 

IEEE P802.21 Media Independent Handover Services

Tentative Minutes of the IEEE P802.21 Working Group

Session #50 Meeting, Atlanta, Georgia, USA

Chair: Subir Das

Vice Chair: H Anthony Chan

Editor: David Cypher

(Minutes are taken by Anthony Chan)

# First Day PM1 (1:30PM-3:30PM): Techwood; Monday, May 14, 2012

## 802.21 WG Opening Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 1:40PM with opening notes (21-12-0049-00).

## Approval of the May 2012 Meeting Agenda (21-12-0046-00)

### Agenda is amended to the following as in 21-12-0046-01 and is approved with unanimous consent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday**  **(May 14)** | **Tuesday**  **(May 15)** | **Wednesday**  **(May 16)** | **Thursday**  **(May 17)** |
| **AM-1**  **8:00-10:00a** | Joint Opening plenary (8-9AM) | 802.21d TG | 802.21d TG | 802.21c TG |
| **AM-2**  **10:30-12:30** |  | 802.21c TG | NA | 802.21c TG |
| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | Reserved for 802.11 ISD | Reserved for EC Smart Grid SG | Reserved for 802.11 ISD and EC Smart Grid SG |
| **PM-2**  **4:00 – 6:00p** | 802.21d TG | 802.21c TG | 802.21d TG | 802.21 WG Closing Plenary |
| **Eve**  **6:30 – 10:00p** |  | Reserved for 802.11 WNG (8:00-10:00pm) | Social Event (6:30 9 pm) |  |

## IEEE 802.21 Session #50 Opening Notes

### WG Officers

#### Chair: Subir Das

#### Vice Chair: Anthony Chan

#### Secretary: Anthony Chan (acting)

#### Editor: David Cypher

#### 802.11 Liaison: Clint Chaplin

#### 802.16 Liaison: Peretz Feder

#### IETF Liaison: Yoshihiro Ohba

Charles Perkins is appointed as the WG secretary

The WG has 28 voting members as of this meeting.

### Network information for the documents

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

### Attendance and voting membership are presented.

#### Attendance is taken electronically ONLY using the links at: <http://newton.events.ieee.org/> and the attendance website itself is at: <https://murphy.events.ieee.org/imat> .

#### Enter your personal information and profile

#### Mark attendance during every session

#### Total number of 802.21 WG sessions: 15

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

#### All attendance records are reported on the meeting minutes. 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: WG 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.

#### Network Information: http://802world.org/wireless

#### Mobile device website: http://802world.org/attendee

#### Hotel room Internet: use the code IEEE802Group (case sensitive)

#### Breakfast, lunch:

Lunch location: Regency VII

#### Breaks: 802.21 WG would break as follows:

AM Coffee/snacks break: 10:00-10:30 am

PM Coffee/snacks break: 3:30 - 4:00 pm

Location:

Wednesday Night Social (may bring guest but need badge.):

#### 6:30 pm 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 announced.



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



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

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

### Chair: How many people are attending the IEEE 802.21 WG meetings for the first time? 1

## Work status

### Working Group

#### IEEE 802.21a and IEEE 802.21b Standards are published in May 2012!!

### Task Group Status

#### 802.21c Single Radio Handovers: Draft document discussion

#### 802.21d: Multicast Group Management: TG will start its first session

## Objectives for the May Meeting

### Task Group Activities

#### 802.21c: Single Radio Handovers: Draft document discussion

### Proposed PAR discussion

### Future Project Planning Discussion

## Next session:

### Plenary: 16-21 September, 2012, Hyatt Grand Champions, Palm Springs, CA, USA

#### Co-located with all 802 wireless groups

### Registration and dates

#### EARLY registration is needed to avoid higher fees,

## March plenary Meeting Minutes (21-12-0031-02).

### Meeting minutes is approved with unanimous consent.

## 802 architecture update

### Another Ballot is expected

## 802.21c Single radio handover task group agenda for this May plenary (21-12-0052-01) is presented by TG Vice Chair, Anthony Chan

### Progress up to March 2012: Proposal discussion

#### 21-12-0020-01-srho-secure-key-distribution.doc

#### 21-12-0036-01-0000

#### 21-12-0038-01-srho

### Teleconference schedule

#### April 10, Tuesday 2012 10:00 ET: Secure key distribution, 21-12-0020-02

#### May 2, Wednesday 2012 21:00 ET: IEEE 802.21c Protocol Frame, Hyunho Park, 21-12-0047-02

#### May 8, Tuesday 2012 21:00 ET: continue discussions from prior teleconference

### Items to be covered this week

#### Secure Key distribution

#### Access Information Database Design for 4G from Charles E. Perkins

#### IEEE 802.21c Protocol Frame (Hyunho Park, ETRI)

### Sessions:

#### Tuesday: AM2, PM2

#### Thursday AM1, AM2

## 802.21d Multicast group management task group:

### Yoshihiro is appointed the 802.21d TG Chair.

#### Agenda for this May plenary (21-12-0048-00) is presented by TG Chair, Yoshihiro Ohba

#### 4 sessions: Mon PM2, Tue AM1, Wed AM1, PM2

#### There are presentations on Gap analysis, use cases and requirements, and related SDO documents

## Meeting recess at 2:30PM

# Fourth Day PM2 (4:00PM-6:00PM): Techwood; Thursday, May 17, 2012

## Closing Meeting is called to order by Subir Das, Chair of IEEE 802.21WG with closing report (21-12-0068-00).

## Liaison report (21-12-0070-00) is provided by Clint Chaplin

### 802.11 TGmb 802.11 Accumulated Maintenance Changes

#### Published

#### Talking about setting up TGmc for incorporating subsequent amendments.

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

#### Approved by Standards Board in March

#### Not yet published

#### Decided to self-assign a Group Address from the 802.11 OUI.

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

#### Completed resolutions of LB187 comments received on draft D2.0.

#### Passed a motion to produce draft D3.0 and start a Recirculation ballot.

#### Length of recirculation ballot subject to controversy. TG stated 15 day recirculation, but that may be changed in closing plenary.

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

#### First Recirculation Sponsor ballot on IEEE 802.11ad D7.0 closed May 11, 2012. Results: 167/8/12 95.43%

#### 66 comments received: 47 technical, 18 editorial, 1 general

#### Resolved all of the comments

#### Going out for recirculation ballot after this meeting.

### 802.11 TGae QoS MAN

#### Approved by Standards Board in March

#### Published

### 802.11 TGaf TV White Space

#### All officers were re-elected

#### Approved draft D1.07 as the working draft

#### Ron Porat presented a PHY proposal which we debated during the week (11-12/616r0)

#### Adopted D1.07 corrections and clarifications

#### Decided to follow a plan similar to the TGah Spec Development Process in 11-12/602r0

#### Heard TVWS regulatory updates: US, UK, EU and Japan

#### Voted to approve the baseline PHY design in document 11-12/699r0 for development of the TGaf draft, and for multiple channel operation in document 11-12/709r0

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

#### TGah clause discussion. Desire deltas from P802.11ac. 12/0602 TGah-Spec-Development-Process

#### Report back from TGah editors meeting regarding TGah clause

#### MAC/PHY sub groups.: 12/651 TGah Sub Groups – Present in Task Group; 12/644 MAC Ad Hoc Agenda & Report; 12/672 PHY Ad Hoc Agenda & Report

#### Motions from Sub Groups.

#### Specification framework review & motion

#### Timeline moved out two months

### 802.11 TGai fast initial authentication

#### 33 Contribution for SDF & Presentations

#### 24 AP/Network discovery

#### 4 Security

#### 3 upper layer setup

#### 2 general

#### https://mentor.ieee.org/802.11/dcn/12/11-12-0579-05-00ai-tgai-submission-list-for-atlanta-meeting.xls

#### 16 Technical motion was moved: 9 passes / 7 failed

#### Approved Teleconference schedule: Tuesdays 00:00 ET (23:59.99…. on Monday) continue from 29th May 2012 until 24th July 2012.

#### Approved Time Line (no change)

#### Approved Plan for May

### 802.11 ISD SG Infrastructure Service Discovery

#### Summary:

#### Several presentations on use cases and requirements

#### Extensive discussion on scope, although no final agreement was met.

#### Liaison to Wi-Fi Alliance: 11-12-0710r1

#### Minutes: 11-12-0670r0

#### Plans for July 2012:

#### Update use case & requirements document (11-12-0433r2)

#### PAR and 5C documents

### 802.11 CMMW SG China MM-Wave

#### Work Completed

#### Feedback from CWPAN: https://mentor.ieee.org/802.11/dcn/12/11-12-0398-04-cmmw-cwpan-response-to-802-11-cmmw.ppt

#### Overview of CPWAN SG5 QLINKPAN: https://mentor.ieee.org/802.11/dcn/12/11-12-0402-02-cmmw-overview-of-cwpan-sg5-qlinkpan.ppt, Update on 45 GHz spectrum

#### Introduction of CMMW PAR and 5C at mid-week plenary: https://mentor.ieee.org/802.11/dcn/12/11-12-0682-00-cmmw-introduction-of-cmmw-par-and-5c.ppt

#### PAR development: https://mentor.ieee.org/802.11/dcn/12/11-12-0140-05-cmmw-ieee-802-11-cmmw-sg-par.doc

#### 5 Criteria development: https://mentor.ieee.org/802.11/dcn/12/11-12-0141-04-cmmw-ieee-802-11-cmww-sg-5c.doc

#### Task group logistic discussion: https://mentor.ieee.org/802.11/dcn/12/11-12-0443-04-cmmw-cmmw-logistics-options.pptx

#### PAR and 5 C’s approved by study group

#### Task Group Logistics

#### Guiding principles: A good standard that meets the needs of all stakeholders. All stakeholders have the ability to participate on a regular basis. Leverage opportunity to integrate new participants into 802.11 process

#### 802.11 chair grants voting rights to designated list of CWPAN members

#### Maximum of 30

#### CWPAN needs to provide list of names at July meeting

#### Criteria: Active participation in CWPAN SG5 or PG4. Intent to participate in plenary meetings

#### Must attend inaugural meeting to receive voting rights

#### Voting rights are maintained based on existing rules for attendance and voting

#### CMMW TG meetings held in Asia will be conducted as 802.11 interim

#### Voting allowed

#### Limit agenda to CMMW TG related topics

#### Not overlapping with normal 802.11 interim

#### Co-located with 802.11 interim when in Asia

#### Opening and closing plenary run by 802.11 officers

#### Official language will be English

#### Cannot get attendance credit for two interims between two plenary meetings

#### WG approval and meeting notification requirement are honored

#### Every plenary session to have at least one CMMW TG session

### 802.11 WNG Wireless Next Generations SC

#### Three presentations at May 2012 meeting

#### Alternative Mesh Path Selection (11-12-0621-01-0000-alternative-mesh-path-selection.pptx) – Donald Eastlake 3rd

#### Compatibility of 6-10GHz Extensions with the 802.11ac PHY (11-12-0653-00-0wng-compatibility-of-6-10ghz-extensions-with-the-802-11ac-phy.ppt) – Jim Landsford

#### 6-10 GHz Extensions to 802.11ac, Part 4 (11-12-0493-00-0wng-6-10gh-extensions-to-802-11ac-part4.pptx) – Richard Edgar

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

#### General update in Atlanta:

#### Reviewed latest liaisons to SC6 of Sponsor Ballot drafts

#### 802.11ac D2.0

#### 802.11ad D6.0 & D7.0

#### Reviewed status of JTC1 ballot on IEEE 802.11-2012

#### Opens 18 May, closes 5 month later

#### Decided to not send any supporting material to NBs at this time

#### Reviewed submitted IEEE 802 responses related to proposed agreement on extensions to IEEE 802 standards

#### Same (almost) material as that developed in May

#### Expect responses from SC6 NBs by 1 June for processing in San Diego meeting; our next round of replies due by 1 August

#### No news on WAPI; NP is still cancelled in ISO/IEC and still required by some regulations in China

#### WAPI NP could be un-cancelled in the future, but that would probably require a new NP ballot

#### No news on TLSec (802.1X replacement)

#### Being developed by BWIPS outside SC6

#### No news on TePA-AC (802.1AE replacements)

#### Being developed by BWIPS outside SC6

#### No news on LRWN security proposal

#### Project is not known to be progessing anywhere

#### Some news on UHT/EUHT (802.11n/ac replacements)

#### UHT and EUHT are now Chinese National standards

#### Previously feared that EUHT would cause 5GHz not to be opened up in China; it now appears 5GHz channels could be opened in 2012

### Regulatory SC

#### Regulatory Summaries:

#### US:

#### Opening the 5350 – 5470 MHz and 5850 to 5925 MHz bands

#### FCC R&O 12-36 on the TVWS

#### Possible new unlicensed spectrum in 3550 to 3650 MHz (NPRM)

#### EUROPEAN UNION:

#### ETSI

#### First ETSI BRAN TVWS meeting June 6th – 8th to develop EN 301 598)

#### TG11 meeting June 4th and 5th on EN 300 328 v1.9.1 Asia

#### UK

#### Ofcom TVWS meetings outcome so far

#### Ofcom VNS plan

#### Asia:

#### Japan update on the TVWS

#### Critical Action Issues

#### Lufthansa DA2GC in the 2.4 and 5.8 GHz bands

#### FM PT48 recommended 2.4 GHz band not be used

#### More industry input needed to support this view

#### SRdoc nearing completion (TR 101 599)

#### Decoupling Regulatory Changes

#### Regulatory changes are asynchronous with IEEE amendment process

#### Current methodology requires regulatory Annex be changed via normal process

#### Study Group

#### Task Group

#### Full WG/EC/NESCOM approval process

#### The Regulatory SC will look at ways to keep regulatory information up-to-date so new projects don’t use old regulatory rules

#### Adding Operating Class changes to the ANA process appears to be the best approach

#### Details still need to be worked out

## 802.16 WG Hetnet SG report (21-12-0070-00) is presented by Charles Perkins:

### Hetnet SG

#### PAR/5C on Hierarchy is focused towards Femto cell within 802.16

#### PAR/5C working on a call for contribution and plans to submit PAR/5C after 2 more meetings. The proposal is based on a proposed OMNI Layer Connectivity Service Network.

## IETF liaison report (21-12-0069-00) is presented by Yoshihiro Ohba

### HOKEY WG

#### EAP Re-authentication Protocol Extensions for Authenticated Anticipatory Keying (ERP/AAK): draft-ietf-hokey-erp-aak-10, Status: RFC Ed Queue (same as March)

#### Handover Keying (HOKEY) Architecture Design: draft-ietf-hokey-arch-design-11, Status: RFC Ed Queue (same as March)

#### EAP Extensions for EAP Re-authentication Protocol (ERP): draft-ietf-hokey-rfc5296bis-06, Status: Publication approved

### DMM (Distributed mobility management) WG

### Architecture Proposals and requirements: draft-chan (architecture,requirments), draft-liu, draft-perkins, draft-patil

### New solution proposals: Locator-based (draft-liebsch), Tunnel-based (draft-seite), BGP-based (draft-mccann), PMIP-based (draft-bernardos, draft-luo), And others

### Leftovers from MEXT WG

#### TLS-based MIPv6 Security Framework for MN to HA Communication: draft-ietf-mext-mip6-tls, Status: RFC Ed Queue

#### Firewall: draft-ietf-mext-firewall-admin-05 (Status: Expired), draft-ietf-mext-firewall-vendor-05 (Status: Expired)

### NETEXT WG

#### PMIPv6 MIB: Published as RFC 6475

#### Interactions between PMIPv6 and MIPv6: Scenarios and Related Issues, Published as RFC 6612

#### Other drafts are no longer Bulk Refresh: I-D.ietf-netlmm-bulk-re-registration, Status: RFC Editor Queue  Non-existent

#### RADIUS support for PMIPv6: I-D. ietf-netext-radius-pmip6, Status: RFC Editor Queue  Non-existent

#### Others

draft-ietf-netext-access-network-option (In IESG Evaluation)

draft-ietf-netext-logical-interface-support (I-D Exists)

draft-ietf-netext-pmipv6-flowmob (I-D Exists)

draft-ietf-netext-pd-pmip (I-D Exists)

draft-ietf-netext-pmipv6-sipto-option (I-D Exists)

### MIF WG

#### MIF-produced RFCs: RFC 6419 -- Current Practices for Multiple-Interface Hosts, RFC 6418 -- Multiple Interfaces and Provisioning Domains Problem Statement

#### WG drafts: Improved DNS Server Selection for Multi-Interfaced Nodes, draft-ietf-mif-dns-server-selection (AD Evaluation)

#### MIF API consideration: draft-ietf-mif-api-extension (I-D Exists)

#### DHCPv6 Route Options: draft-ietf-mif-dhcpv6-route-option (I-D Exists)

#### OMA – IETF workshop on MIF API on March 27 in Paris

### Candidate WGs to watch

#### RPL (Routing Over Low power and Lossy networks) WG: Mostly for multicast routing

#### RMT (Reliable Multicast) WG

#### IRTF SAM (Scalable Adaptive Muticast) RG

## 802.21c Single Radio Handover Optimization TG report (21-12-0052-02) is presented by Anthony Chan

### IEEE 802.21c TG sessions

#### Tuesday: AM2

#### Wednesday: AM1, PM2

#### Thursday AM1, AM2

### Following have been conducted

#### Secure Key distribution: Proposals from Charles and from Yoshihiro/Antonio (21-12-0020-05) accepted

#### Access Information Database Design for 4G: Presentation from Charles E. Perkins (21-12-0064-00) discussed. Proposal (21-12-0067-00) accepted.

#### IEEE 802.21c Protocol Frame: Presentation from Hyunho Park (ETRI) (21-12-0047-02) discussed

#### Network discovery: Proposal from Hyunho Park (ETRI) (21-12-0066-02) accepted

### Current version of proposal: 21-12-0067-00

### Teleconference schedule

#### June 20th, 2012 21:00 ET

#### July 11th, 2012 21:00 ET

#### Proposal Discussion at the teleconference:

#### IEEE 802.21c Protocol Frame

#### Access Information Database Design for 4G 21-11-0064-00

### Motion: To accept to incorporate the texts in the proposal, “21-12-0004-04-srho, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.

#### Moved by: Charles Perkins

#### Second: Subir Das

#### Result: Motions pass by unanimous consent

### Motion: To accept to incorporate the texts in the proposal, “21-12-0020-05-srho, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.

#### Moved by: Yoshihiro Ohba

#### Second: Charles Perkins

#### Result: Motion passes by unanimous consent

### Motion: To accept to incorporate the texts in the proposal, “21-12-0066-02-srho, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.

#### Moved by: Hyunho Park

#### Second: Subir Das

#### Result: Motion passes with no opposition (2 abstain)

### Motion: To accept to incorporate the texts in the proposal, “21-12-0067-00-srho, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.

#### Moved by: Charles Perkins

#### Second: Yoshihiro Ohba

#### Result: Motion passes with unanimous consent

### Authorize the TG ad hoc to discuss and approve the contributions presented during the teleconferences (from May 20 to July 15 2012 timeframe) and incorporate the relevant text into TGc framework document.

#### Moved by: Charles Perkins

#### Second by: Yoshihiro Ohba

#### Result: Motion passes with unanimous consent

## 802.21d Multicast Group Management TG report (21-12-0062-01) is presented by Yoshihiro Ohba, chair of the TGd:

### Progress in this meeting

#### Gap Analysis (DCN 21-12-0051)

#### Use cases (DCN 21-12-0058): identified 3 use case: failover, load balancing, configuration update

#### Requirements (DCN-21-12-0050)

#### Identification of related SDOs (DCN 21-12-0059)

#### Discussion on TG schedule (DCN 21-12-0061): Plan on call for proposal in September

### Next step

#### Develop Use Cases / Requirements document including

Security requirements

Firmware distribution method (using MIH or something else?)

Detailed restoration procedure

Scalability requirements

More study of multicast-related protocols/mechanisms and existing practices

### Teleconference Schedule

#### June 1 (Thu) 10am-noon Eastern Time

#### June 14 (Thu) 10am-noon Eastern Time

#### June 28 (Thu) 10am-noon Eastern Time

#### July 12 (Thu) 10am-noon Eastern Time

## Planned Meeting between IETF and IEEE leadership is reported by Subir Das

### Meeting will be held on 24 July 2012

### It is opportunity to present to IETF our work for which IETF have related work such as MIF.

## Teleconference schedule

### 802.21c TG

#### June 6 (Wed), 2012 21-23:00 ET

#### June 13 (Wed), 2012 21-23:00 ET

#### June 20 (Wed), 2012 21-23:00 ET

#### July 11 (Wed), 2012 21-23:00 ET

### 802.21d TG

#### June 1 (Thu) 10am-noon Eastern Time

#### June 14 (Thu) 10am-noon Eastern Time

#### June 28 (Thu) 10am-noon Eastern Time

#### July 12 (Thu) 10am-noon Eastern Time

## Future session information

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

#### Co-located with all 802 groups (Early registration deadline June 1)

### Interim: 16-21 September 2012, Hyatt Grand Champions, Palm Springs, CA, USA

#### Meeting co-located with all 802 wireless groups

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

#### Co-located with all 802 groups

### Interim: 13-18 January 2013, Hyatt Regency, Vancouver BC

#### Meeting co-located with 802.16 or with other wireless groups

### Plenary: 17-21 March, 2013, Caribe Royale, Orlando, FL, USA

#### Co-located with all 802 groups

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

#### Co-located with all wireless groups

### Plenary: 14-19 July 2013, Geneva (to be confirmed)

#### Co-located with all 802 groups

### Interim: 15-20 September 2013, Nanjing, China

#### Co-located with 802.16 or with other wireless groups

### Plenary: 10-15 Nov 2013, Hyatt Regency Reunion, Dallas, TX, USA

#### Co-located with all 802 groups

### Interim: 19-24 January 2014, Hyatt Century Plaza, Los Angeles, USA

#### Meeting co-located with 802.16 or with other wireless groups

### Plenary: 16-21 March, 2014, Hyatt Regency Atlanta, Atlanta, GA, USA

#### Co-located with all 802 groups

### Interim: 11-16 May 2014, Hilton Waikoloa Village, Big Island, HI, USA

#### 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

#### Co-located with 802.16 or with other wireless groups

### Plenary: 2-7 Nov 2014, Grand Hyatt San Antonio, San Antonio, TX, USA

#### Co-located with all 802 groups

## Adjourn at 5:15PM until July 2012 Interim in San Diego

 

IEEE P802.21 Media Independent Handover Services

Tentative Meeting Minutes of the IEEE P802.21c Single Radio Handover Task Group in May 2012 Interim

Chair: Yoshihiro Ohba

Editor: TBD

(The 802.21d TG minutes in 21-12-0063-00-MuGM are copied here for convenience)

# First Day PM2 Meeting: Techwood; Monday, May 14

## Meeting called to order by Chair at 4PM

Minutes are taken by Steve Chasko.

## Meeting Agenda (21-12-0048-00) is presented by Chair

The agenda is approved by unanimous consent.

## Opening Notes (meeting notes 21-12-0053-00)

We began with a short review of where the group currently is at (Document 21-12-0053-00-mugm). The expected date of submission of draft for initial sponsor ballet is March of 2014. We reviewed the Scope and Purpose of 802.21d.

Scope (c.f. Section 5.2 of PAR)

**“**To add support in Media-Independent Handover (MIH) framework for management of multicast groups.”

Purpose: (c.f. Section 5.3 of PAR)

“The purpose of this standard is to enable the handover for group of users across the same or multiple access networks. Additionally, this standard will define mechanisms to secure multicast MIH protocol exchanges.”

There is a need for officers of the working group (secretary and editor).

The agenda for the week is as follows:

Monday

- Gap analysis

Tuesday

- Use cases and requirements

Wednesdays

- Identification of related SDOs

- TG schedule discussion

Char presented recap of preliminary use case contribution (DCN 21-12-0028-03) that was presented to 802.15.WNG in March plenary.

Chair also indicated there is another a contribution on base ideas and prototype implementation (DCN 21-12-0029) presented in March plenary.

## Gap analysis

There was a general discussion regarding the gap analysis (DCN 21-12-0051-00). There was some discussion regarding a multicast message with a response required.

## Requirements

This was followed by a review of the requirements for IEEE802.21d (DCN 21-12-0050-00). There was a request to include a response required option as a requirement. There was also a request to include an optional non-repudiation as a requirement.

## Recess at 5:30PM

# Second Day AM1 Meeting: Techwood; Tuesday, May 15

## Meeting called to order by Char at 8:05AM

Minutes are taken by Charles E. Parkins.

## Discussion about existing works in other SDOs related to multicast

Yoshihiro Ohba presented existing works in other SDOs related to multicast. The following protocols are identified.

* IETF Trickle [roll]
* MAODV
* Mcast key mgmt / GDOI, GSAKMP, Mikey
* Multimob
* Reliable multicast : FCAST and FLUTE
* Scalable multicast : Application Layer Multicast Extensions to RELOAD and A Common API for Transparent Hybrid Multicast
* IEEE P2030.1 (Guide for Electric-Sourced Transportation Infrastructure)

Comment: There should be scalability requirements as one use case is in range of 10k--20k nodes and based on observation about high packet loss rates in Internet. It also depends on whether multicast group membership is dynamic or static.

Comment: There will be a joint meeting between IEEE and IETF on July 2. Internet ADs will attend from IETF.

Comment: There are privacy issues for vehicular applications

Discussion on demand response:

Comment: Utility needs to turn off

Comment: Battery can give back power to the grid

Comment: There is an MIT solution using parked cars as power reservoir

## First Presentation on Use Cases by Toru Kambayashi

Toru Kambayashi presented use cases (DCN 21-12-0058-00).

The following use cases are presented ;

- Handover

- F/W update

- Failover/Failback

Comment: Failover model may need changes to account for case when current PoS fails leaving MNs without any multicast communication channel.

There was discussion about comparison to detours for road repairs and subsequent restoration to original traffic channel.

There was discussion about managing visibility of group membership, etc.

Comment: There should be security requirements per use case.

## Recess at 9:30AM

# Second Day PM2 Meeting: Techwood; Tuesday, May 14

## Meeting called to order by Chair at 4PM

Minutes are taken by Yoshihiro Ohba

## Second Presentation on Use Cases by Toru Kambayashi

## Toru Kambayashi presented revised contribution on use cases (DCN 21-12-0058-01).

Q: Similar to group manager defined in 802.15. Is GM located inside mesh network?

A: Real location of GM is not a problem, but conceptually it is located outside the mesh.

Q: Are GM and CC physically separated node?

A: It can be physically co-located, but again conceptually it is located outside the mesh.

Q: You could do it. What is multicast address when doing this?

A: Group ID is independent of multicast address. GM controls the group ID. Maybe multicast address is controlled by some other scheme.

Q: What do you mean by restoration?

A: It is handover to the failed PoA.

C: This fits the current MIH mechanism.

C: You have to authenticate first before handover.

C: We assume that key itself is already distributed with group id securely.

Q: How do you plan to update the firmware? Do you assume some kind of tunnel over MIH or use another application?

C: We need to consider how firmware update is done.

C (Antonio): I will give detailed information on firmware update for sensors.

Q: Can MN communicate with two different PoAs at the same time?

A: Currently we assume MN communicate with one PoA at one time, but it is also possible to communicate with multiple PoAs.

C: The failover procedure is simpler than expected.

C: How restoration can be transported. It will send MLD message. It receives a multicast command. If you move to another access point, it is not clear whether MN is sending MLE or not. We need to sit down and discuss how it works.

C: All answers to the questions in the last slide are "no". There is no way for MIH user of knowing members of the group are even if multicast channel is not secured. MIHF will have multicast filtering based on group membership.

C: If there is a malicious module, any layer entity can know the group members, and some security is needed.

C: I would like to know how multicast security is provided for sensors.

C: For meters, there are many different ways. Mostly done at application layer. We need a standard way. We do message signing, requiring certificate distribution. Encryption key needs to be based

on symmetric way.

C; Two ways, one for symmetric and the other for signing.

Q: What kind of scenarios we are targeting? Provisioning is an issue.

Since Tuesday PM2 agenda items completed much earlier, Chair asked if Wednesday agenda items can be discussed in the rest of Tuesday PM2 meeting. The agenda change was approved by unanimous consent.

## Task Group Schedule

Chair presented TGd schedule (DCN 21-12-0061).

Comment: This is a good starting point.

Chair: The schedule may change depending on the progress of the TG.

## Closing Note

Chair presented closing note (DCN 21-12-0086-00). Tentative teleconference schedule was also discussed.

## Adjourn at 5:30PM

Next face-to-face meeting is in July 2012 plenary.