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| Project | **HMD based VR Sickness Reducing Technology**  <<http://sites.ieee.org/sagroups-3079/> **>** |
| Title | IEEE 802.21 Liaison officer report |
| DCN | **3079-19-0012-00-0000** |
| Date Submitted | **April 20, 2019** |
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| Re: |  |
| Abstract | This document reports the summary of IEEE 802 liaison activities and discusses what the WG should do for the network requirements on VR sickness minimization. |
| Purpose | This document provides a basic summary of the IEEE 802.21 VR SG activities, issues and challenges so that IEEE 3079 WG should be able to make its decision on how to draft the network requirements for VR sickness minimization. |
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# **Progress Rerpot on IEEE 802.21 Network Enablers for seamless HMD based VR Content Service SG**

### **“Network Enablers for Seamless HMD based VR Content Service” Study Group was approved by IEEE 802 EC at the end of November, 2018 plenary meeting in Bangkok**

### **IEEE 802 EC asked the study group to do the followings:**

### **Reach out to the rest of 802 WGs to increase the awareness of VR SG activities and goals**

### **Study further and decide what outcomes the SG will produce**

## **SG Status**

## **VR SG reached out the following IEEE 802 Working Groups during January Wireless Interim in St. Louis**

## **IEEE 802.15 WNG, IEEE 802.11 RTA TIG, IEEE 802.24 TAG**

## **VR SG reached out the following IEEE 802 Working Groups during March Plenary in Vancouver**

## **IEEE 802.1 NENDICA, IEEE 802.1 WG, IEEE 802.3 WG**

### **Outcome of Outreach**

#### **Positive Outcomes**

##### **Increased the awareness of VR SG goals**

##### **Developed some personal level discussion on the interest of VR SG**

##### **Began to understand the necessity of VR network requirements**

##### **Got some feedback on how VR SG can leverage the network technology developed by other IEEE 802 WGs**

##### **Two people outside of IEEE 802.21 WG joined the VR SG to explore what they can contribute**

#### **Negative Outcomes**

##### **Did not receive much feedback on the Whitepaper produced by VR IG**

##### **Did not see too many people coming to VR SG to work together**

#### **Quantitative Outcomes**

##### **Number of contributed documents: 10**

##### **Number of participants for VR SG: 8**

##### **Number of SG sessions**

##### **January, 2019 Interim: 4**

##### **March, 2019 Plenary: 4**

# **Activites outside of SG**

## **EHT(Extremely High Throughput) SG in IEEE 802.11 WG drafted the PAR/CSD**

## **RTS(Real Time Services) TIG in IEEE 802.11 suggested the network requirement similar to the network requirements that Network Enablers for seamless HMD based VR Content Service SG suggests**

## **As Network Enablers for seamless HMD based VR Content Service SG presented the use cases for VR network requirements to various IEEE 802 WGs, its argument that the next generation network specification needs to be developed for VR has gained some positive interests**

# **Current Challenges within IEEE 802**

## **IEEE 802.21 WG is a small group made of 10 members**

## **Dillon is currently chairing the SG and has presented to all IEEE 802 WGs to encourage the people to participate, no IEEE 802 members have shown their interest in joining the 802.21 WG**

## **IEEE 802.21 is a WG that defines the network stanard for Handover Service; hence, its standard characteristics are quite different than the rest of the IEEE 802 WGs as they define the network standard for PHY and MAC**

# **Future SG Activities**

## **Paul Nikolich, the IEEE 802 EC Chair, suggested the followings**

## **IEEE 802.21 WG should be hibernated unless new PAR is proposed**

## **IEEE 802.21 WG has no other working items except for the Network Enablers for seamless HMD based VR Content Service SG**

## **Once the Network Enablers for seamless HMD based VR Content Service SG ends, 802.21 WG should be hibernated**

## **For the Network Enablers for seamless HMD based VR Content Service SG’s future plan**

##### **Suggested to continue its work within other IEEE 802 WGs**

##### **Possible suggestions are IEEE 802.1, 802.3, 802.11, 802.24 and NENDICA**

## **Network Enablers for seamless HMD based VR Content Service SG의 계획**

## **A straw poll will be conducted during the Atlanta meeting in May to discuss if it makes sense for the SG to continue its work in one of the following groups: IEEE 802.1, 802.3, 802.11, 802.24 or NENDICA**

## **The official period for SG activities is until Hanoi meeting in July; hence, the IEEE 802.21 WG and SG activities will be determined by the straw poll result.**