



Real-Time B5G/6G Demonstrations

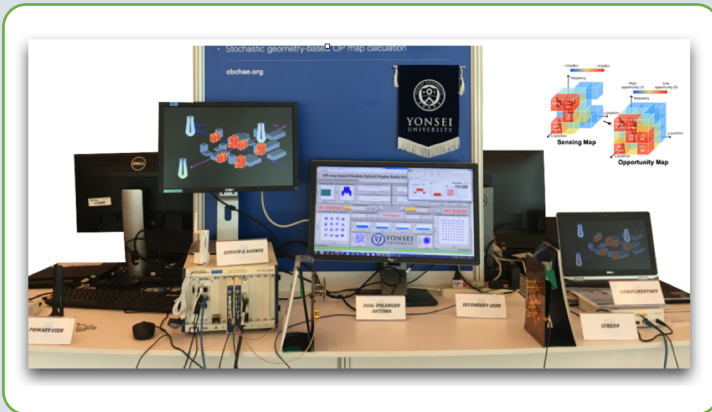


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Demo 1: Reinforcement Learning based Flexible Duplex (Dec. 12th)

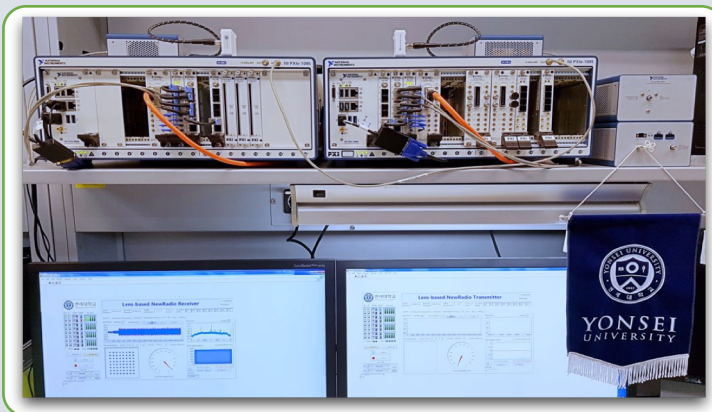
Contributors: Soo-Min Kim, Han Cha, Seong-Lyun Kim, and Chan-Byoung Chae



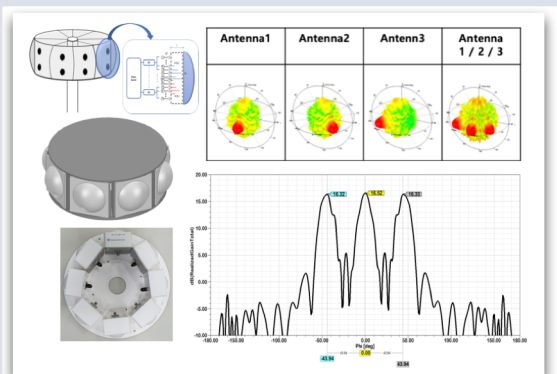
- Learning based opportunistic map (LOP-MAP)
- First prototype of sensor-aided cognitive radio
- Dynamic duplex based on LOP-MAP
- Prior work
 - Full Duplex SISO (Austin, USA, 2014)
 - Full Duplex MIMO (San Diego, USA, 2015)
 - Wideband Full Duplex (Washington DC, USA, 2016)
 - OP-map based Flexible Duplex (Singapore, 2017)
 - Multiuser Full Duplex (Abu Dhabi, 2018)

Demo 2: Lens Array for mm-Wave V2X System (Dec. 10th ~ Dec. 12th)

Contributors: Sang Hyun Park, Inseok Jang*, Byoungnam Kim*, Dong Ku Kim, and Chan-Byoung Chae

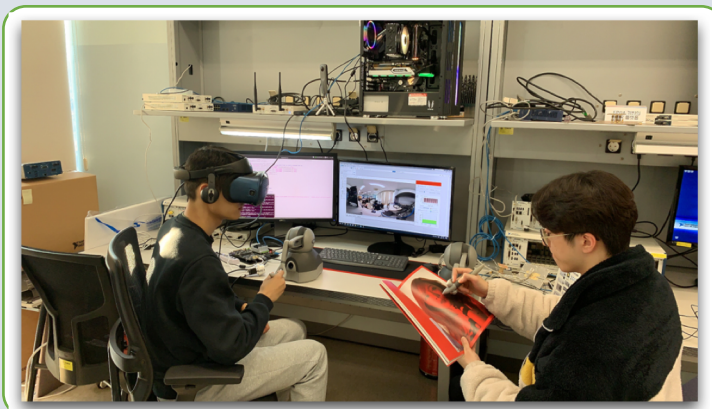



• Joint work with 



Demo 3: Wireless VR/Haptic Open Platform (Dec. 10th ~ Dec. 11th)

Contributors: Taehun Jung, You Na Jin*, Chae Eun Rhee*, and Chan-Byoung Chae



• Joint work with Inha University* 

- Open platform for VR/haptic communications
- Low-rate/latency haptic codecs
- Low-latency video codecs (H.264/265, VP8 etc.)
- VR/haptic transmission over various waveforms
- Haptic device: Geomagic Touch™
- XIMEA camera & Nvidia TX2
- Ricoh 360° camera & Vive Cosmos

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Full demo videos are available at <https://www.youtube.com/channel/UCpSD96cr8FMD-kXUdZ7tg>