

#### **Mobile Interconnection**



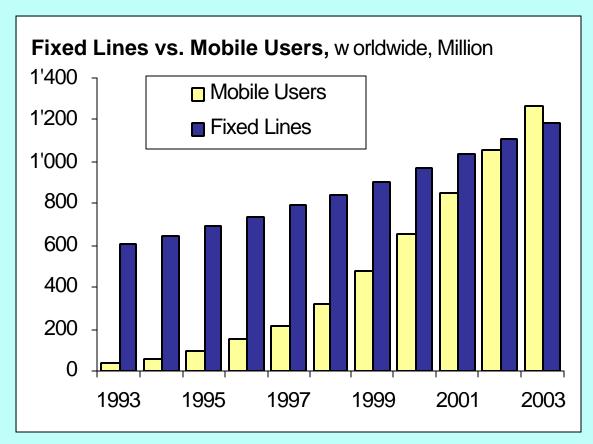
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Note: The views expressed in this presentation are those of the author and do not necessarily reflect the opinions of the ITU or its membership. Lara Srivastava can be contacted at lara.srivastava@itu.int



#### Mobile is overtaking Fixed

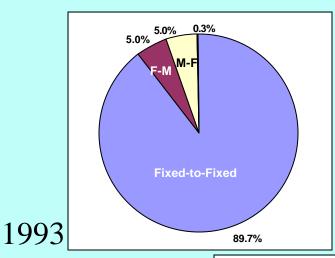


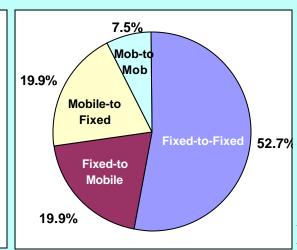
Source: ITU



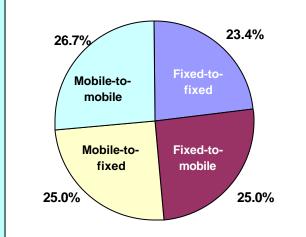
### A wealth of calling opportunities

Among mobile and fixed-line users, worldwide (1993, 1998, forecast 2003)





1998



2003

Source: ITU



## Components of a Fixed to Mobile Call



**Call Origination** 

Transit service

**Call Termination** 

Called
Party
(MOBILE)

Orig. Access

**Switching** 

**Authentication** 

Core Network Switching Locating the Customer

**Switching** 

Term. Access

Source: Adapted from ECTA



#### Interconnect Call Termination

- Calling parties seek to terminate calls at addresses (numbers) controlled by specific operators
  - ⇒ No practical alternatives available
- Operator in control of the more valuable or larger set of addresses has the incentive to:
  - ⇒ Refuse interconnection
  - ⇒ Set high prices for interconnection
- Interconnection regulation focused on dominant fixed operators
  - unintended consequence: mobile carriers have increased negotiating power



### Interconnect Call Termination (cont'd)

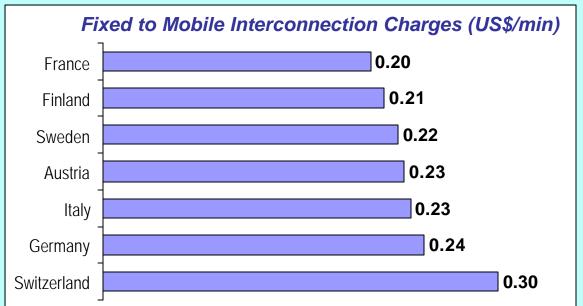
- Problem exacerbated in the CPP context:
  - □ Lack of tariff transparency further reduces incentives to lower prices
  - Mobile operators not subject to commercial consequences of keeping rates high





#### Example: Charges in Europe

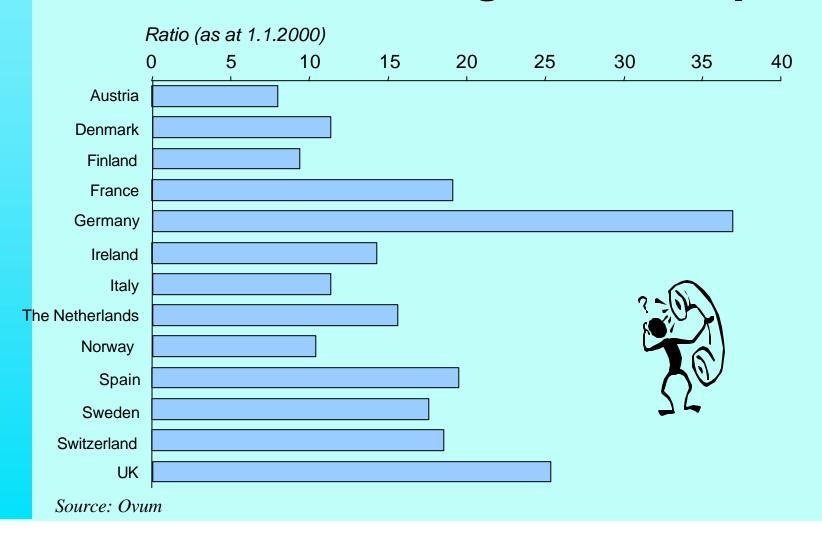
- Interconnect Regime for Mobile Operators
  - ⇒ All operators: right and obligation to interconnect
  - SMP operators : access, cost-orientation, information, non-discrimination
- EU Termination Charges Consistently > Cost



Source: ITU, Trends 2000



# Ratio of Mobile to Fixed Termination Charges in Europe





#### But this is not a universal scenario

- In some cases, powerful incumbents pay little or nothing for connecting to mobile networks
  - ... and this demonstrates the vulnerability of new entrant mobile operators in an unregulated environment
- Contributing factors:
  - State-ownership of incumbent operators
  - ⇒ Independence of the regulator/policy-maker
  - ⇒ Degree of competition

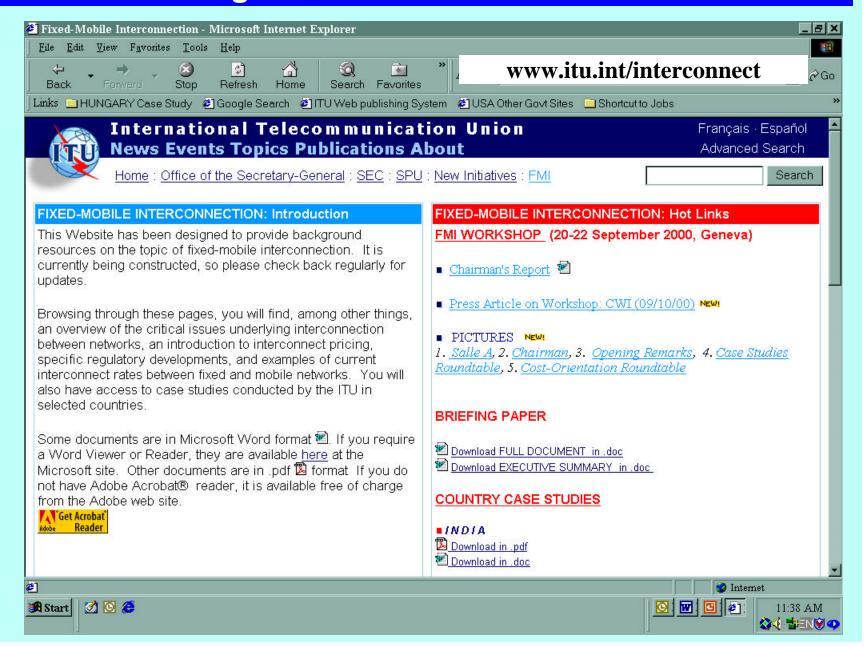


### Technical Aspects

- Incumbents may have the incentive to limit points of interconnection
  - This may result in higher charges, and
  - ⇒ increased congestion of the mobile network
- Implementation of regulation
- e.g. India



#### The Background Resources Website on FMI





### **Questions for Regulators**

- CPP: Should countries move to the CPP pricing scheme for interconnection?
- SMP: Should operators with significant market power be regulated differently from new entrant operators?
- POI: In what ways can a regulator help to overcome or avoid frictions in the process of obtaining technical interconnection?
- ADR: Is there a role for regulators in the arbitration of fixed-mobile interconnection disputes?