 

IEEE P802.21 Media Independent Handover Services

Tentative Minutes of the IEEE P802.21 Working Group

Session #49 Meeting, Big Island, Hawaii, USA

Chair: Subir Das

Vice Chair: Juan Carlos Zuniga

Secretary: H Anthony Chan

Editor: David Cypher

# First Day PM1 (1:30PM-3:30PM): Palm Terrace B; Monday, March 12, 2012

## 802.21 WG Opening Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 1:32PM with opening notes (21-12-0022-00).

## Approval of the January 2012 Meeting Agenda (21-12-0019-00)

### Agenda is amended to the following as in 21-12-0019-01 and is approved with unanimous consent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday**  **(Mar 12)** | **Tuesday**  **(Mar 13)** | **Wednesday**  **(Mar 14)** | **Thursday**  **(Mar15)** |
| **AM-1**  **8:00-10:00a** | NA | PAR Comment Discussion | Future Project Planning | SRHO TG |
| **AM-2**  **10:30-12:30** | NA | SRHO TG | 802.15 WNG (in Kohala 1) | SRHO TG |
| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | ISD SG (802.11) | PAR Comment discussion | Future Project Planning |
| **PM-2**  **4:00 – 6:00p** | WG Election | PAR Comment discussion/  802.15 WNG presentation | SRHO TG | 802.21 WG Closing Plenary |
| **Eve 2**  **6:30 – 9:00p** |  |  | Social |  |

## IEEE 802.21 Session #49 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 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: 13

#### 10 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:

Location: Lagoon Lanai

#### 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: Lagoon Lanai (Mon); Chinese restaurant near Kirin (Tue, Wed, Thur)

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

#### Confirm location onsite

#### 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? 3 Toru Kambaysahi (Toshiba); Michael (US Naval Graduate School)

## Work status

### Working Group

#### Completed IEEE 802.21a and IEEE 802.21b draft specifications

#### Submitted to RevCom for consideration

### Task Group Status

#### 802.21a Security TG: work completed

#### 802.21b Handover with Broadcast Services TG; Work completed

#### 802.21c Single Radio Handovers: Proposals updated; Draft specification is underway

### New PAR proposed

#### 802.21d Multicast Group Management

## Objectives for the March Meeting

### Task Group Activities

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

### Proposed PAR discussion

### Future Project Planning Discussion

## Next session:

### Interim: 13-18 May 2012, Hyatt Regency, Atlanta, GA, USA

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

### Registration and dates

#### EARLY ($600/$900\* US); before 6 PM PT April 13, 2012,

#### STANDARD ($750/$1150\* US): After 6 PM PT April 13, 2012 and before 6 PM PT May 4, 2012

#### ONSITE ($900/$1200\* US): After 6 PM PT May 4, 2012

## January Interim Meeting Minutes (21-12-0008-04).

### Meeting minutes is approved with unanimous consent.

## 802 architecture update

### 802 architecture will meet at

#### Monday 7-9PM

#### Tuesday 4-6PM

#### Thursday 8-9AM

### There will be 802 EC Smart Grid / Smart Utility Network discussion on Wednesday. It will discuss the management. 802.18 chair mentioned ITU may discuss this topic owing to the spectrum use. Both 802.16 and 802.11 are involved.

## PAR update

### The PAR has been submitted.

## 802.21c Single radio handover task group agenda for this March plenary (21-12-0015-01) is presented by TG Chair, Junghoon Jee

### Progress up to January 2012:

#### Consensus on the proposal, 21-12-0004-01-srho

#### IEEE 802.21c TG Draft Spec: 21-12-0004-01-srho

### Items to be covered this week

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

#### Proposal Discussion: Access Information Database Design for 4G by Charles E. Perkins (Tellabs)

#### Proposal Discussion: IEEE 802.21c Protocol Frame by Hyunho Park (ETRI)

### Sessions:

#### Tuesday AM2

#### Wednesday PM2

#### Thursday AM1, AM2

## Future project planning discussion

## 802 EC news

### A past 802 EC chair, Jim Carlo passed away 14 Feb 2012. 802 EC send flowers and collect memorial.

### Another past 802 EC chair, Don Loughry passed away 22 Feb 2012.

### One current EC Vice chair plans not to continue after this plenary. There is card to thank his past service.

### The EC treasurer also plans not to continue after this plenary. There is card to thank his past service.

## Media Specific Mapping for LTE Release 10 (21-12-0027-00) is presented by Antonio de la Oliva

### The mapping of MIH primitives to NAS protocol and LTE RRC protocol is proposed. This is an update of current mapping in main spec. The update is provided by the MEDIEVAL project. It will be useful to put them into the 802.21 document once a revision is scheduled.

## Meeting recess at 3:20PM

# First Day PM2 (4:00PM-6:00PM): Palm Terrace B; Monday, March 12, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 4:10PM.

## Lisa from IEEE Standard will attend the election

## Junghoon Jee conducts the election for the WG Chair

## The candidate for Chair is Subir Das

### For: 8

### Against: 0

### Subir Das is elected by vote.

## The candidate for Vice Chair is Anthony Chan

### For: 8

### Against: 0

### Anthony Chan is elected by vote.

## Meeting recess at 4:30PM

# Second Day AM1 (8:00AM-10:00AM): Palm Terrace B; Tuesday, March 13, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 8:20AM

## The meeting agenda is changed to start at 8:30AM in the morning

## PAR discussion: It proposes multicast management and security. There is a use case that requires a group ID is needed, and another use case

## The P802.21d Group management framework (21-12-0028-00) is presented by Yoshihiro Ohba

### The presentation includes the use cases for group management in failover/failback for segments in an Advanced Meter infrastructure and in software update/configuration for mesh devices. In the existing solutions, the individual registration and handover are used. The terms MIH client, rather than MIH user, is introduced for simplicity in this presentation. Besides explaining handover in the use case, the upgrade and configuration are also important to the 802.15 community.

## L2 and L3 Multicast solutions (21-12-0029-00) is presented by Antonio de la Oliva

### Basic ideas on how to implement the ideas behind IEEE 802.21d are proposed. A working demo is shown for 2 MNs successfully joining a multicast group, one after the other. After that, a multicast message can be sent. The demo shows 802.21 messages being sent using multicast L3 routing in a multi-hop network. Same demo is available for L2 mechanisms. This work is provided by the EU MEDIEVAL project.

## Meeting recess at 10:05AM

# Second Day PM2 (4:00PM-6:00PM): Palm Terrace B; Tuesday, March 13, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 4:20PM

## PAR resolution

### Comment received LMSC chair: I have difficulty understanding why a group of users would need to be handed over from one network to another, i.e., what would cause such a need? Please explain in a little more details the 5.5 Need for the project scenario in which a group of mesh nodes is subjected to a wholesale network change (or perhaps provide another explanatory scenario).

#### 5.5 Need for the Project is changed to the following: There are several handover scenarios where a large group of terminals need to perform a handover as a group. An example scenario is IEEE 802.15.4 mesh networks in which a group of mesh nodes requires handover from one segment of a network to another in the same or a different network for failover and restoration purposes. The failover can occur, for example, when a concentrator / gateway node loses its connectivity to its backbone network. In such scenario, the mesh nodes under the concentrator gateway node need to be handed over from one segment to another segment. Other example are downlink only technologies such as Digital Video Broadcasting (DVB) and Terrestrial Multimedia Broadcasting (T-DMB) where a group of users need to be handed over form one network to another. This amendment is necessary in order to support such scenarios.

### Comment received from 802.11 WG: 4.2 and 4.3 not enough time for sponsor ballot indicated

#### 4.2 changed to: Expected date of submission for Initial Sponsor Ballot: 2014-03.

### Comment received from 802.11 WG: 5.2 Is multicast and group the same? So the parsing of the sentence is a bit confusing.

#### Suggested change to Scope: This amendment defines support for: group management using multicast frames, handover of users from one group to another in the same access network and secure multicast MIH protocol exchange.

#### Change to Scope: To add support in Media Independent Handover (MIH) framework for management of multicast groups

### Comment received from 802.11 WG: 5.4 Move first two sentences to 5.5. Need a purpose statement.

#### The purpose of this amendment is to improve the handover experience for a group of users across the same or multiple access networks. Additionally, this standard will define mechanisms for secure multicast Media Independent Handover (MIH) protocol exchange.

### Add text from 5.4 to 5.5. Insert Std to IEEE 802.15.4. Check that the proper version of PAR is being used

#### Added

## Meeting recess at 6:20PM.

# Third Day AM1 (8:30AM-10:00AM): Palm Terrace B; Wednesday, March 14, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 8:40PM

## 802.11/21 Network discovery and selection architecture (21-12-0025-00) is presented by Antonio de la Oliva

### Discussion on slide 6: 802.21 provides both L2 and L3 transport should be revised for clarity as: 802.21 control/signaling may use L2 or L3.

### Discussion on slide 6: Media independent means same or different networks. It is more general than heterogeneous networks

### Discussion on slide 8: Media independent Information Server can obtain information by various means such as from ANDSF.

### Discussion on slide 10: SSPN is Subscription Service Provider Network.

### Discussion on slide 12: MIH defines a container for other messages, ANQP carries 802.11 information.

### Discussion on slide 13: The 802.21 standard is 802.21-2008

### Discussion on slide 14: Change GAS/ANQP to GAS[ANQP].

### Discussion on slide 16: Remove the item “opportunity to work together.”

### Discussion: add a slide about what is in 802.11u to support MIH: use MIH in upper layer transport

## Update on the P802.21d Group management framework (21-12-0028-01) is presented by Yoshihiro Ohba

### Discussion on slide 6: It is not limited to handover but also on multicast signaling. It is suggested, but not mandatory, to change media independent handover to media independent signaling

### Discussion on slide 11: Input and active participation from 802.15 members are encouraged

### The revisions are made in 21-12-0028-02

### The presentation will be at 11:30

## Meeting recess at 10:20PM.

# Third Day AM2 (11:30AM-12:30PM): Kohala 1; Wednesday, March 14, 2012

## The presentation to 802.15 WNG on Multicast management is delivered by Subir Das and Yoshihiro Ohba.

# Third Day PM1 (1:30PM-3:30PM): Palm Terrace B; Wednesday, March 14, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 1:40PM

## The revised Group management PAR (21-12-0006-06) and the reply to comments (21-12-0028-03) is presented by Yoshihiro Ohba.

## The reply will be submitted.

## Meeting recess at 1:56PM.

# Fourth Day PM1 (1:30PM-3:30PM): Palm Terrace B; Thursday, March 15, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 2:30PM

## WLAN and Cellular Interworking Discovery Use Case (11-12-0346-01) is discussed.

## Meeting recess at 3:00PM.

# Fourth Day PM2 (4:00PM-6:00PM): Palm Terrace B; Thursday, March 15, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 3:52PM.

## 802.16 WG report 21-12-0039-01 is presented by Dan Gal:

### Active task groups:

#### 802.16n – GRIDMAN – high reliability enhancements to the 802.16 standard

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

#### 802.16PPC – Project planning and new projects study group

#### 802.16Maint – IEEE 802.16 Standard maintenance

#### ITU-R Liaison – ITU-R WP5A/D liaison on IMT-Advanced and Cognitive Radio Systems

### 802.16n – GRIDMAN

#### Continues to develop the draft amendment document p802.16n and resolving WG letter ballot comments.

#### Very likely to go to Sponsor Ballot in July 2012.

### 802.16p –M2M task group

#### Finished resolving Sponsor Ballot comments on the current draft P802.16p/D3 and P802.16.1b/D2

#### Revised documents – D4 and D3 respectively - will be generated for the next recirculation.

### 9.3.1.4 802.16Maint – IEEE 802.16 Standard maintenance

#### The TGmaint continues to process and approve change requests (CRs) coming in, mostly from the WiMAX Forum.

#### Has been working on resolving Sponsor Ballot comments on the 802.16 legacy Standard: P802.16-Rev3/D4.

### 802.16PPC – Project planning: New Standardization Suggestion - Characterization Standards

#### Many types of broadband wireless networks are deployed, or in planning, including many 802.16 air interface variations.

#### Theoretical evaluation methodologies are reasonably well established, primarily through IMT-Advanced process.

#### It is not certain how well the theoretical evaluation processes govern actual practice.

#### Include device and network performance, as well as conformance measurement.

### 802.16PPC – Project planning: Proposed WG Study Group 1 - BWA Metrology (Metrology: measurement science)

#### Consider the development of standards and/or recommended practices on measurement procedures to characterize Broadband Wireless Access operation and device conformance.

#### Proposal: Initiate the IEEE 802.16 WG Study Group on Broadband Wireless Access Metrology.

#### Meet at Session #79 (May 2012, Atlanta)

### 802.16PPC – Project planning: Proposed WG Study Group 2 - Heterogeneous Networks

#### PPC has shown an interest in Hierarchical Networks

#### Hierarchical Networks are generally heterogeneous

#### Operation in a Heterogeneous Network has implications for WirelessMAN air interfaces

#### Heterogeneous Networks will not be limited to WirelessMAN air interfaces alone.

#### – Discussions could be of interest to other WGs

#### – Could lead to activity elsewhere in IEEE 802. Session

#### Proposal: To initiate the IEEE 802.16 WG Study Group on the WirelessMAN radio interface in Heterogeneous Networks.

#### Meet at Session #79 (May 2012, Atlanta).

#### Discussion: 802.21 will express its interests with its existing expertise.

## P802.21 WG Motion

### Move to authorize the 802.21 WG Chair to make a motion to the IEEE 802 Executive Committee for approval to forward the IEEE 802.21d PAR to the IEEE-SA NesCom

#### Move by: Yoshihiro Ohba

#### Second: Anthony Chan

#### For: 9

#### Against: 0

#### Abstain: 0

#### Motion passes

## Draft of 802 liaison to ITU to include in Annex is shown by Subir Das

### The liaison has included contributions from 802.21 to mention network discovery, seamless continuity, offloading, etc. Thanks to all who have helped, and especially to Dan.

## 802.21c TG report:

### Current version of proposal: 21-12-0004-01

### Following have been discussed

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

#### Access Information Database Design for 4G (21-12-0036-01) is presented by Charles E. Perkins

#### IEEE 802.21c Protocol Frame (21-12-0038-01-srho) is presented by Hyunho Park (ETRI)

### IEEE 802.21c TG sessions

#### Tuesday AM2

#### Wednesday PM2

#### Thursday AM1, AM2

### Teleconference schedule

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

#### May 2, Wednesday 2012 21:00 ET: IEEE 802.21c Protocol Frame, Hyunho Park, tentatively 21-12-0038-02

#### May 8, Tuesday 2012 21:00 ET:

### TGc Motion: Authorize the TGc to discuss and approve the contributions presented during the teleconferences and incorporate the relevant text into the TGc baseline document.

#### Move by: Anthony Chan

#### Second: Yoshihiro Ohba

#### Motion passes by unanimous consent.

## IETF liaison report (21-12-0041-00) 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

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

#### EAP Extensions for EAP Re-authentication Protocol (ERP): draft-ietf-hokey-rfc5296bis-06. Status: Waiting for AD Go-Ahead

### DMM (Distributed mobility management) WG

#### 20 active Internet-Drafts

#### Leftovers from MEXT WG: TLS-based MIPv6 Security Framework for MN to HA Communication: draft-ietf-mext-mip6-tls, Status: IESG Evaluation (1 DISCUSS)

#### Firewall: draft-ietf-mext-firewall-admin-05 (Status: ID Exists); draft-ietf-mext-firewall-vendor-05 (Status: ID Exists) WG

### NETEXT WG

#### LMA Redirection: Published as RFC 6463

#### Localized Routing for Proxy Mobile IPv6: Published as RFC 6279

#### Bulk Refresh: I-D.ietf-netlmm-bulk-re-registration. Status: RFC Ed Queue

#### RADIUS support for PMIPv6: I-D. ietf-netext-radius-pmip6. Status: RFC Ed Queue

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

#### Others

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

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

draft-ietf-netext-access-network-option (In WG LC)

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

### Mobility-related pre-WG possible activities in IETF83 in Paris:

#### ITS (Intelligent Transport Systems) BoF: “Possible work to be started in the IETF around car, aircraft, and other transports and their networking requirements.” Agenda not scheduled

#### FMC (Fixed-Mobile Convergence) Bar-BoF: Tuesday March 28 at 19:30 6463

### Charlie Perkins mentioned that there is a BoF on New direction on mobility will be on Wednesday 8PM.

## Liaison report (21-12-0013-01) is provided by Clint Chaplin

### 802.11 TGmb 802.11 Accumulated Maintenance Changes

#### Received Standards Board permission to publish

#### Will probably be published in 3-4 weeks.

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

#### Third Recirculation Sponsor ballot on IEEE 802.11aa D9.0 closed January 27, 2012. Results: 124/0/11 100.00%. 0 comments received

#### On the RevCom agenda later this month

#### Deciding whether to ask RAC for a Group MAC address or self-assign one from the 802.11 OUI..

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

#### Second Initial WG Ballot LB187 on draft 2.0 closed February 18, 2012. Results 223/28/19 88.84%. Received 1492 comments: 778 technical, 655 editorial, 59 general comments. Working to address the comments

#### Expecting to go out for recirculation after May meeting.

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

#### Finished addressing all comments from the Initial Sponsor Ballot

#### First Recirculation Sponsor ballot will be started at any time.

### 802.11 TGae QoS MAN

#### Will ask ExCom in March for permission to publish

#### Will ask RevCom in March for permission to publish

### 802.11 TGaf TV White Space

#### Approved draft D1.06 and the comment resolution spreadsheet in 11-11/277r27

#### Heard a presentation on PHY optimization for the TVWS. Special thanks to Ron Porat, Vinko Erceg, Tevfik Yucek, Sameer Vermani, VK Jones and Hemanth Sampath

#### Held 5 straw polls for PHY direction preferences. Nearly unanimous approval of all of the polls

#### Revised the P802.11af timeline

#### Hoping in July to finish resolving all comments and go out for recirculation WG ballot

#### The TGaf Recording Secretary now is also a Vice-chair. Zhou Lan of NICT joins Peter Ecclesine Vice-chairs as TGaf now has two Vice-chairs

#### In order to better understand the needs and plans for the TVWS in Japan, we have added a liaison position between the IEEE 802.11 WG and the White Space Promotion Committee. Hiroshi Harada of NICT will serve as liaison

#### I would like to thank NICT for their continuing, and now increasing commitment to the success of TGaf

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

#### Work continued on specification framework: Many straw polls and motions; Update to the spec framework adopted; 11-11-1137-06-00ah-specification-framework-for-tgah.docx

#### Typo fix on channel model document

#### Ad hoc sub groups created and leadership established

#### PHY Ad hoc sub group chairs: Ron Porat; David Xun Yang; Minho Cheung

#### MAC Ad hoc sub group chairs: Simone Merlin; Yong Liu; Huai-Rong Shao

### 802.11 TGai fast initial authentication

#### 40 Contribution for SDF & Presentations: https://mentor.ieee.org/802.11/dcn/12/11-12-0286-11-00ai-tgai-submissions-list-for-hawaii-meeting.xls; 26 AP/Network discovery; 11 Security; 3 upper layer setup; https://mentor.ieee.org/802.11/dcn/12/11-12-0151-06-00ai-proposed-specification-framework-for-tgai.docx

### 802.11 ISD SG Infrastructure Service Discovery

#### Summary:

#### Two presentations on use cases: 11-12-0346r0; 11-12-0394r0; Extensive discussion on scope, although no final agreement was met.

#### Plans for May 2012:

#### Finalise scope for the SG; Update use case & requirements document (11-12-0433r1); Start on the PAR and 5C documents

### 802.11 CMMW SG China MM-Wave

#### Overview of CWPAN SG5 QLINKPAN (40-50 GHz):

#### https://mentor.ieee.org/802.11/dcn/12/11-12-0402-01-cmmw-overview-of-cwpan-sg5-qlinkpan.ppt

#### Request more information from CWPAN SG5 on what info is needed on details of 11ad to better define “802.11ad MAC + Modification”?

#### Would CWPAN SG5 like a tutorial on 11ad? If so, what level of detail?

#### Feedback from CWPAN

#### https://mentor.ieee.org/802.11/dcn/12/11-12-0398-03-cmmw-cwpan-response-to-802-11-cmmw.ppt ; Chose dates for 2013 CMMW TG interim meetings

#### PAR development discussion

#### Reviewed https://mentor.ieee.org/802.11/dcn/12/11-12-0140-01-cmmw-ieee-802-11-cmmw-sg-par.doc

#### Requested more information from CWPAN regarding MAC modifications

#### Request information from Regulatory SC on 40-50GHz rules in other regulatory domains

#### 5C development discussion

#### Reviewed https://mentor.ieee.org/802.11/dcn/12/11-12-0141-01-cmmw-ieee-802-11-cmww-sg-5c.doc

#### Task group logistic discussion

#### https://mentor.ieee.org/802.11/dcn/12/11-12-0443-00-cmmw-cmmw-logistics-options.pptx

#### attaining/Retaining voting rights & voting on drafts

#### Voting during Asia CMMW TG meeting

### 802.11 WNG Wireless Next Generations SC

#### Three presentations at March 2012 meeting

#### 802.11 Simulations (11-12-0377-00-0wng-802-11-simulations.ppt) – Paul Lambert

#### Key Centric Identity (11-12-0378-00-0wng-key-centric-identity.ppt) – Paul Lambert

#### 6-10 GHz extensions to 802.11, Part 3 (11-12-0375-00-0wng-6-10ghz-extensions-to-802-11ac-part3.ppt) - Jim Lansford

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

#### General update in Hawaii:

#### WAPI (802.11i replacement) NP has been cancelled in SC6. It appears WAPI is still a regulatory requirement in China in some market segments

#### TLSec/TePA-AC (802.1X/AE replacements) projects are not progressing in SC6. Will be progressed in BWIPS

#### LRWN security proposal (802.16 security replacement) project is not progressing in SC6. Not clear if it will be progressed at all because it is in scope of ITU

#### UHT/EUHT (802.11n/ac replacements) were not discussed in SC6. Both have now been ratified by MIIT as Chinese National Standards; Connection to opening of 5GHz band in China is still unclear

#### SC6 agreed to IEEE 802 proposal on disposition of very old ISO/IEC 8802 standards. Now need to update and replace a variety of ISO/IEC documents

#### SC6 invited IEEE 802 to submit IEEE 802.11-2012 for ISO/IEC ratification using PSDO agreement. Will probably be liaised to JTC1 in March/April, with the up/down ballot closing at least 5 months later

#### SC6 approved a “best practices” proposal. Very similar to the practices followed in IEEE 802

#### SC6/WG7 is continuing “Future Network” activities. Redefine the Internet, including an 802.15.4 extension

#### Discussion on SC6/802 agreement in Hawaii:

#### IEEE 802 asked SC for responsibility to “maintain, alter or extend the functionality of IEEE 802 standards ratified by ISO/IEC”

#### SC6 members were concerned by this condition on the submission of 802.1 and 802.3

#### A multi-step process was put in place to allow IEEE 802 to deal with concerns from SC6 NBs, and refine a formal agreement

#### IEEE 802 have answered questions from Chinese NB & Swiss NB in current round and developed a draft agreement (see 299r6). The answers and draft agreement will be considered by IEEE 802 EC at their closing plenary

#### The process will hopefully end with SC6 (in Sept) and IEEE 802 (in July) approving an agreement

### Regulatory SC

#### Regulatory Summaries:

#### North America:

#### US: Payroll Tax Bill passed in February contains the spectrum changes; CSMAC deliberating on controlling interference from unlicensed spectrum use; FCC looking at receiver standards

#### European Union:

#### EN 300 328 v1.8.1 and EN 301 893 v1.7.1 complete this year; Ofcom presented ETSI BRAN with TVWS Work Item; House of Lords looking into “superfast broadband”; European Parliament Radio Spectrum Policy Programme

#### Asia:

#### MIIT has approved UHT/EUHT as “voluntary” standards

#### Critical Action Issues

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

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

#### ETSI wants maximum support to block this

#### 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

## Subir Das reported that Clint Chaplin will be serving as the 802 treasurer while still continuing to serve as 802.21 liaison to 802.11

## Teleconference schedule

### 802.21c TG

#### April 10, Tuesday 2012 10:00 ET

#### May 2, Wednesday 2012 21:00 ET

#### May 8, Tuesday 2012 21:00 ET

## Future session information

### Interim: 13-18 May 2012, Hyatt Regency, Atlanta, GA, USA

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

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

#### Co-located with all 802 groups

### 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 (TBD)

#### Co-located with all 802 groups

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

#### Co-located with 802.16 or with other wireless groups (possibility)

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

#### Co-located with all 802 groups

## Adjourn at 5:50PM until May 2012 Interim in Atlanta

# Attendance

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IEEE P802.21 Media Independent Handover Services

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

Chair: Junghoon Jee

Vice Chair: Anthony Chan

Secretary: Hyunho Park

Editor: Dapeng Liu

# Second Day AM2 (10:50AM-12:30PM): Palm Terrace B; Thursday, March 13, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda (DCN: 21-12-0015-01-srho)

## January meeting minutes (DCN: 21-12-0023-00-srho) is approved with unanimous consent.

## Teleconference meeting minutes (DCN: 21-12-0026-00-srho) is approved with unanimous consent.

## IEEE 802.21c contribution (DCN: 21-12-0020-02-srho) is presented by Antonio De Oliva.

This contribution is solution of DCN 4 in January meeting and is presented by Antonio De Olival

Antonio introduced previous two figures which are identity bootstrapping by TPoS and authentication between the MN and the PoA using newly suggested MIH\_LL\_Transfer and MIH\_N2N\_LL\_Transfer messages. Moreover, he showed the other cases which are extensions of the previous cases but the new cases have same SPoS and TPoS. Thus, the signaling can be simplified as shown in third and fourth

The newly suggested MIH\_LL\_Transfer is used to transport specific link-layer frames between the MIHF located at the terminal and a target PoS. The MIH\_N2N\_LL\_Transfer is also newly suggested and is used to to transport media link-layer frames over MIH between the serving PoS and the target PoS.

There were some questions for security. Related with security key, derivation is explained by Yoshihiro Ohba. From Section 9.2.2, this document supports security for single radio handover with element of IEEE 802.21a. The MIIK and MIEK are from IEEE 802.21a. MIRK is derived from serving PoS and transported to target network.

IEEE 802.21TGc chair ordered to distinguish which ones are from 21a and changed.

## IEEE 802.21c contribution (DCN: 21-12-30-00-srho) is presented by Hyunho Park.

Hyunho Park presented a new protocol header for single radio handover. The previous IEEE 802.21 protocol header is large and complex. The R9 protocol, single radio handover protocol in WiMAX forum, has a simplified protocol header, but cannot deliver control messages, yet. Moreover, there exist other interworking protocol such as ANDSF (Access Network Discovery and Selection Function) of 3GPP, ANQP (Access Network Query Protocol) from IEEE 802.11u, R9 protocol from WiMAX forum.

Thus, the suggested protocol header is changed into simplified form such as R9 protocol, includes SID (Service Identifier), Opcode (operation code), and AID (Action Identifier). Moreover, the protocol header has flag field to distinguish interworking protocol, and thus the new protocol can support compatibility with existing protocols.

However, some of participants pointed out that this protocol does not contain transaction identifier and fragmentation number, and thus they suggested that this protocol does not consider packet loss and fragmentation. Hyunho Park answered that this protocol delivers above UDP protocol and the protocols under UDP protocol can solve packet loss and fragmentation.

# Third Day PM2 (4:00PM-6:00PM): Palm Terrace B; Wednesday, March 14, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG

## 802.21c protocol design considerations (DCN: 21-12-0036-01) is presented by Charles Perkins

The discussion deals with “Handover proposal vs. MIH\_LL\_Tunnel vs. ANQP.” It shows comparison of the other handover with 21c handover. Related with this topic, he introduced his contents.

Dr. Perkins showed SFF-oriented handover and explains adaptation of the SFF scheme into MIH\_LL\_Tunnel based approach. For explaining MIH\_LL\_Tunnel based approach, MIH\_LL\_Tunnel and MIH\_N2N\_LL\_Tunnel are explained. Related with it, key distribution method is discussed. The discussion deals with generality of EAP (Extensible Authentication Protocol) and consideration about general authentication method.

The second discussion was about SFF-based preregistration for handover into WiMAX network. Related with the signal forwarding function (SFF), the role of the SFF and method for transmitting address of TSFF (target SFF) to the mobile station (MS) was discussed. For transmitting the address of the TSFF, the originating SFF (OSFF) should know the address of TSFF.

The third discussion was about handover into HRPD (High Rate Packet Data) network from WiMAX and matching existing SFF designs to MIH\_LL\_Tunnel was discussed. TPoS (Target Point of Service) can be a new function of anchor point.

The last discussion was about system architecture [802.11 + 802.21]. For system architecture [802.11 + 802.21], the protocol between the MS and the access point (AP) uses GAS/ANQP and the protocol between the AP and the information server uses IEEE 802.21. There was some suggestion that IEEE 802.21c should deliver GAS/ANQP of IEEE 802.11u.

# Fourth Day AM1 (9:00AM-10:30AM): Palm Terrace B; Thursday, March 15, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG

## 802.21c protocol design considerations (DCN: 21-12-0038-01-srho) is presented by Hyunho Park

Hyunho Park modified the new protocol header by changing version field of the previous IEEE 802.21. Moreover he also presented network discovery for single radio handover. The modified protocol header is suggested to be considered again, because of skipping transaction identifier and fragmentation number. Fourth Day AM2 (10:45AM-11:50AM): Boardroom 2; Thurs day, January 17, 2012

# Fourth Day AM2 (10:45AM-11:50PM): Palm Terrace B; Thursday, March 15, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG

## 802.21c protocol design considerations (DCN:21-12-0038-01-srho) is presented by Hyunho Park, continuously

Related with this proposal, some member suggested considering methodology to deliver IEEE 802.21 protocol in WiMAX interworking protocol. Related with network discovery, needs of considering network load problem of GPS (Global Positioning System) based network discovery is asked. Mr. Park answered that network operators are sensitive at periodical information update to server and the network load should be considered seriously.

Hyunho Park’s proposal is decided to be proposed again in the future.

## Junghoon Jee, chair of 802.21c TG, presented 02.21c report (DCN: 21-12-0015-02-srho)

## Junghoon Jee, chair of 802.21c TG, decided future teleconference time and discussion topics

## Motion, which is “Authorize the TG ad hoc to discuss and approve the contributions presented during the teleconferences and incorporate the relevant text into TGc framework document” is approved with unanimous consent

## Meeting of IEEE 802.21 TGc adjourned at 11:50 AM