

## Antennas and Propagation Track

<b>WeAP-O1</b>	<b>Special Session: Antennas for Mobile Communications</b>
Time	10:40 to 12:00, Wednesday, 31 October, 2007
Room	
Co-Chair	Dr. Fu-Ren Hsiao, Advanced-Connectek INC., Taiwan.
	Dr. Shih-Huang Yeh, Industrial Technology Research Institute, Taiwan.

### 10:40 Surface-Mount Metal Chip Antenna with Symmetric Structure for WLAN Application

Po-Sheng Chen, Sheng-Chih Lin, Tsung-Wen Chiu, and Fu-Ren Hsiao  
Advanced-Connectek INC., Taiwan

### 11:00 The realization of pattern/polarization diversity by applying vertical excitation

Sung ho Chae, Min-Goo Choi, and Seong-Ook Park  
Information and Communications University, Korea

### 11:20 2.4/5.2 GHz Dual-WLAN Unequal-Arms Dipole Antenna with a Chip Inductor for Omni-directional Radiation Patterns

S. H. Yeh<sup>1</sup>, W. C. Yang<sup>2</sup>, W. K. Su<sup>2</sup>, and C.Y. Wu<sup>1</sup>

<sup>1</sup>Industrial Technology Research Institute, Taiwan

<sup>2</sup>Chung Cheng Institute of Technology, Taiwan

### 11:40 Broadband Monopole Antenna for DTV Reception and GSM Operation in the Mobile Phone

Cheng-Tse Lee<sup>1</sup>, Kin-Lu Wong<sup>1</sup>, and Yuan-Chih Lin<sup>2</sup>

<sup>1</sup>National Sun Yat-Sen University, Taiwan

<sup>2</sup>Walsin Technology Corporation, Taiwan

<b>WeAP-I</b>	<b>Invited Talk</b>
Time	13:20 to 14:00, Wednesday, 31 October, 2007
Room	
Co-Chair	Prof. Kin-Lu Wong, National Sun Yat-Sen University, Taiwan.
	Prof. Hong-Twu Chen, ROC Military Academy, Taiwan.

<b>WeAP-O2</b>	<b>Broadband and UWB Antennas</b>
Time	14:10 to 15:50, Wednesday, 31 October, 2007
Room	
Co-Chair	Prof. Chien-Jen Wang, National University of Tainan, Taiwan.

Prof. Shun-Yun Lin, Cheng Shiu University, Taiwan.
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- 14:10 Wideband Printed Dipole Antenna for DTV Signal Reception  
Yun-Wen Chi and Kin-Lu Wong  
National Sun Yat-Sen University, Taiwan
- 14:30 A CPW-Fed Two-Arm Spiral Slot Antenna  
Chien-Jen Wang<sup>1</sup> and Jin-Wei Wu<sup>2</sup>  
<sup>1</sup>National University of Tainan, Taiwan  
<sup>2</sup>National Chiao Tung University, Taiwan
- 14:50 A Planar UWB Antenna with Band Rejection Characteristic  
Kyoung-Min Kim, Sung-Kyo Park, In-Su Na, and Chong-Baek Park  
Chosun University, Korea
- 15:10 A Double-Sided Printed Y-Shaped Dipole Antenna for UWB Communications  
Shu-Ani Yeh, Shun-Yun Lin, Ching-Wei Guan, and Homg-Ren Huang  
Cheng Shiu University, Taiwan
- 15:30 The Design of Rhombic Antenna with a Band-Reject Characteristic  
Wen-Shan Chen and Yen-Hao Yu  
Southern Taiwan University, Taiwan

<b>WeAP-O3</b>	<b>Special Session: Microwave Filters and Diplexers</b>
Time	16:10 to 17:50, Wednesday, 31 October, 2007
Room	
Co-Chair	Prof. Ching-Her Lee, National Changhua University of Education, Taiwan.
	Prof. Ming-Hua Ho, National Changhua University of Education, Taiwan.

- 16:10 Dual-Band Bandpass Filter Using the Combined  $\lambda/2$  and  $\lambda/4$  SIRs for WLAN Applications  
P.-W. Chen, H.-H. Ho, and M.-H. Ho  
National Changhua University of Education, Taiwan
- 16:30 UMTS Diplexer Design Using Combined Coplanar Waveguide and Microstrip  
Wei-Qin Xu and Min-Hua Ho  
National Changhua University of Education, Taiwan
- 16:50 Design of an LTCC switchable filter for Dual-Band RF Front-End applications  
Cheng-Chung Chen and Shih-Ming Wang  
Industrial Technology Research Institute, Taiwan
- 17:10 Design of Dual-Mode SIW Cavity Filters

Chia-Cheng Chuang, Hung-Hsuan Lin, and Chin-Li Wang  
Industrial Technology and Research Institute, Taiwan

17:30 A Wideband Bandpass Filter using Combined  $\lambda/4$  Stepped-Impedance Resonators

Lian-Yu Chen<sup>1</sup>, Chung-I G. Hsu<sup>2</sup>, and Ching-Her Lee<sup>1</sup>

<sup>1</sup>National Changhua University of Education, Taiwan

<sup>2</sup>Da-Ye University, Taiwan

<b>ThAP-O4</b>	<b>Special Session: Small and Integrated Antennas I</b>
Time	10:20 to 12:00, Thursday, 1 November, 2007
Room	
Co-Chair	Prof. Hiroyuki Arai, Yokohama National University, Japan.
	Prof. Wen-Shan Chen, Southern Taiwan University, Taiwan

10:20 Low-profile Loop-shaped Inverted-F Wire Antenna with Dualmode Operation

Minseok Kim<sup>1</sup> and Hiroyuki Arai<sup>2</sup>

<sup>1</sup>Tokyo Institute of Technology, Japan

<sup>2</sup>Yokohama National University, Japan

10:40 Numerical Simulation of Antenna Efficiency Based on Wheeler and Refection Methods Using Method of Moments with Wire-Grid Model

Takashi Murayama, Nozomu Ishii, Yasuo Katagiri, and Michio Miyakawa  
Niigata University, Japan

11:00 Characteristics of Built-in Bent Folded Dipole Antenna for Handsets

Atsushi Kajitani<sup>1</sup>, Yongho Kim<sup>1</sup>, Hisashi Morishita<sup>1</sup>, and Yoshio Koyanagi<sup>2</sup>

<sup>1</sup>National Defense Academy, Japan

<sup>2</sup>Panasonic Mobile Communications Co., Ltd., Japan

11:20 Internal Penta-Band Printed Loop-Type Mobile Phone Antenna

Wei-Yu Li and Kin-Lu Wong

National Sun Yat-Sen University, Taiwan

11:40 Design of a Novel Multiband Internal Antenna for Personal Communication Handsets

Rashid Ahmad Bhatti, Hyeong-Sik Yoon, and Seong Ook Park  
Information and Communications University, Korea

<b>ThAP-O5</b>	<b>Special Session: Small and Integrated Antennas II</b>
Time	13:20 to 15:00, Thursday, 1 November, 2007
Room	

Co-Chair	Prof. Seong-Ook Park, Information and Communications University, Korea
	Prof. Hua-Ming Chen, National Kaohsiung Univ. of Applied Sciences, Taiwan

- 13:20 A novel compact PIFA for Wireless Communication applications  
Yong-Sun Shin and Seong-Ook Park  
Information and Communications University, Korea
- 13:40 High Gain Design of a Very Small Normal Mode Helical Antenna for RFID Tags  
Y. Yamada, W.G. Hong, W.H. Jung, and N. Michishita  
National Defense Academy, Japan
- 14:00 Design for the Miniaturized RFID Tag Antenna in 910 MHz Band  
Kyeong-Sik Min, Gun-Do Park, and Chul-Keun Park  
Korea Maritime University, Korea
- 14:20 Compact Dual-band Hybrid Dielectric Resonator Antenna  
Hua-Ming Chen, Yi-Fang Lin, Chia-Ho Lin, and Shih-Chieh Lin  
National Kaohsiung University of Applied Sciences, Taiwan
- 14:40 Planar High Gain Antenna for 5.8-GHz WiMAX Operation  
Chun-Yih Wu, Shih-Huang Yeh, and Tzu-Hao Lu  
Industrial Technology Research Institute, Taiwan

<b>ThAP-P</b>	<b>Poster Session</b>
Time	15:20 to 17:20, Thursday, 1 November, 2007
Room	
Co-Chair	Prof. Jin-Sen Chen, Cheng Shiu University, Taiwan.
	Prof. Horng-Dean Chen, National Kaohsiung Normal University, Taiwan
	Prof. Fa-Shian Chang, ROC Military Academy, Taiwan
	Prof. Chih-Yu Huang, National Kaohsiung Normal University, Taiwan

- AP-P-01 “Bad Urban” Uplink Multipaths' Distribution in Azimuth-Elevation DOA, with Scatterers Modeled as Inside a Cylinder Above the Mobile & as More Sparse with Height  
Andriy Yakovych Olenko<sup>1</sup>, Sajjad Ahmed Qasmi<sup>2</sup>, and Kainam Thomas Wong<sup>3</sup>  
<sup>1</sup>Kyiv University, Ukraine  
<sup>2</sup>Sandvine Incorporated, Canada  
<sup>3</sup>Hong Kong Polytechnic University, Hong Kong
- AP-P-02 Studies of CPW-fed Compact Equilateral Triangular-ring Slot Antennas  
Jin-Sen Chen and Tung-Ying Chiang

- Cheng Shiu University, Taiwan
- AP-P-03 Experimental Consideration on the Synthetic Range-Profile Processing by Stepped-Frequency Radar  
Chie Fukushima  
Keio University, Japan
- AP-P-04 Design of Band-Rejected UWB Slot Antenna with Parasitic Strips  
Jieh-Sen Kuo<sup>1</sup> and Chih-Yu Huang<sup>2</sup>  
<sup>1</sup>Kao-Yuan University, Taiwan  
<sup>2</sup>National Kaohsiung Normal University, Taiwan
- AP-P-05 Joint Two Dimensional DOA and Multipath Time Delay Estimation in Rectangular Planar Array  
Han Wang and Jin-Kuan Wang  
Northeastern University, China
- AP-P-06 Broad Dualband Fork-shaped CPW-fed Monopole Antenna  
Wen-Chung Liu, Chao-Ming Wu, and Yueh-Hsing Ho  
National Formosa University, Taiwan
- AP-P-07 A Study on Broadband Printed Slot Antennas with Regular Rhombus Slots  
Jen-Yea Jan and Liang-Chin Wang  
National Kaohsiung University of Applied Sciences, Taiwan
- AP-P-08 Compact Wideband Microstrip-Line-Fed Rhombus-Like Slot Antenna with Extended edges  
Jen-Yea Jan and Dong-Rong Wu  
National Kaohsiung University of Applied Sciences, Taiwan
- AP-P-09 Switchable Printed Monopole Antenna with Frequency Diversity for WiFi/2.6 GHz WiMAX/3.5 GHz WiMAX Applications  
Re-Yu Chou, Chun-Yih Wu, and Shih-Huang Yeh  
Industrial Technology Research Institute, Taiwan
- AP-P-10 A Novel Design to Prevent Crosstalk  
W.T. Huang<sup>1</sup>, C.H. Chen<sup>2</sup>, C.H. Lu<sup>1</sup>, S.Y. Tan<sup>1</sup>  
<sup>1</sup>National Taipei University of Technology, Taiwan  
<sup>2</sup>Central Taiwan University of Science and Technology, Taiwan
- AP-P-11 Application of Linearization Modeling Technology for Nonlinear RF Power Devices  
Maoliu Lin, Xiaojie Hua, Hongjian Sun, and Jing Jiang  
Harbin Institute of Technology, China
- AP-P-12 A Wide-Band PLL-Based Frequency Synthesizer with Adaptive Dynamics  
Ping-Heng Wu, Ching-Yuan Yang, and So-Yu Chao

National Chung-Hsing University, Taiwan

**AP-P-13 A Time-domain Beamformer for UWB Through-wall Imaging**

Chen Lei<sup>1,2</sup> and Shan Ouyang<sup>2</sup>

<sup>1</sup>Xidian University, China

<sup>2</sup>Guilin University of Electronic Technology, China

**AP-P-14 Capacitively-Fed Shorted Patch Antenna for Broadband Operation**

H.D. Chen, J. N. Li, Y. H. Taso, and L. C. Lee

National Kaohsiung Normal University, Taiwan

**AP-P-15 Broadside CPW Coupled-Line Balun**

Guan-Yu Chen<sup>1</sup>, Jwo-Shiun Sun<sup>1</sup>, Kao-Liang Wu<sup>1</sup>, Cheng-Hung Lin<sup>2</sup>,  
Chia-Hao Wu<sup>2</sup>, Kwong-Kau Tiong<sup>2</sup>, and YD Chen<sup>3</sup>

<sup>1</sup>National Taipei University of Technology, Taiwan

<sup>2</sup>National Taiwan Ocean University, Taiwan

<sup>3</sup>High Tech Computer, Corp (HTC), Taiwan

**AP-P-16 3D Far-Field Antenna Scanning Technique Apply to Radiation Efficiency and Mean Effective Gain Measurement**

Guan-Yu Chen<sup>1</sup>, Cheng-Hung Lin<sup>2</sup>, Jwo-Shiun Sun<sup>1</sup>, Kwong-Kau Tiong<sup>1</sup>,  
and YD Chen<sup>3</sup>

<sup>1</sup>National Taipei University of Technology, Taiwan

<sup>2</sup>National Taiwan Ocean University, Taiwan

<sup>3</sup>High Tech Computer, Corp (HTC), Taiwan

**AP-P-17 Mobile Handset and Radiation Power Absorption Measurement**

Guan-Yu Chen<sup>1</sup>, Cheng-Hung Lin<sup>2</sup>, Jwo-Shiun Sun<sup>1</sup>, Kwong-Kau Tiong<sup>1</sup>,  
and YD Chen<sup>3</sup>

<sup>1</sup>National Taipei University of Technology, Taiwan

<sup>2</sup>National Taiwan Ocean University, Taiwan

<sup>3</sup>High Tech Computer, Corp (HTC), Taiwan

**AP-P-18 Dual-Band 1-D PBG**

Guan-Yu Chen<sup>1</sup>, Jwo-Shiun Sun<sup>1</sup>, Kao-Liang Wu<sup>1</sup>, Cheng-Hung Lin<sup>2</sup>,  
Chia-Hao Wu<sup>2</sup>, Kwong-Kau Tiong<sup>2</sup>, and YD Chen<sup>3</sup>

<sup>1</sup>National Taipei University of Technology, Taiwan

<sup>2</sup>National Taiwan Ocean University, Taiwan

<sup>3</sup>High Tech Computer, Corp (HTC), Taiwan

**AP-P-19 CPW-Fed Planar Ultra-Wideband Antenna Having a Frequency Band-Reject Function**

Wen-Shan Chen and Kai-Cheng Yang

Southern Taiwan University, Taiwan

**AP-P-20 Dual-Band Operation Vertical Patch Antenna for WLAN Applications**

Kuo-Chien Chao<sup>1</sup>, Fa-Shian Chang<sup>2</sup>, Hong-Twu Chen<sup>2</sup>, Chia-Hung Lu<sup>2</sup>, and  
Yung-Tao Liu<sup>2</sup>

<sup>1</sup>Cheng Shiu University, Taiwan

<sup>2</sup>ROC Military Academy, Taiwan

**AP-P-21 Novel 3D Space Partition Method for Triple WiMax Multilayer LTCC  
Diplexer IPD Design with EM Coupling Sensitivity Concerns**

Chien-Heng Chen and Kuan-Huang Lin

National Sun Yat-Sen University, Taiwan

<b>FrAP-O6</b>	<b>Novel Antenna Structures</b>
Time	09:00 to 10:20, Friday, 2 November, 2007
Room	
Co-Chair	Prof. Shen-Shou Max Chung, Southern Taiwan University, Taiwan
	Dr. Chun-Yih Wu, Industrial Technology Research Institute, Taiwan.

**09:00 Capacitive Coupling Return Loss of A New Pre-ionized Monopole  
Plasma Antenna**

Max Chung<sup>1</sup>, Wen-Shan Chen<sup>1</sup>, Bohr-Ran Huang<sup>2</sup>, Chih-Chia Chang<sup>3</sup>,  
Kuang-Yuan Ku<sup>1</sup>, Yen-Hao Yu<sup>1</sup>, and Tain-Wen Suen<sup>4</sup>

<sup>1</sup>Southern Taiwan University, Taiwan

<sup>2</sup>National Taiwan University of Science and Technology, Taiwan

<sup>3</sup>Industrial Technology Research Institute, Taiwan

<sup>4</sup>CSIST, Taiwan

**09:20 Metamaterial Enhanced High Gain Antenna for WiMAX Application**

Hung-Hsuan Lin, Chun-Yih Wu, and Shih-Huang Yeh

Industrial Technology Research Institute, Taiwan

**09:40 Integrated Printed Antenna for DTV Signal Reception in the Portable  
Media Player**

Chih-Hua Chang and Kin-Lu Wong

National Sun Yat-Sen University, Taiwan

**10:00 Improvement of Scanning Beams of a Lens Antenna by Cluster Feeds**

Yosuke Tajima and Yoshihide Yamada

National Defense Academy, Japan

<b>FrAP-O7</b>	<b>Special Session: DOA Estimation and Its Applications</b>
Time	10:40 to 12:20, Friday, 2 November, 2007
Room	
Co-Chair	Prof. Koichi Ichige, Yokohama National University, Japan
	Prof. Kin-Lu Wong, National Sun Yat-Sen University, Taiwan

**10:40 Iterative AOA Estimation of Coherent Signals**

Kazumasa Kaneko and Akira Sano

Keio University, Japan

**11:00 DOA Estimation for Wideband Signals using Modified C-SPRIT Method**

Yutaka Onuma, Koichi Ichige, and Hiroyuki Arai

Yokohama National University, Japan

**11:20 Effects of Spatial Correlation Between Signal Subspaces on Indoor Localization Using Subspace Matching**

Shohei Ikeda<sup>1</sup>, Hiroyuki Tsuji<sup>2</sup>, and Tomoaki Ohtsuki<sup>1</sup>

<sup>1</sup>Keio University, Japan

<sup>2</sup>National Institute of Information and Communications Technology, Japan

**11:40 Blind Array Calibration Technique for Uniform Linear Array Using ICA**

Yuhei Shimada, Hiroyoshi Yamada, and Yoshio Yamaguchi

Niigata University, Japan

**12:00 Two-dimensional DOA Estimation Using L-shaped Patch Array by Light Load Calibration Technique**

Jun Yaezawa and Hiroyuki Arai

Yokohama National University, Japan