

# Regulation of International Roaming Beyond 2010

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# Motivation

Last summer EU adopted a legislation on International

Roaming:

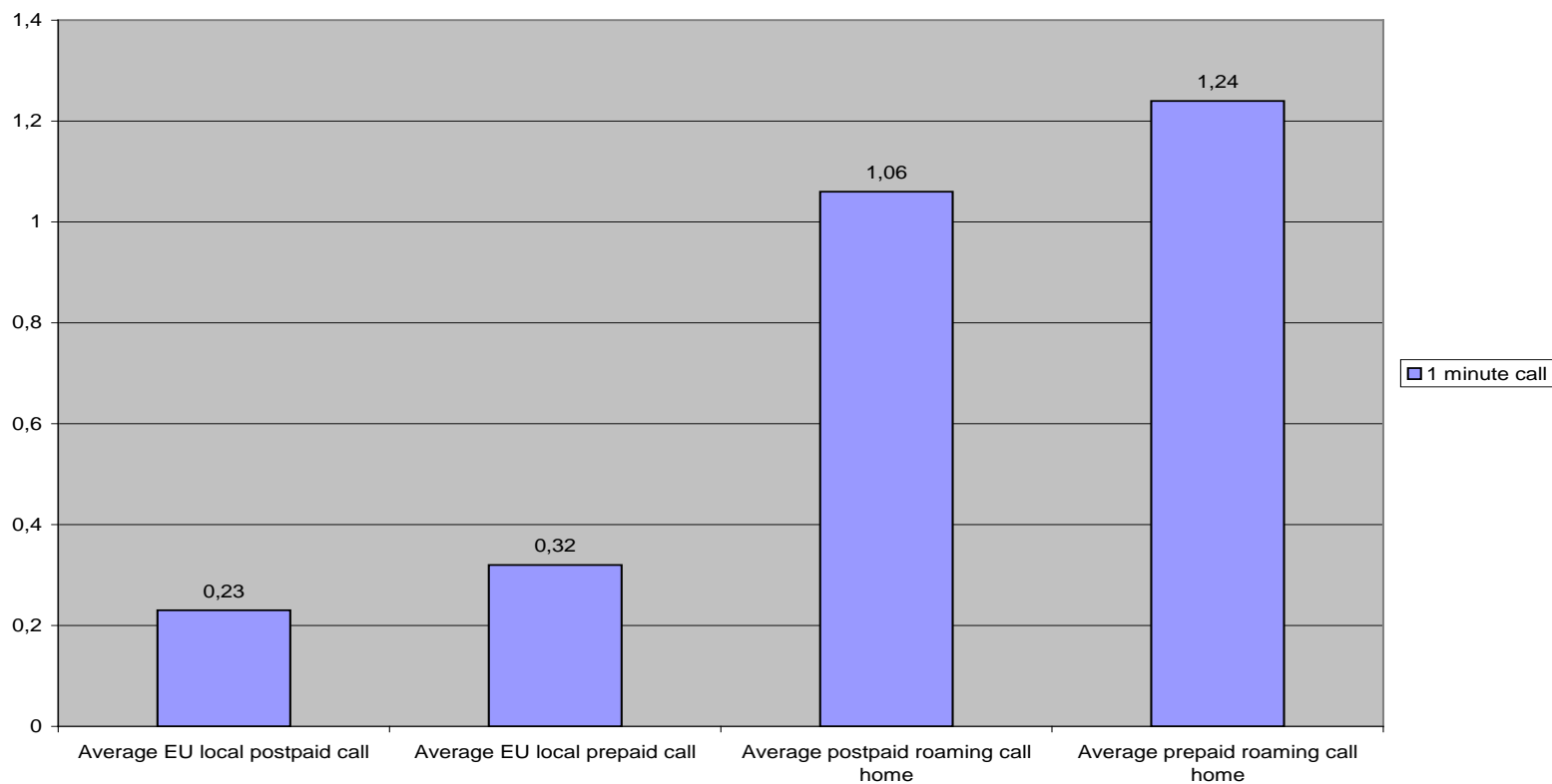
- Europewide price ceiling on wholesale tariffs
- Europewide price ceiling on retail tariffs
- Roaming market to be reviewed after three years

## Research question:

Will there be a need for roaming regulation beyond 2010?

- Background for the intervention
- Techno-economic analysis
- Analysis of market structure
- The need for regulation
- Limitation: Only look at voice

# Prices of local and roaming calls (CEC 2006)



## Situation before the roaming Regulation

- Roaming prices 3-5 times the costs
- Cheaper to buy a local SIM card
- Has been debated for many years
- Business customers have been making complaints for long – INTUG
- A growing number of all users roam
- However, nothing has happened with prices
- Difficult to regulate on a national basis
  - If retail prices are lowered, there will be a price squeeze on local operators
  - If wholesale prices are lowered, it will not be to the advantage of local users
- Commission therefore found the need to intervene with a EU-wide initiative

This has led to reductions of 57% and 60% in charges for outgoing and incoming roaming calls

# Basic Services in a GSM network

- Origination
- Termination
- Transit

# Major Cost drivers

- Coverage
- Capacity
- No. subscribers
  
- The number of cells is the decisive factor for network cost.
- Non network costs such as customer handling and marketing are also important

# Cost drivers 2

Number of cells depend on:

- Technology
- Frequency band used
- Frequency capacity

In urban areas the number of cells in 2G networks depend on the need for capacity.

Small cells are cheaper than large cells

How should costs of coverage be paid?

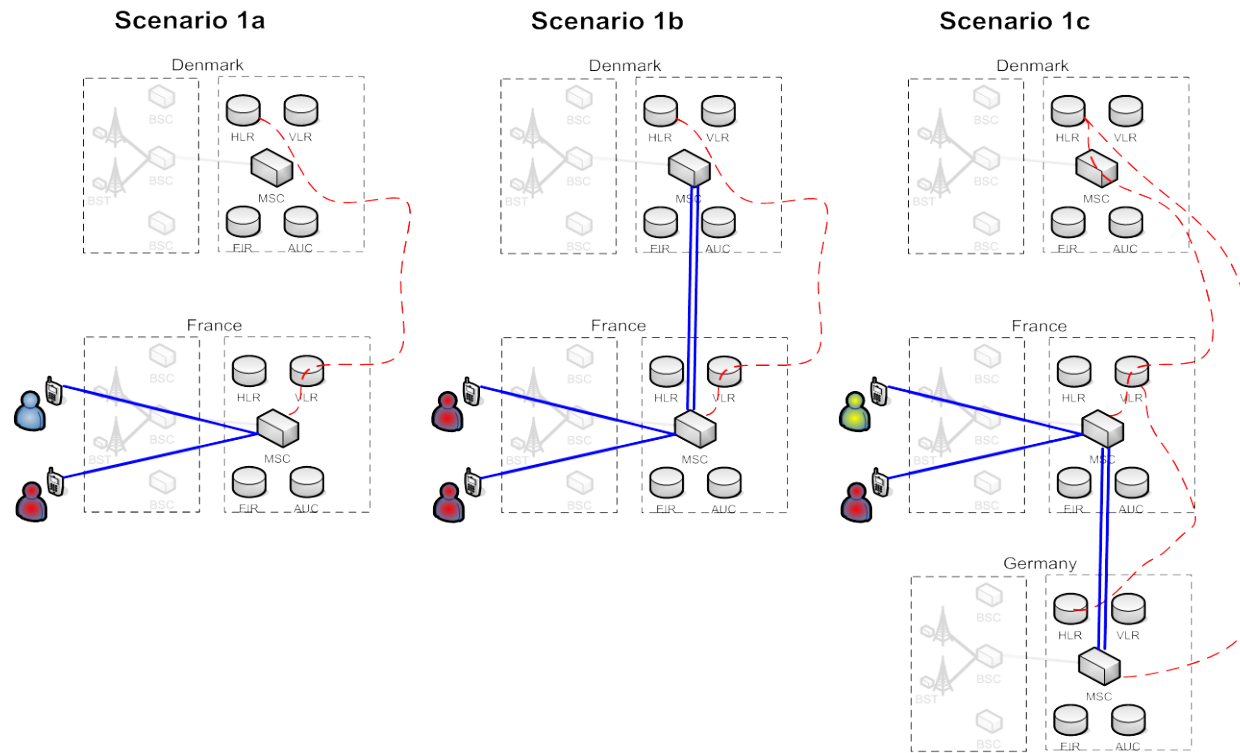
- Subscription, traffic or universal service fund?



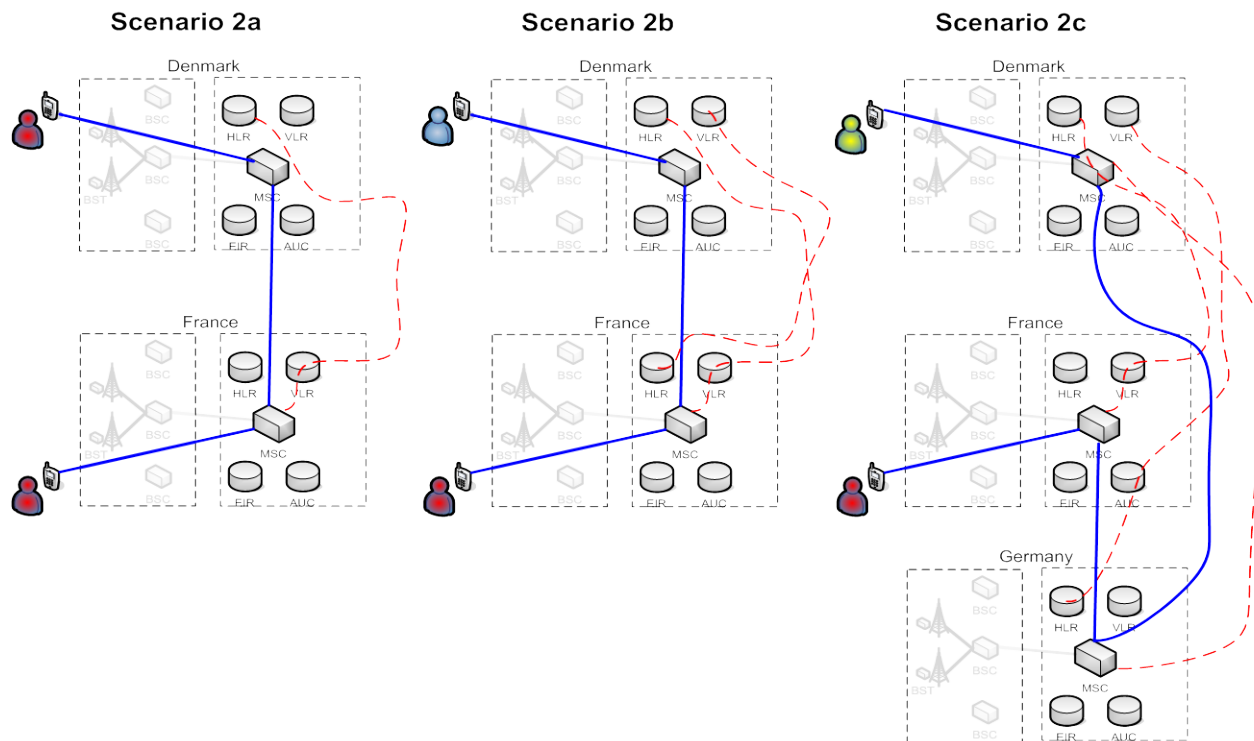
# What is roaming?

- Scenario 1: Calls inside the visited country
- Scenario 2: Calls from the visited country to the home country
- Scenario 3: Calls from the visited country to a third country
- Scenario 4: Receiving calls inside the visited country

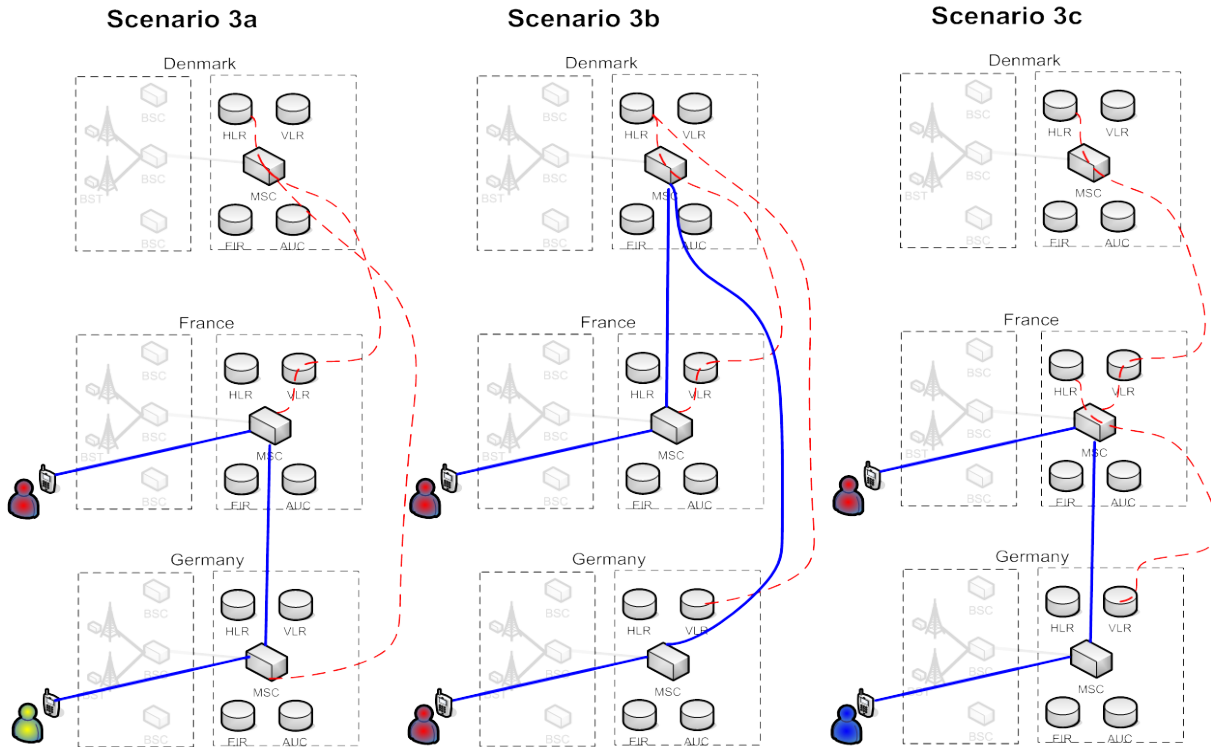
# Scenario I



# Scenario 2



# Scenario 3



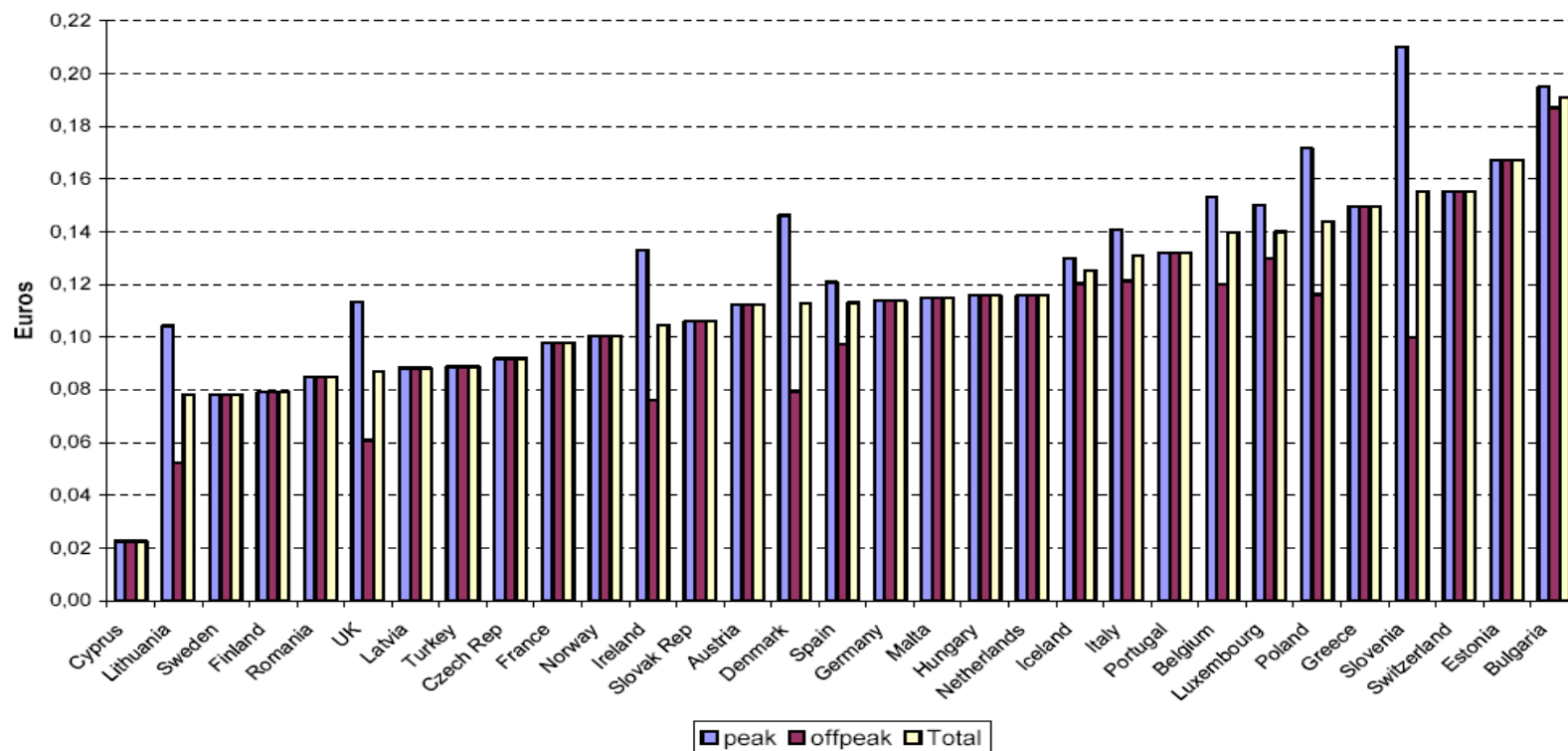
# The Cost of International Roaming

Basically international roaming involves the following functions:

- Mobile origination
- Mobile/Fixed termination
- International transit
- Roaming specific functions

# National MTR- 2006

Average MT Tariff per country January 2006



## Cost of roaming functions

	€-cent per minute
Mobile origination / termination (MT)	11.4
Fixed termination (FT)	1.25
International transit (IT)	2
Roaming specific costs (RSC)	2

## Roaming costs per scenario (€-cent per minute)

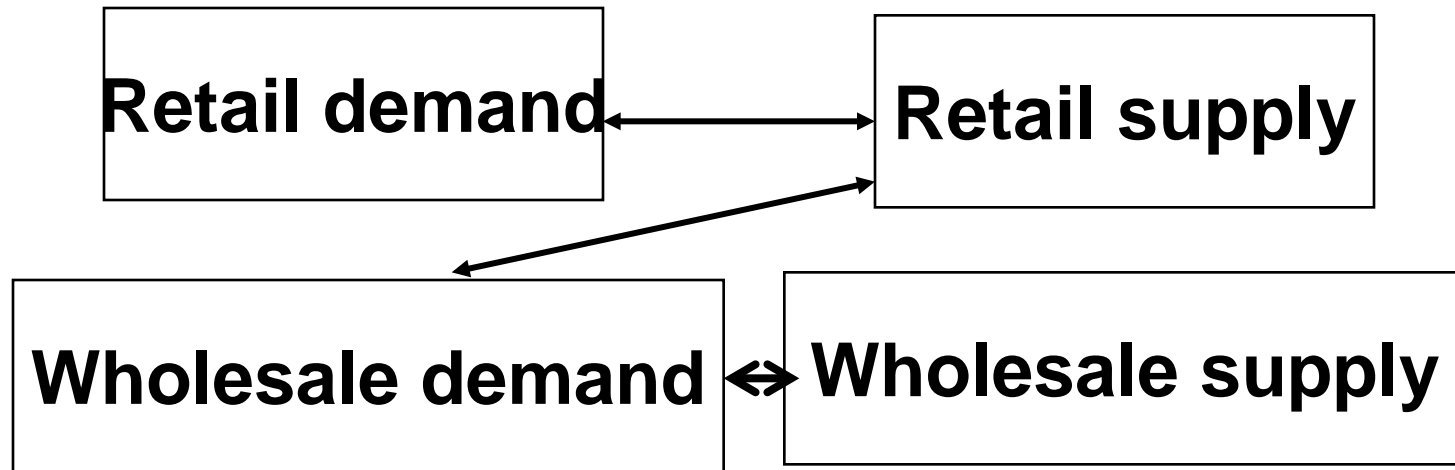
<i>Scenario</i>	<i>Mobile termination</i>	<i>Fixed termination</i>		
0	2*MT	22,8	FT+MT	12,65
1a	2*MT+RSC	24,8	FT+MT+RSC	14,65
1b	2*MT+RSC+2*IT	28,8	FT+MT+RSC+2*IT	18,65
1c	2*MT+2*RSC+2*IT	30,8	FT+MT+2*RSC+2*IT	20,65
2a	2*MT+RSC	24,8	FT+MT+RSC	14,65
2b	2*MT+RSC+IT	26,8	FT+MT+RSC+IT	16,65
2c	2*MT+2*RSC+2*IT	30,8	FT+MT+2*RSC+2*IT	20,65
3a	2*MT+RSC+IT	26,8	FT+MT+RSC+IT	16,65
3b	2*MT+RSC+2*IT	28,8	FT+MT+RSC+2*IT	18,65
3c	2*MT+RSC+IT	26,8	FT+MT+RSC+IT	16,65
4	IT+RSC	4	-	-



## Conclusions on cost analysis

- High roaming costs can not be justified by network costs.
- No obvious economics of scale in roaming costs, but costs may be higher in rural areas.
- But high mark-ups can be justified by demand conditions and regulatory intervention may not be necessary.

# Structure of the market for international roaming



# Retail Demand

- Small share of the total communication bill
  - Little focus on roaming when choosing an operator
- Price elasticity between -0.55 and 1.20
- Lack of transparency – lower price sensitivity
- Demand distributed among several different markets
- Bundled with other services
- Uneven distribution of demand – higher in tourist areas

# Retail Supply

- The same number of suppliers as for other mobile services
  - Offered by all mobile service providers
- EU national market studies have concluded that roaming markets are competitive
- Costs depends on supply for wholesale services
- Bundled with other services
- Purchase of local SIM-card is an alternative Uneven distribution of demand – higher in tourist areas

# Wholesale Demand

- Demanded by all mobile operators without a global footprint
- Demand generated by retail demand
- Technical limitations for choosing the cheapest supplier
- Many operators are both demanding and supplying roaming services
- Bilateral agreements

# Wholesale Supply

- Based on International Operator Tariffs
- Similar to International Accounting rates
- Tariffs agreed on reciprocal basis
- Costs transferred to retail customers
- Lack of transparency
- Reduction in roaming prices does not benefit the operators' own customers
- Traffic is not always led through the cheapest operator. Lower prices will therefore not attract more traffic.
- Collective agreements within international alliances seem to lead to lower prices, but they harm competition.

## Number of countries with roaming charges below 80, 90, 95 and 100% of maximum

	Call tariff			Receive tariff		
	cheapest offer	2. cheapest offer	3. cheapest offer	cheapest offer	2. cheapest offer	3. cheapest offer
Below 80%	5	0	0	2	0	0
Below 90%	7	0	0	5	0	0
Below 95%	12	5	0	10	0	0
Below 100%	20	15	8	19	14	3