

#### Comment Type T Comment Status X

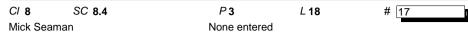
At the meeting of the IEEE Registration Authority Committee (RAC) on 2015-11-12, during discussion of P802c/D0.1, I suggested that, upon approval of the eventual standard, it would be appropriate for the RAC to amend Reference [B8] ["Guidelines for Use Organizationally Unique Identifier (OUI) and Company ID (CID)"]. Subsequent discussion by the RAC suggested that the IEEE 802.1 Working Group should propose the amendment. Note: It appears that the two related RAC tutorials: ["Guidelines for 48-Bit Global Identifier (EUI-48)" and "Guidelines for 64-bit Global Identifier (EUI-64)"] are not affected by P802c, since they consider only global addresses.

#### SuggestedRemedy

Include draft amendments of Reference [B8] with packages circulated in Working Group ballot and Sponsor Ballot of P802c. The amendments should target the sections entitled "Structure of OUI and CID" and "Company ID" (under "Use of Terms"). It should define the Y and Z bits and and the four [Y,Z] quadrants of the local space, indicating that RA CID assignments are expected to be limited to [Y,Z]=[0,1], forming the basis of ELIs. It should also summarize the usage of the SAI and AAI quadrants, and it should specify that the SAI space is administered by the RA, with part of the space allocated for assignments and insteaded by 802. Also, it should specify that the quadrant that remains unspecifed in the 802c draft ([Y,Z]=[1,0]) is reserved by the RA (not by 802).

Proposed Response

Response Status 0



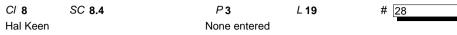
## Comment Type TR Comment Status X

This amendment concentrates on address assignment protocols and ignores the fact that a local administrator may wish to assign local addresses, and indeed that there can be multiple administrators (certainly if you count IEEE standards and the RAC). MAC Address assignment is (most regrettably) being moved inexorably in the direction of greater complexity and confusion. Since the AAI space will inevitably be completely consumed by randomized allocation procedures in support of privacy, and the design (and in some cases the use) of these procedures will be under vendor control and/or equipment user control and not the control of any local network administrator, this amendment effectively proposes removal of local administrative control over address assignment - unless each local administrator applies for a CID (which would be a very bad idea if it took hold, since having each end user organization - or even end user site location - have a CID could rapidly exhaust the whole CID space).

## SuggestedRemedy

Ensure that there is a space available for address assignment by local administrator that is separate from the proposed AAI space, preferably by removing the CID provisions and returning that space to local network administrator control (with some guidelines in space partitioning where the local network has multiple administrators).

Proposed Response Response Status **0** 



### Comment Type T Comment Status X

I write to pick up on the following comment from Mick Seaman: This amendment concentrates on address assignment protocols and ignores the fact that a local administrator may wish to assign local addresses, and indeed that there can be multiple administrators (certainly if you count IEEE standards and the RAC). MAC Address assignment is (most regrettably) being moved inexorably in the direction of greater complexity and confusion. Since the AAI space will inevitably be completely consumed by randomized allocation procedures in support of privacy, and the design (and in some cases the use) of these procedures will be under vendor control and/or equipment user control and not the control of any local network administrator, this amendment effectively proposes removal of local administrative control over address assignment - unless each local administrator applies for a CID (which would be a very bad idea if it took hold, since having each end user organization - or even end user site location - have a CID could rapidly exhaust the whole CID space)." I considered expressing similar misgivings in my own response, but refrained because I understood the present draft to properly maintain the concept of local administration. That is, it did not excise a large chunk from the threedecades-established locally administered space and commit it to exclusively standardized use. Rather, it provided for a way in which, entirely under the authority of local administration, that space could be employed in an environment intended to support certain uses. The distinction lies in whether local administrators may choose an alternative to the structure provided. I took this to be the reason the focus was on address assignment protocols, that being the case for which new provisions are needed. Since I submitted my ballot, some of the material in the one from Roger Marks has raised new misgivings. How does the RAC view this matter? Does it see this as permanently devoting the locally administered MAC address space to a new use, in effect universally administered although providing addresses which are not globally unique? I would be opposed to that course, and hope that any registration authority would see it as perilous. Perhaps we need to clarify the scope of locally administered address domains--even if it means revising the scope of this amendment."

#### SuggestedRemedy

Proposed Response

Response Status 0

C/ 8	SC 8.4	P 5	L <b>5</b>	# 30
Mick Seama	an	None e	entered	

### Comment Type TR Comment Status X

This clause contains a number of apparent conformance recommendations without clarifying who or what needs to be in conformance or might claim conformance.

# SuggestedRemedy

Clarify the following: (a) the standard makes recommendations to be followed by a local administrator where the responsibility for address administration is to be divided (b) allows for a claims of conformance in respect of various address administration protocols and procedures, specifically: (1) a claim that an address administration protocol (or its implementation) uses only the space identified by CIDs within the ELI space [requirement on this claim is to provide a way that the local administrator can select which CIDs to use/permit]; (2) a claim that the address administration protocol allocates only addresses within the SAI space (3) a claim that the address administration protocol uses only addresses within the AAI space.

Propose	d Response	Response Status 0			
CI 8	SC 8.4	P 5	L <b>8</b>	# 31	
Mick Sea	aman	None entered	ł		

Comment Type TR Comment Status X

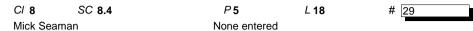
IEEE Std 802 lacks a conformance clause and a PICS and even a description of conformance terminology. Yet it would seem that the interpretation and force of some of the statements in this amendments depends on understanding that terminology. It is not a reasonable assumption that the reader will be familiar with the IEEE standards manual and its default terminology, as that differs from use in other standards bodies.

#### SuggestedRemedy

Add a requirements terminology clause. Suitable boiler plate text can be found in IEEE 802.1Q-2014 (start first sentence with "Requirements placed ..", leave out the NOTE, the PCS discussion unless a PICS is to be included, and the very last sentence about "allow")amongst other places.

Proposed Response Response Status **O** 

CI 8 SC 8.4



### Comment Type TR Comment Status X

The discussion of the use of multiple address assignment protocols needs to be generalized and moved to 8.4.1. Otherwise it is hard to escape the conclusion that this amendment is deprecating or indeed prohibiting all methods of local address assignment other than by "address assignment protocol". It is not until 8.4.7 that anything is said that is not within the context of address assignment protocol (first para of 8.4.7) and even that statement is open to interpretation.

### SuggestedRemedy

In 8.4.1 clarify that a local administrator may assign local addresses using his or her choice of protocols and procedures, including (for example) prior to a system being used in the network, or by local (to the system) or remote (over the network) management, and may choose to delegate address assignment responsibility to other managers and/or a combination of address management protocols. Where responsibility is to be divided this standard makes that task easier by identifying various address spaces within the local address space.

Proposed Response Response Status **O** 

CI 8	SC 8.4	P 5	L <b>45</b>	# 16
Mick Sea	aman	None	entered	
Commen This		Comment Status y contradicts pg 5 line		
00	edRemedy nge "SAI" to "AAI	'.		
Proposed	d Response	Response Status	0	
C/ 8	SC 8.4	P 6	L <b>27</b>	# 33
Mick Sea	aman	None	entered	
Commen	nt Type TR	Comment Status	х	
	would seem to ba iction is imposed.	•	Inment by YANG/NETC	CONF unless an arbitrary
Suggeste	edRemedy			
ouggoon				isted to one of the
Rem addr	ess pools. This c			protocol, but a blanket

CI 8	SC 8	.4	P 6	L 29	# 34
Mick Seamar	۱		None er	itered	
Comment Ty	pe	TR	Comment Status X		
			lministrator may" mear		
address	protoc	ol". What	does it add to the con	formance requirement	nts in the Std 802. A
local adm	ninistra	ator is alr	eady permitted to do the	nis.	

SuggestedRemedy

Use "can" instead of may if this statement is only reiterating an existing provision of the standard. Clarify what it actually means if this means "without using any protocol".

Proposed Response Response Status **O** 

C/ 8	SC 8.4	P 6	L 35	# 18
Mick Sea	aman	None entered		

Comment Type TR Comment Status X

The statement that address assignment protocols shall avoid duplicate assignments is a pious wish, not a practical conformance statement. Proposed and feasible protocols in the AAI space will (with non-zero probability) assign duplicates when using random procedures. So the statement is just motherhood and apple pie.

#### SuggestedRemedy

Remove the statement, it is only one of obvious intent/desire and is not practical beyond launching an argument about the meaning of "avoid".

Proposed Response Response Status **O** 

CI 8	SC 8.4	P 6	L 37	# 32
Mick Sear	nan	None entered		

Comment Type TR Comment Status X

"only ELIs, SAIs, or AAIs" is ambiguous in this context. If a protocol can assign an address that is any on of these then it can assign any local addresses. Unfortunately this might be read to mean that a protocol can assign addresses from only one of these pools, in which case it would be necessary for an administrator wanting unrestricted assignment by protocol to run three different protocols.

SuggestedRemedy

Disambiguate.

Proposed Response Response Status **0** 

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C/ 8
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 COMMENT STATUS: D/dispatched A/accepted R/rejected
 RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
 SC 8.4
 1/15/2016 4:15:36 PM

 SORT ORDER: Clause, Subclause, page, line
 SC 8.4
 1/15/2016 4:15:36 PM

P802c/D0.1

CI 8 SC 8.4	P 6	L 37	# 19	C/8 SC 8	8.4.2	P <b>3</b>	L <b>24</b>	# 10
Vick Seaman	None entered			Hiroki Nakano		None enter	ed	
Comment Type TR	Comment Status X			Comment Type	т	Comment Status X		
	tements with "shall" in 8.4.7 only reewhere. This duplication is not use		nce requirements	fundamental p	premises of	ns in Section 8.4.1, Uniq f IEEE802 network opera	tion and its breaka	age is fatal to the
SuggestedRemedy						order to keep the uniquented by human network operations of the second sec		
here or above) and	tatement "is" or "are" where requir d insert a cross-reference to the o ide (i.e. where "shall" is used).			equipment, the addresses. Th	ough some	of switch boxes have fu chanism proposed by this corporate an appropriate	nctionalities to avo s section has the s	bid duplication of MAC came assumption.
Proposed Response	Response Status 0			prevent duplic		AC addresses within a ne		
				'assignment' a same as ment totally random first part assig part and repea Let me mentic have IEEE802 idea to enable to share a MA servers such a I am not sure be constructed discuss a prot SuggestedRemed Add the folowi Instead of disj	and the oth tioned in S a addresses ins. When ats them. on the tech at them. 2.1X which a this proto C address as authenti that this id d with som cocol to ass by ing sentenci joint address	ss pools, administrators of	iqueness.' The first as strict rules are a suniqueness of the plication, system of tocol for 'valudation e a host is connect ses. Another idea ing switches if you group because the d. I, however, requaddresses.	st part is almost the allowed, for example, ne MAC address the goes back to the first n of uniqueness.' We ted to a network. It is an is to define a protocol don't like centralized e current PAR looks to uest to the members to
				•		resses.This protocol avoi premises of IEEE802 ne		AC addresses and
				Proposed Respon	se	Response Status 0		
				C/ 8 SC 8		P 3	L <b>43</b>	# 3
				Rodney Cumming	S	None enter	ed	
				Comment Type Typo	E	Comment Status X		
				SuggestedRemed Replace "addr	•	h "address".		
				Proposed Respon	se	Response Status 0		
TYPE: TR/technical re	equired ER/editorial required GR/	general required	d T/technical E/editorial G	/general		CI	8	Page 4 of 6

C/ 8 P SC 8.4.3 1,

P802c/D0	).1	P	802c/D0.1 L	ocal MAC Address Us	age 1st Tas	sk Force revi	ew comments		Task Group Reviev
Cl 8	SC 8.4.3 mings	P <b>4</b> None entered	<i>L</i> 1	# 4	C/ 8 Rodney C	SC 8.4.6 ummings	P 6 None entered	L <b>30</b>	# 6
Comment Typ Is it possi		Comment Status X OUI bits from an MA-L, and u	use them as the	e CID of an ELI?	<i>Comment</i> Typo	Туре Е	Comment Status X		
SuggestedRe Add a NO	<i>medy</i> )TE to answer	this question.			Suggested Repla		" with "administrator".		
Proposed Res	sponse	Response Status O			Proposed	Response	Response Status O		
C/ 8	SC <b>8.4.4</b> mings	P 5 None entered	L <b>7</b>	# 5	<i>Cl</i> <b>9</b> Mick Sean	SC <b>9</b> nan	P7 None entered	L <b>3</b>	# 20
Comment Typ Typo SuggestedRea Replace "		Comment Status X			Suggested	fiddling with pro	Comment Status X ptocol identifiers is out of the sco and clause 9 changes from this	,	ect.
Proposed Res	•	Response Status <b>O</b>				Response	Response Status <b>O</b>	amenament.	
<i>CI</i> 8	SC <b>8.4.4</b>	P 5 None entered	L <b>35</b>	# 2	<i>Cl</i> <b>9</b> Norm Finn	SC 9	P <b>7</b> None entered	L <b>3</b>	# 24
Comment Typ Missing w	oe E vord in sentend	Comment Status X			<i>Comment</i> To an	swer implied qu	Comment Status X estion in Editor's note, I think the	at the suggest	ed text should be
SuggestedRe Insert "by standards	or "in" in the	following sentence: "but ma	y be specified	_by_ other IEEE 802	import points of suc	tant. Many stan and protocol id h usage, makin	Es on page 23 of the base stand dards inside and outside 802.1 entifiers. The G/L usage introdu g the additional text relevant, no	use an "OUI" t uced by P802c	to create various code c amplifies the ambiguity
Proposed Res	sponse	Response Status <b>O</b>			ameno Suggesteo Repla		with toxt		
<i>CI</i> <b>8</b> . Hal Keen	SC 8.4.5	P 5 None entered	L <b>44</b>	# [7		Response	Response Status <b>O</b>		
Comment Typ typo	De ER	Comment Status X							
SuggestedRe Change "S	<i>medy</i> SAI" to "AAI".								
Proposed Res	sponse	Response Status 0							

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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C/ 9

SC 9

P802c/D0.1

CI 9	SC 9	P <b>7</b>		L <b>3</b>	# 25	
Norm Finn		None	entered			
	add a new sub	<i>Comment Status</i> oclause to 9 for the use g., in IEEE Std 802.1A	e of "OUI" :		e point, as opposed to	C
SuggestedF See Co	Remedy mment.					
Proposed R	Response	Response Status	0			
C/ 1&2	SC 1&2	P1		L <b>44</b>	# 8	
Roger Mark	s	None	entered			
	<i>уре</i> Е	Comment Status nd 2 are included in th		ient as usefu	l placeholders.	
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C/ E SC **E.3**