 

IEEE P802.21 Media Independent Services

Minutes of the IEEE P802.21 Working Group (DCN 21-18-0077-00-0000)

Session #88 Meeting, Bangkok, Thailand

Chair: Subir Das

Vice Chair: Hyeong Ho Lee

Meeting minutes are scribed by Hyeong Ho Lee

# Day 1 PM1 (1:30pm-3:30pm), November 12, 2018: Room Apartment 7 (9th Floor)

## IEEE 802.21 WG Opening Plenary: Meeting is called to order at 1:30pm by Subir Das, Chair of IEEE 802.21 WG with opening notes

## November, 2018 Meeting Agenda (DCN: 21-18-0060-00-0000)

### Agenda bashing:

#### The agenda was approved without any objections.

## IEEE 802.21 Session #88 Opening Plenary Notes (21-18-0066-00-0000)

### Meeting logistics: Meeting room Apartment 7 (9th Floor), JTC1/SC6: Thai Boromphimarn 3 (3rd Floor)

### <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

### ISO/IEC/IEEE 8802-21:2018/Cor 1:2018 (IEEE Std 802.21:2017/Cor 1:2017) was published in November 2018.

### Ongoing discussions on Network Enablers for Seamless HMD based VR Content Service in the Interest Group.

## Working Group Objectives for November meeting

### IG proposal for the formation of a Study Group on Network Enablers for Seamless HMD based VR Content Service

### Discussion on network requirements w.r.t. to liaison from IEEE P3079.

### Next Steps

## Session #87 minutes (DCN: 21-18-0056-00-0000) was approved without any objections.

## Two teleconference minutes (DCN: 21-18-0058-00-0000, 21-18-0062-00-0000) were approved without any objections.

## Working Group Chair reported EC opening meeting updates (DCN: ec-18-0181-03-00EC, ec-18-0198-03-00EC).

* + - * + At the meeting, WG Chair reported on the proposal of new SG ‘Network Enablers for Seamless HMD based VR Content Service’.
        + IEEE-SA staff will not physically present at the plenary session, but support will be provided remotely via Web-ex.
        + IEEE 802.18 WG will work during the week to make the comments to the FCC 6GHz NPRM(Notice on Proposed Rule Making) for unlicensed use of the band in USA.
        + The meeting reviewed proposed update and changes of the IEEE 802 LMSC P&P and the WG P&P.

## Plan for Interest Group (IG) on Network Enablers for Seamless HMD based VR Content Service (DCN: 21-18-0063-00-0000)

* + - * + The IG Chair presented the VR IG meeting plan (DCN 21-18-0063-00-0000), and the meeting discussed and modified the IG meeting schedule. The revised plan for the IG sessions was reported in DCN 21-18-0063-01-0000.
        + The goal of IG sessions this week is to finalize drafting of the white paper and to propose the formation of a Study Group on Network Enablers for Seamless HMD based VR Content Service.

## Meeting was recessed at 3:11pm.

# Day 3 PM1 (1:30pm-3:30pm), November 14, 2018: Room Apartment 7 (9th Floor)

## Meeting is called to order at 1:30pm by Subir Das, Chair of IEEE 802.21 WG.

## Presentation of the overview of TSN by John Messenger

* + - * + John Messenger, IEEE 802.1 WG Vice-chair, presented the overview of TSN (Time Sensitive Network) (DCN: 11-18-2027-00).
        + The meeting discussed on the possibility of using TSN for VR service, and future cooperation with IEEE 802.1 TSN TG.

## WG Chair thanked Dongil Dillon Seo for his presentation (DCN: 21-18-0073-00-000) in the mid-plenary session of IEEE 802.11 WG.

## The meeting discussed on future work plan of the SG on Network Enablers for Seamless HMD based VR Content Service, given that formation of the SG is approved by IEEE 802 EC.

## WG Chair asked Dongil Dillon Seo to prepare final draft of the white paper for reviewing it in the WG closing plenary session.

## Meeting was recessed at 3:20pm.

# Day 4 AM2 (10:30am-12:30pm), November 15, 2018: Room Apartment 7 (9th Floor)

## 802.21 WG Closing Plenary: Meeting is called to order at 10:32am by Subir Das, Chair of IEEE 802.21WG

## The agenda was revised and uploaded as DCN 21-18-0060-01-0000.

## Vinayagam Mariappan from SNUST presented 4 contributions on VR Applications and Use cases (DCN: 21-18-0069-00-0000, 21-18-0070-00-0000, 21-18-0071-00-0000, 21-18-0072-00-0000)

* + - * + The meeting had discussions on the contribution, and the WG chair encouraged contributors to bring more technical contributions on network aspects for VR applications and use cases.

## Interest Group Report

* + - * + IG on Network Enablers for seamless HMD based VR Content Service had three sessions.
        + IG Chair, Jeong Sangkwon Peter, presented the IG report (DCN: 21-18-0074-00-0000).
        + During this meeting, IG revised the white paper and produced the final draft titled “A White Paper on Use Cases and requirements for supporting HMD-based VR Applications” (DCN: 21-18-0061-02-0000).

## Tim Godfrey, IEEE 802.24 WG chair, announced that IEEE 802.24 WG will start to develop a white paper on low latency.

## Dongil Dillon Seo reported verbally the results of interactions with experts of IEEE 802.11 RTA TIG.

## IEEE 802.21 Session #88 Closing Plenary Report (DCN: 21-18-0076-00-0000)

## Work Update

* + - * + Interest Group on Network Enablers for seamless HMD based VR Content Service had three sessions and the report is available at:
  + <https://mentor.ieee.org/802.21/dcn/18/21-18-0074-00-0000-vr-ig-meeting-summary.ppt>
    - * + Status update on IEEE-2017/Cor1 in ISO/JTC1/SC6 and joint meeting with IEEE 802 ISO/JTC1/SC6 ad hoc
  + Published in November, 2018 - ISO/IEC/IEEE 8802-21:2018/Cor 1:2018
    - * + Presentation from 802.1 on TSN
  + <https://mentor.ieee.org/802.11/dcn/18/11-18-2027-00-0000-overview-of-ieee-802-1-tsn-and-ietf-detnet.pdf>
    - * + Additional AR/VR use cases and applications
  + dcn/18/21-18-0069, dcn/18/21-18-0070, dcn/18/21-18-0071, and dcn/18/21-18-0072
    - * + Verbal Report on interactions with 802.11 Real Time Applications TIG

## Teleconferences

#### Thursday, December 20, 2018, 7:30-9:30 am, US EDT (9:30-10:30 pm, JST/KST)

#### Tuesday, January 8, 2019, 7:30-9:30 am, US EDT (9:30-10:30 pm, JST/KST)

## WG Motion (Full details are available in 21-18-0076-00-0000)

* + - * + Move to authorize the P802.21 WG Chair to make a motion to the IEEE 802 Executive Committee for the formation of a Study Group on 'Network Enablers for Seamless HMD-based VR (Virtual Reality) Content Service’ (9/0/0)

## January 2019 Interim Meeting Logistics

### IEEE 802 Interim Meeting: January 13-18, 2019

* + Meeting Venue: Hilton St. Louis at the Ballpark, St. Louis Missouri, USA
  + Event Information: https://www.regonline.com/ieee802wirelessjanuary2019

### Registration Fees and Deadlines

* + Standard Registration: Before 6:00 PM Pacific Time, Friday, December 14, 2018
    - $US 650.00 for attendees at the conference hotel (>= 3 nights) otherwise $US950.00
  + Before 6:00 PM Pacific Time, Friday January 4, 2019
    - $US 850.00 for attendees at the conference hotel (>= 3 nights) otherwise $US1150.00
  + Late/On-site registration:   After 6:00 PM Pacific Time Friday, January 4, 2019
    - $US 1050.00 for attendees at the conference hotel (>= 3 nights) otherwise $US1350.00

### Hotel Room Rates:

* + 149.00/Night plus applicable taxes per night
  + Single/Double Occupancy Run of House Rooms, Internet access included.
    - Available January 12-19, 2019 (subject to availability)
    - Subject to Availability: Rates are subject to the deadline and availability of rooms in the Group Room Block.

### If visa is required, please indicate it during registration

### Request Letter After Registration: Contact 802info@facetoface-events.com

## Future Sessions – 2019

### Interim: January 13-18, 2019, Hilton St. Louis at the Ballpark

* + Co-located with all 802 groups

### Plenary: March 10-15, 2019, Hyatt Regency Vancouver and Fairmont Hotel Vancouver, Vancouver, Canada

* + Co-located with all 802 groups

### 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

## WG chair reviewed the EC package (DCN: DCN 21-18-0075-00-0000) to be submitted to the EC Closing plenary.

## The meeting was adjourned at 11:58am

# Attendance

|  |  |
| --- | --- |
| Cha Jaesang | SNUST |
| Chang Sooyoung | SYCA |
| Das Subir | Perspectra Labs |
| Gilb James | GA-ASI, GenXComm, Gilb Consulting |
| Godfrey Tim | EPRI |
| Hanatani Yoshikazu | Toshiba Corporation |
| Jeong Sangkwon Peter | JoyFun Inc. |
| Kim Jeong Gon | Korea Polytechnic University |
| Kim Namgi | Kyonggi University |
| Lee Hyeong Ho | Netvision Telecom Inc. |
| Lee Minwoo | SNUST |
| Mariappan Vinayagam | SNUST |
| Messenger John | ADVA Optical Networking |
| Oh Ji Hoon | TTA |
| Ohba Yoshihiro | Toshiba Memory Singapore Pte. Ltd. |
| Seo Dongil Dillon | VoleR Creative |
| Takazoe Tomoki | Panasonic Corporation |

 

IEEE P802.21 Interest Group on Network Enablers for Seamless HMD based VR Content Service

Meeting Minutes of the IEEE P802.21 Interest Group

Chair: Sangkwon Jeong

Editor: Dong Il Dillon Seo

# Day 2 AM1 (08:00Am-10:00Am), November 13, 2018: Apartment #7

## IEEE 802.21 IG Session: Meeting is called to order at 9:00Am by Peter Jeong, Chair of IEEE 802.21 IG

## Presented “The Network Relevance in VR” (DCN: 21-18-0067-00-0000)

#### Dillon presented the document and the document was reviewed by the group

#### Restructured and rephrased the content based on the comments made by Subir

#### Jame’s comments were also reflected in the document

## Meeting was adjourned at 9:45Am.

# Day 2 AM2 (10:30Am-12:30Am), November 13, 2018: Apartment #7

## Meeting is called to order at 10:30Am by Peter Jeong, Chair of IEEE 802.21 IG.

## Discussions on “The Network Relevance in VR” (DCN: 21-18-0067-00-0000)

#### Continued the discussion on the document and edited the content based on the comments made by Subir

## Meeting was adjourned at 12:40pm

# Day 3 AM2 (10:30am-12:30pm), November 14, 2018: Thai Chitlada 1

## 802.11 WG Midweek Plenary: Meeting is called to order at 10:30AM by Dorothy Stanley, Chair of IEEE 802.11 WG

## Presented “HMD based VR Applications – Issues and Challenges” (DCN: 21-18-0073-00-0000)

* + - * + Dillon presented the document to 802.11 WG members
        + Question was raised from the audience regarding the scope of SG
        + Subir answered that the SG is yet to be formed so the scope is yet to be determined.

## The meeting was adjourned at 12:25PM