Channel Islands

Wholesale Access Project

Consultation Document

Pan Channel Islands Consultation on Wholesale Access Products

Channel Islands Competition and Regulatory Authorities

Document No: CICRA 11/01 **November 2011**

Office of Utility Regulation
Suites B1 & B2, Hirzel Court,
St Peter Port, Guernsey, GY1 2NH
Tel: +44 (0)1481 711120
Web: www.cicra.gg

Jersey Competition Regulatory Authority
2nd Floor Salisbury House, 1-9 Union Street,
St Helier, Jersey, JE2 3RF
Tel: +44 (0)1534 514990
Web: www.cicra.je

CONTENTS

1. Introduction

Guernsey and Jersey consumers have already enjoyed substantial benefits from competition in the mobile sector. Competition in the provision of fixed line services is less developed, an issue which CICRA, the Channel Islands Competition and Regulatory Authorities, are seeking to address on a pan Channel Islands basis through the Channels Islands Wholesale Access Project (CIWAP).

For this purpose an industry working group comprising telecom providers and the utility regulators from both islands was set up in early 2010. Its objective was to identify and develop options to extend competition in the fixed line market. Significant progress has been made in identifying a number of options and it is now time to narrow the focus and develop plans for delivering products to the market to enable customers to benefit. The purpose of this document is to report on the progress made by the working group, explain the shortlisted options and obtain views on which options should be prioritised.

A number of potential Wholesale Access Products were identified during the process, and this initial list was narrowed down to the following preferred products:

- Fixed Number Portability (FNP);
- Wholesale Line Rental (WLR);
- Wholesale naked[1] Digital subscriber Line access ("naked DSL");
- Bitstream (Midstream bitstream access);
- Hub & Spoke Ethernet (Point to Multipoint partial private circuit);

Initial assessment was made of the cost of their development and the strength of support among operators for the products. This process has been invaluable and there is now a common understanding of the views of different operators. We understand the practical obstacles faced in the development of these products, especially given the resources available to the various operators and the commitment to capital investment programmes which present their own substantive challenges.

CICRA will now commence the process of consultation in order to bring this work to a conclusion. We are mindful that operators have different priorities and preferences for the products. They also hold different views of some details of the product definition, the resources required for implementation and the commercial viability of such products.

---

[1] *Subscriber Line Access with the analogue phone service removed. Telephone services would be provided by a VOIP (Voice Over Internet Protocol) service, direct from the ISP or a provider like Skype.*

A considerable amount of time has been committed to assessing the views of operators through plenary sessions and bilateral discussions. Both regulators now have sufficient information to propose a short list of the preferred access products and, where there are differences or issues of definition or implementation, to be able to resolve those issues and determine an appropriate way forward through this consultation project.

An assessment of the commercial viability of such products is also required, and to this end a framework for the cost-benefit analysis (CBA) of the various products is presented later in the document.

Operators' and other stakeholders' views are sought on:

- the proposed wholesale access products;
- the appropriate pricing methodology and the CBA framework;
- the implementation of the Wholesale Access Products.

2. Purpose and Structure of the Consultation

The consultation is structured as follows:

Section 3:	Legislative background
Section 4:	Background and Context
Section 5:	Consultation Process
Section 6:	Wholesale Access Products
Section 7:	Pricing of Wholesale Access Products
Section 8:	Cost Benefit Analysis
Section 9:	Process for implementation
Section 10:	Consultation issues
Section 11:	Next Steps
Annex A:	Definition of Wholesale Access Products
Annex B:	Summary of the CI WAP Discussions

Interested parties are invited to submit comments on the matters raised in this consultation paper in writing or by email to the following addresses:

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

Email: info@cicra.gg

JCRA, Jersey
Jersey Competition Regulatory Authority
2nd Floor, Salisbury House
1-9 Union Street, St Helier
Jersey
JE2 3RF

Email: info@cicra.je

All comments should be clearly marked "Pan-Channel Island Consultation on Wholesale Access Products" and should arrive before 10am on 12th January 2012.

In line with CICRA's consultation policy, responses to the consultation will be made available on the CICRA website. Any material that is confidential should be put in a separate Annex and clearly marked as such so that it may be kept confidential.

3. Legislative and Licensing Background

The general legislative background for the Regulators is provided by their respective establishment laws, the *Regulation of Utilities (Bailiwick of Guernsey) Law*, for the OUR (Office of Utility Regulation) in Guernsey and the *Competition Regulatory Authority (Jersey) Law* for the JCRA (Jersey Competition Regulatory Authority).

The legislative background is provided by the *Regulation of Telecommunications (Bailiwick of Guernsey) Law 2001* and the *Telecommunications (Jersey) Law 2002* together with the Telecommunications licenses of the various companies in Guernsey and Jersey. The use of radio spectrum is governed by Ofcom under the UK *Communications Act 2003* and the UK *Wireless Telegraphy Act 2006*. Operators may require additional licences for their use of this spectrum.

In addition to specific legislation, there is scope for the States of Guernsey and Jersey to give formal directions to the OUR and JCRA respectively.

4. Background & Context

The Channels Islands telecoms market already has a competitive mobile telecoms market, with operators active in both the Jersey and Guernsey markets, a wide range of tariffs and the capability to port mobile numbers from one operator to another.

The purpose of the Channel Islands Wholesale Access Project (CIWAP) is to facilitate the development of an active and vibrant market in fixed line services. At this point, the focus is on the development of the wholesale market because that will enable operators to offer a wider and more diverse range of services to their customers and encourage an increased level of competition at the retail level.

New entrants can enter the telecoms market through new physical infrastructure or wholesale access to the existing infrastructure. The different approaches to opening up wholesale markets are often referred to as active and passive – on the basis of the level of activity and investment required by a new entrant.

Passive remedies are those where the OLO seeking access makes use of the existing basic infrastructure but can set up and configure its service independently from the existing network operator. This could include access to ducts, cables or exchange sites. In the UK, this approach is being used to facilitate the roll out of rural broadband, where access to BT's ducts and telegraph poles has been allowed to 3rd parties to develop their own improved network infrastructure.

Active remedies are effectively wholesale services offered by the existing provider and are less open to configuration or control by the entrant/OLO. This includes services such as wholesale line rental (WLR) and bitstream access where the configuration is largely dependent on the existing network operator, but there may be a degree of flexibility and limited scope for service configuration by the OLO.

Figure 1: *illustration of active and passive access remedies*

	Passive	**Active**
Access to:	Underlying physical assets Such as ducts, copper or fibre networks	Electronics connected to the infrastructure
Provider	Manages infrastructure;	Supplies managed interfaces;
Operator	Needs to install its own active electronics to use the infrastructure.	No or little requirement to provide own equipment

In deciding which approach to adopt and the appropriate products to prioritise, it is important to strike a balance between the risk and reward on offer to new entrants and existing providers while encouraging innovation and competition to the benefit of customers.

The size of the telecoms market in the Channel Islands as a whole is small and Jersey and Guernsey do not operate as a single market. In common with other small island jurisdictions, the rewards on offer, even to a very successful market entrant, are relatively less than from achieving a small share of a larger market such as the UK or France. Achieving economies of scale is much more difficult than in large markets and may act as an additional barrier to entry in its own right. This situation makes the cost of extra investment for the potential duplication of assets more difficult to support and less sustainable than in a bigger economy. This means that there is potentially a lower appetite for the infrastructure investment needed to support the use of passive remedies. Therefore, while CICRA is open to all approaches to increase customer market competition and customer choice, it would seem prudent to focus initially on those remedies where operators are themselves willing to make the level of investment required. The preferred approach is where possible to open access to the existing networks, based primarily on active remedies.

In assessing the feasibility of extending the provision of wholesale access products, principles that may be drawn upon in similar assessments elsewhere are informative. Of particular importance is the regulatory Principle of Equivalence, which has been applied in OFCOM's considerations of similar issues[2]. This deals with the way in which the existing (incumbent) network operators are expected to deal with their wholesale customers – generally, but not exclusively, other licensed telecoms operators (OLOs). The approaches and implications are discussed briefly below.

The overall objective for equality of access is that where an operator is required to provide a wholesale product because of its market power in the relevant market, then all customers for this product must be treated in exactly the same way in all respects. This means that all the customers of the wholesale business should be treated even-handedly, whether a new entrant, OLO or the operator's own retail arm. For end consumers it should mean the transparent and seamless provision of services with no difference in the quality or timeliness of response to faults, repairs or other issues that require the intervention of the network operator.

The three key areas of equivalence are:

[2] *Ofcom: Strategic Review of Telecommunications, Phase 2 consultation document, Nov 2004*

- **Product**: the features, functionality and quality of service of the product;
- **Process**: including the processes for forecasting, ordering, provisioning and fault repair etc.;
- **Price**: covering the price of the various aspects of the wholesale product

There are two forms of equivalence:

(i) **Equivalence of outcome** means that wholesale products the incumbent offers to its wholesale customers should be comparable to those that it offers for its own retail activities, but the product and processes need not be exactly the same so long as any differences do not impact on the competitor's ability to offer exactly the same retail services and service levels as the SMP operator's retail business. This type of equivalence can be applied with different levels of rigour.

(ii) **Equivalence of input** means that the incumbent's wholesale customers are able to use exactly the same set of regulated wholesale products, at the same prices and using the same systems and transactional processes, as the incumbent's own retail activities.

There are advantages and disadvantages to each form of equivalence. The former can be a slightly more opaque process therefore requires a greater degree of transparency from the incumbent operators and potentially greater supervision by regulators. The latter implies a degree of separation between retail and wholesale operations in the incumbent network operator and arms length transactions. However this may introduce additional interfaces and costs into the process.

For the Channels Islands, where the scale of the market is relatively small compared to the major European (EU) economies that are generally driving the approach to the development of competition in the telecoms sector, the use of "equivalence of outcome" appears the more proportionate approach, and the one adopted by CICRA in developing the wholesale access market to date.

Consultation issues:

Q1 **Do respondents agree that equivalence of outcome is the appropriate approach to use for the Channel Islands telecoms market? If not, what alternative approach should be used and why?**

Q2 **Do respondents believe that the current provision of wholesale products and services provides equivalence of outcome?**

5. Consultation Process

The process of consultation for the development of further pan Channel Islands wholesale access products commenced in January 2010, when CICRA commissioned consultants, KPMG, to facilitate the discussions between the various operators and CICRA on the future requirements for wholesale access products in the Channel islands.

For this purpose, an Industry Working Group was set up, comprising the larger telecom providers - Cable and Wireless, Airtel Vodafone, Jersey Telecom/Wave Telecom and Newtel Jersey - and the utility regulators from both islands to look at the issues on a Pan Channel Islands basis.

The purpose of the group was to explore the various options for wholesale access for the provision of further wholesale fixed line services which should be delivered across the Channel Islands; to narrow the choice of options down to a manageable shortlist for development and ensure that the preferred products would be future proof.

Initially the focus was on involving those telecoms operators which were active in network operation but at various stages in the discussions, other licensed operators were invited to take part and to express their views on the development of wholesale access products. For the most part, their input to date has been limited and CICRA would particularly welcome their comments on the preliminary proposals set out in this document.

6. Wholesale Access Products

6.1 Summary of potential Wholesale Access Products

The CIWAP working group drew up a list of the potential options to extend wholesale market competition considered elsewhere (UK, EU, etc.). The list included both interconnection and access and active and passive remedies. Its aim was to provide an initial focus for the Working Group and it contained the following products, defined in Annex A of this document:

Table 2: *Wholesale Access Products*

Wholesale Access Product	Interconnection or Access	Active or Passive
Wholesale Line Rental (WLR)	*Interconnection*	*Active*
Carrier Pre-selection (CPS)	*Interconnection*	*Active*
Fixed Number Portability (FNP)	*Interconnection*	*Active*
Duct Sharing	*Access*	*Passive*
Dark Fibre	*Access*	*Passive*
Local Loop Unbundling (LLU) - Full & Sub-loop	*Access*	*Passive*
Service Agnostic Pipe	*Access*	*Passive*
Local Loop Unbundling (LLU) - Line Sharing	*Access*	*Active/Passive*
Wholesale Leased Line	*Access*	*Active*
Wholesale Naked DSL	*Access*	*Active*
Bitstream	*Access*	*Active*
Off-island capacity	*Access*	*Active*
Class of Service and Quality of Service	*Interconnection & Access*	*only applies to Active remedies*
Wholesale Service Level Agreements, Penalties & Service Commitments	*n/a*	*n/a*

From this long list, operators were asked to indicate their preferred options for wholesale services. After more detailed discussion and refinement by the group, operators were asked to choose their preferred Wholesale Access Products, and any products not which were not supported by at least one member of the Industry Working Group were discarded at this stage – leaving the following list of products:

- Wholesale Line Rental;
- Fixed Number Portability;
- Point-to-multipoint Ethernet Private Circuit;
- Carrier Pre-Selection;
- Leased Line Portfolio;

- Partial Private Circuit;
- Service Agnostic Pipe;
- High Level QoS (quality of service);
- Midstream Bitstream Access (naked);
- Duct Sharing;
- Wholesale Naked DSL (Digital Subscriber Line);

These remaining products were further reviewed and refined in more detail by the CIWAP Industry Working Group. Products were assessed as to whether they were:

- based on commercial or process changes within operators (rather than technical development);
- based on existing networks or require the roll out of Next generation Networks (NGN) or Next Generation Access (NGA);
- a "value add" to existing products rather than a process or technology change;
- "Future Proof" – so will remain relevant for the transition from traditional to Next Generation Networks.

Table 3: *Assessment of Options*

	Process/ Commercial Centric	Circuit Switched Network	IP Based Network Required	Provided with SLA & Penalties	Future Proof
Wholesale Line Rental (WLR)	✓	✓		✓	✓
Fixed Number Portability (FNP)	✓	✓		✓	✓
Point-to-Multipoint Ethernet Private Circuit			✓	✓	✓
Carrier Pre-selection (CPS)	✓	✓		✓	?
Leased Line portfolio	✓	✓		✓	✓
Partial Private Circuit	✓	✓		✓	✓
Service Agnostic Pipe		(✓) ⇨	✓	✓	✓
High Level QoS		(✓) ⇨	✓	✓	✓
Midstream Bitstream Access (Naked)		✓		✓	✓
Duct Sharing	✓	✓		✓	✓
Naked DSL	✓	✓		✓	✓

Source: *KPMG presentation, Summary of prioritisation by operators, 14 May 2010*

6.2 Selection of Products

Following this round of discussions the Working Group selected a shortlist of the wholesale access products identified as being of greatest interest to operators and greatest potential benefit to customers. They were:

- Bitstream (midstream "naked" Bitstream Access);
- Fixed Number Portability (FNP);
- Point to Multipoint partial private circuit (Hub and Spoke Ethernet) services;

- Wholesale naked DSL; and
- Wholesale Line Rental (WLR).

The combination of the functionality of the Bitstream access product with wholesale naked DSL opens the potential for operators to provide a wide range of services to customers. It will make it possible to offer comprehensive packages of services to a wide range of customers including data and voice services.

In further discussion, the “wholesale naked DSL” and Bitstream products were identified as being strongly complementary. Together they offered a much greater opportunity for development of the market than as individual products. They enable OLOs to offer combined broadband and IP[3] based voice services and greater opportunity to manage the quality of service. However the approach is likely to require more investment in equipment and resources by OLOs than other approaches and take more time to implement. Based on the complementary nature of the products, it was agreed to combine the two products for the process going forward, creating a single product, “wholesale naked DSL with Bitstream”.

For further consideration, “wholesale naked DSL with Bitstream” is treated as a single product, defined as in Annex A item under this heading, although CICRA recognise their origin as separately defined products. However, there was a view that a significant part of the market may not be ready to make the move from PSTN to VOIP telephone services implicit in this product and there were Quality of Service issues to be addressed. For this segment of the market and for all customers in the short to medium term WLR was considered to offer the most appropriate solution to provide these customers with access to the benefits of competition in the market. It was therefore a significant priority for OLOs to facilitate their access to the market and improve the range of competitive offerings available.

“Hub and spoke Ethernet” was seen as a product of the natural evolution of operator’s networks that would be delivered location by location over a period of time. It was not a product that operators believed could be made available quickly on a pan Channel Islands or an island wide basis. On this basis and given the view that even without the CIWAP, operators could roll out the product locally on an area by area basis, CICRA indicated that it was minded to drop this product from the project altogether and allow it develop outside this framework. There was general agreement from operators on this point and there were no significant objections.

Therefore, given the Industry Working Group’s general agreement that the “Hub and Spoke” Ethernet product should be excluded from further consideration in this process it is excluded from further analysis in this paper.

Consultation Issues

[3] *IP: Internet Protocol*

Responses are sought on:

Q3 **Which of the Wholesale Access Products shortlisted in Section 6 are required by operators and which should be prioritised? Responses should set out the reasons for the preferences and priorities.**

Q4 **How will the selected products further the aim of promoting competition in the Channel Islands telecoms markets?**

Q5 **Are respondents comfortable that the decision to take the Hub and Spoke Ethernet product outside this process is appropriate? If not, why not? How would its inclusion further the aim of promoting competition in the wholesale markets?**

7. Pricing of Wholesale Access Products

7.1 Approaches to Pricing

There are two main approaches, "Cost plus" and "Retail Minus".

Cost Plus

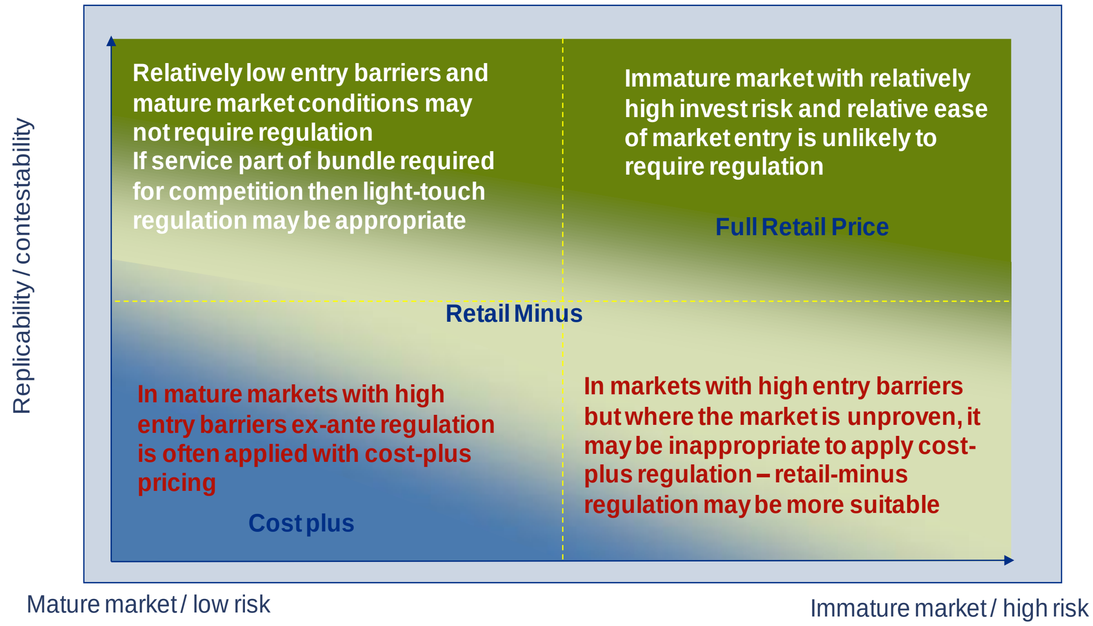
The "cost plus" methodology is a bottom-up approach. The wholesale charge is set based on the efficiently incurred economic costs of the incumbent operator) in providing the service (including an appropriate rate of return).

Retail Minus

The "retail minus" methodology is a top-down approach. The wholesale price is set based on the retail price charged by the incumbent operator less the costs that arise from providing retail, rather than wholesale, services (and associated rate of return).

The two approaches require different amounts of information and are most applicable in different circumstances. In either case, variations on the approach may be adopted. For example where reliable cost information is not available or there is a significant difference between operators in their view of the reasonably incurred and efficient cost levels, it may be more appropriate to adopt a hybrid approach which includes external benchmarking.

Figure 3: *the general decision matrix presented to the operators*.



Source: *KPMG presentation, Summary of approaches to pricing*

In considering which approach would be the most appropriate for each product, CICRA asked respondents to take into account the following issues:

- The availability of trusted and consistent information costs to enable the development of cost plus charges in which all parties can have confidence;
- The significant difference in retail prices between Jersey and Guernsey for some products and the difficulty of developing "retail minus" wholesale charges which would be acceptable in both jurisdictions.

7.2 Summary of Operators' views

Taking each of the products in turn, the views of each operator on costing approaches and pricing principles for each of the remaining shortlisted Wholesale Access Products are set out below.

Figure 4: *Summary of operator views*.

Output from 9th June Meeting
The cost allocation matrix

REVISED SLIDE

Product	Cable & Wireless	Newtel	Airtel Vodafone	Jersey Telecom/Wave
Wholesale Line Rental (WLR)	Cost Plus	Cost Plus	Cost Plus	Retail Minus
Hub & Spoke	Range from Cost Plus (with caveats) to Retail Minus (due to uncertainties)	Cost Plus (retail pricing/ wholesale pricing benchmarking as a safety check)	Cost Plus	
Naked Bitstream	Further discussion required	Further discussion required	Further discussion required	Cost Plus
Fixed Number Portability	Cost Plus	Cost Plus	Cost Plus	Cost Plus

 3

Source: *KPMG presentation, Summary of operator pricing preferences*

7.2.1 Fixed Number Portability (FNP)

All the operators favoured a "Cost Plus" approach to pricing; however C&W argues that a risk premium should be included in the costing.

C&W's initial estimate suggests a cost of around £80 per customer and given this level of costs C&W expressed reservations that costs may be too high for the cost benefit assessment. This costing estimate will however need to be analysed in further detail before decisions are made in this regard.

Airtel Vodafone had produced an earlier lower costing estimate, although it recognised at the time that the costs would need adjusting for specific differences between mobile and fixed portability requirements.

7.2.2 Wholesale Line Rental (WLR)

JT/Wave indicated a qualified preference for a "Retail Minus" approach if the product were to proceed. Both Newtel Jersey and Airtel-Vodafone indicated a preference for a Cost Plus approach for this product.

C&W proposed that WLR should be priced on a pan-CI basis, using a cost plus approach and that WLR charges should be based on the lesser of the two incumbents' costs. C&W propose costs should be shared among the customer base which could potentially benefit from this product, rather than just those who had actually taken up the offer. C&W has assessed the likely cost of implementation as £33k per annum, with no requirement for capital expenditure and estimates that WLR can be launched in nine months from the commencement of the project.

C&W further propose that initially WLR should offer a PSTN-only product. Calls from a WLR line should be priced using the "Retail Minus" approach and incoming wholesale calls to incumbent fixed network should not in C&W's view be charged to OLOs. C&W propose that one-off WLR charges and rental for associated service features should be provided for PSTN-only WLR product on a "Retail Minus" basis.

7.2.3 Wholesale naked DSL with Bitstream

There was debate over the technical definition of the bitstream product, and specifically whether market entrants should be able introduce their own equipment (such as a BRAS[4]) which would allow greater control over the product delivery and its Quality of Service (QoS) or would be required to make use of existing equipment. This distinction has an impact on the preferred approaches to costing.

C&W favoured the adoption of a "Retail Minus" approach, given the degree of uncertainty over the costing of the physical line, the treatment of stranded capacity, forecast take-up and migration of existing customers and network configuration requirements. JT/Wave favoured a "Cost Plus" costing methodology given this would be a completely new product. The other two operators have yet to give an indication of their view in this area.

7.2.4 Hub and Spoke (Point to Multipoint) Ethernet

As previously noted, this potential access product is one which the working group agreed was best taken outside the CIWAP process and subject to comments in response to this consultation, will not be included for further consideration.

7.3 CICRA's views and observations

CICRA has considered the views expressed through the CIWAP process so far on the specific Wholesale Access Products considered above and has the following observations. An important consideration is that while the primary focus is active remedies and equivalence of output, CICRA's objective is to encourage competition as deeply into the network as possible.

---

[4] *BRAS: Broadband Remote Access Server*

Ideally, Wholesale Access Prices would be consistent across both islands. However, there are significant differences in retail prices between the two jurisdictions and both “retail minus” and “cost plus” approaches (even on the basis of efficiently incurred costs) could result in different charges. C&W’s proposal to use the lowest cost calculated across both jurisdictions may be a solution, but CICRA would wish to seek respondents view on this proposal and any issues perceived in its application and the potential to use benchmarking where there is inadequate pricing information remains an important option.

7.3.1 FNP

CICRA supports the use of the cost plus approach. This is the unanimous preference of the operators to date, and there is no corresponding retail product on which to base a “retail minus” charge.

7.3.2 WLR

The proposal that general set-up and operating costs should be shared by all subscribers is consistent with the principle that the benefits of the resulting increased competition would likely accrue to all users. CICRA is minded to agree with this principle but seek comment from all respondents on this point.

It could be argued that WLR, which is simply the wholesale version of a retail product, should be offered on a “retail minus” basis only. This is supported by the inclusion of “naked DSL with Bitstream” as a recommended product which offers greater potential for product differentiation but needs more investment by OLOs.

7.3.3 Naked DSL with Bitstream (NDB)

As noted above, CICRA considers that “naked DSL with Bitstream” (NDB) product could encourage competition deeper into the network. In the longer term it offers the possibility of producing more innovative products based on OLOs’ own product specifications. However, it will require more investment and take longer to implement than a product such as WLR.

This suggests that if one of the WLR or NDB products were offered on a cost plus basis then it should be the NDB product. This is further supported by the fact that there is no equivalent single retail product on which to base a “retail minus” price, the product effectively replaces two retail products (line rental and broadband (DSL)), with a single wholesale product. The significant differences in retail price between Guernsey and Jersey make it difficult to apply the “retail minus” approach to produce a single charge that can be used on a pan-Channel Islands basis.

The debate over whether OLOs should be allowed to introduce their own BRAS or would have to use existing equipment prompted CICRA to hold bilateral discussions with the operators. As the outcome from this, CICRA reached the view that new entrants/OLOs should be able to introduce their own BRAS and not forced to use the existing equipment. While this might add to their costs, operators will benefit from greater independence and more immediate control over issues such as access and Quality of Service. In addition, there would be no bar to existing operators choosing to offer an appropriately priced alternative access product based on use of their existing BRAS alongside the mandated product.

7.4 Product uptake

To carry out its high level cost benefit analysis (CBA), CICRA needs information from the operators on the likely uptake rates of Wholesale Access Products. This will depend on the price of the Wholesale Access Product (and the price at which products can be offered to retail customers) - the cheaper the product the greater uptake is likely to be.

CICRA will therefore write to participants in the CIWAP to request their estimates of uptake of Wholesale Access Products and their potential price elasticity.

Consultation issues:

Comments are sought on whether the proposed approaches are appropriate and, where there are differences between the operators, on which approach is preferable and most closely meets the objectives of the project.

Q6 Views are sought on operators' approaches to costing and pricing the various Wholesale Access Products and which is the preferred approach to meet the objective of increasing competition in the wholesale access market. Any additional data on costing, pricing or uptake of products would be welcome. However CICRA will write separately to participants in the CIWAP to obtain indicative figures for product uptake.

Q7 Where the islands' incumbent operators have different network design and capability there is potential for differences in the cost of Wholesale Access Products between the islands. Views are sought on how CICRA might treat such differences, in particular, on what basis higher costs of one incumbent might still be regarded as efficient in these circumstances. Views are also sought on whether it could be acceptable to have different wholesale charges in the two jurisdictions for the same wholesale services?

8. Cost Benefit Analysis (CBA)

As part of this process, CICRA believes it is necessary to undertake a high level cost-benefit analysis of the products before deciding on implementation.

Given differences between operators on product descriptions, scale of costs and the consequent difficulties in estimating take up figures necessary to carry out any cost-benefit analysis, this consultation paper sets out at this stage to propose principles CICRA considers relevant for informing the inputs for such an analysis that will be conducted at a later stage in the consultation process. These principles are set out in this section and views are sought on these.

Taking the broad definitions provided, operators have over the course of discussions of the past year also submitted their views on the scale of costs and estimated timing of delivery for the products under discussion. They have also provided their views on the pricing principles that might be adopted for those products should these be taken forward. Some operators have provided more detailed views than others, and in most cases these are qualified as the provisional views of the operators. These views are summarised below and respondents are requested to consider these and, where feasible, operators are requested to provide more definitive positions. Where necessary, confidential submissions that provide supporting information for these position would be welcomed.

In some cases where operators have qualified their views this is due to a lack of certainty in some details at this stage of the process. CICRA would welcome considered responses on costing, timing and pricing principles on the basis that product definitions set out in section 6 above (& Annex A) are broadly accepted.

8.1 Principles of Cost Benefit Analysis

When conducting a Cost-Benefit Analysis (CBA), it is important that the criteria for the analysis are set clearly in advance, including the timeframe over which the analysis should seek to quantify costs and benefits. For the purpose of the evaluation of the products short-listed through the process described above, CICRA proposes a high-level CBA approach set out below.

8.1.1 Costs

Only directly identifiable costs which would not otherwise be incurred within a reasonable period of time will be included. No attempt should be made to estimate the cost of moving some costs forward in time in order to support the products being proposed. The main reason for this is that it is not possible for CICRA to ascertain for certain when those costs would otherwise have been incurred.

The costs to be incorporated should reflect reasonably efficient and effective investment costs. The main consequence of this is that CICRA would take a view of the level of automation the product would reasonably require to support the expected scale of the processes. If less sophisticated interfaces are deemed sufficient then the costs of these should be included in the CBA and vice-versa.

Capital costs incurred in relation with each product could fall into two categories:

- Network/infrastructure costs; and
- Systems and IT costs.

Non-capital costs should be estimated on a long-term basis, not accounting for initial up-front inefficiencies due to the need to train staff etc. Likewise, staff costs should be calculated based on an average work-load, not peak-load.

Scope efficiencies between products being evaluated should be identified and taken into account where possible.

Costs should be identified at a level of granularity that gives meaningful input but which does not require detailed investigation into different software options etc.

Costs will be sourced from operators and, where considered necessary, validated against international benchmarks or independent data. Where possible, cost information will be sourced from more than one operator. This will enable CICRA to gain a more comprehensive understanding of cost components and cost drivers.

8.1.2 Benefits

The CBA will include a number of types of benefits:

- Benefits to customers moving to the competing operators as a result of the introduction of the new wholesale service;
- Benefits to customers not moving to the competing provider but enjoying improved conditions (including reduced prices) as a result of the increased competitive activity.

In addition there will be less tangible but equally important benefits to the overall economy. Examples of this type of benefit could include an increased range of products, better or more differentiated “QoS” (Quality of Service) which may generate more scope for internet-based businesses on the islands and so on. It is not intended to include these explicitly in the CBA, because it will add substantially to the burden of carrying out the assessments. However, it is important to recognise these additional benefits and in cases where they can reasonably be quantified it may be appropriate to include an allowance in the overall CBA.

Data to perform the benefits quantification will be partially sourced from take-up forecasts from licensees in Jersey and Guernsey as well as from benchmarking information from other jurisdictions where the same or similar wholesale products have been introduced. Account will again be taken of interdependencies between products in terms of customer migration paths and the likely impact of this on the level of competitive activity and resulting pricing levels.

For some products (including FNP) non-pricing benefits will also be included. This could include, for example, the reduced cost in switching provider by not having to change stationary and advertising caused by changing telephone numbers. Where included, such benefits will be estimates, rooted in more detailed CBAs undertaken for similar products in other jurisdictions.

8.1.3 Timing

It is proposed that the Cost Benefit Analyses should cover a 10-year period. Although this may seem a long time horizon for a high level CBA, the nature of the products is such that it will likely take time for them to reach their full potential in terms of consumer and general economic benefits that this is considered a reasonable timeframe for this purpose. Further, some products may be inter-dependent; with some providing greater short term benefits and others longer term benefits.

Respondents are asked to consider the following consultation questions, focussing on the principles of:

- the high level CBA;
- the general approaches to costing; and
- whether there should be common pricing for Wholesale Access Products or whether differentials in price should be allowed between islands.

Consultation issues:

The principles of the proposed Cost benefit analysis (CBA) are set out above. Views are sought on whether this approach is appropriate.

Q8 Is the proposed approach to the CBA appropriate for all the Wholesale Access Products under consideration? If not, what adjustments and changes should be made and how will they affect the cost benefit analysis?

9. Process for implementation

There is a need to consider how the development and delivery of any wholesale products identified might be phased. More general questions are set out at the end of this section, while issues pertinent to specific products are discussed within the headings below.

Fixed Number Portability

In terms of operator responses on implementation timescales, feedback received by CICRA suggests that a 12 month implementation of FNP may be feasible and there is no material cross-over of resources between FNP and WLR.

Airtel-Vodafone currently offers a fixed telephony substitute to C&WG's PSTN service and the telecoms markets in Guernsey and Jersey, which would allow customers to benefit from an FNP product immediately. However, without the availability of naked DSL with Bitstream, most operators will not be in a position to benefit from the FNP product. It is also the case that the implementation timescale for FNP may differ from that for naked DSL with Bitstream. An argument could therefore be made for aligning the implementation process of the FNP and naked DSL with Bitstream products should both pass a CBA assessment.

Wholesale Line Rental and naked DSL with Bitstream

Feedback from operators indicates that WLR could be launched in nine months from the commencement of the project, should it be confined to a PSTN service.

It is apparent from the discussions that there are different views on the priority and importance of the WLR. JT/Wave has stated that it considered WLR had been set aside as not being future proof and not of interest to the parties. Therefore it provided no views on costing or timing of implementation for the WLR product. However, the majority of OLOs and operators were keen to see WLR implemented as quickly as possible in order to compete in the market with single provider solutions. While operators appear to agree that in the long term, naked DSL with Bitstream, provided FNP is also available, offers the most opportunities to develop retail products for customers, WLR provides the most immediate opportunities for competition and should therefore be the highest priority.

The DSL with bitstream product is more complex than WLR and there was considerable debate over the time it would take to implement. The risk of extended delay in delivering the product and the potential lack of good quality cost information are issues of concern to operators who want to be able to provide multi-service offerings and compete on a level playing field with the incumbent operators.

Some of the operators have therefore indicated their immediate priority would be the development of the WLR product. In addition, competing operators were concerned that a significant number of customers would be reluctant at this stage to give up their PSTN-based service and move to VOIP only telephone service. WLR is the only product that would allow competitors to access this group of customers to provide fixed line telephone or multi service offerings. These appear to be legitimate concerns which CICRA would need to take into account and views are sought on this aspect from respondents. A further issue raised by the Working Group is whether WLR should include both PSTN and ISDN services. If both are included, should there be a phased implementation, with PSTN-WLR delivered prior to ISDN-WLR. A reason for not including ISDN-WLR is that the complexity, cost and timescales for implementation may be substantially greater than for PSTN-WLR, which potentially involves less resource and is a simpler product. A separate CBA may be justified for each alternative given the above issues. This raises the question how a CBA might be appropriately framed to take account of these aspects and responses are sought to inform CICRA's view. When considering this, operators are asked to keep in mind the intention to conduct high-level CBAs for the products so as to not incur unnecessary costs or delays.

WLR and naked DSL/Bitstream are separate but potentially complementary in that WLR might be delivered relatively swiftly thereby delivering benefits to consumers earlier and may also in fact increase the potential benefits of naked DSL/Bitstream should there be a material difference in the time it takes to implement the two products. Whether these two products complement each other or not is therefore a key issue for CICRA to consider going forward and views are sought to inform this area.

Future Network Development; copper, fibre and technology neutrality

Throughout the process of discussion in the working group CICRA has been mindful of the issue of future network development and whether the products under discussion would be appropriate with NGN/NGA networks. It is now particularly relevant given the announcement of plans by Jersey Telecom to introduce NGA and replace its existing copper network with fibre to the home.

The proposals put forward by Jersey Telecom indicate the roll out of FTTH access across Jersey over a number of years. This has significant implications for the development of competition. While it may facilitate the provision of some services, for example, the wholesale bitstream access product, there will be a considerable number of customers who will remain on existing networks. It is important that these customers are not left out of the CIWAP process and have access to the benefits of competition via the provision of services using wholesale access products.

Inevitably there will be further complications, for example over the wholesale costs of NGA products compared to existing copper products, and CICRA would welcome views on how these issues should be addressed.

Because future network development was identified as an issue early in the discussions, the assessment of potential Wholesale Access Products included assessment of whether the products were "future proof", whether they required, or were compatible with, NGN/NGA[5] networks.

Operators indicated that the provision of wholesale products should not depend on the timescales for the rollout of this network upgrade by Jersey Telecoms and that the products should be technology neutral. Network operators would be required to deliver wholesale products irrespective of whether the network is copper or fibre based. Halting the development of Wholesale Access Products on existing networks or waiting for the introduction of an NGN or NGA investment programme would significantly delay the introduction of more effective competition into the market and have a significant adverse effect on the range and value of services offered to customers.

In the case of the selected shortlisted products, the working group identified them all as more or less their existing format with copper or fibre networks and technology.

- FNP relies on transferring a customer's number from one operator to another, and is technology neutral;
- WLR is also technology neutral – the difference is that the line being rented will be fibre rather than copper;
- naked DSL with bitstream product becomes simpler with an NGA network since there will be no PSTN voice service to remove for FTTH subscribers, and pricing/costing will be simplified.

An alternative view is that the benefits of the rollout of fibre networks and NGA are sufficiently great to justify such a delay and the provision of wholesale products over copper may not be future proof. Given the intended fibre rollout project, the introduction of Wholesale Access Products on the existing copper network could be argued to deliver no benefits beyond the short term. There is also a question of resourcing in that the provision of Wholesale Access Products could draw on the same resources as the fibre network rollout project. Other capital projects by incumbents could also lead to a scarcity of resources.

[5] ***NGN, "Next Generation Network"***: *in which the core network is delivered across fibre rather than copper (but the final connection to the customer premises uses existing copper network)*
NGA, "Next Generation Access": *in which as well as a core fibre network, the final connection to the customer is also fibre or FTTH ("Fibre To The Home")*

Views are sought on how CICRA should prioritise the delivery of Wholesale Access Products the resource implications and whether there is any overlap of resources or common ground for development between the products, and on how the development of Wholesale Access should be fitted around other projects such as NGN (Next generation networks) and NGA (Next Generation Access) development.

Consultation Issues

Views are sought on how CICRA might prioritise delivery of Wholesale Access Products, both in terms of timescale and the resources needed for delivery by the incumbents and OLOs. Major investment projects – like Gigabit Isles or changes to major IT systems - have been noted as factors that may delay the implementation of Wholesale Access Products. Where there is overlap of resources, the question arises as to which project should take priority and whether other investment should take precedence over specific Wholesale Access Products.

Q9 **Where there is material overlap in resources and timing either between Wholesale Access Products or with other projects, please explain the extent of overlap and its effect on the implementation of specific Access Products.**

Q10 **Where overlap occurs, what options are available to mitigate the impact, which Wholesale Access Products should take precedence and which projects, if any, should take priority over the delivery of Wholesale Access Products? Respondent's views are sought to inform CICRA's view on how to address such issues in drawing up a programme to implement the delivery of Wholesale Access Products.**

Q11 **If WLR were developed as a Wholesale Access Product, should its scope be limited or include PSTN and ISDN services? And if both, which should take priority, should implementation be phased and over what time period?**

Q12 **Should the implementation of Wholesale Access Products be modified to take account of the roll out of upgraded networks and NGA? If so, how should it be modified and what would be the implications of such an approach for customers and for the development of competition?**

10. Summary of Consultation Issues

CICRA invites comments from interested parties on the shortlisted Wholesale Access Products. CICRA is consulting on 3 key areas:

- The selection of products;
- The approach to the Cost benefit Analysis and pricing the products;
- The process and timescale for implementing the Wholesale Access Products.

Specifically, responses are sought to the questions set out at the end of the relevant sections (4 to 9) and repeated below.

Q1 **Do respondents agree that equivalence of outcome is the appropriate approach to use for the Channel Islands telecoms market? If not, what alternative approach should be used and why?**

Q2 **Do respondents believe that the current provision of wholesale products and services provides equivalence of outcome?**

Q3 **Which of the Wholesale Access Products shortlisted in Section 6 are required by operators and which should be prioritised? Responses should set out the reasons for the preferences and priorities.**

Q4 **How will the selected products further the aim of promoting competition in the Channel Islands telecoms markets?**

Q5 **Are respondents comfortable that the decision to take the Hub and Spoke Ethernet product outside this process is appropriate? If not, why not? How would its inclusion further the aim of promoting competition in the wholesale markets?**

Q6 **Views are sought on operators' approaches to costing and pricing the various Wholesale Access Products and which is the preferred approach to meet the objective of increasing competition in the wholesale access market. Any additional data on costing, pricing or uptake of products would be welcome. However CICRA will write separately to participants in the CIWAP to obtain indicative figures for product uptake.**

Q7 **Where the islands' incumbent operators have different network design and capability there is potential for differences in the cost of Wholesale Access Products between the islands. Views are sought on how CICRA might treat such differences, in particular, on what basis higher costs of one incumbent might still be regarded as efficient in these circumstances. Views are also sought on whether it could be acceptable to have different wholesale charges in the two jurisdictions for the same wholesale services?**

Q8 **Is the proposed approach to the CBA appropriate for all the Wholesale Access Products under consideration? If not, what adjustments and changes should be made and how will they affect the cost benefit analysis?**

Q9 **Where there is material overlap in resources and timing either between Wholesale Access Products or with other projects, please explain the extent of overlap and its effect on the implementation of specific Access Products.**

Q10 **Where overlap occurs, what options are available to mitigate the impact, which Wholesale Access Products should take precedence and which projects, if any, should take priority over the delivery of Wholesale Access Products? Respondent's views are sought to inform CICRA's view on how to address such issues in drawing up a programme to implement the delivery of Wholesale Access Products.**

Q11 **If WLR were developed as a Wholesale Access Product, should its scope be limited or include PSTN and ISDN services? And if both, which should take priority, should implementation be phased and over what time period?**

Q12 **Should the implementation of Wholesale Access Products be modified to take account of the roll out of upgraded networks and NGA? If so, how should it be modified and what would be the implications of such an approach for customers and for the development of competition?**

11. Next Steps

At the end of the consultation period, CICRA will review the responses received. They will amend the proposals in the light of the comments received and carry out a high level CBA of the remaining shortlisted products. These CBAs will be based on the definitions developed through the CIWAP consultation process. Operators will be asked to provide information to CICRA on the likely uptake of the various services. This, together with any further updates of the companies' costs or cost models will be used as an input to the CBA process, the framework for which is set out in this document. This will be a high level assessment, to determine which products should be carried forward to the implementation plan.

Once this exercise is complete, proposals will be adjusted accordingly and a final suite of products selected. CICRA will put forward proposals for the Wholesale Access Products to be developed, including a timetable for their implementation and delivery.

The proposals will then be formally published in the form of a draft decision/initial notice. Subject to the responses received CICRA will work with all of the Channel Islands operators to implement and deliver the Wholesale Access Products to the benefit of customers and to meet the objective of this project.

/ends

Annex A

Annex A describes the key wholesale products discussed over the course of the process of consulting operators.

Dark Fibre

Dark fibre is fibre installed in ducts, but not in use i.e. not actively transmitting a communications signal (commonly known as un-lit). This option for opening access to competitors can be used to connect end users to various broadband services, co-located equipment in local exchanges, base stations for mobile telephony and a number of other purposes. Access to dark fibre would allow one communications provider to use the fibre of another as an input to their downstream wholesale and retail products. Full management and control of the circuit for the communications provider is available and therefore independence from the incumbent.

Duct Sharing

Duct sharing is a form of passive infrastructure access, which involves direct access to physical infrastructure elements of the access network, but does not include any form of active electronic access. This form of sharing can take different forms:

- Access to existing telecommunications duct and duct network (trenches, ducts, manholes and joints);
- Access to non-telecommunication duct network such as used by utilities like water, gas and sewer;
- Sharing of new duct and duct network starting at build phase.

Duct sharing enables a competing operator to choose the type of cable and the technology over which services are delivered. In the case of new build, competing providers could also have the flexibility to innovate at duct level, for example, in the specification and layout of ducts.

There also different operational models:

- Joint/shared duct network planning and access;
- Unrestricted access to one or many other communications providers;
- Managed access to one or many other communications providers;
- No access, where the infrastructure 'owner' undertakes all access on behalf of others.

Fixed Number Portability

Fixed Number Portability (FNP) enables customers to retain their assigned fixed telephone number when changing service provider. This product complements the introduction of alternative service providers where the alternative service provision would otherwise entail the changing from an existing fixed line number and taking a new number. FNP adds to the increased level of choice since the removal of one of the key costs of switching to an alternative provider, namely the need to change the fixed number, is eliminated.

Hub and Spoke Ethernet

See Point to Multipoint partial Private Circuits

Local Loop Unbundling

Local Loop Unbundling (LLU) is the process where the incumbent operator makes its local access network (the copper cables that run from customers premises to the MDF (Main Distribution Frame)) available to other operators. Operators are then able to upgrade individual lines using DSL technology to offer services such as high speed internet access direct to the customer.

There are a number of options available to operators for gaining access to the local loop:

- Co-mingling & associated services covers the location, housing and connection of equipment in the incumbent’s exchange, on own premises or in the street.
- Line Sharing, where an operator only wants to provide the broadband service, the line is shared with the incumbent operator who provides the voice services.
- Fully unbundled line
- Sub-loop unbundling, where access the customer’s line at a point between the exchange and the customer’s premises.

Full local loop unbundling occurs when the local loop connecting a subscriber to the MDF is leased by an OLO from the incumbent. The OLO takes total control of the local loop and can provide subscribers with all services including voice and DSL. The incumbent still owns the local loop and is responsible for maintaining it.

In providing this service, the OLO gains access at the MDF or equivalent, typically a tie cable is provided by the incumbent to extend the local loop to a distribution frame owned by the OLO and the OLO then provides the facilities for the required customer services.

When incumbent and OLO share use of the local loop the local loop is owned and maintained by incumbent. The incumbent provides PSTN or BRA ISDN to customer while the OLO leases ‘spectrum’ on the local loop to provide other services to the same customer and provides DSL using its own DSLAM and other facilities, generally gives a lower leasing cost than full unbundling. There are however restrictions on some of the services an OLO can offer compared with full unbundled local loop, for example, telephony, higher bit rate, extended reach DSL.

Naked DSL with Bitstream

This is a service which allows alternative communications providers to rent access lines on wholesale terms from the (incumbent) network owner and resell those lines to customers. This service offers access to the DSL part of the line only; it does not include the analogue phone service. The bitstream part of the service includes QoS management to enable provision of IP-based voice services by control over the BRAs and allows operators to aggregate traffic from several end-users in a single 'bitstream'. The alternative communications provider can then use the line to provide both voice and data services over the line. The network operator remains responsible for maintaining and repairing the network infrastructure required to deliver the telephony services.

Point to Multi Point Private Circuits (Hub and Spoke Ethernet)

This is commonly described as an Ethernet based service to provide multi-service multi-customer access between customers on the SMP operator's network and a Gigabit Ethernet switch on the OLOs network. The SMP operator provides access from either an Ethernet switch or MSAN/DSLAM to customer's CPE. A VLAN per customer is provided between the OLO Ethernet switch or MSAN/DSLAM and the OLO Gigabit Ethernet switch. A "tunnel" is provided between the OLO Gigabit Ethernet switch and the Gigabit Ethernet switch at the OLO's network

- Based on 1 or 10 Gigabit Ethernet
- Connection can carry both private Ethernet circuits (10Mbs, 100Mbs) as well as broadband services

OLOs are able to monitor all VLANs that are set up on the interconnect and OLO's terminate customers PPPoE session within its own BRAS.

Service Agnostic Pipe

This service involves a network connection that is not constrained by technology or protocol. The ability for an operator to buy connectivity that is not defined as ATM, PDH, SDH, or similar is available so that the competing operator can provide its service to its customer without meeting certain network and service criteria of the operator providing the pipe. Depending on how the pipe is provided there might still be physical restrictions that parties would have to adhere to (i.e. in a copper network maximum voltage on line and parameters that would affect cross-talk would have to be recognised).

Wholesale Bitstream

This is generally referred to as the ‘wholesale’ service required by alternative operators to offer competing DSL or DSL-based value-added services. This enables operators to aggregate traffic from several end-users in a single ‘bitstream’ without having to build out their networks to the level of local exchanges and purchase and install DSLAM/MSANs. The incumbent provides a DSL line to the end user through its own DSLAM/MSAN. The CPE may be owned by the end-user (if self-install available) or the incumbent. Three alternatives are seen to exist for this wholesale product, namely:

- local bitstream access;
- mid-network bitstream access; and
- end-to-end bitstream access.

These alternatives are distinguished by the degree of backhaul provided by the incumbent to carry traffic to a point of interconnection with the other operator. Bitstream access products hand over a bitstream to the alternative operator who must provide its own internet service to end users, in contrast to simple wholesale services which supply an end-to-end service to the other operator including internet access.

Wholesale Line Rental

Wholesale Line Rental (WLR) is a service which allows alternative communications providers to rent access lines on wholesale terms from the (incumbent) network owner and resell those lines to customers. For this service the communications providers effectively lease an exchange line and decide how best to route a customer’s calls. This would generally include residential and business customers (PSTN & ISDN-2). A key change is that a full retail relationship with the customer lies with the communications provider and the communication provider produces a single bill for both line rental and calls. The network operator remains responsible for maintaining and repairing the network infrastructure required to deliver the telephony services.

Substance of the CI WAP Discussions

1. Views from the initial discussions

Jersey Telecom (JT) informed KPMG that it had already included within its company plan, the introduction of a wholesale line rental product as well as a carrier pre-selection service in Jersey. In order to justify the resources required for the development of further wholesale products however, JT's view was that operators should be willing to pay the appropriate cost for wholesale products. To this end a decision on the type of products that might be recommended should be subject to a high level cost-benefit analysis.

Newtel Jersey's view was there was a need for wholesale line rental and a Priority 1 DSL Class of Service as soon as possible. Beyond this immediate requirement Newtel saw the need for fixed number portability, a Bitstream product, Local Loop Unbundling and a Carrier Preselection service.

Cable and Wireless (CW) expressed an interest in further information on the nature of a wholesale line rental product in Jersey, with a clear preference for a dedicated pipe providing wholesale access. CW also sought improved technical specifications for private circuit provision. In Guernsey, CW had not identified a demand for point to multi point MPLS service for private circuits and was looking to move its current leased line portfolio to an Ethernet product set.

Airtel-Vodafone (AV) sought greater standardisation of the leased line product set, both off-shore and on-shore. A need for 'pipes' available for access providing a service agnostic interface as a flexible connection to the home was also a key requirement identified. As with Newtel, AV was interested in fixed number portability and the possibility of a Naked DSL service being available

On the 25th of January 2010 the first meeting with the above operators, regulators and the regulators' consultant, KPMG, took place (referred to in the remainder of this document as the Channel Island Working Group (CIWG)). The above views of operators were shared and initial terms of reference debated with a view to gaining operator feedback. To assist the operator's considerations, a further meeting was held with all operators and a presentation given by KPMG covering the generally understood definitions of the various types of Wholesale Access Products that may be relevant to the process going forward.

2. Taking the Proposals Forward

By 5 November 2010, each of the four operators had championed certain wholesale products and presented further detailed descriptions of the different products, including features sought, and estimates of the potential resources involved in delivery. JT/Wave chose to champion Wholesale Line Rental and Naked DSL, AV discussed Fixed Number Portability and Newtel Jersey presented detail on a 'Connectivity Product'. CW, as the Guernsey incumbent, also submitted a cost analysis for the 'Connectivity Product'.

The same meeting received a presentation from KPMG setting out a framework for better understanding which areas of the market the wholesale products might primarily serve. These were broken down by business & residential customer groups and voice & data services.

A further meeting of the CIWG was held on the 21st of December 2010, where both regulators and all four operators agreed the next steps for the development of Wholesale Access Products. In terms of which products might be carried forward to the next stage of discussion, the DG of the OUR and ED of the JCRA explained that he was not willing to drop any of the products currently under discussion. Given this, it was confirmed that the following products remained as part of the assessment process going forward:

- Ethernet connectivity product – led by Cable & Wireless
- Wholesale Line Rental (WLR) – led by Jersey Telecom/Wave
- Naked DSL (NDSL) – led by Cable & Wireless (given JT/Wave resource constraints CW offered to take this forward)
- Fixed Number Portability (FNP) – led by Airtel-Vodafone
- Bitstream Product – led by Newtel

For the next phase of the consultation process, operators were asked to meet as a group to produce an agreement in principle with the other operators, of a product description of each of the products. These would be based on the descriptions presented at the previous meeting and would also take into account all aspects of the products such as technical issues, operational issues, customer service issues, etc. It was intended that the outcome from those group meetings would be presented at the next CIWG meeting where the agreed product definitions presented at the next workshop would form the input to a more detailed costing exercise. No further costing information was therefore required from operators at this stage. The Regulators also undertook to contact licensed telecom operators, other than JT/Wave, CW, Newtel Jersey and Airtel Vodafone, to inform them of the activities of this working group to gauge any level of interest in participating in the process going forward.

On the 10th of February 2011, the Regulators and KPMG gave a short introduction to ITEX and 2E2 representatives on progress to date and the wholesale products discussed by the four main operators. These two licensed operators were the only respondents to the invitation of the CIWG. At the meeting which followed, a further iteration of the product definitions was presented by the product champions to the CIWG as well as Itex and 2e2 representatives.

Following this discussion, KPMG liaised with the four operators; CW, JT/Wave, Newtel Jersey and AV prior to the meeting scheduled for 11th March 2011 and produced the following table as a summary of their preferences for the different products, subject to a number of qualifications.

	Jersey Telecom	*Airtel-Vodafone*	*Cable & Wireless*	*Newtel*	*iTex*	*2e2*
Wholesale Line Rental	*5*	*5*	*4*	*1 (inc ISDN30)*	*5*	*5*
Naked DSL with Bitstream functionality	*1*	*5*	*2*	*1*	*1*	*1*
Fixed Number Portability	*1*	*1*	*1*	*3*	*5*	*5*
Hub and Spoke (based on pricing assumption)	*4*	*1*	*3*	*5*	*1*	*1*
Bitstream						

Key:
1= Necessary product, 2 = Somewhat necessary product, 3 = No strong opinion, 4 = Somewhat unnecessary product, 5 = Unnecessary product

In further developing the specification of the wholesale products, there was a degree of difference on the precise definitions depending on operator's views of what was needed and expectations on timing of delivery. One area of difference for example was with regard to the Bitstream product. The issue was set out by CW in an email dated 25th March 2011 and responded to by Newtel Jersey. Another was in the concerns around timing of a Naked Bitstream product, which influenced views on the desirability of other products, in particular, Wholesale Line Rental.

3. Developing the approach to pricing

As an input to considerations around product costing, at a meeting on 9th of June 2011, KPMG presented alternative pricing methodologies, covering the principles that generally inform the selection of different methodologies and how these might be applied to the types of wholesale products under consideration.

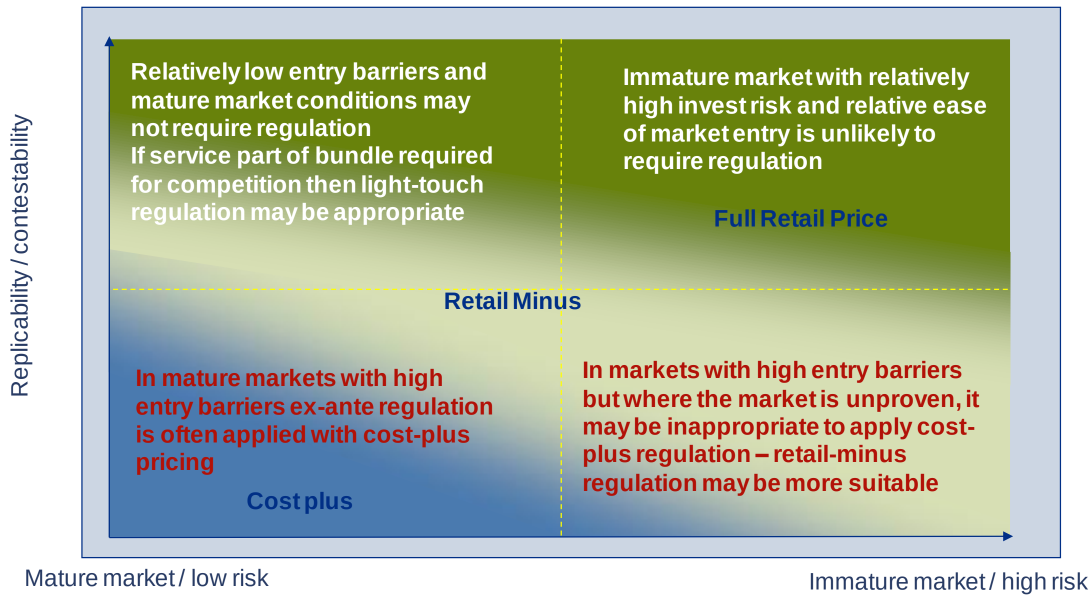
Since each of the operators set out further below their initial preferences for the costing methodology for each of the wholesale products, a summary of the key points covered by the KPMG's presentation is discussed here.

The presentation set out that when setting individual charges SMP operators charge other operators (OLOs) for wholesale products, a regulator would tend to use one of two distinct methodologies; 'cost plus' or 'retail minus'.

The ‘cost plus’ methodology is a bottom-up approach whereby the wholesale charge is set based on the efficiently incurred economic costs of the operator found to have significant market power (SMP) in providing this service (and a corresponding obligation to provide wholesale access) plus an appropriate mark-up for the SMP operator. Within the cost-plus approach various options are possible.

The alternative retail minus’ methodology is a top-down approach whereby the wholesale price is set based on the retail prices currently charged by the SMP operator minus the avoidable costs that should not need to be incurred if the SMP operator provided a wholesale service as opposed to a retail service.

The diagram below sets out schematically the general decision matrix presented to the operators.



There are other issues around cost-plus and retail-minus. For instance, retail-minus places the onus on new entrants to be more efficient than existing operators. It treats the retail price is a solid benchmark, which is true in many sectors but not always in the telecoms market, where technology and markets change rapidly and the cost apportionment underpinning retail prices is open to much debate. Where neither approach is suitable, benchmarking provides an alternative way forward.

4. Narrowing down the proposals

As noted above, the wholesale access products (WAPs) currently under discussion for introduction in the Channels Islands are focussed on the following products:

- Fixed Number Portability (FNP);
- Wholesale Line Rental (WLR);
- Bitstream;
- Naked DSL, and
- A connectivity product referred to as “Hub and Spoke”.

This meeting also noted that a hybrid product that, if made available sufficiently quickly, might negate the requirement for WLR, Bitstream and Naked DSL. This hybrid product was described as “Naked Bitstream”. Having considered the views expressed by the different parties at the various meetings held over the course of 2010 and 2011, at the 9th June 2011 meeting, the OUR/JCRA set out a considered view on the status of the short listing process as follows:

- **Fixed Number Portability (FNP)** – The inclusion of FNP on the shortlist appeared unanimous but needed to be implemented in association with one or more access products to be able to realise its benefits.
- **Hub & Spoke** – if this product was progressed, its implementation might be done separately from those WAP products going forward as part of the current workstream.
- **Naked DSL** – It appeared that this product was superseded by the Naked Bitstream product
- **Bitstream** – it appeared that this product was superseded by the Naked Bitstream product
- **Wholesale Line Rental (WLR)** – the Regulators were concerned about the impact that the design and implementation of WLR would have on the available resources to focus on the implementation of the other products in a short list. Another issue was that this product may have a limited life given the planned introduction of Naked Bitstream, should it be available reasonably quickly.
- **Naked DSL with Bitstream** – to be considered for CBA

On WLR, C&W expressed the view that the likely timing of the introduction of Naked Bitstream led it to consider that WLR should be taken forward and was concerned that WLR was being dismissed too early when considering the delay that it believes existed for the introduction of Naked Bitstream. WLR was therefore regarded by CW as a quick win. JT stated that the completion date for the current upgrading of its billing system was Q1/Q2 2012. In addition to the billing system JT also plans to introduce its NGN and Gigabyte Island project. JT stated that it was planning to introduce a SIP interconnect in the short term (2011 or early 2012). C&W considered that WLR could be launched around April 2012 (estimate) and there was no material overlap in the resources required to deliver WLR and those to deliver Naked Bitstream. C&W believed that if as a smaller organisation it could find the necessary resources, JT could do the same. The main reason given by C&W’s for its requirement for WLR is that it would enable OLOs to replicate JT’s combined product and would also suit customers who might not be ready to embrace IP-based telephony via the naked bitstream product. However, the implications of the time to develop and implement processes for WLR and the impact on the resources available for other products were also a consideration. Newtel were of the view that if there was any prospect of delay in JT’s plans to introduce a SIP interconnect in the short term (this year/early next year) it would also wish for the WLR product to be made available as part of this project.

Operators were requested by 24 June 2011 to review the matrix of costing approaches, determine where each service best fits and come to a view on which of retail minus or cost plus would form the more appropriate basis for pricing the products discussed. They were also requested by 8 July to provide further detail on costing information for each of the relevant services given discussions to date, together with an indication of the timescale for delivery. In summary, the following products were intended to be carried forward as part of this process:

- **Naked DSL with Bitstream;**
- **Fixed Number Portability;**
- **Wholesale Line Rental;**
- **With other services (e.g. Hub and Spoke) to follow as appropriate should they remain part of the CI WAP workstream.**

5. Delivering new wholesale products to the market

The Director also indicated that in going forward a formal process seemed more appropriate in developing the precise definition of the wholesale products and the costs of their provision. Differences in the requirements and preferences of operators remained despite the extensive time period over which CIWG had been considering the options available.

Following this meeting of 24th June, JT did subsequently confirm that JT had appointed staff to start work on the SIP interconnect project but was at that time unable to provide timing for introduction of the SIP interconnection product. CW subsequently set out the reasons for its position that resourcing was not a substantive issue for the provision of a WLR service. CW maintain there are established and agreed working processes and appropriate customer/OLO interactions. WLR was seen as a natural extension of these as using almost identical processes/interactions, with the additional element of wholesale call rating.