 

IEEE P802.21 Media Independent Handover Services

Minutes of the IEEE P802.21 Working Group (DCN 21-13-0067-00-0000)

Session #55 Meeting, Orlando, FL, USA

Chair: Subir Das

Vice Chair: H Anthony Chan

Editor: David Cypher

Secretary: Charles E. Perkins

# First Day AM2 (10:45am-12:30pm):ANTIGUA 2 ; Monday, Mar. 18, 2013

## 802.21 WG Opening Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG with opening notes (DCN: 21-13-0046-00-0000 ).

## March 2013 Meeting Agenda (DCN: 21-13-0030-00-0000)

### 802.21c TG meeting was scheduled in every PM. Some conflicts need to be resolved. . The chairs for 802. 21c and 802.21d were requested to work on this as deemed necessary.

### Revised agenda (21-13-0030-01-0000) was approved

## IEEE 802.21 Session #54 Opening Notes (21-13-0046-00-0000 )

### Attendance procedures

### Duty to inform, etc.

### Question on call for Intellectual Property declaration: No one declared

### New member count = 0

## Discussion about White Space effort within IETF.

## Presentation about WG officers

## Discussion about OmniRAN coordination

## Objectives for March meeting

###  802.21c: finalize the comment resolution of last ballot

###  802.21d: harmonize proposals

###  802.21m, 802.21.1 first meetings

### The nomination of Charlie Perkins for 802.21m chair was approved by the WG

### Task group presentations 802.21c (21-13-041-01) and 802.21d (21-13-013-00)

## Updates on IEEE 802 Joint Opening Plenary Report (21-13-0044-00-0000)

### Future Project Discussion

##  802.21c update from Dapeng Liu 21-13-0041-01:

###  Progress so far

####  Completed WG ballot comment resolution

####  WG ballot recirculation

#### 11 approve, 7 disapprove, 3abstain 252 comments, 134 editorial, and 118 technical

###  Motion: WG Motion to authorize the Working Group chair to request EC to extend the deadline of the 802.21c PAR for 1 year.

#### 8 yes, 0 no, 0 abstain

#### Result: pass

##  802.21d update (21-13-0045-01) from Yoshihiro Ohba:

###  Q: will there be a 21d document produced after this meeting ?

### Chair : expect to have by July

###  Members suggested to have a document after this meeting

##  802.21m discussion

### PAR is about the revision of IEEE802.21-2008 base document. Amendments approved on that base document shall be included under the revision PAR

### 802.21c and 802.21d are amendments to IEEE 802.21-2008.

### Outcome of this TG will be a new version of IEEE 802.21-2008 version adding the amendments

## 802.21.1 Discussion

### The project will take some portions of the base specification and then extend it and will work in tandem with 802.21m

### group will decide whether to add new use cases and or services.

### Lily: do we need to include security specification into 802.21m

### Lily: do we need to consider security framework from scratch for 802.21.1

### Farrokh: currently we cannot separate 802.21m and 802.21.1. They are co-contingent.

##  802.21 future meetings

###  Interim #56 early registration before April 1, 2013 $600 for hotel guests

###  July 2013 Geneva at ITU-HQ. It was reminded that during July meeting, there is no penalty for registration for not staying in designated hotels.

# Day 4 PM2 (4:00pm-6:00pm): ANTIGUA 2; Thursday, Mar.21, 2013

## 802.21 WG Closing Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG (21-13-0059-00).

## Meeting Updates

## 802.21c Single Radio Handovers Task Group (21-13-0058-00)

### Jan 2013: Completed WG ballot comment resolution

### WG ballot recirculation on: IEEE P802.21c/D02 from Feb 1 to Feb 22

### 11 approve, 7 disapprove, 3 abstain. Result: not approved.

### 252 comments: 134 editorial, 118 technical

### Finished all the comments except 5 which need email discussion to resolve in this meeting.

### Document 21-13-0033-03-srho-lb-comments-and-resolution

### Teleconferences

#### April 4, Thu 8pm- 10pm , US ET

#### April 16, Tue 8am-10am, US ET

#### April 30, Tue 8am- 10am, US ET

## 802.21d Multicast Management Task Group (21-13-0055-00)

### Progress in March 2013 Meeting

* Proposal Presentation III for 2 proposals (DCN 34, 42)
* Produced a single harmonized proposal (DCN 34-01)
* Identified several issues

### Next Steps

* No down-selection is conducted in May 2013 Interim Meeting
* Any technical changes to the baseline document requires 75% support from TG members

### Teleconferences

#### April 17 (Wed) 8am-10am ET

#### May 8 (Wed) 8am-10am ET

## 802.21m Initial meeting report

### Agenda: (21-13-0045-01)

### Teleconference:

#### April 23, 2013, 8-10pm, US EST

## 802.21.1 Initial meeting report

### New scenarios for 802.21.1 and some corrections (21-13-0043-00-0000)

#### Daniel Corujo and Antonio de la Oliva joined the session remotely

#### Corrections to IEEE 802.21-2008 standard may belong in 802.21m

#### Sensors have special requirements over/above mobility

#### XML uses up too much bandwidth over the air...

#### Do the IoT nodes support http? Do they move?

#### Corrections for data types

#### Battery power (slide 10) is an issue?

#### Slide 11 points to real problem

#### Robustness of State Machines

### Use case for media-independent services

### Teleconference:

#### April 24, 8:00-10:00pm , US ET

## 802.11 report

##  There was no report for 802.11 in this meeting.

## IETF Report (21-13-0051-01-0000)

### IEEE / IETF coordination March 16, 2013

### DMM (Distributed Mobility Management) WG

### NETEXT WG No meeting in IETF86

### MIF (Multi-Interfaces) WG

### ROLL (Routing Over Low power and Lossy networks) WG

### RMT (Reliable Multicast) WG

## 802.21c Ballot Resolution Committee: Anthony Chan (Chair)

* Membership
	+ Dapeng Liu
	+ Charlie E. Perkins
	+ Yoshihiro Ohba
	+ Antonio de la Oliva
	+ Hyunho Park
	+ Hyeong Ho Lee
* Motion to authorize the Ballot Resolution Committee for committee
	+ Move: Lily Chen
	+ Second: Hyunho Park
	+ Motion Passes
		- For: 08
		- Against: 0
		- Abstain: 0
* Authorization for the P802.21c Editor to incorporate all the resolutions of letter ballot #6a comments into P802.21c /D02 and produce P802.21c/D03
	+ Move: Lily Chen
	+ Second: Charlie E. Perkins
	+ Motion Passes
		- For: 08
		- Against: 0
		- Abstain: 0
* Motion to authorize the Working Group chair to initiate a LB#6 re-circulation Letter Ballot on the question “Should P802.21c/D03 be forwarded to Sponsor Ballot?”
	+ Move: Lily Chen
	+ Second: Charlie E. Perkins
	+ Motion Passes
		- For: 08
		- Against: 0
		- Abstain: 0

## Authorize the 802.21 WG Chair to make a motion to the IEEE 802 Executive Committee for approval to forward the IEEE P802.21c Extension PAR to the IEEE-SA NeSCom

* Move: Lily Chen
* Second: Charlie E. Perkins
* Motion Passes
	+ For: 09
	+ Against: 0
	+ Abstain: 0

#  Future Sessions – 2013

## Interim: 12-17 May 2013, Hilton Waikoloa Village, 2013

* + Co-located with all 802 wireless groups
	+ http://802world.org/wireless
* **Plenary: 14-19, July 2013, Geneva, Switzerland**
	+ Co-located with all 802 groups
* **Interim: 15-20, Nanjing Zhong Shan Hotel, September 2013, Nanjing , China**
	+ Co-located with all 802 wireless groups
* **Plenary: 10-15 Nov 2013, Hyatt Regency Reunion, Dallas, TX, USA**
	+ Co-located with all 802 groups

# Future Sessions – 2014

* **Interim: 19-24 January, 2014, Century Plaza, Los Angeles, CA, USA**
	+ Co-located with all 802 groups
* **Plenary: 16-21 March, 2014, TBD (Non-American Venue)**
	+ Co-located with all 802 groups
* **Interim: 11-16 May 2014, Hilton Waikoloa Village, HI**
	+ Co-located with all wireless groups
* **Plenary: 13-18, July 2014, Manchester Grand Hyatt, San Diego, CA, USA**
	+ Co-located with all 802 groups
* **Interim: 14-19, September 2014, TBD (Europe or Asia venue)**
	+ Co-located with all 802 wireless groups
* **Plenary: 2-7 Nov 2014, Grand Hyatt, San Antonio, TX, USA**
	+ Co-located with all 802 groups

# Attendance

|  |  |
| --- | --- |
| Chen Lily  |  National Institute of Standards and Technologies (NIST) |
| Chasko Stephen | Landis+Gyr  |
| KAMBAYASHI TORU | Toshiba Corporation  |
| Khatibi Farrokh  | Qualcomm  |
| Yoshikazu Hanatani  | Toshiba Corporation  |
| Ohba Yoshihiro  | TOSHIBA Corporation |
| Park Hyunho  | Electronics and Telecommunications Research Instititute (ETRI) |
| Perkins Charles  | Futurewei Technologies  |
| Lee Hyeong-Ho  | Electronics and Telecommunications Research Instititute (ETRI) |
| Liu Dapeng  | China Mobile  |
| Randall Karen  | NSA/ISD |
| Valentine Aikens  | Western Digital Corporation |

# The meeting was adjourned at 5:40pm

Minutes of 802.21c Task Group Meeting

Session #55 in Orlando, USA

Chair: Anthony Chan

Vice Chair: Dapeng Liu

Technical Editor: Charles Perkins

Secretary: Hyunho Park

# Day1 PM2 (4:00PM-6:00PM): Antigua 2; Monday, Mar. 18, 2013

## Meeting is called to order by Dapeng Liu, vice chair of 802.21c TG, with agenda (DCN# 21-13-0041-00).

## Comments from the 53th comment number of “LB comments and resolution (DCN# 21-13-0033-01-srho)” were discussed and results of the discussions are as follows.

## Comment # 53 (Clause: 5.5.8, Pg: 8, Line: 17) If IR is a distributed database, it may not need to introduce "proxy" IR, unless it behaviors differently from the IR.

* Resolution: Rejected, done (see comments 140).

## Comment # 55 (Clause: 5.5.8, Pg: 9, Line: 1, Figure 10 b) "PreReg\_Xfer" is not the correct name.

* Resolution: Accepted, Figure 10b is determined to be modified.

## Comment # 65 (Clause: 6.5.4, Pg: 11, Line: 7) The editing instruction contains all of the description of the changes.

* Resolution: Accepted.

## Comment # 71 (Clause: 7.4.30.2.2, Pg: 16, Line: 31) Make "Parameter" into part of column 1 title of the table (appears many times).

* Resolution: Accepted.

## Comment # 74 (Clause: 7.4.30.3.3, Pg: 18, Line: 7) SALifetime should be given as the first parameter in the list; it doesn't appear in section 9.2.2

* Resolution: Accepted

## Comment # 75 (Clause: 7.4.30.3.3, Pg: 18, Line: 9) "MIHF" --> "MIH application"

* Resolution: Rejected.

## Comment # 158 (Clause: 5.5.8, Pg: 8, Line: 11) It seems that Figure 10a is not a reference model. The functional architecture for single radio handover is shown in Figure 10a..

* Resolution: Accepted.

## Comment # 159 (Clause: 5.5.8, Pg: 8, Line: 13, Figure 10a) Replace distributed database of Information Repository with a single logical Information Repository in Figure 10a.

* Resolution: Accepted.

## Comment # 160 (Clause: 5.5.8, Pg: 8, Line: 13, Figure 10a) "Proxy" is undefined in the document. Replace "OPoS/Proxy" with "OPoS/Proxy IR". Replace "TPoS/Proxy" with "TPoS/Proxy PoA"..

* Resolution: Accepted..

## Comment # 161 (Clause: 5.5.8, Pg: 8, Line: 16) Why do we need Proxy IR? Is there more than one IR? Remove the concept of Proxy IR.

* Resolution: Rejected.

## Comment # 163 (Clause: 5.5.8, Pg: 9, Line: 1) If TPoA supports SR-MIHF, then the TPoA itself can be considered the TPoS that can directly communicate with OPoS.

## Remove PreReg\_Xfer request/response exchange between TPoS and TPoA.

## Replace "If no, signal to TPoA out of scope" with "Signal to TPoA out of scope".

## Revise 5.5.5.8 (c) to: "(c) Upon receiving this message from MN (either directly or via the OPoS: if the message is received directly from the MN, the OPoS is bypassed), TPoS or target Proxy PoA helps to discover a suitable PoA if not already known, and the TPoS or Proxy PoA communicates the link-layer frames to the target PoA using a mechanism that is outside the scope of this specification.".

* Resolution: Accepted.

# Day3 AM1 (8:00AM-10:00AM): Antigua 2; Wednesday, Mar. 20, 2013

## Meeting is called to order by Dapeng Liu, vice chair of 802.21c TG, with agenda (DCN# 21-13-0041-00).

## Comments from #198 of “LB comments and resolution (DCN# 21-13-0033-01-srho)” are discussed and resolved.

## Comment # 198 (Clause: 7.4.33.1, Pg: 26, Line: 27-28) Sentences "The control messages are messages to control networks. Therefore, the control messages are not only network specific control messages but also messages, such as ANQP and ANDSF messages, for interworking heterogeneous networks." are not clear. Not clear what we are trying to convey here. In subsequent primitives, without defining the proper message container/parameters, how will it know what control messages it?

* Resolution: Modify
	+ (1) Define ANDSF MO value.
	+ (2) ADNSF MO will carried by MIH message.
	+ (3) Make AID value consistence, refer to comment number 208,209.
	+ (4) Add example for ANQP command.

## Comment # 199 (Clause: 7.4.32, Pg: 27, Line: 10) Sections 7.4.30 and 7.4.31 have both a short summary of their commands. 7.4.32 does not. The behavior should be consistent in all sections. This happens also to 7.4.33. Ideally, section 7.4.32 should also have a small summary of the command set.

* Resolution: Accepted.

## Comment # 212 (Clause: 9.2.2, Pg: 32, Line: 15) Note that this subclause (9.2) is key establishment through an MIH service access authentication. Now besides MSK and rMSK, a key K is introduced. It seems that the K is not established through access authentication. In which situation such a key needs to be generated at OPoS?

* Resolution: modified, refer to comment 213

# Day3 AM2 (10:30AM-12:30PM): Antigua 2; Wednesday, Mar. 20, 2013

## Meeting is called to order by Dapeng Liu, vice chair of 802.21c TG, with agenda (DCN# 21-13-0041-00).

## Comments from #214 comment of “LB comments and resolution (DCN# 21-13-0033-01-srho)” are discussed and resolved.

## Comment # 214 (Clause: 9.2.2, Pg: 32, Line: 21) MSK and EMSK are media specific keys. I don't believe it can be made available for O and T networks.--> The MSK and rMSK is not necessarily media specific. It can be generated during media independent authentication.

* Resolution: rejected, The MSK and rMSK is not necessarily media specific. It can be generated during media independent authentication.

## Comment # 228 (Clause: F.3.4, Pg: 43, Line: 1) Is power consumption the only interesting link parameter? How would this be used?

* Resolution: accepted,
	+ (1) Corss reference to Annex S.
	+ (2) add text to figure S.3.

## Comment # 233 (Clause: N, Pg: 46, Line: 12) There are no PICS related question. Therefore there are no requirements in this amendment. Therefore why are you writing one? this comment was not addressed in the previous ballot.

* Resolution: accepted.

## Comment # 235 (Clause: E, Pg: 48, Line: 13) Are there no considerations about the primitives for 802.11? (i.e., Table E.2 of the original standard)

* Resolution: accepted.

## Comment # 237 (Clause: F.3.17, Pg: 51, Line: 6) For CTRL\_TYPE only ANQP is already defined. All examples speak of ANDSF as well. Could you consider adding a value for ANDSF already?

* Resolution: Accepted, resolved by comments number 198.

## Comment # 238 (Clause: 12, Pg: 52, Line: 5) The notion of Proxy Services and sepcifically Proxy PoA would be RAT dependent

* Resolution: rejected, concept of the proxy service is not RAT dependent. Implementation could be RAT dependent.

# Day4 AM2 (10:30AM-12:30PM): Antigua 2; Thursday, March. 21, 2013

## Comments from #157 of “LB comments and resolution (DCN# 21-13-0033-01-srho)” are discussed and resolved.

## Comment # 157 (Clause: 5.4.6, Pg: 7, Line: 9) This section seems to be incomplete. There is no relationship with the title and text of this section. Suddenly the distributed mobility management has been introduced but there is no rationale”

* Resolution: Accepted, See comment #156.

## Comment # 168 (Clause: 7.4.30.1, Pg: 15, Line: 17) In the description of 'CandidateLinkList' it is mentioned that if target link is known, this parameter not required. However, in 'TargetLinkInfoList' it is not mentioned when this parameter is not available. I think it will be hard to find a scenario where 'TargetInfoLinkList' is not available. To me, instead of TargetLinkInfoList, it should only include 'CandidateLinkList' since from Mobile's point of view, it can only report what it sees as candidate networks.

* Resolution: Accepted, Suggested resolution, merged.

## Comment # 193 (Clause: 7.4.32, Pg: 23, Line: 10): what is the use case for the command? The sequence in Figure S-1 could be done by way of MIH\_Prereg\_Xfer command. Consider coalescing commands.

* Resolution: E-mail discussion is needed.

## Comment # 210(Clause: 9.2.2, Pg: 32, Line: 12): The current description only mentions that a key transferred from OPoS to TPoS is generated by invoking a pseudo-random number generator. It should also support the other scheme in which the key is generated by key derivation. Also, supporting key derivation means that K used by a PoS derives K transferred to another PoS. It is better to use different a key name other than K for the transferred key.

* Resolution: Modified, See the document 21-13-0062001

## Comment # 212 (Clause: 9.2.2, Pg: 32, Line: 17) : Note that this subclause (9.2) is key establishment through an MIH service access authentication. Now besides MSK and rMSK, a key K is introduced. It seems that the K is not established through access authentication. In which situation such a key needs to be generated at OPoS?

* Resolution: Modified, Refer to comment 213

## Comment # 215 (Clause: 9.2.2, Pg: 33, Line: 5): Ciphersuite SHOULD be a parameter sent by MN, or if not, sent by OPoS. It should be added as another parameter to the Prereg\_Xfer commands

* Resolution: Accepted, Suggested resolution: add a ciphersuite parameter in the Prereg\_Xfer command.

## Feb. 26, 2013 teleconference minutes (DCN# 21-12-0037-00) was approved with unanimous consent.

## Mar 5, 2013 teleconference minutes (DCN# 21-12-0039-01-srho) was approved with unanimous consent.

## The meeting was adjourned at 12:30 PM

IEEE P802.21 Media Independent Handover Services

Meeting Minutes of the IEEE P802.21d Group Management Task Group

Chair: Yoshihiro Ohba

Editor: Antonio de la Oliva

# First Day AM1 Meeting: Antigua 2; Tuesday, March 19

## Meeting called to order by Chair at 8:13AM

Call for volunteer to take minutes. Toru Kambayashi and Subir Das are the minutes-taker for Tuesday AM1

## Meeting Agenda (21-13-0045-02) is presented by Chair

The IEEE 802.21d task group is scheduled to meet Tuesday AM1 and Thursday AM1. The agenda was approved with no objections.

## Meeting Minutes Approval

The following meeting minutes have been approved with no objections.

* DCN 21-13-0025-00 (January 2013 F2F meeting minutes)
* DCN 21-13-0026-00 (January 26, 2013 teleconference minutes)
* DCN 21-13-0031-00 (February 13, 2013 teleconference minutes)
* DCN 21-13-0035-00 (February 27, 2013 teleconference minutes)

## Opening Notes (21-13-0049-00) is presented by Chair

Slides #1-#4 shown, Note Well, Duty to Inform

Call for essential patents: None

Officers: Antonio de la Oliva is appointed as the Technical Editor. Secretary position is still open.

TGd Schedule:

There are two 802.21d proposals: 21-13-0034-00 and 21-13-0042-01 to be discussed in this week.

If a single harmonized proposal is generated by Thursday AM1, it will become a TG document provided TG members agree. The TG document can be updated within the TG until the document is sent to WG letter ballot.

## Proposal Presentation by Antonio de la Oliva

Proposal presentation by Antonio de la Oliva, DCN 21-13-0042-01 (MN initiated join/leave) is presented.

Discussion on “Command Range”. The group agreed on changing the name to “Sub-Group Range”. As a related discussion, the use of term “target” for groups is discussed as the usage is different from “target PoA/PoS” The group agreed that the word “target” can also be used for representing the group that a command is destined for (i.e., target group).

Discussion on GROUP\_STATUS data type. The group agreed to have the following status codes: Join success, leave success, failure, not authorized. As a related discussion, a question was asked if key update needs to be mandated when a member left the group. Group agrees to make key update upon a member left optional.

Comment that section reference to 7.4.30 is incorrect. Corrections will be made when incorporating the document into a single harmonized document.

Comment that optional parameters should be differentiated from conditional parameters. The group agreed to make the differentiation. The group also agreed that the differentiation can be made after the March Plenary meeting.

Contributors agree on creating a single harmonized proposal by Thursday AM1 session.

# Second Day AM1 Meeting: Antigua 2; Thursday, March 21

## Meeting called to order by Chair at 8:10AM

Minutes are taken by Subir Das.

## Proposal presented by Antonio de la Oliva

Antonio de la Oliva presented the document ( DCN # 21-13-0034-01-MuGM-merged-proposal.doc)

Discussion items are highlighted in the document and presenter felt the need for a discussion on these points . TG members discussed and resolved them one-by-one .

It was suggested to have the support for both unicast and multicast-based responses for primitive 7.4.30.3.2. The clarification was made that the multicast response does not make any sense here since the node is asking for the multicast address to join. It was initially suggested to remove the parameters of this primitive. Again clarification is made that these parameters are required.

Comment regarding GroupKeyUpdateFlag in 7.4.31.1.2: suggestion is made to keep this flag since we removed the group key update status from GROUP\_STATUS data type.

Discussion followed with all the remaining comments/issues and consensus was achieved.

Action items for Toru Kambayashi :

- GKB generator description

- Informative section 9.4.1

- Review 9.4.3 – key derivation

- Provide example of GKB generation

TG agreed on defining a bootstrap GKB procedure: Antonio and Yoshikazu have been assigned to propose a solution.

Motion to approve DCN 21-13-0034-01 as a baseline document:

Moved by: Farrokh Khatibi

Seconded by: Toru Kambayashi

Result: 7/0/0

Editor will generate the -00 draft version.

## Closing Note by Chair

TG closing note is captured in DCN #21-13-0055-00-MuGM.

Teleconference schedule was also discussed.

## The meeting was adjourned at 9:30am