

## MOBILE SERVICES

### STATISTICAL INFORMATION

#### 4th QUARTER 2010

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***Operational providers:***

*Vodafone Portugal - Comunicações Pessoais, SA*

*TMN - Telecomunicações Móveis Nacionais, S.A.*

*Optimus – Comunicações, S.A.*

*CTT – Correios de Portugal, S.A.*

*ZON – Tv Cabo Portugal, S.A.*

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## Preliminary notes

- In 2010 a new set of Mobile Service indicators entered into force, with the approval of ICP-ANACOM Determination of 08.07.2009. The designations and definitions of the indicators have therefore seen some alterations in relation to previously published reports, and as such a consultation of the definitions of indicators is advised; these can be found on ICP-ANACOM's website at [Página Inicial > Estatísticas > Operadores / prestadores - informação periódica a remeter à ANACOM > Questionários trimestrais por serviço > Serviços Móveis > Serviços Móveis - Deliberação de 08.07.2009, alterada pelas deliberações de 17.06.2010 e de 19.08.2010.](#)
- Due to the application of the new questionnaire, it is not always possible to make comparisons with previous periods.
- Information compiled on 11.02.2011. The quarterly information provided in this report is considered provisional until the year is closed, and as such is subject to alteration in case of revisions or updates.

## 1. Mobile stations / Active user equipment of the Mobile Service

At the end of the fourth quarter of 2010 (4Q10), there were 16.47 million active mobile stations<sup>1</sup> associated with post-paid, pre-paid and hybrid tariff plans, 2.1 percent more than in the previous quarter. Of these, around 81.9 percent saw actual use in the last month of the quarter, around 0.1 percentage points less than in 3Q10.

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<sup>1</sup> Active mobile stations are those which are eligible to use the services, while not necessarily seeing use in the period.

**Table 1- Mobile stations / Active user equipment of the Mobile Service**

4th Quarter 2010	Quarterly variation			
		%	(+/-)	%
<b>Total number of mobile stations / Active user devices of the Mobile Service connected to post-paid, pre-paid and combined/hybrid tariff plans</b>	<b>16 474</b>	<b>100.0%</b>	<b>334</b>	<b>2.1%</b>
of which saw actual use	13 489	81.9%	284	2.2%
Post-paid plans	2 563	15.6%	-4	-0.1%
of which saw actual use	1 899	14.1%	-36	-1.9%
Pre-paid plans	11 880	72.1%	277	2.4%
of which saw actual use	9 974	73.9%	261	2.7%
Combined/hybrid tariff plans	2 031	12.3%	61	3.1%
of which saw actual use	1 617	12.0%	59	3.8%

Unit: thousands of stations/user devices.

Source: ICP-ANACOM

In 4Q10, post-paid plans represented 15.6 percent of total plans, pre-paid plans represented around 72.1 percent and combined/hybrid plans around 12.3 percent. It is noted that the percentage of post paid-plans which were active but not actually used is 25.9 percent, with one operator reporting a significantly higher value. This may be due to cards/modems being counted under this category.

If cards/modems used exclusively for broadband Internet access are excluded from the total of mobile stations, the number of active mobile stations and user devices in actual use during 4Q10 is reported at 12.2 million, 292 thousand more than in 3Q10.

The table below shows the distribution by provider of active mobile stations<sup>2</sup> associated with post-paid, pre-paid and hybrid tariff plans, of the number of these stations which actually used the service and of the number of these stations excluding cards/modems.

<sup>2</sup> Active mobile stations are those which are eligible to use the services, while not necessarily seeing use in the period.

**Table 2 - Distribution by provider of active mobile stations / Active user devices with actual use and excluding cards/modems used for Internet access**

4th Quarter 2010	CTT	Optimus	TMN	Vodafone	Zon
Mobile stations / Active user devices with post-paid, pre-paid and hybrid tariff plans	0.4%	15.7%	44.1%	38.9%	0.8%
Mobile stations / Active user devices with post-paid, pre-paid and hybrid tariff plans <u>in actual use</u>	0.4%	15.7%	43.9%	39.3%	0.7%
Mobile stations / Active user devices with post-paid, pre-paid and hybrid tariff plans <b>in actual use</b> , <u>excluding cards/modems used for Internet access</u>	0.5%	14.4%	43.7%	41.1%	0.4%

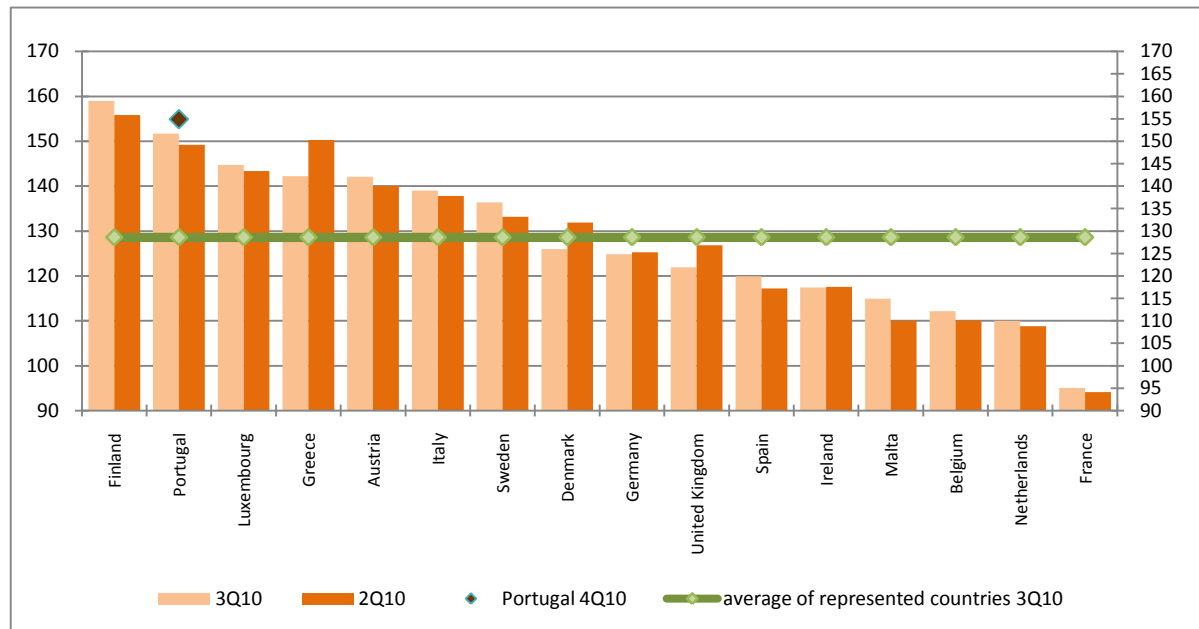
Unit: %.

Source: ICP-ANACOM

Note: It should be stressed that the definitions of the indicators used for calculation are those set out in the currently effective mobile services form (available at Página Inicial > Estatísticas > Operadores / prestadores - informação periódica a remeter à ANACOM > Questionários trimestrais por serviço > [Serviços Móveis > Serviços Móveis - Deliberação de 8.7.2009, alterada pelas deliberações de 17.06.2010 e de 19.08.2010](#). These definitions may differ from those used by the providers. It is also noted that the data given according to these indicators may have been affected by the e-iniciativas programme; as such the shares of each provider may partly reflect the different commitment assumed in the context of tenders to allocate UMTS licensing for the purpose of the promotion of the information society by each provider.

At the end of 4Q10, the penetration of this service was reported at 154.9 per 100 inhabitants. According to available information, with reference to 3Q10, the penetration rate reported in Portugal (151.7 per 100 inhabitants) remained above the EU average (128.6 per 100 inhabitants).

Graph 1 - Service penetration rate in EU27



Unit: subscribers per 100 inhabitants.

Source: ICP-ANACOM.

Note: It wasn't possible to obtain data for the countries of Eastern Europe and Cyprus in time for publication.

Interpretation of the figures given for MTS subscribers and the penetration rate should take account of the following:

- There are users who have more than one card for accessing the service. According to the latest survey conducted by ICP-ANACOM, around 20 per cent of MTS customers had more than one active card;
- There are SIM cards used exclusively for Internet access and data services;
- There are active cards used in machines, equipment and vehicles (mobile payment terminals, alarm equipment, security, telemetry and telematics, etc.)
- There are cards in corporate use.

## 2. Users of 3rd generation services

In 4Q10, the number of users eligible to use broadband services was reported at around 10.5 million. It is again noted that the introduction of new indicators means that it is not possible to present comparative values from previous periods.

The number of active users who actually use services which are characteristic of 3rd generation (i.e. video-telephony, broadband data transmission, mobile TV) totalled around 4.1 million, 8.6 percent more than in the previous quarter.

**Table 3 - Users of 3rd generation services**

4th Quarter 2010	Quarterly variation	
	(+/-)	%
Total number of broadband services (eligible)	10 496	5.1%
of which are users of 3rd generation services, active equivalent upgrades and standards (who recorded traffic in the last month of the period being reported)	4 078	8.6%
of which have connection to Internet using card/modem	1 279	-0.6%

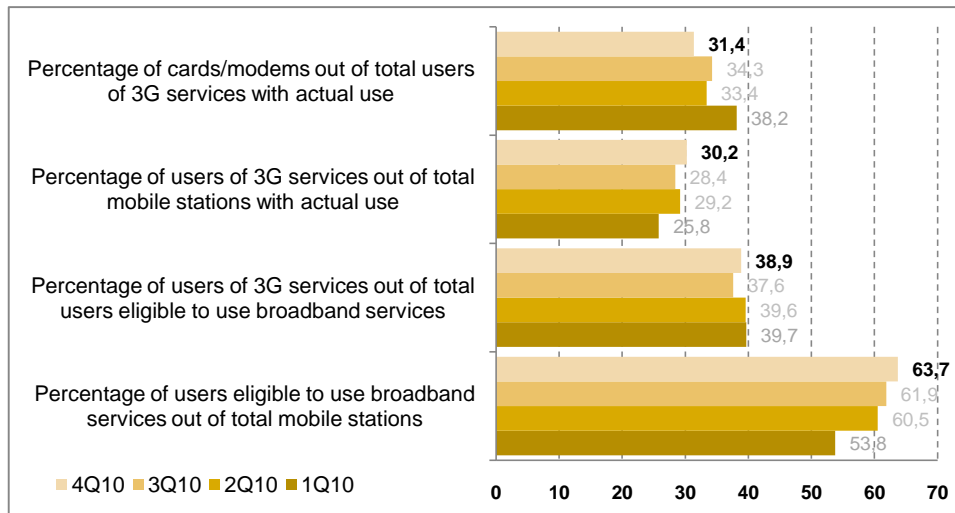
Unit: thousands of users, %.

Source: ICP-ANACOM

Users who are eligible to use broadband services (UMTS/HSPA) represent 63.7 percent of total active mobile stations, while active users constitute 30.2 percent of all mobile stations in actual use.

Of all the users of the broadband service who recorded traffic in the last month of the period being reported, around 31.4 percent are users of the broadband Internet access service using cards/modems.

Graph 2 - Penetration of UMTS and 3rd generation services



Unit: %

Source: ICP-ANACOM.

### 3. Traffic

#### 3.1. Voice

During 4Q10, over **2.25 billion calls** were made using the mobile service, 0.1 per cent less than in the previous quarter. In recent years, a drop in the number of calls has been reported in the 4th quarter compared to the 3rd quarter.

The total number of calls made is reported within the limits of the forecast range resulting from the historic trend with estimated seasonal adjustment.

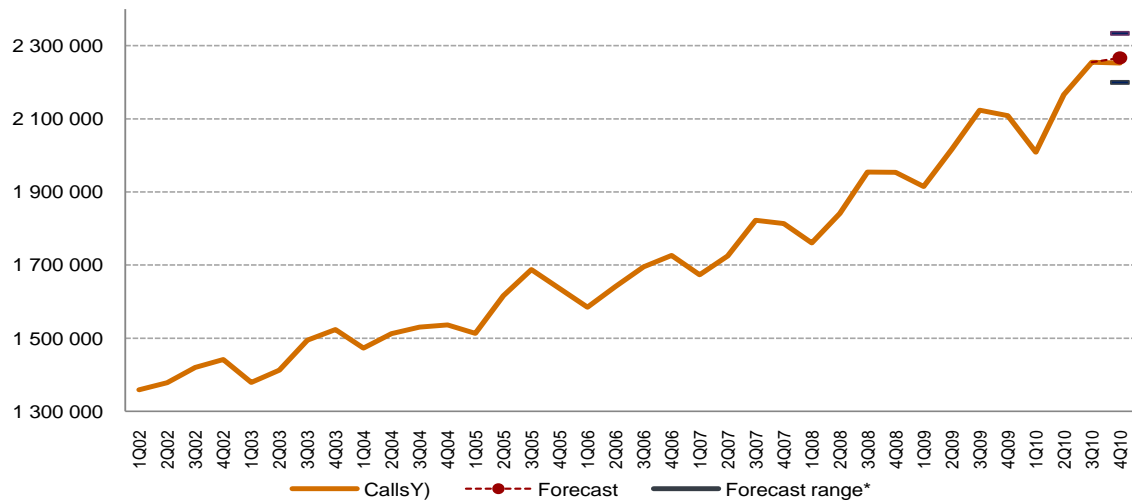
**Table 4 - Voice traffic: calls**

4th Quarter 2010		Quarterly variation		Annual variation		
		Distribution of traffic type	(+/-)	%	(+/-)	%
<b>By traffic origin</b>	<b>2 252 244</b>	<b>100.0%</b>	<b>-2 568</b>	<b>-0.1%</b>	<b>143 452</b>	<b>6.8%</b>
Own network - own network	1 596 719	70.9%	12 563	0.8%	86 028	5.7%
Own network – other national MTS	398 786	17.7%	-12 117	-2.9%	-11 700	-2.9%
Own network - national FTS	95 466	4.2%	-3 878	-3.9%	n/a	n/a
Own network – short and non-geographical numbers	109 232	4.8%	19 942	22.3%	n/a	n/a
Own network - international networks	52 040	2.3%	-19 078	-26.8%	-6 977	-11.8%
<b>By traffic termination</b>	<b>2 190 682</b>	<b>100.0%</b>	<b>8 377</b>	<b>0.4%</b>	<b>90 482</b>	<b>4.3%</b>
Own network - own network	1 596 719	72.9%	12 563	0.8%	86 028	5.7%
Other national MTS - own network	405 389	18.5%	-10 240	-2.5%	-10 646	-2.6%
National FTS - own network	106 656	4.9%	-4 645	-4.2%	n/a	n/a
Traffic terminated on short and non-geographical numbers	31 964	1.5%	21 249	198.3%	n/a	n/a
International networks - own network	49 954	2.3%	-10 550	-17.4%	-2 430	-4.6%

Unit: thousands of calls, %.

Source: ICP-ANACOM

Graph 3 - Evolution of voice call traffic



Unit: thousands of calls.

Source: ICP-ANACOM.

Notes: \* Projection range at a significance level of 95 percent

A linear regression model was used estimated with the following significant independent variables at a 95 percent confidence level: quadratic trend ( $t$  and  $t^2$ ) and seasonal dummies. The adjusted determination coefficient (adjusted  $R^2$ ) of the model is 0.987.

Compared to the fourth quarter of 2009, a rise of 6.8 percent is reported in the number of calls, significantly exceeding the increase reported in the number of active mobile stations. This growth was driven above all by the increase in on-net calls, which now represent 71 percent of originating traffic – increasing 3.7 percentage points over the period immediately preceding the introduction of plans which allow free calls to be made between subscribers.

A significant decline in international traffic occurs recurrently in the fourth quarter of each year for seasonal reasons. Compared to the fourth quarter of 2009, a significant reduction is also reported in this type of traffic, in line with previous quarters. These trends are associated with the performance of one operator in particular.

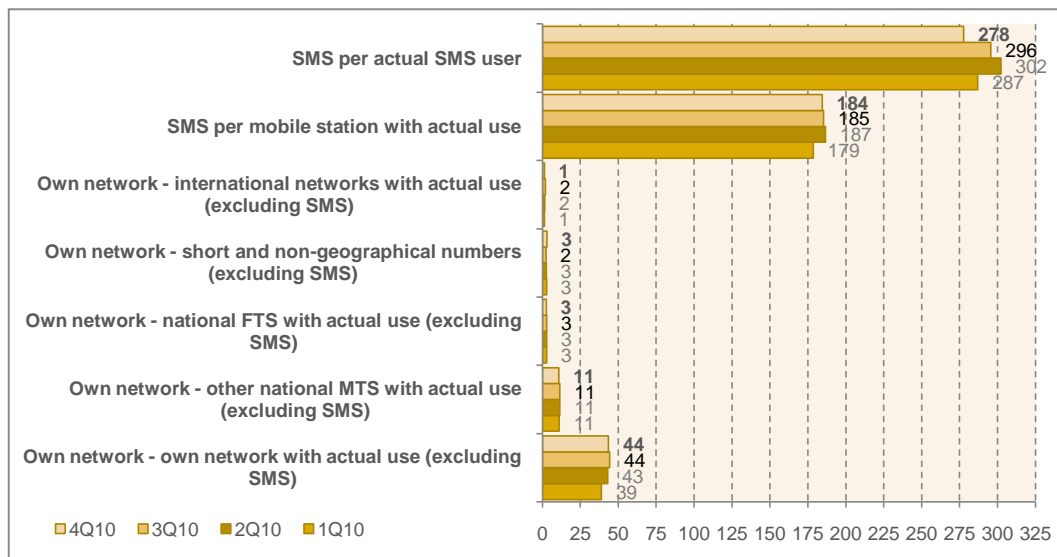
The growth in traffic associated with short and non-geographic numbers results from a correction by one operator in how this indicator is calculated, whereby the associated data series may be subject to alteration.

Over the same period, the **number of calls received** on the mobile network was 2.19 billion, a value which represents an increase of 0.4 per cent over the previous quarter and an increase of 4.3 per cent year-on-year.

Fixed-mobile traffic saw a significant fall compared to the previous quarter (-4.2 per cent), strengthening the trend evident in recent years.

In 4Q10, an average of 61 calls each month were reported per active mobile station in actual use, excluding cards used for mobile broadband Internet access. Around 44 of the calls made were made to the same operator as that used to originate the call and 11 to another provider of the same service.

**Graph 4 - Number of calls and messages per month reported per active mobile station in actual use, excluding cards used for mobile broadband Internet access**



Unit: Average number of calls and messages per month reported per active mobile station in actual use, excluding cards used for mobile broadband Internet access.

Source: ICP-ANACOM

The **number of conversation minutes originating on mobile networks** during 4Q10 totalled 5.3 billion minutes, a decline of 0.05 per cent over the previous quarter. The value reported in 4Q10 remains within the forecast range resulting from the historical trend and estimated seasonal adjustment.

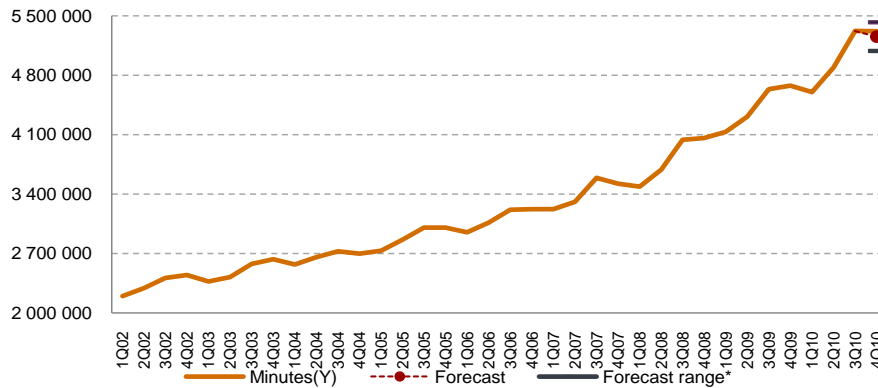
**Table 5 – Voice traffic: minutes**

4th Quarter 2010	Distribution of traffic type		Quarterly variation		Annual variation	
			(+/-)	%	(+/-)	%
<b>By traffic origin</b>	<b>5 317 478</b>	<b>100.0%</b>	<b>-2 557</b>	<b>-0.05%</b>	<b>640 802</b>	<b>13.7%</b>
Own network - own network	4 168 586	78.4%	33 071	0.8%	624 629	17.6%
Own network – other national MTS	706 796	13.3%	-24 226	-3.3%	-29 150	-4.0%
Own network - national FTS	162 839	3.1%	-7 101	-4.2%	n/a	n/a
Own network – short and non-geographical numbers	117 122	2.2%	23 051	24.5%	n/a	n/a
Own network - international networks	162 133	3.0%	-27 352	-14.4%	65	0.0%
<b>By traffic termination</b>	<b>5 305 308</b>	<b>100.0%</b>	<b>3 029</b>	<b>0.1%</b>	<b>608 223</b>	<b>12.9%</b>
Own network - own network	4 168 586	78.6%	33 071	0.8%	624 629	17.6%
Other national MTS - own network	720 753	13.6%	-18 479	-2.5%	-27 532	-3.7%
National FTS - own network	207 333	3.9%	-11 803	-5.4%	n/a	n/a
Traffic terminated on short and non-geographical numbers	46 671	0.9%	21 364	84.4%	n/a	n/a
International networks - own network	161 965	3.1%	-21 123	-11.5%	-2 382	-1.4%

Unit: thousand of minutes, %.

Source: ICP-ANACOM

Graph 5 - Evolution of voice traffic in minutes



Unit: thousand of minutes.

Source: ICP-ANACOM.

Notes: \* Projection range at a significance level of 95 percent

A linear regression model was used estimated with the following significant independent variables at a 95 percent confidence level: quadratic trend ( $t^2$ ), considering the following seasonal indices (multiplication model): Q1=0.972; Q2=0.991; Q3=1.031 and Q4=1.009. The adjusted determination coefficient (adjusted  $R^2$ ) of the model is 0.983.

Compared to the same quarter of 2009, the number of conversation minutes grew by 13.7 percent, significantly exceeding the growth rate reported in the number of active stations.

The main components and factors leading to this trend are the same as those previously outlined with regard to calls. The main factor driving this trend is the launch of plans which allow free calls to be made between subscribers. Since the launch of these plans, the weight of on-net traffic has increased by 9.3 percentage points.

It is likewise noted that the average duration of calls originating on the mobile network this quarter has continued in an upward trend, with an average reported of 142 seconds per call, around 9 seconds more than in the same period of 2009.

The **number of minutes terminated on mobile networks** totalled over 5.3 billion minutes, a 0.1 per cent increase over the previous quarter.

Compared to the same quarter of 2009, terminating traffic increased by 12.9 per cent, driven by on-net traffic. It is noted that fixed-mobile traffic declined by 5.4 per cent year-on-year, extending the trend seen in recent years.

### 3.2. SMS

During 4Q10, 6.7 billion text messages were reported. This figure is around 2 per cent more than the figure reported for the previous quarter and 5.9 percent more than in 4Q09.

**Table 6 - Text messages**

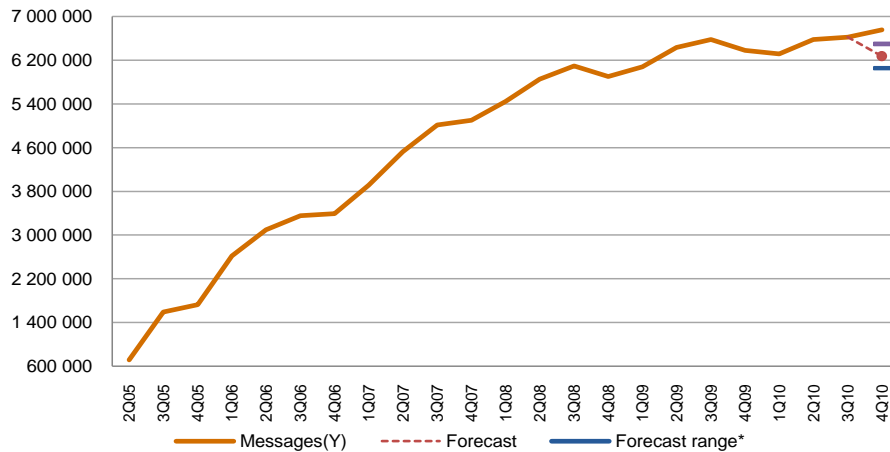
4 <sup>th</sup> Quarter 2010	Quarterly variation		Annual variation		
	(+/-)	%	(+/-)	%	
Number of originated SMS	6 756 959	131 838	2.0%	376 526	5.9%

Unit: thousands of messages.

Source: ICP-ANACOM

Over time, mobile service text message traffic has followed a rising trend which has levelled off in recent quarters. In 4Q10, a significant jump in traffic was reported (5.9 percent), possibly as a result of seasonal factors. As a result, the value corresponding to the period being reported is above the forecast range.

Graph 6 - Evolution in message traffic



Unit: thousand of messages.

Source: ICP-ANACOM.

Notes: \* Projection range at a significance level of 95 percent

A linear regression model was used estimated with the following significant independent variables at a 95 percent confidence level: quadratic trend (t and t<sup>2</sup>). The adjusted determination coefficient (adjusted R<sup>2</sup>) of the model is 0.995.

The number of value-added messages was reported exceeding 20 million, representing the equivalent of 0.3 percent of SMS volume.

The average number of messages sent per month by each subscriber was reported at 278, representing close to 9 messages per day. It should be noted that this number is higher than the figure reported in previous reports where the value corresponded to the average number of SMS per MTS user. On average, the number of users of the text message service comprises around 66 percent of the total number of mobile stations in actual use, excluding Internet access cards.

### 3.3. MMS

In 4Q10, users of the mobile service sent around 34 million MMS messages, 1.6 per cent less than in the previous period. Year-on-year the number of multimedia message sent by users of this service grew by 40.2 per cent.

**Table 7 - Multimedia messages**

4th Quarter 2010	Quarterly variation		Annual variation		
	(+/-)	%	(+/-)	%	
Number of originated MMS	34 043	-434	-1.3%	9 765	40.2%

Unit: thousands of sessions via APN MMS.

Source: ICP-ANACOM

While the rate of growth is high, the absolute values reported for the traffic of this service are relatively low.

Each user sent an average of 6 multimedia messages per month this quarter; however the number of users using the service represents just 15 percent of the total of mobile stations with actual use, excluding cards as at the end of 2010.

### 3.4. Video-calls

1.05 million video-calls were made during 4Q10, 21.5 per cent more than in the previous quarter. The conversation time associated with these calls also increased, by around 19.2 per cent over the previous quarter.

**Table 8 - Video-calls**

4th Quarter 2010	Unit	Quarterly variation		Annual variation		
		(+/-)	%	(+/-)	%	
Number of Video-calls	Thousands of calls	1 054	-289	-21.5%	-180	-14.6%
Volume of video-call traffic	Thousands of minutes	4 210	-1 000	-19.2%	-684	-14.0%

Unit: thousands.

Source: ICP-ANACOM

Compared to the same quarter of 2009, the number of video-calls made by users of this service rose by 14.6 per cent while the volume of minutes fell by around 14 per cent. Use of this feature, in view of its characteristics, is also dependent on the availability of

equipment, with both the maker and receiver of the call requiring equipment that is compatible with the service.

### 3.5. Mobile TV

In 4Q10, the number of users of the mobile TV service totalled just over 57.4 thousand users (1.4 percent of the total of mobile stations with actual use of 3G services). Compared to the previous quarter (3Q10), a decline is reported of around 7.1 percent in the number of users.

The mobile TV service was reported with 1.5 million sessions, which corresponds to around 9 sessions per user each month.

## 4. Roaming traffic

In the quarter being reported (4Q10) roaming in<sup>3</sup> traffic recorded a decline of 56.7 percent over the previous quarter in terms of the number of calls, 52.7 percent in terms of minutes and 64.1 percent in terms of messages.

**Table 9 - Roaming in traffic**

4 <sup>th</sup> Quarter 2010			Quarterly variation		Annual variation		
	Originated	Received	(+/-)	%	(+/-)	%	
<b>Roaming in traffic</b>							
<b>Number of calls</b>	27 394	61%	39%	-35 822	-56.7%	-290	-1.0%
<b>Number of minutes</b>	60 122	58%	42%	-67 113	-52.7%	-407	-0.7%
<b>Text messages</b>	72 977	29%	71%	-130 530	-64.1%	8 663	13.5%
<b>Average length of calls</b>	(secs)	126	141				

Unit: thousand.

Source: ICP-ANACOM

In comparison to the same quarter of the previous year, declines were reported of 1 and 0.7 per cent respectively in terms of the number of calls and minutes, and an increase of 13.5 percent in messages.

<sup>3</sup> Routed (originated and terminated) traffic in national networks by subscribers of foreign networks.

Roaming out<sup>4</sup> fell over the quarter by 17.2, 14.5 and 19.9 percent in calls, minutes and messages respectively.

(It is noted that, contrary to previous reports, since 1Q10, *roaming out* message traffic only includes text messages. The values previously published up to 4Q09 included all messages sent and received using roaming outside the country).

**Table 10 - Roaming out traffic**

4th Quarter 2010			Quarterly variation		Annual variation		
	Originated	Received	(+/-)	%	(+/-)	%	
<b>Roaming out traffic</b>							
<b>Number of calls</b>	<b>25 258</b>	48%	52%	-5 229	-17.2%	1 292	5.4%
<b>Number of minutes</b>	<b>64 848</b>	39%	61%	-10 994	-14.5%	2 618	4.2%
<b>Text messages</b>	<b>21 290</b>	n/a	n/a	-5 291	-19.9%	n/a	n/a
<b>Average call duration</b>	(secs)	124	182				

Unit: thousands.

Source: ICP-ANACOM

In comparison to the same quarter of the previous year, increases were reported in roaming out calls and minutes (5.4 and 4.2 percent respectively).

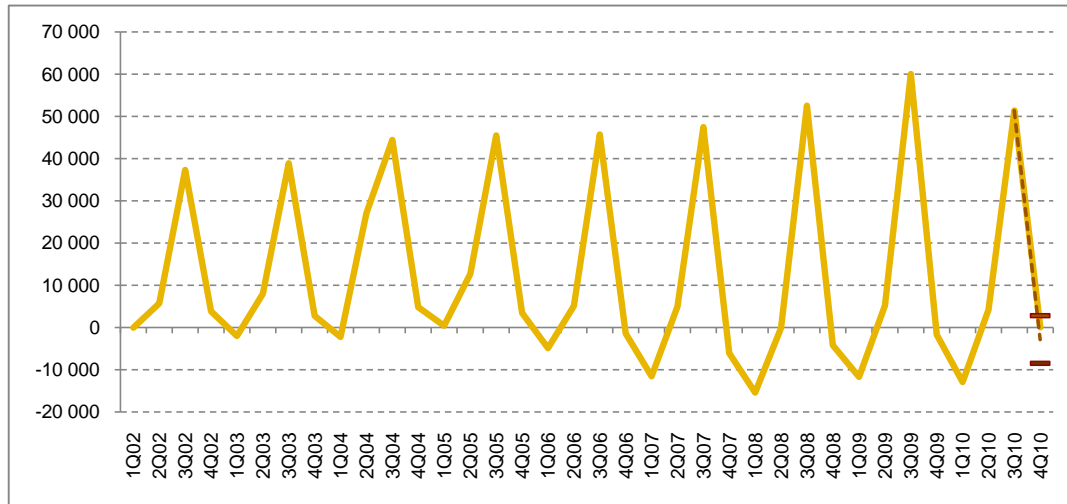
The average number of users of the international roaming service outside Portugal represents around 6.3 per cent of the total of active mobile stations in actual use.

The balance of roaming traffic (roaming in traffic – roaming out traffic) was negative this quarter in the case of traffic volume in minutes (4 million minutes; roaming in traffic is around 7.3 percent below roaming out traffic). As can be seen below, the fourth quarter is normally characterised by a deficit in this balance. In 4Q10, the deficit was less than in the previous year (4Q09).

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<sup>4</sup> Traffic generated and terminated by subscribers of national operators as users of the networks of other operators abroad.

**Graph 7 – Quarterly evolution in the balance of roaming traffic - minutes (in – out)**

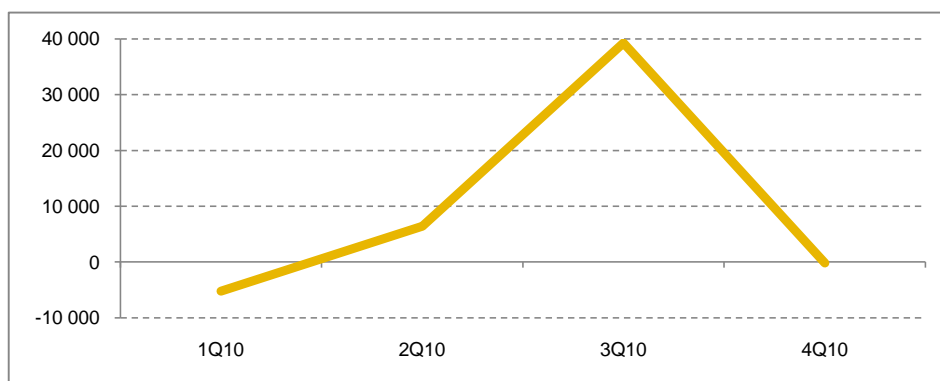


Unit: thousands of minutes.

Source: ICP-ANACOM

In the case of messages (only those sent), the balance in traffic is slightly negative (200 thousand messages, 0.9 percent less than roaming out traffic). Subscribers to national networks sent more messages when abroad than subscribers of foreign networks sent while in Portugal.

**Graph 8 - Evolution in the balance of roaming traffic - messages sent (in – out)**



Unit: thousands of messages.

Source: ICP-ANACOM

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