**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | Comments and Responses for PSC PAR and 5C |
| Date Submitted | December 10, 2010 |
| Source | [Soo-Young Chang][CSUS] | Voice: [530-574-2741]E-mail: [sychang@ecs.csus.edu] |
| Re: |  |
| Abstract | All the comments regarding the PSC PAR and 5C and corresponding responses prepared by the author are consolidated in this document for soliciting more comments and providing a base for revision of future PSC PAR and 5C. |
| Purpose | To solicit more comments from members of other groups and provide a base for revision of future PSC PAR and 5C within the 802.15 WG. |
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**COMMENTS AND RESPONSES FOR PSC PAR AND 5C**

Soo-Young Chang

November 16, 2010

1. **Introduction**

In IEEE802 September 2010 meeting, the PSC SG submitted their PAR and 5C documents to get approval from the EC. Since that meeting, the SG received comments on these two documents from 10 individuals and groups (8 individuals in the form of emails sent through the email reflector by individual members from other groups, and 2 groups) and one individual from the PSC group.

The author already responded to the first five comments through the email reflector. He also prepared responses for all other comments. He will revise the PAR and 5C based on these comments and responses later to use them as a baseline for further discussions and revision in the PSC group.

In this document, the author consolidated all comments so far suggested and their responses prepared by him to help the group to suggest better ideas for future revision of the PAR and 5C. He also included two more comments which are not directly related to the PSC PAR and 5C, but worthwhile to keep in mind for the future revision.

He hopes that these responses satisfy the commentors and become a base for revising the current PAR and 5C. Each response can be sent to the corresponding commentor to check whether he or she satisfies the responses and has further comments.

**Some important parts are highlighted with green color for readers’ convenience.**

1. **Key Text from Current PSC PAR**

From 15-10-0635-03-0psc-sg-psc-draft-par,

**2.1** **Title:** Standard for Personal Space Communications – MAC and PHY specifications for wireless connectivity with a broad range of data rates optimized access to integrated personal services

**5.2 Scope**: This standard defines the PHY and MAC specifications for a broad range of data rates from 10 Kbps to 55 Mbps dynamically scalable, optimized for personal space communications typically operating in a range of 30 meters or less in the 2.4GHz and 60GHz unlicensed bands without interference to other IEEE 802 standard technologies.

It support features including simultaneous use of multiple channels, dynamic grouping, multiple peer-to-peer communications, location of devices, multicasting, coverage extension, low latency, fast synchronization and association of devices, low power consumption, and enhanced security.

**5.4 Purpose**: This standard is to provide a communication means to a personal space involving various devices associated with a single individual to be controlled and managed in a personally tailored fashion.

It will provide, in a mobile personal space, cost effective wireless connectivity with a broad range of data rates from low rate data to voice/video streaming and broadcasting in the unlicensed bands. The data rate will be dynamically scalable to support simultaneous multiple streaming of various information such as control data, voice, audio, and video on a single platform. This standard supports dynamic topology configuration to accommodate the change of services.

**5.5 Need for the Project**: Given ubiquity and increasing number of personal devices with no commonalities, it is beneficial to have a unified platform.

There are standards that could serve parts of the PSC, but no single standard supports all combinations of simultaneous use of multiple channels, dynamic scalability of data rates, QoS (reliability and latency), low power consumption, fast device synchronization and association, device management, security control and configurability of topologies.

Therefore there is a need for a new standard that is optimized for and will serve the PSC interfacing with other communication infrastructures such as 3G/4G mobile networks, 802.11, other 802.15, and IP networks.

1. **Comments and Responses**

Email from the Chair of PSC SG to get approval on PSC PAR and 5C from the 15 WG

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| **Subject:** | [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | “Peter Murray” <petermurr@MAC.COM> |
| **Date:** | Thu, September 16, 2010 6:01 pm |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

…..… (intentionally removed)

Definition of Personal Space Communications (PSC)

In general, personal space is defined as a physical and virtual space which a person regards as psychologically the person’s. From the view point of this standard, the personal space is defined as a physical space surrounding a person within 30 meters radius.

Personal space communications is connectivity between the individual and the devices in the personal space for exchange of information and management of the environment.

Applications and service examples of PSC

Applications based on the proposed standard for PSC include multiple peer-to-peer communications, group games requiring low latency, conferencing, multi-lingual simultaneous interpretation system, personal broadcasting, stereo wireless karaoke, wireless tour guide, wireless audio, drive-in shop operations audio, mobile VoIP, Internet radio, mobile IPTV, remote control, wireless PBX, and convergence of such applications.

As an example, if you are standing under an art piece in a museum, you can use your PSC enabled device to listen to the information about the display on any of channels of your preferred language. At the same time, the PSC device allows you to talk to the tour guide for specific questions.

An important part of the standard is the low latency, and wireless speakers and “karaoke” are good examples of this. The lip synchronization between the video on the TV and the sound from the speakers can be made to be undetectable.

Quick association of devices around the user is another important aspect of this standard. Not like today’s lengthy and cumbersome procedure to get connected to a wireless network and authorized by the router or a server, a PSC device will be instantly able to see devices in the space with a limited access for identification and association purposes. Once a PSC user sees what devices are around, the user can choose and associate with any of available devices which are ready to be connected and provide services. This feature will instantly enable the user to use lots of services such as point of sale contents, audio streaming to an audio system, video streaming to a TV, and an instant group game through group association.

………. (intentionally removed)

Comment 1 from Mike Lynch

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| --- | --- |
| **Subject:** | Re: [802.15-MEMBERS-LIST] Revision 2 of the SG-PSC 5C document and revision 3 of the SG-PSC PAR |
| **From:** | "MJLynch@mjlallc.com" <MJLynch@MJLALLC.COM> |
| **Date:** | Thu, September 16, 2010 11:16 pm |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

**So how did it go?**

Regards,

Mike

Response to Comment 1

No response has been made so far.

Comment 2 from David Britz

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| --- | --- |
| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "BRITZ, DAVID M (DAVID M)" <dbritz@RESEARCH.ATT.COM> |
| **Date:** | Fri, September 17, 2010 7:46 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Hi Peter, Just following on your line of thought. **The work we are doing in the THz IG for 10-100Gigabit links would fall within the domain of the 0-300 meter range. It is likely that early generation THz based wireless LANs would be in the 30 meter range for in-building communications for both human to human, human to machine and machine to machine. Thus to add to your excellent thoughts, the capacity for extreme local area bandwidth delivery via high frequency millimeter, THz and optical transport should be woven in and part of the PSC definition going forward.**

Regards,

………. (Email copy from the Chair of PSC SG sent to get approval on PSC PAR and 5C was intentionally removed from this email since it already exists in the above.)

Response by the Chair of PSC SG to Comment 2

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Peter Murray" <petermurr@MAC.COM> |
| **Date:** | Thu, September 30, 2010 7:02 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Hi David,

I am sorry for my late reply.

Who knows how PSC systems will evolve or even what future standards people will say about today’s efforts. When I started in Wireless, 22 MegaHertz was the highest frequency I used at a speed of 25 words per minute Morse code (Digital) :-). The decoder was called an "Ear".

TeraHertz is still not even in my computer dictionary.

However David, I have no doubts that **the usages currently described by your IG will one day, in the not too distant future, be commonplace.**

Many of the PSC devices that we are discussing in SG PSC are already being used today. It is the improvements and new ideas that the standard will address, if our PAR is approved in Dallas and then by NesCom in December.

Best Wishes

Peter

Response by Soo-Young Chang to Comment 2

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Soo-Young Chang" <sychang@ecs.csus.edu> |
| **Date:** | Thu, September 30, 2010 1:35 pm |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Dear David,

Thank you very much for your suggestions. I am sending this email to provide some thoughts on what you suggested.

Actually the work for PSC was initiated by defining a physical space – personal space. This space is a kind of logical space in a public space where some devices are associated to an individual. So far all the devices have been controlled and managed by inputting some information to the devices by the individual. Now we are trying to define a new space where all machines/devices in this space can be controlled by implicit information and explicit control relevant to this individual. So this personal space is a space where

* devices only associated to an individual exist,
* implicit data without human intervention and/or explicit control are exchanged between a human being and a device or among devices in this space of an individual, and
* the environment for the devices is profile/group based, behavior based, and collaboration based.

The living environment follows when a person moves. Therefore the space can be personalized. Personalization involves using technologies to accommodate the differences among individuals and among groups formed based on corresponding individuals. This personalization implies:

* The changes based on implicit data of each individual or each group,
* Elimination of repetitive tasks, recognition of personal information including habits and routine works/things to reflect this personal information to set surrounding environment with minimal human intervention,
* Provision of more specific information that is increasingly relevant to an individual’s interests; replacement of “average” information with information specific to that person’s environment, and
* Accommodation of unique personal preferences.

From this definition, we are trying to figure out which types of communications are needed for this space. Personal space communications are being defined for this space. So I believe that for this type of communications, data rates and ranges are not matters that we are thinking of. A variety of types of applications/services/use cases should be considered for this space, which entails a broad spectrum of technical requirements.

They should be serviced with one platform. So more important features that we should consider are

* dynamically scalable data rates,
* fast and easy association with common synchronization, and
* low latency that some of PSC applications requires.

All these features should be implemented in one platform. It is our goal in this PSC group.

My feeling is that **each of PSC applications can be realized with one of existing technologies (or standards) or future technologies such as THz technology. You can find some applications presented so far in this PSC group which can be realized by existing technologies. We are trying to define a technology which can accommodate all these applications with one (PHY+MAC).**

You can feel that many of the PSC devices that we are discussing in SG PSC are already being used today and can be realized with existing technologies. However I would emphasize that with one platform, all the devices and applications should be realized, for simple data control to real time video streaming, group chatting, video gaming from 10 Kbps to 55 Mbps with simple association in a small space, and sometimes with low latency. In other words, with one PSC terminal, an individual can enjoy a breadth of services from simple control to group entertainment. For this type of communications, we believe that a new unique technology should be specified.

You can find these detailed features in the PAR and 5C already posted. We are considering a different space which provide a different technical environment and services which require our own technology. It is the technical goal the PSC group is pursuing now.

I will appreciate you if you suggest more thoughts on this concept. I will be happy to discuss further on this issue with you.

Best wishes,

Soo-Young Chang

Comment 3 from Ben Rolfe

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Benjamin A. Rolfe" <ben@BLINDCREEK.COM> |
| **Date:** | Fri, October 1, 2010 9:27 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

PSC Participants/advocates:

This does sound like an interesting concept. However, as you have described here, and in the posted 5C draft, it sounds much more like a convergence sublayer than a new PHY and/or MAC standard. As you state, **the individual attributes have already been achieved with existing 802 standards. As stated in the 5C, products already exist that combine 802.15.1, 802.11 and other wireless MAC+PHYs.** As presently written, and from reading the discussions on this reflector, **I would conclude a more appropriate project would be a recommended practice for how to manage multiple standards in a single device, or a management layer above the MAC.** I totally agree there are advantages to integrating these technologies into a converged platform, but as you have described it, that is a product, not a standard. 802 does not develop products.

* **Need to modify a part of PAR, “….. interface with ….. and ‘platform’” and emphasize “single technology”.**

I am not trying to say that this project is not a good idea, or discourage anyone from working to move it forward. Quite the opposite, in fact, I'm trying to help. I think it is a good story and potentially a cool thing to do, but from the published material, it is not adequately described in terms that justify a new standard. If the PAR and 5C go forward as they appear today, I would expect the project would be unlikely to succeed. I suggest reviewing currently approved PARs in 802.15 for guidance on how to convince other WGs that what you are doing is relevant and not in conflict with existing standards or ongoing approved projects.

Just one opinion...take it for what it's worth (at least what you paid for it ;-).

-Ben

Response by Nancy Bravin to Comment 3

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Nancy Bravin" <nbravin@EARTHLINK.NET> |
| **Date:** | Fri, October 1, 2010 10:13 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Dear Ben,

Although I understand what you mean, I disagree, for what that is worth. **SG-PSC is describing an area different than those existing in 802, even though some of what is there refers to existent standards...That by itself is not uncommon in 802.** Further, it is not 802 that will be the product developer, it is, as always, the different companies that will be interested in developing products or are doing so today. Consequently, **it is the market they will drive it. IEEE does not develop products, but they do however, encourage others to work together through the development, implementation, and those in the market place today,** to have a manner in which others can refer to, a Standard that will I assume will also work on coexistence and interoperability within 802.

That is always a plus for IEEE and IEEE802. Just my opinion.

Sincerely Nancy

Response by Soo-Young Chang to Comment 3

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| --- | --- |
| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Soo-Young Chang" <sychang@ecs.csus.edu> |
| **Date:** | Fri, October 1, 2010 11:16 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Hello Ben,

Thank you very much for your invaluable suggestions and comments.

You suggested an issue which this SG-PSC group deliberated and spent a lot of time for. This issue is one that all IGs and SGs should go through and I believe that the SG-PSC did.

I would like to emphasize that **one of the most important criteria for judgment on whether a new standard is needed or not is efficiency. I feel that technical goals for most of existing technologies (or standards) can be achieved with (combination of) other existing technologies. The point is how easily and efficiently these technologies can be applied for a target application/service**. As you mentioned, we can combine more than one (PHY+MAC)’s to facilitate our target applications. My strong feeling is that any combination of existing technologies is not a technology that we are pursuing and is way too low cost effective. A question arises from this thought. Why do we try to have a new standard? As I mentioned, a personal space was first defined. After then, we tried to find the best technology or combination of existing technologies for this concept. **Our conclusion was that a new technology for a (PHY + MAC) is the best solution.**

I really appreciate for your productive opinion. I will appreciate you if you suggest further thoughts or opinions on this issue.

Best wishes,

Soo-Young Chang

Comment 4 from Ben Rolfe

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Benjamin A. Rolfe" <ben@BLINDCREEK.COM> |
| **Date:** | Fri, October 1, 2010 10:38 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Then I didn't make my point well at all, it seems. What you say may be true - but **the PAR and 5C in the current form may not get it done. What is being described comes across as someone's product they are trying to turn into a new standard.** Heck, I don't know if that's what it is or not, that's just how it reads to someone who wasn't paying attention until the PAR and 5C drafts hit the server.

Having phrases like "despite its superior performance" and "the chip has been developed for over 10 years" in the 5C will cause problems.  I was just trying to help those who think this is a good thing to get the PAR and 5C fixed, without being harsh.

Obviously that wasn't clear, sorry.

-Ben

Response by Soo-Young Chang to Comment 4

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Soo-Young Chang" <sychang@ecs.csus.edu> |
| **Date:** | Fri, October 1, 2010 12:07 pm |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Hello Ben,

Once again thank you for your comments and trying to help us.

**Definitely the SG-PSC group is not trying to turn someone's product into a new standard. Actually some of specific products were presented by a couple of members of this group as some of example applications which can be serviced for PSC. Once again, these products are specific to some of applications/services among numerous target applications/services for PSC.**

As I mentioned, a breadth of technical requirements have been identified inevitable for PSC, but these products shows feasibility for only a small part of these requirements. For general PSC implementation, a lot of core technologies are required. Our intention with this product and "the chip having been developed for over 10 years" was to show that some of the requirements were implementable.

Please feel free to suggest more comments.

Best wishes,

Soo-Young Chang

Comment 5 from John Barr

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "John Barr" <john.barr@ME.COM> |
| **Date:** | Sat, October 2, 2010 8:10 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

All,

I have to agree with Ben. The PSE PAR is not appropriate based on the current availability of standards appropriate for the MAC/PHY that would support what have been defined as the requirements for PSE. **Starting a new MAC/PHY effort that duplicates many of the features already in 802.15.1, various versions of 802.15.4, 802.15.3, 802.11, and some of the new work being done in 802.15.6 and 802.15.7, would not seem to present something that would benefit the short range wireless market at this time. Ben¹s suggestion of a recommended practice for tying some of the existing standards together to meet the PSE requirements seems to be a more appropriate approach.**

* **Need to emphasize single technology with one (PHY+MAC), not combining multiple technologies in a combo chip.**

I have been listening to the mobile phone industry for many years and one of their messages has been “no new radios”. They already have too many radios that are essential. These include multiple air interface radios for worldwide cellular coverage, 802.11, Bluetooth, GPS, and FM. The cellular radios are required by the operator and some operators are also including 802.11 (Wi-Fi) as part of their services. Bluetooth is the personal space connectivity solution that also satisfies hands free laws while driving. Each of these standards continues to improve performance and features making it extremely difficult for something new to dislodge them in those devices. **Mobile phone manufacturers can buy combination chip sets that contain 802.11, Bluetooth, GPS, and FM support and are not interested in adding another radio device that isn¹t included in these combo chip sets.** Since the major market for the PSE PAR overlaps the mobile phone market, one has to wonder if anyone from the mobile phone industry is really supporting this effort as claimed in the PAR.

* **Need to emphasize single technology with one (PHY+MAC), efficiency, complexity, and cost problem with combo chips**

Regards, John

Response 1 by Soo-Young Chang to Comment 5

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| **Subject:** | Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached. |
| **From:** | "Soo-Young Chang" <sychang@ecs.csus.edu> |
| **Date:** | Sat, October 2, 2010 11:24 am |
| **To:** | STDS-802-15@LISTSERV.IEEE.ORG |

Dear John,

Thank you very much for your bringing up good points that I always want to address. I feel that a considerable number of members from various 802 groups are struggling to collect clear answers for these points. I think it is partly because at the beginning stage the PSC group introduced their work by presenting some of their applications as typical examples of PSC.

As I mentioned in a couple of my emails, in a personal space, there are a variety of devices which need to exchange diverse types of contents each of which has its unique communications requirements. **These communications should be performed through one technology (or one solution or one platform) if you consider efficiency.** This is a distinguishable point from other technologies (or standards) that you mentioned.

I believe that each technology that you mentioned such as various versions of 802.11, 802.15.3, 802.15.4, etc has its own simpler and more easily configurable way of operation to users. For example, 802.11 devices simply need to connect to an AP to communicate. I do not mean that they have simpler technical details. On the contrary, the PSC has various types of contents each of which has its unique requirements. It is not a matter of data rates or ranges. Our goal with the PAR is to figure out a technology which can accommodate all these requirements for various devices and applications in one space. **It may be an efficiency issue whether tying some of the existing standards together to meet the PSC requirements is the better approach** or not as I already addressed in one of my emails.

**I believe that if the goal for this PSC is achieved, the mobile phone industry and carriers are the chief beneficiaries. The PSC radio will provide a simplified connection to other devices which has different radio interfaces (or air interfaces) rather than all these types of interfaces built in a mobile phone. Moreover, more extra values can be added to mobile phones by providing other convenient features to users in the mobile phones.** The PSC does not intend to replace the existing technologies. In a small space – personalized space – more convenient, more personalized, more intelligent, one-device service for various user requirements and needs is the ultimate goal. For this and the applications we identified, I believe that any one existing technology or tying some of existing technologies is not the solution.

I will appreciate you if you suggest further comments.

Best wishes,

Soo-Young Chang

Response 2 by Soo-Young Chang to Comment 5

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| **Subject:** | [Fwd: Re: [802.15-MEMBERS-LIST] The SG-PSC intends to request a vote on their PAR & 5C at the closing Plenary today September 16th. A brief summary of PSC is attached.] |
| **From:** | sychang@ecs.csus.edu |
| **Date:** | Wed, October 6, 2010 12:45 pm |
| **To:** | barr@ieee.org |
| **Cc:** | petermurr@MAC.COM |

Also sent to

David: dbritz@RESEARCH.ATT.COM

Ben: ben@BLINDCREEK.COM

Cc’ed petermurr@MAC.COM

Dear John,

I am sending this email to know whether you have further suggestions/comments or thoughts on what I responded to your opinions as below.

It was my sincere and honest response for your email. We might have different “beliefs” on the PSC issues. Personally I had the same issues or questions you suggested at the early stage. However, I believe the initial PSC concepts introduced a new and unique area which deserves a new technology. Still I am trying to build up the better concepts. Your points were a big help to me to do that. I believe that other members of the PSC group have the same feeling.

I would let you know that any more comments/suggestions/thoughts will be welcome and will be a great help to me and to reduce the gap between what I think of and what you understand about PSC.

Thank you very much for your spending time with these issues.

Best wishes,

Soo-Young Chang

Comment 6 from Paul Nikolich

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| **Subject:** | Fwd: [802SEC] concerns regarding 802.15 PARs for consideration in November |
| **From:** | "Peter Murray" <petermurr@mac.com> |
| **Date:** | Tue, November 2, 2010 5:45 am |
| **To:** | "Chang Soo-Young" <sychang@ecs.csus.edu> |

Please see below.

………… (intentionally removed)

Soo-Young in his responses to comments, distributed on the PSC reflector, since the Hawaii meeting has I believe provide a clearer explanation that I will present to Paul during our conversation.

Regards

Peter

Begin forwarded message from Paul Nikolich:

…………. (intentionally removed)

**Upon review, the incorrect Criteria #2 are used for the proposed MBAN and PSC PARs. This will need to be corrected.**

Regardless, **upon reviewing the draft Personal Space Communication PAR/5C it is not clear to me that this work is within the scope of 802 (it seems to define functionality above layer 1/2), has distinct identity within 802 (it seems current MAC/PHY functionality meets the proposed requirements) or is compatible within the family of 802 standards (not addressed in the 5C).** Please make sure these items are addressed by the WG/TG at next week's session.

………….. (intentionally removed)

Regards,

--Paul

|  |  |
| --- | --- |
| **Subject:** | Re: Responses to our PAR |
| **From:** | "Peter Murray" <petermurr@mac.com> |
| **Date:** | Tue, November 2, 2010 9:53 am |
| **To:** | sychang@ecs.csus.edu |

Dear Soo-Young:

This comment is from Paul Nikolich:

Regardless, upon reviewing the draft Personal Space Communication PAR/5C it is not clear to me that this work is within the scope of 802 (it seems to define functionality above layer 1/2), has distinct identity within 802 (it seems current MAC/PHY functionality meets the proposed requirements) or is compatible within the family of 802 standards (not addressed in the 5C).

…………. (intentionally removed)

Regards

Peter

…………. (intentionally removed)

Response by Soo-Young Chang to Comment 6

(This was not sent to the email reflector.)

|  |  |
| --- | --- |
| **Subject:** | Re: Fwd: [802SEC] concerns regarding 802.15 PARs for consideration in November |
| **From:** | sychang@ecs.csus.edu |
| **Date:** | Tue, November 2, 2010 11:36 am |
| **To:** | "Peter Murray" <petermurr@mac.com> |

Dear Peter,

I reviewed Paul's comments/suggestions and would like to suggest my thoughts/proposals for our responses as follows:

----------------------------------------------------------------

Paul's suggestion 1:

Upon review, the incorrect Criteria #2 are used for the proposed MBAN and PSC PARs. This will need to be corrected.

[Soo-Young Chang]: Current PSC and MBAN Criterion #2 are as follows:

Current PSC's Criterion #2: Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with IEEE 802.1 Architecture, Management and Interworking. All logical-link-control (LLC) and media-access (MAC) standards shall be compatible with ISO 10039, MAC Service Definition 1, at the LLC/MAC boundary. Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC/Physical layer interface. Each standard in the IEEE 802 family of standards shall include a definition of managed objects, which are compatible with OSI systems management standards.

Note: This requirement is subject to final resolution of corrections and revision to current ISO 10039, currently inconsistent with ISO 8802 series standards.

Current MBAN's Criterion #2: Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with IEEE 802.1 Architecture, Management and Interworking. All LLC and MAC standards shall be compatible with ISO 10039, MAC Service Definition1, at the LLC/MAC boundary. Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC/Physical layer interface. Each standard in the IEEE 802 family of standards shall include a definition of managed objects, which are compatible with OSI systems management standards.

Note: This requirement is subject to final resolution of corrections and revision to current ISO 10039, currently inconsistent with ISO 8802 series standards.

The MAC (Medium Access Control) Layer of the Wireless Personal Area Network (WPAN) Standard will be compatible with the IEEE 802 requirements for architecture, management, and inter-networking.

I also reviewed Criteria #2 from other groups; BAN, VLC, High Rate Study Group, and LECIM as follows:

BAN's Criteria #2

IEEE 802 defines a family of standards. All standards shall be in conformance with IEEE 802.1 Architecture, Management and Interworking. All LLC and MAC standards shall be compatible with ISO 10039, MAC Service Definition, at the LLC/MAC boundary. Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC/Physical layer interface. Each standard in the IEEE 802 family of standards shall include a definition of managed objects, which are compatible with OSI systems management standards.

Note: This requirement is subject to final resolution of corrections and revision to current ISO 10039, currently inconsistent with ISO 8802 series standards.

The MAC (Medium Access Control) Layer of the Wireless Body Area Networks (WBAN) Standard will be compatible with the IEEE 802 requirements for architecture, management, and inter-networking as needed.

VLC's Criteria #2

IEEE 802 defines a family of standards. All standards shall be in conformance with IEEE 802.1 Architecture, Management and Interworking. All logical-link-control (LLC) and media-access (MAC) standards shall be compatible with ISO 10039, MAC Service Definition 1, at the LLC/MAC boundary.

Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC/Physical layer interface. Each standard in the IEEE 802 family of standards shall include a definition of managed objects, which are compatible with OSI systems management standards.

Note: This requirement is subject to final resolution of corrections and revision to current ISO 10039, currently inconsistent with ISO 8802 series standards.

The MAC layer of visible-light communication (VLC) Standard will be compatible with the IEEE 802 requirements for architecture, management, and inter-networking, as needed.

High Rate Study Group's Criteria #2

IEEE 802 defines a family of standards. All standards shall be in conformance with IEEE 802.1 Architecture, Management and Interworking. All LLC and MAC standards shall be compatible with ISO 10039, MAC Service Definition1, at the LLC/MAC boundary. Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC/Physical layer interface. Each standard in the IEEE 802 family of standards shall include a definition of managed objects, which are compatible with OSI systems management standards.

Note: This requirement is subject to final resolution of corrections and revision to current ISO 10039, currently inconsistent with ISO 8802 series standards.

The MAC (Medium Access Control) Layer of the Wireless Personal Area Network (WPAN) Standard will be compatible with the IEEE 802 requirements for architecture, management, and inter-networking.

LECIM Study Group's Criteria #2

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.

This amendment will not affect the IEEE 802.15.4 standard's compliance with the IEEE 802. Architecture, Management, and Interworking documents as required. There is no specific technology feature anticipated in the amendment that could preclude this compliance.

From Paul's suggestion, PSC and MBAN have a problem with this criterion, but they proposed exactly the same criteria for compatibility as other groups except LECIM as shown in the above. The fact is that other groups did not have any problem with their criteria with the same texts as we have. That means to me that recently their rules were changed regarding this criterion. (I would like to ask you to check with the WG 15 Chair whether recently there was any change in rules for this criterion.) So I propose a new Criterion #2 by modifying LECIM's as follows:

Newly Proposed PSC's Criterion #2: Compatibility prepared by Soo-Young Chang

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.

This standard will in compliance with the IEEE 802. Architecture, Management, and Interworking documents as required. There is no specific technology feature anticipated in the standard that could preclude this compliance.

* **This new text for 5C Criteria #2 is acceptable for the new 5C. However, we need to review LMSC operator’s manual to know the rules.**

----------------------------------------------------------------

Paul's suggestion 2:

Regardless, upon reviewing the draft Personal Space Communication PAR/5C it is not clear to me that this work is within the scope of 802 (it seems to define functionality above layer 1/2), has distinct identity within 802 (it seems current MAC/PHY functionality meets the proposed requirements) or is compatible within the family of 802 standards (not addressed in the 5C). Please make sure these items are addressed by the WG/TG at next week's session.

[Soo-Young Chang]: I would like to emphasize the following points while you can use all my responses to comments so far suggested:

* Clearly we are trying to suggest new PHY and MAC for PSC applications which are apparently different from existing technologies/standards.
* To meet the requirements of higher layers and so far identified applications/use cases,
	+ The future PSC PHY and MAC will be devised for fast, easy, and simple connection without extra intervention from other devices - for example, complicated authentication and link establishment which are inevitable for applications of other standards.
	+ To achieve this technically, fast synchronization for dynamic association from one group to another group is necessary to exchange various types of contents at the same time.
	+ A PSC terminal should be able to be involved in multiple groups by grouping devices in a personal space.
* To do this, new frame and network structures are mandatory for dynamically scalable data rates for concurrent delivery of different types of information.

As a summary, there is a complicated situation in a personal space, which features

* Broad range of data rates
* Dynamic association with dynamic grouping
* Various types of contents delivered from simple data to video stream for one way and two way, balanced and unbalanced, and symmetric and asymmetric.

To accommodate all these features, a new frame/network structure and MAC features will be inevitable for PSC.

----------------------------------------------------------------

…………. (intentionally removed)

Best wishes,

Soo-Young Chang

Comment 7 from Pat Thaler

|  |  |
| --- | --- |
| **Subject:** | Fwd: [802SEC] concerns regarding 802.15 PARs for consideration in November |
| **From:** | "Peter Murray" <petermurr@mac.com> |
| **Date:** | Thu, November 4, 2010 5:50 am |
| **To:** | "Chang Soo-Young" <sychang@ecs.csus.edu> |

Dear,

This e-mail and comments are from a member of the EC, and is the first that I have seen.

…………. (intentionally removed)

Peter

Begin forwarded message:

From: Pat Thaler <[pthaler@broadcom.com](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=pthaler%40broadcom.com)>

Date: November 3, 2010 10:52:54 PM EDT

To: Paul Nikolich <[paul.nikolich@ATT.NET](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=paul.nikolich%40ATT.NET)>, "[STDS-802-SEC@LISTSERV.IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=STDS-802-SEC%40LISTSERV.IEEE.ORG)

" <[STDS-802-SEC@LISTSERV.IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=STDS-802-SEC%40LISTSERV.IEEE.ORG)>

Subject: Re: [802SEC] concerns regarding 802.15 PARs for consideration in November

Paul, thanks for pointing this PAR out.

Bob,

**One thing I notice on first reading of the PAR is that it needs some editorial clean-up. The grammar is pretty poor. Please especially focus on getting the Scope right since the exact text of the Scope must go into the Scope section of the standard.**

**The second thing I noticed is that the 5 Criteria responses are all in italics which makes them difficult to read.** Next time please use normal font. In the past, the italics have often been used for the explanations of the criteria (the part that comes with the 5 criteria boiler plate) but it shouldn't be used for the responses.

Now getting down to the more technical side of the review, I'm finding **it difficult to reconcile statements in 1a) "[long list of features] which have not been feasible with the current technologies," with 1c) "the technology is of such a simplistic form without much increased complexity," and with the Technical Feasibility section all being focused on the part of the technology that is already standardized as ISO/IEC 29157 and gone through years of use.** I assume that ISO/IEC 29157 doesn't include the features "that have not been feasible with current technologies" and the technical feasibility section needs to address the feasibility of those extensions.

It is **not okay to claim Distinct Identity based on the new capabilities that you are going to add while basing Technical and Economic Feasibility arguments on the existence of the prior technology which doesn't include those capabilities.**

**The Compatibility section appears to only include the text that states the requirements for compatibility but doesn't include any response on the compatibility of the proposed work.** (And as Paul points out, the text there is not the current compatibility requirement text. See the LMSC Operations Manual for the correct text.) I am particularly concerned with the WG's response regarding compatibility of the proposed project with 802.1D and 802.1Q bridging. Given the apparent importance of AV streams in the proposed PAR, I would particularly like to understand relationship between the proposed work and the 802.1 AVB revisions to 802.1Q.

**Distinct Identity 3iii) "up to multiple stereo-audio and multiple stereo voice channels" I would normally expect to see a number after "up to". Does up to multiple mean at least 2, at least 3? Also isn't stereo voice a type of stereo audio?**

* **Need to mention only PHY and MAC in 5C, not include application features in PAR and 5C.**

Pat

Response by Soo-Young Chang to Comment 7

|  |  |
| --- | --- |
| **Subject:** | Re: Fwd: [802SEC] concerns regarding 802.15 PARs for consideration in November |
| **From:** | sychang@ecs.csus.edu |
| **Date:** | Thu, November 4, 2010 2:21 pm |
| **To:** | "Peter Murray" <petermurr@mac.com> |

Dear Peter,

My suggestions for Pat Thaler’s comments are as follows one by one:

1> One thing I notice on first reading of the PAR is that it needs some editorial clean-up. The grammar is pretty poor. Please especially focus on getting the Scope right since the exact text of the Scope must go into the Scope section of the standard.

[Soo-Young Chang]: This comment is recommending us to clean up editorial and grammatical blemishes. Most of the members have English as a second language. So I would like to ask you to review the PAR and 5C again with more cares for the scope after they are modified with all comments including future comments. Then this comment can be resolved.

2> The second thing I noticed is that the 5 Criteria responses are all in italics which makes them difficult to read. Next time please use normal font. In the past, the italics have often been used for the explanations of the criteria (the part that comes with the 5 criteria boiler plate) but it shouldn't be used for the responses.

[Soo-Young Chang]: This comment can be easily resolved by converting fonts to normal.

3> Now getting down to the more technical side of the review, I'm finding it difficult to reconcile statements in 1a) "[long list of features] which have not been feasible with the current technologies," with 1c) "the technology is of such a simplistic form without much increased complexity," and with the Technical Feasibility section all being focused on the part of the technology that is already standardized as ISO/IEC 29157 and gone through years of use. I assume that ISO/IEC 29157 doesn't include the features "that have not been feasible with current technologies" and the technical feasibility section needs to address the feasibility of those extensions.

[Soo-Young Chang]: This comment claims almost the same that Ben suggested before, saying “what is being described comes across as someone's product they are trying to turn into a new standard”. To resolve this comment, we need to modify Criteria #4, Technical Feasibility. I feel that the answer is clear. If the technology is already standardized and is being used in the market, it is a kind of existing technology. We should emphasize the fact that the technology we will propose is different from existing technologies, but it is fully feasible with reasonable arguments. ……… I will try to suggest newly modified text for these criteria.

4> It is not okay to claim Distinct Identity based on the new capabilities that you are going to add while basing Technical and Economic Feasibility arguments on the existence of the prior technology which doesn't include those capabilities.

[Soo-Young Chang]: The same rationale for the above comment regarding Criteria #4 is applied to this comment. The author will try to modify it and suggest a new text proposal later when the newly revised 5C document is submitted as a baseline document for the group’s review by the author.

5> The Compatibility section appears to only include the text that states the requirements for compatibility but doesn't include any response on the compatibility of the proposed work. (And as Paul points out, the text there is not the current compatibility requirement text. See the LMSC Operations Manual for the correct text.) I am particularly concerned with the WG's response regarding compatibility of the proposed project with 802.1D and 802.1Q bridging. Given the apparent importance of AV streams in the proposed PAR, I would particularly like to understand relationship between the proposed work and the 802.1 AVB revisions to 802.1Q.

[Soo-Young Chang]: (This response is modified when this document is prepared.)The newly proposed text for Criteria #2 Compatibility in the above Response by Soo-Young Chang to Comment 6 can satisfy this comment. This text can be used for a new text for Criteria #2.

6> Distinct Identity 3iii) "up to multiple stereo-audio and multiple stereo voice channels" I would normally expect to see a number after "up to". Does up to multiple mean at least 2, at least 3? Also isn't stereo voice a type of stereo audio?

[Soo-Young Chang]: For this comment, the text can be easily modified.

…………. (intentionally removed)

Best wishes,

Soo-Young Chang

Comment 8 from T Olsen (NesCom)

From: Bob Heile <[bheile@ieee.org](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=bheile%40ieee.org)>

Date: November 9, 2010 6:43:38 AM CST

To: [petermurr@mac.com](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=petermurr%40mac.com), [bheile@ieee.org](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=bheile%40ieee.org)

Subject: Re: NesCom Comment for P802.15.8

C/LM/WG802.15/802.15.8

P802.15.8 Standard for Personal Space Communications - MAC and PHY Specifications for Wireless Connectivity with a Broad Range of Data Rates for Optimized Access to Integrated Personal Services Original Comment from T Olsen

**In 5.2, we have a new unit, the Kbps. How is this related to the unit kbps that we understand?**

…..… (intentionally removed)

Response by Soo-Young Chang to Comment 8

[Soo-Young Chang]: **This comment can be simply satisfied by changing Kbps to kbps.**

* **The author checked IEEE standards style manual again and failed to find the solution for this issue. He found from *IEEE Std 260.1-1993* *American National Standard Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units, and Certain Other Units)* that kbps is correct for us. 🡪 (103: prefix kilo, symbol k, not K) 🡪 no more discussions needed**

**Need to revise the PAR according to the above comment.**

Comment 9 from 802.11 WG

**802.15.8 PAR review:** from 11-10-1321-00-0000-comments-for-nov-2010-ec-par-proposals

* **2.1 Title: should include the 802 boiler plate intro including the WG identifier.**
* **Acronyms need to be spelled out at first use.**
* **A tutorial should be considered for the March 2011 plenary to help explain the PAR and the intent of the project**
* **Remove ambiguous words**
* **5.6 Stakeholders: just list the stakeholders do not need “but are limited to:”**
* **7.1 need explanation to be put in.**
* **5.5 Need: the statements seem contradictory. Is this a new standard that replaces other things, or is this an overlay to the existing standards and explains the intercommunication? It is not apparent that you can do both at the same time.**
* **8.1 Need to identify which item number the comments are explaining.**

Response by Soo-Young Chang to Comment 9

[Soo-Young Chang]: The responses for these comments are as follows:

* 2.1 Title: should include the 802 boiler plate intro including the WG identifier.

New tile for TG4i accepted: Standard for Local and Metropolitan Area Networks Part 15.4: Low Rate Wireless Personal Area Networks (LR-WPANs) 🡪 this title can be an example for better PSC title.

**Modify 2.1 to** **Standard for Local and Metropolitan Area Networks Part 15.8: Personal Space Communications (PSC).**

* **Need discussions in the group to have the better title or confirm this title later.**
* Acronyms need to be spelled out at first use.

**Spell out acronyms.**

* A tutorial should be considered for the March 2011 plenary to help explain the PAR and the intent of the project

**Have a tutorial in March 2011.**

**🡪 Need to discuss this issue in the group. Another possibility is to prepare a document to introduce PSC concepts and upload to the document area and advertize it through the email reflector.**

* Remove ambiguous words

**Revise the PAR by implement the comment.**

**🡪 Need to revise PAR and 5C to satisfy this comment.**

* 5.6 Stakeholders: just list the stakeholders do not need “but are limited to:”

**Remove “but are limited to.” 🡪 simply modify it.**

* 7.1 need explanation to be put in.

**Put simply “No.”**

**🡪 Just need to put “no”.**

* 5.5 Need: the statements seem contradictory. Is this a new standard that replaces other things, or is this an overlay to the existing standards and explains the intercommunication? It is not apparent that you can do both at the same time.

**Modify the 5.5 to clarify contradiction.**

* 8.1 Need to identify which item number the comments are explaining.

**This section should be modified with more words added to clarify the concepts and to satisfy the comments.**

**🡪 Need to revise the whole explanatory notes section to introduce the PSC concepts more efficiently. Put the item numbers and reference numbers to appropriate sections of the PAR.**

Comment 10 from 802.19 WG (Steve Shellhammer)

From: "Shellhammer, Steve" <[sshellha@QUALCOMM.COM](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=sshellha%40QUALCOMM.COM)>

Date: November 9, 2010 4:46:08 PM CST

To: "Robert Heile ([bheile@ieee.org](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=bheile%40ieee.org))" <[bheile@IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=bheile%40IEEE.ORG)>, "802ExecutiveCommittee ([STDS-802-SEC@IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=STDS-802-SEC%40IEEE.ORG))" <STDS-802-[SEC@IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=SEC%40IEEE.ORG)>

Subject: [802SEC] Comments on 802.15 PSC PAR

Bob,

The 802.19 WG has the following comments on the 802.15 PSC PAR,

**\* The 5C states that PSC can coexist with Bluetooth, Zigbee and Wi-Fi; however, it does not state whether it will produce a CA document.**

**\* The 5C does not specify if a coexistence assurance (CA) document will be provided as per Section 12.5.4.1 of the LMSC Operations Manual. Either state that a CA document will be produced or explain why a CA document is not needed.**

**\* In the Distinct Identity of the 5C the section on Dynamic scalability of data rates within a frame is unclear. Please provide a clearer explanation.**

**\* In the Distinct Identify Section a), please explain if items i) - iv) are distinct from other 802 wireless standards or is it that the complete set of these features make PSC unique?**

**\* Please explain in more detail how PSC is distinct from 802.11 and 802.15, which both operate in the 2.4 GHz and 60 GHz bands.**

Regards,

Steve

Response by Soo-Young Chang to Comment 10

[Soo-Young Chang]: The responses for these comments are as follows:

\* The 5C states that PSC can coexist with Bluetooth, Zigbee and Wi-Fi; however, it does not state whether it will produce a CA document.

**Modify 5C. Refer to PARs of MBAN and LECIM which might have similar comments.**

\* The 5C does not specify if a coexistence assurance (CA) document will be provided as per Section 12.5.4.1 of the LMSC Operations Manual. Either state that a CA document will be produced or explain why a CA document is not needed.

**Modify 5C. Refer to PARs of MBAN and LECIM which might have similar comments.**

\* In the Distinct Identity of the 5C the section on Dynamic scalability of data rates within a frame is unclear. Please provide a clearer explanation.

**Modify 5C. Refer to PARs of MBAN and LECIM which might have similar comments.**

\* In the Distinct Identify Section a), please explain if items i) - iv) are distinct from other 802 wireless standards or is it that the complete set of these features make PSC unique?

**Modify 5C.**

\* Please explain in more detail how PSC is distinct from 802.11 and 802.15, which both operate in the 2.4 GHz and 60 GHz bands.

**Modify PAR and 5C to satisfy this comment. Some of the points regarding clear distinction between PSC and 802.11 and other 15 variants are suggested in the above.**

Comment 11 from Cheolhyo Lee, et al

Suggestion for extend scope in PAR

* Instead of specifying exact frequency band, open to all unlicensed bands in PAR as following:

5.2 Scope: This standard defines the PHY and MAC specifications for a broad range of data rates from 10 Kbps to 55 Mbps dynamically scalable, optimized for personal space communications typically operating in a range of 30 meters or less in **unlicensed bands** without interference to other IEEE 802 standard technologies.

Response by Soo-Young Chang to Comment 11

[Soo-Young Chang]: This comment needs further discussion in the PSC group.

Comment 12, not directly related to the PSC PAR and 5C

From Tony Jeffree

|  |  |
| --- | --- |
| **Subject:** | Fwd: [802SEC] Final output document and 2nd feedback for PARs underconsideration file was posted last night. |
| **From:** | "Peter Murray" <petermurr@mac.com> |
| **Date:** | Fri, November 12, 2010 9:18 am |
| **To:** | "Chang Soo-Young" <sychang@ecs.csus.edu> |

Dear Soo-Young:

This e-mail from Tony Jeffree is worth remembering when we re-edit our document.

Peter

Begin forwarded message:

From: Tony Jeffree <[tony@jeffree.co.uk](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=tony%40jeffree.co.uk)>

Date: November 12, 2010 10:04:54 AM CST

To: Jon Rosdahl <[jrosdahl@IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=jrosdahl%40IEEE.ORG)>

Cc: STDS-802-SEC <[STDS-802-SEC@LISTSERV.IEEE.ORG](https://gaia.ecs.csus.edu/mail/src/compose.php?send_to=STDS-802-SEC%40LISTSERV.IEEE.ORG)>

Subject: Re: [802SEC] Final output document and 2nd feedback for PARs under consideration file was posted last night.

Jon -

I am going to say this one more time, because you clearly didn't understand the response to the 802.11 comment on this point.

The title you see in the draft PAR text is the result of the myBallot system automatically munging together:

- The title of the standard;

- The project number input in the myBallot online PAR submission form;

- The amendment title input in the myBallot online PAR submission form;

- The word "Amendment" which it automatically generates;

- Whatever punctuation the system sees fit to include (or not).

The submitter has no control over the format of the PDF output that the system generates, beyond filling in the fields in myBallot. If you want it fixed, talk to staff about getting their software fixed.

The title will be in the correct format on the draft.

Regards,

Tony

Response by Soo-Young Chang to Comment 12

[Soo-Young Chang]: This comment will be considered when the PAR and 5C are revised.

Comment 13 for other PARs and 5Cs, not directly related to the PSC PAR and 5C

From Steve Shellhammer on LECIM

The Scope section is way too long and should be shortened.

In the Distinct Identity section of the 5C please elaborate on why this PAR could not be met by 802.11, 802.16 or 802.22.

1. **Summary and Conclusion**

In this document, ten comments regarding the current PSC PAR and 5C suggested by members from other groups and one comment from the PSC group are consolidated. Corresponding responses to these comments prepared by the author are suggested in the hope that other members can find all the comments in one place and have chances to suggest new ideas for better responses and solutions for new revision of the PSC PAR and 5C.

The PSC group walked through this document during the Nov. 2010 meeting and suggested some opinions – and reached to conclusions for some of relatively simple comment issues. However, more deliberate and deep discussions in the group will lead us to the better PAR and 5C.

The author hopes that this document will provide the base for the newly revised PSC PAR and 5C.

The author will prepare drafts of the new PAR and 5C based on the comments and responses to provide a baseline for the next revision. Any inputs from the group will be invaluable to our next step.

***References***

1. 15-10-0635-03-0psc-sg-psc-draft-par
2. 15-10-0636-02-0psc-sg-psc-draft-5c
3. 11-10-1321-01-0000-comments-for-nov-2010-ec-par-proposals

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