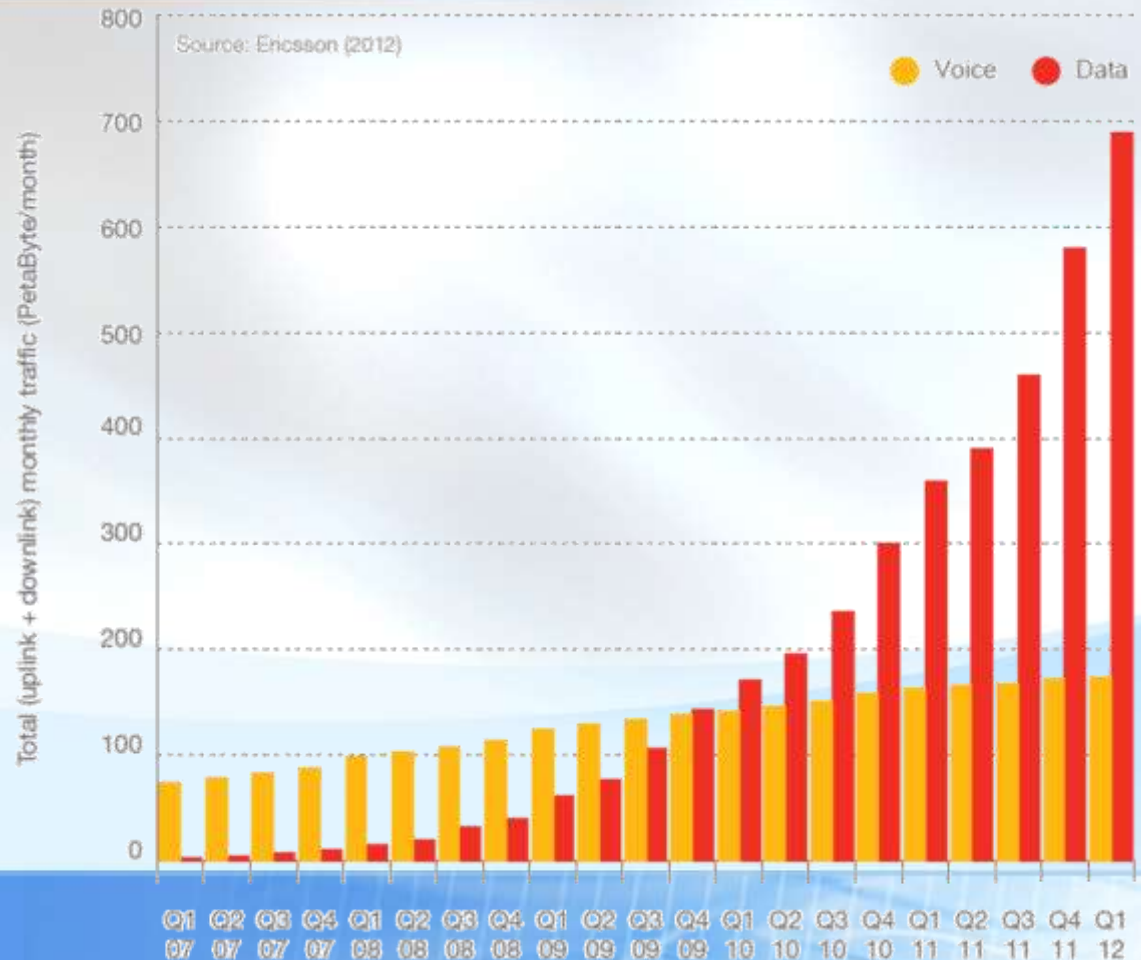


# Alignment and Co-operation with Fibre Metro Network LTE Asia 2012

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September 2012

# The Increase in Demand on Bandwidth

- Data traffic is growing
- Voice and SMS are slowing



Source: Ericsson's Traffic and Market Report (June 2012)

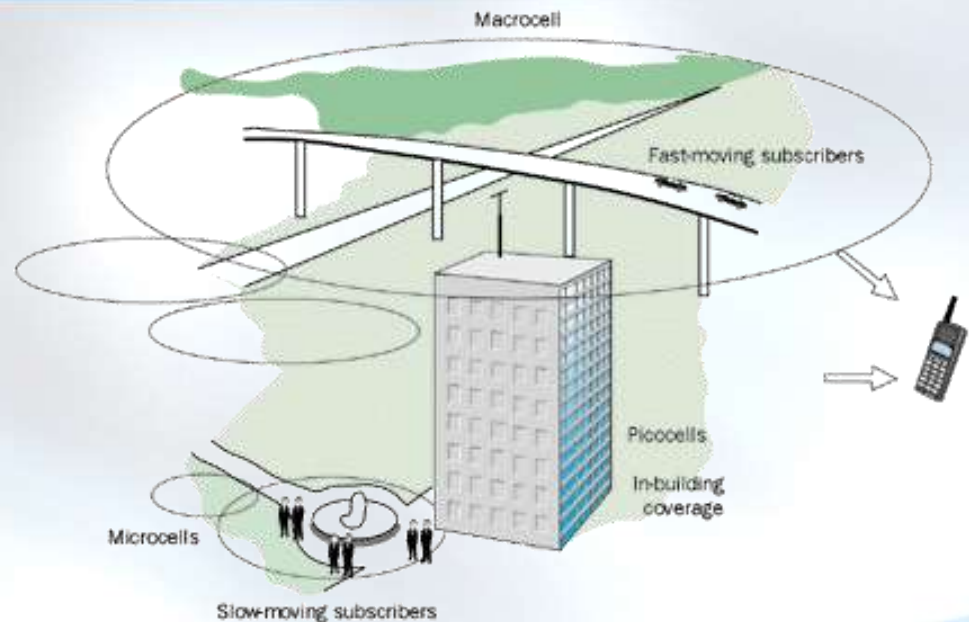
# The Fair Usage Policy

- The usage cap, say 5Gbps a month
- Not a good solution in a competitive market



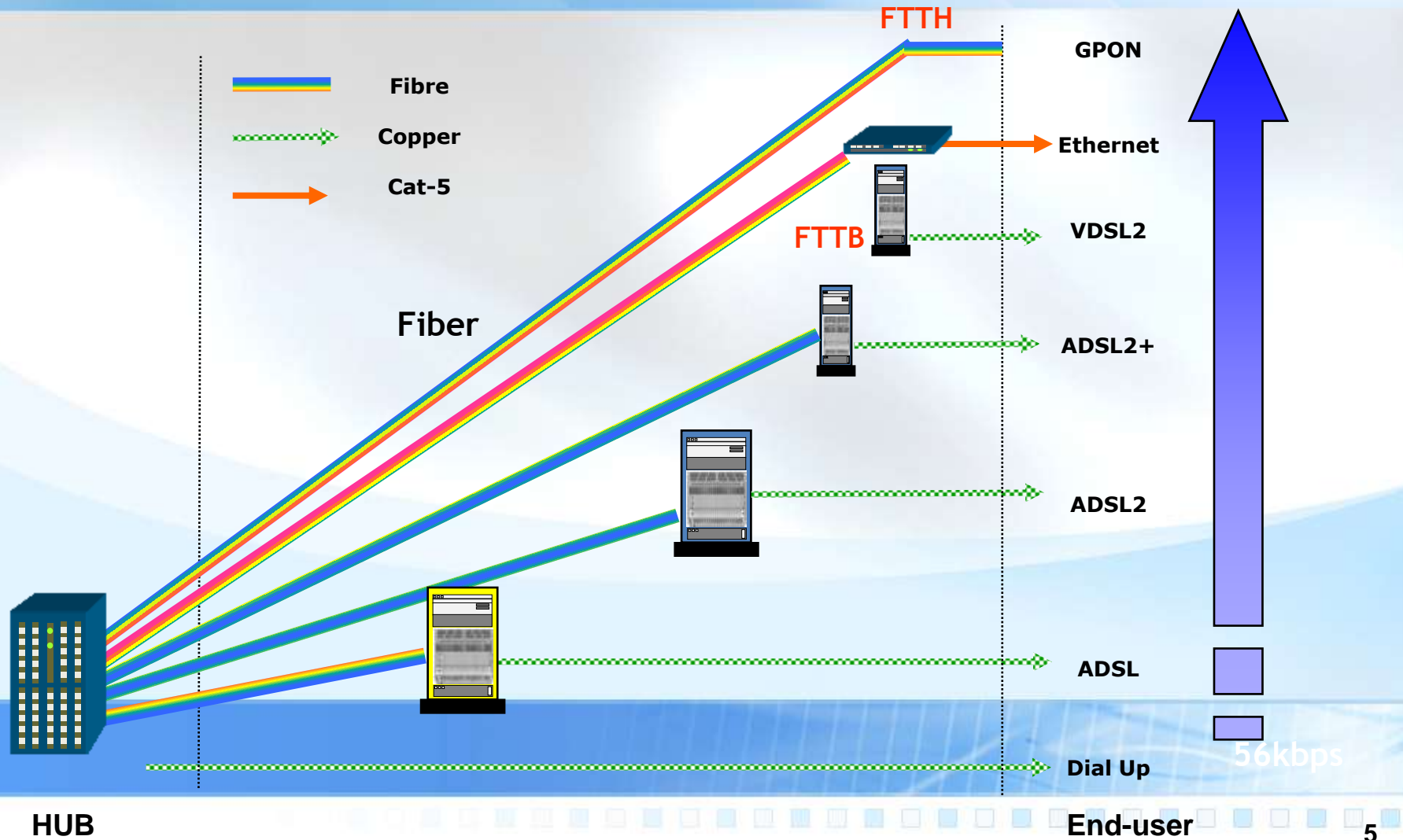
# The Solutions

- More spectrum
  - Not unlimited
  - Spectrum Usage Fee
- Smaller cell
  - Microcell
  - Picocell
  - Femtocell



Source: Harris Communications

# The Speed vs Distance





# The Perceived Value with Small Cell

- Increase capacity and throughput
- Lower equipment
- More efficient in the use of spectrum

# The Issues not Mentioned

- Increase in site rental cost
  - The location
  - The fee
- Increase in backhaul cost
- The power source

Macro cells only



Macro cells + small cells



Source: Alcatel Lucent

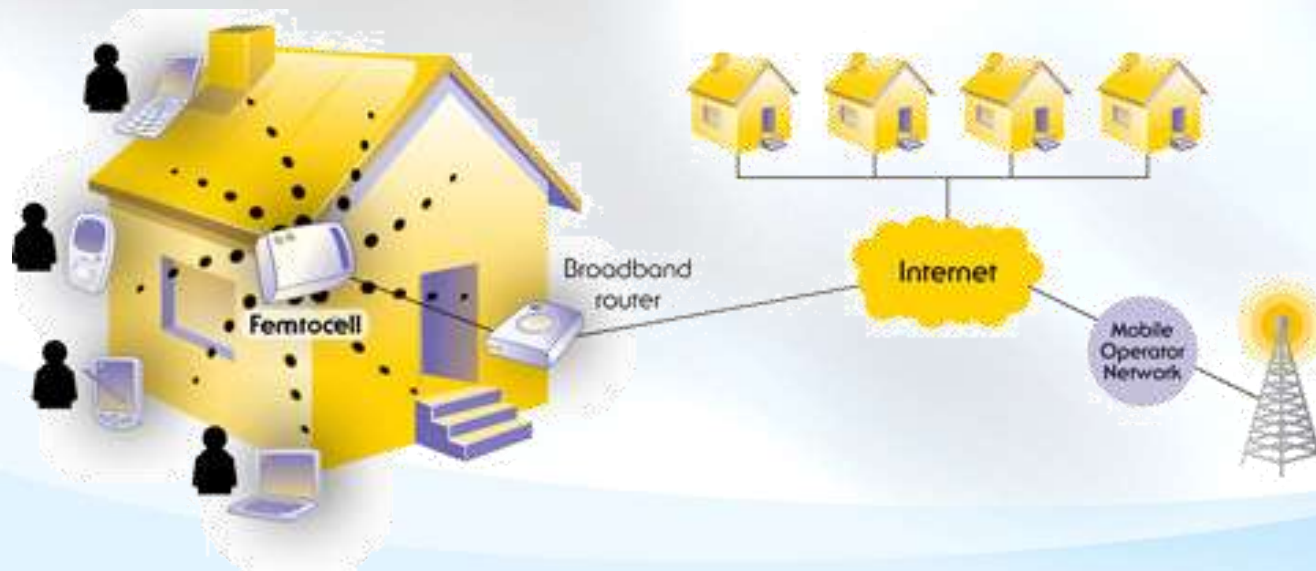
# Wireless Backbone

- Line of sight
- Most traffics are indoor
- Not an ideal solution for area we need to deploy small cell

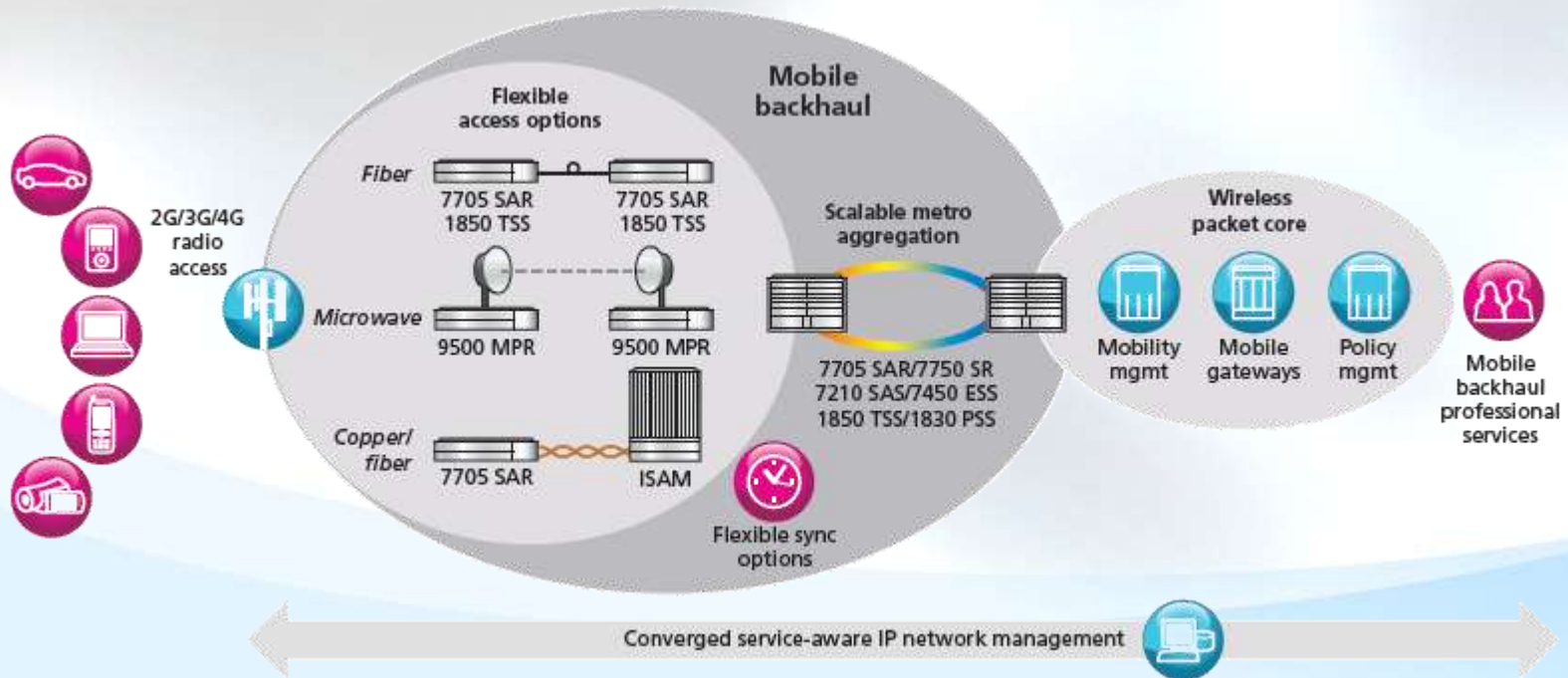




# Extension of Fixed Network



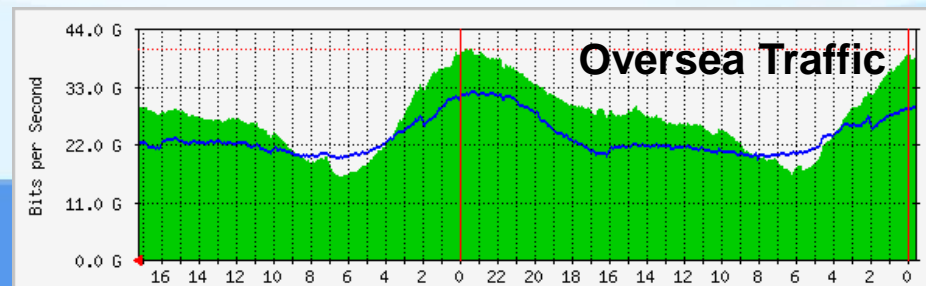
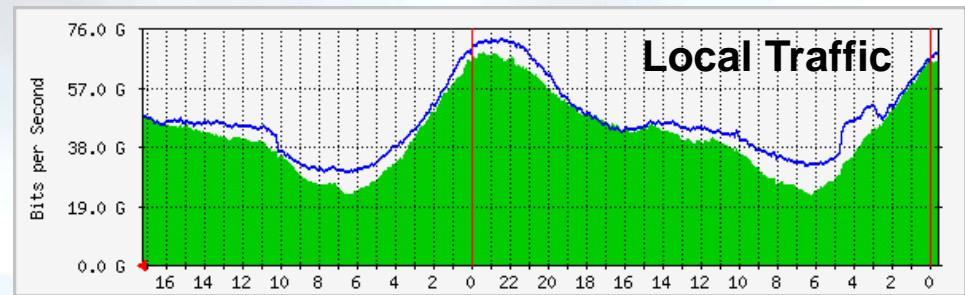
# Fixed Mobile Integration



Source: Alcatel Lucent

# The Usage on Fixed

- Symmetric
- Average 100 GB per month per user
- The highest is 2,500 GB in a month



# Fixed Mobile Integration

- Demand drives bandwidth and also makes mobile cell site closer to the user
- Wireless is a must for user interface
- Mobility is required, so is the bandwidth

