 

IEEE P802.21 Media Independent Services

Minutes of the IEEE P802.21 Working Group (DCN 21-19-0030-0000)

Session #90 Meeting, Vancouver, BC, Canada

Chair: Subir Das

Vice Chair: Hyeong Ho Lee

Meeting minutes are scribed by Hyeong Ho Lee

# Day 1 PM1 (1:30pm-3:30pm), March 11, 2019: Room Brighton (HRV 4th Floor)

## IEEE 802.21 WG Opening Plenary: Meeting is called to order at 1:40pm by Subir Das, Chair of IEEE 802.21 WG with opening notes

## March, 2019 Meeting Agenda (DCN: 21-19-0018-01-0000)

### Agenda bashing:

#### Agenda was modified by adding Presentation in NENDICA (8:30-9:30p on Tuesday).

#### The revised agenda (DCN 21-19-0018-02-0000) was approved without any objection.

## IEEE 802.21 Session #90 Opening Plenary Notes (21-19-0020-00-0000)

### Meeting logistics: Meeting room Brighton (Hyatt Regency); 802.1: Saturna (Fairmont); 802.3: British Columbia (Fairmont)

### <http://mentor.ieee.org/802.21/documents>

### Attendance procedures, logistics, breaks: useful website <http://ieee802.linespeed.io/>

### Duty to inform slides 1-4, etc.

### Request to make Intellectual Property declaration.

#### No one declared any patent claims in this session.

### LMSC Chair’s Guidelines on Commercialism at meetings.

## Working Group Status

### IEEE 802.21/Cor1 Standard was published in 2018.

### ISO/IEC/JTC1 SC6 published three IEEE 802.21 Standards in 2018.

### Study Group on ‘Network Enablers for Seamless HMD based VR Content Service’ was approved in November, 2018.

* + - * + Dongil Dillon Seo is the Chair of the SG.

## Working Group Objectives for March meeting

### Study Group Sessions

### Presentations to other WGs and TAGs

### PAR/CSD Discussion

## Session #89 minutes (DCN: 21-19-0017-00-0000) was approved without any objections.

## WG Chair gave the EC opening meeting updates (DCN: ec-19-0010-02-00EC, ec-19-0027-02-00EC, ec-19-0032-01-00EC, ec-19-0037-01-00EC).

* + - * + Terminology Changes (DCN ec-19-0037-01-00EC)
  + From ‘Sponsor’ to ‘Standards Committee’
  + From ‘Study Group’ to ‘PAR Study Group’
    - * + Event Conduct and Safety Statement (DCN ec-19-0032-01-00EC)
        + Tutorial on Spectrum Sharing will be held on Monday (March 11) evening.
        + WG Chair presented overview of IEEE 802.21 in the Fellowship program session on Sunday (March 10)

## Plan for SG on Network Enablers for Seamless HMD based VR Content Service

* + - * + SG chair presented VR SG meeting plan (DCN: 21-19-0021-00-0000), and it will be updated at the SG opening session.
        + The goal of this SG meeting is to draft PAR scope and CSD.
        + SG Chair presented in IEEE 802.1 session on AM2 Monday, and he will present in NENDICA session on Tuesday evening, and in IEEE 802.3 session on PM1 Thursday.

## Meeting was recessed at 3:25pm.

# Day 2 AM1 (8:00am-10:00am), March 12, 2019: Room Brighton (HRV 4th Floor)

## Meeting is called to order at 8:00am by Subir Das, Chair of IEEE 802.21 WG with revised agenda.

* + - * + WG meeting Agenda was revised and uploaded as DCN 21-19-0018-02-0000.

## Meeting reviewed PAR and CSD of IEEE 802.11be - Amendment, Enhancements for Extremely High Throughput (EHT).

### PAR and CSD of IEEE 802.11be are in DCN 11-18-1231-04-0eht and 11-18-1233-04-0eht, respectively.

### Questions for clarification on scope of the project in PAR document

* + - * + What is the expected average throughput per station in a dense deployment scenario?
        + Are very low latency and jitter in scope of the project? If the answer is yes, what are the target values for latency and jitter?

### Suggestion on CSD document

* + - * + If the scope includes very low latency and jitter, it could be another distinct identity in 1.2.3 Distinct Identity.

## Meeting was recessed at 10:15am.

# Day 3 PM1 (1:30pm-3:30pm), March 13, 2019: Room Brighton (HRV 4th Floor)

## Meeting is called to order at 1:32pm by Subir Das, Chair of IEEE 802.21 WG.

## WG meeting Agenda has been revised as in DCN 21-18-0079-03-0000.

#### SG session on PM2 today is cancelled, and WG closing plenary is moved to AM2 Thursday,

## WG reviewed responses on the comments of IEEE 802.11be PAR and CSD.

#### Comments and Responses are in DCN 11-19-0459-03.

#### Revised PAR and CSD are in DCN 11-18-1231-06 and 11-18-1233-06, respectively.

#### Question on the revised PAR is “what is the meaning of worst-case latency and jitter?”.

## WG chair requested SG chair to present future SG plan in WG closing plenary tomorrow.

## Meeting was recessed at 3:30pm.

# Day 4 AM2 (10:30am-12:30pm), March 14, 2019: Room Brighton (HRV 4th Floor)

## 802.21 WG Closing Plenary: Meeting is called to order at 12:15pm by Subir Das, Chair of IEEE 802.21 WG

## WG reviewed WG chair’s presentation material for IEEE EC closing plenary meeting.

## Study Group Report

* + - * + SG Chair, Dongil Dillon Seo, presented the SG report (DCN: 21-19-0028-00-0000) and later on updated (DCN-19-0028-01-0000).
        + SG on Network Enablers for seamless HMD based VR Content Service had four sessions and also presented its plan and objectives (DCN # 21-19-0023-00-0000, DCN #21-19-0022-01-0000) in IEEE 802.1 WG, NENDICA, and IEEE 802.3 WG.
        + Presentation by Vinayagam
  + DCN #21-19-0025-00-0000, Title: OWC NW Requirements for VR Broadcasting Service
  + DCN #21-19-0026-00-0000, Title: Network Considerations for Light Communication based Interactive VR Game Services
    - * + Motion
  + Move to authorize the SG Chair to make a motion to the IEEE 802.21 WG for re-chartering the study group until July, 2019 plenary. (5/0/0)
    - * + The SG action items are to:
  + Continue to reach out to IEEE 802.1 and 802.3 WGs
  + Follow up with IEEE 802.11 RTA TIG, 802.15 WNG, 802.19 WG, 802.24 TAG
  + Start drafting the scopes for PAR/CSD if needed
    - * + Teleconference schedule
  + April 18, 2019: US EDT 07:30 AM ~ 08:30 AM
  + May 9, 2019: US EDT 07:30 AM ~ 08:30 AM
    - * + The SG meeting minutes is in DCN 21-19-0031-00-0000.

## IEEE 802.21 Session #90 Closing Plenary Report (DCN: 21-19-0024-00-0000)

## Work Update

* + - * + Study Group presentations in different groups
  + 802.1

https://mentor.ieee.org/802.21/dcn/19/21-19-0023-00-0000-the-network-relevance-in-vr.pptx

* + NENDICA

https://mentor.ieee.org/802.21/dcn/19/21-19-0022-01-0000-why-you-should-care-about-the-vr-network-requirements.pptx

* + 802.3

https://mentor.ieee.org/802.21/dcn/19/21-19-0022-01-0000-why-you-should-care-about-the-vr-network-requirements.pptx

* + - * + Study Group report:

https://mentor.ieee.org/802.21/dcn/19/21-19-0028-01-0000-vr-sg-meeting-summary.pptx

## Teleconferences

* + - * + Thursday, April 18, 2019, 7:30-8:30am, US EDT (8:30-9:30 pm, JST/KST)
        + Thursday, May 09, 2019, 7:30-8:30 am, US EDT (8:30-9:30 pm, JST/KST)

## WG Motion (Full details are available in 21-19-0024-00-0000)

#### Move to authorize the P802.21 WG Chair to make a motion to the IEEE 802 Executive Committee for re-chartering the Study Group on 'Network Enablers for Seamless HMD-based VR (Virtual Reality) Content Service’. (7/0/0)

#### Move to authorize the P802.21 WG Chair to make a motion to the IEEE 802 Executive Committee for extension of the Study Group on 'Network Enablers for Seamless HMD-based VR (Virtual Reality) Content Service’. (7/0/0)

## Future Sessions – 2019

### Interim: May 12-17, 2019, Grand Hyatt Atlanta in Buckhead, Atlanta, Georgia, USA

* + Co-located with all wireless groups

### Plenary: July 14-19, 2019, Austria Congress Centre, Vienna, Austria

* + Co-located with all 802 groups

### Interim: September 15-20, 2019 - Marriott Hanoi, Hanoi Vietnam (TBC)

* + Co-located with all 802 wireless groups

### Plenary: November 10-15, 2019, Hilton Waikoloa Village, Kona, HI, USA,

* + Co-located with all 802 groups

## The meeting was adjourned at 12:35pm

# Attendance

|  |  |
| --- | --- |
| Chang Sooyoung | SYCA |
| Das Subir | Perspectra Labs |
| Goldberg Jonathan | IEEE-SA Manager |
| Hanatani Yoshikazu | Toshiba Corporation |
| Kim Jeong Gon | Korea Polytechnic University |
| Lee Hyeong Ho | Netvision Telecom Inc. |
| Mariappan Vinayagam | SNUST |
| Oh Minseok | Kyonggi University |
| Seo Dongil Dillon | VoleR Creative |
| Takazoe Tomoki | Panasonic Corporation |

 

IEEE P802.21 Media Independent Services

Minutes of the IEEE P802.21 VR Study Group

March 2019 Meeting, Vancouver, BC, Canada

Chair: Dong Il Dillon Seo

Meeting minutes are scribed by Dong Il Dillon Seo due to the absence of Secretary in this meeting.

# Day 2 AM2 (10:30Am-12:30pm), March 12, 2019: Brighton (4th Floor), Hyatt Regency

## Meeting is called to order at 10:30 AM by Dongil Dillon Seo, Chair of SG with opening notes

## Read the relevant attendance and IP elements.

## Discussion on March, 2019 Meeting Agenda (DCN: 21-19-0021-03-0000)

#### The agenda was modified and the change was reflected

## Discussion on the feedback from the presentation made to IEEE 802.1 WG on March 11

#### Title of the Presentation: The Network Relevance in VR

#### DCN: 21-19-0023-00-0000

* Huawei commented that they are working on a simulation where their equipment can support the VR applications.
* Huawei believes that the issues raised by this presentation is very relevant to the industrial demand
* Additional questions were pushed back to Nendica session on Tuesday evening

## Discussion on new PAR and CSD for the SG

* Discussed the direction of PAR and CSD
* Reviewed the past PAR and CSD written for IEEE 802.21 for reference
* Discussed the plan to recruit the members who can appropriately scope and write the PAR and the CSD
* Discussed the type of documents that SG may choose to produce if the PAR and CSD cannot be scoped during this time.
* Suggestion was made to open up the topics that SG wants to solve in non-IEEE 802 organizations

## Meeting was adjourned at 12:30 PM

# DAY 2 PM1 (1:30Pm-3:30Pm), March 12, 2019: Brighton

## Meeting is called to order at 1:30 PM by Dongil Dillon Seo, Chair of SG

## Discussion on the direction where SG should be heading

* + - * + Discussed how to bring more participants to the SG from the rest of IEEE 802 WGs
        + Discussed the types of documents that SG can produce if it is not the PAR and the CSD
        + Discussed the possibility of moving the SG to other WG that can accommodate the scopes of the SG
        + Discussed how important it is for the SG to make a substantial progress if the SG receives the extension from the LMSC

## Meeting was adjourned at 3:30 PM

# Day 3 AM2 (10:30am-12:30pm), March 13, 2019: Brighton

## Meeting is called to order at 10:30 AM by Dongil Dillon Seo, Chair of SG

## Discussion on the feedback from the presentation made to NENDICA on March 12

* Title of the Presentation: Why You Should Care about VR Network Requirements
* DCN: 21-19-0022-01-0000
* Huawei and Fujitsu showed interests on the issues raised by the presentation
* Discussed how we can bring the people who have shown interests on the problem and get their input on the document that the SG will update.
* Discussed the presentation material for IEEE 802.3 WG meeting.
* Reviewed the presentation content and modified

## Meeting was adjourned at 12:30 PM

# Day 4 AM2 (10:30Am-12:30pm), March 14, 2019: Brighton

## Meeting is called to order at 10:30 AM by Dongil Dillon Seo, Chair of SG

## Discussion on the contributed documents (Presenter: Mariappan Vinayagam)

### Title: OWC NW Requirements for VR Broadcasting Service

* DCN: 21-19-0025-00-0000
* Title: Network Considerations for Light Communication based Interactive VR Game Services
* DCN: 21-19-0026-00-0000
* Suggestion was made to work with the SG participants and see if these use cases can fit in the white paper.

## Meeting was adjourned at 11:50 AM

# Attendance

|  |  |
| --- | --- |
| Seo, Dongil Dillon | VoleR Creative |
| Chang, Soo Young | SYCA |
| Das, Subir | Perspectra Labs |
| Lee, Hyeong Ho | Netvision Telecom Inc. |
| Mariappan, Vinayagam | SNUST |
| Oh, Min Seok | Kyonggi University |
| Kim, Jeong Gon | Korea Polytechnic University |
| Hanatani, Yoshikazu | Toshiba Corporation |
| Takazoe, Tomoki | Panasonic Corporation |