CS4031

Mobile Communications
How does a mobile network look like

This is what most people know about a mobile communication network
In reality it is much more complex

Depending on size/role, the central office hosts numerous functions and network boxes

- 1G/10G Ethernet, ADSL/VDSL, SDH, GPON/EPON, POTS, ...
- BRAS, PE Router, SGSN/GGSN (Mobile), DPI, DSLAM, Carrier-grade NAT, MPLS, ...

Local Exchange with DSL customers

- DSL
- Street cabinets, copper cable branching

Local Exchange with Fibre-to-the-cab customers

- FTTC
- FTTH
- Drop points, copper cable branching
- Ptp Ethernet

Large business

Core or Backbone network
Wireless access networks

This course focuses on the wireless access side:

• How do mobile phones successfully communicate to base station?
Global scale networks

• How do we provide global coverage?

• What happens after the Base station?
Local scale networks

• Why are there different types of wireless networks?

• And how does this work?
Personal scale networks and IoT

How do we get from this...

...to this