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DEVELOPMENTS IN CARRIER SELECTION AND PRE-SELECTION

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DEVELOPMENTS IN CARRIER SELECTION AND PRE-SELECTION

Introduction

A new entrant in the telecommunications market requires time in order to construct its own network. A requirement on the incumbent operator to implement carrier selection and pre-selection can enable a new entrant to immediately attract customers and therefore earn revenue. In turn this facilitates the expansion of networks. For new market entrants specialising in the provision of national long distance and/or international services carrier selection and pre-selection are essential for competition. Thus, new market entrants regard the full implementation of carrier selection, particularly carrier pre-selection (CPS), as being indispensable to the achievement of full market liberalisation and the development of effective competition. From their viewpoint, CPS provides them with the easiest form of access to the end-user for voice telephony services. In this context, it is essential that policy initiatives, and legislation if necessary, are taken to ensure that the full range of CPS services are offered by new entrants, in particular local, long distance, and international calls and calls from fixed to mobile networks.

There are two main types of carrier selection, namely “call-by-call carrier selection” and “carrier pre-selection” (CPS). Call-by-call selection allows consumers to choose a new entrant rather than the incumbent carrier using a specific code designated to the new carrier each time a call is made. If a consumer does not make a choice, the call is carried by the incumbent’s network. Carrier selection is sometimes viewed as being an indirect form of selection.

In order to ensure fair conditions of competition between the new entrants and the incumbent, an increasing number of countries are implementing CPS. Consumers can use CPS to choose the carriers of their choice without needing to replace their existing telephone line. Furthermore they can choose a carrier for different market segments, such as the long-distance, international, local, and fixed-to-mobile. CPS also facilitates calling as compared to carrier selection since special codes to select carriers do not have to be entered for each call. However, CPS in contrast to carrier selection requires a deliberate choice to change carrier, that is, to no longer take service from a carrier (usually the incumbent) for a specific service. In turn this requires informing the existing carrier of this choice and registering with a new service provider. CPS does not prevent the consumer from using carrier selection on a call-by-call basis. CPS can help competition by reducing the cost to consumers of switching operators, however to be effective the process of implementing pre-selection needs to be transparent and easy for the consumer to understand as well as impose minimum costs.

Full carrier selection, *i.e.* carrier pre-selection, with the ability to override on a call-by-call basis, for long-distance, international, local, and fixed-to-mobile calls without restrictions, has now been implemented in 13 OECD countries (Austria, Belgium, Denmark, Finland, Iceland, Ireland, Italy, Luxembourg, New Zealand, Norway, Portugal, Switzerland, and the United States). But many OECD countries have only recently introduced CPS, or are in the process of implementing it, particularly for local calls and fixed-to-mobile calls. This report examines the experiences of OECD countries in implementing carrier selection, in particular CPS, and how consumers are using this new opportunity to diversify in terms of service providers.

1. Call-by-call carrier selection

Actual competition in the voice telephony market cannot start without some means for consumers to choose a service from two or more telecommunication operators offering service in the marketplace. In its most simple form such competition can take place by adding a prefix of a few digits to a telephone number. Availability of call-by-call carrier selection is therefore an important prerequisite for the development of competition in a particular market. A fully liberalised voice telephony market in the legal sense, without the means for users to express choice, would in reality not have the necessary requirements to create effective conditions for competition.

For this reason, the European Union set a deadline for the implementation of call-by-call carrier selection in its member states for 1 January 1998, the same date as the deadline for completing the full liberalisation of the telecommunications market. All EU Member States, except those with a derogation, met this requirement for long-distance and international calls. By the end of 2000 call-by-call carrier selection was available for long-distance and international calls in all EU Member States, except Greece which still had a derogation.¹ In fact, most OECD countries have already introduced call-by-call carrier selection in long-distance and international calls (**Table 1**), and new entrants have obtained more than half the market share in several cases (**Table 2**).

Mexico chose a different approach in that it did not implement call-by-call selection, but did implement carrier pre-selection (without call-by-call overriding function) for long-distance calls in April 1998. When competition in the long-distance market started in September 1997 and eleven carriers were granted concessions, each of them was allocated an “identification code” from the numbering plan. However, at the request of concessionaires, Cofetel, the regulator, delayed the process. Cofetel published a Resolution in March 1998 to set out the guidelines under which call-by-call selection was to be provided. But call-by-call selection has not started yet. The reasons for the request for a delay put forward by the concessionaires include high charges by Telmex, the incumbent, for performing the necessary billing and collection services, and the high costs of terminating or originating the long distance calls.

In other OECD countries, call-by-call selection was introduced as soon as competition started in long-distance or international calls market, either with CPS as in the United States, or without CPS as in others.

Call-by-call selection for local calls has been adopted at a much slower pace although now a majority of OECD countries have implemented it. Nevertheless, it has not yet led to the creation of local competition partly because it is a relatively new service and partly because in this market segment, where the amount of calls is relatively high, call-by-call selection is a relatively cumbersome means to create effective competitions. Call-by-call selection in this market should be viewed as an interim measure before full CPS is introduced.

In the OECD, fewer countries have implemented call-by-call carrier selection in the local call market than in the long-distance, or international call market. Moreover, the number is fewer than those OECD countries who have implemented call-by-call selection in the fixed-to-mobile call market (**Table 3**). Some countries who have already fully liberalised the local call market do not have call-by-call carrier selection in place. The rationale for this can be questioned. Given that incumbent operators are still dominant in the provision of access lines to consumers in all OECD countries, it is imperative that OECD governments place emphasis in policies and regulations on measures aimed at ensuring competition in the fixed local call market by improving conditions to encourage new entry including carrier selection. Clearly these measures need to be supplemented by such policies as the unbundling of the local loop. An important requirement, among others, is to monitor market shares in the local calls market in terms of the number of subscribers, minutes of traffic, or revenues, rather than in terms of access lines. A number of regulators,

who do not undertake such monitoring, cannot adequately judge the success of policies in time and the requirement to make necessary adjustment in these policies.

In the European Union, the telecommunications market was fully liberalised as of 1 January 1998 in ten of its 15 member states, but only seven of them (Belgium, Denmark, Italy, the Netherlands, Austria, Sweden, and the United Kingdom) had implemented call-by-call selection in local calls by the end of 2000.² In 1999 the EU's incumbent operators still had 96%, on average, of the market share of local calls, which was a slight decrease from 1998 (98%) and 1997 (99%).³ On the other hand, the equivalent figure for long-distance calls was 88% in 1999, whereas the figures were 94% in 1998 and 97% in 1997. For international calls, it was 81% in 1999, 91% in 1998, and 93% in 1997. In the case of these two markets (long-distance and international), all EU countries, except one, had liberalised them, and had implemented call-by-call carrier selection as well. The larger decrease in the market share of incumbent operators in long-distance and international calls than in the local call market in the European Union could be attributable partly to the availability of call-by-call carrier selection, which is often equal to having a choice from competing services for consumers and the existence of competition in effect.

In all other OECD countries where local competition based on service rather than facility competition has started, call-by-call selection was implemented as soon as new entrants started to operate. Those OECD countries that have not started competition in the local call market also envisage implementation of call-by-call selection as soon as they have competitive operators. In order to do this, arrangements on billing and collection services need to be ensured among incumbent and new entrants.

The argument has been put forward by some new entrants that, as an interim measure before CPS is implemented, the incumbent should be obliged to use an additional number prefix (carrier identification code) which must be used by all its customers. Use of such a number prefix it is argued, would ensure that all carriers are treated equally in the market so that a customer that chooses to remain with the incumbent does not do so only because dialling is less cumbersome. However, creating such equality in call-by-call carrier selection also imposes costs on customers which are likely to exceed any benefits for users to use a number prefix to continue obtaining service from the incumbent. The fact that technologies such as autodiallers exist call into question the need to require the incumbent to use an additional number prefix, as does the fact that call-by-call selection should be an interim step to CPS.

Table 1. Call by call carrier selection (as of 1 May 2001)

	Long Distance	International	Local	Fixed to Mobile
Australia	Implemented	Implemented	Implemented	Implemented
Austria	Implemented	Implemented	Implemented	Implemented
Belgium	Implemented	Implemented	Implemented	Implemented
Canada	Implemented	Implemented	Implemented	Implemented
Czech Republic	Scheduled for implementation in 2002	Scheduled for implementation in 2002	Scheduled for implementation in 2002	Scheduled for implementation in 2002
Denmark	Implemented	Implemented	Implemented	Implemented
Finland	Implemented	Implemented	Implemented	Implemented
France	Implemented	Implemented	Not implemented (to be implemented on 1 January 2002)	Implemented
Germany	Implemented	Implemented	Not implemented	Implemented
Greece	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003
Hungary	Not implemented	Not implemented	Not implemented	Not implemented
Iceland	Implemented	Implemented	Implemented	Implemented
Ireland	Implemented	Implemented	Implemented	Implemented
Italy	Implemented	Implemented	Implemented	Implemented
Japan	Implemented	Implemented	Implemented	Not Implemented
Korea	Implemented	Implemented	Implemented	Implemented
Luxembourg	Implemented	Implemented	Not implemented	Implemented
Mexico	Not implemented	Not implemented	Not implemented	Not implemented
Netherlands	Implemented	Implemented	Implemented	Implemented
New Zealand	Implemented	Implemented	Implemented	Implemented
Norway	Implemented	Implemented	Implemented	Implemented
Poland	Implemented	Not implemented	Not implemented	Not implemented
Portugal	Implemented	Implemented	Implemented	Implemented
Slovakia	Not implemented	Not implemented	Not implemented	Not implemented
Spain	Implemented	Implemented	Implemented	Implemented
Sweden	Implemented	Implemented	Implemented	Implemented
Switzerland	Implemented	Implemented	Implemented	Implemented
Turkey	Not implemented	Not implemented	Not implemented	Not implemented
United Kingdom	Implemented	Implemented	Implemented	Implemented
United States	Implemented	Implemented	Implemented	Implemented

Source: OECD.

Table 2. Market share of competitive new entrants as of 1999

	Long Distance (based on switched minutes)	International (based on minutes of international traffic)	Local (based on access lines)
Australia	16.4	42.9	3.97
Austria	15.0	N/A	1.80
Belgium	N/A	N/A	0.00
Canada	27.9	57.0	29.00
Czech Republic	0.9	0.0	0.34
Denmark	N/A	43.7	0.37
Finland	62.1	48.5	0.35
France	20.0	27.1	0.00
Germany	40.0	40.0	1.00
Greece	0.0	0.0	0.00
Hungary	0.0	0.0	0.00
Iceland	4.0	5.0	0.00
Ireland (1)	N/A	N/A	2.40
Italy	15.0	32.0	0.00
Japan	40.6 (for 1997)	42.5	N/A
Korea	10.0	38.0	0.30
Luxembourg	N/A	N/A	0.00
Mexico	27.8	25.1	0.45
Netherlands	16.0	15.0	0.10
New Zealand	25.0 (for 1998)	36.0 (for 1997)	3.50
Norway (2)	12.0	27.0	0.40
Poland	0.0	0.0	5.30
Portugal	0.0	0.0	0.00
Slovakia			
Spain	14.3	12.9	1.70
Sweden	14.0 (based on revenue)	38.0	1.00
Switzerland	20.0	20.0	2.00 (for 1998)
Turkey	0.0	0.0	0.00
United Kingdom	33.4	54.6	15.40
United States	62.9	54.7 (based on revenue)	5.44

Notes 1: Norway eliminated the long distance charge zones on 1 July 1999.

2: Ireland estimates that the corresponding figures for fixed line market is 6-7% based on revenue.

Source: OECD Communications Outlook 2001.

2. Carrier Pre-Selection (CPS)

2.1. CPS for international and long-distance calls

CPS for long distance and international calls has now been implemented in the vast majority of OECD countries. Six countries that have not yet done so for these two markets are those that have not opened their markets to full competition, except Greece (Czech Republic, Hungary, Poland, Slovakia, and Turkey). The sixth country, Greece, has a derogation from the EU until 2003. Within countries where CPS for long distance and international services has been in place for a number of years, it is regarded to have contributed significantly to strengthening competition and lowering prices. In fact, the market share of competitive new entrants in several OECD countries are over 50%, or 60% in a few cases, in either or both of the international and long-distance markets as of 1999 (**Table 2**).

2.2. CPS for local calls

The emphasis of regulatory initiatives in recent years has been placed on further stimulating effective local access competition. Some examples of such policies include mandating local loop unbundling, licensing fixed wireless access operators, and encouraging access via CATV networks. CPS has also been expected to help stimulate competition as well as allow for fair access to customers.

In the fixed local call market, 17 OECD countries have implemented CPS as of 1 May 2001 including those where it is available only for major centres and where the area code needs to be dialled (**Table 3**). This figure is slightly fewer than the number of OECD countries where CPS in fixed-to-mobile call is available, which is 19. This might suggest that competitive pressures are slightly weaker in the local call market or that it is more difficult to implement competition there.

In the EU, the Numbering Directive 98/61/EC provided that operators with significant market powers must be mandated by the Member States to offer carrier pre-selection for all calls (international, long-distance, local, and fixed-to-mobile) by 1 January 2000. However, while CPS for long-distance and international calls has been implemented in all its Member States except one, and CPS for calls from fixed to mobile networks has been implemented in eleven, it has been available for local calls in only eight countries, including those requiring the area code to be dialled for CPS to work.

Several EU countries found it difficult to observe the EU deadline to implement CPS (Germany, Belgium, France, Italy, the Netherlands, Austria, Finland, and the United Kingdom). The European Commission opened infringement proceedings against them in late March to June 2000 for failure to implement the Numbering Directive 98/61/EC.⁴ In most cases, the problem was with the implementation of CPS in local calls and calls to mobile except for Austria and the United Kingdom who had not implemented the CPS in any of the categories by the deadline. In the case of Austria, the delay was caused firstly because negotiations to make necessary arrangements between the incumbent and new entrants had failed and the dispute settlement case was filed with considerable delay, and secondly because the process of implementation had turned out to be more complex than expected technically. In the case of the United Kingdom, it requested and was granted a deferment of three months (*i.e.* until 1 April 2000) because it needed time for necessary arrangements to be put in place and to avoid imposing an excessive burden on British Telecom and other operators.

The United Kingdom despite being one of the early countries to open its market to full competition, had not thought CPS a necessary part of the regulatory toolkit required to create fair competition. This was due mainly to the emphasis placed by OFTEL on infrastructure competition rather than service competition. The adoption of CPS under pressure from EC Directives by the United Kingdom differed, however, from other EU countries in quite a significant way. When the United Kingdom implements CPS for local calls and fixed-to-mobile calls by the end of 2001, the options available to each consumer will be *i)* CPS for all

national calls, *ii*) CPS for all international calls, or *iii*) CPS for all calls. A consumer can choose the same or different companies for national and international calls, but cannot choose different companies for local calls, calls to mobile, and national or international calls. In other words, if a consumer chooses a company other than BT for local calls, it automatically means choosing the same company for other types of calls.

In some countries, even before CPS was implemented, technologies to facilitate dialling were introduced by equipment manufacturers, for example by adding to a telephone (equipment) a function to automatically add a prefix or choose an operator with the lowest rate at the specific time and for each type of call. Autodiallers, which are attached to a telephone line, automatically add the prefix of a company of choice when a user dials, and are being used in the United Kingdom as a temporary measure.⁵ The use of autodiallers is in fact equivalent to making each time a call-by-call selection. Such developments underline the necessities for full CPS.

Some countries have formed a working group comprising the regulator and the telecommunications carriers to address practical problems encountered. Sometimes difficulties in early implementation of CPS were encountered because of the change in the zonal system in the course of establishing a new reference interconnection offer which usually includes the arrangement and costing of interconnection for CPS. Also, in some countries (*e.g.* the Netherlands and Sweden), calls are automatically handled by the incumbent despite CPS, if the area code is not dialled. Consumers are not accustomed to dialling the area code for local calls in many cases, so that this practice should not continue.

2.3. *CPS for calls to mobile*

Calls originating from fixed lines and terminating on a mobile network is also a market segment where many OECD countries had initially not implemented CPS. By 1 May 2001, however, 19 OECD countries had done so, but for many of them this was only a recent measure. Having CPS in this sector is necessary because it could help introduce competition to a market segment which has been isolated from competition, and characterised by high consumer prices and generally high interconnection charges. Even when mobile operators have the power to set the prices for fixed-to-mobile calls by setting interconnection charges, CPS increases the pressure to reduce them by the fixed operators.

Without the availability of CPS, competition in fixed-to-mobile calls is limited because in most cases such calls are automatically carried by the local incumbent carriers or fixed network operators affiliated with the mobile carriers. In general, fixed network users pay to call mobile network users in the OECD countries, except in cases where the pricing system is one of Receiving Party Pays as in Canada and the United States.

In Australia, CPS had been available since 1993 only for fixed long-distance and international calls as in many other OECD countries.⁶ In order to introduce competition in fixed-to-mobile calls, the Australian Communications Authority determined in December 1998 that calls from fixed to mobile services should be carried by the pre-selected long distance carrier, rather than the carrier providing the local access service.⁷ This meant an end to the dominant position in this market by the local incumbent, namely Telstra. Subsequently, CPS in fixed-to-mobile calls was separated from local calls and introduced as a distinct service in July 1999. This resulted in a significant reduction in the prices of such calls by 17 to 20% between February and August 1999.⁸ However, consumers in Australia have, for technical reasons, not yet been able to pre-select a different carrier for calls from fixed-to-mobile from their pre-selected carrier of long-distance and international calls. Neither can they do so between long-distance and international calls (this is called “single basket pre-selection” as opposed to “multi-basket pre-selection” that allows different carriers to be pre-selected for each of the call types). Australia is considering the introduction of multi-basket pre-selection.

Table 3. Carrier pre-selection (as of 1 May 2001)

	Long Distance	International	Local	Fixed to Mobile
Australia	Implemented	Implemented	Not implemented	Implemented
Austria	Implemented	Implemented	Implemented	Implemented
Belgium	Implemented	Implemented	Implemented	Implemented
Canada	Implemented	Implemented	Partially implemented (major centres)	Implemented
Czech Republic	Scheduled for implementation in 2002	Scheduled for implementation in 2002.	Scheduled for implementation in 2002	Scheduled for implementation in 2002
Denmark	Implemented	Implemented	Implemented	Implemented
Finland	Implemented	Implemented	Implemented	Implemented
France	Implemented	Implemented	Not implemented (to be implemented on 1 January 2002)	Implemented
Germany	Implemented	Implemented	Not implemented	Implemented
Greece	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003	To be introduced not later than 1/1/2003
Hungary	Not implemented	Not implemented	Not implemented	Not implemented
Iceland	Implemented	Implemented	Implemented	Implemented
Ireland	Implemented	Implemented	Implemented	Implemented
Italy	Implemented	Implemented	Implemented	Implemented
Japan	Implemented	Implemented	Implemented	Not implemented
Korea	Implemented	Not implemented	Not implemented	Not implemented
Luxembourg	Implemented	Implemented	Implemented	Implemented
Mexico	Implemented	Implemented	Not implemented	Not implemented
Netherlands	Implemented	Implemented	Implemented (but the area code needs to be dialled)	Implemented
New Zealand	Implemented	Implemented	Implemented	Implemented
Norway	Implemented	Implemented	Implemented	Implemented
Poland	Not implemented	Not implemented	Not implemented	Not implemented
Portugal	Implemented	Implemented	Implemented	Implemented
Slovakia	Not implemented	Not implemented	Not implemented	Not implemented
Spain	Implemented	Implemented	Implemented	Not implemented
Sweden	Implemented	Implemented	Implemented (but the area code needs to be dialled)	Implemented
Switzerland	Implemented	Implemented	Implemented	Implemented
Turkey	Not implemented	Not implemented	Not implemented	Not implemented
United Kingdom	Implemented	Implemented	Implemented (with auto- diallers until the end of 2001)	Implemented (with auto- diallers until the end of 2001)
United States	Implemented	Implemented	Implemented	Implemented

Source: OECD.

Box 1. Initial implementation of Carrier Pre-Selection

Different approaches are taken among OECD countries regarding how to manage the transition to Carrier Pre-Selection in practice. One common approach is simply to begin providing CPS services nationally on the same day. Another approach has been to implement CPS gradually, region by region. These approaches generally leave consumers to actively choose to have pre-selection based on marketing by the new entrants. If consumers do not actively make a choice to change operators, they are regarded as having selected the incumbent.

Australia introduced CPS for long-distance and international calls in 1993 as one of the few OECD countries that implemented CPS at an early stage with a different approach. Soon after Optus entered these markets in December 1991 as the first competitor to the incumbent Telstra, AUSTEL (the regulator transformed later into Australian Communications Authority), decided that CPS should be implemented as soon as possible, and that a ballot should be used at the initial introduction. As an interim measure, consumers were provided with a prefix of "1" to choose Optus (*i.e.* call-by-call selection). Balloting was carried out by AUSTEL on a regional basis, preceded by up to nine months of call-by-call selection with the prefix "1". All telephone customers were asked to choose either Telstra or Optus and to return ballots to the regulator. Optus had an option to call for a second ballot in the case where less than 60% of the customers returned the ballot in a particular area. Those who did not return the ballot were regarded as having chosen Telstra.

Once the balloting process was completed in each region, customers were able to override their pre-selection on a call-by-call basis with a four-digit prefix. The balloting process was completed throughout Australia in October 1996. Once CPS started after the balloting process, consumers could change their operator (pre-select) without charge once every quarter.

However, the Telecommunications Act 1997, while requiring CPS to be extended to all service providers of standard telephone services including local calls and fixed-to-mobile, did not maintain the use of the ballot process for future pre-selection.

The possibility of balloting was considered in Canada in 1995 for the long-distance market that had not been served by competitors to the incumbent, but the Canadian Radio-television and Telecommunications Commission (CRTC) rejected such a request by new entrants. The grounds for this decision were that consumers' awareness of the availability of alternative operators could be raised sufficiently by other means such as advertising and that competition had actually been developed sufficiently in certain areas without the need for balloting.

Balloting is important in that the option of choosing a carrier is put directly before the consumers. This is important in view of the fact that the lack of consumer awareness and a tendency not to make an active choice strengthens the incumbent's position. Commercial campaigns by new entrants can be very costly to them. In that sense, it is important to design balloting in a way that induces consumers actually to make a choice. The United States has experience that underscores such importance. When the FCC carried out balloting for CPS for long-distance service in 1984-85, firstly ballots were included in the monthly bills, which resulted in most customers ignoring them (only around 30% of them responded). Then the FCC had to carry out the second round in which ballots were sent to customers accompanied by a notice informing them that if they did not fill out the ballots, they would be randomly assigned to carriers, based on the proportions of customers who did vote. This time between 60% to 75% of customers returned the ballots. This seems to have contributed to AT&T's loss of market share during the late 1980s.

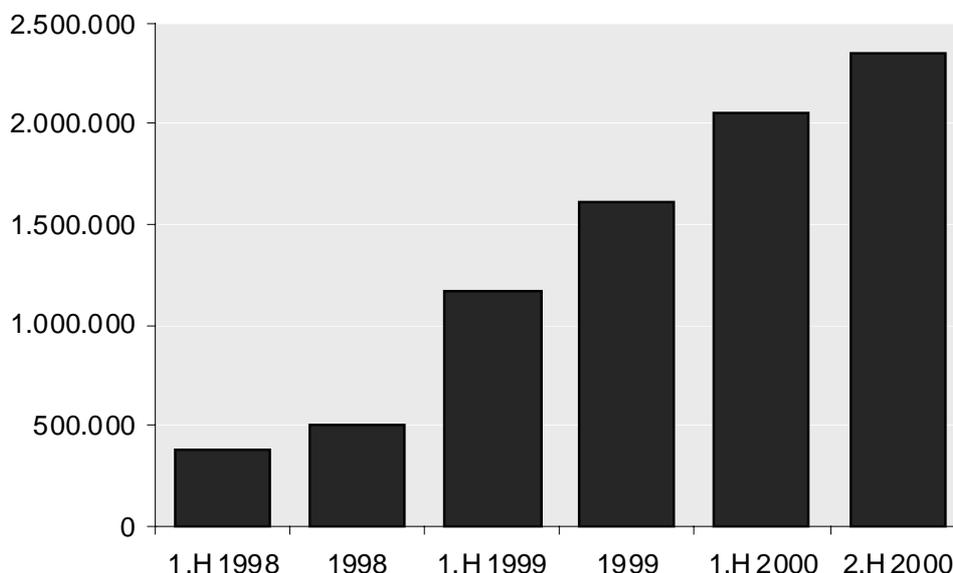
3. Reaction of consumers

Although carrier selection, CPS in particular, has only recently been implemented in many OECD countries, those that have introduced it already have experienced some positive reaction from consumers and signs of greater competition. In turn this has had benefits to consumers.

Denmark had introduced call-by-call selection by January 1998, and experienced an increasing take-up of this function by consumers. After the implementation of CPS on 1 January 1999 for all the four types of calls (*i.e.* international, long-distance, local, and fixed-to-mobile), the number of customers using carrier selection codes, including both CPS and call-by-call selection, more than doubled, and has been constantly increasing since then (**Figure 1**). However, it needs to be noted at the same time that TeleDanmark still

has 94% of the market share in terms of fixed line subscriptions as of the end of 2000.⁹ New entrants are still unhappy with the prices being charged for CPS by TeleDanmark, as in some other OECD countries, and the regulatory authority has intervened to settle disputes.

Figure 1. Customers using carrier selection codes 1998-2000



Source: National Telecom Agency, Denmark, "Telecom statistics – second half of 2000".

Positive signs of consumers' reaction to the introduction of carrier selection can be seen in some other countries as well. In France, the number of subscribers to carrier selection (both call-by-call and CPS) reached 6 573 416 at the end of the year 2000, which represents an increase of 24.2% from the end of the 3rd quarter of 2000.¹⁰ In Ireland, where CPS was introduced on 1 January 2000 for all calls and ahead of the deadline set by the European Commission, the number of subscribers is estimated to be over 150 000 as of the end of December 2000, which is an increase of 30 000 from the preceding quarter.¹¹ Italy, where CPS is available for all types of calls, had over 200 000 subscribers as of October 2000.

Sweden introduced CPS in September 1999, and according to the EU¹², 91% of the population knew about the possibilities of choice through CPS in December 1999. At that time, 41% of the population stated that they had used carrier selection and/or pre-selection. About half of those who had used some form of carrier selection chose an alternative operator. By the end of 1999, 1.4 million subscribers were indirectly connected to an alternative operator (compared with 750 000 a year earlier), half of whom had chosen through CPS and another half through call-by-call selection. 28% of households used an alternative operator in 1999, whereas the figure was 14% in 1998.

Japan introduced call-by-call carrier selection in the three categories (international, long-distance, and local) when it introduced competition in the market. However, CPS, called MYLINE, was just introduced on 1 May 2001, allowing a consumer to pre-select a company for each of the local, intra-prefecture, inter-prefecture, and international calls. Registration is free of charge until 31 October 2001, after which JPY 800 (excluding VAT) is charged for each request of change by the incumbents (NTT East or NTT West). CPS is not available for calls from fixed to mobile phones. There is an option called "MYLINE plus" which does not allow call-by-call selection to override the pre-selection even when a pre-fix is dialled.¹³

Positive signs of strengthened competition were already observed during the period prior to the start of the service in Japan. In the local call market, facing the start of the registration on 10 January 2001, the NTT Group (NTT-East and NTT-West) announced in December 2000 that their rates would decrease to JPY 8.8 for a three minute call in peak hours from JPY 10 effective on 1 May 2001.¹⁴ Upon commencement of the registration of the CPS operator on 10 January 2001, one operator, TNet, changed its rates from JPY 9 for three minutes at peak hours to JPY 8.7. On 27 March 2001, Japan Telecom announced that its rates would be reduced from JPY 8.8 for three minutes in peak hours to JPY 8.5 effective on 1 May 2001, the date of starting the CPS. Then KDDI announced on 2 April 2001 that it would change the price of local calls from JPY 8.8 for three minutes in peak hours to JPY 8.5 effective on 1 May 2001. These were followed by the announcement by NTT Communications, an NTT Group company providing long distance and international services, to reduce the rates of local calls to JPY 8.5 per three minutes from the previously planned JPY 8.8 on entering the local call market on 1 May 2001. Similar moves to reduce rates in the other markets where CPS has been introduced have been announced.

The tentative result of the CPS registration shows that among the total of 60 634 000 customers of fixed telephone carriers in Japan, an average of 32 2415 000 or about 47% of them have been registered and their CPS has been activated for each of the four market segments (local, in-prefecture long-distance, out-of-prefecture long-distance, and international calls) as of the end of July 2001. In this context the NTT Group, the incumbent carrier, has won around 66% of the registered customers overall (**Table 4**). They have the largest share in the local call market at 75% but in international calls their share is 56%. However, around 53% of total customers have not made any explicit choice yet. Considering that if a customer does not register with any companies for CPS, he or she is regarded as having chosen the NTT Group except for international calls which do not have a default operator¹⁵, the incumbent's market shares among total customers could be regarded to be 87%, 84%, and 83% in local, in-prefecture long-distance, and out-of-prefecture long-distance calls markets respectively. This indicates that the incumbent still holds a dominant status in these markets.

Another point to be noted here is that the tentative share of the NTT Group in the international call market of CPS, which is 56% of the registered customers, reflects the significant strength of the incumbent operator in the domestic (local and long-distance) market, overtaking its rival incumbent operator in the international call market, namely KDDI (former KDD), which had around 58% of that market in 1997. In the long-distance market, the NTT Group used to have 60% of the market in 1997, but has obtained an even larger share at 84% (in-prefecture long-distance) and 83% (out-of-prefecture long-distance). This could mean that despite the introduction of CPS, the incumbent in the domestic markets, (*i.e.* local and long-distance markets), has maintained or possibly strengthened its dominant status in Japan as a whole.

Finally, MYLINE Carriers Association of Japan, an operators' association set up to implement CPS smoothly, announced on 25 April 2001 that the introduction of CPS envisaged for 1 May 2001 would be delayed for some subscribers because of the huge volume of applications, beyond the initial forecast, received toward the end of March 2001, although it had been announced that applications received by the end of March 2001 were entitled to the start of the service on 1 May 2001. NTT-East and NTT-West enhanced their processing capacity for registration of applicants, but could not meet the current volume of applications. Of approximately 30 million applications received by the end of March 2001, 22 million are expected to be able to receive services on time. Eight million applicants who cannot start receiving the service from 1 May 2001 were required to wait for one month longer at most. According to the Association, it still took around 30 days, as of 15 August 2001, to complete the registration after receiving the application whereas the standard time had been announced as two weeks, and of approximately 57 million applications received approximately 5.5 million registrations had not been completed yet.¹⁶

Table 4. Number of MYLINE customers, as of the end of July 2001 (Unit: 1 000 lines)

	NTT Group Number of registered lines	NTT Group Share	Other Telephone Companies (carriers) Number of registered lines	Other Telephone Companies (carriers) Share	Number of Lines not yet registered	Percentage of lines registered
Local Calls	23 988	75%	8 152	25%	28 494	53%
In-prefecture long- distance	22 513	70%	9 784	30%	28 337	53%
Out-of-prefecture long-distance	15 661	60%	10 566	40%	34 407	43%
International	12 873	56%	10 034	44%	37 728	38%
Total		66%		34%		

Note: For local calls and in-prefecture long-distance calls, NTT Communications is categorised in "Other Telephone Companies" because it is a new entrant in these two markets.

Source: MYLINE Carriers Association <www.myline.org/customer/index_e.htm>

4. Main regulatory issues

4.1 Difficulties in implementation and involvement of the regulator

Although virtually all OECD countries recognised the importance of implementing carrier pre-selection as early as possible, they often encountered difficulties in doing so because of regulation or technical issues, as well as the incumbent operator's resistance to losing its advantageous position. On the regulatory side delay in the introduction of CPS is often due to the lack of the necessary framework for managing CPS or delay in intervention by the regulator to solve disputes. In some cases there is excessive optimism or reliance on the industry to solve practical problems by themselves. But in view of the experiences of some OECD countries and the natural resistance of incumbents, who generally dominate in terms of the necessary information and facilities to implement CPS, regulatory intervention is necessary in general to remove barriers and unnecessary burdens, and to ensure the well functioning of the market.

For example, in Sweden, most operators initially had complaints that PTS, the telecommunications regulator of Sweden, did not act in a timely manner to set guidelines or to intervene, thereby creating uncertainty.¹⁷ This was due partly to the fact that the scope for the regulator to act was limited until the relevant legislation came into effect on 1 July 1999. However, this date was only two months before CPS was introduced. The regulator, having concluded that it overestimated the capacity of the industry to co-ordinate decided to become more active and intervened through further secondary legislation and through mediation in disputes between operators. Similar cases are observed in other countries as well, where new entrants have complained to the regulator requesting intervention to settle disputes.

The incumbent still holds an advantageous position in its negotiation with new entrant operators as the former has the necessary technical and economic information for CPS. It is also the incumbent that has to take the necessary steps to activate CPS from the administrative and technical perspective. This gives the incumbent a significant advantage that new entrants have difficulty in overcoming without recourse to the regulator. In this context it is important that the administrative process for pre-selecting a carrier is agreed to by all parties. In addition, because the incumbents have no economic incentives to disclose the information and to co-operate with new entrants to activate CPS, regulators are required to intervene to ensure that CPS is implemented properly by getting involved in drafting agreements between the operators and implementing the necessary regulations. Regulators are also required to oversee the market once CPS

has started, particularly to oversee the behaviour of incumbents, to see if the rules and agreements are observed properly, enforce them using penalties as appropriate, and settle disputes as they arise.

Determination of the cost of CPS is often included in a reference interconnection offer by the incumbent operator, which is usually subject to approval by the regulator. Although the principle of cost-orientation is well accepted, disputes arise over the actual methods and cost elements. New entrants often question the cost elements provided by the incumbent as lacking transparency. In this context, costs of upgrading networks which become necessary as a result of the implementation of CPS, as was the case in the United States, should be distinguished from those that arise from day-to-day operation of CPS (*i.e.* incremental costs of switching over a customer). The former costs should be split in a competitively neutral way among all carriers including the incumbent, *e.g.* by market share as a reflection of the benefits from the upgrade. The latter costs are those to be charged to the new entrants by the incumbent, and the regulators need to ensure that the incumbent does not include others which should be the responsibility of the incumbent alone. A requirement for the incumbent to publicise the cost elements regularly, *e.g.* yearly as in Ireland, based on agreed accounting separation is important.

Portugal brought forward the deadline to implement CPS to July 2000 although it had a derogation from the EU to defer this up to 1 January 2002. To shorten the period for preparation by 18 months Portugal started CPS initially in the inter-urban and international call markets using autodiallers as an interim measure to speed up the process before it implemented full CPS without autodiallers at the end of 2000. This decision provides a good benchmark to other countries facing similar difficulties. However, establishing an agreement on sharing the costs of CPS still remains an issue to be resolved, and an area where the operators would like to see more active involvement of the regulator.¹⁸

In the case of Sweden, there was a legal requirement that operators base the fees that they charge each other on costs related to the day-to-day operation of CPS, and not on the costs of the investment necessary to make CPS technically possible. The fees initially set were SEK 35 for national and international calls and SEK 67 for both types. In May 2000 PTS, the telecommunications regulator of Sweden, required the incumbent to reduce these charges to SEK 9.25 for either national or international calls and SEK 15.20 for both types of calls. The incumbent is entitled to compensation for operational costs only (*i.e.* the costs of processing orders), but PTS considered that it tried to recover other general costs as well. The incumbent appealed the PTS decision in June 2000.

Involvement of the regulator in establishing the proper pricing of CPS is essential in that incumbents have an incentive to charge as much as possible to provide CPS, to new entrants, and have much greater negotiating power.

Finally, the experiences of the regulators in the OECD countries show that the creation of an industry working group including the incumbent and new entrants, and involving the participation of the regulator, to formulate an agreed framework for CPS is the most rapid way to implement CPS.

4.2 *Delay in delivery of pre-selection*

Delay in the delivery of pre-selection by incumbent operators is one of the common complaints by new entrants. In some countries, the regulators set a maximum period of three to ten working days typically in the form of a decision or an approval of a reference interconnection offer that the incumbent establishes. For example, ART, the telecommunications regulator of France, decided that the maximum period for the delivery should be 72 hours¹⁹ and BIPT, the regulator of Belgium approved Belgacom's Reference Interconnection Order where the delivery period was set at five working days.

In other cases, this issue is left to a commercial agreement among the operators. In Germany, for example, new entrants agreed with the incumbent that the latter make available the technical facility to enable the selection of the operator by a subscriber within three days after the request. But operators report that a substantial proportion of their requests take longer.²⁰

In Spain as well, where the regulator set the standard limit of five days to deliver CPS, new entrants encountered delays in the delivery by the incumbent Telefónica. However Telefónica claims that the delays were caused by the period for implementing CPS being shortened by ten months (Spain had been granted a derogation until 1 December 2000 to implement CPS, but decided to bring it forward to February 2000), and also the absence of a defined procedure for managing and sharing the costs. In July 2000 the regulator established a queuing system to manage the backlog, but left operators to decide on the issue of costs with the understanding that the regulator will decide in case an agreement could not be reached.

It has become increasingly common in OECD countries to tackle this problem by imposing economic penalties on the incumbent for non-delivery of CPS as scheduled. In Austria, the incumbent operator Telekom Austria agreed with competitors that it will receive a one-time fee of €6.9 per customer, and that if CPS is not implemented within three days, this amount will be halved, and there will be no charge if CPS is not implemented within six days. The approach of Switzerland is that if the incumbent, Swisscom, fails to activate CPS within the statutory maximum of five working days,²¹ it has to pay incremental penalties depending on the length of the delay, as follows.²²

Table 1. Table 5. Example of the Amounts of Penalty for Delayed Activation of CPS (Case of Switzerland)

Number of Working Days for Activation	Amount of Penalty (CHF)	Activation Fee Chargeable
5 or less	0.00	Yes
6	0.00	No
7	40.00	No
8 to 10	50.00	No
11 to 14	100.00	No
15 to 19	200.00	No
20 to 24	300.00	No
25 or more	500.00	No

Note: This table applies to a single line access.

Source: Swisscom AG

Regulators could require incumbents to file performance data periodically so that they could monitor the compliance of the incumbents, and publicise the data to put further pressure on the incumbents to comply with the deadline.

4.3 *Slamming*

Some incumbent companies have claimed that they have encountered problems of “slamming”. The word is usually used to mean an activation or deactivation of CPS which is not authorised by a customer. Since the United States introduced CPS in 1984 when it divested AT&T, it has encountered and tried to eliminate this problem. A typical case of slamming is that one carrier calls a customer of another carrier to induce

him or her to change service provider, then without his or her explicit consent the carrier is changed. A change of carriers without the knowledge of the customer might also happen as a result of a misread number or a computer glitch.

The Federal Communications Commission (FCC) of the United States found in 1998 that slamming had become a profitable business for many carriers, and concluded that more aggressive slamming liability rules than before were essential, and decided to implement the following rules.²³

1. If a consumer has been slammed, he or she does not need to pay any company including the authorised one for any service up to 30 days after the slamming. The consumer must pay the charges for services beyond the 30 days to his or her authorised company at that company's rate.
2. If a consumer fails to notice slamming and has paid the bill before discovering it, then, a) the slamming company must pay his or her authorised company 150% of the charges it received, b) the authorised company reimburses the customer 50%²⁴ of what he or she paid to the slamming company.

These rules are designed to provide carriers with economic disincentives to engage in slamming practices, and to compensate the customer for the inconvenience and confusion experienced due to slamming.

As a preventive measure against slamming, FCC developed rules for telephone carriers to change a consumer's service provider based on a verification of a consumer's intention by one of three means; *i*) an independent representative verifies the change (third party verification), *ii*) the consumer provides written authorisation of the change, or, *iii*) the consumer calls a dedicated free-phone number to verify the change.

According to the FCC, these changes resulted in a decline in slamming complaints that may well have been attributable to carriers' recognition that the new liability rules would make it costly to continue slamming.²⁵

It is common in other OECD countries as well to require written authorisation for an activation or deactivation to take effect in order to prevent slamming in the first place. And should slamming take place, the responsible operators are obliged to pay penalties.

Box 2. Procedures for consumers to use CPS

For a consumer who wishes to change his or her telephone service provider, the costs involved in the change is an important factor in the decision. Prices for taking up CPS and changing carriers vary among OECD countries. In some countries such as Austria and Italy, consumers can change operators without charge, sometimes with a limitation on the number of changes that can be made, and in others there is a flat rate for CPS per request no matter how many categories of change a consumer requests. For example, consumers in Japan pay JPY 800 per request after the initial free period is over, irrespective of the number of categories among local, intra-prefecture long-distance, inter-prefecture long-distance, and international calls, as long as the application is made at once.

Procedures to change CPS are another cost for consumers affecting the ease in changing operators. Consumers in the United States originally only needed to call their chosen operator, but after experiencing problems with slamming (*i.e.* unauthorised implementation of CPS) a verification system was introduced. It has become common among OECD countries to require a written application to implement CPS. However, in some countries (*e.g.* Japan) consumers simply need to fill in a form and return it to either the incumbent or one of the selected operators. In other countries (*e.g.* the United Kingdom), consumers need to go through two steps. First, they need to sign and return a contract to the selected CPS provider, and then within a certain period (four weeks in the United Kingdom) they need to sign and return a separate confirmation slip directly to the incumbent to confirm the changes. In the case of the United Kingdom, the confirmation slip requires that they put in their account number which appears on the bill of the incumbent as a means of certification. This requirement, while increasing the administrative costs to consumers, is used as a cautionary measure to protect consumers from being “slammed”.

4.4 Fair marketing

As CPS becomes more widespread and competition intensifies, there will be an increasing demand and necessity to ensure fair conditions in how incumbent operators compete with new entrants in obtaining customers. One such condition is use of accounting separation between competitive activities and those services which the dominant operator is obliged to offer to competitors at cost. In addition, information, whether financial, technical, or marketing, must not be used by the incumbent to obtain an unfair advantage over competitors unless the competitors have access to this information as well. Thus, in the case of CPS, incumbents need to ensure that they do not use information on clients in a way that provides them with an unfair advantage.

Although such principles are recognised and enforced in most OECD countries, there are cases where new entrants suspect that the incumbent operator is engaged in violation of the rules. For example in Japan, five new entrants claimed that the NTT Group had conducted unfair practices in their marketing of CPS. The NTT Group has allegedly provided customer information to the different companies in the group and has indicated to its customers that only the NTT Group could rectify faults related to CPS immediately. The new entrants requested that the Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT) intervene in the matter, and the MPHPT started an investigation.

An approach that Korea took in this regard is establishing a centre in charge of changing and maintaining records on pre-selection called “Long Distance Carrier Pre-selection Registration Center”. Initially when the Ministry of Information and Communications (MIC) began a carrier pre-selection system for long-distance calls in November 1997, users were required to register with the incumbent carrier, Korea Telecom (KT), for their pre-selection and subsequent changes. Because of complaints by new entrants on discriminatory procedures being used by the incumbent to review customer’s request forms to change

carriers, MIC established in July 1999 the centre to increase transparency and ensure fairness. Users now register their changes with the Centre.

Conclusion

Virtually all OECD countries have recognised the importance of carrier selection and carrier pre-selection, in particular, as indispensable for furthering effective competition in a fully liberalised telecommunications market, providing consumers with an easy way to change service provider and obtain better services and competitive prices. All countries have implemented, are in a process of implementing, or have stated their intention to implement carrier selection in the international, long-distance, local, and fixed-to-mobile call markets. Those OECD countries that have implemented carrier selection have experienced positive effects from consumers and in increasing competition among market participants and reducing prices.

On the other hand, local access lines are still dominated by incumbents, allowing them to have market power in costing and other information which is essential to start carrier selection as well as in negotiating powers. This has led to a number of difficulties between incumbents and new entrants, including the administrative process for customers to follow for carrier pre-selection and determining the appropriate costs to implement CPS. In many cases this has required direct intervention by a regulator. It is imperative that the regulator ensures the establishment of a cost recovery mechanism that is competitively neutral, clearly distinguishing the incremental costs from network upgrading costs to enable CPS to start, and mandate the incumbent to publicise its cost elements. For local access the possibility of using a well-designed ballot is worth considering when starting CPS because it provides consumers with a better opportunity to directly choose a carrier and can better promote actual competition.

Difficulties have been encountered after carrier selection has been implemented. These include delays in delivery of carrier selection, and concern by new entrants over unfair access to CPS customer information by competitive branches of incumbent operators. Consumers have also experienced unfair marketing tactics and have had their service providers changed without their knowledge. These issues, as well, required regulatory intervention to establish rules to be observed by operators.

There were also cases in OECD countries where the government or the regulator did not act early enough or in a sufficiently forceful way to ensure an early and smooth introduction to carrier selection. In some cases this was due to over-reliance on the ability of market players to resolve disputes and in others the regulator did not have a legal mandate necessary to act. Regulators have often underestimated incumbents' disincentives to implement CPS and their incentives to charge as much as possible to new entrants.

Specific disputes among operators or between operators and consumers over compliance with the rules or over new issues are likely to persist as an increasing number of consumers take up the carrier selection services, no matter how well prior arrangements and regulatory systems are designed. In this respect, regulators should continue overseeing this area and especially in dispute resolution. To do this regulators need adequate enforcement powers. It is also important for regulators to monitor the performance of markets and the development of competition by monitoring changes in market share in each market segment, as well as how consumers can benefit from this competition without unnecessary costs, either financial or in time. As the regulators seem to be required to play more active roles in certain areas, they will need increasingly to strike a balance carefully between reliance on the market and timely determination of the intervention in the market.

NOTES

- 1 European Commission “Sixth report on the Implementation of the Telecommunications Regulatory Package” (December 2000), COM (2000)814.
- 2 Based on European Commission, *op.cit.*
- 3 *Ibid* at 8.
- 4 See press releases of the European Commission dated 29 March 2000 (IP/00/307) and on 15 June 2000 (IP/00/619).
- 5 Portugal also used autodiallers as an interim measure from July 2000 in areas where old switching centres did not allow full implementation of CPS, but they had all been disconnected by the end of 2000 as full CPS was fully implemented.
- 6 It should be noted, however, that consumers in Australia have not been able to pre-select different operators for long distance and international calls, which is not the case with many other OECD countries.
- 7 Telecommunications (Provision of Pre-selection for Specified Carriage Services) Determination 1998; and Telecommunications (Provision of Pre-selection for a Standard Telephone Service) Determination 1998.
- 8 OECD “*Cellular Mobile Pricing Structures and Trends*” (2000) at Table 15.
- 9 National Telecom Agency, Denmark “Telecom statistics – second half of 2000” at 7.
- 10 *L’Autorité de Régulation des Télécommunications “Le marché des services de télécommunications en France au 4ème trimestre 2000”* (2 juillet 2001).
- 11 ODTR, “The Irish Communications Market/ Quarterly Review/ March 2001” (ODTR 01/14) at 8.
- 12 European Commission, *op.cit.*
- 13 This option of “MYLINE plus” is regarded as necessary because many consumers have telephone equipment which has an auto-dialler function to automatically choose the best rates among available companies at the specific time and type of calling on a call-by-call basis.
- 14 The reduction of the rates of NTT-East had two steps; JPY 9 per three minutes in peak hours from 10 January 2001, the date of starting the registration for CPS, then to JPY 8.8 from 1 May 2001.
- 15 A consumer without a CPS carrier for international calls cannot make a call without affirmatively selecting a carrier by adding a prefix.
- 16 MYLINE Carriers Association, press release of 15 August 2001, available at www.myline.org/release_e010815_1e.htm.
- 17 European Commission, *op.cit.*

- 18 In Portugal and in the United Kingdom, where an interim CPS system was or is in use based on auto-diallers, the associated cost was or is split equally between the incumbent and other operators. This required a determination by the regulator. In the case of the United Kingdom, the matter was challenged in a lawsuit by British Telecom, but the decision of OFTEL was upheld in principle.
- 19 ART Decision 99-490.
- 20 EU Report Annex at 132.
- 21 ComCom Decree, Appendix 2, Paragraph 3.2, Requirement 4.
- 22 Swisscom, Annex 1 to the Standard Manual of Operational Procedures and Service Definitions for Pre-Selection (August 2000) at 2.2.1.
- 23 Order FCC 00-135.
- 24 Fifty per cent is chosen as a proxy of what a consumer has paid to the slamming company in excess of what the he or she would have paid to the authorised carrier, taking into consideration that actual calculation of such an amount for each case is too costly.
- 25 FCC op.cit at 2-3.