 

IEEE P802.21 Media Independent Handover Services

Tentative Minutes of the IEEE P802.21 Working Group

Session #46 Meeting, Bangkok, Thailand

Chair: Subir Das

Vice Chair: Juan Carlos Zuniga

Secretary: H Anthony Chan

Editor: David Cypher

# First Day PM1 (1:30PM-3:30PM): Lotus Suite 5; Monday, September 19, 2011

## 802.21 WG Opening Plenary: Meeting is called to order by Subir Das, Chair of IEEE 802.21WG at 1:35PM with opening notes (21-11-0154-00).

## Approval of the September 2011 Meeting Agenda (21-11-0147-00)

### It is changed to use Monday Evening for future planning tentatively.

### Agenda is amended to the following and is approved with unanimous consent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monday**  **(Sept 19)** | **Tuesday**  **(Sept 20)** | **Wednesday**  **(Sept 21)** | **Thursday**  **(Sept 22)** |
| **AM-1**  **8:00-10:00a** | NA | Comment resolution- 802.21a | Comment resolution- 802.21b | Comment resolution- 802.21a |
| **AM-2**  **10:30-12:30** | NA | SRHO TG | SRHO TG | Comment resolution- 802.21b |
| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | Comment resolution- 802.21b | Comment resolution- 802.21a | SRHO TG |
| **PM-2**  **4:00 – 6:00p** | Comment resolution- 802.21a | Comment resolution- 802.21a | SRHO TG | 802.21 WG Closing Plenary |
| **Eve**  **6:30 – 7:30p** | Future Project Planning tentative | Future Project Planning | Social(TBD) |  |

## IEEE 802.21 Session #46 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://seabass.ieee.org/imat>

#### Enter your personal information and profile

#### Mark attendance during every session

#### Total number of 802.21 WG sessions: 16

#### 12 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: Lotus Suite 5

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

#### Lunch: 12.30 -1:30 pm

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

Breakfast Tuesday to Thursday 7-9AM

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

#### 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.

### 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

## Work status

### Working Group

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

### 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

## IEEE 802.21a Sponsor Ballot Result

### SB started on August 2nd, 2011 and ended on August 31st, 2011

### Result announced on September 01, 2011

### Summary

#### Approve: 59

#### Disapprove: 03

#### Abstain: 03

#### Return ratio: 81 %

#### Approval ratio: 96%

### The ballot is approved

#### Received 93 comments of which 28 must be satisfied

## IEEE 802.21b Sponsor Ballot Result

### SB started on August 2nd, 2011 and ended on August 31st, 2011

### Result announced on September 01, 2011

### Summary

#### Approve: 57

#### Disapprove: 03

#### Abstain: 02

#### Return ratio: 82 %

#### Approval ratio: 95%

### The ballot is approved

#### Received 41 comments of which 19 must be satisfied

## Objectives for the September Meeting

### Working Group Activities

#### IEEE 802.21a: Security Extensions to MIH Services: Sponsor Ballot comment resolution by Ballot Resolution Committee (BRC)

#### IEEE 802.21b: Handovers with Broadcast Services: Sponsor Ballot comment resolution by BRC

### Task Group Activities

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

### Future Project Planning Discussion

#### Tuesday evening

## Next session:

### Plenary: 7-10 Nov 2011, Atlanta, USA

#### Co-located with all 802 groups

## September Plenary Meeting Minutes (21-11-0121-04).

### Meeting minutes is approved with unanimous consent.

## 802 architecture update

### No new information is available at this point. Waiting for a new updated version.

## 802.21a BRC meeting agenda (21-11-0156-00) is presented by 802.21a BRC-Lead, Yoshihiro Ohba

### Monday Sept 19 2011 PM2

#### Editorial and general comments.

### Tuesday Sept 20 2011 AM1 and PM2

#### Technical comments.

#### PM2: Discussion on Comment #26 (Y. Ohba’s comment on SFF support through sPoS), contribution DCN for detailed remedy to be announced

### Wednesday, September 21th, 2011, PM1

#### Technical comments

### Thursday, September 22th, 2011, AM1

#### Teleconference schedule, etc.

### The agenda is subject to change depending on the progress of comment resolution discussion

### Commentary file DCN: 21-11-148

### 802.21a BRC members

#### Ajay Rajkumar

#### Antonio de la Oliva

#### Anthony Chan

#### Clint Chaplin

#### Fernando Bernal-Hidalgo

#### Karen Randall

#### Lily Chen

#### Rafael Marin-Lopez

#### Subir Das

#### Yoshihiro Ohba (Lead)

## 802.21b BRC is presented by 802.21b BRC-Lead, Juan Carlos Zuniga

### The received comments have been tentatively assessed.

### BRC has been formed.

## 802.21c Single radio handover task group agenda for this September Interim (21-11-0139-01) is presented by TG Chair, Junghoon Jee

### Proposal discussion

#### SFF operations augmented with UE location information, Charles Perkins (Tellabs)

#### Single Radio Handover proposal, Anthony Chan (Huawei)

#### 802.21c Draft Revision, Dapeng Liu (China Mobile): 21-11-0152-00-srho, 21-11-0153-00-srho

#### Command service for single radio handover, Dapeng Liu (China Mobile): 21-11-0151-00-srho

### Future Planning

### Time Schedule

#### Tuesday AM2

#### Wednesday AM2, PM2

#### Thursday PM1

## Meeting recess at 2:40PM

# First Day PM2 (4-6PM): Lotus Suite 5; Monday, September 19, 2011

## 802.21a comment resolution is led by Yoshihiro Ohba

## Comments are recorded in 21-11-0148-00

## Comment resolution are recorded in 21-11-0148-01

# Eve (6:30-7:30PM): Lotus Suite 5; Monday, September 19, 2011

## Future planning discussion is chaired by Subir Das

## The slides from Antonio de la Oliva regarding the future planning teleconference is briefed, and additional materials especially in use cases are requested.

## Agenda is amended into the following (21-11-0147-01)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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| **AM-2**  **10:30-12:30** | NA | SRHO TG | SRHO TG | Comment resolution- 802.21b |
| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | Comment resolution- 802.21b | Future Project Planning | SRHO TG |
| **PM-2**  **4:00 – 6:00p** | Comment resolution- 802.21a | Comment resolution- 802.21a | SRHO TG | 802.21 WG Closing Plenary |
| **Eve**  **6:30 – 7:30p** | Future Project Planning tentative | Comment resolution- 802.21a | Social(TBD) |  |

## Meeting recess at 7:53PM

# Second Day AM1 (8-10AM): Lotus Suite 5; Tuesday, September 20, 2011

## 802.21a comment resolution (21-11-0148-01) is led by Yoshihiro Ohba

## Comment resolutions are being recorded into the next version of 21-11-0148

## Meeting recess at 10 AM

# Second Day PM1 (1:30-3:30PM): Lotus Suite 5; Tuesday, September 20, 2011

## 802.21b comment resolution is led by Juan Carlos Zuniga

## There are 41 comments in the comment file (21-11-0149-00)

## Comment resolutions are recorded into the next version of 21-11-0149

# Second Day PM2 (4-6PM): Lotus Suite 5; Tuesday, September 20, 2011

## 802.21a comment resolution is led by Yoshihiro Ohba

## Comment resolutions are being recorded into the next version of 21-11-0148

## The suggested remedy for comment #26 (21-11-0157-02) is presented by Yoshihiro. This document, titled “Proactive pull key distribution through target POS,” introduces interaction between serving POS and target POS so that the serving POS may pass the existing key to the target POS to support the originating SFF to forward the keys to the target SFF. However it is argued that 802.21a does allow authentication by POS to generate media specific keys to different networks. It does not need to define a different POS for the serving and target network. . Such specific application should be left to 802.21c.

# Second Day Evening (6:30-7:30PM): Lotus Suite 5; Tuesday, September 20, 2011

## Meeting from PM2 is extended beyond 6PM to start the evening session early.

## Comment resolution discussions are continued.

## As most comments have been discussed, the meeting recess early at 6:30PM.

## Comment resolutions are in 21-11-0148-02

# Third Day AM1 (8-10AM): Lotus Suite 5; Wednesday, September 21, 2011

## 802.21b comment resolution is led by Juan Carlos Zuniga

## Some comments on data types are owing to confusion on the meaning of data types. It is suggested to explain that the data types in 802.21 are abstract data types rather than specific data types used in some computer programming languages. All the comments arising from such confusion will be fixed with this clarification in the base spec. However, this issue will be discussed in the BRC teleconference and a final decision will be taken based on the input received from other BRC members.

## The comment #5 has a suggested resolution in 21-11-0144-00 but is waiting for a corrected version of this file.

## Comment resolution are recorded into the next version of 21-11-0149

## Agenda is amended with unanimous consent into the following

|  |  |  |  |  |
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| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | Comment resolution- 802.21b | SRHO TG | SRHO TG |
| **PM-2**  **4:00 – 6:00p** | Comment resolution- 802.21a | Comment resolution- 802.21a | Future Project Planning | 802.21 WG Closing Plenary |
| **Eve**  **6:30 – 7:30p** | Future Project Planning tentative | Comment resolution- 802.21a | Social(TBD) |  |

## Meeting recess at 10:35AM

# Third Day PM2 (4:00-6:00PM): Lotus Suite 5; Wednesday, September 21, 2011

## Future project planning discussion

## Antonio de la Oliva and Daniel presented the slides and joined remotedly.

### Antonio presented 3 main themes:

#### QoS integration: define a common QoS framework

#### Extended capability discovery

#### Extended and dynamic MIIS: Provide dynamic information which is not in ANDSF

### There is need to make dynamic information available, e.g., VoIP capabilities, ESS, CDN and other services provided, load, etc. without having to attach to the POA.

#### The time scale for dynamic information, e.g. finding out the link condition prior to handover, i.e., with attaching to the network. The information allows for making better network selection. It needs a distributed information server.

#### Is the information available at the radio layer or at other layers as well?

#### The value is on how to make the information available and the architecture that supports it.

### Use cases:

#### Network selection for bootstrapping;

#### Network load balancing

#### Provide scenarios on how to optimize.

#### For example, ANDSF defined by 3GPP is only giving static policy information. There is work item in SA2 on extending the capability of ANDSF. Dapeng will check the information to share with us.

## Proposals for future work (21-11-0158-01) is presented by Charlie Perkins

### Provide location data with SFF signaling

### Define PAWS (whitespace)-like access to common location database: make gap analysis for MIIS and ANDSF (ietf paws WG is already active)

#### The database is currently owned by FCC.

#### SFF and ANDSF access operator location database

#### The scenarios are: (1) AP has direct access to the database. (2) AP and MN have direct access. (3) MN does not have direct access and must access via an AP.

### Caching operation [regional trickle charge + UE-specific loads]

### Policy features for MIIS

### SFF Proposal into 3GPP

### Both MIIS and ANDSF are not yet dynamic, and both need mechanism of updating dynamically.

## Hotspot 2.0 work is briefed by Dapeng Liu

### Purpose is to for WiFi users to have the same experience as cellular network users

### Network based on 802.11, authentication methods: EAP with different methods; network selection policy from operator. Notification protocol (NQP) – upper layer information – will check whether one can access information before or after network access.

### Use case 1: Currently, authentication to WiFi is through login to network SSID. Hotspot will scan the SSID and automatically find the right one. It will also know the authentication method. The user experience is similar in using cell phone where the user does not need to select which operator.

### Use case 2: authentication method. The hotspot can broadcast SSID together with roaming agreement information.

### Policy information: Hotspot 2.0 only focuses on the WiFi network only. The information can push to the MN.

## Agenda is amended with unanimous consent to the following (21-11-0147-02).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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| **AM-1**  **8:00-10:00a** | NA | Comment resolution- 802.21a | Comment resolution- 802.21b |  |
| **AM-2**  **10:30-12:30** | NA | SRHO TG | SRHO TG | Comment resolution- 802.21a and Comment resolution- 802.21b |
| **PM-1**  **1:30 – 3:30p** | 802.21 WG Opening Plenary | Comment resolution- 802.21b | Comment resolution- 802.21a | SRHO TG |
| **PM-2**  **4:00 – 6:00p** | Comment resolution- 802.21a | Comment resolution- 802.21a | SRHO TG | 802.21 WG Closing Plenary |
| **Eve**  **6:30 – 7:30p** | Future Project Planning tentative | Future Project Planning | Social(TBD) |  |

## Meeting recess at 6:35PM

# Fourth Day AM2 (10:30AM-12:30PM): Lotus Suite 5; Thursday, September 22, 2011

## 802.21b comment resolution is led by Juan Carlos Zuniga

### The suggested resolution on Comment #25 which clarifies the use of abstract data type in the base spec is agreed.

### Comment #5 with suggested resolution in 21-11-0144-00 is discussed and deferred to a teleconference of the comment resolution committee

### A teleconference is scheduled on every Thursday 11AM-noon ET

### Comment resolution are updated into 21-11-0149-01

## 802.21a comment resolution is led by Yoshihiro Ohba

### The comment resolution on comment #26 regarding data type is amended by copying the resolution of Comment #25 in 802.21b

### Comment resolution regarding support of Charlie Perkin’s proposal in 802.21c to protect signals traversing the Internet is discussed.

#### In annex N.3, proactive authentication: The dotted line to push MIH keys is in dotted line meaning it allows the use but the specification is not in scope.

#### In annex N.2, Push key distribution, the MIH user install the media specific key in MAC layer is in also in dotted line. It is for the MIH user but is not specified here.

#### In annex N.4, the installation of media specific key to give to user is also in dotted line. It should not define another POS at this time, also for the purpose of avoiding possible security problem. It is not desirable to assume that the new POS will become the AAA.

#### The SA in 802.21a is based on MIH ID. It protects MIH messages. The media specific authentication mechanism is not in its scope.

### The comment is rejected.

### The teleconference of the comment resolution committee is on every Thursday 10-11AM ET

### The targeted date to generate the next version is mid-October

### Comment resolution are updated into 21-11-0148-03

## Future planning committee teleconference is scheduled on Oct 10 10AM ET and Oct 21 10AM ET

## Meeting recess at 12:10PM

# Fourth Day PM2 (4-6PM): Lotus Suite 5; Thursday, September 22, 2011

## 802.21 WG Meeting called to order by Subir Das, Chair of IEEE 802.21WG at 9AM with agenda (21-11-0147-02) and closing report (21-11-0164-00)

### WiMAX Forum Update:

### 3GPP update: Dapeng Liu will prepare a report for the next meeting. Anthony Chan will also help. Others will also find out updates on SA2 and CT.

## SB comment resolution on 802.21a update: only 1 comment is deferred as in 21-11-0148-03

## SB comment resolution on 802.21a update: only 1 comment is deferred as in 21-11-0149-01

## 802.21c report (21-11-0139-02) is presented by TG Chair, Junghoon Jee

### 4 sessions during the week

#### Outputs : Consensus on the proposal 21-11-0155-04, which has become the current draft spec

### 2 teleconference has been scheduled

### Possible topic:

#### Change the term: C-GW

#### Proposal harmonization 21-11-0160-00, 21-11-0152, 21-11-0153,

#### Protocol details

## IETF liaison report (21-11-0163-01) is presented 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-05**:** Status: revised after WG last call

#### Handover Keying (HOKEY) Architecture Design**:** draft-ietf-hokey-arch-design-04**;** Status: ended WG last call

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

### MEXT WG

#### Home Agent reliability: I-D. ietf-mip6-hareliability; ended 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-dmm-pmip-based-approach-00

draft-patil-mext-dmm-approaches-01

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.txt

draft-perkins-dmm-matrix-01

draft-kuntz-dmm-summary-00

#### Others

draft-yokota-mext-ha-init-flow-binding-00

draft-perkins-mext-sffexts-00

draft-perkins-mext-gtpdata-01

draft-perkins-mext-hatunaddr-01

### NETEXT WG

#### LMA Redirection: I-D. draft-ietf-netext-redirect-08. Status: IESG Evaluation (2 DISCUSSes)

#### Localized Routing:

Localized Routing for Proxy Mobile IPv6: Bulk Refreshdraft-ietf-netext-pmip-lr, Status: Revised after WG Last Call.

I-D.ietf-netlmm-bulk-re-registration; Status: Ended WG Last Call

#### 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 WG item)

#### New works (accepted as WG items)

draft-ietf-netext-pmipv6-flowmob

draft-ietf-netext-pd-pmip-01.txt

draft-ietf-netext-access-network-option

draft-ietf-netext-pmipv6-sipto-option

## Teleconference schedule

### 802.21a comment resolution committee

#### every Thursday 10-11AM ET until SB is complete

### 802.21b comment resolution committee

#### every Thursday 11AM-noon ET until SB is complete

### 802.21c TG

#### October 19, 2011, 10:00PM ET

#### November 2, 2011, 10:00AM ET

### Future planning

#### Oct 10 10AM ET and Oct 21 10AM ET

#### Oct 24 10AM ET and Oct 21 10AM ET

## Future session information

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

#### Co-located with all 802 groups

### Interim: 16-19 January 2012, Jacksonville, Florida

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

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

#### Co-located with all 802 groups

### Interim: target 13-18 May 2012 (target), TBD

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

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

#### Co-located with all 802 groups

### Interim: 10-13 September 2012 (target), TBD

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

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

#### Co-located with all 802 groups

## Any other business: Need good Internet service in future meetings

## Adjourn at 4:50PM until November 2011 Plenary in Atlanta

# Attendance

|  |  |
| --- | --- |
| Chan, Anthony | Huawei Technologies |
| Chen, Lily | NIST |
| Jee, Junghoon | Electronics and Telecommunications Research Institute ETRI) |
| Lee, Jin | LG ELECTRONICS |
| Liu, Dapeng | China Mobile |
| Ohba, Yoshihiro | TOSHIBA Corporation |
| Perkins, Charles | Tellabs |
| Zuniga, Juan Carlos | InterDigitial Corporation |

 

IEEE P802.21 Media Independent Handover Services

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

Chair: Junghoon Jee

Vice Chair: Anthony Chan

Secretary: Hyunho Park

Editor: Dapeng Liu

Minutes taken by Dapeng Liu

# Second Day AM2 (10:30AM-12:30PM): Lotus Suite 5; Tuesday, September 20, 2011

## Meeting is called to order by Junghoon Jee, chair of 802.21c TG, with agenda 21-11-0139-01

## The chair, Junghoon Jee, introduced meeting protocol, the IEEE patent policy and the agenda items for this meeting. The agenda for this week:

### Proposal discussion

#### SFF operations augmented with UE location information, Charles Perkins

#### Single Radio Handover proposal, Anthony Chan 21-11-0155-00

#### 802.21c Draft Revision, Dapeng Liu: 21-11-0152-00-srho, 21-11-0153-00-srho

#### Command service for single radio handover, Dapeng Liu: 21-11-0151-00-srho

### Future Planning

### Time Schedule

#### Tuesday AM2

#### Wednesday AM2, PM2

#### Thursday PM1

## Anthony Chan presented contribution: DCN#21-11-0155-00-srho.

This contribution proposes to add section “9.4.2: Single radio handover control function,” section 9.4.3: “Transport of L2 network entry PDU of the target radio” and section 9.4.4: “communication between the MN and the target POA” to the current draft. The main idea is to define single radio handover control function in the current reference model and define the mechanism that transports the L2 network entry PDU to the target radio. Charles commented that the first sentence in section 9.4.2 it should be “the MN” exchanges the link-layer network entry PDU instead of “the target radio”. Juan Carlos commented that whether it needs new port number. Charles commented that the concept is good but need time to read in detail. Junghoon Jee suggests that the group members read the contribution and have more detailed discussion in tomorrow session.

## Dapeng Liu form China Mobile presented contribution: DCN# 21-11-0152-00-srho

DCN# 21-11-0152-00-srho proposes to change the term “SFF” to “C-GW” since SFF is specific to WiMAX. Charles commented that the “C-GW” is too general that people hard to understand what is function of C-GW. Subir commented that if the functionality of C-GW only related to handover the term should not be too general. Dapeng Liu suggests that continue using the term of C-GW but make clear definition in the terms definition section. Junghoon commented that it needs more general term because the reference model should be general and when it comes to the specific networks, the corresponding SDO should make it more specific.

## Dapeng Liu form China Mobile presented contribution: DCN# 21-11-0153-00-srho

DCN# 21-11-0153-00-srho proposes to correct the definition of ANDSF and also change the term of “SFF” to “C-GW”. The group accepts the ANDSF correction.

## Dapeng Liu presented contribution: DCN# 21-11-0151-00-srho.

DCN# 21-11-0151-00-srho proposes to extend 802.21 command services for single radio handover. Three new commands: MIH\_MN\_SRHO\_Prepare, MIH\_MN\_SRHO\_Commit, MIH\_MN\_SRHO\_Complete are proposed for single radio handover. Junghoon commented that the idea is good and suggested having more discussion during the proposals harmonization discussion.

## Charles E. Perkins presented contribution: DCN#21-11-0142-00-0000-srho

The contribution has not been updated since last meeting. Juan Carlos commented that whether there is more information in the location information. Junghoon commented that it needs more concrete contribution and how the OSFF get UE location information. Charles explains that UE initiates the handover and will carry the location information. Junghoon commented how the MN can find the target WiFi access point. Charles explained that it can be based on DNS and other mechanisms. Junghoon also asked whether roaming means different operators, Charles explained that it could be a single operator. Subir commented that need to investigate whether ANDSF support pull mode. Charles will update the contribution to include information element proposal and discuss tomorrow.

## The task group chair Junghoon introduced tomorrow session’s agenda

The TG will discuss Charles’s contribution first then will try to harmonize the different proposals then will start consensus call.

# Third Day AM2 (10:30AM-12:30PM): Lotus Suite 5; Wednesday, September 21, 2011

Charles E. Perkins presented contribution: DCN# 21-11-0160-00-srho.

Subir: what will be OSFF logic entity reside in WiMAX? OSFF should be in ASN-GW. ASN-GW and base station may co-locate. Do you anticipate this SFF could be implemented in base station? Will MN have the knowledge of the target network information?

Subir: SFF need to be in ASN-GW. Because need to maintain the pseudo state information.

Charles: There are other ways to do. Not necessary to co-locate with ASN-GW.

Subir: pseudo station or physical station need to be anchored in the same ASN-GW?

Charles: Not necessary

Subir: OSFF is WiFi or WiMAX network?

Charles: should be general.

Subir: If both networks are WiMAX, then may not need SFF.

Subir: MN needs to know whether target is WiFi or WiMAX.

Charles: OSFF can tell that.

Subir: MN always has security association with the current network?

Lily: which layer of the security association?

Charles: IP layer, IPsec.

Lily: Hop by hop or end to end?

Charles: At beginning, it is hop by hop, and then is end to end. OSFF help to establish the security association TSFF between MN.

Junghoon: Could be pseudo base station or physical base station. Real station is faster. Same thing in CDMA, CDMA and WiMAX similar, but 3GPP has MME.

Junghoon: 3GPP2, the SFF function could be co-located or separated.

Charles then introduced the call flow using location data.

Subir: Require MN has GPS?

Charles: Not necessary, could use 11u, etc.

Subir: OSFF mapping the location information server. Is there any problem for MN directly contacting to the information?

Charles: First, use DNS to get the IP address of ANDSF, then security, then contact to the ANDSF. You have a lot of work to do before. ANDSF take care the security, will interact with AAA.

Subir: How the SFF is discovered?

Charles: MN just turns on, establish association with HSFF.

Subir: Can use 21 information service?

Charles: IS cannot replace ANDSF.

Junghoon: Both are ok, subset in 21c. OSFF and MN can contact to the information server.

Charles: It is better for OSFF.

Anthony: what kind of agreement between the two networks? Allow one network to use another network’s key? 3GPP and WiFi’s security mechanism are different.

Charles: Agreement includes context information. TSFF has security association with OSFF; MN has security association with OSFF.

Lily commended that there are two things. L2 is different with L3 security. Lily also introduced the two different security modes in 21a.

Junghoon: IETF MIP6 bootstrapping, it is a different plan.

Subir: How much of this can fit in 21c architecture?

Charles: forget OSFF, just MN how to find SFF may fit in 21c’s scope. Current 21c architecture can support that.

Lily commented that there are two modes of security in 21c: bundle mode and direct mode.

Subir suggested 21c to show Charles how SFF discovered.

Anthony suggested we should do the harmonization work first, and then can see whether it can fit to 21c architecture.

Subir: Charles wants to make his proposal align with 21c architecture.

Anthony: Cannot decide right now because the 802.21c work has not finished.

# Third Day PM2 (4-6PM): Lotus Suite 5; Wednesday, September 21, 2011

## Anthony Chan presented DCN# 21-11-0155-00-srho.

The group had discussion about how to revise the proposal.

Anthony suggested that it is needed to update the 802.1 architecture figure. The group had a lot of discussion on this and consensus was made that it is not needed to change 802.1 architecture.

Subir commended that the figure (a) has two IP stack, should be one.

Dapeng Liu commend that figure (b) should avoid confusion and IP/UDP should be TCP/UDP which is the transport protocol of MIH message.

Anthony will update the proposal based on the discussion.

# Fourth Day PM1 (1:30-3:30PM): Lotus Suite 5; Wednesday, September 22, 2011

# Anthony Chan presented DCN# 21-11-0155-03-srho.

Anthony Chan changed the figure as yesterday discussion suggested, also changed the figure showing the encapsulation.

Subir: MICF is bellow IP.

Dapeng Liu commented that it is better to change UDP/IP to TCP or UDP/IP.

Charles: Commented to change the name “C-GW” to “handover C-GW”. Or in abbreviation section, make it clear that C-GW function is mainly about handover.

Subir: MICF inside or outside?

Anthony updated the proposal to version 4.

### The group made a consensus call.

The motion: To accept to incorporate the texts in the proposal, “21-11-0155-04-srho” into the TGc framework document “21-10-0025-02, 802.21c draft template” was moved by Dapeng Liu and seconded by Anthony Chan and passed by the task group.

## Conference call schedule:

October 19 22:00 ET, November 2, 2011 10:00 ET.

The possible topics of the conference call are: 1) Changing of the term C-GW. 2) Harmonization of the contribution from Charles and Dapeng.