

February 26, 2013

Activity Report of URSI-F

Reported by Y. Maekawa (Chair)

1. Commission meetings in the period of November 2012– February 2013
(For more detail, please see <http://www2.nict.go.jp/pub/ursi-f/>)

(1) No. 569 Meeting

Date: November 14-16, 2011 Place: Tokyo Denki University (Tokyo)

This meeting was held under the co-sponsorship of IEICE Technical Committees on AP and CS, and IEEE AP-S Japan Chapter. Seven papers relevant to the field of URSI-F were presented in the URSI-F special session and other sessions:

1. Standardization activities on radio wave propagation technology in ITU-R
2. Radio wave propagation for radio communication technologies of a new era
3. OFDM transmission in multi-path propagation environment
4. study of MIMO channel property with movement in LOS and NLOS paths – Dependence of correlation on antenna configuration –
5. Analysis of MRC diversity characteristics of OFDM where delay profile exceeds the guard interval
6. A reverberation chamber to realize multipath-rich environment [IV] – Frequency dependence of propagation characteristics in the chamber –
7. A study on time-spatial propagation model for low antenna height base station – Delay profile model –

For more details, please see: <http://www.ieice.org/cs/ap/jpn/>

(2) No. 570 Meeting

Date: December 14, 2012 Place: National Institute of Information and Communications Technology (Tokyo)

Three papers were presented:

1. Current status of cloud profiling radar (CPR) onboard EarthCARE satellite
2. Measurement of the refractive index of polystyrene foam at 60GHz
3. Improvement effects of site diversity techniques on rain attenuation in Ku-band satellite communications links related to rain area motion

(3) No. 571 Meeting

Date: January 23-25, 2013 Place: Hotel Merieges Miyazaki (Miyazaki)

This meeting was held under the co-sponsorship of IEICE Technical Committee on AP, and IEEE AP-S Fukuoka Chapter. 17 papers relevant to the field of URSI-F were presented in the special sessions organized for recent propagation issues:

1. Study of elevation power angular spectrum to evaluate performance of 3D beamforming at base station
2. Deterioration mechanism of MIMO channel capacity and the influence on actual environment
3. Scale model method for mobile propagation in urban area and residential area
4. A experimental study on spatio-temporal channel characteristics in outdoor-to-indoor radio propagation environment
5. FDTD analysis of shielding effect of connecting doors for wireless LAN access service in high-speed train cars
6. Evaluation on interfering power due to 2/3 GHz band in heterogeneous network
7. Performance evaluation on MIMO sensor using narrow band FSK signals
8. Basic study on communication frequency for Very Large MIMO transmission
9. Evaluation of propagation loss difference between the 5.8GHz and 700MHz bands in V2V environments
10. Propagation loss model in inter-vehicles radio communication environments
11. Urban dynamic channel modeling for MIMO system evaluation using particle filtering
12. Arrival wave distribution characteristics with low antenna height in residential area

13. Analysis of field measurement with wideband MIMO sounder at 11 GHz frequency
14. Numerical examination on propagation loss properties for propagation distance and passerby density in case people exist between transmitter and receiver
15. Shadowing-multipath analysis of a BAN diversity antenna based on statistical dynamic measurements of the human walking motion
16. A study on the effects of rain area motion and upper atmospheric wind speed on rain attenuation characteristics in Ku-band satellite communications links
17. Presumption of trajectory deviations of a cubesat orbiting at very low altitude based on Ku-band beacon observations

For more details, please see: <http://www.ieice.org/cs/ap/jpn/>

2. Others

URSI-F Triennial Open Symposium will be held in Ottawa, Canada. Date: Apr.30-May 3, 2013.

The 4th Asia-Pacific Conference on Synthetic Aperture Radar (APSAR) 2013 will be held in Tsukuba, Japan. Date: Sept. 23-27, 2013.