

Telecom Regulatory Authority of India
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Direction to Access Providers (BSOs / CMSOs) & National /International Long Distance Operators, regarding implementation of Carrier Selection in their respective networks

1. PREAMBLE.

1.1 Consequent upon the opening up of the National & International long distance service markets, the customer has multiple choice to route his long distance calls through long distance carriers chosen by him. As per provisions in the License Agreement & the policy directive of the government, this has to be done by dialing four extra digits called Carrier Access Code (CAC) after `0` (for NLD calls) & `00` (for ILD calls), which will enable the switching system of the Access Providers (BSOs / CMSOs) to identify the long distance carrier selected by the subscriber, and route the call accordingly. Alternatively, the subscriber can intimate his choice to the Access Providers (APs) in advance in a process called `polling`, so that the four extra digits i.e. CAC could be embedded in the exchange subscriber data base in advance and with that the subscriber is not required to dial them before the destination code. The latter mode of Carrier Selection called Carrier Pre-selection (CPS) is implemented in telecommunication networks to provide ease to customers in dialing their long distance calls. Both the modes of Carrier Selection i.e., `Call by Call` in which four extra digits are required to be dialed for routing of each call, and Carrier Pre-selection (CPS), are required to be implemented in a time bound manner in the Indian telecommunication network. Accordingly, the Authority has decided to issue this direction to the operators concerned so that they carry out the required system modifications within a stipulated time frame, and provide the customers both the facilities i.e. `Call by Call` Carrier selection as well as Carrier Pre-selection.

1.2. The Authority, following its established practice, undertook a comprehensive consultation process vide its consultation paper 2001(5) issued on the 14th December 2001, on Interconnection between Access Providers and Long Distance Operators. During these consultations, the implementation of the Carrier Pre-Selection (CPS) facility in the Access Provider`s network was discussed with the operators and other stakeholders. The technical issues relating to implementation of CPS have been discussed at length during the last one year in the High Level Technical Committee constituted by the Authority in which all the stake holders are represented along with technical experts from DOT / TEC / C-DOT etc. Based on useful inputs provided by the Technical Committee, as well as individual operators, the Authority has come to the conclusion that the implementation of Carrier Selection i.e. both Call by Call and Carrier Pre-selection (CPS), is technically feasible in all the switching systems of the CMSOs, without any major system software modification. The same is true as far as it relates to all new technology switching systems installed in the BSO`s network. However, in some older switching systems, there may be need to carry out major system modifications for which extra time period may be required.

1.2 In the light of the foregoing, the Authority would consider relaxation of the time limits stipulated in this direction for these older switching systems on the merits of each case. However, the Authority is of the view that as far as it relates to the new technology switching systems, it would be possible to implement Carrier Selection within the stipulated time frame by incurring only incremental costs. It would be so even in the incumbent`s network, where the majority of the lines are connected to new technology switching systems. These state of the art systems are already operating in North America & Europe, where CPS has been introduced a long time ago. It is therefore expected that the system manufacturers would be able to supply readymade software modules (also called software patches) from their software centers to Indian operators, thus saving the time required to develop a new software module for CPS functionality from scratch. The Authority expects the operators to explore all avenues to curtail the time of implementation of Carrier Selection.

1.3 This direction has been formulated based upon the principle that the choice of carrier must lie with the caller. The caller would be able to exercise this choice in respect of both domestic long distance as well as the International long distance carrier. However, the facility may not be available at all places simultaneously, as it would depend upon the type of the switching system and the feasibility of their up-gradation to meet the requirement of Carrier Selection. In any case the question of exercising a choice would arise only if, from the area of service to which the customer belongs, the NLDO or the ILDO is in a position to pick up calls for long distance carriage by interconnecting his network to that of the Access Providers` networks. Almost, perforce, therefore, the extension of this facility all over the country will be phased as it will begin only at places where the NLDOs /ILDOs have set up their POPs and the concerned Access Provider`s switches are quickly modified. However, notwithstanding the phasing of this service as explained above, the Authority is of the view that barring areas which will be only exceptions, in almost all Circles and in most parts of the country, the facility will be available to the caller latest by the end of calendar year 2003 i.e. in about 18 months from now.

1.4 The Authority has carefully considered the question of the cost that will be involved in the required up-gradation as also who should bear it and how. On a general analysis of the existing telecom network in the country, and the switching systems installed therein, the Authority has come to the conclusion that in most of the new technology switching systems to which the majority of the subscribers are connected, the up-gradation cost is not going to be high. Inquiries reveal that the hardware & software changes required would involve only modest expenses, which can be reasonably met. In any case, the cost involved will be incurred only in a phased manner during the entire roll out period to cover all service areas. The Authority has noted that the estimates provided by some operators are way off the mark and quite clearly do not take into account either the phasing involved mainly due to fact that the setting up NLDO`s /ILDO`s POPs would be gradual, and that most of the new generation switching systems have Carrier Selection functionalities already available. The Authority observes that such estimates do not take into account changes in the technology and network structure in the telecom sector in the country which will in any case take place. These changes will have significant cost implications and, therefore, it would not be correct to make estimates of costs required, with the assumption that the entire network remains the same or similar during the whole period of the roll out. The Authority therefore, is of the view that the costs involved in the exercise would be modest and fully sustainable & should be readily incurred by the operators because of the benefits that the industry is likely to derive by giving the customer CPS facility at an early date.

1.5. Therefore, in exercise of powers vested in the Telecom Regulatory Authority of India under Section 13 read with clauses (i) and (iii) of sub section (b) of Section 11(1) of the Telecom Regulatory Authority of India Act, 1997 as amended by TRAI (Amendment) Act, 2000, to ensure compliance of terms and conditions of licence and effective interconnection between Access Providers, National Long Distance Operators and International Long Distance Operators and to regulate arrangements amongst them for providing to all the subscribers Equal Ease of Access through Carrier Selection, whereby they could have a free choice to select their Long Distance Carriers, the Authority hereby issues the directions as contained in Section 2 to 7 to all Basic Service Providers (BSOs), Cellular Mobile Service Providers (CMSOs) and Long Distance Operators (NLDOs / ILDOs). The Interconnection Agreements between Access Providers and NLDOs / ILDOs shall be amended to comply with the terms and conditions of this direction. A Functional Specification for Carrier Selection in Access Provider`s network is placed at Annex-II.

2. TIME FRAMES FOR INTRODUCTION OF CARRIER SELECTION.

2.1. Cellular Mobile Networks.

2.1.1. Based on the inputs received from the operators and independent assessment of the capabilities of the Mobile Switching Centers which employ state of the art digital switching systems, the Authority is of the view that the implementation of Call by Call Carrier Selection should not take more than three months as no major system changes are required. In most of the Mobile Switching Centers (MSCs), it should be possible to implement, Call by Call Carrier Selection by man machine commands within three months, as these systems have adequate storage capacity to store the extra four digits (CAC) dialled by the subscribers. Even in the case of `Pre-selection`, most Mobile Switching Centers (MSCs) may not need system modifications (system program change) & only changes by man machine command to the office data base may be adequate to implement the CPS facility. However, some operators have represented to the Authority that their systems may need program modifications as well as changes to support systems such as off line billing system. Taking note of their representation, the Authority has decided, to give six months for implementation of Carrier Pre-selection in all Cellular Mobile networks. The Authority accordingly directs that all CMSOs in whose service area, a POP has been established by a NLDO, on a request from the latter, shall draw up a detailed time schedule and implement both types of Carrier Selection i.e. Call by Call and Pre-selection within as short a time period as possible, but in no case exceeding six months of the receipt of request from the concerned NLDO.

2.1.2. The ILDO license granted by the Government permits the ILDOs to establish their gateway switches at the level-I stations in the country and they can directly pick up ILDO traffic from the GMSC of CMSO at these stations i.e. without the need for routing such traffic through NLDO's network. Accordingly, CMSOs will take steps to implement Carrier Selection i.e. both Call by Call & Pre-selection in their respective service area on request of the ILDO. This implementation of Carrier Selection (CS) for ILDO shall also be completed within six months of the receipt of request from the ILDOs concerned.

2.2. Basic Service Networks.

2.2.1. The Basic Service Operator's Network (PSTN) also employ similar state of the art digital switching systems in their exchanges as in the case of CMSO's Mobile Switching Centres, therefore the time period for implementation of CPS should be of the same order as indicated in preceding section. Based on the inputs received from various BSOs including the incumbents, the Authority has noted that the first NLDO who has entered the market has already established his Point of Presence in 18 LDCAs. The BSOs including the incumbents are directed to implement Call by Call Carrier Selection in these 18 LDCAs, in three months of the issue of this direction. As far as Pre-selection is concerned, it should be possible to complete the process in about six months but in any case not exceeding nine months from the date of issue of this direction. The extra time of three months beyond six months may be required by the incumbent due to older technology systems operating in their networks. As and when the NLDO establishes a new POP in other LDCAs, which will generally be as per a plan shared with the Access Provider in advance, similar implementation schedule shall be drawn up by the concerned BSOs (including the incumbent) so as to complete the entire process of implementation of both modes of Carrier Selection (Call by Call /CPS) within nine months of the POP being established.

2.2.2. Since in the case of International calls, 21 digit storage capacity is required in the local exchanges of the BSOs, which is not available at present in most of the exchanges of the incumbent, the Authority has decided to give more time to carry out the hardware & software up-gradations in the switching systems of the BSOs. Accordingly, a time period not exceeding 18 months is stipulated for implementation of Carrier Selection for ILDO i.e., both for Call by Call and Pre-Selection in BSO's networks including that of the incumbent at these stations. In stipulating the extra time of nine months for implementation of Carrier Selection for ILDO calls, the Authority has taken note of the fact, that for storage of additional digits (CAC) and its subsequent analysis for call processing program, both software and hardware up-gradations will have to be carried out in BSO's exchanges. At some stations, modification in off line support systems /billing system modifications may also be required.

2.3 A Table summarising the time periods stipulated in the direction is placed at

Annex-I.

3. Routing of ILD calls

3.1. At all other stations, except the Level-I stations where direct connectivity between the Access Provider's network and the ILDO's network have been permitted as per the license agreement, Access Providers shall route ILD calls through an NLDO's network. For routing such ILD calls, for the present, the choice of the NLD network for routing ILD calls shall be exercised by the Access Providers. The Authority's decision in this regard is based on appreciation of the fact that giving simultaneous choice of NLDO and ILDO to the subscriber will require major system modifications in the Access Provider's network, which may not be feasible in the next 18 months. A decision in this regard will be taken after a detailed cost benefit analysis during the financial year 2003 /2004. As under the arrangement now being finalized the subscriber will have the facility to pre-select national as well as international carrier separately, absence of simultaneous pre-selection is not likely to be a serious disadvantage.

4. Handling of Default Traffic.

4.1 Till the full facility of Carrier Selection i.e., both modes of selection namely Call by Call and Pre-selection is available, all default traffic will be routed by the Access Providers through the NLDO / ILDO of their choice for onward carriage to the dialled destination. At the end of the period prescribed in this Direction, for setting up arrangements for providing Carrier Selection facilities i.e., 3, 6, 9 or 18 months as the case may be, depending upon the nature of modifications required to be made, the Access Provider will no more be able to carry any NLD or ILD call as per its own choice of NLD / ILD Carriers. Thereafter, in all cases of long distance (i.e. prefix '0') calling, in which the subscriber has not pre-selected his carrier and has also failed to dial the four-digit pre-fix i.e. Carrier access code (CAC), the calls will be routed by the Access Providers (BSOs /CMSOs) to a recorded announcement. Through the announcement, the subscriber shall be requested to select his long distance carrier either on the basis of Call by Call or Pre-selection. If he does not make the choice, the announcement will request him to do so. In effect, therefore, consequent upon the full implementation of Carrier Selection i.e., both Call by Call /Pre-selection, there will be no default traffic. Arrangements will have to be made for extensive and sustained subscriber education and publicity for familiarising them with the advantages as well as procedures for Carrier Selection. This will have to be done by the Access Providers as well as NLDOs / ILDOs. Every effort has to be made so that by the end of the period prescribed for completing Carrier Selection arrangements, the possibilities and the number of calls without selection of carriers, which will have to be routed to announcement, may be reduced to the very minimum. As the subscriber gets familiar with the new dialing procedure, the volume of traffic being routed to announcement machine will be insignificant.

5. Cost of implementing Carrier Selection and its Recovery.

5.1 Since Carrier Selection is part of interconnection arrangement, the principle of cost determination and recovery is to generally conform to the overall framework of interconnection regulations. The system modification including the cost of subscriber and office data changes required to implement Carrier Selection form part of system set up cost for providing interconnection between the Access Providers network and that of the NLDO /ILDO. These shall be borne by the latter. The set up cost involved and the manner in which it will be reimbursed to the Access Provider could differ from case to case depending upon the interconnection scenario between the parties involved viz. the Access Provider on the one hand and the NLDO /ILDO on the other. The amount to be paid by way of set up cost and the mode of its payment will be decided by mutual negotiations. Following such negotiations an arrangement will be entered into under which the NLDO /ILDO will pay the necessary set up cost to the Access Provider in whose network the required changes are to be made. In the case of an operator who is a BSO as well as an NLDO /ILDO, the relationship and inter se payment between the two service wings will be in the same manner as it would be between two different operators functioning as BSO and NLDOs / ILDOs. Such operators, if they are providing the two services under the same business unit, shall keep the accounts of the two services separate and receive and pay as if they were two separate business units. A note giving some International best practices in respect of set up costs is placed at Annex - III.

5.2 While it is expected that bilateral negotiations will enable the concerned parties to arrive at a mutually agreed set up cost (cost of system up-gradation), and the modality by which this cost will be paid to the Access Provider, if the operators concerned fail to reach such an agreement within thirty days of the setting up of the POP by the NLDO / ILDO in the concerned service area, they should approach the Authority for a determination on the issue. On a consideration of the relevant input /data, it will issue a determination on costs taking into account the recommendations of the High Level Committee working under its aegis. Such determination will be made within a period not exceeding forty-five days from the date of reference made by at least one of the operators involved.

5.3 Some important guiding principles based on which setup costs will be worked out are given below so that these are used by the operators in their mutual negotiations.

5.3.1 Guidelines For Cost Recovery

In order to establish that costs are eligible for recovery, an operator should conclusively show in its proposal and its calculations for the purposes of such costs:

- (a) would not have been incurred by the operator but for the

implementation of carrier pre-selection; and

- (b) were incurred for provision of carrier pre-selection and are directly attributable to the same.

5.3.2 Measuring Eligible Costs

In measuring eligible costs, the criteria would be as follows:

- (a) Eligible costs constitute dedicated costs, portions of joint costs, and certain incremental overheads.
- (b) Dedicated costs are the costs of investments or expenses that are dedicated exclusively to the provision of carrier pre-selection functions.
- (c) Joint costs of providing carrier pre-selection are costs associated with new investments or expenses that directly support the provision of carrier pre-selection functions and also support at least one other function.
 - (1) The portion of joint costs that is an eligible cost constitutes the difference between the total cost of an item with the carrier pre-selection functionality and the total cost of the item without the carrier pre-selection functionality.
 - (2) The burden shall be on the operator to demonstrate what portion, if any, of such joint costs should be attributed to carrier pre-selection.
- (d) An operator may include incremental overheads as eligible costs only to the extent that the operator can demonstrate that such incremental overheads:
 - (1) are incurred specifically in the provision of carrier pre-selection; and
 - (2) are actually new costs incremental to and resulting from the provision of carrier pre-selection.

Costs recoverable through carrier Pre-selection cost recovery mechanisms may not be included in other cost recovery mechanisms.

6. Monitoring the implementation of Carrier Selection in various Service Areas & grant of Extension in exceptional cases.

6.1 The Authority does not foresee any major difficulty in adherence to the stipulated time schedules in this direction as far as it relates to cellular network and the new technology switching systems in the Basic Service Network including that of the incumbent (BSOs), as most of these switching systems are state of the art, and are already in operation in Europe and North America, where Carrier Selection has been implemented about a decade back. Therefore, the vendors are expected to have ready made software patches for introduction for Carrier Selection in their switching systems obviating the need to develop new software for our country. However, there may be some analogue switching systems as well as older generation digital switching system in respect of which, there may be genuine difficulty in implementation of Carrier Selection within the time schedules stipulated herein. In these exceptional cases, there may be need to grant extra time periods on the merits of each case.

6.2 It would be necessary to closely monitor the progress of implementation of Carrier Selection in a large number of service areas. Since Carrier Selection has to be implemented in local exchanges (LEs) in case of BSOs, and Mobile Switching Centres (MSCs) in case of CMSOs, it will be impractical to monitor the progress of implementation of Carrier Selection from a central place like Delhi because the number of local exchanges is in tens of thousand, and that of MSCs about a hundred. During the public consultations on interconnection, it was suggested by a number of stake holders that implementation of interconnection and its monitoring should be done at the Telecom Circle level, which is also the service area for BSOs /CMSOs in majority of the cases. The Authority intends to form a Carrier Selection implementation committee whenever required for each Circle. However, till formation of such committee at Circle level, the initial monitoring for the 18 LDCAs where the new entrant has established a POP is being entrusted to the High Level Technical Committee functioning under the aegis of TRAI in Delhi.

6.3. All cases of extension of time limits stipulated in this direction will be examined by the Circle level coordination committee and will thereafter be forwarded to the High Level Technical Committee working under TRAI, which in turn will examine each case on its merit and provide the Authority with its reasoned recommendations for a suitable extension or otherwise. The same modus operandi will be followed in regard to the assessment of cost for setting up Carrier Selection in the networks of the Access Providers in the Circles. The Authority will issue a determination in respect of the cost and its recovery taking into account the recommendations of the High Level Technical Committee in this regard. The Authority may wherever it considers necessary, issue an interim determination on recovery of costs if in its view the final determination is likely to be delayed.

7. Polling and Subscriber Education.

7.1 Polling is a process undertaken by the Access Providers to ascertain the choice of each subscriber, in regard to his pre-selected long distance carrier in a fair and objective manner. Thus polling is an essential pre-requisite for the introduction of Pre-selection facility in an exchange. The operators concerned shall therefore take urgent steps for customer education and also give adequate publicity to the polling, so that the customers are fully aware about the choice of long distance carrier available to them. The polling process should be completed by them as soon as possible, but not exceeding two months after receipt of request for setting up of Carrier Pre-selection (CPS) from the NLD /ILD operator in a service area. This period is part of the stipulated time period for implementation of Carrier Selection.

7.2. The publicity and customer education should also give details about the new dialing procedure particularly relating to the Call by Call selection. The subscriber should be made fully aware that after the expiry of the stipulated time periods in this direction, if he does not either pre-select his long distance carrier (NLD /ILD) or dials his long distance call without prefixing the Carrier Access Codes for each call, his call will be routed to a recorded announcement and that there will be no default carrier for such calls. The operators are directed to publish Carrier Selection consumer guidelines giving full details of the dialing procedure applicable to various types of calls and the benefits that the consumers will derive from the newly introduced Carrier Selection procedure. A detailed note on polling for Pre-selection is placed at Annex IV.

(Dr. H.V. SINGH)

Secretary cum Principal

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To

All Service Providers

Annex - I

Table summarising the Time-periods stipulated in the Direction

(1) National Long Distance Calls

Type of Access Provider	Call by Call Carrier Selection:Outer Time Limit	Carrier Pre-Selection:Outer Time Limit	Service Areas to be covered	Routing to announcement machine at the end of
CMSOs	3 months	6 months	In service areas where	6 months

			POPs have been established by new NLDOs	
BSOs	3 months	9 months	In stations where POPs have been established by new NLDOs	9 months
	Within 3 months of the establishment of POP	Within 9 months of the establishment of POP	In the remaining stations in which new NLDOs establish POPs as per rollout plan shared with BSOs	Within 9 months of rollout.

(2) International Long Distance Calls

CMSOs	6 months	6 months	In service areas where new ILDOs can pick up ILD traffic directly from CMSOs or POPs of NLDOs	6 months
BSOs	18 months	18 months	At stations where Carrier Pre-selection has already been implemented for NLD calls	18 months
	18 months	18 months	For other stations as per rollout plan shared with BSOs	18 months

Annex - II

FUNCTIONAL SPECIFICATION OF CARRIER SELECTION

1. Call by Call Carrier Selection.

1.1. Call by Call Carrier Selection facility shall be provided to all subscribers of CMSOs /BSOs including pay phone lines and also to pre-paid card customers. However, Call by Call Carrier Selection shall not be provided to operator-assisted calls, including transfer /reverse charge calls.

1.2. Adequate storage capacity will be provided in the switching nodes of both Cellular Mobile /Basic service operator`s networks to store additional four digits (CAC) dialed by the subscribers. Adequate depth of digit analysis capabilities will be provided in switching nodes for proper routing of long distance calls to the POP of the long distance operator based on the analysis of CAC and long distance trunk prefix (0 / 00) dialed by the subscriber.

2. Carrier Pre-selection (CPS)

2.1. CPS facility shall be provided to all cellular subscriber including pre-paid card subscribers of CMSOs. CPS shall be available only in the service area of a CMSO. It will not be available to roaming subscribers visiting another service area.

2.2. The applicable CACs of pre-selected carriers shall be stored in the subscriber`s database. Pre analysis of initial 3 / 4 digits and the calling line category shall indicate to the call processing program that it is a pre-selected long distance call, accordingly the CAC (four digits) will be read from the subscriber data memory area and inserted after `0` or `00` i.e, trunk prefix by the call processing program. Subsequent processing of the call will be identical to what is applicable in case of Call by Call selection.

2.3. Pre-para provides a conceptual view of processing required to be done in a typical local exchange /MSC and is based on discussions in the High Level Technical Committee. The operators are free to implement the CPS facility in their switching nodes in the manner they like. However, the switching nodes should be treated like a black-box and the CPS modification should not necessitate changes to the standard signaling systems (CCS7 / MFC), specified by TEC, for the Indian Telecom Network.

Annex - III

Methodology for recovery of costs incurred by Access Providers in setting up of Carrier Pre-Selection : Best International Practice

United Kingdom (UK)

- In the UK, significant costs had to be incurred in upgrading older generation switching systems like AXE-10 (earlier version), TXE-4 / UHD-5 etc.
- BT`s `System set-up` costs include costs of upgrading BT`s switches to be recovered through a pence-per-minute surcharge on BT`s wholesale call origination charges. This will be for a duration of 5 years. The surcharge applies to all calls carried on BT`s network that are capable of being pre-selected even if the call is not actually carried by a pre-selected operator. This decision was

taken since the OFTEL's economic analysis showed that all customers originating calls on BT's network would benefit from the increased competition created by CPS, even if the customer does not actually use CPS.

- In the UK, all operators pay an initial 'per operator' charge of about Pound Sterling 23,000 to cover BT's data amendment and forecast handling costs. This charge applies to all the operators even if they enter at a later date. It is presumed that after 5 years, BT's cost recovery should be complete and no operator has to pay this surcharge.

Ireland

Cost Allocation

Three broad cost categories associated with the provision of CPS as below are identified: -

- a) General system provisioning costs: These are once-off costs mainly incurred by the incumbent operator in modifying network and support systems to enable CPS. System provisioning costs are independent of operator demand.
- b) Operator-specific enabling costs: These are the costs of enabling CPS for any individual operator, including the setting up of commercial arrangements for the electronic transfer of customer orders.
- c) Per-line enabling costs: These are the mainly administrative costs of implementing CPS for individual customer lines.

Allocating Per-Line and Operator-Specific Enabling costs

Six guiding principles for cost apportionment were used to determine the Regulator's initial proposals for apportioning the three costs.

1. Cost causation: the party responsible for causing costs should help to bear the costs.
2. Distribution of benefits: the party(ies) benefiting from the process should help to bear the costs.
3. Effective competition: the cost allocation mechanism should inherently encourage competition.
4. Cost minimisation: the cost allocation mechanism should encourage operators to minimise costs and in particular to adopt technically efficient

solutions.

5. Reciprocity: Charges between operators should be equal for the same service (generally applicable to a service like number portability only, as only Incumbent is currently mandated to offer CPS).
6. Practicability: the allocation mechanism should be practical to implement.

Note: Oftel is also following the same set of guiding principles

Applying cost causation as the primary principle is generally sound, on the grounds that economic efficiency is enhanced by requiring parties to pay for costs, which they directly cause to be incurred.

Using these guiding principles, the Regulator proposed that per-line and operator-specific enabling costs should be recovered from CPS operators. This ties in with the cost causation principle, which is generally straightforward to apply and normally the key factor in cost allocation.

The Regulator further proposed that these costs should be recovered from CPS operators directly, not through conveyance charges. CPS operators are free to pass the per-line cost on to their customer directly or to recover it in some other way.

1. Per-line and operator-specific enabling costs can be recovered from CPS operators directly.
2. The operators are free to pay the per-line enabling cost on behalf of the consumer, and recover it in some way other than by a direct charge to the consumer. This is a commercial decision for each CPS operator.
3. Per-line and operator-specific charges shall include only the costs of an efficient operator using an efficient technical solution.

Applying the Principles to General System Provisioning Costs

The burden of general system provisioning costs could be shared between Incumbent and the CPS operators. This was mainly justified on the basis of effective competition and distribution of benefits, given that all customers, including Incumbent, will benefit from the increased competition brought about by CPS. Arguments about practicability and cost minimisation tend to support the same conclusion.

Other European Countries

In Austria and Holland, system setup costs are recovered by the Incumbent from other Carriers.

In Germany and Norway, System setup costs are not recovered by the incumbent from other Carriers.

Mexico and Argentina

Some of the Developing Countries like Mexico and Argentina had worked out the cost for the implementation of Carrier Pre-selection based on the number of Carrier Pre-selection transactions. The work was assigned to an outside consultant known to be a leading third party provider for pre-subscription data base setup and administration plus associated services such as balloting and verification.

A cost of £ 19,20,000 per year was worked out as processing cost based on 80,000 transactions per month at a rate of £ 2 per transaction.

South Africa

The providing carrier's reasonable costs incurred in providing carrier pre-selection facilities for new subscribers and for changes to pre-selected operators shall be categorized as System Set-Up Costs, Per Operator Set-Up Costs and Per Subscriber Set-Up Costs and shall be allocated accordingly.

On or following 7 May 2002, each providing carrier may impose a one-time charge upon each new subscriber and upon each subscriber making a change in its pre-selected operator. Where a providing carrier imposes a charge pursuant to this section, such charge shall consist of the Per Subscriber Set-Up Costs and the proportional share of the System Set-Up Costs and Per Operator Set-Up Costs associated with such new-service or change in pre-selected operator. Allocations of System Set-Up Costs and Per Operator Set-Up Costs shall be based upon reasonable estimates of the number of new lines and pre-selected operator changes expected by the providing carrier.

In respect of any individual item of cost under this section, the Authority may determine into which category of cost it falls, and if it considers that any such item of cost cannot be reasonably categorized as System Set-Up Costs, Per Operator Set-Up Costs or Per Subscriber Set-Up Costs, the Authority may determine whether and to what extent the providing carrier may reasonably recover such costs. The Authority may determine whether a providing carrier's estimates of new subscribers and pre-selected operator changes are reasonable and may substitute its own values where it determines that such estimates are unreasonable.

Any eligible costs recoverable through carrier pre-selection cost recovery mechanisms shall not result in any burden, as determined by the Authority, to the implementation of carrier pre-selection. Should such recoverable eligible costs result in a burden to the implementation of carrier pre-selection, the Authority may determine by notice in the Gazette that such costs are not recoverable and are to be borne by the operator incurring such costs.

Annex - IV

POLLING AND SUBSCRIBER EDUCATION

General

Polling is a term used to indicate the process of ascertaining the choice of every subscriber in relation to his preferred carrier for long distance calls. Polling is an essential pre-requisite to Pre-selection. However, proper publicity and customer education have to be carried out prior to Polling. For polling to be successfully carried out, the following actions have to be taken:

- Proper publicity and customer education
- Definition of the polling process.
- Prescription of procedures for change of choice and post-Pre-selection default traffic

Subscriber Education

Publicity and subscriber education can be grouped into two categories, those relating to the polling process, description of Pre-selection and Call by Call selection processes and announcements, and those relating to use of specific Call by Call selection codes, change of choice, rates etc.

The former has to be done by the entity carrying out the polling process. The latter is a matter purely relating to competition and can be left to the respective carriers.

Definition of the Polling Process

The polling process may be as follows:

- Publicity regarding the choices available to customers and the manner in which such choices are required to be exercised.
- Individual letters to every subscriber enclosing explanatory material and forms for registering choice within a specified time.
- Telephone calls to all subscribers who have not responded in time, indicating

difficulties that may be encountered if no choice is made.

- A second round of publicity and letters
- Entering Pre-selection choice of subscribers in exchange data followed by a brief period of special announcements.
- Supply of lists of subscribers failing to exercise choice, to other operators on payment, so that they can supplement the polling exercise.
- Subscribers, who respond to the announcements to be brought on to the pre-selected list.
- Introduction of the default announcement procedure.

Announcements

The announcement procedure requires investment and creates an initial disturbance in the free flow of traffic, it is therefore desirable to reduce its impact to the extent desirable by giving ample opportunities to subscribers to exercise their choice.

Post Polling Period

Once polling is complete and Pre-selection data entered in an exchange, a subscriber who has not exercised his choice will have to dial the Carrier Selection Access Code for each long distance call failing which, he will be routed to an announcement. For subscribers who exercise a late choice after the polling process is over, a fee should be recovered from the subscriber by the Access Provider.