

Ben Zhang

Resume

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Education

Tsinghua University, Beijing, China

Aug 2008 - Jul 2012

Bachelor of Engineering in Electronic Engineering

Chinese University of Hong Kong, Hong Kong, China

Sept 2010 - Jan 2011

Exchange Student in Electronic Engineering Department, GPA 3.95/4.0

Academic Experience

Mobile and Sensing Systems, Microsoft Research Asia, Beijing, China

Jun 2011 - present

Research Intern, advised by Dr. Xiaofan Fred Jiang

LiveSynergy

- Embedded hardware system design and debugging; manufactured 60+ boards for deployment. Design and development of Windows Phone 7.5 native application to enable bi-directional interaction
- Conducted experiments to measure the reliability and consistency for zone proximity sensing of current technologies (BLE, RFID, ZigBee); post-processed the raw data and compared the results with our magnetic-based platform.

SEPTIMU

- Designed the prototype with microphone and IMU, perfectly embedded in normal ear-phones.
- Wrote Windows Phone App and Matlab code for the communication using audio jack.

PhoneWeb

- Implemented a GUI frontend for PhoneWeb - SubwayRendezVous client

Digital Television Laboratory (DTV), Tsinghua U, Beijing, China

Jul 2009 - Jun 2011

Research Assistant, advised by Prof. Kewu Peng

- Proposed a simplified criterion – Hamming Euclidean Distance Spectra – to evaluate the equivalence of labelings and obtain the classification of unique mappings; submitted a patent to suggest a constellation mapping and de-mapping scheme by applying this criterion on DVB-S2 coded modulation systems.

Publications & Patents

1. X. Jiang, C.M. Liang, K. Chen, **Ben Zhang**, J. Hsu, B. Cao, J. Liu, and F. Zhao, “Design and Evaluation of a Wireless Magnetic-based Proximity Detection Platform for Indoor Applications”, to appear in the Proceedings of the 11th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN 2012), Apr. 2012.
2. X. Jiang, C.M. Liang, K. Chen, F. Zhao, K. Chen, J. Hsu, **Ben Zhang**, and J. Liu, “Demo: Creating Interactive Virtual Zones in Physical Space with Magnetic-Induction”, the 9th ACM Conference on Embedded Networked Sensor Systems (SenSys 2011), Nov. 2011
3. K. Peng, **Ben Zhang**, J. Lin, H. Yang, and C. Pan, “A Constellation Mapping and De-mapping Scheme for DVB-S2 Coded Modulation Systems”, Chinese Invention Patent, Patent Application Number: 201110216908.2

Personals & Skills

- English: TOEFL(iBT) 109; GRE 610+800+4.0
- Computer skills: Assembly, C, C++, C#, NesC, Verilog, Matlab, Python, HTML, XAML, Pspice, Visual DSP++, Multisim, Quartus, EAGLE PCB design, L^AT_EX