Application of competition principles to Interconnection and Access

Training on Competition and Changing Market Conditions: Impact on ICT Regulation
Addis Ababa, 6th – 9th November, 2007

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Application of competition principles to interconnection and Access

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Markets related to interconnection and Access

- Traditionally almost all NRAs deal with
  - Markets for interconnection of fixed networks: F2F
  - Markets for interconnection of mobile networks: M2M
  - Markets for interconnection of fixed and mobile networks: F2M, M2F
  - Markets for the access to the local loop in fixed networks
  - Markets for access to mobile networks

- These markets are typically wholesale markets, no end customers directly involved, with the notable exception of access to the local loop
Market definition

• Markets are defined along the established competition law principles of demand and supply substitutability, the HMT-Test is used for the delineation of markets.

• Typical result for termination markets: Each network is a market for itself, this is true for mobile and fixed networks. The reason for this “One Network – One Market” model is the fact that you can only reach a certain end user via the network to which he is connected.

• For call origination markets this is different. There are normally national call origination markets in the fixed and in the mobile sector. The reason for this is that there is a substitution possible on the supply side of the market. New entrants could enter the market via building their own access network or reselling existing connections or by buying call origination from other market parties.

HMT Test
Market definition

• **Access markets:**

  • According to technological reasons, it is a widely held belief that fixed access markets are markets with subadditive cost structures. This means that the average cost of the service of giving access to end users is lower, if it is provided by only one supplier. If this holds true, there is something like a natural monopoly in the access markets.

  • There are basically two types of fixed network access markets: retail and wholesale. The subaddiditvity property holds true for both markets.

  • Market analysis performed with the HMT would probably lead to a subdivision into narrowband and broadband access markets on the retail as well as on the wholesale level.

  • Sometimes, as in the EU, there will be a further subdivision of the wholesale market into a market for copper loops.
SMP Designation

- Ex ante regulation normally requires market failures due to restrictions on effective competition. These market failures/restrictions to effective competition occur by definition only, if there is a market party with a dominant position:

According to Article 14 of the framework Directive: ‘an undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors customers and ultimately consumers’.

Source: Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03)
SMP on interconnection markets

• **Termination:** According to the One Network – One Market model, each operator, running a local access network will be monopolist on its own termination market. Normally this would lead to the conclusion, that as a monopolist he would have SMP (by definition).

• Under certain circumstances there could be a restraint on the monopolists behavior, due to countervailing power. If the size of the network under consideration is very small compared to others, the small company could be forced to agree to lower termination rates than those it would charge as a monopoly by the threat of non-contracting by a bigger competitor. This means it would not be able to reach a termination contract. This reasoning was in fact used by smaller ops in Germany, but was not accepted by the EC.
SMP on interconnection markets

• **Call Origination:** On these markets, SMP has to be established by analyzing the markets. Indicators for SMP are market shares and their development and the economic position of the market parties. In the fixed networks there are no cases known, where the incumbent operator was not designated as having SMP on the origination market.

• However in mobile markets, there are some countries, where competition between MNO’s even on the wholesale markets is so strong, that no SMP was found. In some countries collective dominance was found and SMP was assigned to all mobile operators.
SMP on fixed access markets

- Considering the subadditivity of access markets, there will normally be one dominant operator, i.e. the operator who owns and runs the copper access network. This operator is normally the SMP operator on all markets defined in this area.

- This means, that his position is very strong and the utmost focus has to be laid on restraining its market power.

- There might be – particularly in high density areas as big cities – a second infrastructure, capable of offering electronic communication services. This is normally the TV Cable network, which can – properly upgraded – be used to supply voice telephony and broadband (Triple play). In this case, it might be correct to define the geographical extension of markets according to competition conditions, meaning according to the availability of more than one fixed access infrastructure.
Remedies

• What can NRAs do to promote competition in the presence of SMP operators on those markets.

• In principle, NRAs will have to analyze the markets and the market failures to design their policy to promote competition.

• Two principles should be followed:
  
  • Appropriateness
  
  • Proportionality

• Appropriateness means, that measures taken by the NRAs should in principle be adequate to fight the competition problem.

• Proportionality means, that the NRAs should chose the least onerous measures, which are available to fight the competition problem.
Remedies

- In many legal frameworks, NRAs can choose from a list those measures they would regard as necessary to solve a competition problem on a market with an SMP operator. There is a notable example of a regulatory framework, where NRAs had to apply a full list of obligations on SMP operators, once SMP was found. This is the ONP Framework, which was relevant for the EU from 1998 to 2003.

- A typical list would contain:
  - Transparency measures (RIO, RUO, technical specifications, etc)
  - Non-discrimination: The SMP operator is forbidden to deal with their own operations in a different way than with other operators. This includes prices and conditions as well as procedural aspects.
Remedies

• List of obligations continued
  • One way access: Access to the local access network
  • Two way access: interconnection
  • Access to other facilities (IPs, ancillary services like ducts, collocation, masts etc)
  • Regulatory accounting, accounting separation
  • Price controls, cost oriented prices

• There is another “remedies” under consideration in the EU:
  Functional or even structural separation of the access network from all other operations of the SMP operator on the access market.
Remedies

- The art of a good NRA is to completely understand the market situation and to calibrate the regulatory measures in a way to create and support competition (do not misunderstand: competition not competitors).

- Termination markets: The market failure is dominance with the threat of foreclosure of the market by non contracting.
  
  - An NRA would therefore have to consider to order two way access to the dominant operators network, i.e. interconnection of networks.
  
  - In a second step he will have to consider that conditions have
    
    - to be clear and
    
    - Fair
Remedies

- **Interconnection continued:**

  - This would suggest to apply in addition transparency and non-discrimination
  
  - Furthermore there exists in vertically integrated companies the possibility to cross subsidize and thereby to distort competition, if transparency is not supported by accounting separation.
  
  - This still does not necessarily solve the problem of too high prices for termination services. If they are set on the monopoly price level, this would inevitably lead to a reduction in welfare. The consequence would be to introduce price controls for interconnection services.
Remedies

• If one goes through this list of measures to be taken to solve the potential competition problems, one can readily see that for termination markets almost everything which is available in the NRA’s toolbox will be applied in practice.

• A very similar situation can be found on the fixed access markets. Here we will typically find a combination of access obligations as resale, bitstream access and unbundling of local loops, combined with the full set of transparency, non-discrimination, accounting, price control etc. measures.

• It is the access markets where the discussion on functional separation started. BT started this discussion by offering the UK NRA Ofcom to functionally separate its local copper access network from the rest of the company. The new company “OPENREACH” is now in operation for more than one year.
Results: Termination markets

The following text is taken from the 4th Implementation report of the European Commission on the regulatory Package of 1998:

Interconnection charges per minute (in Ecu/100) for call termination on fixed network, are based on a 3 minute call duration at peak rate as set out in the Commission Recommendation on Interconnection in a liberalised telecommunications market. Deviation from “best current practice” interconnection charges (identified by the above-mentioned Recommendation) for call termination on fixed network, based on a 3 minute call duration at peak rate:
- local level: between 0,6 and 1,0 Ecu/100 per minute;
- single transit (metropolitan level): between 0,9 and 1,8 Ecu/100;
- double transit (national level/more than 200 km.): between 1,5 and 2,6 Ecu/100.
Positive deviation is from the upper limit of the range.
Exchange rate to ECU at September 1997 is applied (for consistency with the “best current practice”).

FYI: The ECU was the implicit common currency before the Euro came into life. The (calculatory) exchange rate was 1.
EU Termination charges

Fixed-to-fixed interconnection charges
EU25 weighted average (euro-cents)

- 1.61 in July 2004
- 1.39 in October 2005
- 1.25 in October 2006

- 1.01 in July 2004
- 0.94 in October 2005
- 0.86 in October 2006

- 0.66 in July 2004
- 0.61 in October 2005
- 0.57 in October 2006

Legend:
- Local level
- Single transit
- Double transit
Double Transit in the EU 2005/2006

Interconnection charges for call termination on incumbents’ fixed network (peak time)
Double transit - EU average: 1.25 €-cents

Czech Republic: Price in place till 2 May 2006. Price are currently not regulated.
Estonia, Finland: Data are not available.
Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower.
France, Belgium, Spain: Price does not take account of annual linking fee.
Lithuania, Luxembourg: Double transit does not exist. There is a national IC including single and double transit.
Hungary: Prices refer to the main incumbent operator Mavav
The Netherlands: Data are not available, price not regulate.
Single Transit in the EU 2005/2006

Interconnection charges for call termination on incumbents’ fixed network (peak time)
Single transit - EU average: 0.86 €-cents

Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower than for single transit.
France, Belgium, Spain: Price does not take account of an annual linking fee.
Lithuania: The national IC includes single and double transit.
Hungary: Prices refer to the main incumbent operator Magyar Telekom.
Malta: Only one level of interconnection exists.
Finland: Value refers to an average among 43 SMP operators. Charges vary between 1.261¢/cents/min - 1.999¢/cents/min.
Luxembourg: Local level coincides with single transit.

Folie 19
Local IC in the EU 2005/2006

Interconnection charges for call termination on incumbents' fixed network (peak time)
Local level - EU average: 0.57 €-cents

Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower.
France, Belgium, Spain: Price does not take account of IC linking fee.
Latvia: Interconnection at local level not offered.
Hungary: Prices refer to the main incumbent operator Magyar
Malta: Only one level of interconnection exists.
Luxembourg: Local level coincides with single transit.
Finland: Value refers to an average among 43 SMP operators. Charges vary between 1.261€-cents/min - 1.999€-cents/min.
EU15 average fixed-to-mobile interconnection charges in the national interconnection market

Data for EU15 average have changed due to the revision of the IC rates in FR and PT.
Unbundling prices in the EU
Unbundled local loops 2002 - 2005

L.L.U. monthly average total cost in EU15

Euro per month

2002 2003 2004 2005

Fully unbundled lines

Shared access lines
Broadband penetration in the EU

EU Broadband penetration rate (July 2007)
Broadband development in the EU

Figure 3 Growth trend since January 2003

Total broadband fixed access lines (EU27)
Summary

• Appropriate ex ante regulation of interconnection markets is fundamental for the development of the electronic communication sector

• Competition policy/law principles provide good guidance for the NRAs’ activities

• Phasing out or phasing in of regulation undetermined, probably less or no regulation on end user markets and better and more stringent regulation of wholesale markets.

• Proper regulation of access markets helps to develop broadband penetration and usage, at least in Europe.
How can these principles be applied to African countries

- In principle, these are very broad concepts that could be used almost everywhere in the world.

- As we have experienced in Europe, it seems to be necessary to jumpstart liberalization by a simpler regime.

- In Europe, liberalization of telecommunication markets was promoted by a regime, which defined some markets not according to the rules described and applied remedies in a much more rigid fashion (ONP Regulatory Framework). It proved to be very effective until the point, when some of the predefined sets of remedies appeared too burdensome and not apt to solve special competition problems.

- But it allowed the NRAs to acquire the necessary skills and to collect the data required for the application of the approach described.
How can these principles be applied to African countries

• But it allowed the NRAs to acquire the necessary skills and to collect the data required for the application of the approach described.

• It was indeed practiced by the EU with all new entrants 2004 and 2007. They were obliged to implement the older regime first and upon entry moved to the newer regulatory framework.
Thanks for your attention!!!
HMT Test

• A good reference to most regulatory topics can be found in the following document:

  • http://www.ictregulationtoolkit.org/en/Sections.html,

• for the HMT Test:

  • http://www.ictregulationtoolkit.org/en/Section.1710.html
The “SSNIP” or “hypothetical monopolist” test defines a market as:

The smallest group of products and the smallest geographical area in which a hypothetical monopoly could successfully implement a “small but significant and non-transitory increase in price” (or "SSNIP").

Look at the fixed voice telephony market and consider first the services supplied by the incumbent operator. If he implements a SSNIP and his profits decrease, there must have been substitution of his services by other services, which means consumers changed their consumption patterns and other operators might have entered the market (CATV ops offering voice services, VOIP ops,...).
HMT Test

- We would then conclude that the markets has to be broader as originally assumed and we would include the other services, which have been used as substitutes for traditional voice.

- We can now conduct a thought experiment and assume, that the group of operators in the market would act as monopolist (“Hypothetical Monopolist”) and would try to explore, what would happen, if this HM would again try to implement a SSNIP.

- If again there is some substitution and profits drop, the market would include the new entrants aside the already operating companies.

- This process would terminate, when and if there is no further drop in profits for the included operators in the case of a SSNIP. In this case the initially given definition would be fulfilled and we would have reached a valid market definition.
The main obstacle for the correct application of the HMT Test is lack of market data and lacking market analysis based on these data.

It is a major task of NRAs to collect the necessary material to conduct such a type of analysis. This could consist of cross section data of end users (special consumer surveys), describing their reactions to price variations, experiences of other countries, technological considerations etc.

Whatever data are used, they must allow at least some tentative conclusions on the behavior of potential competitors and of end users.