ACCESS PRICING (WITH A FOCUS ON TELECOMMUNICATIONS) HUNGARY 04-Oct-2001

1. This submission shows in detail the regulatory and competitive situation concerning access issues in Hungarian telecommunications and also touches upon the fields of electricity and natural gas.

1. Telecommunications

2. The Hungarian telecommunications industry lives the last days of its monopoly period – full market opening is scheduled from 23 December 2001 to November 2002. The Hungarian Parliament this June adopted the new Communications Act[1] – parts of it are taking effect gradually but the most important parts will take effect on 23 December 2001 – that will give the legislative framework of the liberalised area – included inter alia access pricing. However that does not mean that every detail of the regulation is clear today – much is depending on the decrees – governmental and ministerial – yet to be adopted. The Government is in the middle of drafting the secondary legislation for the law but only one of them has already been adopted – that is the Government decree on local loop unbundling[2]. That means that we are just few weeks before the starting point of the liberalisation with only having the framework of the new system adopted so we show the present situation concerning access pricing as well as we will try to draw a picture of the predicted changes in that field.

1.1. Access services

3. Before going into details we compare the present and the future system highlighting those markets that are closely effected by the legislative changes taking into effect. Defining different kinds of access services we use the terms origination-, transit- and termination access services. Transit and termination access services are sometimes referred to as interconnection services in the Hungarian legal texts

1.1.1. Fixed telephone services originated in the PSTN network and terminated in a fixed network

4. The present system is controlled by the Telecommunications Act[3] – which came into effect on 1 July 1993 – and the concession agreements concluded between the exclusive service providers and the Government. According to that system the monopoly for long distance and international services is in the hands of Hungary's dominant provider MATAV, and it is the monopoly provider of – either directly or

[1] Act No. XL. of 2001 on Communications

[2] Government decree on unbundling of the local loop and related procedures, No 175/2001 (IX.26.)

[3] Act No LXXII. of 1992 on Telecommunications

indirectly through its wholly owned subsidiary, Emitel – local calls in 39 out of the country's 54 so called primary areas. The other 15 areas are monopolised by three companies (Vivendi Telecom Hungary –11, Hungarian Telecommunications and Cable Corporation – 4, and Monortel – 1). They are the so-called Local Telephone Operators (LTOs). For the provision of long distance and international services MATAV is the access seeker when the call is originated, or terminated in an LTO network. The price for termination and origination is regulated by a ministerial decree on interconnection prices[4], also when the service is provided by MATAV for itself. Of course in that connection we cannot speak about access and interconnection in economic terms when the call is originated from or terminated in MATAV's network, and also there is no real transit service in this situation as the service provider is the company that is transiting the call. According to the Ministerial decree on the structural plan of the PSTN network[5] the call is always transited by MATAV if it leaves the boundary of the primary areas. It is also true for the case of calls between mobile and fixed networks.

5. The system will change in the future as long distance, international and also local services will not be under monopoly. Of course it is most probable that the controlling position over the local network – and possibly for some time it is the same case with the backbone network – ensures market power for the former monopolies. Consequently the network will show the characteristics of an essential facility, and for that reason the access to the PSTN network will be mandated.

1.1.2. Fixed telephone services originated in the PSTN network and terminated in the mobile network

6. According to the regulatory framework in effect today the access seekers for the origination and the transit service are the mobile service providers, and the access price is regulated by a ministerial decree on interconnection prices (see the number above). The system will change next year as the fixed to mobile call will be part of the definition of the of the fixed voice telephony services – so the end user price will be set by the fixed service providers. In that case the access seeker will be the fixed company, and the mobiles will provide termination services for them. The transit service of MATAV will not be mandatory.

1.1.3. Mobile services originated in the mobile service provider's network and terminated in the PSTN network

7. In that case termination access service is provided by MATAV and LTOs, today the price of this service is set by a ministerial decree on interconnection prices. As in the case of fixed to fixed it is most probable that the network domination over PSTN will provide market power for MATAV and the LTOs, and the access will be mandatory. Access seekers are the mobile service providers and it will not change in the future.

1.1.4. Mobile services originated in the mobile service provider's network and terminated in another mobile network

8. In that case the termination access service is provided by the mobile companies – it is the same in the present and the future. Transit access service is provided by MATAV, it is mandatory at present. In the future the use of that service will not be mandatory, mobile companies can deliver the calls on their own,

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4 KHVM decree on revenue sharing of the concession activities in telecommunications, No 1/1998 (I.12.)

5 KHVM decree on the structural plan of the PSTN network, No 26/1993 (IX.9.)

or they can get the service from some other company. Access seekers for that service are the mobile companies and it will not change in the future.

9. The local access service either to a mobile network or to a fixed network has not been part of the above list. The description of those kinds of services should also be separated by outlining of the present and the future situation. Today it is not possible to provide voice telephony for others than the concession companies[6] so utilisation on the PSTN network is not possible today for this kind of access services. In the future it will change but there will not be regulated access price only in the case of local loop unbundling. In the case of mobile networks the regulatory situation of virtual mobile services is not really clear today, as there is no clear prohibition in the legislation in effect today providing that kind of service. However, the concession agreements of the mobile service providers contain an undertaking on the part of the Government that it will not grant any new mobile licences till the end of 2003. Besides the fact that the regulatory situation is not clear, there isn't any kind of this service present today on the mobile market. The Communications Act basically will not change the situation, so there isn't any provision concerning the access price of this kind of a service.

1.2. Regulatory framework for access pricing

10. While examining the present situation it is important to mention that the access rights and obligations were determined by the concession agreements of the operators – either talking about mobile or fixed operator. The legislative framework has been constructed on the basis of the companies operating with concession and for that reason it isn't really detailed for those parts where the access service concerns an undertaking operating only with a licence. Mandatory access is present where there is a legal monopoly for some access services. In that context it is mandatory for MATAV to provide transit for the LTOs and mobiles, it is mandatory for MATAV and LTOs to provide origination and termination access for long distance, international and mobile calls. There isn't any obligation on the part of the mobiles. The present regulatory framework cannot provide any guidance on taking a stance between facilities based competition or the control of market power as the regulated part of access services can only be find in connection with the exclusive rights.

11. By 1998 access prices had been calculated based on a revenue-sharing formula from the retail prices of the relevant telephone calls. For instance the retail price of long-distance call was shared among the originating, the transit and the terminating parties. From 1998 on the access prices were set independently from the retail prices in a separate ministerial decree. The government claimed to apply the cost-oriented principle, but in practice the historical access charges were modified only in a moderate form. In general the actual access prices were much higher than the relevant international benchmarks, based on the necessity to cover the local access deficit of the local network operators, which did not have the opportunity to cross-subsidise their access services from the profitable long-distance and international call charges. Basically the setting of access prices remained at the point of sharing the revenue from the retail services, the main change was that the Government included some adjustments from the prior situation based on estimated cost differentials between different kinds of services. It is clear that some of that estimation had a base, but the system hasn't been based on a cost analysis. To give an example of those adjustments the Government decided to set the origination price on a higher level than the termination price – in fact that was a move to cover the local access deficit but it was based on the estimation that a call origination has higher cost than a termination as this also includes customer care. It has to be added that there was not any detailed analysis of the possible presence of local access deficit as well.

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[6] There is only one exception in the case of voice over IP, but it has to be provided by a mandatory delay built in, if the PSTN network is used carrying out the service.

12. Because of the form of setting the price in a ministerial decree no discretion was given to access providers in setting their access charges. (It has to be pointed out again that the termination fee for the fixed to mobile calls was determined by the operators as a consequence of having the price-setting rights for the call charges – see the service description above.) The access seekers (like the mobile operators) have not got any opportunity to challenge the government decisions. The peak / off peak differentials of the access prices are determined by the relevant retail prices. (See the historic roots of revenue sharing formula). The government tried to preserve the historical margins of the fixed telephone service license holders referring to their universal service obligations (protected by the concession agreements as well). As background calculations for the government decree issued on a yearly basis, the access prices are determined by a cost model taking into account the maximum capacity needed by the forecasted traffic volume. The right to operate a network is tied to the service license (concession) and according to the interpretation established by the concession companies the unused capacities are not tradable. The access prices are fixed and proportional to the traffic volume (in minutes). No geographic differentials are taken into account in the price level. For a temporary period of time the mobile operators had got the right to pay lower access charges than the fixed operators for the same service (terminating access to the local network). This practice was abolished this year. As it was described above from 1998 on the actual access prices were determined by a ministerial decree issued regularly in the beginning of every year. The aim of the government was to have cost-oriented prices but because of the lack of information on costs of the interested parties and the lack of a clear costing principle by 2000 only broad estimates were available. Last year an extensive project was initiated to tackle this problem In the appendix you can find a more detailed description of the results of this project. Hopefully the project's results will give a starting base for applying the new regulatory regime.

13. The future framework will provide for mandatory access in connection with the services mentioned in point 1.1 if an undertaking is found to have significant market power (SMP) in a certain market. The Communications Act differentiates four markets: voice telephony, leased lines, mobile services and interconnection. It is not really clear yet how the Hungarian Communications Authority (CA) will develop its practice of designating companies having SMP on a certain market so the analysis will only touch upon those questions that is clear from the law. The system of the law according to access services closely follows the effective regulatory system of the EU. The Communications Act has not made any reference to the foreseeable regulatory changes in the EU. In that context the criteria of being an SMP is based on the 25% market share base and the relevant correction criteria (inter alia the presence on the related markets etc.) If a company has SMP on the market of voice telephony or leased lines it has to create a reference interconnection offer and it has to apply a price for interconnection that is based on the methodology of long run incremental costs (LRIC). According to prices it is the same obligation for a company having SMP on the interconnection market, with the difference of not having an obligation of creating a reference offer. (In practice that means that the mobile company having SMP on the national market for interconnection has to apply a cost oriented – based on LRIC, or fully distributed costs, see below – price for terminating a service from the fixed network. The law doesn't contain any provision in connection with the mobile to mobile services.) A company having SMP on the voice telephony market has to meet an additional obligation in connection with local loop unbundling: it has an obligation to unbundle its local loops, it has to create a reference unbundling offer and it also has to apply prices on the basis of LRIC. The prices and reference offers have to be presented to the CA, and it has to approve them. The decisions of the CA on approval of the prices are subject to appeal to the Metropolitan Court, but the appeal has no suspensive effect on the implementation of the decision.

14. The prices have to be set and approved individually there isn't any basket of access prices. That means it is foreseeable that they will not be tied in any ways to the retail prices, according to the Communications Act. All the companies that have an obligation to provide certain access services and form their prices on the basis of LRIC methodology have a possibility for one year to use the fully distributed cost method. It is only a possibility to decide on which method to use, but in principle the CA

has to be prepared for both next year. Nevertheless from 2003 on there will not be any delay applying the LRIC methodology.

15. Basically the whole system is based on the control of market power although there are some provisions in the law that clearly support facilities based competition. Both of those kinds of provisions will only be in force till Hungary's accession to the EU. One of them ensures that the obligation to form the price based on LRIC – and with that the cost oriented obligation – only applies for two years from the date of unbundling a particular local loop. The other one gives the possibility for a company obliged to interconnect and/or unbundle its local loops on the basis of LRIC prices, to alter from that price with a maximum of 20% surplus if it can prove that the contracting company doesn't possess the network needed to provide its services. (The burden of proving the possession of the network is on the company seeking access.)

1.3. Competition cases in connection with access pricing

16. To understand the role of competition law in Hungary concerning access prices in telecommunications, first, one has to make a reference to the provision of the Act No. LVII of 1996 on the prohibition of unfair and restrictive market practices (Competition law) on the scope of the law. Article 1 provides that the Act shall apply to market practices of undertakings except where otherwise regulated by statutes. This means that a regulated market practice cannot be subject to competition supervision proceedings.

17. In 1997 the LTOs filed a complaint to the Hungarian Office of Economic Competition (OEC) claiming that MATAV had abused its dominant position during the negotiations of setting that year's interconnection prices. Although the information asymmetry situation is clear where the Government has to decide on access prices based on those data it can only get from the concession companies i.e. the dominant company, MATAV had the possibility to influence the Government's decision informally. However the case was that the actual access prices that had the influence on the market were set by a decree i.e. it was a regulated market practice, therefore it has fallen out of the scope of the Competition Act.

18. The OEC had another case directly related to access prices; it was a dispute in 1996 between MATAV and Novotron, a cable company on the rental charges for ducts. MATAV as the legal successor of the Hungarian Post in the telecommunications industry acquired its ducts and trenches for laying cables – of course with its partners and with the prices that had been set formerly by the Hungarian Post. MATAV raised the rental charges at the point when Novotron wanted to update its cables laid in the ducts in order to enable them to provide data services on it. It turned out that MATAV had applied discriminatory charges to those companies participating only in the cable business compared to those wanted to enter the data market. The Competition Council found that MATAV had a dominant position and it had abused its position. The decision didn't contain real measures concerning the actual prices. Of course it was a case of discriminatory pricing, not excessive pricing - so it wasn't necessary to base the decision on a cost analysis -, but one has to admit that the OEC wouldn't have been in a position to measure the actual cost of MATAV in order to decide whether the price was excessive or not.

19. There are two other issues worth mentioning in connection with access prices, both of them are pending cases before the OEC. On of them is a dispute between the ISPs and MATAV concerning their relationship for the provision of dial-up Internet access. The main question is what kind of accounting system will ensure that ISPs can share the revenue of the traffic they generate on MATAVs PSTN network. MATAV had offered a reverse charging model for the ISPs with a discount scheme based on the volume of traffic but the ISPs claimed it was abusive in terms of its discriminatory feature and it is able to

foreclose the Internet access market. It is still an ongoing proceedings so any final conclusion cannot be presented nevertheless it is important to note that the OEC is examining the case in a broader sense than only the details of the offered reverse charging system. Concerning the possible models created between ISPs and the network operator the Communications Act has introduced another system concerning revenue sharing. According to the Act the ISPs shared proportion of the retail telecommunications price will be regulated. Although the responsible minister has not adopted yet the decree on prices that will provide for further details of the regulated revenue sharing the OEC will have to take it into account in its decision as well.

20. The other ongoing issue before the OEC concerning access pricing is the question of mobile termination rates. The OEC has launched a sectoral inquiry into the whole mobile sector included inter alia the fixed to mobile termination rates. The inquiry is really wide so it only has a goal to elaborate every issue raised on the basis of the specific Articles of the Competition Act but it does not go as deep as competition supervision proceedings – in other words one can only consider it as a preparatory phase for possible further detailed examination through competition supervision proceedings. The results of the inquiry are planned to make public in December 2001. During the inquiry there were some arguments about possible breach of the Competition Act concerning the mobile termination prices so we try to outline the most important standpoints concerning the access issue by remembering the regulatory situation. According to the framework in effect till 1 July 2001 the mobile termination rate is in fact a remaining portion of the fixed to mobile retail price as the origination and the transit part was regulated in a decree and the retail price was set by the mobile service provider. Since the modification of the Telecommunications Act adopted in June 2001 the fixed to mobile call is defined as a fixed call so the retail price would also be set in a decree and only the mobile part would remain unregulated. Of course this would be quite problematic so it is understandable that since the adoption of the modification of the Telecommunications Act the Government has not adopted a new decree.[7] Next year the whole system will change as the fixed to mobile retail price will be set by the fixed operator – under price control if the company has SMP on the vice telephony market – and the mobile termination price will be set by the mobile company. Of course it will be under control if the company has SMP on the national market for interconnection but the control will only comprise of the relevant cost methodology – the LRIC system with one year transitional period for the possibility of applying the fully distributed cost model. The OEC has to understand the changing regulatory situation in order to understand and make it clear whether there could be at least the possibility of breaching of the Competition Act.

21. Talking about the future, it is clear that those access prices that have to be set in line with the provisions of the Communications Act and will be subject to ex ante control of the CA and will not be subject to competition proceedings. It is important to understand that the OEC does not have the necessary resources to measure in details the costs of a company for a particular service, and decides whether they are too high – or sometimes too low. The Communications Act has created a special regime for controlling the services that are strategic for a new entrant, therefore strategic for the development of competition in the first phase of liberalisation. The CA will take care of the special regime, but the OEC will also have a role in applying it. The OEC has a mandatory power to be heard during the proceedings of the CA: designating companies with SMP, and controlling their reference offers. The CA has an obligation to reason its position if it alters in its final decision from the opinion of the OEC. The two authorities are working on updating their co-operation agreement dated in 2000, in order to adapt it to the present and the future situation.

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[7] It has to be pointed out that the above-mentioned modification of the Telecommunications Act is only applicable for the second half of 2001. From 1 January 2002 the whole Telecommunications Act will expire and the provisions of the Communications Act will take effect.

22. The main question will be whether the lawmaker has chosen the right markets to create a special regime of controlling market power. Are those markets really the ones, and only those that are strategic for the development of competition? Are those the ones that cannot be dealt with the facilities of general competition law? Could the regime be updated fast enough to adapt to the new developments of the sector? The adopted practice of CA, and the necessary and effective co-operation between the two authorities can help to overcome the possible shortcomings of the new regime.

2. Electricity

23. As far as electricity is concerned many questions of the questionnaire cannot be answered because they related to special telecommunications characteristics. Moreover, in Hungary practically speaking there is no competition in electricity sector to raise this questions and the plans about introducing competition are not sufficiently well developed to answer the question on access pricing. Therefore we can provide only a brief overview of the topic addressing probably questions a-d at least partly.

24. Under the current electricity regulation only very limited forms of competition exist (such as tendering for building new generating capacities). The high voltage transmission network - which can be regard as the principal „essential facility" within the sector - is basically integrated with the incumbent former monopoly (MVM Rt.), although it is divested to some extent. There is no access to the network in economic terms (of course there is access in technical terms), therefore there is no access pricing.

25. The Hungarian government is planing market opening for electricity sector, and a draft law is prepared. This law will be a so called framework law, in other words, some features of the new competition based regime will be outlined by the law, but other features will be included by other legal rules such as government or ministerial decrees. Many important details remain unknown today. According to the draft law, the high voltage network will be separated (in fact it has been partly separated already) from other activities (such as generation, distribution, or supply). System operator will be separated similarly. There will be an open access to the network and this access (including the prices) will be regulated. The details and principles of this regulation relevant for the questionnaire are not clear yet; this issue will be addressed later in a government decree. Distance based transmission or access pricing is an option but it is not preferred by the sectoral regulatory authority that is in favour of post stamp kind pricing system.

3. Natural gas

26. As far as the natural gas sector is concerned the situation is much similar that of the electricity sector: many questions of the questionnaire cannot be answered because they related to special telecommunications characteristics. In addition, in Hungary practically speaking there is no competition in electricity sector to raise this questions and the plans about introducing competition are not sufficiently well developed to answer the question on access pricing. Therefore we can provide only a brief overview of the topic addressing probably questions a-d at least partly.

27. Under the current natural gas regulation there is no room for competition. (The only exemption is extraction where there might be competition since more than one company have concession to research for and to extract natural gas. Nevertheless there is only one who have productive natural gas fields.) The high pressure network and gas storage capacities - which can be regarded important „essential facilities" - are integrated with the incumbent former monopoly (MOL Rt.). There is no access to the network in economic terms (of course there is access in technical terms), even imported gas must be sold at the border of Hungary to MOL. Therefore access pricing issue does not exist.

28. The Hungarian government is planing market opening for natural gas sector, and a draft law is prepared. This law will be a so called framework law, in other words, some features of the new competition based regime will be outlined by the law, but other features will be included by other legal rules such as government or ministerial decrees. Many important details remain unknown today. According to the draft law there will be open access to the high pressure network as well as the storage capacities. The relevant EU directive provides two options for access regimes: regulated or negotiated access. The Hungarian government prefers regulated access. The details and the principles of this regulation relevant for the questionnaire are not clear yet, this issue will be addressed later by a government decree.

APPENDIX

The "cost model" project of the telecommunications industry in Hungary

1. The project was initiated by the Hungarian Communication Authority (referred to as "CA" hereinafter) and carried out by Arthur Andersen's international team. Other project members included:

1. the fixed line voice operators:
    a) MATAV Rt. (has a national license and ca. 80% of the market),
    b) Vivendi Telecom Hungary (owns seven local network operators)
    c) UPC (owns one operator),
    d) Hungarian Telephone and Cable Corporation (owns four operators)
    e) EMITEL (owns one operator).
2. the mobile operators:
    a) WESTEL 900,
    b) Pannon GSM,
    c) Vodafone,
3. the government representatives,
4. the Finance Ministry and
5. the Office of Economic Competition.

2. The primary purpose of the project was to map and analyze the costs and expenses of all fixed line PSTN operators. This analysis served as foundation to determining cost based interconnection charges in Hungary.

3. The approach applied by the project was based on the Fully Distributed Costs methodology (FDC), which is prescribed by the new Hungarian Uniformed Communication Act for significant market players in the industry from 2002 on.

4. The project's working program was carried out in three phases. The first phase consisted of building an Activity Based Costing (ABC) model, designing a questionnaire for data gathering. The operators completed the questionnaire in the second phase of the project and sent them back to the regulator for processing. Arthur Andersen continuously assisted the operators in this phase. The objectives of the third phase were to verify the data, process the data, calculate costs of designated interconnection services, analyze results and prepare a project report.

The model

5. The designed model calculated the unit costs of the following interconnection services:

1. cost per minute of origination, (both for fixed and mobile calls)
2. cost per minute of termination, (both for fixed and mobile calls)
3. cost per minute of transit, (both for fixed and mobile calls)
4. cost per minute of an international outgoing-, incoming- and transit call.

6. The model applied the principles of the activity based costing methodology and fully allocated the operators' audited historical costs (FDC, HCA). The cost base of the allocation included all types of operating costs and other expenses (with the exception of foreign exchange losses) based on the Hungarian Accounting Standards. The model did not include the extraordinary expenses in unit costs, since not all extraordinary expenses should be part of the interconnection fees payable by other operators. Beside these costs, the interconnection charges paid and other non-PSTN related costs, of course, were not allocated on interconnection services. Foreign exchange losses and the financial expenses were taken into account through the cost of capital.

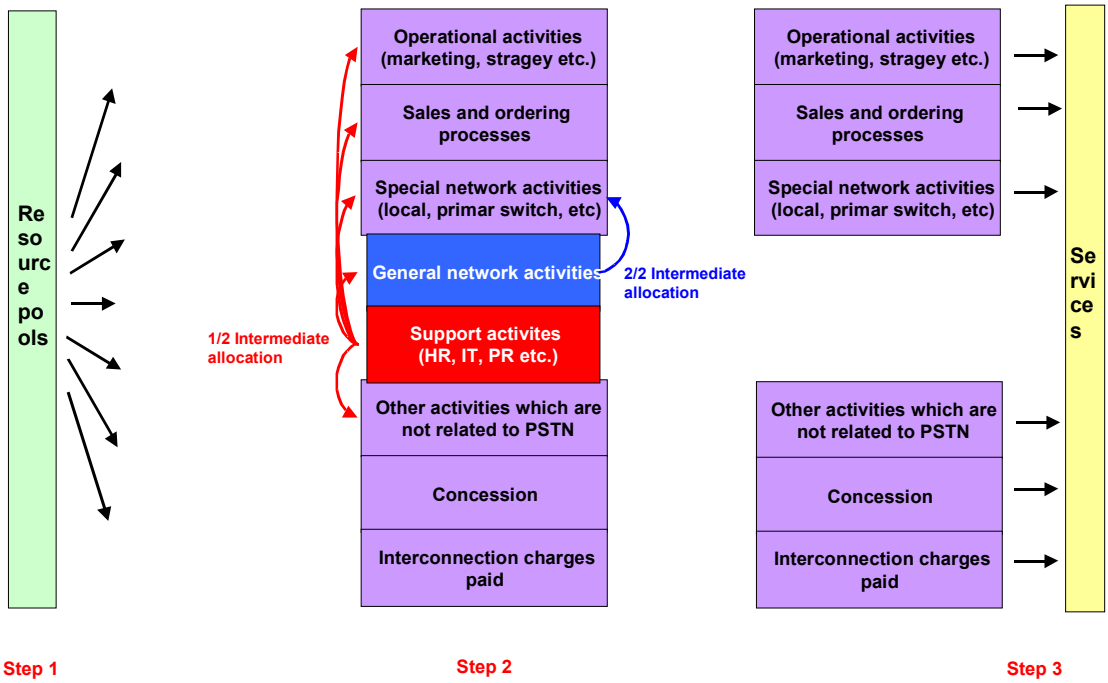
7. The project prepared a questionnaire and an enclosed guideline to enable the operators to provide the requested data in a structured way. In the guideline the project described the definitions of resource pools, activities, drivers and interconnection services. These definitions were determined with the contribution of all operators, which helped the operators understand and fill out the questionnaire. There are two parts of the questionnaire. One part collects the cost information of the operators and the other gathers special statistical data (drivers) on the companies' operations (e.g. headcount attributed to each activity).

8. The steps of the cost allocation were the following:

- Based on the questionnaire the model summarized the operators' costs found in their general ledgers into resource pools. This made the allocation of the costs to activities easier and more efficient, since the same types of costs are in one resource pool, which can be allocated to activities based on the same cost-drivers. (Examples for resource pools: material type costs, depreciation of buildings, wages)
- The first step was to allocate the costs in the resource pools to activities based on cost drivers, such as the distribution of costs, headcount, etc. After all allocation steps the cost base must remain the same, so all relevant costs were allocated to activities.
- The second step was to allocate the costs from secondary activities to primary activities, as an intermediate allocation. Secondary activities were support activities (e.g. HR, IT, PR) and general network activities such as system management.
- The third step was to allocate the costs from primary activities on services based on activity drivers such as revenue, traffic and routing, number of lines etc.
- In the last step the model divides the amount of cost allocated to the services by their traffic to arrive at the unit costs of the interconnection services.

The model ensured that non-PSTN related costs were not allocated onto interconnection services.

CHART 1: Steps of the cost allocation in activity based costing



The WACC

9. The applied formula for calculating the cost of capital:

$$(NBV_{Dec.\ 31,\ 2000}+NBV_{Dec.\ 31,\ 1999})/2*WACC,$$

where:

NBV: Net Book Value of each network element

WACC: Weighted Average Cost of Capital (in percentage)

10. The actual cost of capital was determined as follows:

- First, the operators had to determine the NBV of each network element by using the depreciation rates prescribed in the Hungarian tax law since the model used the same type of depreciation as part of the cost base. To do this the operators had to recalculate their last year's depreciation according to the tax law.

- The other component of calculating the cost of capital was the weighted average cost of capital (WACC in percentage). All operators were obliged to determine the components of their WACC. Based on these factors the project calculated the WACC for each operator and determined the weighted WACC for the industry by weighting the individual WACCs with the operators' revenue, representing their weight and size in their industry. The model used

the Capital Asset Pricing Model (CAPM) for calculating the WACC of each operator. For this purpose the following data were obtained from the operators:

- R_f: risk free interest rate
- R_m-r_f: market premium
- R_d: cost of debt
- t: corporate tax rate
- D/V: percentage of debt in total capital
- E/V: percentage of equity in total capital

The calculated percentage of the applied WACC was 15% for 2000.