 

IEEE P802.21 Media Independent Handover Services

Tentative Minutes of the IEEE P802.21 Working Group

Session #45 Meeting, San Francisco, USA

Chair: Subir Das

Vice Chair: Juan Carlos Zuniga

Secretary: H Anthony Chan

Editor: David Cypher

(Version: minutes for 802.21c TG are added into this version.)

# First Day PM1 (1:30PM-3:30PM): Pacific E; Monday, July 18, 2011

## 802.21 WG Opening Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 1:30PM with opening notes (21-11-0112-00).

## Approval of the July 2011 Meeting Agenda (21-11-0103-00)

### Agenda is amended for Tuesday AM1 to start at 9AM and Wednesday AM1 to start at 8:30AM

### It is noted that the security and HBS TG sessions on Thursday are not needed. It will be possible to move the closing plenary early. We will revisit the agenda at the Wednesday mid-plenary.

### Agenda is amended to the following (21-11-103-01) and is approved with unanimous consent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday**  **(July 18th)** | **Tuesday**  **(July 19th)** | **Wednesday**  **(July 20th)** | **Thursday**  **(July 21th)** |
| **AM-1**  **8:00-10:00a** |  | Security TG  (9AM) | WG Mid-Plenary (8:30:00- 10:30a) | Security TG |
| **AM-2**  **10:30-12:30** |  | HBS TG | SRHO TG | HBS TG |
| **PM-1**  **1:30 – 3:30p** | WG Opening Plenary | SRHO TG | Security TG | SRHO TG |
| **PM-2**  **4:00 – 6:00p** | Security TG | Security TG | HBS TG | WG Closing Plenary |
| **Eve**  **6:30 – 8:00p** | NA | NA | Social Event (until 9 pm) |  |

## IEEE 802.21 Session #45 Opening Notes

### WG Officers

#### Chair: Subir Das

#### Vice Chair: Juan Carlos Zuniga

#### Secretary: Anthony Chan

#### Editor: David Cypher

#### 802.11 Liaison: Clint Chaplin

#### 802.16 Liaison: Peretz Feder

#### IETF Liaison: Yoshihiro Ohba

The WG has 27 voting members as of this meeting.

### Network information for the documents

#### SSID: CLLIEEE or someother IEEE password: ieeeieee

#### Document server: <https://mentor.ieee.org/802.21/documents>.

### Attendance and voting membership are presented.

#### Attendance is taken electronically ONLY at <https://seabass.ieee.org/imat>

#### Enter your personal information and profile

#### Mark attendance during every session

#### Total number of 802.21 WG sessions: 14

#### 11 sessions for 75% attendance to be counted towards WG voting membership.

#### All attendance records on the 802.21 website. Please check the attendance records for any errors

### Voting membership

#### 802.21 Voting membership is described in DCN 21-06-075-02-0000

#### Maintenance of Voting Membership

Two plenary sessions out of four consecutive plenary sessions on a moving window basis

One out of the two plenary session requirement could be substituted by an Interim session

#### WG Letter Ballots: Members are expected to vote on WG LBs. Failure to vote on 2 out of last 3 WG LBs could result in loss of voting rights

### Miscellaneous Meeting Logistics are presented.

#### Meeting room: Pacific E

#### Breaks:

Breakfast Tuesday to Thursday 7-9AM

AM coffee break 10:00-10:30AM;

#### Lunch 12:30-1:30PM;

PM coffee break 3:30-4PM

#### Wednesday night: Social at 7:00PM onwards

### Rules on registration and media recording policy are presented.

### Rules on Membership & Anti-Trust are presented

### Rules to inform about patents are presented as follows:



### Chair asked whether there are any potential essential patent claims by any 802.21 WG participants. None.



### Other guidelines for IEEE WG meetings, including discussions that are inappropriate are presented.



### LMSC Chair’s guidelines on commercialism at meeting are presented.

### There is a survey in this meeting. The last question in the survey should be removed so that there is no need to answer the last question.

### Rules on copyright are presented. Note that the copyright procedures are being updated.

### Chair: How many people are attending the IEEE 802.21 WG meetings for the first time? Floor: counted 0

## Letter ballot #4c Results

### LB#4b started on June 20, 2011 and ended on July 5, 2011

### Result is published on July 6, 2011 http://www.ieee802.org/21/ballot\_4.html

### Summary

#### Approve :27

#### Disapprove : 00

#### Abstain: 02

#### Return ratio : 90.63 %

#### Approval ratio : 100%

### The ballot is approved

## Letter Ballot #5b Result

### LB#5b started on June 20 , 2011 and ended on July 5 , 2011

### Result is published on July 6, 2011

### http://www.ieee802.org/21/ballot\_5.html

### Summary

#### Approve : 29

#### Disapprove : 00

#### Abstain: 00

#### Return ratio : 90.6%

#### Approval ratio : 100%

### The ballot is approved

## Objectives for the July Meeting

### Task Group Activities

#### 802.21a: Security Extensions to MIH Services

Letter Ballot results and preparation for Sponsor ballot

#### 802.21b: Handovers with Broadcast Services

Letter Ballot results and preparation for Sponsor ballot

#### 802.21c: Single Radio Handovers

Draft document discussion

## Next session:

### Interim: 19-22 September 2011, Bangkok, Thailand

#### Co-located with 802.16

## May Interim Meeting Minutes (21-11-0085-02).

### Meeting minutes is approved with unanimous consent.

## 802 architecture update is presented by Subir Das

### The comments to the architecture update draft, which are related 802.21 802 are discussed.

### Input text to architecture concept section. Anthony and Subir provide a draft to the architecture concept section. The WG discussed and edited the text to the following:

“In addition, 802 technologies support the nodes to discover neighboring networks information that may include 802 and non-802 technologies. They also provide the capability to achieve service and session continuity in a heterogeneous networking environment when nodes have a choice of connecting multiple access networks, either in stationery condition or while in movement.”

## 802.21a Security task group update (21-11-0116-00) is presented by TG Chair, Yoshihiro Ohba

### Progress so far:

#### January 2009: The 1st 802.21a meeting

#### March 2009: Issued CFP

#### May – Sept 2009: Proposal Presentations (7 proposals)

#### Nov 2009 – May 2010: Harmonization discussions

#### July 2010 – Completed down-selection

#### Sep & Nov 2010 – Open issue discussion

#### Nov 23 – Dec 22: Letter Ballot (LB5)

#### Feb 15 – Mar 1: Letter Ballot (LB5a)

#### Apr 18 – May 3: Letter Ballot (LB5b)

#### June 20 – July 5: Letter Ballot (LB5c)

### Letter Ballot #5c Statistics

#### Result: Approved

#### (Approve, Disapprove, Abstain) = (29/0/0)

#### Return ratio = 90.6%

#### Approval ratio = 100%

#### Number of comments = 17 (Editorial 15, Technical 2)

### Security TG March Agenda:

#### Monday, July 18th, 2011, PM2: Comment discussion

#### Tuesday, July 19th, 2011, AM1, PM2: Placeholder

#### Wednesday, July 20th, 2011, PM1: Placeholder

#### Thursday, July 21th, 2011, AM1: Placeholder

## 802.21b Broadcast handovers task group update is presented by TG Chair, Juan Carlos Zuniga

### The main task for this meeting is to complete the letter ballot resolution and prepare for sponsor ballot. There are 4 technical comments.

## 802.21c Single radio handover task group update (21-11-0100-01) is presented by TG Chair, Junghoon Jee

### Agenda Item for this week

#### Proposal Discussion: 21-11-0115-00-srho, Charles E. Perkins (Tellabs)

#### IEEE 802.21c SRHO Protocol to transport 802.11 Network Entry Message: 21-11-0099-00-srho

#### Future planning

## Planning discussion:

### The invitation to sponsor ballot had been sent out. The invitation is good for 30 days and will expire this Friday. In the current letter ballot, there are only few technical comments, but none of them are mandatory. It is therefore planned to use the existing draft to go for sponsor ballot approval. Else, if we edit this draft, we will need another letter ballot before going for sponsor ballot.

### Tentative time-line for P802.21a Sponsor Ballot

#### The Sponsor Ballot Pool information is currently under way

#### Aug 2 – Sponsor Ballot #1 starts

#### Aug 31 – Sponsor ballot #1 ends

#### Sept 19-22 – Address and resolve comments.

#### Oct 2011 – Sponsor ballot recirculation

#### Nov 2011 – Sponsor ballot recircultaions

#### Nov 2011 – Conditional approval request to EC for fowarding to Revcom

## Future meeting logistics: With 802.21a and 802.21b planned to go for sponsor ballot, we need to review the meetings for next year.

## The tutorials for tonight are:

### 6-7:30PM: ALOHA to the web

### 7:30-9PM: Geolocation technologies suitable to meet regulatory requirements in TV Whitespace

## There is a Meeting on proposal to address RAC issues on Thursday evening

## Meeting recess at 3:19PM

# Third Day AM1 (8:30AM-10AM): Pacific E; Monday, July 20, 2011

## 802.21 WG Mid-Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 8:30AM.

## Revision of the July 2011 Meeting Agenda (21-11-0103-01)

### The following revised agenda is proposed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday**  **(July 18th)** | **Tuesday**  **(July 19th)** | **Wednesday**  **(July 20th)** | **Thursday**  **(July 21th)** |
| **AM-1**  **8:00-10:00a** |  | Security TG  (9AM) | WG Mid-Plenary (8:30:00- 10:30a) | WG Closing Plenary (starts at 9AM) |
| **AM-2**  **10:30-12:30** |  | HBS TG | SRHO TG | WG Closing Plenary |
| **PM-1**  **1:30 – 3:30p** | WG Opening Plenary | SRHO TG | SRHO TG |  |
| **PM-2**  **4:00 – 6:00p** | Security TG | Security TG | SRHO TG |  |
| **Eve**  **6:30 – 8:00p** | NA | NA | Social Event (until 9 pm) |  |

### This revised agenda is approved with unanimous consent.

## Package of P802.21a for sponsor ballot approval request to EC is presented by Subir Das

### Include history of letter ballots with 100% approval with no “must satisfy” comments for P802.21a Draft v4.0 letter ballot, links to each letter ballots. The timeline is also prepared.

## P802.21 WG Motion

### Move to authorize the P802.21 WG Chair to make a motion to the IEEE 802 Executive Committtee for approval to forward IEEE P802.21a Draft for Sponsor Ballot

### The Motion to EC will be: To forward IEEE P802.21a for Sponsor Ballot, to be moved by Subir Das and seconded by Roger Marks.

#### Moved by: Yoshihiro Ohba

#### Second by: Anthony Chan

#### For: 9

#### Against: 0

#### Abstain: 0

#### Result: Motion passes

## Package of request of P802.21b for sponsor ballot approval request to EC is presented by Subir Das

### Include history of letter ballots with 100% approval with no “must satisfy” comments for P802.21b Draft v4.0, links to each letter ballots. The timeline is also prepared.

## P802.21 WG Motion

### Move to authorize the P802.21 WG Chair to to make a motion to the IEEE 802 Executive Committee for approval to forward IEEE P802.21b Draft for Sponsor Ballot

### The Motion to EC will be: To forward IEEE P802.21b for Sponsor Ballot, to be moved by Subir Das and seconded by Roger Marks.

#### Moved by: Juan Carlos Zuniga

#### Second by: Antonio De La Oliva

#### For: 9

#### Against: 0

#### Abstain: 0

#### Result: Motion passes

## 802.21b TG appointment announcements

### Juan Carlos reported that 802.21b TG has appointed Antonio De La Oliva as vice chair and Christian Niephaus as secretary. The work of TG editor is also much appreciated.

## Follow-up:

### Chair thanks everyone for their efforts. Upon EC approval on Friday, the ongoing work will be handled by the sponsor ballot committee. The work of the sponsor ballot committee will need to be announced through the email reflector.

## 802 architecture update is presented by Juan Carlos Zuniga

### The architecture group has agreed that MIH is not limited to MAC and PHY but extends to the higher layer.

### The WG discussed about the figures.

### In the MIH interface with 802.11, it is noted that the MSAP should be in L-shape.

### In the 802 architecture, the transport for MICF is not shown, the MICSAP is not defined. We will wait for the next recirculation to give comment.

## Meeting break for 10 minute at 9:58AM

## Meeting resume at 10:13AM

## Future work discussion

### The tools and technologies developed in 802.21 are not limited to support handover only but can support other services. The service layer cannot be completely agnostic with the lower layers. Information available from lower layers may help the service layer make the proper decisions faster. We need to understand what the market needs and see what media independent services can support them. Examples are M2M and service discovery. In ETSI and M2M, the work is on higher layers. Is there anything needed in the lower layers? Can the lower layers communicate with the higher layers to make decisions faster and in a dynamic manner. Another example is that when one network fails momentarily, the nodes changes to another network and can overload and bring down the network one by one. It was mentioned that operators such as ATT are interested in dynamic connection.

### Service discovery: 802.11 has defined some services which we need to know so that we can support such service discovery. SA has also talked about discovery of emergency services.

### ANDSF is quite static whereas MIH is more dynamic. Even in homogeneous network, the dynamic aspect of 802.21 can outperform ANDSF

### There are many services but there is only a discrete set of QoS parameters to support the services. A more proper term may be capability information.

### TTA has formed a new project group to manage the M2M work. Example is that there are many hotspots and Femto cells, and the problem is how to manage them. Although there is information in individual networks, there is no co-related information among them.

### It is necessary to make plans to go beyond the discussion. It is worth investigating whether the work is needed and which does not duplicate existing work elsewhere. We need to find out whether industry is interested to standardize the work and someone is willing to lead the effort. While the work may make sense technically, we need to look into the implications to the overall networks.

### It is desirable to start with wireless network, but we should not be limited to wireless.

### There are information that are media dependent as well as media independent, such as location information, which will enhance performance. It is necessary to take a fresh look.

### Antonio De La Oliva will co-ordinate ongoing discussions including teleconferences.

## IEEE 802.21 Network based Distributed mobility management (21-11-0123-01) is presented by Antonio De La Oliva

### The approach can be fully or partially distributed. As MN moves from one anchor point to another anchor point, it can use the previous IP address as well as get a new IP address. It will be getting IP prefix announcement for both IP addresses. This work can be included into 802.21c

## Meeting recess at 12:14PM

# Fourth Day AM1 (9AM-10AM): Pacific E; Thursday, July 21, 2011

## 802.21 WG Meeting called to order by Subir Das, Chair of IEEE 802.21WG at 9AM with agenda (21-11-0103-01) and closing report (21-11-0136-00)

### WiMAX Forum Update is already presented by Junghoon Jee to the 802.21c meeting. In May meeting, the single radio handover issue has discussed about 802.21c and pseudo mode operation.

### There is ongoing liaison between WiMAX Forum and 802.21. The upcoming meeting will be in September during which we can present the 802.21c.

## 802.21a report is presented by TG Chair, Yoshihiro Ohba

### Received 100% approval in the 4th Letter Ballot recirculation. The TG held one meeting on Tuesday. There are 70 comments which are all unbinding. The current draft will go to Sponsor Ballot. The comments will be taken care of in the Sponsor Ballot.

## 802.21b report (21-11-0138-00) is briefed by Juan Carlos Zuniga

### Comments received: 6. Technical: 2. Editorial: 4. 100% approval.

### All comments are resolved during session #45. Since these are no binding comments and the document is approved, it will be sent for SB and commenter will be encouraged to re submit their comments during the SB

### Next steps: Start Sponsor Ballot (pool ~70 people), if approved by EC. Start resolving comments during September meeting.

## 802.21c report (21-11-0100-02) is presented by TG Chair, Junghoon Jee

### Proposal Discussion

#### 21-11-0124-00-srho, Charles E. Perkins (Tellabs)

### IEEE 802.21c SRHO Protocol to transport 802.11 Network Entry Message

#### 21-11-0099-00-srho, Hyunho Park (ETRI)

### 802.21a point of view of SFF

#### 21-11-0128-00-srho, Yoshihiro Ohba (Toshiba)

### Consensus on the proposal, 21-11-0133-00-srho-tgc-proposal-charles-perkins

### Current IEEE 802.21c TG Draft Spec: 21-11-0133-00-srho-tgc-proposal-charles-perkins

### Conference Calls

#### Aug 17, 2011, 10:00 ET

#### Sept 7, 2011, 10:00 ET

## 802.11 Liaison report (21-11-0137-01) is present by Clint Chaplin

### 802.11 TGmb 802.11 Accumulated Maintenance Changes

#### Second Recirculation Sponsor ballot on IEEE 802.11mb D8.0 closed April 14, 2011. Results: 136/12/10 91.89% . 863 comments received: 301 technical, 522 editorial, 40 general. Resolved all of the comments

#### Third Recirculation Sponsor ballot on IEEE 802.11mb D9.0 closed June 22, 2011. Results: 139/11/10 92.67%. 216 comments received: 90 technical, 115 editorial, 11 general. Resolved all comments. Going out for Fourth Recirculation Sponsor in August once resolutions have been incorporated into the draft.

### 802.11 TGs Mesh Networking (Management protocol additions; AP-AP negotiations; load balancing; access controls)

#### Third Recirculation Sponsor Ballot on IEEE 802.11s D10.0 closed April 9, 2011. Results: 140/5/0/9 96.55%. 246 comments received: 164 technical, 78 editorial, 4 general. Resolved all comments

#### Fourth Recirculation Sponsor Ballot on IEEE 802.11s D11.0 closed May 7, 2011. Results: 140/5/0/9 96.55%. 300 comments received: 133 technical, 165 editorial, 2 general. Resolved all comments

#### Fifth Recirculation Sponsor Ballot on IEEE 802.11s D12.0 closed June 4, 2011. Results: 141/4/0/9 97.24% (two voters change from “no” to “yes” after ballot closed: 143/2/0/9). 1 comment received. Asking the EC Friday for unconditional approval to publish

### 802.11 TGaa 802.11 Video Transport Streams (additions to support video)

#### Third Recirculation WG Ballot LB175 on draft 4.0 closed April 9, 2011. Results 135/23/37 85.44%. 802.11aa received 93 comments, 70 technical and 23 editorial, and the BRC addressed all comments.

#### Fourth Recirculation WG Ballot LB179 on draft 5.0 closed June 17, 2011. Results 142/15/39 90.45%. 802.11aa received 132 comments, 70 technical and 62 editorial, and the BRC addressed all comments.

#### Planning on going out for recirculation after this meeting.

#### Ganesh Venkatesan stepped down as chair, Graham Smith (DSP Group) was selected to become the new chair.

### 802.11 TGac Very High Throughput <6GHz (successor to 802.11n at frequencies < 6Hz)

#### First Initial WG Ballot LB178 on draft 1.0 closed June 25, 2011. Results 148/52/16 74.00%: failed. 802.11ac received 1821 comments, 1031 technical, 766 editorial, and 24 general, and the BRC is addressing the comments.

#### Planning on going out for Second Initial WG ballot in September or November

### 802.11 TGad Very High Throughput 60GHz (successor to 802.11n at 6Hz)

#### First Recirculation WG Ballot LB174 on draft 2.0 closed April 4, 2011. Results 175/25/25 87.50%. 802.11ad received 330 comments, 198 technical and 132 editorial, and the BRC has addressed all comments.

#### Elected Chris Hansen as Vice-Chair (previous Vice-Chair stepped down)

#### Second Recirculation WG Ballot LB177 on draft 3.0 closed June 1, 2011. Results 188/16/24 92.16%. 802.11ad received 214 comments, 133 technical and 81 editorial, and the BRC has addressed all comments.

#### Will go out for Third Recirculation WG ballot after this meeting.

### 802.11 TGae QoS MAN

#### Second Recirculation WG Ballot LB176 on draft 3.0 closed April 26, 2011. Results 163/21/37 88.59%. 802.11ae received 142 comments, 58 technical and 84 editorial, and the BRC addressed all the comments.

#### Third Recirculation WG Ballot LB180 on draft 4.0 closed June 18, 2011. Results 180/8/35 95.74%. 802.11ae received 77 comments, and the BRC addressed all the comments.

#### Already started Fourth Recirculation WG ballot; ends August 4.

#### Asking the EC Friday for conditional approval to go out for Sponsor Ballot.

### 802.11 TGaf TV White Space

#### May meeting: Settled on architecture and security modifications to track regulatory changes. Selected P802.11ac as PHY focus. Adjusted timeline accordingly

#### Resolved 481 comments. 408 of 410 Editorial (accepted into draft 1.01). 73 of 892 Technical (voted Thursday AM2)

#### Revised the P802.11af timeline

#### Planned for July ad hoc, and weekly teleconferences. Still begin Tuesdays at 22:00 ET

#### July meeting: Resolved 151 comments; 626 of 1302 comments have Approved resolutions

#### Met with TGac PHY experts to discuss how TGaf can proceed prior to approval of the TGac draft;

#### Revised the P802.11af timeline; Planned for September ad hoc in Korea, and weekly teleconferences on Tuesdays at 21:00 ET

### 802.11 TGah < 1GHz (sub 1GHz operation)

#### May 2011: Worked on Channel model document. General agreement on outdoor channel model. Discussions on indoor channel. Have not yet reached agreement on document

#### Requirements and evaluation methodology started

#### Still need to make progress on Requirements and Evaluation Methodology

#### Change of leadership roles:

#### Yongho Seok: Vice Chair

#### Minyoung Park: Editor

#### Secretary is open

#### July 2011: Initial channel model document adopted: 11-11-0968-01-00ah-channel-model-text.docx

#### Initial functional requirements and evaluation methodology adopted: 11-11-0905-03-00ah-tgah-functional-requirements-and-evaluation-methodology.doc

#### Addition of leadership role: Joseph Teo Chee Ming - Secretary.

### 802.11 TGai fast initial authentication

#### May 2011: Reviewed and Approved the Singapore and Teleconference meeting minutes

#### Approved Use Case Scenario documentation, TGai requirement documentation, Process for creating TGai draft.

#### July 2011: Approved TGai evaluation methodology document. 11/0811r05 TGai evaluation methodology.

### 802.11 WNG Wireless Next Generations SG

#### May 2011 meeting presentations:

#### 802.11 WNG Presentation: 6-9GHz extensions to 802.11 (11-11-0743-00-0wng-6-9ghz-extensions-to-802-11.ppt) – Jim Lansford

#### DSA system for 2.4GHz ISM Band (11-11-0591-00-0wng-dsa-system-for-2-4ghz-ism-band.pptx) – Shoichi Kitazawa

#### July 2011 meeting presentations:

#### Improving the Case for Wireless LAN Transmit Power Control— including to better service Mobile Telephones? (11-11-1036-00-0wng-improving-tpc-case.ppt) – Lawrence Zuckerman

#### Channel Contention with a Large Number of Devices (11-11-0953-00-0wng-channel-contention-with-a-large-number-of-devices.ppt) – Ed Reuss

#### PTC Radio and System Architecture (11-11-1032-00-0wng-positive-train-control-radio-and-system-architecture.ppt) – Jia-Ru Li

### JTC1/SC6 Ad-Hoc ISO/IEC JTC1/SC6

#### May 2011:

#### The ad hoc is now responsible for all 802 matters

#### Reviewed status of liaisons previously sent to SC6; Comments received from China NB related to 802.11s; passed to TGs

#### Reviewed presentations for SC6 meeting; mostly based on previous liaisons related to: Liaison relations questions; 802.11 security; Identifier conflict issue; 802.1X/AE misunderstandings

#### Discussed UK NB proposal to obsolete 8802 series; No position yet; will wait for discussions at SC6 meeting

#### Discussed possibility of becoming Category A liaison; No position yet; more information required

#### Appointed delegation (HoD delegation action); Likely to include 9 people; including an IEEE staff member

#### Approved mechanism for approving presentations to SC6: Presentations still being refined/revised; Plan is for Bruce Kraemer to have authority to approve

#### Bruce Kraemer will take over formal 802 Liaison position to SC6

#### July 2011:

#### Reviewed SC6 meeting in San Diego: Review attendance; IEEE 802 delegation (8 people) & ten NBs; Review agenda; Many topics not related to 802 activities

#### Discussed proposed 8802 series withdrawal: Consensus of .1, .3, .11 participants that “international” is important & 802 should send standards to ISO as long as ISO does not amend our standards. 802.11 will not send 802.11-2007 as interim update because 802.11-2012 is very close to completion

#### Received WAPI report: WAPI still at NP stage & not at WD stage. A CRM will be held with 802 delegation in August, with the output to be considered by SC6 NBs in Feb 2012. Not clear on process for WAPI project approval

#### Received 802.1X/AE replacement report: Will ask what additional function provided by TePA? Will need to review TePA in longer term. Not clear if proposal will proceed in SC6

#### Received 802.16 security replacement report; Not clear if proposal will proceed in SC6

#### Received 802.11 replacement report (Thursday): Explained 802.11ac and critiqued N-UHT. Late news: N-UHT proposal will proceed in SC6. Late news: N-UHT is linked to 5GHz spectrum. Decided need to liaise 802.11ac to SC6 ASAP

### Regulatory Ad-Hoc (at May 2011 meeting)

#### Discussed regulatory summaries from North America, the EU and Asia. FCC TVBD test plan issues. Update on 5 GHz TDWR activities. Received Draft Spectrum Allocation plan from India

#### Generated input on P802.11af for 802.18 information document to ITU-R

## 802.16 Liaison report (21-11-0134-00) is presented by Dan Gal

### Current IEEE 802.16 projects and activities

#### New P802.16-Rev3 has been launched. Split the standard in two:

The “legacy” 802.16 standard, with the inclusion of the 802.16h and 802.16j amendments. Will, probably be published as IEEE Standard 802.16-2012

The published IEEE 802.16m amendment will be incorporated into IEEE P 802.16.1

#### Active Task Groups:

802.16n – GRIDMAN – high reliability enhancements to 802.16

802.16p – Machine to Machine (M2M) protocol enhancements to 802.16e and 802.16M

802.16PPC – project planning committee and new projects study group

802.16Maint – IEEE 802.16 standard maintenance

### 802.16p M2M TG

#### This week, the TG continued to resolve many comments on the 16p draft standard (a.k.a AWD=Amendment Working Draft).

#### A V&V (Verification and Validation) of the AWD – a review of the draft standard content vs. the requirements, was prepared for this meeting. The review was done on Monday and will continue on Thursday. Aims to identify weak areas and outages in the working draft. Deemed an essential process step (though, rarely done in IEEE 802), before going to WG Letter Ballot

#### M2M definitions: An M2M wireless device is the communication part of a totally automated device, deployed in the field (such as a sensor, power meter, video surveillance camera, smart grid sensor or actuator, etc.) that requires two-way communications with a counterpart on the landline side (or another wireless device). The M2M device communicates autonomously, or under remote control, with its counterpart (a server or another client that receives the data sent by the M2M device).

#### M2M technical challenges: (i) The major challenge that providing M2M wireless services poses to the Access System is related to the potentially very large number of devices deployed in the service area of a single cell. Probably, as large as many hundreds or even thousands of devices in extreme cases. Handling a very large number of M2M devices in a cell requires: (Solving the device addressing problem. We need, perhaps, two to three orders of magnitude more IP addresses (than needed for human-carried MSs), as well as network internal addresses and data flow identifiers. For some, common, functionalities Similar devices could be arranged in logical groups and addressed by a group identifier.

#### M2M technical challenges: (ii) Solving the severe congestion problem in the Wireless Access System after an area-wide power outage or crash, when many devices try to re-enter the network at the same time. Requires a special pre-defined behavior that would minimize collisions, yet would allow a quick recovery of the entire system.

#### In some aspects, the M2M draft must provide different protocol solutions for the 802.16e and 802.16m standards.

### 802.16n – CRIDMAN

#### The TG continued to develop the draft standard document and has resolved all the comments made on the current draft AWD.

#### They continue to struggle with the difficult problem of providing BS-less direct MS to MS communications, in case of disaster or fast deployment in a desolate areas (such as a forest or a lean rural area).

#### A new draft AWD will be generated out of this session #74

### 802.16 – PPC : Project planning

#### There were no contributions submitted for this session. Other than a short discussion, the committee did not have any real business this week.

### 802.16 – Maint : IEEE 802.16 standard maintenance

#### The TG has been receiving, processing and approving change requests (CRs) (made mostly by the WiMAX Forum) to the IEEE 802.16-2009 standard.

#### Its new assignment is to manage the new projects P802.16-Rev3 and P802.16.1

#### P802.16-Rev3 will revise the IEEE 802.16-2009 standard and merge it with the currently published amendments 16h, 16j and 16m and then, split the 16m part and create P802.16.1 as a standalone standard for the IMT-Advanced technology

## Meeting break for 10 minutes at 10:20AM

## Meeting resume at 10:36AM

## IETF liaison report (21-11-0135-01) is present by Yoshihiro Ohba

### HOKEY WG

#### The Local Domain Name DHCP Option**:** draft-ietf-hokey-ldn-discovery-10**;** Status: RFC Ed queue

#### EAP Re-authentication Protocol Extensions for Authenticated Anticipatory Keying (ERP/AAK). draft-ietf-hokey-erp-aak-04**:** Status: Ended WG Last Call

#### Handover Keying (HOKEY) Architecture Design**:** draft-ietf-hokey-arch-design-04**;** Status: I-D exists

#### EAP Extensions for EAP Re-authentication Protocol (ERP)**:** draft-ietf-hokey-rfc5296bis-04; Status: I-D exists

### MEXT WG

#### RFC 3775bis: Published as RFC 6275

#### DHCPv6 Prefix Delegation for NEMO: Published as RFC 6276

#### Home Agent reliability: I-D. ietf-mip6-hareliability; WG Last Call

#### TLS-based MIPv6 Security Framework for MN to HA Communication: draft-ietf-mext-mip6-tls. Status: I-D exists

#### Firewall: draft-ietf-mext-firewall-admin-04; draft-ietf-mext-firewall-vendor-04

#### Distributed Mobility Management: draft-liu-mext-distributed-mobile-ip-00; draft-patil-mext-dmm-approaches-00; draft-bernardos-mext-dmm-cmip-00; draft-sarikaya-mext-multicastdmm-00; draft-sjkoh-mext-pmip-dmc-03; draft-chan-distributed-mobility-ps-03; draft-bernardos-mext-dmm-pmip-01

#### HA-initiated flow binding: draft-yokota-mext-ha-init-flow-binding-00

### NETEXT WG

#### LMA Redirection: I-D. draft-ietf-netext-redirect-08. Status: Waiting for Write-Up

#### Localized Routing: Problem statement: Published as RFC 6279.

#### Localized Routing for Proxy Mobile IPv6. draft-ietf-netext-pmip-lr. Status: Completed WG Last Call

#### Bulk Refresh. I-D.ietf-netlmm-bulk-re-registration. Status: Under WG Last Call (by July 24th)

#### RADIUS support for PMIPv6. I.D. ietf-netext-radius-pmip6. Status: Competed WG Last Call

#### Flow mobility & Inter-technology handover support documents. I.D.ietf-netext-logical-interface-support (Applicability). Status: I-D exists

#### I.D.bernardos-netext-pmipv6-flowmob (Solution). Status: I-D exists

### New WGs

#### PAWS (Protocol to Access WS database)

#### 6RENUM (IPv6 Site Renumbering)

#### HOMENET (Home Networking)

### BoFs scheduled for IETF 81

#### HTTP Authentication BOF

#### Multicast Transition BOF

#### Reputation Services BOF

#### Web Object Encryption and Signing BOF

#### Common Interface to Cryptographic Modules BOF

#### Energy Efficiency RG Bar BoF

## Request for Sponosr ballots for 802.21a and 802.21b

### The requests are submitted to EC. The package information are 21-11-0129-00 for 802.21a and 21-11-0130-00 for 802.21b

## Teleconference schedule

### 802.21c TG

#### August 17, 2011, 10:00 ET

#### Sept 7, 2011, 10:00 ET

## Future session information

### Interim: 19-22 September 2011, Bangkok, Thailand (Cantata Grand & Bangkok Conference Center)

#### Meeting co-located with 802.16

#### The meeting package is available. The conference hotel rate is about US$150 including Internet access. Most countries in Europe, USA, etc. do not need visa.

### Plenary: 7-10 Nov 2011, Hyatt Regency Atlanta

#### Co-located with all 802 groups

### Interim: 9-12 January 2012, TBD

#### Meeting co-located with 802.16 (?)

### Plenary: 11-16 March 2012, Big Island, Hawaii

#### Co-located with all 802 groups

### Interim: target 14-17 May 2012, TBD

#### Meeting co-located with 802.16 (?)

### Plenary: 15-20 July 2012, Grand Hyatt Manchester, San Diego, CA

#### Co-located with all 802 groups

### Interim: 10-13 September 2012, TBD

#### Meeting co-located with 802.16 (?)

### Plenary: 11-16 Nov 2012, Grand Hyatt, San Antonio, TX

#### Co-located with all 802 groups

## Adjourn at 11:08AM until September 2011 Interim in Bangkok

# Attendance

|  |  |
| --- | --- |
| An Yoon Young | Electronics and Telecommunications Research Institute (ETRI) |
| Chan Anthony | Huawei Technologies |
| Chaplin Clint | Samsung |
| Chen Lily | NIST |
| Chiu Ran-Fan | Hewlett-Packard Company |
| Delgado Antonio | Universidad Carlos III Madrid |
| Gal Dan | Alcatel- Lucent |
| Jee Junghoon | Electronics and Telecommunications Research Institute ETRI) |
| Khatabi Farrokh | Qualcomm Incorporated |
| Lee Jin | LG ELECTRONICS |
| Lynch Michael | Nortel Networks |
| Marks Roger | WiMAX Forum |
| Niephaus Christian | Fraunhofer-Gesellschaft |
| Ohba Yoshihiro | TOSHIBA Corporation |
| Park Changmin | Electronics and Telecommunications Research Institute (ETRI) |
| Park Hyundo | Electronics and Telecommunications Research Institute (ETRI) |
| Perkins Charles | Tellabs |
| Shellhammer Steve | Qualcomm Incorporated |
| Zuniga Juan Carlos | InterDigitial Corporation |

 

IEEE P802.21 Media Independent Handover Services

Tentative Meeting Minutes of the IEEE P802.21a Security Task Group in July 2011 Plenary

Chair: Yoshihiro Ohba

Editor: Lily Chen

Minutes taken by Yoshihiro Ohba

(The following 802.21a TG meeting minutes are copied from DCN 21-11-0146-00)

# Monday, July 18th, 2011, 4:00PM -6:00PM

## Chair called the meeting to order

## Agenda (DCN# 21-11-0117-00-0sec) by Chair

The agenda was presented by Chair. The agenda was approved with no objections. It was mentioned by Chair that depending on Monday PM2 slot discussion, the rest of the meeting slots may be cancelled.

## Meeting opening notes (DCN#21-11-0119-00-0sec) by Chair

The task group opening note given in DCN 21-11-0119, containing WG information, patent slides and Letter Ballot #5c statistics was reviewed. There were no comments or patent claims from the attendees.

## Approval of outstanding meeting minutes

The working group minutes were approved during opening plenary on Monday; the WG minutes contained minutes from the security task group meeting at the May interim meeting, so there was no need to review them during the security meeting. There is no other meeting minutes to approve.

## Letter Ballot #5c comment resolution (DCN#21-11-0110-00)

The group reviewed 1.5 Letter Ballot #5c comments and agreed on the proposed remedies with some modifications. There was a comment that since the Approval Ratio has already reached 100%, the best way is to go for Sponsor Ballot with 802.21a/D04, and LB5c comments can be resubmitted and addressed during Sponsor Ballot. The group had no objection to move 802.21a/D04 forward to Sponsor Ballot.

Chair asked if there is anything else to discuss, and there was no discussion item brought up by the group.

## Chair called the meeting to adjourn at 5:30pm

 

IEEE P802.21 Media Independent Handover Services

Tentative Meeting Minutes of the IEEE P802.21b Broadcast Handover Task Group in July 2011 Plenary

Chair: Juan Carlos Zuniga

Vice Chair: Antonio de la Oliva

Secretary: Christian Niephaus

Editor: Hongseok Jeon

(The following 802.21b TG meeting minutes are copied from DCN 21-11-0141-00)

# Tuesday, July 19th, 2011, 10:30AM -12:30PM

## The meeting was called to order on March 14th by Juan Carlos Zuniga at 10:45am.

## Agenda (DCN# 21-11-0118-00) was approved by the group with unanimous consent.

## There was a discussion on the Ballot Resolution Committee (BRC):

### Chair will ‘ping’ different people or send an email to the reflector in order to find people who are willing to work in the BRC and try to resolve the comments received in the sponsor ballot.

### BRC should be known before Sponsor ballot starts.

### It was mentioned that, due to the equal time schedule of TGa und TGb the amount of people who are participating in the BRC for both 802.21a and 802.21b should be minimized since resolving the received comments might be a very time-consuming activity.

## The compiled list of comments received during LB4 was presented to the group by Juan Carlos Zuniga and are resolved as follows (DCN: 21-11-0120-00)

### (Comment IDs (CIDs) refers to DCN: 21-11-0120-00):

### CID1 was accepted.

### CID2 was accepted

### CID3 and CID4 were rejected since MIH\_Net\_HO\_Bcst\_Commit.indication is generated upon reception of an indication.

### CID5: The author of the comment has withdrawn the comment. Hence the comment was rejected.

### CID6 was accepted.

## The remaining sessions of TGb were cancelled due to the missing necessity of further discussion at this time. This was approved by the group by unanimous consent.

## The meeting was adjourned by Juan Carlos Zuniga at 11:30am.

 

IEEE P802.21 Media Independent Handover Services

Tentative Meeting Minutes of the IEEE P802.21c Single Radio Handover Task Group in July 2011 Plenary

Chair: Junghoon Jee

Vice Chair: Anthony Chan

Secretary: Hyunho Park

Editor: Dapeng Liu

(The following 802.21c TG meeting minutes are copied from DCN 21-11-0150-00)

# Second Day PM1 (1:30PM-3:30PM): Pacific E; Tuesday, July 19, 2011

The meeting agenda is DCN#21-11-0100-01.

The chair, Junghoon Jee of ETRI, introduced meeting protocol, the IEEE patent policy and the agenda items for this

Hyunho Park of ETRI presented the DCN#21-11-0099-00-srho. Mr. Park introduced IEEE 802.21c SRHO Protocol to transport 802.11 network entry messages. Mr. Park explained about “WiFi Network Entry and Handover” and had explained about considerations and issues. The first section, “WiFi Network Entry and Handover”, deals with IEEE 802.11i and IEEE 802.11r network entry, and IEEE 802.11r handover. The 11r handover uses different key hierarchy compared to the 11i and thus reduces time to derive pairwise master keys (PMKs). Finally, Mr. Park suggested time to think about consideration or issues for single radio handover. Junghoon Jee commented about the newly proposed the 11ai and a need to consider about configuring IP address for the 21 case.

Charles E. Perkins of Tellabs proposed DCN#21-11-0115-00-srho. Mr. Perkins showed “SFF-based Handovers”. He explained effective use of signal-forward function (SFF) for a low-latency, optimized handover in 802.21c. For the effective use of SFF, he proposed signaling between the originating SFF and the target SFF.

# Second Day PM2 (4-6PM): Pacific E; Tuesday, July 19, 2011

After Mr. Perkins’ presentation, Antonio de Oliva commented about the relationship with 21a. He also commented about the identification for SFF and architecture perspective regarding theOSFF.

Yoshihiro Ohba agreed on the key management proposal from Mr. Perkins. He also expected that security procedure between MN and home network may be skipped by introducing key hierarchy of OSFF. Mr. Ohba suggested that utilization of 21a and said that signaling between OSFF and TSFF needs to be considered.

# Third Day PM1 (1:30PM-3:30PM): Pacific E; Wednesday, July 20, 2011

Yoshihiro Ohba presented DCN#21-11-0128-00-0srho. He explained about the proactive authentication of the current 802.21a. The 802.21a includes security association (SA) by using MIH\_LL\_Auth primitives but does not specify about the indirect authentication between two PoSes. Hence, he accepted the idea of Mr. Perkins’ “Inter SFF SA” idea and then suggested about including the indirect authentication mode for 802.21a. Mr. Perkins commented that the round trip delay of the AAA server can be serious and thus the indirect authentication will reduce the delay.

After Mr. Ohba’s presentation, SRHO motion for consensus on the proposal, 21-11-0133-00-srho-tgc-proposal-charles-perkins was conducted. It is unanimously accepted by incorporating the texts in the proposal, “21-11-0133-00, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.