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Methodology for Constructing Wireless Broadband Price Baskets

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Working Party on Communication Infrastructures and Services Policy

METHODOLOGY FOR CONSTRUCTING WIRELESS BROADBAND PRICE BASKETS

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FOREWORD

This document details the agreed methodology for the creation of wireless broadband service price baskets. At its June 2012 meeting, the OECD's Working Party on Communication Infrastructures and Services Policy (CISP) adopted the methodology for use in its wireless broadband price baskets.

METHODOLOGY FOR CONSTRUCTING WIRELESS BROADBAND PRICE BASKETS

INTRODUCTION

The OECD published a revised methodology for its telecommunication price baskets in March 2010, which introduced a new set of baskets for fixed broadband services. The Working Party on Communication Infrastructures and Services Policy (CISP) recommended, at its meeting in December 2009, that the OECD examine the feasibility of developing an additional wireless/mobile version of the broadband baskets that could be used to compare wireless broadband prices across countries.

As a first step a questionnaire was undertaken to gather information across the OECD area. The main findings were distributed among delegations and telecommunication operators. The basket definitions in this document take into account all data received from operators and regulators throughout the process. Much of the background data, that underpins the choices made in the creation of the basket methodologies, is deemed by the operators to be commercial in confidence and these data were submitted to a third party firm (Teligen) to be analysed on behalf of the OECD. An expert group of delegates assisted in developing the basket proposal.

GENERAL BASKET RULES

A range of relevant price packages shall be covered, allowing the lowest cost package to be selected for each operator. Only prices clearly presented as current on the operator web pages will be considered.

Some of the proposed baskets (handset-based baskets) contain voice and SMS components, which are determined by the existing mobile voice baskets. Therefore, voice and SMS volumes of the handset-based baskets should be understood in the sense of the OECD mobile basket methodology, whose parameters are reproduced in the Annex to this document for clarification purposes. Handset-based baskets will also include business offers, as established by that methodology.

The baskets shall include mobile wireless broadband services. Services considered are based on UMTS, HSPA/HSPA+, CDMA2000, IEEE 802.16e and LTE technology. A flag will be included to distinguish those operators currently offering LTE connectivity. WiFi or hotspot usage is not included, even though some offerings may include this capability. The subscription must allow for access to the greater Internet via HTTP. Subscriptions that only offer “walled garden” or email-only services will not be considered. A subscription is not included if a terrestrial mobile operator only provides access to a limited number of websites, content, and/or applications such as games, ring tones, music, and pictures that are offered directly by the mobile operator and customised for that operator’s network and devices.

The baskets shall include the following charge elements: connection (one-off) charge, monthly rental charge, usage allowance (time or volume) and overage charges (i.e. charges above the subscriber’s monthly limit).

At least the two largest network operators are covered for each country, based on subscriber numbers. If the underlying data are available, the two largest wireless broadband operators, in terms of subscribers, could be chosen instead. For those countries in which these two largest operators account for less than 70%

of the market, the third largest operator will also be included. This could also apply to countries with three national network operators only. Discount brands offered by the network operators will only be included when clearly linked with the network operator's website and brand.

Basket results will contain fixed and usage cost for each package. Where an allowance is exceeded and the service is stopped or speed reduced until the end of the billing period, the package will not be considered in the basket results for those baskets exceeding the data allowance of that package. If there is an option of purchasing additional data allowances once the limit has been reached, both the new price and the new allowance can be considered.

Results are presented in USD/PPP per month including VAT. Nominal exchange rates can be used and will also be provided for reference.

Different patterns have been reported for handset-, tablet- and laptop-based usage. Laptop-based (or tablet-based) service provides connectivity using a laptop (or tablet) and a USB modem, dongle, etc (without explicit voice capability). Handset-based service is provided through a smartphone or other type of mobile handset (with voice capability). These three types of devices have different usage patterns. Accordingly, there will be three different sets of mobile wireless baskets: handset-based, tablet-based and laptop-based. Future evolution of terminal equipment and associated plans will be monitored in the context of the baskets review.

Pre- and post-paid tariffs are included. Only residential, single user tariffs are included (except for the handset baskets, which include business offers as well, as defined by the OECD mobile basket methodology). Offers should be advertised on the operator's website.

Non-recurring price elements are depreciated over three years.

ADVERTISED SPEEDS

Common peak theoretical speeds, in current networks, are 7.2 Mbps and 14 Mbps. Recent developments are pushing these peak theoretical speeds up to 21 Mbps and higher. LTE peak theoretical speeds in the 50-100 Mbps range are being offered in some markets. Currently, some markets have the majority of customers on networks with 7.2 mbps, while other markets have already upgraded over half of their customers to the 14/21 Mbps networks.

It is crucial to highlight that the actual speed experienced by the customer may be much lower than the theoretical network speed. For this reason, many operators refrain from mentioning speed when advertising the service. This poses considerable challenges to using speed as a parameter and, therefore, suggests that advertised speeds should not be used in the baskets. LTE offers will be flagged, as well as those corresponding to peak theoretical speeds of at least 20 Mbps. For the future, a number of online and transparent tools may emerge to monitor the average actual speeds experienced by users. If this occurs the baskets could be reassessed accordingly.

USAGE PATTERNS

The methodology will exclude those offers with time-based limitations, for example by the number of monthly hours of use, or daily or weekly offers. Only those offers where the allowance can be freely used over a whole month will be considered. Therefore, the number of hours or days of use per month are not parameters in the methodology.

Data volumes include both upload and download data volumes.

Excess usage, i.e. beyond data or time allowance, is considered in one of two ways:

- If throttling is used the tariff is excluded from the results if the basket volume exceeds the allowance. This will also apply if both throttling and overage charges are applied to a given offer. In this regard, throttling practices specified by acceptable use policies (AUPs) will also be considered.
- If excess usage results in overage charges the additional cost is added to the total as a usage element to pick the level of usage specified in a basket.

Operators have mainly reported data based on laptop use. The available evidence suggests that usage volumes are significantly lower when browsing the Internet from a mobile handset/smartphone. It has been also suggested that tablet use is around a half of laptop use. For example, while laptop-based tariffs have allowances in the 500 MB to 10 GB range, handset-based tariffs (e.g. smartphones) will have allowances in the 100 MB to 2 GB range. The range offered may of course vary from market to market.

Given these very distinct usage patterns and tariff packages and the emergence of tablet-specific plans, it is proposed to develop three different sets of mobile broadband baskets: one laptop-based (using USB keys, dongles, etc.), one tablet-based and one handset-based (including smartphones), where the latter will approximately have an allowance of one fifth (1/5) of the corresponding laptop-based basket. Some operators offer flexible plans that will automatically escalate customers to higher allowance plans as usage increases.

BASKET PROPOSALS

The following typical data allowances are based on the distribution of customers on allowances, taking into account usage forecasts provided by operators. Voice and SMS volumes of the handset-based baskets should be understood in the sense of the OECD mobile baskets.

Table 1: Mobile broadband basket proposal – tablet, laptop and handset use

Laptop use (data volumes)	Tablet use (data volumes)	Handset use (data volumes + voice/SMS basket)
500 MB	250 MB	100 MB + 30 calls basket
1 GB	500 MB	500 MB + 100 calls basket
2 GB	1 GB	1 GB + 300 calls basket
5 GB	2 GB	2 GB + 900 calls basket
10 GB	5 GB	2 GB + 100 calls basket

Laptop- and tablet-based mobile broadband baskets

Options including the provision of a laptop, netbook, notebook or tablet are not considered. Any additional price for a modem (e.g. USB key, dongle, etc.) shall be included, unless it is not available.

Handset-based mobile broadband baskets

The handset-based basket group will be based on bundles of voice, SMS and data (each one of them including a certain amount of voice, SMS and data). For this purpose, a data allowance will be associated to one existing mobile basket (e.g. 100 MB + 30 calls basket).

In order to ensure compatibility with the mobile voice baskets, the following applies to the handset-based mobile broadband baskets: at least the two largest network operators are covered for each country, based on subscriber numbers. The operators covered should between them have at least 50% of the market share.

For the same reason, handset-based baskets will also include business offers, as they are conceived as an add-on to the mobile voice baskets, which include business offers.

ANNEX – MOBILE BASKET PARAMETERS

(Extracted from [DSTI/ICCP/CISP\(2009\)14/FINAL](#))

Mobile: Overall basket volumes and destination distribution

Volume per month	Total calls per month	Call distribution				SMS
		Mobile to fixed	On-net	Off-net	Voicemail	
30 calls basket	30	16%	55%	25%	4%	100
100 calls basket	100	17%	52%	28%	3%	140
300 calls basket	300	14%	46%	37%	3%	225
900 calls basket	900	14%	55%	28%	3%	350
40 calls prepaid basket	40	14%	64%	18%	4%	60
400 messages basket	8	8%	55%	25%	12%	400

Mobile time of day distribution

	Voice call distribution			Message distribution			
	Day	Evening	Weekend	Peak	Off-peak	On-net	Off-net
30 calls basket	46%	29%	25%	66%	34%	53%	47%
100 calls basket	51%	26%	23%	66%	34%	51%	49%
300 calls basket	49%	32%	19%	66%	34%	50%	50%
900 calls basket	49%	32%	19%	66%	34%	50%	50%
40 calls prepaid basket	46%	29%	25%	66%	34%	53%	47%
400 messages basket	46%	29%	25%	66%	34%	50%	50%

Mobile voice call durations

	Call duration (minutes / call)			
	Mobile to fixed	On-net	Off-net	Voicemail
30 calls basket	2.0	1.6	1.7	0.9
100 calls basket	2.1	1.9	1.8	1.0
300 calls basket	2.0	2.0	1.8	1.0
900 calls basket	1.9	2.1	1.9	1.1
40 calls prepaid basket	1.9	1.9	2.0	0.9
400 messages basket	1.6	2.2	1.6	1.1