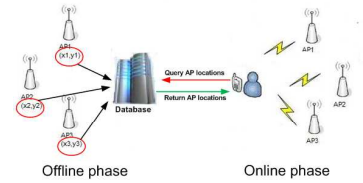
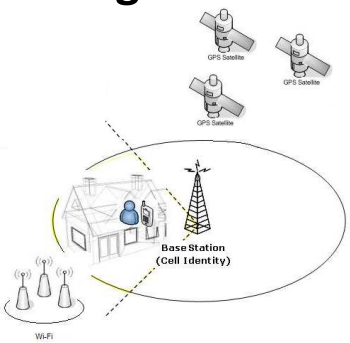
# The University *of* Edinburgh

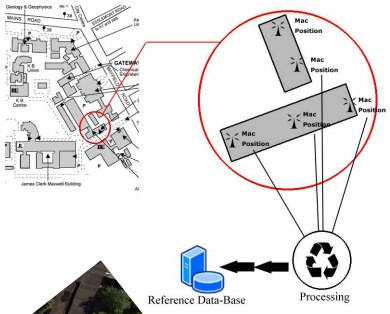
# System Level Integration Group

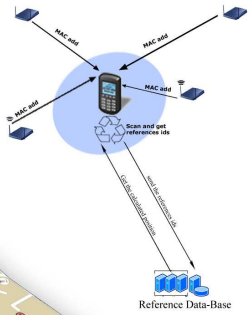
*The System Level Integration Group (SLIG) research aims to address the challenges associated with current and future electronic system design. Our activities extend from application and algorithmic research addressing areas such as navigation, telecommunication, and imaging down to efficient implementation issues in terms of embedded software and hardware platform developments. The following are selected example activities.*

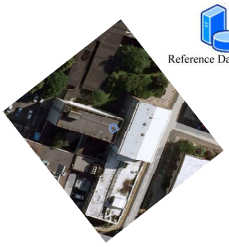
## Indoor Positioning



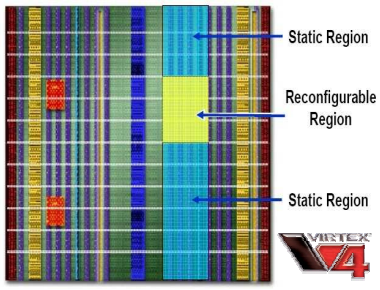



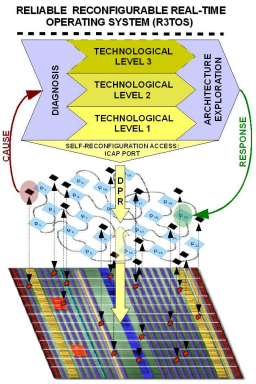



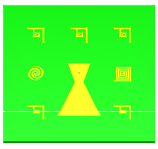
## Dependable Systems

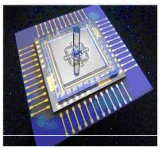


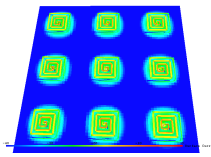



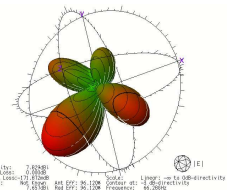

## Low Power, Reconfigurable MEMS Sensors, and Antennas

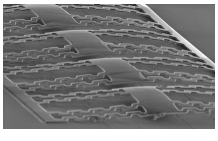
- **Development of Multi-frequency Antennas**
- **Arrays of Multi-frequency Antennas**
- **Smart Antenna Applications**
- **Fabrication on Silicon substrate**
- **Size of single element less than 2*2mm**
- **MEMS switches**
- **Programmable Beam Steering**

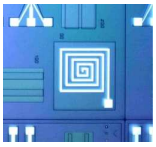


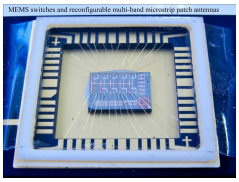


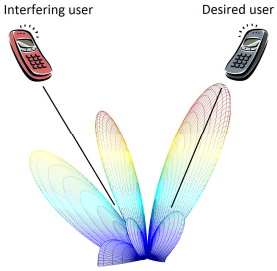











## High Performance Computing

- **The "Frequency Wall" problem means that commercial microprocessors are not going to run faster through clock frequency increases**
- **Solution: parallel computing e.g. through multi-core processing**
- **Designing parallel hardware systems is tricky**
- **Programming such systems is even trickier!**
- **We design new high performance computer systems**
- **Using a variety of technologies including FPGAs and Graphics Cards**


System Level Integration Group
Institute for Integrated Micro and Nano Systems
School of Engineering
The University of Edinburgh
Kings Buildings
Edinburgh EH9 3JL

**Contact:**
Prof. Tughrul Arslan
Phone: 0131 650 5592
E-mail: T.Arslan@ed.ac.uk
Group homepage: **http://www.see.ed.ac.uk/~slig/**