spec for accuracy of idle power measurement. Then Tgy should modify CCA-ED to rely on measurement of IPI values (in place of RSSI) for its specified and testable performance. Otherwise strike out all references to CCA-ED in the TGy draft. Repeating the errors of the past will only further degrade the baseline standard going forward. ADDITIONAL DETAIL: RSSI is not specified with any unit or accuracy. RSSI is unitless and may only be used to compare relative signal levels perceived within any single STA. It is meaningless to compare a STA's subjective and unitless RSSI to any objective CCA-ED threshold specified in dBm.

Response *Response Status* **U**

REJECT. This standard does not define regulatory tests, nor what must be demonstrated. We do not agree with commenter's presumption of what those FCC tests are, and what Canada will require.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Page 2 of 2
Comment ID # **18** 4/28/2008 2:49:00 PM

Cl **I**	*SC* **I.2.2**	*P*	*L*	# 1

Stephens, Adrian P   Individual

Comment Type   **ER**   *Comment Status*   **A**

As far as I know, an entire annex is marked informative or normative.   There is nothing in the style guide that allows subclauses to be marked informative or normative and no such marking in the baseline.   Further, the text in this subclause clearly indicates its informative nature.

SuggestedRemedy

Remove (informative) from this subclause heading and any others in the draft.

Response   *Response Status*   **U**

ACCEPT. The IEEE Standards Style Manual continues to evolve, and is currently silent on marking subclauses. We agree that it would be useful if the next edition of the style manual gave guidance on this subject. We agree that the IEEE editors are sensible and can determine if the text clearly indicates its informative nature (especially with the disclaimers in Annex I clause I.1). We are changing I.2.3 text to clarify that Transmit spectrum masks herein are defined in regulation and described here for information only.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open   W/written   C/closed   U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID # **1**

Page 1 of 1
4/28/2008 2:50:47 PM