

AGENDA & MINUTES (Unconfirmed) - IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING

Friday July 21, 2006 1:00 PM – 6:00 PM

San Diego, CA

1.00 MEETING CALLED TO ORDER - Nikolich 1 01:00 PM

Paul Nikolich called the meeting to order at 1:00 PM Members in attendance were:

- Paul Nikolich - Chair, IEEE 802 LAN / MAN Standards Committee
- Pat Thaler - Vice Chair, IEEE 802 LAN / MAN Standards Committee
- Bob O'Hara - Recording Secretary, IEEE 802 LAN / MAN Standards Committee
- Buzz Rigsbee - Executive Secretary, IEEE 802 LAN / MAN Standards Committee
- John Hawkins - Treasurer, IEEE 802 LAN/MAN Standards Committee
- Tony Jeffree - Chair, IEEE 802.1 - HILI Working Group
- Bob Grow - Chair, IEEE 802.3 - CSMA/CD Working Group
- Stuart Kerry - Chair, IEEE 802.11 - Wireless LANs Working Group
- Bob Heile - Chair, IEEE 802.15 – Wireless PAN Working Group
- Roger Marks - Chair, IEEE 802.16 – Broadband Wireless Access Working Group
- Mike Takefman - Chair, IEEE 802.17 – Resilient Packet Ring Working Group
- Mike Lynch - Chair, IEEE 802.18 – Regulatory TAG
- Steve Shellhammer - Chair, IEEE 802.19 – Wireless Coexistence TAG
- Jerry Upton - Chair, IEEE 802.20 – Mobile Broadband Wireless Access
- Vivek Gupta - Chair, IEEE 802.21 – Media Independent Handover
- Carl Stevenson - Chair, IEEE 802.22 – Wireless Regional Area Networks
- Geoff Thompson - Member Emeritus (non-voting)

2.00 MI APPROVE OR MODIFY AGENDA - Nikolich 9 01:01 PM

**r04 AGENDA - IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING
Friday, July 21, 2006 - 1:00PM -6:00PM**

1.00	MEETING CALLED TO ORDER	- Nikolich	1	01:00 PM
2.00	MI APPROVE OR MODIFY AGENDA	- Nikolich	9	01:01 PM
3.00		-		01:10 PM
3.01		-		01:10 PM
3.02		-		01:10 PM
4.00	II TREASURER'S REPORT	- Hawkins	10	01:10 PM
4.01	II Announcements from the Chair	- Nikolich	5	01:20 PM
Category (* = consent agenda)				
5.00	IEEE Standards Board Items	-		01:25 PM
5.01	ME 802.1at PAR to NESCOM	- Jeffree	3	01:25 PM
5.02	ME 802.1au PAR to NESCOM	- Jeffree	3	01:28 PM
5.03	ME 802.1HREV PAR to NESCOM	- Jeffree	3	01:31 PM
5.04	ME Reaffirmation ballot for IEEE Std 802	- Jeffree	3	01:34 PM
5.05	ME	-		01:37 PM
5.06	ME 802.3av PAR to NESCOM	- Grow	3	01:37 PM
5.07	ME 802.11k PAR extension to NESCOM	- Kerry	1	01:40 PM
5.08	ME	-		01:41 PM

5.09	ME	802.16/cor2 PAR to NESCOM	-	Marks	3	01:41 PM
5.10	ME	802.22.2 PAR to NESCOM	-	Stevenson		01:44 PM
5.11	ME		-			01:44 PM
5.12	ME		-			01:44 PM
5.13	ME	802.3aq to REVCOM	-	Grow	5	01:44 PM
5.14	ME	802.3as conditional to REVCOM	-	Grow	5	01:49 PM
5.15	ME	802.11REV-ma conditional to REVCOM	-	Kerry	5	01:54 PM
5.16	ME		-			01:59 PM
5.17	ME	802.1ag approval for sponsor ballot	-	Jeffree	5	01:59 PM
5.18	ME	802.3ap approval for sponsor ballot	-	Grow	5	02:04 PM
5.19	ME	802.17b conditional approval for sponsor ballot	-	Takefman	5	02:09 PM
5.20	ME	802.15.4a conditional approval for sponsor ballot	-	Heile	5	02:14 PM
5.21	ME	802.16k conditional approval for sponsor ballot	-	Marks	5	02:19 PM
5.22	ME	802.16g conditional approval for sponsor ballot	-	Marks	5	02:24 PM
6.00		Executive Committee Study Groups, Working Groups, TAGs	-			02:29 PM
6.01	MI	confirmation of election of Jose Puthenkulam as vice chair of 802.16	-	Marks	3	02:29 PM
6.02	MI		-			02:32 PM
6.03	MI		-			02:32 PM
6.04	MI		-			02:32 PM
6.05	MI		-			02:32 PM
6.06	MI*	Continuation of 802.1 Congestion Management SG	-	Jeffree		02:32 PM
6.07	MI*		-			02:32 PM
6.08	MI*		-			02:32 PM
6.09	MI*		-			02:32 PM
6.10	MI	Formation of 802.15 study group 4c	-	Heile	3	02:32 PM
6.11	MI	Formation of 802.15 study group 4d	-	Heile	3	02:35 PM
6.12	MI	Formation of 802.11 study group on A/V extensions	-	Kerry	3	02:38 PM
6.13	MI	Formation of 802.3 Higher Speed study Group	-	Grow	3	02:41 PM
6.14			-			02:44 PM
6.15			-			02:44 PM
6.16			-			02:44 PM
7.00		Break	-		10	02:44 PM
8.00		IEEE-SA Items	-			02:54 PM
8.01	II	802 Task Force update	-	Nikolich/Kipness	5	02:54 PM
8.02	II		-			02:59 PM
8.03			-			02:59 PM
9.00		LMSC Liaisons & External Interface	-			02:59 PM
9.01	II	Get IEEE 802 Program Update	-	Hawkins	5	02:59 PM
9.02	ME	Revised proposal to revise M.1450-2	-	Lynch	5	03:04 PM
9.03	ME	Response to questions fro clarification from WP8A	-	Lynch	5	03:09 PM
9.04	ME	802.16 ITU-R BWA Liaison Response	-	Lynch	5	03:14 PM
9.05	II	ITU-T/IEEE joint conference/workshop	-	Parsons	5	03:19 PM
9.06	II	RAC update	-	Jeffree	5	03:24 PM
9.07	ME	Letter to China	-	Kerry	5	03:29 PM
9.08			-			03:34 PM
9.09			-			03:34 PM
10.00		LMSC Internal Business	-			03:34 PM
10.01	MI	P&P "Editorial 2" revision approval	-	Sherman	5	03:34 PM
10.02	MI	P&P "Document numbers" revision approval	-	Sherman	5	03:39 PM
10.03	MI	approval to ballot P&P "WG Voting Procedures" revision	-	Sherman	5	03:44 PM
10.04	MI*	Extension of meeting planner contract	-	Hawkins	0	03:49 PM
10.05	MI	Authorization to produce 802 Standards CD-ROM	-	O'Hara	2	03:49 PM
10.06	II	EC executive session feedback	-	Nikolich	15	03:51 PM
10.07	II	Results of EC email ballots	-	Nikolich	5	04:06 PM

10.08	II	LMSC Executive Secretary reorganization of responsibilities	-	Nikolich	5	04:11 PM
10.09	MI	802.20 - moving forward	-	Upton	10	04:16 PM
10.10	MI	Meeting planner RFQ process	-	Hawkins	5	04:26 PM
10.11	II	Meeting planner contract update	-	Rigsbee	5	04:31 PM
10.12	II	Attendance automation requirements update	-	Gilb	5	04:36 PM
10.13			-			04:41 PM
10.14			-			04:41 PM
10.15			-			04:41 PM
10.16			-			04:41 PM
11.00		Information Items	-			04:41 PM
11.01	II	Open office hours feedback	-	Nikolich	5	04:41 PM
11.02	II	Network Services Report	-	Rigsbee	5	04:46 PM
11.03	II		-			04:51 PM
11.04	II		-			04:51 PM
11.05	II		-			04:51 PM
11.06	II	802.3ar status update	-	Grow	3	04:51 PM
11.07	II	802.3 interim meeting polls	-	Grow	2	04:54 PM
11.08	II	802.16 Liaison letter to IETF	-	Marks	2	04:56 PM
11.09	II	Joint 802.1/802.17 Liaison response to ITU-T SG15 on ring protection	-	Jeffree	2	04:58 PM
11.10	II	ITU-T SG15 liaison response on Ethernet connection management	-	Jeffree	2	05:00 PM
11.11	II	Liaison contribution to IETF, MEF, DSL Forum - combination of tags	-	Jeffree	2	05:02 PM
11.12			-			05:04 PM
11.13			-			05:04 PM
11.14			-			05:04 PM
11.15			-			05:04 PM
11.16			-			05:04 PM
11.17			-			05:04 PM
11.18			-			05:04 PM
11.19			-			05:04 PM
11.20			-			05:04 PM
11.21			-			05:04 PM
		ADJOURN SEC MEETING	-	Nikolich		06:00 PM
		ME - Motion, External				
		MI - Motion, Internal				
		DT- Discussion Topic				
		II - Information Item				

Moved: To approve the agenda, as modified.

Moved: Stevenson/Jeffree

Passes: 16/0/0

4.00	II	TREASURER'S REPORT	-	Hawkins	10	01:03 PM
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IEEE Project 802
Statement of Operations
March 2006 Plenary Session
Denver, CO
As of Jul 20, 2006

Session Income					Est/Act	Budget	Deviation
					1,372	1,200	172
	Net Registrations						370,000
67%	925	Early Registrations	@ \$400	370,000			
	22	Early cancellations	@ \$400	-8,800			
	31	Cancellations	@ \$350	-10,850			
32%	444	Registrations	@ \$500	222,000			222,000
	5	Cancellation	@ \$450	-2,250			
	2	Special Cancellation	@ \$500	-1,000			
	1	On-site registrations	@ \$500	500			
	1	Student	@ \$100	100			
	1	Special Registration	@ \$400	400			
	2	Other credits	@ \$100	-200			
	Registraion Subtotal				569,900	497,465	72,035
	0	Deadbeat Payment	@ \$500		0	0	0
	Interest				68	60	8
	Other				74,261	0	74,261
TOTAL Session Income					643,829	497,525	146,304
Session Expenses					Actual	Budget	
	Audio Visual Rentals				16,855	15,000	(1,855)
	Audit				0	8,000	8,000
	Bank Charges				140	500	360
	Copying				3,879	3,500	(379)
	Credit Card Discounts & Fees				12,688	14,515	1,827
	Equipment Expenses				24,345	9,000	(15,345)
	Get IEEE 802 Contribution				96,900	90,000	(6,900)
	Insurance				2,713	3,500	787
	Meeting Administration				83,485	75,064	(8,421)
	Misc Expenses				3,083	500	(2,583)
	Networking				64,345	65,000	656
	Other				18,133		
	Phone & Electrical				529	2,100	1,571
	Refreshments				117,886	96,000	(21,886)
	Shipping				12,764	6,500	(6,264)
	Social				79,091	42,000	(37,091)
	Supplies				1,250	500	(750)
TOTAL Session Expense					538,089	431,679	(106,409)
Other Income/Expense					0		
NET Session Surplus/(Deficit)					105,740	65,846	39,894
Analysis							
	Refreshments per registration				86	80	(6)
	Social per registration				58	35	(23)
	Meeting Admin per registration				61	62.55	2
	Surplus/(Loss) per registration				77	55	22
	Pre-Registration ratio				0.67	0.85	
Cash on hand as of Jan 31, 2006					459,154		
Reserve for invoiced expenses for prior sessions					(215,546)		
Reserve for other outstanding commitments					0		
Income received for current session					(5,130)		
Expenses prepaid for current session					0		
Expenses prepaid for future sessions					0		
Petty cash fund (F2F)					2,000		
Net Session Surplus (Deficit)					105,740		
Operating Reserve following this session					346,218		

IEEE Project 802
Estimated Statement of Operations
July 2006 Plenary Session
San Diego, CA
As of July 21, 2006

Meeting Income	<i>Budget</i>	<i>Estimate</i>	
Registrations	1,200	1,379	179
Registration income	528,000	578,800	50,800
Cancellation refunds	(10,560)	(26,150)	(15,590)
Deadbeat collections	0	0	0
Bank interest	60	60	0
Other income	0	100,110	100,110
TOTAL Meeting Income	<u>517,500</u>	<u>652,820</u>	135,320
Meeting Expenses	<i>Budget</i>	<i>Estimate</i>	<i>Variance</i>
Audio Visual Rentals	22,000	29,000	7,000
Audit	6,000	6,000	0
Bank Charges	500	500	0
Copying	3,750	3,750	0
Credit Card Discount	14,784	16,206	1,422
Equipment Expenses	11,000	11,000	0
Get IEEE 802 Contribution	90,000	103,425	13,425
Insurance	0	0	0
Meeting Administration	75,064	83,651	8,587
Misc Expenses	2,000	5,500	3,500
Network	60,000	55,560	(4,440)
Phone & Electrical	2,500	500	(2,000)
Refreshments	158,000	155,000	(3,000)
Shipping	4,500	15,000	10,500
Social	45,000	66,500	21,500
Supplies	800	500	(300)
Other Discounts	0	0	0
TOTAL Meeting Expense	<u>495,898</u>	<u>552,092</u>	56,194
Other Income/Expense			
NET Meeting Income/Expense	<u>21,602</u>	<u>100,728</u>	79,126

		Attendance						
		400	500	600	700	800	900	1,000
Average Fee	250	(349,354)	(356,507)	(363,659)	(370,811)	(377,964)	(385,116)	(392,269)
	400	(291,094)	(283,682)	(276,269)	(268,856)	(261,444)	(254,031)	(246,619)
	550	(232,834)	(210,857)	(188,879)	(166,901)	(144,924)	(122,946)	(100,969)
	700	(174,574)	(138,032)	(101,489)	(64,946)	(28,404)	8,139	44,681
	910	(93,010)	(36,077)	20,857	77,791	134,724	191,658	248,591

John indicated that there is a significant danger of a loss exceeding our expectations on the London 802-sponsored interim session in January 2007.

4.01 II Announcements from the Chair - Nikolich 10 01:14 PM
None.

5.00

IEEE Standards Board Items

 -
5.01 ME 802.1at PAR to NESCOM - Jeffree 3 01:15 PM

MOTION

- 802.1 requests permission from the EC to forward the P802.1at draft PAR – SRP - to NesCom.
- 802.1 Proposed: fuller Second: garner
 - For: 23 Against: 0 Abstain: 5
- Exec Proposed: Jeffree Second:
 - For: Against: Abstain:
- Draft PAR/5C URLs:

<http://www.ieee802.org/1/files/public/docs2006/new-p802.1at-draft-par-0506-v1.pdf>

<http://www.ieee802.org/1/files/public/docs2006/new-p802.1at-draft-5c-0506-v1.pdf>

Once you approve and submit the following information, changes may only be made through the NesCom Administrator.

Draft PAR Confirmation Number: 175785200.17078
Submittal Email: tony@jeffree.co.uk
Type of Project: Amendment to an Existing Standard 802.1Q-2005
1.1 Project Number: P802.1Qat
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
1.4 Is this project in ballot now? No
2.1 Title of Standard: IEEE Standard for Local and Metropolitan Area Networks---Virtual Bridged Local Area Networks - Amendment: 9: Stream Reservation Protocol (SRP)
3.1 Name of Working Group: Higher Layer LAN Protocols Working Group
Contact information for Working Group Chair Tony A Jeffree Email: tony@jeffree.co.uk Phone: +44-161-973-4278
Contact Information for Working Group Vice Chair Email: Phone:
3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) Contact information for Sponsor Chair: Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 Contact information for Standards Representative: Email: Phone:
3.3 Joint Sponsor:/ () Contact information for Sponsor Chair: Email: Phone: Contact information for Standards Representative: Email: Phone:
4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2008-07
4.3 Projected Completion Date for Submittal to RevCom: 2009-07
5.1 Approximate number of people expected to work on this project: 30
5.2 Scope of Proposed Standard: This standard specifies protocols, procedures and managed objects, usable by existing higher layer mechanisms, that allow network resources to be reserved for specific traffic streams traversing a bridged local area network. It identifies traffic streams to

a level sufficient for bridges to determine the required resources and provides a mechanism for dynamic maintenance of those resources.

5.3 Is the completion of this standard is dependent upon the completion of another standard: Yes

If yes, please explain: This standard will refer to the material being defined in P802.1ak (also an amendment to 802.1Q); however, P802.1ak will commence Sponsor ballot in June/July 2006, and hence, that project will be complete in time for this project to reference its work.

5.4 Purpose of Proposed Standard: This standard provides a signaling protocol to enable the end-to-end management of resource reservation for QoS guaranteed streams. The signaling protocol facilitates the registration, deregistration, and retention of resource reservation information in relevant network elements. The signaling protocol is an essential component for automatic configuration in bridged local area network applications that require latency and bandwidth guarantees.

5.5 Need for the Project: Many vendors and users desire a single network infrastructure to carry various multimedia applications such as digital video, high-fidelity digital audio, and gaming traffic, as well as non-time-sensitive traffic (e.g., data traffic). The application of current IEEE 802 technologies for high quality time sensitive streaming allows users to load their networks unknowingly to the extent that the user experience is negatively impacted. To provide the robust guaranteed QoS capability for streaming applications, the availability of network resources along the entire data path must be assured before transmission takes place. This requires the definition of traffic stream descriptors and a protocol to signal the resource reservation along the end-to-end path of streams. MRP will be used as a basis for this protocol.

5.6 Stakeholders for the Standard: Developers and users of Audio-Visual (AV) and networking equipment, including networking IC developers, switch and NIC vendors.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board?

Yes

If yes, state date: 2006-05-15

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

and answer the following: Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Future Adoptions

Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? No

If Yes, the following questions must be answered:

Technical Committee Name and Number:

Other Organization Contact Information:

Contact person:

Contact Email address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)

8.1 Sponsor Information:

Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

Submit to NesCom

Save and Come Back Later

Contact the [NesCom Administrator](#)

P802.1at - Stream Reservation Protocol (SRP)

Draft 5 Criteria
May 17, 2006

Broad Market Potential

- **Broad set(s) of applicability**
 - **Multiple vendors and numerous users**
 - **Balanced cost (LAN vs. attached stations)**
-
- Carrying time-sensitive streaming applications with guaranteed QoS represent a new and very broad application space for IEEE 802 technologies. This requires a protocol to signal the resource reservation along the end-to-end paths of streams.
 - Many vendors and users have expressed their support for a standard means of end-to-end stream resource reservation to facilitate the use of bridged LANs for time-sensitive applications.
 - As a control protocol, SRP makes no new demands on a bridge or station's data forwarding capabilities. It does not upset the cost model for bridges.

Compatibility with IEEE Std. 802.1

- **Conformance with 802 Overview and Architecture**
- **Conformance with 802.1D, 802.1Q**
- **Conformance with 802 Functional Requirements**

- **As an extension to IEEE Std. 802.1Q-2005, the proposed standard will conform to the aforementioned documents.**
- The standard defines a control protocol, and does not modify the existing forwarding characteristics and control protocols of bridges.

Distinct Identity

- **Substantially different from other IEEE 802 standards**
- **Unique solution for problem (not two alternatives / problem)**
- **Easy for document reader to select relevant spec.**

- There is no existing 802 standard or approved project that provides end-to-end stream registration.
 - The admission control in some existing 802 standards (e.g., 802.11e, 802.15.3) has no end-to-end meaning.

- Previous efforts (e.g., SBM) were too complex to be taken up by the market; this standard will minimize complexity by confining itself to applications with homogenous one-to-many reservation, and well defined streams with simple traffic profiles.

Technical Feasibility

- **Demonstrated system feasibility; reports – working models**
- **Proven technology, reasonable testing**
- **Confidence in reliability**
 - SRP will be based on MRP which is a refinement of the well established GARP architecture. It will be defined as a new MRP application.
 - We are confident that a MRP based application is a suitable solution.

Economic Feasibility

- **Known cost factors, reliable data**
- **Reasonable cost for performance expected**
- **Consideration of installation costs**

- Other registration protocols (GMRP/GVRP) are standardized. P802.1ak MRP builds on that knowledgebase.

- Running another MRP application will have a negligible impact on the current cost of bridges.

- We expect that applications will be developed and run in stations that automatically request services from SRP without intervention by the user. Therefore, there are no incremental installation costs for the provision of SRP.

**Moved: 802.1 requests permission from the EC to forward the P802.1at draft PAR – SRP - to NesCom.
Moved: Jeffree/Stevenson**

14/0/0 Passes

5.02 ME 802.1au PAR to NESCOM

- Jeffree

3 01:18 PM

MOTION

- 802.1 requests permission from the EC to forward the P802.1au draft PAR – Congestion Notification - to NesCom.
- 802.1 Proposed: finn Second: kim
 - For: 25 Against: 0 Abstain: 6
- Exec Proposed: Jeffree Second:
 - For: Against: Abstain:
- Draft PAR/5C URLs:

<http://www.ieee802.org/1/files/public/docs2006/new-p802.1au-draft-par-0506-v1.pdf>

<http://www.ieee802.org/1/files/public/docs2006/new-p802.1au-draft-5c-0506-v1.doc>

Once you approve and submit the following information, changes may only be made through the NesCom Administrator.

Draft PAR Confirmation Number: 175787384.18794
Submittal Email: tony@jeffree.co.uk
Type of Project: Amendment to an Existing Standard 802.1Q-2005
1.1 Project Number: P802.1Qau
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
1.4 Is this project in ballot now? No
2.1 Title of Standard: IEEE Standard for Local and Metropolitan Area Networks---Virtual Bridged Local Area Networks - Amendment: 10: Congestion Notification.
3.1 Name of Working Group: Higher Layer LAN Protocols Working Group
Contact information for Working Group Chair Tony A Jeffree Email: tony@jeffree.co.uk Phone: +44-161-973-4278
Contact Information for Working Group Vice Chair Email: Phone:
3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) Contact information for Sponsor Chair: Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 Contact information for Standards Representative: Email: Phone:
3.3 Joint Sponsor:/ () Contact information for Sponsor Chair: Email: Phone: Contact information for Standards Representative: Email: Phone:
4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2008-07
4.3 Projected Completion Date for Submittal to RevCom: 2009-07
5.1 Approximate number of people expected to work on this project: 20
5.2 Scope of Proposed Standard: This standard specifies protocols, procedures and managed objects that support congestion management of long-lived data flows within network domains of limited bandwidth delay product. This is achieved by enabling bridges to signal congestion

information to end stations capable of transmission rate limiting to avoid frame loss. This mechanism enables support for higher layer protocols that are highly loss or latency sensitive. VLAN tag encoded priority values are allocated to segregate frames subject to congestion control, allowing simultaneous support of both congestion controlled and other higher layer protocols. This standard does not specify communication or reception of congestion notification information to or from stations outside the congestion controlled domain or encapsulation of frames from those stations across the domain.

5.3 Is the completion of this standard is dependent upon the completion of another standard: No

If yes, please explain:

5.4 Purpose of Proposed Standard: Data center networks and backplane fabrics employ applications that depend on the delivery of data packets with a lower latency and much lower probability of packet loss than is typical of IEEE 802 VLAN bridged networks. This amendment will support the use of a single bridged local area network for these applications as well as traditional LAN applications.

5.5 Need for the Project: There is significant customer interest and market opportunity for Ethernet as a consolidated Layer 2 solution in high-speed short-range networks such as data centers, backplane fabrics, single and multi-chassis interconnects, computing clusters, and storage networks. These applications currently use Layer 2 networks that offer very low latency and controlled frame loss due to congestion. Use of a consolidated network will realize operational and equipment cost benefits.

5.6 Stakeholders for the Standard: Developers and users of networking for data center and backplane Ethernet environments including networking IC developers, switch and NIC vendors, and users.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board?

Yes

If yes, state date: 2006-05-15

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

and answer the following: Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Future Adoptions

Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? No

If Yes, the following questions must be answered:

Technical Committee Name and Number:

Other Organization Contact Information:

Contact person:

Contact Email address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)

8.1 Sponsor Information:

Is the scope of this project within the approved scope/definition of the Sponsor's Charter?

If no, please explain:

Submit to NesCom

Save and Come Back Later

Contact the [NesCom Administrator](#)

Congestion Notification Draft PAR (P802.1au)

5 Criteria

1. Broad Market Potential

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

- a) Broad sets of applicability.

Mechanisms to avoid frame loss, of which congestion notification is one, are essential for support of the highly loss sensitive higher layer protocols, which are prevalent in the important applications E.g. data storage, clustering, backplane fabrics.

Back-end data storage networks, clustering networks and backplane fabrics are typically limited in size, making them amenable to a congestion control mechanism that is most effective with a limited network bandwidth-delay product. Each network is typically under the control of a single administrator, so the control technique does not require protection against 'gaming' by separate organizations attempting to acquire an unfair share of the bandwidth.

The data traffic to be controlled by the proposed congestion notification mechanism will be segregated using a VLAN-based technique, thus ensuring that traffic types already supported by VLAN Bridges are not affected and that there is no diminution of applicability to consolidated networks.

- b) Multiple vendors and numerous users

Multiple equipment vendors have expressed interest in the proposed project. There is strong and continued user interest in converting existing networks to Ethernet and in the realization of operational and equipment cost savings through use of a consolidated network. Further there is strong interest in increased use of data storage networks, provided that they can be realized with familiar technology and a consolidated network.

- c) Balanced costs (LAN versus attached stations)

The introduction of congestion notification is not expected to materially alter the balance of costs between end stations and bridges. While the introduction of the congestion notification option may constrain bridge implementation, significant equipment and operational costs savings are expected as compared to the use of separate networks for traditional LAN connectivity and for loss/latency sensitive applications.

2. Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management and Interworking documents as follows: 802. Overview and

Architecture, 802.1D, 802.1Q and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802.

Each standard in the IEEE 802 family of standards shall include a definition of managed objects which are compatible with systems management standards.

The proposed standard will be an amendment to 802.1Q, and will interoperate and coexist with all prior revisions and amendments of the 802.1Q standard. The data traffic to be controlled by the proposed congestion notification mechanism will be segregated using a VLAN-based technique, thus ensuring that traffic types already supported by VLAN Bridges are not affected.

Congestion notification frames and frame headers are confined to a domain composed solely of congestion notification capable bridges and end stations, thus preventing interoperability or compatibility problems from arising with either existing end stations and bridges, or with future systems using possible different techniques.

The proposed amendment will not introduce new bridge transmission selection algorithms or rate controls. Proposed end station controls on transmission rate and queuing are intended for use with full-duplex links and will be compatible with transmission control mechanisms already developed or under development by 802.3 and subject to liaison with 802.3 using the already established procedures.

Such end station controls will be independent of the details of the 802.3 media access control technology and will make use of the existing interface used by bridges.

The proposed amendment will contain MIB modules, or extensions to existing MIB modules, to enable management operations for any configuration required together with performance monitoring for both end stations and bridges.

3. Distinct Identity

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

- a) Substantially different from other IEEE 802 standards.

IEEE Std 802.1Q is the sole and authoritative specification for VLAN-aware Bridges and their participation in LAN protocols. No other IEEE 802 standard addresses congestion notification by bridges.

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

Congestion notification is a reactive (not prescriptive) mechanism, and has not been anticipated by any other IEEE 802 specification. It does not require or restrict the use of admission control techniques. It signals congestion through bridges, unlike mechanisms that are specific to individual media access control methods.

Congestion Notification mechanism (ECN: Explicit Congestion Notification) specified by IETF is applicable to internet-wide topologies and only to TCP/IP applications. This proposal addresses the needs of low bandwidth-delay networks including those carrying non-TCP or non-IP traffic.

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

IEEE Std 802.1Q is the natural reference for VLAN bridging technology, which will make the capabilities added by this amendment easy to locate.

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.

Congestion notification techniques have been shown to be useful even in networks that are as difficult to control as the Internet. The proposed amendment will be applied only in networks of limited bandwidth-delay product and where both bridges and end stations are typically under the control of a single administration. This reduces the risk that the benefits of the technique will be eroded by over extended control loops or by some of the end stations 'gaming the system'.

The amendment will specify a one way bandwidth-delay product across the congestion controlled domain. The bandwidth-delay product limit is expected to be in the region of 1-5 Mbits (100 – 500 μ S control loop delay for 10Gbps network) and simulation and analysis will verify performance characteristics up to the advertised bandwidth-delay product.

It has been shown that end station rate limiting capabilities, suitable for use with congestion notification, can be implemented in hardware at acceptable cost.

- b) Proven technology, reasonable testing.

The proposed amendment is based on extensive simulation and analysis in an area that has been studied for over 20 years.

- c) Confidence in reliability.

In keeping with best practice in this technical area, both end station and bridge behaviour will be specified, and the performance, stability, and fairness

of the congestion control algorithm and resulting network throughput simulated and analyzed to the bounds of the specification.

- d) Coexistence of 802 wireless standards specifying devices for unlicensed operation

Not applicable.

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.

The proposed amendment will retain existing cost characteristics of bridges including simplicity of queue structures and will not require maintenance of additional queues or queue state beyond the existing per traffic class(priority) queues for conformance to either its mandatory or optional provisions. In particular per flow queuing and state will not be required.

The proposed amendment may require some functions, specifically the generation of congestion notification frames, at a rate and within a time not practical for some existing and otherwise conformant bridge implementation architectures. However these functions can be performed by some existing bridges with known implementation costs.

The proposed amendment is technically feasible, in the envisaged application environment, with minimal flow state in end stations and will allow for complexity/throughput optimization trade-offs.

- b) Reasonable cost for performance.

The proposed technology will reduce overall costs where separate networks are currently required by enabling the use of a consolidated network.

The proposed solution allows the network to avoid packet loss without significant throughput reduction.

- c) Consideration of installation costs.

Installation costs of VLAN Bridges or end stations are not expected to be significantly affected; any increase in network costs is expected to be more than offset by a reduction in the number of separate networks required.

Moved: 802.1 requests permission from the EC to forward the P802.1au draft PAR – Congestion Notification - to NesCom.

Moved: Jeffree/Stevenson

16/0/0 Passes

5.03 ME 802.1HREV PAR to NESCOM

- Jeffree

3 01:21 PM

MOTION

- 802.1 requests permission from the EC to forward the P802.1H-REV draft PAR – MAC Bridging of Ethernet - to NesCom.
- 802.1 Proposed: seaman Second: congdon
 - For: 24 Against: 0 Abstain: 3
- Exec Proposed: Jeffree Second:
 - For: Against: Abstain:
- Draft PAR URL:

<http://www.ieee802.org/1/files/public/docs2006/new-p802.1h-rev-draft-par-0506-v1.pdf>

Draft PAR Confirmation Number: 175717592.3968	
Submittal Email: tony@jeffree.co.uk	<input type="button" value="Change Submitter Email"/>
Type of Project: Revision to an Existing Standard 802.1H-1995	
1.1 Project Number: P802.1H	
1.2 Type of Document: Recommended Practice for	
1.3 Life Cycle: Full	
1.4 Is this project in ballot now? No	
2.1 Title of Standard: Local and Metropolitan Area Networks: Recommended Practice for Media Access Control (MAC) Bridging of Ethernet in Local Area Networks	Old Title: Local and Metropolitan Area Networks: IEEE Recommended Practice for Media Access Control (MAC) Bridging of Ethernet Version 2.0 in 802 Local Area Networks
3.1 Name of Working Group: Higher Layer LAN Protocols Working Group <input type="button" value="Add/Change Working Group"/>	
Contact information for Working Group Chair Tony A Jeffree Email: tony@jeffree.co.uk Phone: +44-161-973-4278	
Contact Information for Working Group Vice Chair Email: Phone:	
3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) Contact information for Sponsor Chair: Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 Contact information for Standards Representative: Email: Phone:	
3.3 Joint Sponsor: / () Contact information for Sponsor Chair: Email: Phone: Contact information for Standards Representative: Email: Phone:	
4.1 Type of Ballot: Individual	
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2008-07	
4.3 Projected Completion Date for Submittal to RevCom: 2009-07	

5.1 Approximate number of people expected to work on this project: 30

5.2 Scope of Proposed Standard: This Recommended Practice specifies extensions to the behavior of MAC Bridges to facilitate interoperability in bridged networks containing a mixture of IEEE 802.3 LANs and other types of LANs. To avoid future incompatibilities, this Technical Report provides guidelines for the identification of protocols operating over IEEE 802 MACs, with particular emphasis on protocols that use the Ethernet Type field.

5.3 Is the completion of this standard is dependent upon the completion of another standard: No

If yes, please explain:

5.4 Purpose of Proposed Standard: This Recommended Practice provides guidelines for protocol identification and translation rules for bridges to support interoperability between IEEE 802.2 and Ethernet Type – based protocols.

5.5 Need for the Project: The need for this revision project is that IEEE 802.1H is in need of updating in a number of areas to reflect developments in Bridging since its publication and to correct inaccuracies in the text that have resulted from changes in other standards.

5.6 Stakeholders for the Standard: LAN standards developers. LAN equipment developers, manufacturers and distributors. Developers of other networking technologies that may be required to interwork with LAN equipment. Users of LAN equipment.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board?

Yes

If yes, state date: 2006-05-15

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

and answer the following: Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Future Adoptions

Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? No

If Yes, the following questions must be answered:

Technical Committee Name and Number:

Other Organization Contact Information:

Contact person:

Contact Email address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)**8.1 Sponsor Information:**

Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

Contact the [NesCom Administrator](#)

Moved: 802.1 requests permission from the EC to forward the P802.1H-REV draft PAR – MAC Bridging of Ethernet - to NesCom.

Moved: Jeffree/Stevenson

16/0/0 Passes

5.04 ME Reaffirmation ballot for IEEE Std 802

- Jeffree

3 01:24 PM

MOTION

- 802.1 requests permission from the EC to initiate a reaffirmation Sponsor Ballot for IEEE Std 802, Overview and Architecture.
- 802.1 Proposed: seaman Second: romanow
 - For: 29 Against: 0 Abstain: 3
- Exec Proposed: Jeffree Second:
 - For: Against: Abstain:

Moved: 802.1 requests permission from the EC to initiate a reaffirmation Sponsor Ballot for IEEE Std 802, Overview and Architecture.

Moved: Jeffree/Stevenson

16/0/0 Passes

5.05	ME		-		
5.06	ME	802.3av PAR to NESCOM	-	Grow	3 01:27 PM

802.3av WG Votes

- **Broad Market Potential** – Y:45, N:1, A:9
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group Broad Market Potential criterion, as shown in 10gepon_5criteria_0506.pdf.
- **Compatibility** – Y: 47, N: 0, A: 4
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group Compatibility criterion, as shown in 10gepon_5criteria_0506.pdf.
- **Distinct Identity** – Y: 49, N: 1, A: 5
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group Distinct Identity criterion, as shown in 10gepon_5criteria_0506.pdf.
Y:49 N:1 A:5
- **Technical Feasibility** – Y: 52, N: 1, A: 6
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group Technical Feasibility criterion, as shown in 10gepon_5criteria_0506.pdf.
- **Economic Feasibility** – Y: 42, N: 2, A: 11
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group Economic Feasibility criterion, as shown in 10gepon_5criteria_0506.pdf.
- **PAR** – Y: 45, N: 1, A: 9
Move that 802.3 WG approve the 10 Gb/s PHY for EPON Study Group PAR, as shown in 10gepon_PAR_0506.pdf, with appropriate modifications to indicate the current revision of 802.3, and forward the PAR to the 802 SEC and NesCom for approval.

P802.3av to NesCom

Motion:

The LMSC grants approval for P802.3av
submittal to NesCom.

PAR: http://www.ieee802.org/3/10GEPON_study/public/may06/10gepon_PAR.pdf

5C: http://www.ieee802.org/3/10GEPON_study/public/may06/10gepon_5criteria.pdf

Moved: The LMSC grants approval for P802.3av submittal to NesCom.

Moved: Grow/Jeffree

15/0/0 Passes

5.07 ME 802.11k PAR extension to NESCOM

- Kerry

1 01:29 PM

IEEE 802 LMSC RESOLUTION

Motion By: KERRY

Seconded By: O'Hara

- **Move that the ExCOM approve the WG decision; TGk request the 802.11 WG to forward the proposed 11k PAR extension to 2011 (as found in document 06/806r0) to NESCOM for consideration of the PAR.**
- WG Results from the May 2006 session: **57/0/0**
- TGk results from the Interim May 2006 session: **7/0/0**
- WG Move by: Al Petrick
- WG 2nd: Richard Paine
- **WG Re-Affirm the decision Results: Approved 142/3/7**

Approve:

Do Not Approve:

Abstain:

[Email This Letter](#)

26 May 2006

Paul Nikolich
18 Bishops Lane
Lynnfield, MA 01940
p.nikolich@ieee.org

Re: P802.11k - Standard for Information Technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications

Dear Paul:

I am pleased to inform you that on 25 May 2006 the IEEE-SA Standards Board approved the above referenced project until 31 December 2006. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/802-11k.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at j.haasz@ieee.org no later than 23 August 2006.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at 732-562-6367 or by email at j.haasz@ieee.org.

Sincerely,

Jodi Haasz
Program Manager
International Stds Programs and Governance
Standards Activities
Phone +1 732 562 6367
FAX +1 732 875 0695
Email: j.haasz@ieee.org

CC: stuart@ok-brit.com

PAR Request Date: 08 March 2006**PAR Approval Date:** 25 May 2006**PAR Signature Page on File:** Yes**Type of Project:** Modification to Approved PAR**Status:** Modification to a Previously Approved Amendment PAR P802.11k, 2002-12-11**Root Project/PAR:** Modification to Approved PAR P802.11-REVma, 2003-03-20**1.1 Project No.:** **P802.11k****1.2 Type of Document:** Standard**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

Standard for Information Technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications

Old Title

Amendment to STANDARD [FOR] Information Technology-Telecommunications and information exchange between systems-Local and Metropolitan networks-Specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Radio Resource Measurement of Wireless LANs

2.1 Amendment/Corrigenda Title

Amendment : Radio Resource Measurement of Wireless LANs

3.1 Working Group Name[Wireless LAN Working Group](#)**Working Group Chair**[Kerry Stuart J](#)

Phone: 408-348-3171

Email: stuart@ok-brit.com

Working Group Vice Chair**3.2 Sponsor**[IEEE Computer Society Local and Metropolitan Area Networks \(C/LM\)](#)**Sponsor Chair**[Nikolich Paul](#)

Phone: 857-205-0050

Email: p.nikolich@ieee.org

3.3 Joint Sponsor**4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** 2006-07-00**4.3 Projected Completion Date for Submittal to RevCom:** 2007-03-00**5.1 Approximate number of people expected to work on this project:** 500**5.2 Scope:** This project will define Radio Resource Measurement enhancements to provide interfaces to higher layers for radio and network measurements.**Old Scope:** This project will define Radio Resource Measurement enhancements to provide interfaces to higher layers for radio and network measurements.**5.3 Is the completion of this document contingent upon the completion of another document?** No

5.4 Purpose: The original standard has a basic set of radio resource measurements for internal use only. These measurements and others are required to provide services; such as roaming, coexistence, and others; to external entities. It is necessary to provide these measurements and other information in order to manage these services from an external source.

Old Purpose: The original standard has a basic set of radio resource measurements for internal use only. These measurements and others are required to provide services; such as roaming, coexistence, and others; to external entities. It is necessary to provide these measurements and other information in order to manage these services from an external source.

5.5 Need for the Project: The demand for measurements is driven by WLAN vendors, suppliers, and service providers who are focusing on emerging new technologies. These new technologies include voice-over-ip (VoIP), video-over-ip, location, sensors, and high-throughput wireless that require more robust measurements of the WLAN radio environment.

5.6 Stakeholders for the Standard: The stakeholders are the telecommunications industry.

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes Presented Date: 2006-03-06

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? Yes

If yes, please explain:

IETF SNMP The IETF has had a standard for years called the "Simple Network Management Protocol (SNMP)" for access of data about the wired, non-mobile network. The MIBs for this protocol have been defined and allocated. The wireless LAN technologies inject new requirements that include location, mobility, varying power levels, varying signal strength, etc. The IETF has not adequately addressed these requirements for SNMP. Distributed Management Task Force (DMTF) The DMTF has developed a Common Information Model (CIM) that defines the schema needed to retain data measurement information about the fixed network. The Open Group's Mobile Management Forum (MMF). The MMF is defining the requirements and information needed for mobility including the Mobility and Directory and Mobility and Security requirements.

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? Yes

Technical Committee Name and Number: ISO/IEC/JCT1 SC6

Contact person: [Robin Tasker](#)

Contact person Phone Number: +44-1925-603758

Contact person Email Address: R.Tasker@dl.ac.uk

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

7.4 Additional Explanatory Notes:

This PAR modification is to revise the "Type of Project" section only, to change the document being amended to "IEEE P802.11-REVma". This amendment cannot be approved until after the approval of IEEE P802.11-REVma. Scope of the Project: The new standard shall be compatible with the IEEE 802.11 MAC. The proposed project facilitates improved management of 802.11 networks by gathering and making available information about the wireless medium and the 802.11 traffic on the wireless medium. The new extensions shall comply with all mandatory portions of the IEEE 802.11 standards and specification. Regulatory Bodies - IEEE P802.11 will correspond with regulatory bodies worldwide in order to assure that the data to be measured will be applicable geographically as widely as possible.

8.1 Sponsor Information:

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

Moved: that the ExCOM approve the WG decision; TGk request the 802.11 WG to forward the proposed 11k PAR extension to 2011 (as found in document 06/806r0) to NESCOM for consideration of the PAR.
Moved: Kerry/O'Hara

16/0/0 Passes

5.08	ME	-		
5.09	ME	802.16/cor2 PAR to NESCOM	- Marks	3 01:31 PM

Project Authorization Request (PAR)

Submittal Email: r.b.marks@ieee.org

Type of Project: Corrigendum to an Existing Standard 802.16-2004

1.1 Project Number: P802.16-2004/Cor 2

1.2 Type of Document: Standard for

1.3 Life Cycle: Full

1.4 Is this project in ballot now? No

2.1 Title of Standard: Corrigendum to IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems

3.1 Name of Working Group: IEEE 802.16 Working Group on Broadband Wireless Access

Contact information for Working Group Chair: Roger B Marks

Email: r.b.marks@ieee.org

Phone: 1-303-725-4626

3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM)

Contact information for Sponsor Chair:

Paul Nikolich

Email: p.nikolich@ieee.org

Phone: 857-205-0050

3.3 Joint Sponsor: IEEE Microwave Theory and Techniques Society

Contact information for Sponsor Chair:

Email:

Phone:

Contact information for Standards Representative:

Email:

Phone:

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: 2007-03

4.3 Projected Completion Date for Submittal to RevCom: 2007-05

5.1 Approximate number of people expected to work on this project: 200

5.2 Scope of Proposed Standard: This corrigendum contains substantive corrections to IEEE Std 802.16. It corrects errors, inconsistencies, and ambiguities in that standard. It does not contain material that introduces enhancements or new features.

5.3 Is the completion of this standard is dependent upon the completion of another standard: No

If yes, please explain:

5.4 Purpose of Proposed Standard: The purpose of this project is only to correct errors, inconsistencies, and ambiguities in IEEE Std 802.16-2004 as amended by IEEE Std 802.16e-2005, IEEE Std 802.16-2004/Cor1-2005 and IEEE Std 802.16f-2005.

5.5 Need for the Project: The need for this project is to correct errors, inconsistencies, and ambiguities in IEEE Std 802.16 as soon as possible.

5.6 Stakeholders for the Standard:

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes

If yes, state date: 2006-07-17

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

and answer the following: Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

https://standards.ieee.org/cgi-bin/NesCOM/myP_par?prt_pview

7.2 Future Adoptions

Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? Yes

If Yes, the following questions must be answered:

Technical Committee Name and Number: ITU

Other Organization Contact Information:

Contact person: Jose M. Costa

Contact Email address: costa@nortelnetworks.com

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)

8.1 Sponsor Information:

Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

**Moved: To forward the maintenance PAR IEEE 802.16maint-06/021r2 to NesCom.
Moved: Marks/Takefman**

15/0/1 Passes

5.10 ME 802.22.2 PAR to NESCOM

- Stevenson

01:44 PM

Motion: To approve the proposed P802.22.2 PAR for consideration by NesCom and the SASB.

Moved: Stevenson

Second: Shellhammer

Informative:

- This PAR, and the corresponding 5 criteria document, were approved by 802.22, with quorum present, at the May 2006 interim session in Jacksonville by a vote of 22 yes, 2 no, 1 abstain.
- The PAR and 5C were submitted to the EC via the EC reflector in compliance with the 30 day requirement
- Bob Grow kindly pointed out to the Chair of 802.22 that the PAR submitted to the EC was on an outdated form (802.22 had followed a link to the “2006 PAR Form” on the IEEE-SA website, but the link erroneously pointed to a older form that had been replaced by a new form in April)
- In response to Mr.Grow’s helpful notice of the inadvertent irregularity, the Chair of 802.22 transposed all of the material from the outdated PAR form to the new PAR form and resubmitted the PAR to the EC on the correct form (still in compliance with the 30 day requirement).
- The approval of the PAR, as transposed to the new form, was reaffirmed by 802.22 at its WG opening plenary at this session (July 2006) by a vote of 22 yes, 0 no, 0 abstain.

Yes No Abstain

IEEE-SA STANDARDS BOARD

PROJECT AUTHORIZATION REQUEST (PAR) FORM - 2006

The submittal deadlines are available at <http://standards.ieee.org/board/nes/index.html>.
(See NesCom Convention - Item #14)

Prior to submitting your PAR, please review the [NesCom Conventions](#).

1. **ASSIGNED PROJECT NUMBER P** (Please leave blank if not available.)
(See NesCom Convention - Item #19)

2. **SPONSOR DATE OF REQUEST** Day: Month: Year: 2006

3. **TYPE OF DOCUMENT** (Please check one.)

Standard for { document stressing the verb "shall" }

Recommended Practice for { document stressing the verb "should" }

Guide for { document in which good practices are suggested, stressing the verb "may" }

4. **TITLE OF DOCUMENT**

(See NesCom Conventions - [Item #5](#), [Item #7](#))

Draft

5. **LIFE CYCLE**

Full-Use

Trial-Use

6. **TYPE OF PROJECT**

New document

Revision of an existing document (indicate number and year existing document was approved in box to the right):

Amendment to an existing document (indicate number and year existing document was approved in box to the right):

(####-YYYY)

Corrigendum to an existing document (indicate number and year existing document was approved in box to the right):

Modified PAR (indicate PAR Number and Approval Date here: P

Day: Month:

Year:)

Is this project in ballot now? Yes No

State reason for modifying the PAR in Item #21.

7. WORKING GROUP INFORMATION:

Name of Working Group (WG) :

Approximate Number of Expected Working Group Members:

8. CONTACT INFORMATION FOR WORKING GROUP CHAIR (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)

(See NesCom Convention [Item #3](#), [Item #4](#))

Name of Working Group Chair: First Name:

Last Name:

Telephone:

FAX:

E-mail:

9. CONTACT INFORMATION FOR CO-CHAIR/OFFICIAL REPORTER, Project Editor or Document Custodian if different from the Working Group Chair (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)

(See NesCom Convention [Item #3](#))

Name of Co-Chair/Official Reporter (if different than Working Group Chair): First Name:

Last Name:

Telephone:

FAX:

E-mail:

10. CONTACT INFORMATION FOR SPONSORING SOCIETY OR STANDARDS COORDINATING COMMITTEE

(See NesCom Convention [Item #1](#), [Item #3](#))

Sponsoring Society and Committee: (Please choose the correct acronym for your Sponsor Society/Technical Committee or SCC. [For an acronym list, please click here.](#))

Sponsor Committee Chair: First Name: Last Name:

Telephone: FAX: E-mail:

Standards Coordinator (Power Engineering Society Only):

Standards Coordinator: First Name: Last Name:

Telephone: FAX: E-mail:

IF THIS PROJECT IS BEING SPONSORED BY TWO SPONSORS, PLEASE COMPLETE THE INFORMATION BELOW

Sponsoring Society and Committee: (Please choose the correct acronym for your Sponsor Society/Technical Committee or SCC. [For an acronym list, please click here.](#))

Sponsor Committee Chair: First Name: Last Name:

Telephone: FAX: E-mail:

Standards Coordinator (Power Engineering Society Only):

Standards Coordinator: First Name: Last Name:

Telephone: FAX: E-mail:

11. SPONSOR BALLOTING INFORMATION (Please choose one of the following):

Individual Balloting

Entity Balloting

Mixed Balloting (combination of Individual and Entity Balloting)

Expected Date of Submission for Initial Sponsor Ballot: Month: Year:

Please review the PAR form three months prior to submitting your draft for ballot to ensure that the title, scope, and purpose on the PAR form match the title, scope, and purpose of the draft. If they do not match, you will probably need to submit a modified PAR.

Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the invitation pool.

(See NesCom Conventions - [Item #20](#))**12. PROJECTED COMPLETION DATE FOR SUBMITTAL TO REVCOM: Month:**

Year:

If this is a MODIFIED PAR and the completion date is being extended past the original four-year life of the PAR, please answer the following questions. If this is not a modified PAR, please go to

Question #13.(See NesCom Conventions - [Item #18](#))

a. Statement of why the extension is required:	
b. How many working group members are working on the project?	
c. How many times a year does the working group meet:	
1. In person?	
2. Via teleconference?	
d. How many times a year is a draft version circulated to the working group via electronic means?	

e. What percentage of the Draft is stable?	%
f. How many significant working revisions has the Draft been through?	
g. Balloting History - If the draft has gone to ballot, please provide a history of all IEEE Sponsor ballots under this project in the box to the right. Please include the: <ul style="list-style-type: none"> ● Ballot Close Date (or scheduled Close Date) ● Ballot Draft Number ● Ballot Results (% affirmative, % negative, % abstain) 	
h. Is this the first request for an extension?	Yes No
If no, when was the previous extension approved?	(DD-MMM- YYYY)

13. SCOPE OF PROPOSED PROJECT

(See NesCom Conventions - [Item #6](#), [Item #16](#), [Item #17](#))

Briefly detail the projected output including technical boundaries.

FOR MODIFIED PROJECTS/REVISION DOCUMENTS - Only detail the projected output including the scope of the project or last published document to be modified and any amendments and/or additions.

Is the completion of this document contingent upon the completion of another document?

Yes (with detailed explanation below) No

14. PURPOSE OF PROPOSED PROJECT

Briefly, clearly and concisely explain "why" the document is being created.

(See NesCom Conventions - [Item #16](#))

FOR MODIFIED PROJECTS/REVISION DOCUMENTS - Only include the purpose of the project or last published document and any amendments and/or additions.

15. REASON FOR THE PROPOSED PROJECT:

Give the specific reason for the standardization project. Focus on explaining the problem being addressed, the benefit to be provided and the stakeholders for the project.

16. INTELLECTUAL PROPERTY (Please answer each of the questions below)

a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes No

If yes, state date: Day: Month: Year:

If no, please explain:

**b. Is the Sponsor aware of copyright permissions needed for this project? Yes
No**

If yes, please explain:

c. Is the Sponsor aware of trademarks that apply to this project? Yes No

If yes, please explain:

d. Is the Sponsor aware of possible registration activity related to this project?

Yes No

If yes, please explain:

17. ARE THERE OTHER DOCUMENTS OR PROJECTS WITH A SIMILAR SCOPE?

Yes (with detailed explanation below) No

If Yes, please answer the following:

Sponsor Organization:

Project/Document Number:

Project/Document Date: (DD-MMM-YYYY)

Project/Document Title:

18. FUTURE ADOPTIONS

Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization?

I acknowledge having read and understood the IEEE Code of Ethics. I agree to conduct myself in a manner which adheres to the IEEE Code of Ethics when engaged in official IEEE business.

The **PAR Copyright Release and Signature Page** must be submitted by FAX to +1 732-875-0695 to the NesCom Administrator before this PAR will be forwarded to NesCom and the Standards Board for approval.

(See NesCom Conventions - Item #8, Item #9, Item #10)

**IEEE P802.22
Wireless RANs**

**5 Criteria for Proposed P802.22.2 PAR for the creation of a
Recommended Practice for the Installation and Deployment of IEEE
802.22 Systems**

Date: 2006-07-23

Author(s):

Name	Company	Address	Phone	email
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Abstract

This document contains the "5 Criteria" information for the IEEE 802 Executive Committee's review, regarding a PAR proposed by 802.22 for approval at the July 2006 IEEE 802 Plenary.

Notice: This document has been prepared to assist IEEE 802.22. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.

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Patent Policy and Procedures: The contributor is familiar with the IEEE 802 Patent Policy and Procedures <<http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf>>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <[Carl R. Stevenson](mailto:Carl.R.Stevenson)> as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.22 Working Group. **If you have questions, contact the IEEE Patent Committee Administrator at <patcom@ieee.org>.**

CRITERIA FOR STANDARDS DEVELOPMENT (FIVE CRITERIA)

Broad Market Potential

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

- a) Broad sets of applicability.*
- b) Multiple vendors and numerous users.*
- c) Balanced costs (LAN versus attached stations).*

IEEE P802.22, under its primary PAR, is developing a standard for use, on a strictly non-interfering basis, for Wireless Regional Area Networks (“WRANs”) using a cognitive radio-based approach, with the target spectrum being geographically unused channels allocated to the TV Broadcast Service.

In the course of our studies, the members of the WG have determined that it is desirable and appropriate to develop a “Recommended Practice for the Installation and Deployment of IEEE 802.22 Systems” that will provide technical guidance to installers and deployers of IEEE 802.22 compliant systems. Correct installation and deployment are important to assure that such systems will maximally achieve their design goals in terms of system performance, reliability, and non-interference to incumbent licensed systems with which they will share the TV broadcast bands.

Because of the expectation of significant global deployment of IEEE 802.22 systems, there is significant need and market potential for such a Recommended Practice.

Because the creation of a Recommended Practice will result in a new, stand-alone document, a new PAR is necessary and the IEEE 802.22 WG recommends that this work be placed as a Task Group (which would be TG2) in the IEEE 802.22 WG because that is where the necessary expertise on the functional and operational requirements of the IEEE 802.22 system resides.

Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management, and Interworking documents as follows: 802 Overview and Architecture, 802.1D, 802.1Q, and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802. Each standard in the IEEE 802 family of standards shall include a definition of managed objects which are compatible with systems management standards.

IEEE 802.22, under its primary PAR, has already met this requirement. The creation of a Recommended Practice for the Installation and Deployment of IEEE 802.22 Systems will have no adverse effect in this area.

Distinct Identity

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

- a) Substantially different from other IEEE 802 standards.*
- b) One unique solution per problem (not two solutions to a problem).*
- c) Easy for the document reader to select the relevant specification.*

IEEE 802.22, under its primary PAR, has already met this requirement. The proposed Recommended Practice for the Installation and Deployment of IEEE 802.22 Systems will have no adverse effect in this area and, by being specific to 802.22 systems, will clearly have a distinct identity of its own.

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.*

IEEE 802.22, under its primary PAR, has already demonstrated technical feasibility. The creation of a Recommended Practice for the Installation and Deployment of IEEE 802.22 Systems will have no adverse effect in this area. In fact, by helping to assure proper installation and deployment of IEEE 802.22 systems, the proposed Recommended Practice will further enhance the reliability of IEEE 802.22 systems' operation, both in terms of basic system performance and in terms of further assuring that IEEE 802.22 compliant systems do not create interference to incumbent licensed systems with which they will share the TV broadcast bands.

This recommended practice will not require a CA document, since it is not creating a new air interface.

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.*

IEEE 802.22, under its primary PAR, has already demonstrated economic feasibility. The creation of a Recommended Practice for the Installation and Deployment of IEEE 802.22 Systems will have no adverse effect in this area. In fact, by helping to assure proper installation and deployment of IEEE 802.22 systems, the proposed Recommended Practice will ultimately reduce the costs of installation and deployment by helping assure that IEEE 802.22 compliant systems are installed and deployed correctly the first time, eliminating, or at a minimum greatly reducing, the need for remedial action after a system is deployed.

References:

**Moved: To approve the proposed P802.22.2 PAR for consideration by NesCom and the SASB.
Moved: Stevenson/Shellhammer**

15/0/0 Passes

5.11	ME		-		
5.12	ME		-		
5.13	ME	802.3aq to REVCOM	-	Grow	5 01:45 PM

802.3aq ballot status

- D4.0 Recirculation – 84.3% return, 93.6% approve, 10.3% abstain
- 9 disapprove voters, 27 unsatisfied comments
- NO comments on last recirculation.

P802.3aq to RevCom

Motion:

The LMSC grants approval for
submittal of P802.3aq to RevCom.

Working Group motion #4 – Y: 60, N: 1, A: 5

Move that the IEEE 802.3 Working Group Chair request
LMSC approval for submission of IEEE 802.3aq to
REVCOM.

**Moved: The LMSC grants approval for submittal of P802.3aq to RevCom.
Moved: Grow/Takefman**

14/0/0 Passes

5.14 ME 802.3as conditional to REVCOM

- Grow

5 01:49 PM

802.3as ballot status

- D3.2 Recirculation – 81.6% return, 93.6% approve, 9.2% abstain
- 5 disapprove voters, 6 unsatisfied comments
- 11 comments on last recirculation.

P802.3as conditional to RevCom

Motion:

The LMSC grants conditional approval per Clause 20 for P802.3as submission to RevCom.

802.3as Sponsor ballot results

	D3.0		D3.1		D3.2	
Sponsor ballot group	147		147		147	
Ballots returned (>75%)	113	77%	119	81%	120	82%
Approve (>75%)	92	88%	97	90%	102	94%
Disapprove	12		11		7	
Abstain (<30%)	9	8%	11	9%	11	9%

Note: Ben Brown and Glen Kramer have flipped their disapprove votes. Current disapprove count as of D3.2 is 5

802.3as comment summary

	GR	G	TR	T	ER	E	Total
D3.0	7	6	21	33	38	55	160
D3.1	0	0	1	3	0	6	10
D3.2	0	0	11	2	0	3	16

D3.0
66 required comments

6 unsatisfied

D3.1
0 required comments
0 unsatisfied

(1 rogue TR comment)

D3.2
8 required comments
0 unsatisfied

(3 rogue TR comments)

802.3as disapprove comments

Disapprove balloter	Comment #
Yong Kim	D3.0/#108
David Law	D3.0/#114 (withdrawn)
Robert O'Hara	D3.0/#14
Pat Thaler	D3.0/#104, #106, #107
Geoff Thompson	D3.0/#113

P802.3as unsatisfied comments (1)

- **D3.0/#14**
 - Packet vs. frame (R)
- **D3.0/#104**
 - Modify a note re: encapsulation protocols, refer to 1.4 definitions (AIP)
- **D3.0/#106**
 - State diagram and subclause title mismatch (Clause 4) (A)
- **D3.0/#107**
 - State diagram and subclause title mismatch (4A) (A)
- **D3.0/#108**
 - Wants 1875 rather than 2000 octet (R)

P802.3as unsatisfied comments (2)

■ D3.0/#113

- (#200) Restore caps of field names (AIP)
- (#201) Revise Q-tagged def in 1.4 (AIP)
- (#202) basic frame to “Basic Frame” (R)
- (#203) envelope frame to “Envelope Frame” (R)
- (#204) Revise overview sentence (AIP)
- (#205) Add clarifying sentence (AIP)



Internal 802.3as TF tracking number

802.3 WG Motion #_ (San Diego)

- Request 802.3 WG approval to submit P802.3as to 802 EC for conditional approval to be placed on September RevCom agenda
- ***M: On behalf of 802.3as TF***
- **Y: 39 N: 0 A: 13**
- **>= 75%**
- **Passes**

IEEE P802.3as D3.0 Frame format extensions Comments

CI 00 SC 0 P 0 L 0 # 113
THOMPSON, GEOFFREY O Individual

Comment Type GR Comment Status A

*** Comment submitted with the file 1340000024-FEX_comments.csv attached ***

myBallot would not accept output of ballot tool will submit comments manually Upload attempt produced the following error message: Row 1: "Category" not found Row 1: "Comment" missing Row 2: "Category" not found Row 2: "Comment" missing Row 3: "Category" not found Row 3: "Comment" missing Row 4: "Category" not found Row 4: "Comment" missing Row 5: "Category" not found Row 5: "Comment" missing Row 6: "Category" not found Row 6: "Comment" missing Row 7: "Category" not found Row 7: "Comment" missing Row 8: "Category" not found Row 8: "Comment" missing Row 9: "Category" not found Row 9: "Comment" missing Row 10: "Category" not found Row 10: "Comment" missing Row 11: "Category" not found Row 11: "Comment" missing Row 12: "Category" not found Row 12: "Comment" missing Row 13: "Category" not found Row 13: "Comment" missing

Suggested Remedy

Response Response Status U

ACCEPT IN PRINCIPLE.

See comments 200-212. Resolutions copied below:

200:ACCEPT IN PRINCIPLE.

Change all instances in 1.4.127 and throughout the rest of the draft where the field names are mentioned as proper nouns to be as follows:

- Destination Address
- Source Address
- Length/Type
- MAC Client Data
- Pad
- Frame Check Sequence

Change all instances throughout the draft where the field names are mentioned as proper nouns to be as follows:

- Preamble
- Start Frame Delimiter
- Extension

201:ACCEPT IN PRINCIPLE.

Change to:

1.4.334 Q-tagged frame: A MAC frame with a specific Type value and has a maximum length of 1522 octets. (See IEEE 802.3, 3.2.7 and IEEE 802.1Q, Annex C).

202:REJECT.

Motion to reject comment: 4-2-1

There is no consensus to make a change.

203:REJECT.

Motion to reject comment: 4-2-1

There is no consensus to make a change.

204:ACCEPT IN PRINCIPLE.

Change to:

"This clause defines the mapping between MAC service interface primitives and Ethernet packets, including the syntax and semantics of the various fields of MAC frames and the fields used to form those MAC frames into packets."

205:ACCEPT IN PRINCIPLE.

Add the following:

All three frame types use the same Ethernet frame format.

206:ACCEPT IN PRINCIPLE.

See comment 200

207:REJECT.

This addition is out of scope of 802.3. Whether or not encapsulation protocols may be used in a recursive manner is an issue for their own definition.

208:REJECT.

This comment was WITHDRAWN by the commenter.

The problem is that the new text says that the 'L/T field indicates' -- the problem is that it may not, the outer L/T field will not necessarily be a well known envelope type, thus the current text.

IEEE P802.3as D3.0 Frame format extensions Comments

209:ACCEPT IN PRINCIPLE.

Change to:
 "Other clauses in this standard may add optional protocol sublayers directly above the MAC that preserve the service interface to the MAC client. Any augmentations to the MAC client interface are specified in the relevant sublayer clause (e.g., clause 31)."

210:REJECT.

This text is now 3.2.8

211:ACCEPT.

212:ACCEPT.

Change sentence to:

However, they may be distinguished within the MAC client.

CI 01 SC 1.4.127 P 10 L 30 # 200
 Thompson, Geoff Nortel

Comment Type ER Comment Status A

Please reverse out the change of capitalization that has been put in on the drafts for this each of the field names for the following reasons:

- 1) The field labels are the proper names for each of the fields
 Proper names should be capitalized
- 2) The change is unnecessary and will only confuse those who are used to the distinguished form that has been in use for over 20 years.
- 3) The change is unnecessary to accomplish the scope of the PAR.
- 4) The change is likely to produce additional style inconsistency across the .3 standard.
- 5) This style change was proposed and the change was rejected in P802.3-REVam
- 6) The change has introduced an inconsistency of capitalization within the various field label names.
- 7) Consideration of this previously submitted DISAPPROVE comment is within the scope of this ballot.
- 8) The rationale of ""self consistency within the opened clauses"" is a weak argument when balanced against the items above.
 This is an unwanted ""service to humanity"!"

SuggestedRemedy

Please delete the change of capitalization for the proper names of field names that has been put in the drafts in this clause and throughout the draft.
 This will significantly reduce the size of the final draft.

Response Response Status W

ACCEPT IN PRINCIPLE.

Change all instances in 1.4.127 and throughout the rest of the draft where the field names are mentioned as proper nouns to be as follows:

- Destination Address
- Source Address
- Length/Type
- MAC Client Data
- Pad
- Frame Check Sequence

Change all instances throughout the draft where the field names are mentioned as proper nouns to be as follows:

- Preamble
- Start Frame Delimiter
- Extension

IEEE P802.3as D3.0 Frame format extensions Comments

CI 01 SC 1.4.334 P 10 L 33 # 201
Thompson, Geoff Nortel

Comment Type ER Comment Status A

Current text (below) is misleading and insufficiently specific:

1.4.334 Q-tagged frame: A MAC frame with a single 4 octet tag in the Length/Type field and the first two octets of the MAC client data field, the original Length/Type field moved to the third and fourth octets of the MAC client data field, and that has a maximum length of 1522 octets. (See IEEE 802.3, 3.2.7 and IEEE 802.1Q, Annex C)

SuggestedRemedy

Change to:

1.4.334 Q-tagged frame: A MAC frame of the encapsulating protocol specified by EtherType value 0x81-00. The protocol place exactly two octets after the Type field and then continues with the Length/Type field of the encapsulated frame resulting in a frame growth of four octets and a maximum length of 1522 octets. (See IEEE 802.3, 3.2.7 and IEEE 802.1Q, Annex C).

Response Response Status W

ACCEPT IN PRINCIPLE.

Change to:

1.4.334 Q-tagged frame: A MAC frame with a specific Type value and has a maximum length of 1522 octets. (See IEEE 802.3, 3.2.7 and IEEE 802.1Q, Annex C).

CI 01 SC 1.4.xxx P 10 L 40 # 202
Thompson, Geoff Nortel

Comment Type ER Comment Status R

The term being defined is being defined as a label for a proper noun, not just a descriptive term, therefore it should be capitalized

SuggestedRemedy

Change ""basic frame"" to ""Basic Frame"" to distinguish the label from the description.

Response Response Status U

REJECT.

Motion to reject comment: 4-2-1

There is no consensus to make a change.

CI 01 SC 1.4.xxx P 10 L 44 # 203
Thompson, Geoff Nortel

Comment Type ER Comment Status R

The term being defined is being defined as a label for a proper noun, not just a descriptive term, therefore it should be capitalized

SuggestedRemedy

Change ""envelope frame"" to ""Envelope Frame"" to distinguish the label from the description.

Response Response Status U

REJECT.

Motion to reject comment: 4-2-1

There is no consensus to make a change.

CI 03 SC 3.1 P 15 L 39 # 204
Thompson, Geoff Nortel

Comment Type ER Comment Status A

Opening the overview with the text:

""This clause defines the mapping between MAC service interface primitives and Ethernet packets, including the syntax and semantics of the various fields of MAC frames and the fields used to encapsulate those MAC frames into packets.""
is confusing and heads people off in the wrong direction.

SuggestedRemedy

Restore the main thrust of the overview by opening with text something like:

""This clause defines the syntax and semantics of an Ethernet packet and its various fields. Specific attention is paid to additional fields or regions defined for use with type encoded encapsulating protocols.""

Response Response Status W

ACCEPT IN PRINCIPLE.

Change to:

""This clause defines the mapping between MAC service interface primitives and Ethernet packets, including the syntax and semantics of the various fields of MAC frames and the fields used to form those MAC frames into packets.""

IEEE P802.3as D3.0 Frame format extensions Comments

Cl 03 SC 3.1 P 15 L 47 # 205
Thompson, Geoff Nortel

Comment Type ER Comment Status A

Listing the three type of frames can confuse the reader with respect to strong common underlying characteristic, i.e. that the basic format of the Ethernet packet is maintained across all 3

SuggestedRemedy

Insert the following text:
""All 3 frame types conform to the basic Ethernet packet model of addressing, type number that specifies data field organization (without regard to recursion), the data itself and a checksum.

Response Response Status W

ACCEPT IN PRINCIPLE.

Add the following:

All three frame types use the same Ethernet frame format.

Cl 03 SC 3.1.1 P 15 L 48 # 14
O'HARA, ROBERT Individual

Comment Type GR Comment Status R

The replacement of "frame" with "packet" is not acceptable. The MAC layer deals with frames, not packets. The use of "packet" in this document, beginning here and in all other occurrences, must be corrected.

SuggestedRemedy

Undo all deletions of "frame", where it is replaced by "packet", throughout the document.

Response Response Status U

REJECT.

There is no consensus to make this change.

The 802.3 document was inconsistent in its use of packet and frame. This Amd has made the use consistent with the clauses in its scope. The chosen use of packet and frame is consistent with 802.3 usage.

Cl 03 SC 3.2.7 P 20 L 15 # 104
THALER, PATRICIA A Individual

Comment Type TR Comment Status A

With no definition of "encapsulation protocols" there is no way for one to know if one is following the recommendation. I realize that it is difficult to strictly define the term but it deserves some explanation beyond citing two examples without explaining the principle. A protocol that adds "additional prefixes and suffixes" isn't enough of a description. TCP and IP add headers to frames but I don't think we would consider them to be encapsulation protocols when they are the native protocol. (They would be if they were being used to create a tunnel for another protocol.) Therefore something should be added that makes it clear this is to allow for headers and footers that are added transparent to the original creator of the frame.

SuggestedRemedy

An encapsulation protocol is a protocol that adds a prefix or suffix or both to a frame that is transparent to the MAC Client sending the original client data.

Response Response Status U

ACCEPT IN PRINCIPLE.

Modify Note 1, first sentence:

. . .encapsulation protocols (see 1.4.xxx Envelope frame) . . .

IEEE P802.3as D3.0 Frame format extensions Comments

CI 03 SC 3.2.7 P 30 L 11 # 108
 KIM, YONGBUM Individual

Comment Type TR Comment Status R

802.1 requested a solution to 802.3 on ever-increasing encapsulation that upper layers useover 802.3 network. The minimum has been met, and then some.802.1ad + 4 bytes802.1AE + 32 bytes (and +32 for provider side) 802.1ah + 4 bytes provider backbone PPP+ MPLS + others = ~ 20 bytes-----S. Total min. 60, max 92MACSec Caveat - 160 (instead of 32), diff of 128 bytes Caveat Total min. 188, max 220bytes.1522+220 = 1720 << 1800 bytes which is where you have high probabilitythat CSMA/CD network would pass these larger frames with +/- 3 bit FIFOs. This meet theobjectives:- 802.1 minimum expansion request- Minimal impact to existing networks and standard, etc.I "have not" seen any "technical" justification why ~2K is a good new frame size but peopleprefer it. I like to invite technical justification why it ought to be different than this ~1800byte #.Supporting Document 1-----

/1/files/public/docs2005/liaison-dot3as-joint-0501.pdfObjectives (Pg 3)1)Preserve the IEEE 802.3 MAC data service interface 2)Preserve the basic frame format3)Maintain the maximum data field length (1500 octets) 4)Increase the maximum framesize exclusively for optional prefix and suffix fields in envelope frames 5)Redefine theTagged frame format as an envelope frame format 6)At a minimum, support:a)IEEE 802.1Q Virtual Bridged LANsb)IEEE 802.1ad Provider Bridgesc)IEEE 802.1AE MACsecd)ITU-T SG15 Ethernet transport encapsulations 7)Investigate and define the largestmaximum frame size with minimal impact to existing networks and standards And StrawPolls (Pg 4)Supporting Document 2-----

/3/minutes/mar04/0304_IEEE802_1_report.pdf (Pgs 3 & 4) TOPIC 1: Frame SizeExpansion Requirements (as currently known)* MACSec Secure Frame Format - 24octets (point to point), 32 octets (sharedmedium)* Provider Bridge TAG - 4 octetsSupporting Document 3-----

http://www.ieee802.org/3/frame_study/0409/braga_1_0409.pdfObservations (1), pg 12 of 19. All repeater tested accept at least 4130 byte frame.This means that repeaters tested have all better than 100 ppm clock, supporting that+/- 3 bit FIFO or deeper value was used for repeaters. Most of thefailed devices are 802.1 Bridges with Ethernet MACs ("Ethernet Switches") thatoften has hardware limit on supported lengths.

SuggestedRemedy

Change c) 1982 decimal - envelop frames ... to 1857 or N to 1808 (reasonable longword boundary andallow for the same 48 octet private and/or internal header).

Response Response Status U

REJECT.

Based on study, the WG has agreed on 2000 octets as the new maximum frame size. There is no new information to change that view.

Motion to approve: Y-6 N-1

CI 04 SC 4.3.2.1.4 P 32 L 50 # 106
 THALER, PATRICIA A Individual

Comment Type TR Comment Status A

This subclause and 4.3.2.2.4 have inaccurate titles still. The state diagram titles on the figures were corrected and these should be corrected to match. The state diagrams are for the MAC client interface, not the MAC.

SuggestedRemedy

Change the subclause title to match the name in the figure title.This will result in the subclause having the same title as the next level subclause (4.3.2.1 and 4.3.2.2 respectively). If that is a problem, the subclause only has the sentence that references the figure. It could be deleted and sentence moved to the parent clause.

Response Response Status U

ACCEPT.

CI 4A SC 4A.3.2.1.4 P 44 L 16 # 107
 THALER, PATRICIA A Individual

Comment Type TR Comment Status A

Also applies to 4A.3.2.2.4. Same problem as my comment on the titles for the equivalent subclauses in Clause 4.

SuggestedRemedy

Whatever change is done in Clause 4 also needs to be applied here.

Response Response Status U

ACCEPT.

**Moved: The LMSC grants conditional approval per Clause 20 for P802.3as submission to RevCom.
Moved: Grow/Stevenson**

16/0/0 Passes

5.15 ME 802.11REV-ma conditional to REVCOM

- Kerry

5 01:54 PM

IEEE 802 LMSC RESOLUTION

Motion By: KERRY

Seconded By: O'Hara

- **To forward the 802.11REV-ma draft to REVCOM, upon successful completion of the procedure in Clause 21 of the LMSC P&P.**

– WG Moved by: Bob O'Hara

– WG 2nd: Andrew Myles

– **WG Results: Approved 53/0/3**

Approve:

Do Not Approve:

Abstain:

**IEEE P802.11
Wireless LANs**

802.11Rev-ma Conditional Approval Clause 21 Report

Date: 2006-0719

Author(s):

Name	Company	Address	Phone	email
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Abstract

This document provides the material necessary to support a request for conditional approval to send 802.11REV-ma to REVCOM.

Notice: This document has been prepared to assist IEEE 802.11. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.

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From the 802 LMSC Policies and Procedures, Clause 21:

Motions requesting conditional approval to forward where 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 confirmation ballot and resolution meeting.

From the myBallot site:

Ballot Open Date: 06/21/2006

Ballot Close Date: 07/11/2006

RESPONSE RATE

This ballot has met the 75% returned ballot requirement.

145 eligible people in this ballot group.

99 affirmative votes

10 negative votes with comments

1 negative votes without comments

8 abstention votes

118 votes received = 81% returned
7% abstention

APPROVAL RATE

The 75% affirmation requirement is being met.

99 affirmative votes

10 negative votes with comments

109 votes = 91% affirmative

Schedule for confirmation ballot: to close by 15 September 2006 (third recirculation ballot) or 31 October 2006 (fourth recirculation ballot).

Schedule for resolution meeting: 18-22 September 2006

Outstanding disapprove ballot comment report

The table below shows the remaining disapprove ballots and a count of their comments. A blank cell indicates no response by the ballot for the ballot at the top of the column.

Name	Original Ballot	Recirc #1	Recirc #2
Keith Amman	1		
Parag Bhatt	0		
Clint Chaplin	5	9	5
Darwin Engwer	10	12	
David James	1		
Andrew Myles	9	11	5
Stephen Palm			14
Amjad Soomro		2	
Dorothy Stanley			38
Adrian Stephens	8	15	9
Harry Worstell	1		
Total	35	49	71

Comments from Initial Ballot

Cl 06 SC 6.2.1.1.1 P49 L1 # 2

COORDINATION, EDITORIAL #

JAMES, DAVID V Individual

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

(These apply throughout; the page, sub-clause, and line numbers were put in to bypass the format checker and are only relevant for a small portion of this comment)

This document does not conform to the IEEE Style Manual. A couple of examples:

- 1) List of Figures ==> List of figures
- 2) Figure 118 in TOF breaks across line
- 3) Redundant/confusing names:
destination address, DA
- 4) Mbit/s ==> Mb/s
- 5) State machine on #811 not consistent with state machine notation in other 802 specifications

Response

SuggestedRemedy

Conform to the IEEE Style Manual.
If necessary, please request assistance from the IEEE Editors.

Response *Response Status* **U**

ACCEPT. The Working Group editor is working with the IEEE-assigned project editor to ensure conformance with the IEEE Style Manual.

Change abbreviation for "megabits per second" to the correct spelling throughout (either Mbit/s or Mb/s).

There is no requirement for state machine format consistency between 802 documents.

Editor included in draft 5.2 by changing capitalization of List of tables, List of figures.

Editor searched for megabit and it does not occur in document.

Editor consulted current IEEE style guide and IEEE staff. Both Mb/s and Mbit/s are considered standard, acceptable, and clear. No changes were made.

Cl 00 SC N & M P L # 7

STEPHENS, ADRIAN P Individual

Comment Type ER Comment Status A

There is confusion between these two annexes as to exactly what an AP is. Annex N provides no means for an AP to discover about mapping changes from the DS. Annex M says that this is possible.

SuggestedRemedy

There probably needs to be a new DS-STA-NOTIFY.request (from DS to AP) to provide this communication. Alternatively the use of terms like AP needs to be clarified (i.e. in M it includes the DS, in N they are called out separately).

Response Response Status U

ACCEPT IN PRINCIPLE.

It is a fact that Annex N does not provide a means for an AP to discover about mapping changes from the DS. Annex M says that "an AP may also receive access control updates from other APs in the form of inter-access point notifications of MU association events and transitions". That inter-access point notification is accomplished via protocol messages, not via the DS SAP.

Those protocol messages are initiated via the IAPP SAP, which is defined in 802.11F.

--begin detailed explanation--

The AP has knowledge of which MUs (mobile STAs) are associated (locally). The AP informs the DS of such updates so that the DS can forward MSDUs destined for that MU to the correct AP. The DS has no knowledge of the entities for which it is distributing MSDUs. For example, an AP may choose to notify the DS about the AP itself (i.e. the ACM_STA), so that MSDUs destined for that AP's SME can be properly delivered by the DS.

In the mobility scenario, the MU is associated with an old AP, and that AP will have notified the DS of the MU's AP (the old AP). When the MU transitions to a new AP, the new AP notifies the DS of the MU's AP (now the new AP).

This immediately causes new MSDUs that are destined for that MU (that are received by the DS) to be forwarded to the new AP.

The remaining issue is the dangling association status at the old AP. The old AP has no way to know that the MU has transitioned to a new AP. While this does not affect new outbound traffic destined for the MU, there is the issue of queued data at the old AP. The old AP will continue to attempt to transmit this queued data until the max retry limit has been exceeded. As this happens the old AP will then discard the MSDUs one-by-one. Eventually the old AP will timeout the MU's association status.

If the MU transitioned to the new AP using a reassociate frame then early teardown of the MU's association status at the old AP is possible. This early teardown (as defined in 802.11F) is accomplished by a direct AP-to-AP communication from the new AP to the old AP, in effect saying "I have this MU now, you can discard the MU's context information along with any queued MSDUs and MPDUs".

In contrast, the DS needs to keep track of the minimal info it needs to distribute MSDUs, and the old AP might or might not benefit from knowing that the association is dead. (Keep in mind that the MU could conceivably have disassociated, or might do a new association rather than a reassociation.) So the AP-to-AP update is only handy (not compulsory). The AP-to-DS update is necessary to proper functioning of the WLAN system. Therefore separate mechanisms, and therefore different primitives. (Although the IAPP SAP needs something like the DS to work, it does not need the DS -- for example, in a WLAN switch the IAPP SAP can exist out-of-band of the DS).

So, Annex N is correct and complete wrt the DS SAP interface primitives. Annex M is correct wrt the functions of the AP. And 802.11F is correct wrt the IAPP functions.

--end detailed explanation--

Early draft text for Annex M clause M.4 contained a reference to 802.11F wrt the AP-to-AP communication needed to support early teardown of the MU's association status at the old AP. The text describing that specific use case scenario was removed in response to a comment on an earlier draft of 802.11ma. (see the Primary AP Functions section of doc 5/120r9 for the original Annex M text, which cites the specific IAPP SAP primitives that define this functionality and cause the corresponding protocol messages to be sent).

In response to the last line of the Suggested Remedy, Annex M does not indicate that an AP includes the DS, they are separate entities and are described individually. Annex M does point out that it is possible to combine an AP and a DS into a single unit called an Access Unit, but that's just one possible product instantiation.

Editor: In clause M.4 change

Change

"An AP may also receive access control updates from other APs in the form of inter-access point notifications of MU association events and transitions." to

"An AP may also receive access control updates directly from other APs, via a protocol outside the scope of this standard, in the form of inter-access point notifications of MU association events and transitions."

Editor included in draft 5.2 by adding to N.4.

CI 11 SC 11.1.3 P308 L # 8
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

"A STA may start its own BSS without first scanning for a BSS to join".
One of the issues I have with the structure of the document is that it claims that the SME is outside the scope of the specification, and therefore doesn't have a section for the SME. However it also makes normative statements that only make sense as specification for an SME.
This statement is an example of that, hopefully I'll notice and report a few more. Because control of sequencing of scanning/joining/starting is under control of the SME, this statement should read: "The SME of a STA may start its own BSS..."

SuggestedRemedy

Add a section containing statements for the SME and move the amended statement there.

Response Response Status U

ACCEPT.

Delete the sentence.

Editor included in draft 5.2 in 11.1.3.

CI 11 SC 11.1.3.2.1 P L # 10
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

"In each BSS there shall be at least one STA&"
This is an example of another class of generic error that is, unfortunately, far too common in this document - wrong use of "shall".
"Shall" introduces a normative requirement on the implementer. In this example, shall cannot introduce a normative requirement on the implementer because the BSS consists of multiple STA from multiple implementers.
It should be possible to trace most "shall" statements to PICS entries.

SuggestedRemedy

I recommend that the document be scanned and each occurrence of "shall" (there are 2258 of them) be validated.

In this example, what it meant to say: "The procedures defined in this subclause ensure that in each BSS there is at least one STA&"

Response Response Status U

ACCEPT. The editor is to identify those uses of "shall" that are not normative and replace with descriptive language.

Editor included in draft 5.2 in 11.1.3.2.1.

CI 11 SC 11.2.1.4 P L # 12
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

"An AP shall have an aging function to delete pending traffic when it is buffered for an excessive time period."
I'm not sure this normative requirement is necessary. It is certainly not testable without defining what "excessive" means.

SuggestedRemedy

Recommend turning this into an informative note.
Alternatively define the ageing algorithm so that compliance can be tested.

Response Response Status U

ACCEPT.

"An AP can delete buffered frames for implementation dependent reasons, including the use of an aging function and availability of buffers."

Editor included in draft 5.2 in 11.2.1.5.

CI 11 SC 11.2.1.9 P L # 14
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

"The AP shall have an aging function to delete buffered traffic when it has been buffered for an excessive period of time. That function shall be based on the ListenInterval parameter of the MLMEASSOCIATE request primitive of the STA for which the traffic is buffered."
"... shall have a function..." "... shall be based on ...".
Oh dear, oh dear, oh dear.

SuggestedRemedy

Either turn this into a recommendation, or provide enough specification that a compliant implementation can be constructed.

Response Response Status U

ACCEPT.

Delete the first two sentences of 11.2.1.9. Also, replace "The AP aging function" with "Any AP aging function" in the third sentence.

Editor included in draft 5.2 in 11.2.1.11.

Cl 11 SC 11.3.2 P L # 15
 STEPHENS, ADRIAN P Individual

Comment Type **TR** Comment Status **R**
 "The STA's SME shall delete any PTKSA&"
 See also my earlier comment. We need to put this in a section containing normative requirements on the SME.

SuggestedRemedy
 Add a section containing statements for the SME and move the statement there.
 Recommend scanning for SME and doing likewith with any other similar statements.

Response Response Status **U**
 REJECT.

By removing the indicated text, the commenter removes the needed cross-layer description that pulls together all the individual operations described elsewhere in the standard. This cross-layer description is essential to understanding the security functionality.

Cl 08 SC 8.5.1.2 P156 L2 # 16
 STEPHENS, ADRIAN P Individual

Comment Type **TR** Comment Status **A**
 (Submitted on behalf of Jesse Walker, TGi edior)
 Line 2 says: "PMK <-- L(PTK, 0, 256)"
 This was an editorial error with normative consequences.

SuggestedRemedy
 Replace the quoted text with:
 PMK <-- L(AAA Key, 0, 256)

Response Response Status **U**
 ACCEPT.

Editor included similar in draft 5.2 in 8.5.1.2. Replacement text is MSK not AAA Key.

Cl 00 SC P L # 19
 WORSTELL, HARRY R Individual

Comment Type **TR** Comment Status **A** 11e
 This ballot does not contain the 802.11e ammendment and should include it. I vote NO.

SuggestedRemedy
 Include 802.11e in the rollup

Response Response Status **U**
 ACCEPT.

Editor included in draft 5.1 by adding 802.11e.

 COORDINATION, SCC14

[Redacted]

Cl 11 SC 11.6.7.2
MYLES, ANDREW F

P Individual

L

65 [Redacted]

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

The DFS channel changing facilities for IBSS represent a very complex set protocols that have little value in the vast majority of cases and will not work in many circumstances. There is no know implementation of this feature.

SuggestedRemedy

Delete all text related to selecting a new channel in an IBSS

Response Status **U**

REJECT.

The commenter is requested to provide more information supporting the assertions that the protocol does not work in many circumstances and thus has little value.

The editor is to reverse the changes made in draft 5.2, as shown below.

Delete all of clause 3.38 (done in 3.47 of draft 5.2) (reversed in draft 6.0)

Delete "or IBSS" in clause 5.4.4.2 (done in 5.4.4.2) (reversed in 5.4.4.2 of draft 6.0)

Delete "IBSS DFS" row from Table 5 in 7.2.3.1 (Changed to reserved in Table 8) (reversed in Table 8 of draft 6.0)

U

Delete "IBSS DFS" row from Table 12 in 7.2.3.9 (Changed to reserved in Table 15) (reversed in Table 15 of draft 6.0)

Delete "IBSS DFS" row from Table 22 in 7.3.2 (Changed to reserved in Table 26) (Reversed in Table 26 of draft 6.0)

Delete "or a STA in an IBSS" in first paragraph in 7.3.2.20 (done in 7.3.2.20) (reversed in draft 6.0 7.3.2.20)

Delete "or a STA in an IBSS" and "A STA in an IBSS may treat a Channel Switch Mode field set to 1 as advisory" in second paragraph in 7.3.2.20 (done in 7.3.2.20) (reversed in draft 6.0 7.3.2.20)

Delete all of clause 7.3.2.24 (done in 7.3.2.24) (Reversed in draft 6.0 in 7.3.2.24)

Delete "or a STA in an IBSS" from 7.4.1.5 (done in 7.4.1.5) (reversed in draft 6.0 in 7.4.1.5)

Delete row with "IBSS DFS Recovery Interval" in 10.3.2.2.2 (Done in 10.3.2.2.2) (Reversed in draft 6.0 in 10.3.2.2.2)

Delete "IBSS DFS Recovery Interval," from MLME-START.request parameter list in

10.3.10.1.2 (done in 10.3.10.1.2) (reversed in draft 6.0 in 10.3.10.1.2.)

Delete row with "IBSS DFS Recovery Interval" in 10.3.10.1.2 (done in 10.3.10.1.2) (reversed in draft 6.0 in 10.3.10.1.2.)

Delete "or IBSS" in seventh dash point in 11.6 (done in 11.10.) (reversed in draft 6.0 in 11.10)

Delete "A STA in an IBSS may also autonomously report measurements to other STAs in the IBSS using the Channel Map field in the IBSS DFS element in a Beacon frame or Probe Response frame" in 11.6.6 (done in 11.10.6) (Reversed in draft 6.0 in 11.10.6)

Delete title "11.6.7.1 Selecting and advertising a new channel in an infrastructure BSS" but keep following text (Removed 11.10.7.1 heading) (Reversed in draft 6.0 in 11.10.7.1)

Delete all of clause 11.6.7.2 (Removed 11.10.7.2) (Reversed in draft 6.0 in 11.10.7.2)

Delete SM17-19 in A.4.12 (Removed SM17-19 in A.4.12) (Reversed in draft 6.0 in A.4.12)

Delete "Transmission of channel switch announcement and channel switch procedure by a STA" sub-row in SM20 in A.4.12 (Done in SM20 of A.4.12) (Reversed in draft 6.0 in A.4.12).

Editor included in draft 5.2 in the locations described in the parentheses above.

Editor reversed changes in draft 6.0 in the locations described in the parentheses above.yyyyyyyyyyyyyyyyyyyyyyyyyyyyy

Cl 11 **SC 11.5.1** *P* *L* # **67**

MYLES, ANDREW F Individual

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

The text defines association based on transmit power capability
However, no use has ever been demonstrated for this feature and few if any implementations provide it for any useful purpose

SuggestedRemedy
Delete all text related to association based on transmit power capability

Response *Response Status* **U**

REJECT. The commenter does not provide a compelling reason for deprecating this function. It is not proven that no use has ever been demonstrated for this feature. It is to soon to determine that no use will be found for this feature.

Cl 11 **SC 11.5.3** *P* *L* # **68**

MYLES, ANDREW F Individual

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

The text defines adaption of transmit power
However, no use has ever been demonstrated for this feature in relation to DFS and few, if any, implmentations provide it for any useful purpose

SuggestedRemedy
Delete all text related to adaption of transmit power, and allow 11k and 11v to define new more appropriate features

Response *Response Status* **U**

REJECT. The commenter does not provide a compelling reason for deprecating this function. It is not proven that no use has ever been demonstrated for this feature. It is to soon to determine that no use will be found for this feature.

The commenter is urged to work with 802.11 task groups k and v to define new, more appropriate features and to delete this feature at that time.

Cl 11 **SC 11.6.3** *P* *L* # **66**

MYLES, ANDREW F Individual

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

The text references ETSI EN 301 893.
This reference is European focused and incorrect

SuggestedRemedy
Remove all references to ETSI EN 301 893

Response *Response Status* **U**

ACCEPT. There is no reference to ETSI EN 301 893 in the cited clause of the balloted draft. The text existed in earlier versions of the draft, but had already been removed.

No editorial action required.

CI 11 SC 11.6.1 P L # 69
 MYLES, ANDREW F Individual

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

The text defines association based on supported channels
 However, no use has ever been demonstrated for this feature in relation to DFS and few if any implementations provide it for any useful purpose

SuggestedRemedy

Delete all test related to association based on supported channels

Response Response Status **U**

REJECT. The commenter does not provide a compelling reason for deprecating this function. It is not proven that no use has ever been demonstrated for this feature. It is to soon to determine that no use will be found for this feature.

CI 11 SC 11.6.6 P L # 70
 MYLES, ANDREW F Individual

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

The text defines a complex measurement request and response mechanism.
 The mechanism is not required for DFS or TPC purposes. It is clearly not sufficient for the measurement purposes given that 11k is currently redefining it

SuggestedRemedy

Delete all text related to measurement request and response, and allow 11k to define more appropriate features

Response Response Status **U**

REJECT. The commenter is urged to work with 802.11 task group k to make this change in that amendment.

CI 00 SC M P L # 71
 MYLES, ANDREW F Individual

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

This annex allegedly provides an AP functional description
 However, in reality it has very limited value given that it is mostly content free and almost totally disconnected from implementation reality. The use of a large number of new terms and the semi-formal specification language only increases its obscurity.

SuggestedRemedy

Remove entire annex

Response Response Status **U**

REJECT. The material in the annex does provide useful information to readers new to the standard, to understand the function and description of an AP, without providing normative requirements.

CI 00 SC N P L # 72
 MYLES, ANDREW F Individual

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

There is little obvious value in this annex

SuggestedRemedy

Remove entire annex

Response Response Status **U**

REJECT. The material in the annex does provide useful information to readers new to the standard, to understand the function and description of an AP, without providing normative requirements.

[Redacted]

CI 00 SC P L 83
 KLEINDL, GUNTER Individual

Comment Type TR Comment Status R amendments

With this revision the definition of 11a, 11b and 11g get lost.

SuggestedRemedy

Indicate in the PICS (Annex A) which items are mandatory for 11a, 11b and 11g.

Response Status U

REJECT. The designations of each amendment are ephemeral and cease to exist when the revision is approved. IEEE-SA procedure does not allow for these designations to continue to be used in the standard.

[Redacted]

CI 08 SC 8.5.1.1 P L # 84
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R security

There is some concern that SHA-1 is not sufficiently strong as part of the PRF for the long term, although it is considered adequate in the short to medium term.

SuggestedRemedy

Make a modification in 7.3.2.25.2 , 8.5.1.1 and possibly other clauses to allow the use of SHA-256 as part of the PRF instead of SHA-1 in a backward compatible way.

In doing so other changes could also be made to the PRF to make precomputation attacks harder and prefix attacks impossible.

Response Response Status U

REJECT.

The suggested remedy does not provide sufficient guidance to resolve this comment.

Cl H SC H.6.3 P950 L 108
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A

Table H.7: Please also list the source and destination MAC addresses, so that an implementor could walk through the derivation of the the Phase 1 and Phase 2 outputs.

SuggestedRemedy

Add the following entries to the table:
 Source MAC Address: 02 03 04 05 06 07
 Destination MAC Address: 02 03 04 05 06 08

Response Status U

ACCEPT.

Editor included in draft 5.2 in H.6.3 Table H.7.

Cl 16 SC 16 P L # 109
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A

This section describes a PHY that, I believe, was never commercially available, and will never be used in the future. It is no longer necessary to have this PHY in the standard. Maintaining this section is a waste of the IEEE's time. Essentially the same arguments that was used to withdraw IEEE 802.11F are to be used here.

SuggestedRemedy

Remove this section, or mark it as obsolete and not to be implemented.

Response Response Status U

ACCEPT IN PRINCIPLE.

Insert the following as the first paragraph in the clause: "This clause is no longer maintained and may not be compatible with all features of the remainder of this standard."

Editor included in draft 5.2 in clause 16.

Cl 00 SC P L # 110
CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A 11e

IEEE 802.11e should be included in this roll-up. (I realize that it probably would have been anyway, but I wanted to make sure).

SuggestedRemedy

Include IEEE 802.11e

Response Response Status U

ACCEPT.

Editor included in draft 5.1 by adding 802.11e.

Cl 00 SC P L # 111
CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A

The term "AAA Key" is being deprecated within the IETF. As a consequence, the use of that term in this standard needs to be changed to a replacement term. The term suggested by the IETF is "MSK"

SuggestedRemedy

Replace all instances of "AAA Key" to "MSK. Change the definition of "AAA Key" to define "MSK". Add an entry for "MSK" to the acronym section.

Response Response Status U

ACCEPT.

Replace all "AAA Key" occurrences with "MSK". Add the acronym "MSK" to clause 3.

Add the definition of MSK as follows to clause 3.

Master Session Key (MSK): The Master Session Key is keying material that is derived between the EAP peer and exported by the EAP method to the NAS. The MSK is at least 64 octets in length.

Editor included in draft 5.2, by deleting 3.10 and adding 3.80, deleting AAA abbreviation in clause 4, and adding abbreviations for MSK in clause 4. Editor used AS instead of NAS.

Editor in draft 5.2 by expunging AAA key term in favor of MSK, by introducing the new term in 8.4.6.1, and using it in 8.4.8, 8.5.1.2, 8.5.6.3.

[Redacted]

Cl N SC **N.2.1.1.4** *P986* *L*
ENGWER, DARWIN A Individual

288 [Redacted]

Comment Type **ER** *Comment Status* **A**
To more properly align with clause 3 definitions:

SuggestedRemedy

Change
"This primitive initiates distribution of the DSSDU through the DS. A directed DSSDU from"
to
"This primitive initiates distribution of the DSSDU through the DS. An individually
addressed DSSDU from"

Response Status **U**

ACCEPT.

Editor included in draft 5.2 in O.2.1.1.4.

[Redacted]

[Redacted]

Cl 07 *SC* 7.2.1.4 *P*62 *L* # 292
 ENGWER, DARWIN A Individual

Comment Type TR *Comment Status* A
 comment: RA is not shown in Figure 26

SuggestedRemedy

Like the change that was made to Table 4 in clause 7.2.2,
 change the third box annotation in Figure 26 from "BSS ID" to "RA = BSSID".

Response Status U

ACCEPT IN PRINCIPLE.

change the third box annotation in Figure 26 from "BSS ID" to "BSSID (RA)", where "(RA)"
 appears on the line under "BSSID".

Editor included in draft 5.2 in 7.2.1.4 Figure 27.

[Redacted]

Cl J *SC* J-1 *P*966 *L*1 # 293
 ECCLESINE, PETER Individual

Comment Type TR *Comment Status* A 4.9
 Japan allows 5 MHz channels in the 5.03 GHz-5.091 GHz band, and Annex J does not
 represent that

SuggestedRemedy

Editor to change draft according to 11-05-1121-00-000m-modifications-to-802-11ma-
 standard-regarding-4-9ghz-band.doc draft text to describe operation in Japan 4.9 GHz and
 5GHz bands using 5 MHz channel spacing

Response *Response Status* U

ACCEPT. Use r1 of the document.

Editor included in draft 5.2.

Cl 07 SC 7.2.1.5 P62 L # 294
 ENGWER, DARWIN A Individual

Comment Type GR Comment Status A

TA is not shown in Figure 27.

SuggestedRemedy

Like the change that was made to Table 4 in clause 7.2.2,
 change the fourth box annotation in Figure 27 from "BSSID" to "TA = BSSID".

Response Response Status U

ACCEPT IN PRINCIPLE.

See comment #296 for editorial resolution.

Cl 07 SC 7.2.1.6 P63 L # 295
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

TA is not shown in Figure 28.

SuggestedRemedy

Like the change that was made to Table 4 in clause 7.2.2,
 change the fourth box annotation in Figure 28 from "BSSID" to "TA = BSSID".

Response Response Status U

ACCEPT IN PRINCIPLE.

change the fourth box annotation in Figure 28 from "BSS ID" to "BSSID (TA)", where "(TA)"
 appears on the line under "BSSID".

Editor included in draft 5.2 in 7.2.1.6 Figure 28.

Cl 07 SC 7.2.1.5 P62 L # 296
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

TA is not shown in Figure 27.

SuggestedRemedy

Like the change that was made to Table 4 in clause 7.2.2,
 change the fourth box annotation in Figure 27 from "BSSID" to "TA = BSSID".

Response Response Status U

ACCEPT IN PRINCIPLE.

change the fourth box annotation in Figure 27 from "BSS ID" to "BSSID (TA)", where "(TA)"
 appears on the line under "BSSID".

Editor included in draft 5.2 in 7.2.1.5 Figure 28.

Cl 07 SC 7.2.3 P64 L # 299
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

The second paragraph in this section makes references to Address 1, yet Address 1 is not
 shown in Figure 30, and therefore there is no way to coorelate the text with the actual
 management frame format.

SuggestedRemedy

Correct the Figure and the text to correspond to each other.

Response Response Status U

ACCEPT.

Add "Address 1" to the third box in Figure 30 of 7.2.3. Place "DA" in parentheses below it
 in the same box.

Editor included in draft 5.2 in 7.2.3 in Figure 36.

CI 07 SC 7.1.3.1.4 P56 L # 300
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

Re Table 2: for the bit field combination of ToDS=1 and FromDS=1, the description references the WDS, which doesn't really exist (yet).

SuggestedRemedy

Change
 "Data frame using the four-address wireless distribution system
 (WDS) format."
 to
 "Data frame using the four-address format."

Response Response Status U

ACCEPT.

Editor reverted to the 5.0 text on which this comment is based. The 5.1 text is shown as stricken and replace with 5.0 text and the changes suggested.

Editor included in draft 5.2 in 7.1.3.1.4 in Table 2.

CI 07 SC 7.1.3.3.3 P58 L # 301
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

The term "broadcast BSSID" belies the real use of a value of all 1's in the BSSID field of a probe request. It is not a "broadcast" BSSID, it is a "wildcard" BSSID intended to match all BSSIDs.

SuggestedRemedy

Change "broadcast BSSID" to "wildcard BSSID".

Response Response Status U

ACCEPT.

Editor included in draft 5.2 in 7.1.3.3.3, 7.2.3, and 10.3.2.1.2.

CI 07 SC 7.2.3 P65 L # 302
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

The term "broadcast BSSID" belies the real use of a value of all 1's in the BSSID field of a probe request. It is not a "broadcast" BSSID, it is a "wildcard" BSSID intended to match all BSSIDs.

SuggestedRemedy

Change "broadcast BSSID" to "wildcard BSSID".

Response Response Status U

ACCEPT.

Make the change in item c).

Editor included in draft 5.2 in 7.2.3.

CI 10 SC 10.3.2.1.2 P235 L # 303
 ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

The term "broadcast BSSID" belies the real use of a value of all 1's in the BSSID field of a probe request. It is not a "broadcast" BSSID, it is a "wildcard" BSSID intended to match all BSSIDs.

SuggestedRemedy

Change "broadcast BSSID" to "wildcard BSSID".

Response Response Status U

ACCEPT.

Editor included in draft 5.2 in 10.3.2.1.2.

Cl 00 SC P L # 304
AMANN, KEITH Individual

Comment Type TR Comment Status A 11e

802.11e recently completed sponsor ballot and was approved. My understanding is that if this standard revision does not incorporate 802.11e then the 802.11e standard can be lost. I believe this would be a significant error on the part of the IEEE, and that it would seriously set the standard back.

SuggestedRemedy

Update the draft to incorporate the 802.11e standard as recently approved by the IEEE sponsor ballot process.

Response Response Status U

ACCEPT.

Editor included in draft 5.1 by adding 802.11e.

Comments from First Recirculation Ballot

Cl 11 SC 11.4 P 445 L 25 67
CHAPLIN, CLINT F Individual

Comment Type ER Comment Status A

802.11-1999 had only a subclause 11.3 (Association and Reassociation); 11e and 11i both made simultaneous modifications to that area of the standard, and didn't coordinate their changes. 11i split it into 11.3 (Authentication and Deauthentication) and 11.4 (Association, Reassociation, and Disassociation), that is how it appears in 11ma D5.0. 11e added four new subclauses, numbered them 11.4 through 11.7, and instructed that the existing clauses 11.4 and higher be moved to to follow. As a result, the Association/Reassociation/Disassociation subclause created by 11i is placed far apart from its closely-related subclause on Authentication/Deauthentication.

SuggestedRemedy

Make the new clauses from 11e follow 11.4 (keeping 11.3 Authentication and 11.4 Association clauses adjacent). Number the 11e clauses 11.5, 11.6, 11.7, and 11.8.

Response Status U

ACCEPT.

Editor included in draft 7.0 by virtue of other comment resolutions.

Cl 00 SC 0 P L # 73
CHAPLIN, CLINT F Individual

Comment Type ER Comment Status R

11e made a big mistake by defining the notion of a QSTA being somehow different than a STA. A STA is a STA. Some STAs are capable of additional functions, and advertises those additional capabilities. This change unfortunately set a precedent for later amendments - 11r D1.0 defined a TSTA and TAP, and 11n D1.0 defined a HT-STA and HT-AP. Don't set the precedent for future amendments to do this again.

SuggestedRemedy

Change QSTA to STA throughout. Change QAP to AP throughout. Change QBSS to BSS throughout. Change QIBSS to IBSS throughout. Delete definitions 3.118, 3.119, 3.121, and 3.122. Delete acronyms QAP, QBSS, QIBSS, and QSTA.

Response Response Status U

REJECT.

The change suggested by the commenter is not a simple editorial substitution. Such a substitution would result in substantial ambiguity in the functional description of the requirements for compliant operation of an implementation.

Cl 03 SC 3.98 P 12 L 52 # 75
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A

(IEEE 802.11 TGr LB82 Comment 77) PMK is not derived from an EAP method. MSK is derived from an EAP method. Suggest change. (see next column).

SuggestedRemedy

"The PMK may be derived from a key generated by an Extensible Authentication Protocol (EAP) method."

Response Response Status U

ACCEPT IN PRINCIPLE.

Insert "a key generated by" between "from" and "an Extensible".

Editor included in draft 7.0 in 3.96.

Cl 05 SC 5.6 P 44 L 50 # 76
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status R

(IEEE 802.11 TGr LB82 Comment 376) This is a remnant. There should be no shalls in this section since there is no PICs for it.

SuggestedRemedy

change "shall" to must.

Response Response Status U

REJECT.

The normative statements are needed to complete the definition of the MAC. They are inappropriate in clause 5 and are moved to clause 11.

Move clause 5.6 to become clause 11.3. Move the current 11.3 in a level under the text moved from 5.6, becoming a new 11.3.1. Also move 11.8 (Association . . .) in a level and also under the new 11.3, as 11.3.2.

Editor included in draft 7.0 by moving 5.6, renumbering 11.3, and moving 11.8. References to 5.6, 11.3, and 11.8 were searched and updated.

Cl 07 SC 7.2.3.4 P 89 L 36 # 77
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A

(IEEE 802.11 TGr LB82 Comment 447, 448, 450) The third column in the table corresponding to "QoS Capability" lacks any text. Seems that there is no descriptive text now. There is no description for the QoS Capability information element.

SuggestedRemedy

Add description text

Response Response Status U

ACCEPT.

Add "The QoS Capability element is present when dot11Qos-OptionImplemented is true" in the Notes column for the QoS Capability information element.

Editor included in draft 7.0 in 7.2.3.4, Table 10.

Cl 07 SC 7.2.3.4 P 89 L 36 # 78
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status R

(IEEE 802.11 TGr LB82 Comment 449) Definition of QOS Capablity IE in setcion 7.3.2.20 limits its use here.

SuggestedRemedy

Update the defination of QOS Capablity IE in section 7.3.2.20 to allow its use here.

Response Response Status U

REJECT.

7.3.2.20 does not describe the use of the QoS Capability IE.

CI 07 SC 7.2.3.6 P 90 L 41 # 79
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A
 (IEEE 802.11 TGr LB82 Comment 496, 497, 498) The third column in the table corresponding to "QoS Capability" lacks any text. Seems that there is no descriptive text now. There is no description for the QoS Capability information element.

SuggestedRemedy

Add description text

Response Response Status U

ACCEPT.

Add "The QoS Capability element is present when dot11Qos-OptionImplemented is true" in the Notes column for the QoS Capability information element.

Editor included in draft 7.0 in 7.2.3.6, Table 12.

CI 07 SC 7.3.2.28 P 137 L 53 # 80
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status R
 (IEEE 802.11 TGr LB82 Comment 571) "specifies the remaining amount of medium time available via explicit admission control in units of 32 us/s." As specified, this implies that the value must be up to date. It is my understanding that some APs fail to update the medium time each time the QBSS Load information element is advertised, and so this definition would make these implementations non-compliant?

SuggestedRemedy

Reword to make it backward compatible with existing AP implementations that do not transmit an up-to-date value in this field.

Response Response Status U

REJECT.

Poor implementations do not necessitate changes to the standard.

CI 08 SC 8.4.10 P 201 L 52 # 83
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status A
 (IEEE 802.11 TGr LB82 Comment 837) "&it will delete some security association." What does some mean?

SuggestedRemedy

Clarify which security associations it will delete.

Response Response Status U

ACCEPT IN PRINCIPLE.

The subject of the comment is outside the scope of this ballot. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 08 SC 8.4.10 P 201 L 54 # 84
 CHAPLIN, CLINT F Individual

Comment Type TR Comment Status R
 (IEEE 802.11 TGr LB82 Comment 838) "&it will delete some security association." What does some mean?

SuggestedRemedy

Clarify which security associations it will delete.

Response Response Status U

REJECT.

The subject of the comment is outside the scope of this ballot. The comment will be forwarded to the working group for consideration in a future revision of the standard.

Cl 11 SC 11.6.7.2 P L # 85
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

The DFS channel changing facilities for IBSS represent a very complex set protocols that have little value in the vast majority of cases and will not work in many circumstances. There is no know implementation of this feature.

In a response to the same comment in the last ballot, TGma asked me to justify my assertions. I believe that they are justified by a quote from 11.10.7.2 that states, "The potential for hidden nodes within an IBSS means that the IBSS channel switch protocol is best effort. All members of an IBSS shall have an individual responsibility to cease transmission on a particular channel in the presence of radar."

This text effectivley says that the IBSS channel switch protocol cannot be relied upon and that individual STAs need to do radar dedection anyway. It is almost certain that regulators will have a similar view.

This removes the primary advantage cited in 06/220. The other advantages cited in 06/220 for the IBSS DFS protocol can be achieved without any special over the air protocol.

SuggestedRemedy

Delete all text related to selecting a new channel in an IBSS, as specified in comment in last Sponsor Ballot

Response Response Status U

REJECT.

The mechanism does not cause any harm, without regard to it usefulness. The mechanism is adequate to cause some STAs in an IBSS to change channels, though it may not be sufficient to cause all STAs to do so.

Cl 11 SC 11.5.1 P L # 86
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

The text defines association based on transmit power capability

However, no use has ever been demonstrated for this feature and few if any implmentations provide it for any useful purpose.

In the response to a similar comment in the last ballot it was rejected because I had not shown it would never be useful. I would turn the response around by asking TGma to show that the feature is or will be useful. Showing there is a current implemenation would be compelling. I would also like the TG to show the feature was actually within scope for TGh.

SuggestedRemedy

Delete all text related to association based on transmit power capability

Response Response Status U

REJECT.

Fails after motion to accept failed (3,3,1).

Leaving this in the standard does not harm and there may be implementations of which the commenter is unaware.

Cl 11 SC 11.5.3 P L # 87
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

The text defines adaption of transmit power

However, no use has ever been demonstrated for this feature in relation to DFS and few, if any, implmenentations provide it for any useful purpose.

In the response to a similar comment in the last ballot it was rejected because I had not shown it would never be useful. I would turn the response around by asking TGma to show that the feature is or will be useful. Showing there is a current implemenation would be compelling.

It was also suggested that this feature was best deleted by 802.11v and 802.11k. This is certainly a possible course of action. However, these groups are more interested in developing useful new features rather than worrying about useless legacy features. It is TGma's responsibility to look after useless old features

SuggestedRemedy

Delete all text related to adaption of transmit power, and allow 11k and 11v to define new more appropriate features

Response Response Status U

REJECT.

Actually refers to 11.9.4.

While the commenter is not aware of any implementations of this feature, that is not proof that none exist. Work is under way in TGv to address this area in a regulation neutral fashion. Should that be incorporated into the standard, it is recommended that the regulation-specific text in 11.9 be removed.

Cl 11 SC 11.6.1 P L # 88
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

The text defines association based on supported channels

However, no use has ever been demonstrated for this feature in relation to DFS and few if any implmenentations provide it for any useful purpose

In the response to a similar comment in the last ballot it was rejected because I had not shown it would never be useful. I would turn the response around by asking TGma to show that the feature is or will be useful. Showing there is a current implemenation would be compelling. I would also like the TG to show the feature was actually within scope for TGh.

SuggestedRemedy

Delete all test related to association based on supported channels

Response Response Status U

REJECT.

Actually refers to 11.10.1.

While the commenter is not aware of any implementations of this feature, that is not proof that none exist. Maintaining this text in the standard does not hurt, even if there are no implementations of it.

CI 11 SC 11.6.6 P L # 89
 MYLES, ANDREW F Individual

Comment Type TR Comment Status A

The text defines a complex measurement request and response mechanism.

The mechanism is not required for DFS or TPC purposes. It is clearly not sufficient for the measurement purposes given that 11k is currently redefining it.

In the response to a similar comment in the last ballot it was rejected because I had not shown it would never be useful. I would turn the response around by asking TGma to show that the feature is or will be useful. Showing there is a current implementation would be compelling.

It was suggested in the response to a similar comment in the last ballot that this feature was best deleted by 802.11k. This is certainly a possible course of action. However, these groups are more interested in developing useful new features rather than worrying about useless legacy features. It is TGma's responsibility to look after useless old features

SuggestedRemedy

Delete all text related to measurement request and response, and allow 11k to define more appropriate features

Response Response Status U

ACCEPT.

Commenter is to provide specific editing instructions.

CI M SC M P L # 90
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

This annex allegedly provides an AP functional description

However, in reality it has very limited value given that it is mostly content free and almost totally disconnected from implementation reality. The use of a large number of new terms and the semi-formal specification language only increases its obscurity.

I disagree with the previous response to this comment in which it was asserted this annex is useful. Given this is new material to the standard, I believe a very strong reasons needs to be provided to include it.

SuggestedRemedy

Remove entire annex

Response Response Status U

REJECT.

The balloter is requested to read the actual draft being balloted. Annex M has nothing to do with AP functional description. It is assumed the balloter means Annex N.

The consensus of the working group is that the material is useful. The burden of proving it not useful is on the commenter. A simple assertion that it is not useful is insufficient justification to remove the annex.

CI N SC N P L # 91
 MYLES, ANDREW F Individual

Comment Type TR Comment Status R

There is little obvious value in this annex

I disagree with the previous response to this comment in which it was asserted this annex is useful. Given this is new material to the standard, I believe a very strong reasons needs to be provided to include it.

SuggestedRemedy

Remove entire annex

Response Response Status U

REJECT.

The consensus of the working group is that the material is useful. The burden of proving it not useful is on the commenter. A simple assertion that it is not useful is insufficient justification to remove the annex.

CI 09 SC 9.2.4 P 256 L 50 # 92
 MYLES, ANDREW F Individual

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

"The CW shall be reset to aCWmin after every successful attempt to transmit an MSDU or MMPDU,..." There are number of places where MSDU and MPDU are used interchangeably. On page 276, line #1, it clearly states that a MPDU is a fragment of MSDU. Shouldn't the retry counters and CW be associated with individual MPDUs since each MPDU is ACKed individually?

SuggestedRemedy

Replace MSDU with MPDU in appropriate places.

Response Response Status **U**

ACCEPT.

Change "MSDU" to "MPDU" in line 50.

Editor included in draft 7.0 in 9.2.4.

CI 09 SC 9.2.5.3 P 259 L # 93
 MYLES, ANDREW F Individual

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

MSDU and MPDU are used interchangeably in these two paragraphs

SuggestedRemedy

Replace MSDU with MPDU in appropriate places.

Response Response Status **U**

REJECT.

This comment is beyond the scope of the present ballot. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 07 SC 7.3.2.30 P 140 L # 94
 MYLES, ANDREW F Individual

Comment Type **GR** Comment Status **A**

TSID is identified in Figure 101, but references clause 7.1.3.5.1 which defines the TID, not the TSID

SuggestedRemedy

Rename one of the fields to eliminate the confusion

Response Response Status **U**

ACCEPT IN PRINCIPLE.

Replace the sentence "The TSID subfield is 4 bits in length and contains the TSID values in the format defined in 7.1.3.5.1." below figure 101 with:
 "The TSID subfield is 4 bits in length and contains a value that is a TSID."

Editor included in draft 7.0 in 7.3.2.30.

CI O SC O.2.2 P 1165 L # 95
 ENGWER, DARWIN A Individual

Comment Type **GR** Comment Status **A**

With the withdrawal of 802.11F there are now a few aspects of 802.11 that are not described, specified or defined anywhere. While that is in general very unfortunate, there exist today other methods for accomplishing many of the mechanisms described in 802.11F that do not involve using the 802.11F protocol. However, the use of a specially addressed layer 2 frame (e.g. a null XID frame) by an AP to update the DS (e.g. and any infrastructure switches and routers) of the current association status of a mobile STA remains a valid and useful mechanism and method that is now lost.

SuggestedRemedy

Add an informative note in clause N.2.2 (now O.2.2) that cites the use of a null L2 XID packet as one method of accomplishing a DS-STA-NOTIFY update sequence in a real network/ WLAN system. Also include a reference to 802.11F clauses 4.5.1, 4.9.3, 5.1.1, 5.5.1, 5.5.2, 5.8, and 6.3, and (subsequently) add an 802.11F reference to Annex E. Alternatively we could copy from 802.11F directly into 802.11ma (in the appropriate places) the lines of text that describe the XID frame. Then the 802.11F reference and reference citation would not be needed.

Response Response Status **U**

ACCEPT IN PRINCIPLE.

Add the following sentence to the end of O.2.2.1.4:

"There are many mechanisms to implement this mapping update for the cases of ADD and MOVE. One example mechanism, in the case where the DS is an 802 LAN, is to use an 802.2 XID null frame."

Editor included in draft 7.0 in O.2.2.1.4.

CI 09 SC 9.9.3.1.2 P 296 L 7 # 96
SOOMRO, AMJAD A Individual

Comment Type TR Comment Status R

The surplus bandwidth allowance (SBA) field is loosely defined and it is clearly not needed to generate conforming schedules in any scenario. The mandatory parameters are minimum set of parameters required to generate a conforming schedule which meets TSPEC requirements. Any other parameter beyond this should be optional and be not made mandatory. The SBA is poorly defined and its use in wireless protocols to specify stream requirements is unique for this draft. The parameter is susceptible to loose interpretations at both the ends (QAP and QSTA) and, therefore, there is no basis for its inclusion. This parameter is superfluous in TSPEC.

SuggestedRemedy

Remove the requirement to make Surplus bandwidth allowance mandatory

Response Response Status U

REJECT.

While the use of the SBA may not be required to implement a conformant scheduler, the information may be useful to some implementers.

CI 07 SC 7.3.2.30 P 139 L # 97
SOOMRO, AMJAD A Individual

Comment Type TR Comment Status R

Applications such as video or voice are quite tolerant to frame loss conditions and while medical wireless applications are very loss sensitive, though their TSPEC would appear to be similar to voice TSPEC. In order to serve these diverse streams QAP needs to know drop sensitivity of the stream to adjust its scheduling. In order to ensure interoperability and better expression of traffic stream requirements, acceptable frame loss rate for the traffic stream needs to be communicated between HC and a QSTA.

SuggestedRemedy

Add the acceptable error frame loss parameter in TSPEC field

Response Response Status U

REJECT.

Addition of this field to the information element would make any existing implementations instantly noncompliant. This is not a desirable outcome. It is also not clear how a scheduling algorithm would operate differently, given the requested additional frame error loss tolerance information.

CI 06 SC 6.2.1.3 P 62 L 5 # 98
ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

Further to comment #141 on the previous ballot, it is not clear why this primitive exists in its current form. If generation of MA-UNITDATA-STATUS.indication relates to a MA-UNITDATA.request then it should be a .confirm primitive.

Note that the mapping between corresponding .request and .confirm primitives can be asynchronous. That is there is a one-to-one mapping between .request and .confirm primitives, but they are not necessarily synchronous (e.g. an API implemented to be conformant with the SAP specification may employ delayed call back functions).

SuggestedRemedy

Change MA-UNITDATA-STATUS.indication primitive to MA-UNITDATA.confirm.

Response Response Status U

ACCEPT.

Editor to change all occurrences in the draft.

Editor included in draft 7.0 in 6.2.1, 6.2.1.1.4, 6.2.1.3, 6.2.1.3.2, 6.2.1.3.3, 8.2.1.3, 8.7.1, 8.7.2, 8.7.2.1.

CI O SC O.2.2 P 1165 L 32 # 99
ENGWER, DARWIN A Individual

Comment Type TR Comment Status A

With the withdrawal of 802.11F there are now a few aspects of 802.11 that are not described, specified or defined anywhere. While that is in general very unfortunate, there exist today other methods for accomplishing many of the mechanisms described in 802.11F that do not involve using the 802.11F protocol. However, the use of a specially addressed layer 2 frame (e.g. a null XID frame) by an AP to update the DS (e.g. and any infrastructure switches and routers) of the current association status of a mobile STA remains a valid and useful mechanism and method that is now lost.

SuggestedRemedy

Add an informative note in clause N.2.2 (now O.2.2) that cites the use of a null L2 XID packet as one method of accomplishing a DS-STA-NOTIFY update sequence in a real network/ WLAN system. Also include a reference to 802.11F clauses 4.5.1, 4.9.3, 5.1.1, 5.5.1, 5.5.2, 5.8, and 6.3, and (subsequently) add an 802.11F reference to Annex E. Alternatively we could copy from 802.11F directly into 802.11ma (in the appropriate places) the lines of text that describe the XID frame. Then the 802.11F reference and reference citation would not be needed.

Response Response Status U

ACCEPT IN PRINCIPLE.

See resolution to comment #95 (duplicate).

Cl 11 SC 11.2 P 432 L 25 # 100
 ENGWER, DARWIN A Individual

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

Revisit comment #13 from the previous ballot to ensure that after merging in the 802.11e material there is a requirement to send new MSDUs *after* queued MSDUs.

SuggestedRemedy

Add the appropriate shall statement to the appropriate subclause of 11.2 if it is not already there.

Response Response Status **U**

REJECT.

It is believed that the appropriate direction to the implementer is present in 6.1.3 and that no additional requirements are necessary.

Cl 03 SC 3.15 P 7 L 13 # 101
 ENGWER, DARWIN A Individual

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

The basic service set basic rate set text should not be deleted!! it is referenced again as soon as later in clause 3 and at other places in the standard as well.

SuggestedRemedy

Restore the deleted text and fix the definition at the same time.

Response Response Status **U**

REJECT.

Continue the replacement of "BSS basic rate set" with "contained in the BSSBasicRateSet parameter" for all remaining occurrences of BSS basic rate set.

Delete the definition of "extended rate set" and modify 11.1.4 by changing "Rate Set and Extended Rate Set" at the end of the last sentence to be "Supported Rates information element and Extended Supported Rates information element".

Delete the definition of "station basic rate" as those words occur only in the definitions.

The editor search draft 6.0 for BSS Basic Rate Set and basic service set basic rate set and base service set (BSS) basic rate set. None occur except in 3.53 (extended rate set) and 3.138 (station basic rate) which are to be deleted by this same action. No action on this part.

A less precise phrase, "basic rate set," was found in the document in 9.6 (twice), A.4.4, and Annex C. The editor included changes in draft 7.0 in 9.6 (twice) and A.4.4 to use the more precise wording "contained in the BSSBasicRateSet parameter".

The editor included in draft 7.0 in 11.1.4 to avoid extended rate set.

The editor deleted definitions in draft 7.0 from 3.53 (extended rate set) and 3.138 (station basic rate).

CI 03 SC 3.59 P 10 L 10 # 102
 ENGWER, DARWIN A Individual

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

Fragmentation is defined within 802.11, but here in clause the 3 the term should be related back to the appropriate guiding term in the normative reference document ISO 7498-1.

SuggestedRemedy

Change "partitioning" to "segmenting" (and potentially cite the reference to ISO 7498-1 clause 5.8.1.9).

Response Response Status **U**

ACCEPT.

Editor to change "partitioning" to "segmenting" and add an appropriate reference to ISO 7498-1.

Editor included in draft 7.0 in 3.57.

CI 00 SC P L # 103
 ENGWER, DARWIN A Individual

Comment Type **GR** Comment Status **A**

the introduction of hte 802.11e material introduced several inconsistencies in the draft standard

SuggestedRemedy

resolve the inconsistencies

Response Response Status **U**

ACCEPT.

The editor is instructed to comb the document for the term "amendment" and correct it wherever it is found. The editor is also instructed to replace the word "roam" with "transition" wherever it is found.

The Balloter is warned that the suggested remedy is required to provide sufficient detail to allow the ballot resolution committee to determine what is necessary to cause the balloter to change their vote from "no" to "yes". Failure to do so may cause the comment to be considered invalid.

Editor included in draft 7.0 by searching for amendment. Replaced with either revision or standard, as appropriate.

CI 08 SC 8.5.5 P 271 L 25 # 104
 STEPHENS, ADRIAN P Individual

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

(From Suman Sharma) STAKey handshake defined as part of standard is incomplete. Two flaws a) Security flaw & b) Definition flaw in this handshake has been identified as part of document 11-05-1058-00-000w-stakey-design-flaws.ppt. Note, although the referenced section is not changed in this this revision, the problem arises due to the introduction of the DLS feature which is new in this revision.

SuggestedRemedy

Document 11-05-1258-01-000m-normative-text-peerkey-handshake-proposal.doc provides fix to the STAKey flaws. Please use the normative text to fix the STAKey flaws.

Response Response Status **U**

ACCEPT.

Delete 3.136, 3.137, and 3.138, instead of 3.100, 101, and 102 as described in 05/1258r1.

Modify 3.130 as described in 05/1258r1, instead of 3.97.

Adopt 05/1258r1 for the remainder of the changes described there.

See commend #32 for editorial resolution.

CI 06 SC 6.1.1.2 P L # 112
 STEPHENS, ADRIAN P Individual

Comment Type **ER** Comment Status **R**

It is not clear what is new or changed in this subclause. The gutter marking indicates that it is all changed. However there are strikeouts and underlines within the section, which do not correspond to the gutter marking.

SuggestedRemedy

Please show changes from previous version with underlining or strikeout consistently, or define an unambiguous convention through editorial notes.

Response Response Status **U**

REJECT.

This was explained in an editor note in draft 6.0.

Cl 07 **SC 7.3.2** *P* *L* # 116
STEPHENS, ADRIAN P Individual

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

Table 26 contains a TBD

SuggestedRemedy

Get a number from the ANA and insert it here.

Response *Response Status* **U**

ACCEPT.

Editor to replace "TBD" with "127" for the element ID of the Extended Capabilities IE and place it in the correct order in the table.

Editor included in draft 7.0 in 7.3.2 (Table 26) and 7.3.2.27.

Cl 08 **SC 8.3.2.3.1** *P* *L* # 120
STEPHENS, ADRIAN P Individual

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

The deletion of "The priority ... Use." leaves the priority field undefined.

SuggestedRemedy

Specify the field.

Response *Response Status* **U**

ACCEPT.

The field is defined as the "MSDU priority" in 8.3.2.1 a). Editor to add the following in place of the deleted sentence:
"The Priority field refers to the priority parameter of the MA-UNITDATA.request service primitive."

Editor included in draft 7.0 in 8.3.2.3.1.

Cl 11 **SC 11.2.1.5** *P* *L* # 128
STEPHENS, ADRIAN P Individual

Comment Type **ER** *Comment Status* **R**

I challenge anybody to read bullet h) and understand it. My training as a writer says that paragraphs of a 400 words may be a teensy-weensy bit on the long side.

SuggestedRemedy

Restructure using a second level of list indentation to separate out the major topics of bullet h), g) and possibly d).

Response *Response Status* **U**

REJECT.

Commenter does not provide sufficient information to determine what he would accept.

Cl 11 **SC 11.2.2** *P* **440** *L* **52** # 129
STEPHENS, ADRIAN P Individual

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

I think the prohibition against BA and power-saving in a QIBSS is unnecessary. Power-saving introduces one new problem - that delivery of frames is delayed by a non-deterministic amount of time related to the beacon interval (perhaps several beacon intervals). There is the also the issue of whether our knowledge of the power-saving state of a peer is accurate.

The variable delay only creates an issue for block ack if the block ack timeout is too short. But setting this timeout is a matter of local policy, and we don't prevent an implementation doing something intelligent based on its knowledge of the power-saving state of a peer.

Having an inaccurate knowledge of the peer's power-saving state is no different for BA. A BA sequence will start with an exchange of frames intended to discover if contention has been won (i.e. RTS/CTS), this will also discover if the peer is asleep when we thought it was awake.

SuggestedRemedy

Remove the para starting on line 52: "In a QIBSS&".

Response *Response Status* **U**

ACCEPT.

Editor included in draft 7.0 in 11.2.2.

Cl D SC 0 P L # 141
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

There is nothing in the MIB to support 5MHz operation, but there is for 10MHz. So we must be missing some changes.

SuggestedRemedy

Add 5MHz support similar to 10MHz support in the MIB.

Response Response Status U

ACCEPT.

Editor to incorporate the text from 06/736r0.

Editor included in draft 7.0 in Annex D.

Cl 11 SC 11.7 P 456 L 52 # 142
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status R

(Submitted on behalf of Shlomo Ovadia) The DLS operation does not define if the DLS frames are unidirectional or bi-directional; potential implementation problem

SuggestedRemedy

Revise line 52 "However, STAs with QoS facility (i.e., QSTAs) may transmit unidirectional frames directly to another QSTA.."

Response Response Status U

REJECT.

See the resolution to comment #106.

Cl 11 SC 11.7 P 457 L 24 # 143
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status R

(Submitted on behalf of Shlomo Ovadia) The DLS operation does not define if data frames transmitted as part of a DLS link is unidirectional or bi-directional

SuggestedRemedy

Revise line 24 "A STA, QSTA-1, that intends to exchange unidirectional frames directly with another non-AP STA,&"

Response Response Status U

REJECT.

See the resolution to comment #106.

Cl 11 SC 11.7.3.1 P 459 L 42 # 144
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

(Submitted on behalf of Shlomo Ovadia) The DLS Teardown procedure at QSTA does not define DLS teardown if QSTA is out of the QAP range

SuggestedRemedy

Presentation IEEE 802.11-06/0242r1 presents a fix to this problem Submission IEEE 802.11-06/0598r0 contains normative text consistent with this presentation.

Response Response Status U

ACCEPT IN PRINCIPLE.

Adopt the changes in 06/598r0 with the following exception:

Delete: "in some implementation-defined way..." from the text inserted in 11.7.3.3.

Editor included in draft 7.0 in 11.7.3, 11.7.3.1, and 11.7.3.3.

Cl 11 SC 11.7.3.2 P 460 L 37 # 145
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

(Submitted on behalf of Shlomo Ovadia) QAP-initiated DLS teardown procedure is not defined; this is needed when if QAP loses its DLS session state or QSTA left BSS without disassociation

SuggestedRemedy

Presentation IEEE 802.11-06/0242r1 presents a fix to this problem Submission IEEE 802.11-06/0598r0 contains normative text consistent with this presentation.

Response Response Status U

ACCEPT IN PRINCIPLE.

See resolution to comment #144.

CI 07 SC 7.3.1.11 P 103 L # 147
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A
(Comment on behalf of Emily Qi)

Table 24 does not define a vendor-specific action category. It is reasonable for vendors to define vendor-specific signalling, but at the moment, this is only present appended to existing management action frames - each of which has a normative effect. What is necessary is a vendor-specific frame that has no defined normative effect. This can be achieved by defining a vendor-specific management action category, with some standardised syntax relating to OUI within the frame.

SuggestedRemedy

Add "Vendor Specific" in Table 24 and assign it a code, or ask the ANA to assign a code as appropriate. It is suggested that the OUI follow immediately after the category field within the action field, the remainder of the field being vendor-defined. Add new subclause to 7.4 defining vendor-specific management action details. (Emily Qi volunteers to provide normative text consistent with this recommended change if so approved).

Response Response Status U
ACCEPT.

Apply the changes cited in document 6/773r0.

Editor included in draft 7.0 in 7.4 and new section 7.4.5.

CI 08 SC 8.5.5 P 271 L 25 # 149
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A

For DLS to use peerkey handshake for creating a secure DLS link, it is necessary to create additional operational rules regarding the establishment of unidirectional DLS links in both directions between peers.

SuggestedRemedy

The rules for establishment of these links, and the conditions under which they are necessary need to be studied. It is hoped to bring a proposal containing normative text in due course.

Response Response Status U
ACCEPT IN PRINCIPLE.

See the resolution to comment #106.

CI 11 SC 11.7.3 P 460 L 460 # 150
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status A
(For Shlomo Ovadia) Figure 205 applies only to STA-initiated DLS Teardown procedure

SuggestedRemedy

Modify figure 205 caption to "QSTA-initiated DLS teardown message flow"

Response Response Status U
ACCEPT.

Editor included in draft 7.0 in 11.7.3, Figure 212.

CI 11 SC 11.10.7.2 P 471 L 37 # 151
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status R
(Submitted on behalf of Marc Jalfon)

This comment relates to comment 65 by Andrew Myles in document IEEE 802.11-06/0095r4 that was rejected by the comment resolution committee. This commenter agrees with Mr Myles comments, and disagrees with their dismissal by the comment resolution committee.

The DFS channel changing facilities for IBSS represent a very complex set protocols that have little value in the vast majority of cases and will not work in many circumstances.

Moreover, given that european regulatory agencies have relaxed their dfs requirements for IBSS, DFS in IBSS is not needed anymore to fulfill the PAR.

SuggestedRemedy

Delete all text related to selecting a new channel in an IBSS (i.e. the referenced subclause and any references to it). The precise set of changes have been documented in the response to comment 65 in the referenced document.

Response Response Status U
REJECT. See resolution to comment #85.

CI 07 **SC 7.1.3.1.3** **P 69** **L 6** # **152**
 ENGWER, DARWIN A Individual

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

After the 802.11e merge the text for the To DS and From DS clauses is more confusing than ever. The text in Table 2 is now also incorrect.

SuggestedRemedy

Replace the To DS and From DS bit designations and definitions with a two bit field, the meaning of which is defined by Table 2.

Delete all the existing text in clauses 7.1.3.1.3 and 7.1.3.1.4 except the sentence that reads "The permitted bit combinations and their meanings are given in Table 2."

Correct the descriptions in Table 2 as follows:

To/From:

00: Data frame direct from one STA to another STA within the same IBSS, or a data frame direct from one non-AP QSTA to another non-AP QSTA within the same QBSS, as well as all management and control frames.

10: Data frame destined for the DS or being sent by a STA associated with an AP to the Port Access Entity in that AP.

01: Data frame exiting the DS or being sent by the Port Access Entity in an AP.

11: Data frame using the four-address wireless distribution system (WDS) format. This standard does not define procedures for using this combination of field values.

Response **Response Status** **U**

ACCEPT IN PRINCIPLE.

Delete clause 7.1.3.1.4 and all the text in 7.1.3.1.3. Retitle 7.1.3.1.3 as "ToDS and FromDS fields".

As the only sentence in this subclause, insert "The meaning of the combinations of values for the ToDS and FromDS fields are shown in Table 2."

Insert the table as described in the suggested remedy.

Editor included in draft 7.0 in 7.1.3.1.4, including modifying Table 2 entires for To/From 10 and 01.

CI 07 **SC 7.2.2** **P 84** **L 84** # **153**
 ENGWER, DARWIN A Individual

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

The information in the description column is wrong.

SuggestedRemedy

Remove the description column. This incorrect info was added by the 802.11e merge and is an incorrect restatement of the material in Table 2 (clause 7.1.3.1.3).

Response **Response Status** **U**

ACCEPT.

Editor included in draft 7.0 in 7.2.2, Table 7.

CI 09 **SC 9.4** **P 275** **L 46** # **154**
 ENGWER, DARWIN A Individual

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

The term "directed" is deprecated.

SuggestedRemedy

change "directed" to "individually addressed"

Response **Response Status** **U**

ACCEPT.

Editor included in draft 7.0 in 9.1.5, 9.2, 9.2.6, 9.2.7, 9.2.8, 9.3.2.1, 9.3.3.1, 9.3.3.2, 9.3.3.4, 9.4, 9.5.

CI 10 **SC 10.3.6.4** **P 335** **L 18** # **155**
 ENGWER, DARWIN A Individual

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

MLME-ASSOCIATE.response is missing the EDCAPparameterSet parameter, which somehow(???) shows up in the corresponding .confirm. Is this information relayed from the AP, or just being echoed locally from the START.request primitive?

SuggestedRemedy

add the missing parameter

Response **Response Status** **U**

ACCEPT.

Copy the text from 10.3.6.2.2 for the EDCAPparameterSet parameter.

Editor included in draft 7.0 in 10.3.6.4.

Cl 10 SC 10.3.7.4 P 342 L 18 # 156
ENGWER, DARWIN A Individual

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

MLME-REASSOCIATE.response is missing the EDCAPparameterSet parameter, which somehow(???) shows up in the corresponding .confirm. Is this information relayed from the AP, or just being echoed locally from the START.request primitive?

SuggestedRemedy

add the missing parameter

Response Response Status **U**

ACCEPT.

Copy the text from 10.3.7.2.2 for the EDCAPparameterSet parameter.

Editor included in draft 7.0 in 10.3.7.4.

Comments from Second Recirculation ballot

Cl 00 SC 0 P L # 1
 MYLES, ANDREW F Individual

Comment Type TR Comment Status D

In previous ballots, I requested the removal of: * Tx Power Capability functionality (see 11.5.1) * Adaption of Tx Power functionality (see 11.5.3) * Supported Channels functionality (see 11.6.1) I made this request on the basis that: * The functions are not required by spectrum management regulations, which is why they were originally included in the 802.11h * There was no known use of the functions for other useful purposes. The requests were rejected on the basis: * Leaving them in the standard does no harm * There may be implementations of which I am unaware. I accept that there are implementations of this functionality of which I am unaware. However, I claim there is harm in leaving unnecessary and useless functionality in the standard in the long term because it will bloat the standard making it harder to understand and maintain. It may also confuse equipment vendors into thinking they need to implement the functionality.

SuggestedRemedy

A reasonable compromise is to add a statement at the appropriate places in the draft stating something like, " The following functionality, including associated IE's and frames, may be removed during the next maintenance cycle unless it can be shown the functionality has some use."

Proposed Response Response Status W

PROPOSED REJECT.

It is inappropriate for a statement of future intention, as that suggested by the commenter, to be included in the standard.

Cl 00 SC 0 P L # 2
 MYLES, ANDREW F Individual

Comment Type TR Comment Status D

In previous ballots, I requested the removal of Measurement Request and Report functionality (see 11.6.6) I made this request on the basis that: * The function is not required by spectrum management regulations, which is why it was originally included in the 802.11h * There was no known use of the function in its current form for other useful purposes. * A syntactically and semantically different version is being developed by 802.11 TGk The request was accepted and the commenter was directed to provide a set of instructions for the editor. The scope of the changes, and the difficulty they might cause 802.11 TGk, subsequently caused the commenter to suggest that: * the removal of the functionality be delayed until 802.11TGk complete their work * in the meantime, implementors should be discouraged from implementing the functionality by the inclusion of a note at the appropriate place stating that the functionality, including associated IE's and frames, would be removed in a future maintenance cycle (or possibly by 802.11 TGk) Unfortunately, it was too late for the suggestion to be considered by 802.11 TGma.

SuggestedRemedy

Implement the suggestion in the comment to flag the future removal of this functionality

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

It is recognized that there is functionality in 802.11 that could be considered obsolete. The comment will be forwarded to the 802.11 Working Group for consideration in a future revision of the standard.

Cl 00 SC 0 P L # 3
 MYLES, ANDREW F Individual

Comment Type TR Comment Status D

In a previous ballots, I requested the removal of Annex N because I believed it had no value. This request was rejected with, "The consensus of the working group is that the material is useful. The burden of proving it not useful is on the commenter. A simple assertion that it is not useful is insufficient justification to remove the annex." This response is unreasonable because it is impossible to prove no value. Given this is new material, I strongly believe that it is incumbent on the authors to describe what value is provided. What I can say is that it attempts to describe the functions of an AP using an abstract form, new terminology (eg mobile STAs) and a new language (eg based on UML). The majority of the annex is used to describe the new terminology and language.

SuggestedRemedy

Remove Annex N

Proposed Response Response Status W

PROPOSED REJECT.

The consensus of the working group is that the material in Annex N is useful. Inclusion of Annex N was approved unanimously in March 2005 (document 05/205r0, motion #7). This text was developed in response to requests from 802.11 members and external SDOs for additional description of AP functionality. Annex N describes the functions of an AP using a UML-based syntax to clarify AP function versus common implementations of AP devices. The burden of proving that Annex N is not useful is on the commenter.

Cl 00 SC 0 P L # 4
 MYLES, ANDREW F Individual

Comment Type TR Comment Status D

It appears the reference in N.6 to Annex L should actually be to Annex M

SuggestedRemedy

Fix

Proposed Response Response Status W

PROPOSED ACCEPT.

Editor to correct the reference in N.6 to refer to Annex M.

Cl 00 SC 0 P L # 5
 MYLES, ANDREW F Individual

Comment Type TR Comment Status D

In previous ballots, I requested the removal of IBSS DFS functionality on the following basis "The DFS channel changing facilities for IBSS represent a very complex set of protocols that have little value in the vast majority of cases and will not work in many circumstances. There is no known implementation of this feature. In a response to the same comment in the last ballot, TGma asked me to justify my assertions. I believe that they are justified by a quote from 11.10.7.2 that states, "The potential for hidden nodes within an IBSS means that the IBSS channel switch protocol is best effort. All members of an IBSS shall have an individual responsibility to cease transmission on a particular channel in the presence of radar." This text effectively says that the IBSS channel switch protocol cannot be relied upon and that individual STAs need to do radar detection anyway. It is almost certain that regulators will have a similar view. This removes the primary advantage cited in 06/220. The other advantages cited in 06/220 for the IBSS DFS protocol can be achieved without any special over the air protocol." This comment was rejected with the following response: "The mechanism does not cause any harm, without regard to its usefulness. The mechanism is adequate to cause some STAs in an IBSS to change channels, though it may not be sufficient to cause all STAs to do so." I object to the rejection because: * The response admits the mechanism does not achieve its goals and yet there is no recommendation to remove the functionality * It is not true that no harm is caused because it bloats the standard with useless and deceptive material; something we need to avoid in fulfilling our responsibilities as standards developers.

SuggestedRemedy

I would prefer that this functionality was removed using the editing instructions previously provided. However, a reasonable compromise is to add a statement at the appropriate places in the draft stating something like, "The following functionality, including associated IE's and frames, may be removed during the next maintenance cycle unless it can be shown the functionality has some use."

Proposed Response Response Status W

PROPOSED REJECT.

It is recognized that there is functionality in 802.11 that could be considered obsolete. The comment will be forwarded to the 802.11 Working Group for consideration in a future revision of the standard.

CI 09 SC 9.6 P 287 L 54 # 18
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Solomon Trainin) To be complete with the rule "The BlockAck control frame shall be sent at the same rate as the BlockAckReq frame" the spec has to say that the BlockAckReq shall be sent at the rate that both STA can receive and transmit. Only rates from BSSBasicRate set parameter are appropriate. This needs to be specified.

SuggestedRemedy

The resolution is to transmit both BAR and BA at the basic rate still following the rule of same rate. The following edits (in 9.6) achieve this: 1. Insert at the end of "When the control frame is a BlockAckReq or BlockAck frame" the following: " of a delayed Block Ack agreement". 2. Insert after "All other data, BlockAckReq, and BlockAck frames" the following "of a delayed Block Ack agreement" 3. Insert after "... the rate chosen to transmit ... ACK frame is intended." the following: "A STA requesting an immediate BlockAck response shall transmit the BlockAckReq frame at the highest rate in the BSSBasicRateSet parameter that is less than or equal to the rate of the previous Data frame sent to the same destination and that is of the same modulation class. If no rate in the basic rate set contained in the BSSBasicRateSet parameter meets these conditions then the BlockAckReq frame shall be sent at the highest mandatory rate of the PHY that is less than or equal to the rate of the previous Data frame sent to the same destination and that is of the same modulation class."

Proposed Response Response Status W

PROPOSED REJECT.

The current rule already requires that the transmission of the BAR be sent at a rate that can be received by the destination station. There is no need to clarify that rule. The remainder of the suggested remedy is beyond the scope of the current recirculation ballot. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 08 SC 8.3.2.4 P 176 L 13 # 19
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

"Some TKIP countermeasures are applicable for secure DLS data frame exchange as well." Either some was intended, in which case the applicable cases should be listed, or (as is thought to be the case) it was intended to be "the same".

SuggestedRemedy

At the start of this sentence, replace "Some" with "The same".

Proposed Response Response Status W

PROPOSED REJECT.

See the resolution to comment #54. There is no need to make a special case for DLS. It is already encompassed by the current countermeasures text.

CI 00 SC 0 P L # 20
STEPHENS, ADRIAN P Individual

Comment Type ER Comment Status X

The IEEE-SA style guide does not allow hanging subclauses. There are many occurrences of this (5.9, 5.9.2, 5.9.3, 6.1.1, 6.1.1.1, 7, 7.1, 7.2.1, 7.4, 7.4.1, 8.1&)

SuggestedRemedy

Beseech the editor to insert new subclauses to contain introductory material, or material common to subsequent subclauses.

Proposed Response Response Status O

CI 09 SC 9.12 P 323 L 28 # 22
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

My comment in an earlier ballot was not adequately addressed. I proposed replacement of existing tables and figures with a new syntax. The alternative resolution adopted leaves the figures in place. The reason for my original change still stands - the figures are not maintainable. For example, TGn would have no option but to add a disclaimer to the tables (similar to the SDL in Annex C) "this does not apply to the HT feature". I've asked around and nobody really cares about this subclause anyway.

SuggestedRemedy

Remove the text and figures from 323 line 28 until the end of the subclause. Alternatively remove the whole subclause.

Proposed Response Response Status W

PROPOSED ACCEPT.

The editor is to remove the figures and text from page 323, line 28 through the end of the subclause.

CI 03 SC 3.36 P 8 L 21 # 24
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Shlomo Ovadia) The definition of direct link is inconsistent with DLS handshake in Clause 11.7

SuggestedRemedy

Proposed text "Direct Link: A bidirectional link from one non-access point (non-AP) quality of service (QoS) station (QSTA) to another non-AP QSTA operating in the same infrastructure QoS basic service set (QBSS) that does not pass through a QoS access point (QAP). Once a direct link has been set up, all data frames between the two non-AP QSTAs are exchanged directly."

Proposed Response Response Status W

PROPOSED ACCEPT.

Change "unidirectional" to "bidirectional" in 3.36.

CI 11 SC 11.7 P 481 L 24 # 27
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Shlomo Ovadia) Not clear what "intends to exchange frames" means

SuggestedRemedy

Proposed text "A STA, QSTA-1, that initiates a direct link with another non-AP STA, sends a DLS request frame to the QAP (step 1a in Figure 210)."

Proposed Response Response Status W

PROPOSED REJECT.

The comment is outside the scope of the current recirculation ballot. There were no changes that affect the cited text. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 11 SC 11.7 P 481 L 32 # 28
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Shlomo Ovadia) "direct stream" is undefined here and in other occurrences

SuggestedRemedy

Proposed change "direct stream"->"direct link", global search and replace

Proposed Response Response Status W

PROPOSED REJECT.

The comment is outside the scope of the current recirculation ballot. The cited text has not changed. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 11 SC 11.7 P 481 L 5 # 29
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Shlomo Ovadia) "for the duration of the direct stream as long as there is an active DLS between the two STAs" is redundant and unnecessary

SuggestedRemedy

Delete "for the duration of the direct stream"

Proposed Response Response Status W

PROPOSED REJECT.

The comment is outside the scope of the current recirculation ballot, as no change was made to the power save functionality with DLS. The comment will be forwarded to the working group for consideration in a future revision of the standard.

CI 10 SC 10.3 P L # 30
STEPHENS, ADRIAN P Individual

Comment Type TR Comment Status D

(On behalf of Emily Qi) MLME SAP Interface for Vendor Specific Action Frame is missing

SuggestedRemedy

Add new sub-clauses in 10.3 to specify MLME-VENDORSPECIFIC.request, MLME-VENDORSPECIFIC.confirm, and MLME-VENDORSPECIFIC.indication. (Emily Qi volunteers to provide normative text consistent with this recommended change if so approved). Also consider whether clause 9/11 text is necessary to describe its use.

Proposed Response Response Status W

PROPOSED ACCEPT.

Include the content of document 06/926r1.

Cl 07 SC 7.2.2 P 81 L 25 # 33
 CHAPLIN, CLINT F Individual
 Comment Type ER Comment Status X
 incorrect English, plural noun, singular verb
 SuggestedRemedy
 Change "QSTAs uses QoS" to "QSTAs use QoS"
 Proposed Response Response Status O

Cl 08 SC 8.5.7 P 238 L 16 # 34
 CHAPLIN, CLINT F Individual
 Comment Type ER Comment Status X
 An accepted comment in a previous letter ballot changed "AAA Key" to "MSK" throughout.
 But one place in Figure 157 was missed.
 SuggestedRemedy
 Page 238, line 16 (middle of Figure 157), Change "AAA Key" to "MSK"
 Proposed Response Response Status O

Cl 11 SC 11.5.1 P 476 L 9 # 35
 CHAPLIN, CLINT F Individual
 Comment Type ER Comment Status X
 Unresolved cross reference
 SuggestedRemedy
 Change "Editor's Note" to "11.5.1.1"
 Proposed Response Response Status O

Cl 11 SC 11.7 P 481 L 49 # 36
 CHAPLIN, CLINT F Individual
 Comment Type ER Comment Status D
 Comment #148 of previous recirculation left inconsistent text in 11.7. The resulting text in D7.0 gives a normative cross reference to the teardown procedures (pointing to 11.7.4), then follows it with a "Note" that says that the DLS cannot be torn down. The first sentence of this pair was inserted by Comment #148 in the previous recirculation, and second sentence ("Note:") reasonably followed the text that was replaced by comment #148. Resolution to comment #148 in previous recirculation should have instructed the editor to include the "Note" in the text being replaced.

SuggestedRemedy
 Delete the sentence at line #49 of this page, "Note in this case the DLS cannot be torn down because a teardown message cannot be sent because the QSTAs are not on the same QAP."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 00 SC 0 P L # 37
 CHAPLIN, CLINT F Individual
 Comment Type ER Comment Status D
 Followup to comment #73 of previous ballot. 11e made a big mistake by defining the notion of a QSTA being somehow different than a STA. A STA is a STA. Some STAs are capable of additional functions, and advertises those additional capabilities. This change unfortunately set a precedent for later amendments - 11r D1.0 defined a TSTA and TAP, and 11n D1.0 defined a HT-STA and HT-AP. Don't set the precedent for future amendments to do this again.
 SuggestedRemedy
 Proposed resolution given in the previous recirculation was rejected, and commentor agrees that several of the QoS modifiers can't be simply deleted. Request that the editor incorporate the changes given in 11-06-0897-xx-000m-q-removal (latest revision), which give instructions for the proper modification for every occurrence of QSTA, QAP, QBSS, QIBSS, nQSTA, nQAP, nQBSS, and nQIBSS.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 03 SC 3.34 P 50 L 13 # 39
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Revised definition is more confusing. Recommend same definition as in WMM

SuggestedRemedy

An AC for a specific STA, to deliver traffic in that STA specific AC using APSD when an Unscheduled Service Period (USP) is triggered by that STA.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The previous change is to be reversed.

CI 03 SC 3.57 P 51 L 46 # 40
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Isn't this standard full of things it defines???. Is there only a single one or multiple ones?

SuggestedRemedy

Delete "defined by this standard". Then the sentence needs more technical detail to be provided by the contributors

Proposed Response Response Status W

PROPOSED ACCEPT.

Editor to replace the current definition with the following: A key management protocol between two parties that confirms mutual possession of a station to station link master key (SMK) and distributes a station to station link transient key (STK).

CI 03 SC 3.125 P 57 L 9 # 41
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

The deleted sentence changes the definition.

SuggestedRemedy

Return deleted sentence. Reword if necessary

Proposed Response Response Status W

PROPOSED ACCEPT.

Editor to reverse the deletion of the sentence.

CI 03 SC 3.137 P 57 L 16 # 42
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Isn't this standard full of things it defines???. Is there only a single one or multiple ones?

SuggestedRemedy

Delete "defined by this standard". Then the sentence needs more technical detail to be provided by the contributors

Proposed Response Response Status W

PROPOSED ACCEPT.

Editor to replace the definition with the following:

A key management protocol between two parties that creates a new station to station link master key (SMK).

CI 03 SC 3.147 P 58 L 6 # 43
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Is the last sentence a requirement? How is it fulfilled?

SuggestedRemedy

Delete or define what will qualify in the future.

Proposed Response Response Status W

PROPOSED ACCEPT.

Editor to delete the last sentence.

CI 07 SC 7.3.2.2 P 148 L 23 # 44
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

What is "Kbps"? The metric standard for 1000 is lower case "k". Is the intent 1024 or 1000? This needs a definition

SuggestedRemedy

kbit/s

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See resolution to comment #43.

CI 07 SC 7.3.2.2 P 148 L 23 # 45
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

What is "rounded up"? The enclosing or the value? The example is confusing since the encoding should be 0x02

SuggestedRemedy
clarify

Proposed Response Response Status W
PROPOSED ACCEPT.

Replace "data rate, in units of 500Kbps and, if necessary, rounded up" with "data rate, rounded up to the next 500kb/s"

CI 07 SC 7.4.5. P 198 L 4 # 46
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Are the Vendor specific contents rely defined in the standard?

SuggestedRemedy
reword to clarify intent

Proposed Response Response Status W
PROPOSED ACCEPT.

Editor to delete the following from the sentence: "and the Information Elements that are defined in the standard"

CI 08 SC 8.1.4 P 201 L 47 # 47
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Much of this clause reads like a proposal not a standard. " is provided", "it is the intent&", "common"

SuggestedRemedy
Clarify

Proposed Response Response Status W
PROPOSED ACCEPT.

Replace the first paragraph of 8.1.4 with the following text:

The PeerKey protocol provides mutual authentication, session identification, and data confidentiality for a STA to STA connection. A PeerKey association, comprised of a STA to STA link master key security association (SMKSA) and a STA to STA link transient key security association (STKSA), shall only be allowed within the context of an existing RSNA by both peers with a common AP. Both the initiator STA and the peer STA shall ensure that dot11RSNAEnabled is true before initiating the STA to STA link master key (SMK) and STA to STA transient key (STK) handshakes and establishing their respective security associations.

CI 08 SC 8.1.4 P 201 L 52 # 48
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

"STA shall ensure" sounds like the STA should set instead of read the value

SuggestedRemedy
Calrify intent

Proposed Response Response Status W
PROPOSED ACCEPT.

See the resolution to comment #47.

CI 08 SC 8.3.2.4 P 218 L 13 # 49
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

The new statement is vague and content free.

SuggestedRemedy

Delete or add some substance or reference

Proposed Response Response Status W

PROPOSED ACCEPT.

See the resolution to comment #54.

CI 08 SC 8.4.1.1.4 P 232 L 33 # 50
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

"SMKSAs are cached for up to their lifetimes." Are SMKSAs required to be cached?

SuggestedRemedy

Clarify that it is not an implementation detail

Proposed Response Response Status W

PROPOSED REJECT.

Delete "SMKSAs are cached for up to their lifetimes." from 8.4.1.1.4. This is an implementation decision and is not necessary to be specified. The protocol is robust enough to deal with the case where one side of the exchange has deleted the SMKSA.

CI 08 SC 8.5.1.4 P 247 L 1 # 51
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

Are these assumptions or requirements?

SuggestedRemedy

Clarify

Proposed Response Response Status W

PROPOSED ACCEPT.

Replace "Here the following assumptions apply:" with "The following apply and are depicted in Figure 140."

CI 09 SC 9.2.6 P 316 L # 52
PALM, STEPHEN R Individual

Comment Type TR Comment Status D

"individually addressed" does not seem to be defined. "directed" was defined in 3.35

SuggestedRemedy

Define

Proposed Response Response Status W

PROPOSED ACCEPT.

Add the following definition: "Individual address: See unicast address."

Add individual address as a synonym in the unicast address definition.

CI 00 SC 0 P 160 L 2 # 53
STANLEY, DOROTHY V Individual

Comment Type ER Comment Status D

"PeerKey specification" seems to imply that there is a separate document; not needed

SuggestedRemedy

Delete the phrase beginning with "However such communications&PeerKey Protocol" and replace with "In this case, the PeerKey protocol is not used."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 00 SC 0 P 176 L 13 # 54
STANLEY, DOROTHY V Individual

Comment Type TR Comment Status D

Either define the applicable countermeasures that apply to DLS, or delete the sentence.

SuggestedRemedy

Delete the sentence beginning "Some TKIP countermeasures"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 08 SC 8.4.1.1.4 P 190 L 31 # 55
 STANLEY, DOROTHY V Individual
 Comment Type ER Comment Status X
 Duplicate text
 SuggestedRemedy
 Delete the sentence beginning "In other words&"
 Proposed Response Response Status O

CI 00 SC 0 P 190 L 33 # 56
 STANLEY, DOROTHY V Individual
 Comment Type ER Comment Status X
 non-specific language
 SuggestedRemedy
 Change from "their lifetimes" to "the SMK Lifetime"
 Proposed Response Response Status O

CI 00 SC 0 P 190 L 29 # 57
 STANLEY, DOROTHY V Individual
 Comment Type ER Comment Status X
 Inconsistent article usage
 SuggestedRemedy
 Change from "An SMKSA" to "The SMKSA"
 Proposed Response Response Status O

CI 00 SC 0 P 199 L 26 # 58
 STANLEY, DOROTHY V Individual
 Comment Type TR Comment Status D
 Could not find the definition of an STSL "Teardown". Clause 8.5.9.2 refers to both the STSL Teardown procedure and to an STSL Teardown Message, neither of which are defined. Believe that these references should refer to e.g. DLS teardown - the application that uses the STSL. Also in 8.5.3.5. Also, capitalization on STLS "Teardown" vs "teardown" is not consistent. Pick one.
 SuggestedRemedy
 Change all instances of "STSL teardown xxx" to a single term, such as "STSL application Teardown procedure" and indicate that one example is the MLME-DLSTeardown.request.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Adopt the suggested remedy as written. In addition, at the first occurrence of STSL teardown, add the following text. "An example of STSL application teardown procedure is described in 11.7.3."

CI 00 SC 0 P 205 L 54 # 59
 STANLEY, DOROTHY V Individual
 Comment Type ER Comment Status X
 Incorrect grammar
 SuggestedRemedy
 Change from "to deliver SMK" to "to deliver the SMK"
 Proposed Response Response Status O

CI 00 SC 0 P 208 L 20 # 60
 STANLEY, DOROTHY V Individual
 Comment Type ER Comment Status X
 Incorrect grammar
 SuggestedRemedy
 Change from "The STAs where SMK handshakeis not implemented&" to "If the SMKHandshake is not supported, the STA shall set the SMK message bit to 0 and&.."
 Proposed Response Response Status O

Cl 00 **SC 0** **P 214** **L 8** # **61**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Incorrect grammar
SuggestedRemedy
 Change from "PeerKeyHandshake uses..section 8.5.9" to "PeerKeyHandshake Messages use EAPOL-Key frames as defined in 8.5.9."
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 217** **L 42** # **62**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Incorrect grammar
SuggestedRemedy
 Change from "as follows" to "is as follows"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 217** **L 53** # **63**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Incorrect grammar
SuggestedRemedy
 Change from "as follows" to "is as follows"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 220** **L 51** # **64**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Convention is to capitalize "H" in Handshake"
SuggestedRemedy
 Change from "handshake" to "Handshake"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 222** **L 13** # **65**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Convention is to capitalize "H" in Handshake"
SuggestedRemedy
 Change from "handshake" to "Handshake"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 222** **L 13** # **66**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Incorrect article use
SuggestedRemedy
 Insert "the" prior to "4-Way handshake" and prior to "STK"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 231** **L 27** # **67**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Convention is to capitalize the state names
SuggestedRemedy
 Change from "PeerKeylnit" to "PEERKEYINIT"
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 233** **L 5** # **68**
 STANLEY, DOROTHY V Individual
Comment Type **ER** **Comment Status X**
 Incorrect grammar
SuggestedRemedy
 Delete "out" and "other" from the first sentence.
Proposed Response **Response Status O**

Cl 00 **SC 0** **P 233** **L 13** # **69**
 STANLEY, DOROTHY V Individual
Comment Type **TR** *Comment Status* **D**
 Not sure "will be" is the right verb here
SuggestedRemedy
 Change "will be" to "are"
Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

 Change "will be dropped" to "are dropped".

Cl 00 **SC 0** **P 233** **L 15** # **70**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Incorrect grammar
SuggestedRemedy
 Change "is provided" to "are provided"
Proposed Response *Response Status* **O**

Cl 00 **SC 0** **P 233** **L 19** # **71**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Incorrect grammar
SuggestedRemedy
 Insert "the" prior to "MAC Address", "Peer STA" and "PeerKey"
Proposed Response *Response Status* **O**

Cl 00 **SC 0** **P 233** **L 20** # **72**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Incorrect grammar
SuggestedRemedy
 Insert "the" prior to "MAC Address", "Initiator STA" and "PeerKey"
Proposed Response *Response Status* **O**

Cl 00 **SC 0** **P 233** **L 21** # **73**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Missing articles
SuggestedRemedy
 Insert "The" and "the" prior to the "STK" occurrences
Proposed Response *Response Status* **O**

Cl 00 **SC 0** **P 235** **L 47** # **74**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Missing punctuation
SuggestedRemedy
 Insert a period following "machine"
Proposed Response *Response Status* **O**

Cl 00 **SC 0** **P 235** **L 48** # **75**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Duplicate punctuation
SuggestedRemedy
 Delete the period after the :
Proposed Response *Response Status* **O**

Cl 00 SC 0 P 235 L 50 # 76
 STANLEY, DOROTHY V Individual
 Comment Type **TR** Comment Status **D**
 Reference to direct link application not needed
 SuggestedRemedy
 Delete the sentence beginning "This state can be repeated multiple.."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 00 SC 0 P 237 L 1 # 77
 STANLEY, DOROTHY V Individual
 Comment Type **TR** Comment Status **D**
 Lines 1-20 seem to be missing text, and has many missing articles, and sentence fragments. For example, the first definition should probably say "is received by" the Initiator STA
 SuggestedRemedy
 Add complete descriptions
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Replace the existing text with the following:

- SMKNEGOTIATING3: This state is entered when the fifth EAPOL-Key frame for the SMK Handshake is received by the Initiator STA.
- SMKNEGOTIATING4: This state is entered when the fourth EAPOL-Key frame for the SMK Handshake is received by the Peer STA.
- STKSTART: Once the SMKSA is created, the Initiator STA enters this state. This is the start of the STK 4-Way Handshake.
- STKCALCNEGOTIATING: This state is entered when the second EAPOL-Key frame for the STK 4-Way Handshake is received by the Initiator STA and the MIC is verified.
- STKCALCNEGOTIATING1: This state is entered when the first EAPOL-Key frame for the STK 4-Way Handshake is received by the Peer STA and the MIC is verified.
- STKCALCNEGOTIATING2: This state is entered unconditionally by the Initiator STA.
- STKCALCNEGOTIATING3: This state is entered unconditionally by the Peer STA.
- STKCALCNEGOTIATING4: This state is entered when the third EAPOL-Key frame for the STK 4-Way Handshake is received by the Peer and the MIC is verified.
- STKINITDONE: This state is entered by the Initiator STA when the fourth EAPOL-Key frame for the STK 4-Way Handshake is received. This state is entered by the Peer STA when the fourth EAPOL-Key frame for the STK 4-Way Handshake is sent.

Also replace "STAKCALCNEGOTIATING2" with "STKCALCNEGOTIATING2" in figure 156.

Cl 00 SC 0 P 243 L 48 # 78
 STANLEY, DOROTHY V Individual
 Comment Type **ER** Comment Status **X**
 Missing article
 SuggestedRemedy
 Insert "the" prior to "PeerKey"
 Proposed Response Response Status **O**

Cl 00 SC 0 P 243 L 49 # 79
 STANLEY, DOROTHY V Individual
 Comment Type **ER** Comment Status **X**
 Incorrect article use
 SuggestedRemedy
 Change "This" to "The"
 Proposed Response Response Status **O**

Cl 00 SC 0 P 243 L 53 # 80
 STANLEY, DOROTHY V Individual
 Comment Type **ER** Comment Status **X**
 Missing article
 SuggestedRemedy
 Insert "the" prior to "first"
 Proposed Response Response Status **O**

Cl 00 SC 0 P 243 L 54 # 81
 STANLEY, DOROTHY V Individual
 Comment Type **ER** Comment Status **X**
 Grammar error
 SuggestedRemedy
 Change from "on receiving of first" to "upon receipt of the first"
 Proposed Response Response Status **O**

CI 00 **SC 0** **P 244** **L 1** # **82**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Grammar error
SuggestedRemedy
 Change from "the STAs" to "each STA" and change from "message arrived for that session" to "messaging received for that session"
Proposed Response *Response Status* **O**

CI 00 **SC 0** **P 244** **L 1** # **83**
 STANLEY, DOROTHY V Individual
Comment Type **TR** *Comment Status* **D**
 "states" is not specific
SuggestedRemedy
 Change from "Peerkey handshake states" to "STKSA and SMKSA"
Proposed Response *Response Status* **W**
 PROPOSED ACCEPT IN PRINCIPLE.

Replace "On expiration of this timer, the STAs shall delete its PeerKey handshake states and discard any message arrived for that session (after expiry)." with "On expiration of this timer, the STA shall transition to the STKINIT state."

CI 00 **SC 0** **P 244** **L 4** # **84**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Missing article
SuggestedRemedy
 Insert "the" prior to PeerKey
Proposed Response *Response Status* **O**

CI 00 **SC 0** **P 244** **L 13** # **85**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Grammar error
SuggestedRemedy
 Change "whom" to "which" and insert "the" prior to STA_I
Proposed Response *Response Status* **O**

CI 00 **SC 0** **P 244** **L 20** # **86**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Grammar error
SuggestedRemedy
 Change "complete handshake has two parts" to "The PeerKey Handshake has two components:"
Proposed Response *Response Status* **O**

CI 00 **SC 0** **P 244** **L 23** # **87**
 STANLEY, DOROTHY V Individual
Comment Type **ER** *Comment Status* **X**
 Missing article
SuggestedRemedy
 Insert "the" prior to "SMKSA" and prior to "PTK"
Proposed Response *Response Status* **O**

CI 00 SC 0 P 244 L 25 # 88
STANLEY, DOROTHY V Individual

Comment Type ER Comment Status X
missing punctuation, article

SuggestedRemedy

Change from "SMKSA Initiator STA" to "SMKSA, the Initiator STA" and change from "initiates 4-way handshake" to "initiates the 4-Way Handshake" and insert "the" prior to both occurrences of STKSA.

Proposed Response Response Status O

CI 00 SC 0 P 244 L 47 # 89
STANLEY, DOROTHY V Individual

Comment Type ER Comment Status X
not standards terminology

SuggestedRemedy

Change "by filling the" to "including the". Insert "the" before group in the second sentence, change "fill this field with any value and on the other side STA" to "include any value in this field and the receiving STA"

Proposed Response Response Status O

CI 00 SC 0 P 251 L 46 # 90
STANLEY, DOROTHY V Individual

Comment Type ER Comment Status X
missing article

SuggestedRemedy

Insert "the" prior to "STA"

Proposed Response Response Status O

Get file from Stuart (two files)

Moved: To forward the 802.11REV-ma draft to REVCOM, upon successful completion of the procedure in Clause 21 of the LMSC P&P.

Moved: Kerry/O'Hara

Call the question: Sherman/Upton

13/0/1

10/3/2 Passes

5.16 ME

-

5.17 ME 802.1ag approval for sponsor ballot

-

Jeffree

5

02:23 PM

Removed from the agenda.

5.18 ME 802.3ap approval for sponsor ballot

-

Grow

5

02:25 PM

Get file from BobG

Moved: The LMSC grants approval for P802.3ap Sponsor ballot.
Moved: Grow/Jeffree

16/0/0 Passes

5.19 ME 802.17b conditional approval for sponsor ballot

- Takefman

5 02:09 PM

Get file from MikeT

Moved: to request the 802 EC to forward 802.17b Draft 2.0 to Sponsor Ballot
Moved: Takefman/Hawkins

16/0/0 Passes

5.20 ME 802.15.4a conditional approval for sponsor ballot

- Heile

5 02:30 PM

Get file from BobH

Moved: to seek conditional approval per Clause 20 to forward 802.15.4aD4 to Sponsor Ballot.
Moved: Heile/Hawkins

15/0/0 Passes

5.21 ME 802.16k conditional approval for sponsor ballot

- Marks

5 02:36 PM

Get file from Roger

**Moved: To grant conditional approval, under Clause 20, to forward P802.16k for Sponsor Ballot.
Moved: Marks/Jeffree**

16/0/0 Passes

5.22 ME 802.16g conditional approval for sponsor ballot - Marks 5 02:43 PM

Withdrawn from the agenda

6.00

Executive Committee Study Groups, Working Groups, TAGs
--

 -
6.01 MI confirmation of election of Jose Puthenkulam as vice chair of 802.16 - Marks 3 02:44 PM

Get file from Roger

**Moved: To confirm the election of Jose Puthenkulam as Vice Chair of the IEEE 802.16 Working Group.
Moved: Marks/Sherman**

Letters of affiliation and support have been received by the recording secretary.

14/1/1 Passes

6.02	MI		-			
6.03	MI		-			
6.04	MI		-			
6.05	MI		-			
6.06	MI*	Continuation of 802.1 Congestion Management SG	-	Jeffrey		
6.07	MI*		-			
6.08	MI*		-			
6.09	MI*		-			
6.10	MI	Formation of 802.15 study group 4c	-	Heile	3	02:53 PM

Get file from BobH

Moved: to approve the formation a Study Group (SG4c) in 802.15 to investigate an amendment to 802.15.4-2006 to take advantage of the 779 -787 MHz, and 430 - 432 MHz, 433 - 434.79 MHz bands approved by the “Radio Management of P.R.China (Supervised by Ministry of Info Industry)” for the operation of WPAN equipment.

Moved: Heile/Hawkins

16/0/0 Passes

6.11 MI Formation of 802.15 study group 4d

- Heile

3

02:35 PM

Get file from BobH

Moved: to approve the formation of a Study Group (SG4d) in 802.15 to investigate an amendment to 802.15.4-2006 to take advantage of the new 950 MHz band regulations under development by the The Ministry of Internal Affairs and Communications in Japan.

Moved: Heile/Hawkins

16/0/0 Passes

6.12 MI Formation of 802.11 study group on A/V extensions - Kerry 3 03:03 PM

Withdrawn from the agenda

6.13 MI Formation of 802.3 Higher Speed study Group - Grow 3 03:05 PM

Get file from BobG

Moved: The LMSC grants approval for formation of a Higher Speed Study Group within 802.3.
Moved: Grow/Jeffree

16/0/0 Passes

6.14			-			
6.15			-			
6.16			-			
7.00		Break	-		10	03:09 PM
8.00		IEEE-SA Items	-			
8.01	II	802 Task Force update	-	Nikolich/Kipness	5	03:19 PM

Get file from Paul (slide 75-77)

A question was asked about the revision number not having a year number attached to the document number. Michael Kipness responded that the system would be more accommodating of this. The database will support this. This is still under investigation for a final answer.

8.02	II		-				
8.03			-				
9.00		<table border="1"><tr><td>LMSC Liaisons & External Interface</td></tr></table>	LMSC Liaisons & External Interface	-			
LMSC Liaisons & External Interface							
9.01	II	Get IEEE 802 Program Update	-	Hawkins	5	03:30 PM	

Get file from John Hawkins

A suggestion was made that perhaps the program should be discontinued for a year, to gain a new budget benchmark for the “revenue neutral” measurement that is a requirement of the program. Another point was made that 802 does not get credit for RAC sales of 802 addresses.

A question was asked about where “revenue neutral” actually enters into the program. A quotation from the agreement was read that indicates that “deviation from an agreed budget” is the measurement to be examined. Karen Kenney responded that this is one of the reasons that the recommendation is to carefully examine the program.

**Moved: to adopt the 2007 Get802 budget (specific financial data removed from the minutes). Document download introduction would be delayed for 12 months. Download delay to begin 1 August 2006.
Moved: Hawkins/Upton**

10/3/3 Passes

9.02 ME Revised proposal to revise M.1450-2

- Lynch

5 03:54 PM

Get file from MikeL

**Moved: To approve document: 18-06-0035-03-0000_IEEE_ITU_Annotated_document(M.1450_r1).doc as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a “template”, create the appropriate input to ITU-R WP-8A.
Moved: Lynch/Stevenson**

15/1/0 Passes

9.03 ME Response to questions for clarification from WP8A

- Lynch

5 03:57 PM

Get file from MikeL

Moved: To approve document: 18-06-0038-00-0000_ITU-R_Clarification_Response_fnl.doc as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a “template”, create the appropriate input to ITU-R WP-8A.

Moved: Lynch/Stevenson

16/0/0 Passes

9.04 ME 802.16 ITU-R BWA Liaison Response

- Lynch

5 04:01 PM

Get file from MikeL

Moved: To approve document 18-06-0050-00-0000_ITU-R_BWA_Response.doc as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a “template”, create the appropriate input to ITU-R WP-8A.

Moved: Lynch/Marks

Motion to amend the main motion inserting “by EC email ballot” after “To approve document”.

Moved: Stevenson/Kerry

3/8/3 motion to amend fails

On the main motion: 13/1/1 Passes

9.05 II ITU-T/IEEE joint conference/workshop

- Parsons

5 04:10 PM

Get file from Glenn Parsons

9.06 II RAC update - Jeffrey 5 04:17 PM

RAC is working with .16 to develop an Operator ID register for use in implementations of their standard.

RAC is developing an IEEE-wide Object Identifier register (based on ASN.1 Object Identifiers).

9.07 ME Letter to China - Kerry 5 04:20 PM

Withdrawn from the agenda. This issue will be taken to an EC email ballot.

9.08

9.09

10.00

LMSC Internal Business

10.01

MI

P&P "Editorial 2" revision approval

- Sherman 5 04:24 PM

Get file from Mat

Moved: To approve the P&P revision titled "Editorial 2" as described in the file named:

➤ **802.0-Editorial_2_-_LMSC_P&P_Revision_Ballot_proposed_resolution_060628_r0.pdf**

Moved: Sherman/Kerry

14/0/1 Passes

10.02 MI P&P "Document numbers" revision approval

- Sherman

5

04:26 PM

Get file from Mat

Moved: To approve the P&P revision titled “Document Numbers” as described in the file named:

➤ **802.0-Documents_Numbers_-_LMSC_P&P_Revision_Ballot_060430_r0.pdf**

Moved: Sherman/Kerry

14/2/0 Passes

10.03 MI approval to ballot P&P "WG Voting Procedures" revision - Sherman 5 04:28 PM

Get file from Mat

Moved: To approve for distribution and executive committee ballot the P&P Revision titled “WG Voting Procedures” as described in the document titled:

➤ **802-0-WG_Voting_Procedures-Proposed_P&P_ballot_resolutions_r4_060720.pdf**

Moved: Sherman/Kerry

15/0/1 Passes

10.04	MI*	Extension of meeting planner contract	-	Hawkins	0	
10.05	MI	Authorization to produce 802 Standards CD-ROM	-	O'Hara	2	04:30 PM

Get file from BobO

Moved: to approve an expenditure, not to exceed \$2,000, for the production of the 802 Standards CD-ROM, to be distributed at the November 2006 plenary session.

Moved: O'Hara/Hawkins

16/0/0 Passes

10.06 II EC executive session feedback

- Nikolich

15 04:31 PM

Get file from Paul (slide 78)

Bob Grow identified that he is the chair of the IEEE-SA Standards Board subcommittee on dominance and welcomes any correspondence on this issue.

10.07 II Results of EC email ballots

- Nikolich

5 04:39 PM

Get file from Paul (slide 79)

Get file from Paul (slide 80)

A general sentiment was expressed by many members that the addition of a new appointed position with voting rights is not desirable. An alternative was described where the position might be filled by election in the EC. A concern was also expressed that, should Dr. Heile leave the EC, another appointed position might become necessary to pick up the additional responsibilities regarding non-North American venues.

10.09 MI 802.20 - moving forward

- Upton

10 04:54 PM

Get file from Jerry

Moved: Move the 802 Executive approve the IEEE 802.20 Working Group PAR extension request and form for forwarding to NesCom and SAB for approval.

Moved: Upton/Heile

Steve Mills indicated that it is his intention not to penalize 802.20. He indicated that, though a formal decision has not been made, he believes the SB is in agreement with his position. It is the intent to find a way to allow the work to go forward to completion. He indicated that, should a way to allow 802.20 to continue productively, the PAR would not be allowed to expire before an opportunity to deal with this motion by the EC was allowed. Steve encouraged the members of the EC to provide their input to the SB on their opinions on this issue and their rationale.

A view was expressed that the EC is responsible to review the process used to bring a PAR before it. The opinion was that, though the chair acted according to the motion passed by the working group and the working group unambiguously desired a PAR extension, the working group did not actually vote on the PAR.

It was expressed that the LMSC P&P requires that the working group approve a PAR in clause 17, at the end of item 2. An alternative position was expressed that this item applies to only new PARs for significant work.

Another opinion was expressed that, because of obstructive behavior going on in the working group, sending the motion back to the working group would likely result in failure of the motion.

Moved to amend: at the end of the motion add: “with modification to limit the extension to six months” and replace “SAB” with “SASB”.

Moved: Sherman/Thaler

9/6/1 Passes

On the main motion, as amended:

Moved: Move the 802 Executive approve the IEEE 802.20 Working Group PAR extension request and form for forwarding to NesCom and SASB for approval with modification to limit the extension to six months.

Buzz Rigsbee	yes
Mat Sherman	yes
Roger Marks	no
Steve Shellhammer	yes
Mike Lynch	yes
Vivek Gupta	abstain
Bob Heile	yes
Pat Thaler	yes
Stuart Kerry	yes
Tony Jeffree	no
Carl Stevenson	yes
Bob Grow	no
Mike Takefman	no
John Hawkins	no
Bob O’Hara	no
Jerry Upton	yes

9/6/1 Passes

Jerry reported that he would be bringing a motion in November to limit several companies to a single vote.

10.10 MI Meeting planner RFQ process - Hawkins 5 05:40 PM

Get file from John

Moved: That the EC adopts the following work plan for requesting bids and subsequently adopting the meeting planner contract:

- Executive Secretary and Treasurer to develop a comprehensive RFP document to be circulated to interested vendors by Jan 2, 2007.
- Vendor bids are to be accepted until Feb 28th, 2007.
- A subcommittee of EC volunteers to consider responses and recommend a vendor to the EC by the March 2007 plenary.
- EC would then authorize formal contract negotiations with selected vendor.
- Executive Secretary to formally negotiate a contract with the selected vendor
- Final contract presented to EC for approval June 15th, 2007 (>30 days prior to July plenary).
- EC will conduct a final vote on the contract at the July 2007 plenary.
- Exec Secretary and IEEE Procurement will execute final agreement and contract will become effective

It is the expectation of the EC that this contract would be valid for 2 years, and be optionally extensible for 4 additional years after which time the RFQ cycle would be repeated.

Moved: Hawkins/Rigsbee

14/1/0 Passes

Mr. Grow voted in the negative because the discussion was prematurely terminated.

It is the understanding of the EC that the process will be annually extensible up to four times.

10.11 II Meeting planner contract update - Rigsbee 5 05:45 PM

Buzz reported that the extension form was sent to the EC for review this week. It was approved on the consent agenda. There is a plan in place to complete the RFQ process.

10.12 II Attendance automation requirements update - Gilb 5 05:46 PM

James reported that he has sent a list of requirements to the individuals identified to respond from each of the working groups.

10.13 -

10.14 -

10.15 -

10.16 -

11.00

Information Items

 -

11.01 II Open office hours feedback - Nikolich 5 05:50 PM

Get file from Paul (slide 81-82)

Get file from Buzz

11.03	II		-		
11.04	II		-		
11.05	II		-		
ADJOURN SEC MEETING			-	Nikolich	06:00 PM

The meeting was adjourned when the time for adjournment was reached.

11.06	II	802.3ar status update	-	Grow	3
11.07	II	802.3 interim meeting polls	-	Grow	2
11.08	II	802.16 Liaison letter to IETF	-	Marks	2
11.09	II	Joint 802.1/802.17 Liaison response to ITU-T SG15 on ring protection	-	Jeffree	2
11.10	II	ITU-T SG15 liaison response on Ethernet connection management	-	Jeffree	2
11.11	II	Liaison contribution to IETF, MEF, DSL Forum - combination of tags	-	Jeffree	2
11.12			-		
11.13			-		
11.14			-		
11.15			-		
11.16			-		
11.17			-		
11.18			-		
11.19			-		
11.20			-		
11.21			-		

ME - Motion, External MI - Motion, Internal
DT- Discussion Topic II - Information Item

Respectfully submitted,

Bob O'Hara
Recording Secretary, 802 LMSC