

## Network Technology Research Centre

Our mission is to spearhead strategic research in Networking and Communications technologies for short and long term benefits to the industry. Established in 1991, NTRC has positioned itself as a leading university-level inter-school research centre in Nanyang Technological University (NTU) and undertaken research and development works of strategic importance to the Singapore's economy.

### RESEARCH AREAS

#### 1. Power Line Communications

- Power line channel modelling and analysis
- MAC and network protocols for PLC networks
- Automatic meter reading systems
- Building control and monitoring systems
- PLC systems with low EMI radiation

#### 2. Optical Communications

- Nonlinear fibre optics
- Generalized multiprotocol label switching
- Photonic crystal fibres based devices
- Optical channel monitoring
- Fibre grating based devices and fabrication systems

#### 3. Network Control and Engineering

- Network modelling and performance analysis
- Traffic engineering (congestion/admission control, buffer management)
- Quality-of-Service (QoS) provisioning
- Reliable multicast protocol design

#### 4. Mobile Network Technology

- Radio resource management and packet access for 3G cellular
- WPAN technologies (Bluetooth and UWB)
- Mobile ad hoc network (MANET)
- Multihop cellular networks

