Body of European Regulators for Electronic Communications



BoR (14) 55

Termination Rates Benchmark Snapshot (as of January 2014)

Integrated Report

on Mobile Termination Rates, Fixed Termination Rates & SMS Termination Rates

June 2014

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1. Introduction

The BEREC Integrated Report on Termination Rates in Europe provides an overview of Mobile Termination Rates (MTR), Fixed Termination Rates (FTR) and SMS Termination Rates (SMS TR) per country based upon the results of a request for information sent to all NRAs, referring to data as of 1st January 2014.

Therefore, the aim of this report is to offer a picture of interconnection and termination prices in mobile, fixed and SMS in Europe.

Regarding the monitoring of MTR, BEREC continues the work started by ERG in 2004 with an overview report carried out twice a year. Regarding the monitoring of SMS TR and FTR, BEREC started its own data collection in 2011 with the aim of facilitating this benchmarking comparison to NRAs.

As of January 2014, this is the situation of Termination Rates in Europe:

- With regard to MTR, the simple average for EU stands at 1.92 € cents per minute, whereas EU weighted average is estimated in 1.31 € cents per minute.
- Regarding domestic SMS TR, the EU simple average is placed in 2.53 € cents per SMS, whereas the weighted average is reported to be 2.28 € cents per SMS.
- Lastly, Fixed Termination Rates (FTR) were analysed taking into account the three main levels of fixed interconnection layers and two types of interconnection (time and capacity). EU average for Layer 1 was reported to be 0.41€ cents per minute. Regarding layer 2 and 3, EU average stands at 0.47€ cents per minute and 0.64€ cents per minute, respectively.

2. Graphs





SMS TR per country – January 2014

FTR - Effective weighted interconnection rate in Incumbent's fixed network (Layer 1, Layer 2, Layer 3) - January 2014



Note to figure - CY: CYTA uses layer 1 interconnection for local and regional coverage. The rate reported in the figure represents the local termination rate. The regional rate is 0.55 eurocent/minute





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3. MTR

Assumptions

Most countries do not differentiate between MTR for fixed-to-mobile and mobile-tomobile. For countries that differentiate, fixed-to-mobile charges have been used.

In order to obtain a homogenous comparison, a three-minute average call duration has been assumed; set-up charges are accounted for by the standard formula¹.

Operators with a market share below 1.5% have been excluded from the MTR average calculation

Only nominal tariffs are represented in the report, defining them as "The price (in eurocent/minute) set out by the regulator that represents the maximum price per minute which operators may charge each other (without any adjustment for purchasing power parity or real effects – inflation)."

For those countries that have not set an average tariff and, additionally, apply distinct rates - one for the peak period, and another one for off-peak period- a total average tariff per operator has been calculated with the distribution of peak and off-peak traffic.

Average MTR per country have been obtained by weighting the average MTR of each operator by its market share, measured in terms of subscribers. Two general averages at the European level have been calculated: a simple average and a weighted average, the latter weights each country's average with the share of the country's subscribers (total subscribers per country / total European subscribers). In the case of the European weighted average, only the countries that reported the number of subscribers are taken into account.

For non-Euro countries, the average exchange rate for the second quarter of the year, Q2 2013, was used for the calculation of MTR.²

¹ The formula is (fixed set-up charge + price per minute 3)/3.

Given that the assumed length of an average call is three minutes, in case mobile operators charged the first minute or 30 seconds, the mobile termination rate would be obtained in the same way as in the case where there is no set-up charge.

² For IS: Exchange rate is the average of the average exchange rates for 10/2013, 11/2013 and 12/2013 as listed by the Central Bank of Iceland since the European Central Bank has not listed the ISK since late 2008. Exchange rates reported in the Annex.

Country	Average MTR per country (€cent)				
Country	Peak	Off-peak	Total		
AT	0.8049	0.8049	0.8049		
BE	1.1800	1.1800	1.1800		
BG	1.0226	1.0226	1.0226		
СН	5.9114	5.9114	5.9114		
CY	1.7326	1.7326	1.7326		
CZ	1.0128	1.0128	1.0128		
DE	1.7900	1.7900	1.7900		
DK	0.8956	0.8956	0.8956		
EE	1.2900	1.2900	1.2900		
EL	1.1890	1.1890	1.1890		
ES	1.0900	1.0900	1.0900		
FI	2.8000	2.8000	2.8000		
FR	0.8000	0.8000	0.8000		
HR	1.6810	1.6810	1.6810		
HU	2.3737	2.3737	2.3737		
IE	2.6000	2.6000	2.6000		
IS	1.0041	1.0041	1.0041		
IT	0.9800	0.9800	0.9800		
LT	1.0426	1.0426	1.0426		
LU	9.2000	7.9520	8.5760		
V	1.5652	1.5652	1.5652		
FYROM	1.9511	1.9511	1.9511		
MT	2.0700	2.0700	2.0700		
NL	1.8610	1.8610	1.8610		
NO	1.9423	1.9423	1.9423		
PL	1.0250	1.0250	1.0250		
PT	1.2700	1.2700	1.2700		
RO	3.0700	3.0700	3.0700		
RS	3.4549	3.4549	3.4549		
SE	1.0161	1.0161	1.0161		
SI	3.2400	3.2400	3.2400		
SK	1.2260	1.2260	1.2260		
TR	0.9510	0.9510	0.9510		
UK	1.0086	1.0086	1.0086		
Average (S)	1.9427	1.9060	1.9243		
Average (W)	1.3136	1.3136	1.3136		

TABLE 1: Average MTR per country as of January 2014 (nominal rates per
voice minute)

Note to Table 1:

Weighted Average (W) is calculated taking into account only countries providing the total number of subscribers.

TABLE 2: Average MTR per operator as of January 2014

There are a number of countries where information regarding number of subscribers and/or market share has been declared as confidential data and for this reason this report does not publish this data. Nevertheless, market shares have been taken into account for the average MTR calculations.

		Average effective prices (€cent)			Country	Markot	
Country	Operator	Peak	Off-peak	Total	Subscribers	subscribers	Share %
	A1Telekom Austria	0.8049	0.8049	0.8049	5,739,425		43.50%
AT	T-Mobile	0.8049	0.8049	0.8049	4,076,261	13 194 374	30.89%
	H3G (including Orange)	0.8049	0.8049	0.8049	3,378,688	10,104,074	25.61%
	Belgacom	1.1800	1.1800	1.1800	confidential		40.59%
BE	Mobistar	1.1800	1.1800	1.1800	confidential	confidential	28.28%
	KPN Group Belgium	1.1800	1.1800	1.1800	confidential		23.51%
	Mobiltel	1.0226	1.0226	1.0226	confidential		40.7%
BG	Cosmo Bulgaria Mobile	1.0226	1.0226	1.0226	confidential	confidential	37.2%
	BTC	1.0226	1.0226	1.0226	confidential		22.1%
	Swisscom	5.4091	5.4091	5.4091	6,407,000		61.41%
СН	Sunrise	6.7106	6.7106	6.7106	2,490,000	10,433,718	23.86%
	Orange	6.7106	6.7106	6.7106	1,536,718		14.73%
	MTN Cyprus LTd	1.7090	1.7090	1.7090	312,729		28.15%
CY	CytamobileVodafone	1.7090	1.7090	1.7090	776,321	1,110,935	69.88%
	Prime TelMobile	2.9090	2.9090	2.9090	21,885		1.97%
	T-Mobile	1.0128	1.0128	1.0128	confidential		39.14%
07	Telefónica	1.0128	1.0128	1.0128	confidential	confidential	37.34%
02	Vodafone	1.0128	1.0128	1.0128	confidential	connuentiai	23.41%
	Air Telecom	1.0128	1.0128	1.0128	confidential		0.11%
	T-Mobile	1.7900	1.7900	1.7900	38.625.000		33.52%
DE	Vodafone	1.7900	1.7900	1.7900	32.253.000	115 225 000	27.99%
DE	E-plus	1.7900	1.7900	1.7900	24.946.000	115.225.000	21.65%
	O2Telefónica	1.7900	1.7900	1.7900	19.401.000		16.84%
	TDC	0.8956	0.8956	0.8956	3,009,185		41.90%
שע	Telia	0.8956	0.8956	0.8956	1,270,694	7 4 9 4 9 6 4	17.69%
DK	Telenor	0.8956	0.8956	0.8956	1,745,492	7,101,304	24.31%
	Hi3G	0.8956	0.8956	0.8956	587,049		8.17%
	EMT	1.2900	1.2900	1.2900	865,101		42.09%
EE	Elisa	1.2900	1.2900	1.2900	655,803	2.055.234	31.91%
	Tele2	1.2900	1.2900	1.2900	534,330	_,,	26.00%
	Cosmote	1.1890	1.1890	1.1890	confidential		confidential
EL	Vodafone	1.1890	1.1890	1.1890	confidential	12,999,790	confidential
	Wind	1.1890	1.1890	1.1890	confidential		confidential
	TME	1.0900	1.0900	1.0900	16,827,700		33.54%
50	Vodafone	1.0900	1.0900	1.0900	11,810,342	F0 407 070	23.54%
ES	Orange	1.0900	1.0900	1.0900	11,021,702	50,167,372	21.97%
	Xfera	1.0900	1.0900	1.0900	3,364,036		6.71%

	DNA	2.8000	2.8000	2.8000	n.a.		n.a.
=1	Elisa	2.8000	2.8000	2.8000	n.a.	n.a.	n.a.
ГІ	TeliaSonera	2.8000	2.8000	2.8000	n.a.		n.a.
	ÅMT	2.8000	2.8000	2.8000	n.a.		n.a.
	Orange	0.8000	0.8000	0.8000	confidential		confidential
	SFR	0.8000	0.8000	0.8000	confidential		confidential
	Bouygues Telecom	0.8000	0.8000	0.8000	confidential	73,994,000	confidential
FR	Free Mobile	0.8000	0.8000	0.8000	confidential		confidential
	Lycamobile	0.8000	0.8000	0.8000	confidential		confidential
	Omea Telecom	0.8000	0.8000	0.8000	confidential		confidential
	HT	1.6810	1.6810	1.6810	2,302,625		46.88%
HR	VIPnet	1.6810	1.6810	1.6810	1,843,789	4,912,133	37.54%
	Tele2	1.6810	1.6810	1.6810	765,719		15.59%
	T-Mobile	2.3737	2.3737	2.3737	5,402,251		46.61%
HU	Telenor	2.3737	2.3737	2.3737	3,579,093	11,590,326	30.88%
	Vodafone	2.3737	2.3737	2.3737	2,608,982		22.51%
	Hutchinson 3G Ireland	2.6000	2.6000	2.6000	371,840		7.84%
	Lycamobile Ireland	2.6000	2.6000	2.6000	122,728		2.59%
IF	Meteor	2.6000	2.6000	2.6000	982,842	4,744,500	20.72%
12	Telefonica Ireland	2.6000	2.6000	2.6000	1,188,677		25.05%
	Tesco Ireland	2.6000	2.6000	2.6000	206,196		4.35%
	Vodafone Ireland	2.6000	2.6000	2.6000	1,872,217		39.46%
	Siminn	1.0041	1.0041	1.0041	126,022		35.56%
21	Vodafone	1.0041	1.0041	1.0041	98,605	35/1 301	27.82%
10	Nova	1.0041	1.0041	1.0041	113,218	337,331	31.95%
	Tal	1.0041	1.0041	1.0041	15,896		4.49%
	Telecom Italia	0.9800	0.9800	0.9800	31,220,585		34.06%
іт	Vodafone Omnitel	0.9800	0.9800	0.9800	28,460,285	91 662 572	31.05%
	Wind	0.9800	0.9800	0.9800	22,292,123	01,002,012	24.32%
	H3G	0.9800	0.9800	0.9800	9,689,579		10.57%
	Bitė Lietuva	1.0426	1.0426	1.0426	1,023,159		22.41%
LT	Tele2	1.0426	1.0426	1.0426	1,871,445	4,565,976	40.99%
	Omnitel	1.0426	1.0426	1.0426	1,584,326		34.70%
	EPT	8.8000	7.6000	8.2000	n.a.		53.00%
LU	Tango	8.8000	7.6000	8.2000	n.a.	n.a.	31.00%
	Orange	11.3000	9.8000	10.5500	n.a.		16.00%
	LMT	1.5652	1.5652	1.5652	1,802,454		47.72%
	Tele2	1.5652	1.5652	1.5652	1,063,029	2 777 050	28.14%
LV	Bite Latvija	1.5652	1.5652	1.5652	870,733	3,777,050	23.05%
	Telecom Baltija	1.5652	1.5652	1.5652	37,185		0.98%
	T Mobile Macedonia	1.9511	1.9511	1.9511	1,063,631		47.91%
FYROM	ONE TS	1.9511	1.9511	1.9511	527,928	2,219,862	23.78%
	VIP Macedonia	1.9511	1.9511	1.9511	628,303		28.30%
	Go Mobile	2.0700	2.0700	2.0700	205,684		36.07%
NT	Melita Mobile	2.0700	2.0700	2.0700	75,120	F70 407	13.17%
MI	Vodafone	2.0700	2.0700	2.0700	278,863	570,197	48.91%
	Redtouch Fone	2.0700	2.0700	2.0700	10,465		1.84%

	KPN	1.8610	1.8610	1.8610	confidential		30%-35%
NL	Vodafone	1.8610	1.8610	1.8610	confidential	19,060,000	20%-25%
	T-Mobile	1.8610	1.8610	1.8610	confidential		25%-30%
	Telenor	1.9423	1.9423	1.9423	2,913,288		49.60%
	NetCom	1.9423	1.9423	1.9423	1,403,782	E 070 E04	23.90%
NÜ	Network Norway	1.9423	1.9423	1.9423	681,333	5,873,564	11.60%
	Tele2	1.9423	1.9423	1.9423	422,897		7.20%
	T-Mobile Polska	1.0250	1.0250	1.0250	confidential		29.30%
DI	Polkomtel	1.0250	1.0250	1.0250	confidential	50 057 440	25.65%
PL	PTK Centertel	1.0250	1.0250	1.0250	confidential	53,957,418	27.60%
	P4	1.0250	1.0250	1.0250	confidential		16.10%
	TMN	1.2700	1.2700	1.2700	7,846,677		46.83%
PT	VODAFONE	1.2700	1.2700	1.2700	5,972,522	16,754,164	35.65%
	OPTIMUS	1.2700	1.2700	1.2700	2,276,059		13.59%
	Vodafone Romania	3.0700	3.0700	3.0700	6,697,770		29.23%
DO	Orange Romania	3.0700	3.0700	3.0700	9,890,451	00.014.000	43.16%
RU	Cosmote	3.0700	3.0700	3.0700	5,237,881	22,914,608	22.86%
	RCS & RDS	3.0700	3.0700	3.0700	1,088,465		4.75%
	MTS (Telekom Srbija)	3.4549	3.4549	3.4549	N/A		44.80%
RS	Telenor	3.4549	3.4549	3.4549	N/A	N/A	33.30%
	Vip mobile	3.4549	3.4549	3.4549	N/A		21.90%
	TeliaSonera	1.0161	1.0161	1.0161	4,700,000		41.04%
SE.	Tele2	1.0161	1.0161	1.0161	3,671,000	11 453 000	32.05%
JL	Telenor	1.0161	1.0161	1.0161	1,932,000	11,433,000	16.87%
	Hi3G	1.0161	1.0161	1.0161	1,150,000		10.04%
	Telekom Slovenije	3.2400	3.2400	3.2400	confidential		55.56%
<u>SI</u>	Si.mobil	3.2400	3.2400	3.2400	confidential	confidential	29.74%
51	Tušmobil	3.2400	3.2400	3.2400	confidential	conndential	12.17%
	T-2	3.2400	3.2400	3.2400	confidential		2.52%
	Orange	1.2260	1.2260	1.2260	confidential		45.48%
SK	Slovak Telekom	1.2260	1.2260	1.2260	confidential	confidential	29.96%
	Telefónica	1.2260	1.2260	1.2260	confidential		24.56%
	Turkcell	0.9079	0.9079	0.9079	35,197,641		50.53%
TR	Vodafone	0.9369	0.9369	0.9369	19,930,042	69,661,108	28.61%
	Avea	1.0749	1.0749	1.0749	14,533,425		20.86%
	Vodafone	1.0086	1.0086	1.0086	confidential		confidential
	O2	1.0086	1.0086	1.0086	confidential	confidential	confidential
	EE	1.0086	1.0086	1.0086	confidential	Sonnaennal	confidential
	H3G	1.0086	1.0086	1.0086	confidential		confidential

Notes to Table 2:

- 1. AT: Subscribers as in September 2013.
- 2. CH: Subscribers as at 31 December 2013.
- 3. **DE**: Current MTR are preliminary and still subject to Phase II investigation. Number of subscribers are for 4th quarter 2013.
- 4. EL: Data refers to active subscribers as at 31.12.2013.

- 5. IE: Subscribers at Q3 2013 (excluding dedicated broadband and M2M subscriptions). In December 2012 Vodafone issued appeal proceedings with respect to ComReg's MTR decision. The appeal was heard in the high Court in May 2013. On 17 October the Order of the High Court included a provision for a maximum weighted average MTR of 2.60 cent per minute until the final determination of the Appeal or further order. The High Court also provided a further statement of reasons for its decision to postpone any ruling on Vodafone's challenge to the validity of ComReg's choice of pure LRIC as the relevant cost standard for regulating MTRs. In addition, the High Court clarified that the maximum rate of 2.60 cent per minute referred to in its Order of 17 October 2013 applies from 1 July 2013. The High Court judgment is currently under appeal to the Supreme Court and note that the High Court refused to grant any stay on its Order of 17 October 2013 (i.e. refused to grant any stay on the application of the 2.60 cent MTR) pending the outcome of the Supreme Court appeal.
- 6. **MT**: Data at Q3 2013.
- 7. NO: Numbers of subscribers are provided as for 30.06.2013. The maximum rate was inflation-adjusted.
- 8. PL: Market shares and number of subscribers as at 31.12.2012.
- 9. **SE**: Subscribers as at 31.12.2012.

4. SMS TR

Assumptions

Regarding the number of subscribers, it must be considered that different estimation methods are used among European countries (especially in the case of pre-paid consumers).

In some countries, SMS wholesale rates are considered to be confidential information.

No countries differentiate between peak time, off-peak time and weekend hours. According to the responses received, there is no exception in Europe.

The price for SMS termination is related to each delivered domestic off-net SMS; therefore, no assumption is necessary about set-up charges or average call durations. Slovenia is the only country where "Bill & Keep" agreements are in place for traffic between all domestic operators.

There is a high degree of bilateral negotiations among operators due to the mostly unregulated environment existing for SMS TR in most European countries. In some countries, operators have bilateral contract agreements implying different rates depending on the volume of SMS sent across the two networks. These non-linear outlays imply different average rates depending on the volume of SMS exchanged. In this case, the lowest average rate expected (corresponding to the highest volume of SMS) has been considered. In some countries, different SMS TRs results for an

operator in its negotiations vis-à-vis each one of the other operators. In this case, if not differently indicated, a TR simple average is considered.

Due to the last considerations, for some countries the benchmarking proposed in this exercise may represent - with different level of accuracy - the average SMS TR effectively charged for an off-net SMS.

Country	SMS TR per country
AT	3.3100
BE	4.9600
BG	Confidential
СН	4.0425
CY	0.6100
CZ	Confidential
DE	N/A
DK	0.8044
EE	2.3105
EL	3.0000
ES	3.0303
FI	Confidential
FR	1.0000
HR	Confidential
HU	4.7070
IE	3.1700
IS	2.3572
п	3.4654
LT	0.8895
LU	4.1000
LV	2.1343
FYROM	0.8100
МТ	1.7378
NL	5.6000
NO	4.2489
PL	1.1947
PT	1.2700
RO	2.2638
RS	N/A
SE	3.3870
SI	Bill & Keep
SK	3.0000
TR	0.1590
UK	Confidential
Average (S)	2.5316
Average (W)	2.2761

TABLE 3: SMS TR per country as of January 2014 (€cents)

5. FTR

Assumptions

Some NRAs regulate distinct prices for peak and for off- peak hours³. For those countries which apply distinct rates for the peak/off-peak period, an average price has been calculated taking into account the traffic distribution between peak and off-peak time. When this distribution has not been made available, a 50/50 distribution has been assumed.

In some cases the termination rate is a two-part tariff, i.e. composed of a variable part (to be paid for each minute of a call) plus a set- up or fixed part (to be paid for each call). In other cases, termination prices consist only of the variable part. In order to obtain an homogeneous comparison of average price per minute across operators, a 3-minute average call duration has been assumed, using the standard formula: (fixed set-up charge + price per minute*3)/3.

In one country (Spain) a capacity based interconnection regime (CBI) is also implemented. Differently from the time based interconnection regime - TBI (in which one price is defined for each minute of interconnection service), in the CBI regime the price is referred to a circuit (usually of 2 Mbps of capacity). Each circuit may be used for a specific amount of minutes of voice, or narrowband IP traffic, depending on the expected demand and quality of service parameters. For those countries⁴ adopting both the TBI and the CBI regimes, given the different tariff outlays, a weighted average between the CBI and the TBI regime is provided.

Interconnection services in fixed networks are provided at different levels in the hierarchy of the incumbent's networks, called layers. Even though some peculiarities in specific countries are present, in general three main layers for interconnection are defined: i) layer 1, or local level service provision, ii) layer 2, or regional level service provision (single transit), and iii) layer 3, national level service provision (or double transit). In most cases, all three layers are regulated on the incumbent's network, either with the TBI or with the CBI regime, or both, but in some countries only a subset of these layers may be regulated.

³ Other NRAs distinguish three tariff time.

⁴ In January 2014, only the Spanish incumbent has an obligation to provide also a capacity-based interconnection regime for all of its 4 different layers.

TABLE 4: Incumbent's effective weighted interconnection rate per minute and level (€cent)

			P	rice per operate	or
Country	Operator	Layer	peak	Off-peak	Total
AT	A1 Telekom Austria	Layer 1	0.1370	0.0850	0.1110
		Layer 1	0.6187	0.3247	0.4717
BE	Belgacom	Layer 2	0.8747	0.4583	0.6665
		Layer 3	1.1213	0.5883	0.8548
BG	Bulgarian Telecommunication Company	Layer 1	0.2600	0.2600	0.2600
СН	Swisscom	Layer 2	1.0119	0.5287	0.7838
	OWISSCOM	Layer 3	0.7723	0.4175	0.6219
		Layer1(I)	0.3420	0.3420	0.3420
CY	СҮТА	Layer1(r)	0.5470	0.5470	0.5470
		Layer 2	0.6320	0.6320	0.6320
CZ	Telefónica Czech Republic,	Layer 1	1.1254	0.5627	0.8440
	a.s.	Layer 2	1.2754	0.6377	0.9566
514		Layer 1	0.0880	0.0585	0.0836
DK	TDC	Layer 2	0.0880	0.0585	0.0836
		Layer 3	0.5541	0.3396	0.5220
DE	Telekom Deutschland GmbH	Layer 1	0.3600	0.2500	0.3000
FF	Flion	Layer 1	0.8033	0.5233	0.6913
		Layer 3	1.1400	0.7300	0.9760
	OTE	Layer 1	0.2400	0.2100	0.2190
EL	OTE	Layer 2	0.4500	0.4100	0.4310
		Layer 3	0.5600	0.5600	0.3500
		Layer 2	0.6700	0.6700	0.4500
ES	TELEFONICA	Layer 3	0.9500	0.9500	0.8500
		Layer 4	0.6500	0.6500	0.6500
FI	Elisa Oyj		N/A		2.4000
FR	Orange	Layer 1	0.0510	0.0317	0.0800
		Layer 1	0.3501	0.1744	0.2891
HR	HT	Layer 2	0.5074	0.2531	0.4191
		Layer 3	0.9611	0.4812	0.7945
		Layer 1	0.1345	0.1345	0.1345
HU	Magyar Telekom	Layer 2	0.1345	0.1345	0.1345
		Layer 3	0.1345	0.1345	0.1345
		Layer 1	0.0950	0.0950	0.0982
IE	Eircom	Layer 2	0.3803	0.3301	0.5080
		Layer 3	0.7497	0.4150	0.6260
IS	Siminn	Layer 2	0.5126	0.5126	0.5126
ІТ	Telecom Italia S.n.A	Layer 2	0.1040	0.1040	0.1040
	relecont Italia S.p.A.	Layer 1	0.1040	0.1040	0.1040

LV	Lattelecom	Layer 1	0.9676	0.9676	0.9676
LT	TEO LT, AB	Layer 3	0.6111	0.6110	0.6111
	FPT	Layer 1	0.7333	0.3733	0.5533
LU		Layer 2	0.9633	0.4833	0.7233
		Layer 1	0.4715	0.4715	0.4715
FYROM	Makedonski Telekom AD	Layer 2	0.4878	0.4878	0.4878
		Layer 3	0.5853	0.5853	0.5853
МТ	GO plc	Layer 1			0.2722
NL	KPN	Layer 2	0.3020	0.3020	0.3020
NO	Telenor	Layer 1	0.3156	0.3156	0.3156
		Layer 1	0.6572	0.3298	0.4935
PL	TP SA	Layer 2	0.7823	0.3900	0.5861
		Layer 3	1.1506	0.5753	0.8630
		Layer 1	0.1026	0.1026	0.1026
PT	PTC	Layer 2	0.1411	0.1411	0.1411
		Layer 3	0.1642	0.1642	0.1642
		Layer 3	N/A	N/A	0.7300
RO	Romtelecom	Layer 2	N/A	N/A	0.6700
		Layer 1	N/A	N/A	0.5800
пе	Tolokom Schiio	Layer 3	0.8134	0.8134	0.8134
кэ	Telekom Sibija	Layer 2	0.7872	0.7872	0.7872
			0.0035	0.0035	0.0035
SE	TeliaSonera	Layer 2	0.0740	0.0743	0.0745
		Layer 1	0.1200	0.1200	0.1200
SI		Layer 2	0.5900	0.5900	0.5300
0	Telekom Slovenije	Layer 3	0.0000	0.0000	0.0000
		Layer 1	0.1234	0.1234	0.3300
SK	Slovak Telekom	Laver 2	0.1234	0.1234	0.1234
	Slovak Telekolli	Layer 3	0.1234	0.1234	0.1234
UK	BT	Layer 1	0.0416	0.0416	0.0416
		Layer 1	0.5048	0.5048	0.5048
TR	Türk Telekom	Layer 2	0.6210	0.6210	0.6210
		Layer 3	0.8135	0.8135	0.8135

Notes to Table 4:

- 1. **BG**: The coverage of layer 1 is national.
- 2. **CH**: It exists a "clause of reciprocity": tariffs of other operators have to be same as the ones of incumbent.
- 3. **CY**: CYTA uses layer 1 interconnection for local and regional coverage and layer 2 for national coverage. Alternative operators use layer 2 interconnection.
- 4. **CZ**: Hypothetic Layer 3 with national coverage can be achieved through transit of traffic between two regional Pol. However, this is not supposed to be part of fixed termination and transit prices are not regulated. Currently all OLOs active on the relevant market are interconnected only on Layer 2 (regional coverage).
- 5. **DE**: Other fixed network operators (i.e. BT Germany, Telefónica Germany, Verizon, Versatel, Vodafone et al) have symmetrical tariffs. FTR are valid from 01.12.2012 until 30.11.2014. The decision is preliminary and still subject to Phase II investigation.

- 6. EL: There is a third time interval (off-peak 2), whose respective prices for the incumbent are: 0.16 eurocent/min for 'Layer 1', 0.35 eurocent/min for 'Layer 2' and 0.45 eurocent/min for 'Layer 3'. Note also that all the termination rates presented in the table above are produced from a top down LRAIC+ methodology and were applicable from 1/1/2013 until 31/12/2013. The rates which will apply from 1/1/2014 until the end of April 2014 will also be produced by the aforementioned methodology and will be defined shortly by an EETT's Decision. Finally, from May 2014 onwards the termination rates will be produced by a BU LRAIC+ methodology and will be applicable for all fixed operators.
- 7. ES: Time based and Capacity based interconnection have been taken into account for Spain. Layer 4 of Telefonica refers to metropolitan level of interconnection (between local and single transit). It could be considered as layer 1-2, despite in this report is considered as Layer 4 for European harmonisation purposes. Only 5 big cities are interconnected at this level.
- 8. FI: Termination Rates of Elisa is 2,8 eurocent/min as of Feb 1st 2014.
- 9. FR: France Telecom's tariff structure comprises both time-based and capacity-based components. The time-based component is the weighted average between peak (66%) and off-peak (34%) tariffs while the capacity-based component is priced at a unit price of 1000 euros per E1 per year, based on an average E1 load of 2.85 million minutes per year. The total FTR is the sum of these two components.
- 10.**HU**: The termination Rate is independent from; i) the time (there's no peak/off-peak differentiation); ii) the length of the call (so called from the interconnection point).
- 11.NL: Note that these are preliminary rates set by court, awaiting final ruling.
- 12.PT: On 27 August 2013, ICP-ANACOM has approved provisional and urgent measures with immediate effect imposing new termination rates from 1 October 2013. Termination prices applied by SMP operators must be at 0.1114 EUR cents per minute, which corresponds to the average prices of the countries that have at that time notified "pure" LRIC prices to the EC. As for PTC (the incumbent), termination prices in each interconnection level (local, single and double transit), are set at a level such that its weight with the interconnection traffic at each of these levels results in the established average price of 0.1114 EUR cents per minute (resulting from the benchmark exercise) and so the maximum prices for each level are the ones presented in this table. For the remaining operators with SMP (other than PTC), in case the operator offers a pricing structure with several levels of interconnection then the applicable termination prices may not exceed the maximum prices established for the local, single and double transit charged by PTC. Otherwise, in case the operator decides to offer a simplified pricing structure with only one level of prices, the termination price may not exceed 0.1114 EUR cents per minute.
- 13.UK: From 1 Jan 2014, BT is subject to a charge control where the average price cap for the year must equal 0.035ppm. This is based on a pure BU LRIC cost model; a change from the previous LRIC+ based charge control. BT is free to set prices within this cap. BT has previously set different rates for day, evening and weekend traffic. All other operators must set rates that are fair and reasonable rates, which are presumed to be symmetric to BT. We note that BT chose to delay its price changes (from the previous rate based on LRIC+ costs) by one month to 1 Feb 2014 so that its prices will be below the regulated cap to make up the over-recovery in January 2014.

6. ANNEXES

COUNTRY ABBREVIATIONS

AT	Austria
BE	Belgium
BG	Bulgaria
СН	Switzerland
CY	Cyprus
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IS	Iceland
IT	Italy
LT	Lithuania
LV	Latvia
LU	Luxembourg
FYROM	Former Yugoslav Republic of Macedonia
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
RS	Serbia
SE	Sweden
SI	Slovenia
SK	Slovakia
TR	Turkey
UK	United Kingdom

EXCHANGE RATES⁵

COUNTRY	1 EURO
BG	1.96
СН	1.23
CZ	26.66
DK	7.46
HR	7.63
HU	297.43
IS	163.21
LT	3.45
LV	0.70
FYROM	61.51
NO	8.24
PL	4.19
RO	4.45
RS	114.33
SE	8.86
TR	2.75
UK	0.84

⁵ ECB website: http://sdw.ecb.europa.eu/browseSelection.do?DATASET=0&FREQ=A&node=2018794 For IS at http://www.cb.is/exchange-rate/.