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## License Conditions and Infrastructure Sharing

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# Agenda



- Why infrastructure sharing
- Mandated sharing
- Sharing models analysis
  - Germany
  - Sweden
- Regulatory environment
  - Functional control
  - Competitive independence

# Why infrastructure sharing



Capital constraints: € 125 bn have been spent in 3G spectrum and another € 75 bn+ to be spend in infrastructure

The mobile operators have increased financial constraints :

- ▶ debt market available for telecommunication is shrinking
- ▶ operators have experience a downgrading on their debt rating
- ▶ operators' stock price have decreased



Delay in offering UMTS is foreseen

# Benefits of infrastructure sharing

- ▶ Operators will be able to reach a wider public more quickly
- ▶ The loss-producing start-up period of market development of *UMTS* can be shortened
- ▶ Allowing the competition at service level to get going more quickly
- ▶ Faster and better services with broader coverage and lower prices
- ▶ Reduction in the total number of antenna placement sites required



# Mandated infrastructure sharing



- Infrastructure should be permitted when:
  - commercially sensible
  - in no conflict with the competitive model in the market in question
- Infrastructure sharing should not be mandated:
  - in urban areas number for sites will be driven by need for capacity
  - reduction of sites in rural areas - however not primary roll-out area

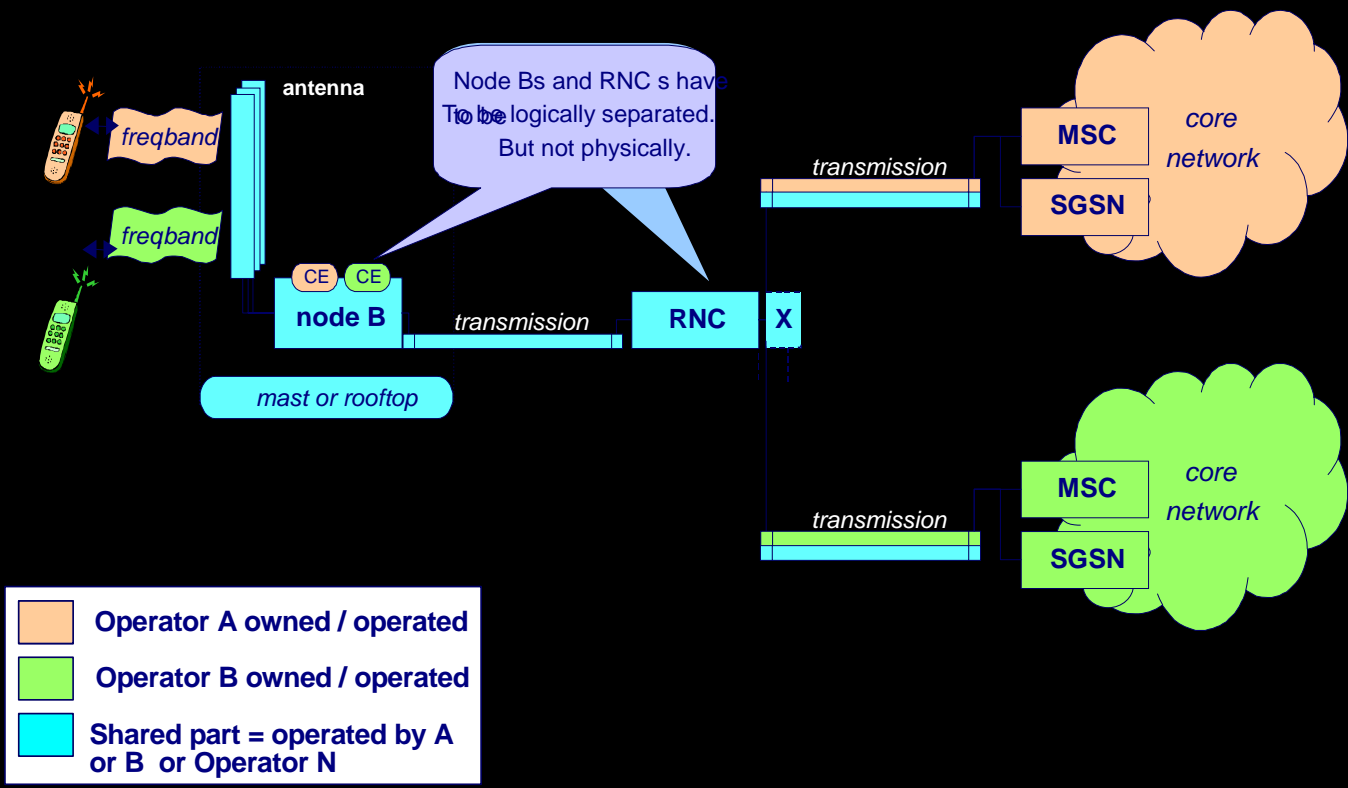


# Sharing Models

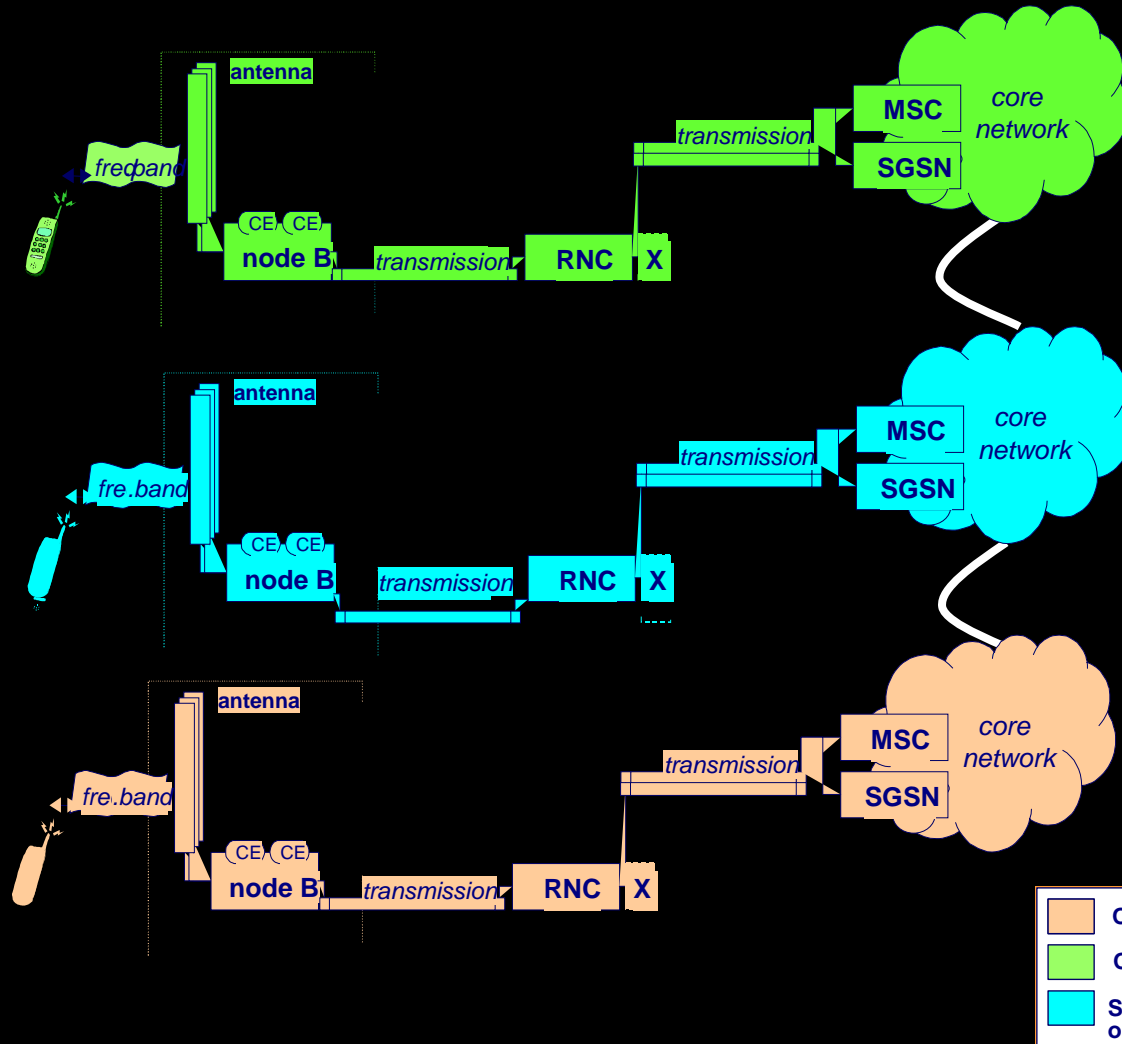
- NETCO
- Node B + RNC sharing
- Site Sharing
- Roaming Models
  - 2G-2G
  - 3G-3G
  - 2G-3G
  - Roaming Club



# NodeB - RNC - Germany



# NETCO - Sweden





# Functional control



Functional control over the network should remain with each operator



- ▶ Shared radio infrastructure should not contain intelligent core network
- ▶ Guaranteed capacity needed for services
- ▶ Service-related enhancements for network

# Competitive Independence



Sharing of radio access facilities does not affect the parties' competitive independence

- ▶ Distinct and differentiated cost base
- ▶ Radio infrastructure cost is only one of several elements in total cost
  - e.g 8% of total cost
- ▶ Most of the other cost elements are entirely separate and different.

Operators will develop their own business plan, brand and trademarks, marketing and distribution strategies and outlets. Independent development or acquisition of content and services

# Differentiating cost elements



- ▶ Brand and trademark development-cost
- ▶ Cost for marketing strategies
- ▶ Cost to develop or acquire rights to content and services
- ▶ Profit sharing cost with the owners of rights, services, transactions and content
- ▶ Salaries and incentive programs for staff
- ▶ Each parties cost of funds and vendor financing agreements
- ▶ Research and development

