 

IEEE P802.21 Media Independent Handover Services

Tentative Minutes of the IEEE P802.21 Working Group

Session #48 Meeting, Jacksonville, Florida, USA

Chair: Subir Das

Vice Chair: Juan Carlos Zuniga

Secretary: H Anthony Chan

Editor: David Cypher

(These are partial minutes recorded up to the time of upload)

# First Day PM1 (1:30PM-3:30PM): Boardroom 2; Monday, January 16, 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 (21-12-0002-00).

## Chair has noted the name of his affiliation as a result of acquisition has changed to ASC

## Approval of the January 2012 Meeting Agenda (21-11-0199-00)

### Agenda is amended to the following as in 21-11-0199-01 and is approved with unanimous consent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday****(Jan 16)** | **Tuesday****(Jan 17)** | **Wednesday****(Jan 18)** | **Thursday****(Jan 19)** |
| **AM-1****8:00-10:00a** | NA | 802.11 WNG | NA | SRHO TG |
| **AM-2****10:30-12:30** | NA | SRHO TG | 802.15 WNG  | SRHO TG  |
| **PM-1****1:30 – 3:30p** | 802.21 WG Opening Plenary | SRHO TG  | Future Project Planning and PAR discussion  |  802.21 WG Closing Plenary |
| **PM-2****4:00 – 6:00p** | 802.21 WG Plenary Contd.. | Future Project Planning and PAR discussion | SRHO TG  | NA  |
| **Eve 2****8:00 – 10:00p** |  |   | Social  |  |

## IEEE 802.21 Session #47 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

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

### Attendance and voting membership are presented.

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

#### There are links at: http://newton.events.ieee.org/

#### Enter your personal information and profile

#### Mark attendance during every session

#### Total number of 802.21 WG sessions: 12

#### 9 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.

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

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

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

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

#### Default Location: Boardroom 2

#### Wednesday Night Social:

#### River City Brewing Company , 835 Museum Circle Jacksonville, FL 32207

#### 6:30 pm – 9:30 pm

#### Complementary Beverages : 6:30 pm – 8:30 pm

### 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.

### 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 1

## Work status

### IEEE 802.21a SB Re-circulation Result

#### SB-recirc started on November 28th, 2011 and ended on December 8th, 2011

#### Result announced on December 9th, 2011

#### Summary

Approve : 63

Disapprove : 01

Abstain: 04

Return ratio : 85%

Approval ratio : 98%

#### Conditional approval to RevCom has been met: Received no disapprove vote and no new comments

### IEEE 802.21b SB Re-circulation Result

#### SB-recirc started on November 28th, 2011 and ended on December 8th, 2011

#### Result announced on December 9th, 2011

#### Summary

Approve : 60

Disapprove : 02

Abstain: 03

Return ratio: 86%

Approval ratio: 96%

#### Conditional approval to RevCom has been met: Received no disapprove vote and no new comments

### Working Group

#### Completed IEEE 802.21a and IEEE 802.21b ballots

#### Conditional approval to RevCom was granted during November 2011 Plenary meeting

#### Conditional approval has been met in December 2011

#### Currently it is on RevCom’s March Agenda

### Task Group Status

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

## Objectives for the January Meeting

## Next session:

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

#### Co-located with all 802 groups

## November Plenary Meeting Minutes (21-11-0180-04).

### Meeting minutes is approved with unanimous consent.

## 802 architecture update

### The architecture document version 3 had completed sponsor ballot. Please let Chair and Juan Carlos Zuniga know about your comments.

## 802.21c Single radio handover task group agenda for this January Interim (21-12-0003-00) is presented by TG Chair, Junghoon Jee

### Progress up to November 2011:

#### Consensus on the proposal, 21-11-0188-00-srho

#### IEEE 802.21c TG Draft Spec: 21-11-0188-00-srho

### Items to be covered

#### Merging Plan for Pull Key Distribution: 21-11-0198-00-srho, Yoshihiro Ohba (Toshiba)

#### Access Information Database Design for 4G: 21-11-0187-00-0000, Charles E. Perkins (tellabs)

#### Proposal Discussion: 21-12-?, Hyunho Park (ETRI)

### Sessions:

#### Tuesday AM2, PM1

#### Wednesday PM2

#### Thursday AM2

## Future project planning: Multicast group proposal is presented by Yoshihero Ohba

It enables a group of nodes, say utility meters in a neighborhood area network (NAN) to perform handover.

Another use case is the traffic offload.

Group identifier to form a specific group of nodes is needed at the MIHF level.

## Meeting recess at 3:30PM

# First Day PM2 (4:00PM-6:00PM): Boardroom 2; Monday, January 16, 2012

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

## Future projects and PAR discussion:

### A presentation is scheduled on Tuesday at 8AM to present how 802.21 can complement 802.11u. The meeting discuss and prepare the presentation slides.

### Subir Das will complete the slides. Subir will present because Peretz is not available tomorrow.

## Meeting recess at 6:50PM

# Second Day AM1 (8:00AM-10:00AM) Presentation at 802.11 NWG meeting: Terrace 9; Tuesday, January 17, 2012

## Notes taken by Yoshihiro Ohba

## A System Architecture of Network Discovery and Selection using 802.11 and 802.21 features (21-12-0005-00) is presented by Subir Das

### Stephen: After completion of TGu, there is no 802.21 related work left in 802.11 WG. An issue is that MIH IS does not support ANQP.

### Subir: We are considering to carry ANQP IEs in MIH IS query.

### Stephen: The biggest issue is that 802.21 requires registration for a 802.11 station to make query. 802.11 station in pre-association state should not require registration with the database server

### Subir: In the proposed architecture AP is the MIH end point and 802.11 station does not need to support MIH, there is no such issue.

### Yoshi: Registration is not needed for MIH IS query. Registration is required only for CS and IS push.

# Second Day PM2 (4:00PM-6:00PM): Boardroom 2; Tuesday, January 17, 2012

## Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 4:02PM.

## Future project planning: Multicast group and L2 routing proposal 21-12-0009-00 is presented by Yoshihiro Ohba

The issues discussed in this proposal are group management and mesh routing.

There is need for standard because there are devices belonging to different operators. Collectors have been defined as a group of devices possibly of different types. In security, there is key for everyone in a collector to use. When the key is bad, there is group failover. There is need to inform everyone that the collector is moving to a no-security area. There are also needs to perform software upgrade to everyone in a collector.

For routing, route under is usually used. Routing is needed even when the connection is not available. IETF will not work on L2 routing. It is up to 802.15 to determine whether the routing is within 802.15 network or whether they need a L2 independent routing which is not IP. There are also existing L2 routing call that one should ask which L2 protocol is appropriate here.

Yoshihiro will revise the slides to present to 802.15 in Terrace 3 in the AM2 session

## Group management PAR 21-12-0006-00 will be discussed in the PM1 session tomorrow.

## Meeting recess at 5:40PM

# Third Day AM2 (10:30AM-12:30PM) Presentation at 802.15 NWG meeting: Terace 3; Wednesday, January 18, 2012

## Multicast group and L2 routing proposal 21-12-0009-01 is presented by Yoshihiro Ohba

Comments are solicited about working on L2 routing protocol for mesh network in 802.15 WG. It is not the scope of IETF. That means the 802 is the appropriate place, if there is such a need.

There are already practices for mesh routing in 802.15.5 We can discuss whether there is need for 802.21 to help in the heterogeneous network information. 802.15.4(2009) spec already has homogeneous routing, with energy saving, etc. It is different from route over though. It is suggested that 802.21 review the 802.15.5 recommended practices first to see whether they are sufficient before proposing route over.

# Third Day PM1 (1:30PM-3:30PM): Boardroom 2; Wednesday, January 18, 2012

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

## Discussion on Group management PAR 21-12-0006-01.

### Change title 2.1 to Multicast Group Management.

### Scope session 5.2 is changed to:

#### To add support of multicast group management features

### Purpose session 5.4 is changed to:

#### The current standard only supports unicast commands which are inefficient when a group of users needs to be supported simultaneously. This standard will add support of multicast group management which will significantly improve the handover experience for a group of users across multiple networks. In addition, this standard will also support handover of users from one group to another in the same network. This standard will also define mechanisms for secure multicast MIH protocol exchange.

### Need session 5.5 is changed to:

#### 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 to another in the same or a different network for failover and restoration purpose. This amendment is needed to support such scenarios.

### Broad market potential session 17.5.1(a):

#### add IEEE 802.15.4

### Compatibility session 17.5.2

#### Add (3) The proposed amendment will maintain backward compatibility with the published IEEE802.21 standard.

#### And delete sentence afterward that.

### Distinct identity session 17.5.3 is changed to:

#### Currently there is no IEEE 802 standards that supports group management in handover from one segment to another in the same or different network.

### Technical feasibility session 17.5.4 is changed to:

#### This is an amendment to an existing IEEE 802.21 standard and does not present any new technical challenges.

### Economic feasibility session 17.5.5 is changed to:

#### Add IEEE 802.15.4

### The revised PAR is in document 21-12-0006-02

## Meeting recess at 3:38PM

# Fourth Day PM1 (1:30PM-3:30PM): Boardroom 2; Thursday, January 19, 2012

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

## Agenda is changed to begin with Group management PAR before 802.21c report, and the updated agenda is 21-11-0199-01.

## Discussion of Group management PAR 21-12-0006-03

### Technical feasibility session 4 is changed to:

The project is believed to be feasible. Securing group messages is a challenging problem and may need careful selection of technical solutions that satisfy the target use cases. If and when required, the working group will work with other SDOs, such as IETF, via appropriate liaison.

The updated PAR is 21-12-0006-04.

### WG Motion:

### To authorize the IEEE 802.21 WG Chair to submit the Group Management PAR 21-12-0006-04 to 802 EC for consideration in March 2012 Plenary Session

#### Move by: Yoshihiro Ohba

#### Second: Juan Carlos Zuniga

#### Motion passes by unanimous consent.

## 802.21c TG report:

### Following have been discussed

#### Merging Plan for Pull Key Distribution 21-11-0198-00-srho by Yoshihiro Ohba (Toshiba)

#### Access Information Database Design for 4G 21-11-0187-00-0000 by Charles E. Perkins (Tellabs)

#### Proposal Discussion: 21-12-0004-00-srho by Anthony Chan (Huawei) and 21-12-0010-02-srho by Hyunho Park (ETRI)

#### The consensus proposal is now 21-12-0004-01-srho

### Teleconference schedule

#### February 7, 2012 21:00 ET

Network Discovery with User Schedule Information by Hyunho Park (ETRI)

Access Information Database Design for 4G by Charles E. Perkins (tellabs)

#### February 28, 2012 21:00 ET

Merging Plan for Pull Key Distribution

Yoshihiro Ohba (Toshiba)

### TGc Motion: Authorize the TGc to discuss and approve the relevant text presented in “21-12-0004-02-srho” offline and its subsequent versions and incorporate them into the TGc baseline document.

#### Move by: Junghoon Jee

#### Second: Anthony Chan

#### Motion passes by unanimous consent.

## 802.16 WG report is briefed by Dan Gal:

### Split document into 3 parts. The legacy 16 part and 16.1

### Gridman is going to letter ballet. Added PL4.

### Project planning discussed document on cognitive radio.

## IETF liaison report (21-12-0011-00) is presented by Yoshihiro Ohba

### HOKEY WG

#### The Local Domain Name DHCP Option**:** Published as RFC 6440

#### EAP Re-authentication Protocol Extensions for Authenticated Anticipatory Keying (ERP/AAK). draft-ietf-hokey-erp-aak-07**:** Status: AD evaluation, AD followup

#### 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: Completed WG last call

### MEXT (Distributed mobility management) WG

#### Re-chartered from MEXT WG

#### Leftovers from MEXT WG:

TLS-based MIPv6 Security Framework for MN to HA Communication, draft-ietf-mext-mip6-tls, Status: AD Evaluation;

Firewall, draft-ietf-mext-firewall-admin-05, draft-ietf-mext-firewall-vendor-05

#### Distributed Mobility Management:

draft-kuntz-dmm-summary-01

draft-liu-dmm-pmip-based-approach-00

draft-perkins-dmm-matrix-02

### NETEXT WG

#### LMA Redirection: I-D. draft-ietf-netext-redirect-12; Status: RFC Ed Queue

#### Localized Routing: Localized Routing for Proxy Mobile IPv6, draft-ietf-netext-pmip-lr, Status: AD Evaluation

#### Bulk Refresh: I-D.ietf-netlmm-bulk-re-registration, Status: Submitted to IESG for Publication (AD review done)

#### RADIUS support for PMIPv6: I-D. ietf-netext-radius-pmip6, Status: IETF Last Call (until Jan-18)

#### 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

draft-ietf-netext-pd-pmip

draft-ietf-netext-access-network-option

draft-ietf-netext-pmipv6-sipto-option

## Teleconference schedule

### 802.21c TG

#### February 7, 2012 21:00 ET

#### February 28, 2012 21:00 ET

## Next meeting

WG election will be held during the March plenary.

There will be announcement about the election.

## Future session information

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

#### Co-located with all 802 groups

### 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 (tentative), 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 2:50PM until March 2012 Plenary in Big Island

 

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 (10:30AM-12:30PM): Boardroom 2; Tuesday, January 17, 2012

## 802.21c proposal (21-11-0198-00) is presented by Yohihiro Ohba

Dr. Ohba presented again about relationship between PPKD (Proactive Pull Key Distribution) and SFF scheme. Related with the proposal, messages for authentication are L2 messages, because the mobile node does not have IP address, yet. MIH\_LL\_Auth message is discussed, because it can serve L2 authentication and protect tunnel. For the L2 authentication, there was some suggestion that uplink and downlink for authentication messages would be defined. In the next session, compatibility will be discussed. Antonio De Oliva told his opinion about delivering link layer messages to the target network. This topic will be reviewed on future teleconference.

# Second Day PM1 (1:30PM-3:30PM): Boardroom 2; Tuesday, January 17, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda 21-12-0003-00 4.1

## 802.21c protocol design considerations (21-11-0187-00) is presented by Charles Perkins

The basic idea of the presentation is local caching information of local network for target access network. For this local caching, operation between roaming partners is discussed. Moreover, the SFF (Signal Forwarding Function) is discussed as a candidate of local caching. To explain the local caching exactly, specific examples were required, and thus the examples will be discussed in the next time.

## 802.21c proposal (21-12-0004-00) is presented by H Anthony Chan

The mobility gateway (M-GW) is discussed as entity for mobility management and a generalized and extended entity of the SFF. .Moreover, information repository (IR) is discussed as a Distributed database with local management function and network service information. The name of the M-GW was also discussed, because it has similar name to S-GW and P-GW of 3GPP. However, it was not modified in this session.

# Third Day PM2 (4:00PM-6:00PM): Boardroom 2; Wednesday, January 18, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda 21-12-0003-00

## Charles’ item is decided to be discussed in teleconference meeting, later.

## 802.21c proposal (21-12-0004-01) is presented by H Anthony Chan

There was some modification about IR and M-GW. The IR was modified a distributed database with location management function and network service information. As a location management, it can deal with ip address, GPS information, etc. for mobility. The name of the M-GW was an issue, but is not discussed yet, because of needs for more consideration. In addition, the M-GW was discussed as an extended entity of SFF and a local caching entity.

## TG Motion:

### To accept to incorporate the texts in the proposal, “21-12-0004-01-srho, 802.21c Proposal” into the TGc framework document “21-10-0025-02, 802.21c draft template”.

#### Moved by: Charles Perkins

#### Second: H Anthony Chan

#### Motion passes with unanimous consent

# Fourth Day AM1 (9:00AM-10:00AM): Boardroom 2; Thursday, January 19, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda 21-12-0003-00

## Network Discovery with User Schedule Information (21-12-0010-02) is presented by Hyunho Park

Comments:

It causes more load to Information Repository, which adds the cost. Keeping information in the mobile node itself without invoking the network is easier.

The use of recent network usage to assist scan has been in existence.

Existing system does not add the location information.

The location information may not be reliable. The location in a schedule generally does not narrow down enough, e.g., traveled to a city. One can be in many possible locations in that city. These reliability issues had been analyzed before.

The simplest method being used now is to store prior network information in the MN.

The addition here is to confine the information to a location.

The scheduler can be in the MN or in the network, but is usually separate from the media independent IS.

# Fourth Day AM1 (9:00AM-10:00AM): Boardroom 2; Thursday, January 19, 2012

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda 21-12-0003-00

## Continue discussion of Network Discovery with User Schedule Information (21-12-0010-02) presented by Hyunho Park

The figure is slide 7 is changed as indicated in 21-12-0010-03.

## Draft 802.21c with the addition of Network Discovery with User Schedule Information (21-12-0004-02) is presented by Hyunho Park

Session 9.8 Network discovery with user schedule is proposed.

The scheduler information can only give useful advice, but cannot be regarded as reliable information. With GPS, the speed also needs to be taken into account.

Added a sentence in the 3rd paragraph of Section 9.8:

In the event of GPS signal loss, such as when entering a building, the last known location could be used.

There is also relationship between this proposal and the distributed database proposal.

### Motion: Authorize the TG ad hoc to discuss and approve the relevant text presented in “21-12-0004-02-srho” and its subsequent versions and incorporate them into TGc framework document.

#### Moved by: H Anthony Chan

#### Second by: Charles Perkins

#### Motion passes with unanimous consent

## Conference call schedule:

February 7 2012 21:00 ET

February 28 2012 21:00 ET

## Meeting adjourn at 12:33PM