



Office of Utility Regulation

# **Carrier Pre-Selection and Number Portability within the Bailiwick of Guernsey**

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## **Consultation Document**

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**Office of Utility Regulation**

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# 1. Introduction

For competition to deliver benefits in a newly liberalised telecommunications market, it is necessary for consumers to be able to freely choose the services of an alternative operator should they so wish. Two mechanisms that may assist in enabling choice are Carrier Pre-Selection (CPS) and Number Portability (NP).

CPS is the facility that permits a consumer to decide in advance to use an alternative operator to carry certain pre-defined categories of call, for example all international calls. Once this decision has been made, and the necessary technical routing mechanism established, the consumer does not have to dial a routing prefix or follow any other procedure on a call by call basis to ensure that his calls are routed to his carrier of his choice. A well defined CPS scheme can be a key enabler for effective competition in a liberalised telecommunications environment. CPS enables consumers to avail of telecommunications services best suited to their specific needs, particularly in terms of price. The existence of such services also brings pressure on the incumbent operator to lower prices, reduce their cost base and introduce new services more quickly, thus bringing the benefits of competition to all consumers.

Number portability (NP) on fixed telecommunications networks may also help to promote competition and maximise the benefits of a competitive telecommunications market for consumers. NP allows a customer of telecoms company to change operator while still retaining their existing telephone number. For example, if a customer can keep their telephone number when changing operator, they avoid a number of costs associated with a number change. Those costs can be significant particularly for business users. As a consequence, with lower switching costs to the customer of changing operators, there is more potential for the development of competition and market entry.

CPS and NP are complimentary competition enhancing measures in the fixed telecommunications market and while both measures may be used by one operator, only one will be used in any specific customer case. CPS will be of use where an operator does not install its own access lines to a customer's premises, i.e. where the customer continues to rent his telephone line from the incumbent operator. NP on the other hand will be of use where an operator installs its own access lines directly to the customer's premises and the customer wishes to "port" his entire service to the new operator – both line rental and calls.

Having previously sought some high-level views from interested parties on the potential to introduce these measures in Guernsey, the purpose of this consultation is to assist the DG assess in greater detail the degree to which these two measures, either on their own or together, may help to promote competition and achieve greater choice for telecommunications users in the Bailiwick.

This paper does not consider measures specific to the mobile telecommunications market at this time.

## 2. Structure of this Consultation

This paper is structured as follows:

- Section 3 sets out the legislative basis for the measures being considered;
- Section 4 outlines the background to the consultation and details the discussions held with licensed operators to-date;
- Sections 5 and 6 consider CPS and the various ways in which it can be implemented as well as the options for Guernsey;
- Sections 7 and 8 consider NP, how it can be implemented and the options for Guernsey;
- Section 9 sets out the conclusion and next steps.
- Annex 1 lists the questions respondents are asked to consider in this consultation.

The consultation period will run from Friday 30<sup>th</sup> April to Friday 4<sup>th</sup> June 2004. Written comments should be submitted before 5.00pm on 4th June 2004 to:

Office of Utility Regulation,  
Suite B1 & B2,  
Hirzel Court,  
St. Peter Port,  
Guernsey, GY1 2NH.

Email: [info@regutil.gg](mailto:info@regutil.gg)

All comments should be clearly marked **“Comments on Review of Carrier PreSelection and Number Portability in Guernsey: Consultation Document”**.

In line with the policy set out in Document OUR 04/01 – “Regulation in Guernsey; Revised Consultation Procedures”, the DG intends to make responses to the consultation available on the OUR website. Any material that is confidential should be put in a separate Annex and clearly marked so that it can be kept confidential.

The DG regrets that she is not in a position to respond individually to the responses to this consultation. The DG intends that her response to this consultation will be provided following the completion of the review of interconnection and access charges which is currently underway.

### 3. Legislative Background

The regulatory regime for the telecommunications market in the Bailiwick has evolved since October 2001 in accordance with;

- Legislation approved by the States in September 2001<sup>1</sup>;
- States Directions to the DG in relation to universal service and the extent of competition in the telecommunications sector<sup>2</sup>; and
- States Direction on the identity of the first licensee to receive a licence with a Universal Service Obligation (“USO”) in the telecommunications sector.<sup>3</sup>

Together, the legislation and States Directions provide for the manner in which telecommunications market in Guernsey has been opened up to competition with all parts of the market being open to new entry since 1<sup>st</sup> April 2003.

#### 3.1. Regulatory Objectives

Section 2 of the Regulation of Utilities (Bailiwick of Guernsey) Law 2001 sets out the overarching objectives that the DG must have regard to:

*“In exercising their respective functions and powers, the States and the Director General shall each have a duty to promote (and, where they conflict, to balance) the following objectives –*

- (a) to protect the interests of consumers and other users in the Bailiwick in respect of the prices charged for, and the quality, service levels, permanence and variety of, utility services;*
- (b) to secure, so far as practicable, the provision of utility services that satisfy all reasonable demands for such services within the Bailiwick, whether those services are supplied from, within or to the Bailiwick;*
- (c) to ensure that utility activities are carried out in such a way as best to serve and contribute to the economic and social development and well-being of the Bailiwick;*
- (d) to introduce, maintain and promote effective and sustainable competition in the provision of utility services in the Bailiwick, subject to any special or exclusive rights awarded to a licensee by the Director General pursuant to States’ Directions;*
- (e) to improve the quality and coverage of utility services and to facilitate the availability of new utility services within the Bailiwick; and*

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<sup>1</sup> The Regulation (Bailiwick of Guernsey) Law, 2001 (Billet d’Etat No. 1, 2001), and the Telecommunications (Bailiwick of Guernsey) Law, (Billet d’Etat No. VI, 2001).

<sup>2</sup> Billet d’Etat No VI, 2001

<sup>3</sup> The Billet for the States of Deliberation meeting in September included a policy letter from the Board of Industry with recommendations on this issue.

*(f) to lessen, where practicable, any adverse impact of utility activities on the environment;*

*and, in performing the duty imposed by this section, the States and the Director General shall have equal regard to the interests of the residents of all islands of the Bailiwick”*

The DG considers that the further investigation of the potential for the introduction of CPS and NP in Guernsey is in accordance with these objectives and in particular (but not only), those set out in sections 2(a), (b) and (d) of the Regulation Law quoted above.

### **3.2. Equal Access**

All telecommunications licences issued in Guernsey include a condition<sup>4</sup> which provides for the DG to direct a licensee to make available such services as are necessary to enable ‘Equal Access’ which is defined as a facility whereby a User can access the Telecommunications Network or Telecommunications Services offered by an Other Licensed Operator (“OLO”). The User’s choice may be made in either of the following ways, subject to the requirements of the direction:

- by pre-selection, that is to say the User registers with the Licensee the name of the OLO which will convey all his calls (but the Licensee may offer a facility to overwrite the preference in the case of any particular call); or
- on a call-by-call basis using any numbers or codes allocated for this purpose by the appropriate licensing authority.

It further stipulated that the Licensee may not charge any fee or require a subscriber to acquire any special equipment as a pre-requisite to obtaining ‘Equal Access’ or changing its designation of preferred Operator.

In earlier discussions with licensed operators a query was raised as to the basis for the mandating of CPS given the availability of Carrier Selection (“CS”) already. The view was offered that as CS is currently available in the market, and as this is one of the means by which ‘Equal Access’ may be offered, then there is no basis for the DG mandating or directing that CPS be also offered. The operator believes that there is only requirement to offer one or the other of these services, not both.

It is the DG’s opinion that the application of this condition is from the viewpoint of the User. That means that the availability of both services may be required and that it is the user that has the choice of which service (or both) it may wish to avail of. The fact that CS is currently available in the RO as a service does not in any way preclude or restrict the DG from directing that CPS be made available, should that be the outcome of this process.

### **3.3. Interconnection and Access**

Section 10 of the Telecommunications (Bailiwick of Guernsey) Law 2001 confers on the DG the power to issue directions with regard to matters relating to interconnection

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<sup>4</sup> Condition 24 of the Fixed Telecommunications Licence Conditions

and access. The DG has already determined, as set out in OUR Document 01/14<sup>5</sup>, that Guernsey Telecoms (now C&WG) has a dominant position in the fixed network and services telecommunications markets and in the mobile network and services markets.

The requirements that the DG may therefore apply to C&WG include the following;

- (a) A requirement to make its procedures for the provision of interconnection and access publicly available on a non-discriminatory basis in a manner that is to the reasonable satisfaction of the DG;
- (b) A requirement to offer a standard interconnection and access agreement (referred to as the “Reference Offer”) which is available under non-discriminatory terms, conditions and charges, and on a non-discriminatory basis, no less favourable than that offered to -
  - (i) any of the C&WG’s own services; or
  - (ii) any associated company of C&WG’s or services of such a company;
- (c) A requirement to provide interconnection or access on terms, conditions and charges that are transparent and cost-oriented having regard to the need to promote efficiency and sustainable competition and maximise consumer benefits;
- (d) A requirement to provide interconnection or access at any technically feasible point in its telecommunications network; and
- (e) A requirement to provide interconnection or access in a manner that is sufficiently unbundled so that the person requesting interconnection or access does not pay for telecommunications network components or telecommunications services that he does not require.

In addition, the Telecoms Law makes provision for the DG to direct changes to the standard interconnection and access offering and to require C&WG to justify its costs or charges for the provision of interconnection and access services.

CPS and NP services and the charges for those services are included in many RO documents internationally and these provisions are therefore also relevant.

### **3.4. Conclusion**

In the lead up to the liberalisation of the telecoms market, the OUR undertook a review of the needs of the market, including a consultation on the draft RO prepared by C&WG<sup>6</sup>. C&WG’s RO was confirmed in July 2002 and included the offering by C&WG of a CS service to OLOs.

For the avoidance of doubt, the DG considers that the existence of a CS service in the RO in no way precludes or forecloses on the consideration of the potential benefits of the introduction of a CPS service in Guernsey.

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<sup>5</sup> Decisions under the Telecommunications (Bailiwick of Guernsey) Law, 2001; Decision Notice and Report on the Consultation

<sup>6</sup> The RO was submitted by GT prior to the purchase by C&W. OUR documents 01/24, 02/10 and 02/20 are important in this regard.

*This document does not constitute legal, technical or commercial advice; the DG is not bound by this document and may amend it from time to time. This document is without prejudice to the legal position or the rights and duties of the DG to regulate the market generally.*



## **4. Background to this Consultation**

### **4.1. RO Consultation**

In July 2002, Guernsey Telecom (now Cable & Wireless Guernsey – C&WG) published a Reference Offer for Interconnection and Access (the RO). The RO, which had been approved by the OUR as being consistent with C&WG's licence requirements, focussed on the minimum set of services needed by OLOs to enable them to enter the market.

In August 2003 the OUR initiated a review of the RO (OUR 03/22) on the basis that the RO is a living document and should evolve to take account of the on-going needs of the market. In particular, given that the first RO had concentrated on basic interconnection and access services only, it was appropriate to consult on the need for changes or additions to the RO in the light of the experience of C&WG and the new licensees in Guernsey in working with the RO.

In the consultation the OUR reviewed a number of aspects including the management of the RO and the future review processes for it as well as discussing a series of potential measures to enhance competition in the Bailiwick. Specifically the consultation sought views on the possible introduction of CPS, NP, Wholesale Line Rental ("WLR") and Local Loop Unbundling ("LLU").

The DG published her report on this consultation in November 2003<sup>7</sup>. Whilst there was general support for the new measures, there was a divergence of opinion on the priority with which they should be introduced. In OUR 03/32, the DG concluded that these services should be subject to further analysis and consultation. However, in the light of the comments received the DG took the view that the initial focus for additional work would be on CPS and WLR. The purpose of this further work being to determine the technical, operational and commercial feasibility for the Guernsey market and to estimate the costs associated with introducing competition enhancing measures and how these should be distributed between the market players.

### **4.2. Review of Key Priorities**

Arising from the position outlined in OUR 03/32, In January 2004, OUR commissioned a review of CPS and WLR services for Guernsey, including gathering data from and interviewing all the licensed operators to gain a deeper understanding of their requirements and capabilities.

During this review it was clear that operators' own consideration of these issues had evolved and the demand for WLR was considered by the operators to be less urgent than was indicated in the replies received to OUR 03/22. This change in emphasis reflected the further consideration that parties had given to the issue and the highly complex nature of this product. However the demand from the newly licensed operators for CPS was confirmed in the review.

Additionally, the demand from newly licensed operators for an NP service in Guernsey was again re-iterated even though this product was not part of the original

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<sup>7</sup> Document OUR 03/32

scope of this review. As a result OUR has added NP to this further consultation and this document therefore focuses on the two products now considered the highest priority by the operators in Guernsey, CPS and NP.

Both of these services exist in a number of different product specifications and technical implementations in other countries. The review undertaken in preparation for this consultation has therefore focused on ascertaining the level of demand for the services in Guernsey as well as the specific functional requirements that would be appropriate. Thus, operators have already been afforded the opportunity to express their view on the product specification and technical implementation most suited to the conditions in Guernsey and this consultation will assist the OUR in understanding those views further.

The market in Guernsey is relatively small when compared with most other markets in Europe. In view of this it is important that any measures adopted in Guernsey are proportionate to the level of demand and that the services are configured such as to maximise the benefits, but also keeping any associated costs at a level proportionate to any such benefits.

The review carried out so far has therefore concentrated on gaining a full understanding of three issues:

- the underlying reasons for requesting these services and the most critical components of their functionality;
- the scale of demand for the services (this may affect the suitability of different technical solutions for the services); and
- C&WG's technical and operational capabilities in relation to different technical and operational options for implementing the services in Guernsey.

#### **4.3. Scope of this Consultation**

The information gathered in the initial review has been of great assistance in scoping this consultation. Both of the two services now under consideration (CPS and NP) are discussed in detail in this paper with particular focus on the options for technical implementation as this will be the main determinant of the cost of introducing the services.

Operational processes to support the ordering, provisioning and ongoing management of the products will also need to be tailored to reflect the small size of the market. OUR's informal consultation suggests that these processes could and should not be based on highly sophisticated automated interfaces and protocols, such as introduced in some EU countries. In order to reduce overall costs these process would preferably be managed through e-mail exchanges or other communications methods which are manageable given the limited scale of the likely order throughputs and this is also considered further.

Finally, it is clear from the discussions to date that if OUR concludes that one or both of the services reviewed in this document should be mandated in Guernsey, then more detailed work will be necessary to specify the framework for the operational procedures and the OUR will be relying on the further co-operation and input of the market players at that stage.

## 5. Carrier PreSelection: The Context

CPS is an extension of “call by call” CS service. In CS, the user (or Customer Premises Equipment - “CPE”) inserts a short code before each call the customer wishes to have routed to the Carrier Select Operator (“CSO”). With CPS the relevant calls are routed automatically to the Carrier Pre-Select Operator (“CPSO”) without the customer having to dial extra digits.

CS is generally straightforward to implement, as it requires minimal changes to the network and does not require exchange of order information between the incumbent operator and the indirect access operator but relies instead on the customer dialling the prefix each time he wishes to use an alternative operator. CPS on the other hand, typically requires upgrades to the network and requires setting up inter-operator order processes. Because CS is simpler and easier to implement, notwithstanding some drawbacks from the users’ point of view, it has often been introduced as an initial offering to enable competition to begin to develop, with CPS being introduced subsequently.

In particular, business users often have CPE such as PABXs which can automatically insert the short codes necessary under CS, or have sufficient call spend to justify the CSO installing “pre-diallers”, which are small devices attached to the telephone line which insert the short codes when their CPE does not have this capability. For these type of customers therefore, CS may provide much of the benefits of competition and the introduction of CPS may only offer marginal additional benefits.

CPS is likely to deliver most incremental benefits to residential users. Residential users generally have lower call spends than business users and simpler handsets. To use CS they will therefore often have to dial the short codes themselves which can be confusing and cumbersome and will serve as a disincentive to switching to alternative service providers. The addition of CPS will remove this barrier to changing supplier and is thus likely to lead to both direct benefits, by reducing prices for those who swap supplier, and indirect benefits by putting greater pricing pressure on the incumbent, benefiting those customers who stay with the incumbent as well.

In Guernsey CS is already part of the C&WG’s RO and this document discusses whether the overall incremental benefits of introducing CPS in Guernsey outweigh the likely overall costs of doing so.

Before discussing in detail whether CPS would be a suitable competition-enhancing measure for Guernsey, and if so how it could be introduced, it is useful to look at how it had been introduced and what effect it has had in other markets.

This section sets out data from a selection of countries of different sizes and characteristics to demonstrate the impact of CPS across these different markets. Western European countries provide useful examples of the introduction of CPS. In addition most Western European countries have had recent experience of

implementing CPS after having CS in place. To illustrate the configurations and impact of CPS we have show data for 6 countries in this paper<sup>8</sup>.

This document considers the following aspects:

- The scope of CPS
- The take up of CPS
- The technical means of introducing CPS
- The costs and charges for CPS

### **5.1. Background to CPS in Europe**

The majority of EU countries liberalised their telecommunications markets on or around 1<sup>st</sup> January 1998, as required by a series of European Union directives<sup>9</sup>. Some countries were granted a “transition period” which allowed them to implement full liberalisation later, while other countries, such as Sweden and the UK, had unilaterally liberalised prior to the directives being issued. The various directives governing the opening of the markets (the ONP directives) initially only mandated the provision of CS. In September 1998, an amendment to the ONP directives was issued requiring Member States to ensure that CPS was available by 1<sup>st</sup> January 2000. The precise configuration and functionality of CPS was not set out in the directives other than the need to ensure the possibility of overriding the pre-selection by dialling a short code.

**Table 5.1: Dates when CS and CPS were introduced in the sample countries.**

	Spain	France	UK	Denmark	Iceland	Faeroe Islands
<b>Introduction of CS</b>	1998	1998	1986	1997	1998	2000
<b>Introduction of CPS</b>	2000	2000	Interim 2000* Full CPS 2002	1999	2000	2001

\* Interim CPS was achieved using auto-diallers placed on the subscribers' premises.

### **5.2. Scope of CPS**

Initially, the focus of CS and CPS was international calls and national (particularly long distance) calls. In some countries, such as France and Spain, local calls were specifically excluded initially.

However, with rebalancing bringing the prices of national calls and local calls closer together, and competition increasing in the residential sector where a higher proportion of calls are local calls, demand for CPS and CS to be extended to local calls increased. This would allow CPSOs to offer an increased calls portfolio to their customers, many of whom disliked getting billed by two operators for different sets of

<sup>8</sup> France, Spain, the UK, Denmark, Iceland and The Faeroe Islands (the last two are not part of the EU but are part of the European Trade Area and thus are required to comply with EU telecommunications regulation).

<sup>9</sup> the Open Network Provision (ONP) directives.

calls. The potential to enter the local calls market also provided competing operators with extra margin, even if the margins on local calls were often relatively low.

Typically, CPS is available for a limited number of pre-set categories of calls. Table 5.2 below sets out what call categories are available for CPS in our sample countries

**Table 5.2: Call categories available on CPS**

	Spain	France	UK	Denmark	Iceland*	Faeroe Islands
National calls			Y			
International calls			Y	Y	Y	Y
Local, national and calls to mobiles					Y	Y
Local, national, international and calls to mobile	Y***	Y**			Y	
National, international and calls to mobile	Y					
Local, national, calls to mobile and non-geographic calls				Y		
All calls	Y		Y	Y		Y

\*Iceland has only one national call rate

\*\*CPS for Local calls was introduced end 2001

\*\*\*CPS for local calls was introduced in 2001

### **5.3. Take-up of CPS Services**

The latest EU Implementation report showed that 33% of fixed telephony subscribers in 2003 used an alternative indirect access operator, using a combination of CS and/or CPS, up from 30% in 2002.

The most recent take-up information (2002 or 2003 data) for CPS alone and for CPS+CS in the sample countries is set out in the table below:

**Table 5.3 Take-up rates of CPS and CPS+CS**

	Spain	France	UK	Denmark	Iceland	Faeroe Islands
Total Indirect Access Penetration	40%	20%	12%*	80%	N/A	N/A
CPS penetration	8%	12%	6%*	25%	23%**	20%

\* of residential market only – no data available on total market

\*\* of residential market – CPS not used much in business market in Iceland

#### **5.4. Technical Means of Introducing CPS**

CPS is now available in all 15 EU countries. Implementation of CPS in EU countries has generally been achieved through programming of the incumbent access provider's switches in order to identify customers who have chosen a CPSO for some or all of their calls and then route the selected calls to the selected CPSO. For the majority of countries, the upgrades required to implement CPS were part of the standard upgrades of the switches and as a result the majority of operators were able to meet their obligations under the EU directives.

In the UK, however there was no standard switch upgrade available as BT was using switches not generally used elsewhere in the EU (Marconi System-Xs). These are the switches used by C&WG in the Bailiwick. This meant that in order to meet the EU implementation deadline of January 2000, an interim CPS solution based on pre-diallers in customer premises was introduced. The interim solution was effectively a managed version of CS, using pre-diallers. The use of pre-diallers for CPS enabled the UK to meet the legal requirements of the directives but offered little concrete benefits over CS for either consumers or operators. A switch-based CPS solution has since been introduced across BT's network.

Kingston Communications in the UK is deemed to have SMP in the Hull area and was therefore also obliged to offer CPS under the ONP regime. As it was using the same switches as BT, it was subject to the same technical obstacles as BT. Due to the relatively small scale of its operation and the relatively high fixed costs associated with the switch upgrade for CPS on the System X switches, Kingston obtained an agreement by Oftel to offer CPS based on auto-diallers on a permanent basis, but has since developed a proprietary switch-based CPS proposition, different from that used by BT.

#### **5.5. Costs and Charges for CPS**

The costs of implementing and maintaining CPS can be broadly split into three groups:

- Fixed network and system set up and maintenance costs;
- Costs per operator to set up inter-operator processes;
- Costs per line or per customer order.

The largest element of costs is typically the costs associated with upgrading the network in order to offer CPS capability. Costs per operator tend to be relatively small, principally being the cost of setting up the administrative interfaces between the incumbent access provider and the CPSO. Costs per customer order are relatively low as most of the processes tend to be automated.

The EU directive mandating CPS provided only limited guidance on cost recovery for CPS when it stated: "*National regulatory authorities shall ensure that pricing for interconnection related to the provision of this facility is cost-orientated and that*

*direct charges to consumers, if any, do not act as a disincentive for the use of this facility.”*

In general cost recovery for regulated services attempts to follow the principle of cost causality, that is cost is recovered from the service/functionality, and ultimately the end user, that generates the cost. In the case of the per operator and per line costs it is clear that the action of adding another CPSO or another CPS customer respectively, generates costs. However the causality of the cost of adding CPS functionality to the network is less clear, as the functionality is a legal requirement rather than being in response to a request from any operator or customer.

Where cost causality is unclear, or is likely to produce results which create market distortion (for example by not taking account of any externalities) regulators have to make judgements based on other criteria. In the UK, the cost recovery decision often places significant weight on the “distribution of benefits”, that is costs are recovered from customers in proportion to the benefits of the service or functionality. In the case of CPS, it is clear that all customers are likely to benefit to some extent, either directly by using the CPS service, or indirectly due to the greater pricing pressure resulting from the introduction of CPS.

As the benefits will be broadly proportional to call usage, cost recovery based upon call minutes across the incumbent’s network has been considered a reasonable allocation methodology.

Thus in general, costs per operator and per order have been recovered directly from the CPSO operator while the fixed costs have been recovered, either explicitly or implicitly, across a broad range of call services including both the incumbent’s retail services and interconnection services. Given the relative magnitudes of the costs in these jurisdictions, this is consistent with the Directive’s requirement to “*not act as a disincentive for the use of this facility.*”

## **6. Carrier Pre-selection in Guernsey**

### **6.1. The Guernsey Context**

When applying the lessons of the EU countries to Guernsey it is necessary to take account of the differences between Guernsey and the other jurisdictions, the most notable difference being the size of the market.

However the data set out above shows that there appears to be little correlation between the take-up of CPS and the size of the market. More important factors affecting the take up of CPS may be:

- the availability of alternative local infrastructure (such as in the UK); and
- the length of time between liberalisation and the introduction of CPS.

First, where alternative infrastructure is in place, for example where customers can chose to take a full telephony service directly from a cable television network operator, because customers can opt for a full alternative service (line rental and calls) they may be less inclined to opt for the partial switch that is involved with CPS, where only calls are taken from the alternative operator.

Second, if CPS is introduced after CS has been available for a number of years it may have less impact as a larger proportion of higher spending customers may already be using CS, probably with “work arounds” such as prediallers, to mitigate the difficulties of dialling extra digits. For such customers there is unlikely to be much incentive to switch to a CPS solution.

The level of retail prices when CPS is introduced is also likely to have an impact, with CPS being more attractive in those countries having higher long distance and international call prices. Of particular interest and relevance to Guernsey are the penetration levels of CPS in Iceland and the Faeroe Islands, both of which are small countries.

### **6.2. Net CPS benefits in Guernsey**

The customers most likely to benefit from CPS (incrementally over CS) are typically residential users with average or above average call spends. Lower spending residential customers are likely to find that the cost savings do not justify the extra overhead of having two suppliers. As noted above business users are likely to be able to get CPS-style functionality with CS through the use of CPE or pre-diallers.

The incremental consumer benefits from CPS over CS fall into 3 categories:

- the potential savings for those additional customers who use CPS to change suppliers;
- the potential savings for all customers, including those of the incumbent and those using alternative operators, through increased price competition brought about by the introduction of CPS;
- cost savings resulting from not having to dial extra digits and the reduction in mis-dialling associated with CS.



These benefits must be balanced against the costs of introducing CPS such as those described in section 5.5.

Guernsey has two recently licensed fixed operators, both planning to launch services in competition with C&WG. CS is already a part of the Reference Offer and the introduction of CPS must be considered in the context of the additional benefits described above and the incremental costs overall. Through its informal consultations with all licensed operators in Guernsey, OUR understands that the direct benefits of competition are likely to reach a larger group of telecommunications users if CPS is introduced, i.e. alternative operators will be in a position to compete for a larger group of customers if CPS is available.

### **6.3. Costs of CPS in Guernsey**

While this paper does not seek to quantify Guernsey specific costs at this stage, not least because costs will be dependent on a preferred solution, it is important for respondents to consider the overall cost – in terms of direct financial cost and overhead on the operators – when assessing the various technical solutions and options for Guernsey.

It is clear that it is technically feasible to introduce CPS in Guernsey. C&WG uses the same type of switches as BT and Kingston Communications and therefore faces the same technical obstacles as did these two operators and can benefit from the solutions identified by them. In particular it is clear that the CPS solution for System X switches is now available as a standard upgrade functionality which should reduce costs. Additionally, Kingston Communications has developed a switch-based CPS offering without using the standard System X upgrade, providing another option.

With regard to cost recovery, section 5.5 describes how costs may be recovered and the DG has already expressed the view on cost recovery mechanisms that would be considered for Guernsey, when she sated in OUR 03/32;

*“The issue of who pays for these services will be considered in more detail in a separate consultation. In general, as these are consumer enhancing measures for all users in the Bailiwick – i.e. increased competition drives efficiencies and cost savings for all users – it would seem appropriate that the cost be shared across the whole of the market. However the DG will proceed in the near future to consult further on both these issues and seek more specific comments on the matters raised.”*

### **6.4. Scope of CPS in Guernsey**

Experience has shown that, although CS and CPS were typically launched for international and national calls only, there was a demand from customers to purchase all their calls from one supplier, and local calls have therefore been included as CPS calls in most European countries.

As Guernsey is considering introducing CPS significantly later than other European countries, it can benefit from the experience that demonstrates the appropriateness of introducing all call categories for CPS. It is therefore proposed that, if CPS is

introduced in Guernsey, the service should be available for the following call categories:

- International calls only
- National calls only (calls to UK, Isle of Man and Jersey fixed and mobile numbers)
- “All Calls” comprising of calls to fixed and mobile numbers within the Bailiwick, national calls, international calls and calls to non-geographic numbers with the UK numbering scheme

*Q1 Do you consider that the call categories listed above are those that should be considered for introduction in Guernsey at this time? Please explain your response, and if appropriate suggest alternative or additional categories that should be offered in Guernsey.*

### **6.5. Technical Solutions in Guernsey**

The OUR understands that there are three potentially viable technical options for implementing CPS in Guernsey:

- A pre-dialler based solution similar to the interim CPS solution adopted in the UK;
- Upgrades to C&WG’s System-X switches to offer CPS capability; and
- A switch-based solution which does not use the standard System X upgrade.

#### **Pre-diallers**

Although pre-diallers were used in the UK as an interim solution, they are not generally favoured as a means of implementing CPS as they provide no material benefits over the provision of pre-diallers by CS operators. Informal discussions with licensed operators in Guernsey have indicated that this view is shared in Guernsey.

*Q2 Do you agree that mandating a pre-dialler based CPS solution in Guernsey is not desirable? If you disagree, please explain your reasons and provide your explanation of why this option should be considered further.*

#### **Standard System X CPS Upgrade**

C&WG operates two System X switches, neither of which currently has CPS capability installed. In its informal consultations with all licensed operators in Guernsey, OUR has not been able to gain a clear view of the complexity and costs likely to be involved in adding the CPS functionality to one or both of the switches as this depends on the details of the existing switch functionality and on the commercial terms available from Marconi, the suppliers of System X switches.

The standard System X CPS upgrade is a proven technology and, subject to the level of any costs involved in implementing the switch upgrade, there would appear to be every reason to consider that this is a realistic option for the implementation of CPS in Guernsey.

*Q3 Do respondents agree that the standard System X CPS upgrade is a realistic option for introducing CPS in Guernsey. If respondents disagree, then please provide reasons for this position.*

*Q4 What are respondents views on the costs and complexity of implementing the System X CPS upgrade on the existing two switches in the incumbent network in Guernsey? Quantitative data in response to this question would be very helpful and, if respondents consider this information to be confidential, it should be clearly marked so it can be treated as such.*

#### **Switch-based solution not using standard System X upgrade**

OUR understands that Kingston Communications in the UK has developed a CPS service, using its System X switches, but not using the System X standard CPS functionality.

Although no official information is available about this CPS solution, OUR understands that it is particularly suited to smaller networks with a limited number of CPSOs and a limited number of switches. Subject to the costs and complexity applicable to using the standard System X CPS upgrade, OUR considers that it would be worthwhile to investigate this option for Guernsey, given that C&WG's network is smaller than that of Kingston Communications in Hull who have 6 switches.

*Q5 Do respondents agree that this solution should be investigated for Guernsey? If respondents disagree then please supply reasoning for this.*

### **6.6. Proposed Industry Working Group**

Through its consultations with all licensed operators in Guernsey, OUR has been seeking to collect information relating to the likely demand for, benefits of, and costs of introducing CPS in Guernsey. The information received has culminated in the discussion set out above.

OUR does not believe that it yet has sufficient information to make a decision on whether to mandate the introduction of a CPS service in Guernsey, particularly with respect to the costs of introducing CPS. Although it hopes that the responses to this document will assist in that decision, it is clear that there are many outstanding issues relating to identifying the most suitable technical CPS option for Guernsey that require further exploration before OUR can evaluate the balance of the likely costs and benefits to Guernsey overall.

The DG therefore believes that an industry Working Group may offer the most effective means of investigating the technical options for implementing CPS in Guernsey. The scope of the work of the Working Group could encompass the following issues:

- Investigation and documentation of available technical means of implementing CPS in Guernsey;
- Review of pros and cons of each technical options covered;
- Estimate approximate costs of implementing each technical option; and
- Recommendation of technical CPS solution for Guernsey.

Furthermore, it is clear to the OUR that it is essential that the operators who would ultimately implement CPS in Guernsey must be responsible for the scoping of the work the group should carry out and ultimately for the work itself. The DG believes that any Working Group should;

- involve all operators interested in the introduction of CPS;
- specify any additional issues it wishes to investigate itself;
- run for a maximum of 2 months; and
- provide inputs to the OUR to assist in the evaluation of whether to mandate CPS in Guernsey.

*Q6 Do respondents agree that an Industry Working Group is the most useful means of evaluating the technical options for implementing CPS in Guernsey? If Respondents disagree, then they are requested to provide reasons for this and to offer alternative means of evaluating the technical CPS options for Guernsey.*

*Q7. If respondents agree, views on the scope and timeframe proposed are invited.*

## **7. Number Portability: The Context**

### **7.1. Introduction**

There are several different types of NP in use ranging across fixed and mobile telecommunications networks. This document addresses ‘fixed operator portability’ on fixed networks, whereby a customer of a fixed network can port its number from one access operator to another, when they change the access operator.

NP is a facility provided by one operator to another which enables customers to keep their telephone numbers when switching their business between those operators. NP is used where the new operator provides access lines to the customer (whether through building alternative local loop infrastructure, using leased lines or using wireless local loop technology). Thus NP is only relevant in markets where competing operators offer direct customer connections rather than using carrier selection or carrier pre-selection as discussed above.

NP has been implemented in a number of countries which have liberalised their telecommunications markets, as the need to change telephone numbers is considered a considerable barrier to switching suppliers for both residential and business users. This barrier comprises, amongst other things, the inconvenience for private customers, and costs of potential lost business and reprinting of stationary for business customers. The presence of these switching costs may result in the incumbent operator being able to set prices above a competitive level and forming a barrier to entry for potential entrants, by reducing the attractiveness of the new entrant’s services relative to the incumbent.

### **7.2. Development of NP in Europe**

The EU ONP Directives mandated the introduction of NP for fixed geographic numbers by January 2000 and it has now been implemented across Europe.

Both the technical and economic implementation of NP has varied considerably across the member states depending on both the existing technical infrastructure and to a large degree on the likely demand for NP, which is primarily driven by the level of access competition. While some countries, such as the UK, the Netherlands and Spain, have alternative access providers serving the mass market, in many countries access competition is largely restricted to larger corporations and business districts.

The recovery of the costs of implementing NP was not defined in the directives. While in some countries prices have been negotiated commercially between operators, in other countries the allocation of costs has been extremely contentious. In the UK the introduction of NP, which was first mandated in 1992, was delayed for four years due to the inability of the operators to agree commercial terms, leading to OFTEL having to determine prices.

### **7.3. Technical NP Solutions**

Where there are multiple operators with competing networks (based on own build or using leased infrastructure), operators are allocated number ranges by the body responsible for national number management (in Guernsey OFCOM undertakes this function). Operators then allocate numbers (or number ranges) to individual customers and the information in the number is typically used for two purposes:

- Customer identification, and
- Call routing.

If the operator has several switches in its network then it will typically use discrete number ranges for each switch, or divide a range up between the switches, depending on the scale of its operations, and the number will therefore identify the switch where the customer is hosted. The customer identification allows for billing and administration to be carried out by the operator.

If a number has been ported then it can no longer indicate the host switch and thus cannot direct the call routing. The number continues to identify the customer being called but does not identify the network and exchange where the customer is located.

In order to support NP additional information is required to ensure that the call is routed to the correct customer. This additional information should identify that the customer's number is no longer the same as the network routing number and therefore some form of 'number translation' needs to take place to identify the network to which the customer subscribes and also where on that network the customer is located.

In most EU states, NP has been introduced based on an "off switch" Intelligent Networking (IN) platform with a centralised database for all numbers allocated to operators. The IN solution enables a highly stream-lined and efficient porting environment with low ongoing costs, both for the porting process in itself and for the routing of calls to ported numbers across networks, particularly for countries with many licensed operators.

In some countries, an interim solution based on either advanced call forwarding techniques or other "on switch" non-IN solutions have been used. In these countries the reason for moving to the non-IN solution has been that the solutions had lower costs given the likely level of numbers to be ported. Some smaller countries have not opted for the IN solution as it was considered unnecessary given the likely scale of porting operations in the country.

The following three key technical solutions are described in more detail to illustrate the options available:

- Using an IN-based solution with a centralised database
- Using data-decode, and
- Using simple call forwarding.

### **Using an IN based solution**

IN-based solutions typically use an external centralised database where all information about allocation of number ranges to operators and about all ported numbers is housed. When using the IN-based NP solution all calls need to interrogate the database during the call set-up process to ascertain whether the number is ported and how the call should be routed.

The originating operator can interrogate the central database either from the originating local switch or from its trunk switch and will then route the call based on the information received, this avoids any routing inefficiencies, although some extra costs are incurred for all calls due to the need to interrogate the central database for all calls, whether or not the called number has been ported.

The database for NP is often managed by an independent third party, not the operators themselves.

The IN-based solution requires all the networks to be equipped with IN platforms and it requires the set-up of a central data-base, this is a considerable undertaking and can be very costly. However the IN functionality can be used to deliver other services.

### **Call drop-back**

Call drop-back does not require IN platforms as all calls are routed as per the information contained in the dialled number until the call reaches the trunk switch on the donor network. The trunk switch then sends an interrogation to the local switch indicated by the dialled number, asking whether the number is still resident there or has been ported. If the call is ported, then the trunk switch routes the call in accordance with the information from the local donor switch, if not then the call is terminated as per normal.

For the call drop-back option, the local donor switch responds to the enquiry from the trunk switch by returning the dialled number + a prefix which identifies the network and exchange or point of interconnect to which the trunk switch should now route the call, the path to the local switch is then terminated and the trunk switch routes the call accordingly. This method reduces routing inefficiencies compared to if the call had to travel all the way to the local donor switch before it was re-routed and the connection to the local switch would remain live for the duration of the call. This more inefficient form of routing is known as ‘tromboning’.

### **Simple forwarding**

A donor operator can utilise its switch-based ‘remote call forwarding’ facility to implement NP. This facility is usually used as a retail service for customers who wish to have their incoming calls forwarded to another number.

For NP to be supported by simple forwarding, the recipient operator would need to allocate a ‘shadow number’ for the customer who is porting its number. The call forwarding functionality then simply forward all call from the original number to the shadow number.

When using simple forwarding, calls to ported numbers will typically travel all the way to the local donor switch before the number is identified as ported and then re-

routed accordingly. This means that the calls will ‘trombone’ and calls to ported numbers will therefore utilise more switching and transmission capacity than calls to non-ported numbers.

Simple forwarding is not generally considered a suitable option for NP due to the inefficiencies in routing and the use of switch processing capacity. However, in smaller jurisdictions with limited local infrastructure competition, it can be a suitable solution as it relies on existing switch functionality and the costs of implementing NP are therefore limited to setting up the ordering and provisioning processes and the incremental conveyance costs due to the tromboning effect.

#### **7.4. NP Costs and Charges**

Both “on switch” and “off switch” solutions require the following two cost categories to be incurred:

1. System set-up costs, modifications to networks and switches for the introduction of NP, and
2. per line set-up costs, the cost of changing switching and customer records to allow a customer to ‘port’ a number to an alternative network.

“On switch” solutions also have an additional cost, namely incremental conveyance costs associated with calls. These are costs incurred by routing calls through the donor’s network to the other operators’ network for call termination. While IN solutions also incur some per call costs (dimensioning the database and signalling links for the volume of look ups) the incremental cost of each additional look up is minimal.

For the purposes of cost allocation one of the key differences between NP and CPS is that NP is generally a reciprocal arrangement, in that where there is an agreement to port numbers between operators, numbers can be ported in both directions. Thus any “per operator” costs - that is the cost of establishing NP arrangements between two operators - are incurred by both operators. In order to promote economic efficiency by providing strong incentives for operators to minimise these costs, any “per operator” costs are generally borne by the operator that incurs the costs.

System set up costs typically account for a very large proportion of the cost of IN solutions, and can also be significant for on switch solutions. Due to the reciprocal nature of the costs, each operator generally has to recover their own costs. For IN solutions there may be a common database set up for all operators. The cost of this database must then be shared between the operators.

The allocation of call conveyance costs can be problematic in “on switch” solutions. Three parties may be involved in the transmission of the call: the originating operator; the “donor” operator from whom the number is ported; and the “recipient” operator who terminated the call. In a report for the European Commission<sup>10</sup>, it was recommended that the extra costs of conveyance be recovered from the originating operator. In the UK, costs were initially shared between the donor and recipient

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<sup>10</sup> Study on the Cost Allocation for Number Portability, Carrier Selection and Carrier Pre-Selection :Final Report for DGXIII of the European Commission by Europe Economics & Arcome



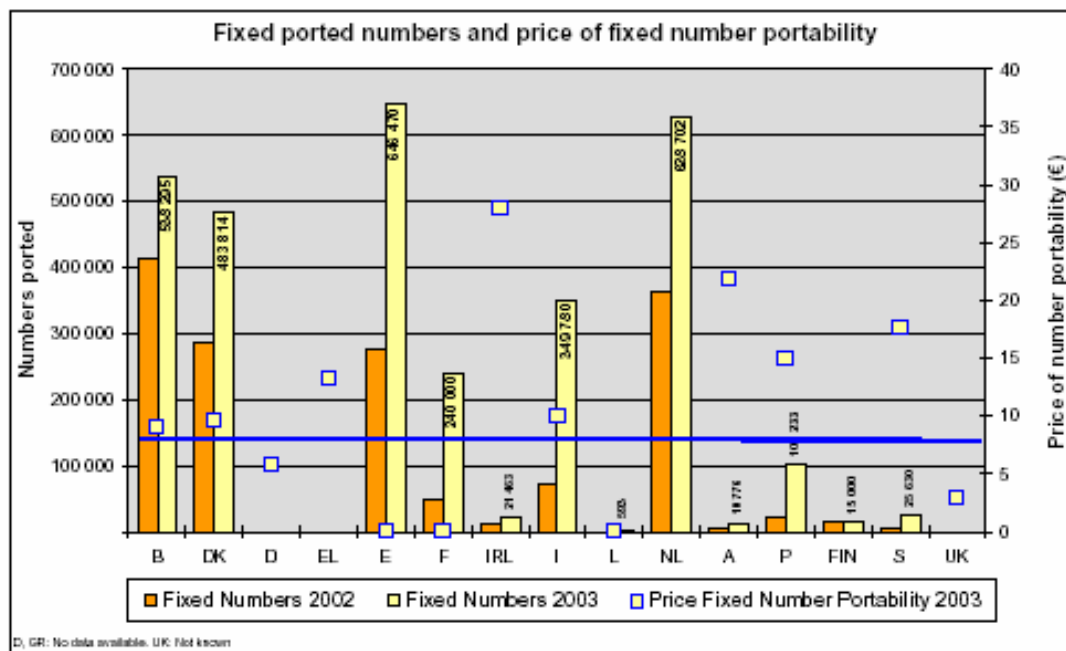
operators whilst call tromboning was in place, but allocated completely to the donor operator when call drop back was introduced.

### 7.5. NP Penetration and Success Factors

In many EU countries, there is little access competition and so very few numbers have been ported. In some countries, such as the UK, Spain and the Netherlands, a high proportion of customers have a choice of access provider, typically from cable TV operators. Penetration of NP is measured as proportion of numbers ported, and it ranges between 13% in Denmark and just 4% in Spain<sup>11</sup>. The level of NP penetration can be affected by a number of factors, including:

- The level of infrastructure competition in the country (if most competitive operators use CS or CPS, and do not offer direct customer connections, then there is little demand for NP);
- The level of Charges for NP (within the EU it would appear that the highest penetration of NP correlates to the lowest per line porting charges);
- The complexity and reliability of the porting processes (NP requires inter-operator ordering, validation and implementation and this process can be very complex).

Below is an overview of NP charges and penetration levels in The EU.



Source: 9<sup>th</sup> Implementation Report

<sup>11</sup> EU 9<sup>th</sup> Implementation Report

## **8. Number Portability in Guernsey**

### **8.1. The Guernsey Context**

As with CPS, NP must be considered in the Guernsey context. In Guernsey there is currently little evidence that either of the newly licensed operators is planning to roll out significant alternative fixed local access infrastructure. The OUR's ongoing informal consultation with all licensed operators in Guernsey suggests that the market for NP in Guernsey could be the business users for which the competitive operators may construct direct connection or use C&WG leased lines to connect the customers to their own networks.

It would appear therefore that any NP solution in Guernsey should be scaled to meet demand, but should be scoped such as to ensure it could port business lines with DDI functionality, hunt groups and other characteristics of business lines. It may also be desirable to consider the porting of number ranges allocated to larger business users.

Therefore the potential technical solutions need to be considered in the context of a small market and in the context of a potentially limited application for a specific sub set of customers.

**Q8** *Do respondents agree with the general comments above on the potential demand for NP in Guernsey and with the scope of a potential NP service in Guernsey? If respondents do not agree, then they are requested to provide their reasoning for this and suggest alternatives.*

### **8.2. Technical Solutions in Guernsey**

The three options discussed above are briefly evaluated below in the light of the Guernsey context and scale. This discussion also takes into consideration the information received by OUR during its informal consultation with all licensed operators in Guernsey and OUR's understanding of C&WG's network capabilities and those of the newly licensed operators.

#### **Intelligent Network Solution**

As discussed above, the IN-based solution was primarily developed to cope with large scale NP operations in larger countries and where significant local infrastructure competition could be anticipated.

The feed-back received from industry is that an IN solution is likely to prove too complex and costly for Guernsey. The DG is not convinced that it is inappropriate to pursue IN based solutions in the future, especially as IN platforms have several other applications, however as the industry players are not currently prepared to pursue this option, it may be inappropriate to evaluate it in detail at this point in time. However, it would be in the interests of the market to review this in the context of any planned investment in an IN platform.

*Q9 Do respondents agree that an IN-based NP solution for Guernsey should not be considered at present? If respondents disagree then they are requested to present reasoning for their position.*

**Call drop-back**

This solution was used as an interim NP platform in the UK, prior to the development of the IN-based solution. It is tried and tested and can provide a sustainable permanent platform for NP in markets where the number of operators requiring NP is limited and where the proportion of numbers ported is relatively low.

Call drop-back is mainly implemented in two-tier networks (with trunk and local switches) to reduce the costs of additional conveyancing described above. However, as C&WG operates only two switches, both of which have local and trunk functionality, it may be that any additional costs incurred by implementing a Call Drop-Back solution may outweigh the network efficiencies achieved.

The DG considers that the call drop-back option could be a suitable solution for Guernsey, if it decides that NP should be introduced, and believes that this option should be investigated in more detail with particular reference to the conditions in Guernsey.

*Q10 Do respondents agree that the call drop-back option could be a suitable NP platform for Guernsey? If respondents disagree, then they are requested to provide reasoning for their position.*

**Simple forwarding**

C&WG currently offers a call forwarding service to its retail customers, implying that its switches are equipped with call forwarding functionality.

Based on information received during its informal consultation with all licensed operators in Guernsey, OUR believes that the demand for NP in Guernsey, whilst potentially critical for certain market segments, appears to be limited in scale and may be applicable to business customers only. This would mean that the drawbacks of the call forwarding option, which are primarily related to it not being suitable for large-scale NP operations, could be largely negated.

Based on its initial assessment, OUR considers that simple forwarding may be a suitable NP platform for Guernsey, and warrants further investigation.

*Q11 Do respondents on whether they agree that simple forwarding could constitute a suitable NP platform for Guernsey and should be investigated further? If respondents disagree, then they are requested to provide reasoning for their position.*

**8.3. Proposed Industry Working Group**

Although the OUR has had initial informal consultation with all licensed operators in Guernsey, it is not presently in a position to decide whether the likely benefits of introducing NP in Guernsey would outweigh the associated costs. This is largely

because there is not yet a clear view on what the most suitable technical NP platform would be for Guernsey and therefore what the associated costs would be.

The DG therefore proposes that an industry Working Group be set up to evaluate the possible technical NP platforms for Guernsey, e.g. call drop-back and simple forwarding as described above. A suggested mandate of this Working Group would be as follows:

- Investigation and documentation of the technical options for implementing NP in Guernsey;
- Review of pros and cons of each technical options covered;
- Estimate approximate costs of implementing each technical option; and
- Recommendation of technical NP solution for Guernsey.

While the proposed mandate above would appear to the DG to be appropriate, as with the CPS working group, she believes that should the establishment of such a group be an outcome from this consultation that the Group itself should have ownership of its work. As with the CPS working Group, she believes that this group should run for a maximum of 2 months and its outputs would form a further part of the DG's further consideration of this issue.

***Q12** Do respondents agree that an Industry Working Group is the most useful means of evaluating the technical options for implementing NP in Guernsey? If Respondents disagree, then they are requested to provide reasons for this and to offer alternative means of evaluating the technical NP options for Guernsey.*

## 9. Conclusion

The promotion of further competition in the telecommunications sector in Guernsey is one of the key objectives of the legislative regime enacted by the States of Guernsey in October 2001. The measures described in this consultation paper are designed, and have been implemented in other jurisdictions, to promote and facilitate the development of competition by increasing customer choice and reducing barriers or costs to customers of switching operators. This in turn encourages operators to compete for a wider range of customers, bringing benefits directly to those who switch operators and indirectly by promoting price competition.

This paper considers the experience of implementing CPS and NP and asks whether they are useful and appropriate measures to consider implementing in Guernsey. The paper proposes that there is more examination needed of the various technically feasible options before more detailed consideration of the overall costs and benefits to an island economy like Guernsey can be concluded. It is suggested that the players in the market, with their specific knowledge and technical expertise in the operation and running of telecommunications networks and the provision of telecommunications services, are best placed to consider the technical solutions available and the establishment of working groups to consider these issues is suggested.

Respondents are invited to engage positively in the discussion on the introduction of competition enhancing measures so as to ensure that the outcome is viable and suitable for the Guernsey environment and that any implementation programme can be realistic, achievable, and ultimately of benefit to end users.

The DG hopes to conclude this consultation and specify the next steps in this process in July 2004.

Ends

## Annex 1: List of Questions asked in this Paper

- Q1** *Do you consider that the call categories listed above are those that should be considered for introduction in Guernsey at this time? Please explain your response, and if appropriate suggest alternative or additional categories that should be offered in Guernsey.*
- Q2** *Do you agree that mandating a pre-dialler based CPS solution in Guernsey is not desirable? If you disagree, please explain your reasons and provide your explanation of why this option should be considered further.*
- Q3** *Do respondents agree that the standard System X CPS upgrade is a realistic option for introducing CPS in Guernsey. If respondents disagree, then please provide reasons for this position.*
- Q4** *What are respondents views on the costs and complexity of implementing the System X CPS upgrade on the existing two switches in the incumbent network in Guernsey? Quantitative data in response to this question would be very helpful and, if respondents consider this information to be confidential, it should be clearly marked so it can be treated as such.*
- Q5** *Do respondents agree that this solution should be investigated for Guernsey? If respondents disagree then please supply reasoning for this.*
- Q6** *Do respondents agree that an Industry Working Group is the most useful means of evaluating the technical options for implementing CPS in Guernsey? If Respondents disagree, then they are requested to provide reasons for this and to offer alternative means of evaluating the technical CPS options for Guernsey.*
- Q7.** *If respondents agree, views on the scope and timeframe proposed are invited.*
- Q8** *Do respondents agree with the general comments above on the potential demand for NP in Guernsey and with the scope of a potential NP service in Guernsey? If respondents do not agree, then they are requested to provide their reasoning for this and suggest alternatives.*
- Q9** *Do respondents agree that an IN-based NP solution for Guernsey should not be considered at present? If respondents disagree then they are requested to present reasoning for their position.*
- Q10** *Do respondents agree that the call drop-back option could be a suitable NP platform for Guernsey? If respondents disagree, then they are requested to provide reasoning for their position.*
- Q11** *Do respondents on whether they agree that simple forwarding could constitute a suitable NP platform for Guernsey and should be investigated further? If respondents disagree, then they are requested to provide reasoning for their position.*

**Q12** *Do respondents agree that an Industry Working Group is the most useful means of evaluating the technical options for implementing NP in Guernsey? If Respondents disagree, then they are requested to provide reasons for this and to offer alternative means of evaluating the technical NP options for Guernsey.*