



Office of the Director of
**Telecommunications
Regulation**

INFORMATION NOTE

Consumer Advice on mobile roaming

-

A Consumer awareness report on mobile roaming costs for popular package holiday and short break destinations

Document No: 02/67

Date: 17th July 2002

Oifig an Stiúirthóra Rialála Teileachumarsáide

Office of the Director of Telecommunications Regulation

Abbey Court, Irish Life Centre

Lower Abbey Street, Dublin 1, Ireland

Tel. +353 1 804 9600 Fax. +353 1 804 9680 E-mail info@odtr.ie

CONTENTS

1	Introduction	3
1.1	CONSIDERATIONS WHEN READING THIS REPORT	3
2	General advice to Irish consumers	4
2.1	RANGE OF MOBILE ROAMING TARIFFS AVAILABLE.....	4
2.2	TYPES OF TARIFFS AVAILABLE.....	6
2.3	GENERAL OPTIONS FOR REDUCING THE COST OF MOBILE ROAMING	6
3	Costs for Irish consumers roaming	9
3.1	OVERVIEW OF PROFILES	9
3.2	SUMMARY OF PROFILE RESULTS	9
3.3	PROFILE 1: IRISH CUSTOMER TAKING A TWO WEEK HOLIDAY ABROAD	11
3.3.1	<i>Summary of Advice for Profile 1</i>	11
3.4	PROFILE 2: IRISH CONSUMER TAKING A SHORT WEEKEND BREAK	12
3.4.1	<i>Summary of Advice for Profile 2</i>	12
	Annex A: Detailed analysis of the cost for Irish consumers	13
	Annex B: Irish operator tariff data for each destination	22

LEGAL DISCLAIMER

The information and statistics contained within this document are derived from a variety of sources. While all reasonable care has been taken in preparing it, no responsibility whatsoever is accepted by the Director of Telecommunications, her lawful servants or agents for any loss or damage, howsoever caused, through any reliance whatsoever placed upon any statement or any calculation howsoever made in this document.

Foreword by the Director

In April of this year, the ODTR and the UK telecoms regulator, Ofcom, released results of research into consumer awareness of mobile roaming between Ireland and the UK. The report generally indicated that awareness of mobile roaming charges and the options available to reduce costs were low. For example, 43% of mobile roaming consumers did not know the cost of using their mobile phone abroad. The report was very well received by consumers and industry and the level of response indicates the importance of consumers having access to reliable and up-to-date information.

Building on the work published in the UK roaming report, the ODTR has conducted some further study into mobile roaming prices charged by operators to consumers when travelling in other EU countries. July to September is generally the peak period for holiday travel and this latest report focuses on advice to consumers for controlling costs when travelling to a selection of popular European destinations. Using typical consumer profiles potential savings are evident in all the destinations featured – France, Spain, the Netherlands, Portugal and Greece such as:

- Savings of over 50% were possible in each destination for both consumer profiles when switching from a pre-pay to a post-pay service
- When manually selecting mobile networks the profiled consumers could save anywhere up to 53% depending on the travel destination and the network selected.

I expect that this latest publication will further raise consumer awareness of mobile roaming costs and the means by which consumers can reduce them.

The findings of this report are based upon a snapshot of operator tariffs collected in June 2002. Operator tariffs change from time to time and consumers are advised to always contact their mobile operator in order to obtain the current mobile roaming tariffs before travelling. This report gives generic advice that can be used by consumers to make savings on their international roaming costs.

The ODTR will continue to examine ways of enabling consumers to make informed choices in the market and I look forward to working with the industry to bring further benefits to consumers in the near future.

Etain Doyle,

Director of Telecommunications Regulation.

1 Introduction

A convenient feature of a mobile phone is the ability to remain in contact when travelling abroad. Mobile operators refer to this service as international roaming. Naturally this convenience comes at a cost to the consumer, however there are options available to the consumer for reducing costs when using their phone abroad.

The objective of this report on international mobile roaming is to raise consumer awareness on a range of options for reducing mobile roaming costs while abroad. The report focuses on a number of popular European destinations:

- France
- Spain
- Netherlands
- Portugal
- Greece

These destinations were selected due to their popularity with Irish travellers as package holiday and short break destinations.

1.1 Considerations when reading this report

In reading this report and, in evaluating options while roaming in the destinations listed, consumers should be aware that:

- Operator prices fluctuate - this report is based on operator submitted tariffs, valid as at June 2002. Consumers should contact their Irish mobile operator for up to date mobile roaming tariffs or details of any special offers prior to travel.
- Individual mobile phone usage will vary and this should also be taken into account when assessing costs and cost reduction options.

In addition, this report gives indicative advice to consumers based upon mobile roaming tariffs. In practice, consumers should take other relevant factors into consideration:

- network coverage.
- quality of customer service from chosen network.
- access to, and cost of, additional services – voicemail, data, SMS etc.
- duration of contractual agreement with chosen network.

2 General advice to Irish consumers

The purpose of this chapter is to provide specific advice to Irish consumers using their mobile phones while visiting the European destinations referred to earlier.

2.1 Range of mobile roaming tariffs available

Fundamentally the best advice that can be given to consumers is to be aware of all mobile roaming tariffs that apply on each mobile network for their chosen destination. The tables (2.1) below outline the range of tariffs available to pre-pay and post-pay Irish mobile consumers when roaming in the destinations featured. All tariffs listed are at peak rate.

Table 2.1(a): Range of tariffs available to Irish consumers roaming in France

Range of tariffs available to Irish consumers roaming in France (including VAT at 21%)				
	Receiving calls while roaming (per min) in France	Calls made to fixed numbers (per min) in France	Calls back to fixed numbers Ireland(per min) from France	Cost of Sending SMS messages [▽]
Pre-pay	€0.70 - €1.60	€0.80 – €1.90	€1.20 - €1.90	€0.09 - €0.65
Post pay – standard	€0.63 - €0.76	€0.80 – €0.86	€0.80 - €1.29	€0.09 – €0.41
Post-pay – standard & ITS	€0.61 - €0.76	€0.80 – €1.21	€0.97 - €1.29	€0.09 - €0.41

Table 2.1(b): Range of tariffs available to Irish consumers roaming in Spain

Range of tariffs available to Irish consumers roaming in Spain (including VAT at 21%)				
	Receiving calls while roaming (per min) in Spain	Calls made to fixed numbers (per min) in Spain	Calls back to fixed numbers Ireland(per min) from Spain	Cost of Sending SMS messages [▽]
Pre-pay	€0.70 - €1.60	€0.83 - €1.90	€1.20 - €1.90	€0.09 - €0.65
Post pay – standard	€0.70 - €0.85	€0.67 - €1.16	€0.83 - €1.38	€0.09 - €0.58
Post-pay – standard & ITS	€0.61 - €0.85	€0.67 - €1.21	€0.83 - €1.38	€0.09 - €0.58

Note: The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.

[▽] Operators do not currently charge for receiving SMS messages in any of the destinations featured

Table 2.1(c): Range of tariffs available to Irish consumers in the Netherlands

Range of tariffs available to Irish consumers roaming in the Netherlands (including VAT at 21%)				
	Receiving calls while roaming (per min) in Netherlands	Calls made to fixed numbers (per min) in Netherlands	Calls back to fixed numbers Ireland(per min) from Netherlands	Cost of Sending SMS messages [▼]
Pre-pay	€0.70 - €1.60	€0.63 - €1.90	€0.82 - €1.90	€0.09 - €0.65
Post pay – standard	€0.63 - €0.76	€0.63 - €0.87	€0.82 - €1.75	€0.09 - €0.53
Post-pay – standard & ITS	€0.61 - €0.76	€0.63 - €1.21	€0.82 - €1.75	€0.09 - €0.53

Table 2.1(d): Range of tariffs available to Irish consumers in Portugal

Range of tariffs available to Irish consumers roaming in Portugal (including VAT at 21%)				
	Receiving calls while roaming (per min) in Portugal	Calls made to fixed numbers (per min) in Portugal	Calls back to fixed numbers Ireland(per min) from Portugal	Cost of Sending SMS messages [▼]
Pre-pay	€0.70 - €1.27	€0.42 - €1.90	€0.90 - €1.90	€0.09 - €0.65
Post pay – standard	€0.70 - €0.85	€0.42 - €1.25	€0.90 - €1.39	€0.09 - €0.50
Post-pay – standard & ITS	€0.61 - €0.85	€0.42 - €1.25	€0.90 - €1.39	€0.09 - €0.50

Table 2.1(e): Range of tariffs available to Irish consumers roaming in Greece

Range of tariffs available to Irish consumers roaming in Greece (including VAT at 21%)				
	Receiving calls while roaming (per min) in Greece	Calls made to fixed numbers (per min) in Greece	Calls back to fixed numbers Ireland(per min) from Greece	Cost of Sending SMS messages [▼]
Pre-pay	€0.70 - €1.60	€0.28 - €1.90	€0.42 - €1.90	€0.09 - €0.65
Post pay – standard	€0.63 - €0.85	€0.28 - €0.56	€0.42 - €0.90	€0.09 - €0.36
Post-pay – standard & ITS	€0.61 - €0.85	€0.28 - €1.21	€0.42 - €1.21	€0.09 - €0.36

2.2 Types of tariffs available

Roaming tariff options available to Irish consumers vary. Annex B contains detailed tariff data for Irish operators for each destination. Some general features of these options are:

- There is a cost to receive voice calls while roaming.
- There is no cost to receive SMS in any of the destinations listed.
- The cost per minute of making calls in each destination may vary according to which network is used. There are 3 main models:
 - tariff varies by visited operator
 - flat rate tariffs across all operators; or
 - "partner schemes" where there are lower charges for the partner network.
- An operator may require a deposit before roaming is enabled.
- Certain calls may incur a call set-up charge. In this report certain Spanish networks charge an additional call setup charge when making calls. See Annex B for details on call setup charges.
- There may be a fixed monthly charge (generally only if an International Traveller Service (ITS) is chosen).

2.3 General options for reducing the cost of mobile roaming

There are a number of options available to consumers for reducing the cost of international roaming as outlined below. While this section gives indicative advice, consumers should check these options with their mobile operator before making decisions regarding their mobile service.

Furthermore in considering some of the options below, consumers should be aware that the potential to reduce mobile roaming costs will depend on their individual usage patterns.

- **Contact your operator for an update before travelling:** Operators will provide the consumer with the most up to date tariff data before travelling. Another benefit when contacting the operator is that the consumer may be informed of any special offers available that can help reduce the cost of mobile roaming.
- **Change from pre-pay to a post-pay service:** In general roaming tariffs on post-pay (contract) services are significantly lower than tariffs available to pre-pay consumers. However, consumers should consider the long-term cost of a post-pay contract before switching from pre-pay. General considerations for consumers include:

- level of domestic mobile usage;
- willingness to contract for a minimum period;
- the charge for monthly access and any inclusive airtime/ minutes;
- there may be a requirement to change mobile number.
- **Diverting and barring incoming calls:** Barring or diverting¹ mobile calls can reduce international roaming costs as, for all destinations listed, there is a charge for receiving mobile calls when abroad.
 - A mobile user can divert incoming calls directly to voicemail or another number in Ireland rather than receiving calls (and paying for each call received) while roaming. The user can then make one call back to check messages received and decide which messages require attention.
 - A mobile user may also bar incoming calls completely. This may suit mobile users who only make outgoing calls.
- **Use text messages (SMS) instead of voice calls:** Sending text messages rather than making voice calls may be a cheaper option depending on the operator's rates. See Annex B for mobile roaming rates for featured destinations.

Furthermore, Irish mobile operators do not currently charge for receiving text messages in any of the featured destinations, so roamers may avoid the cost associated with receiving incoming calls by receiving text messages in their place.

- **Manually select a network to roam on:** When arriving at their destination a consumer's mobile phone may select a preferred network or one with the strongest signal. However, this may not necessarily be the cheapest option. Consumers can manually² choose the network they wish to use in order to select the network operator that reduces their roaming costs, see Annex B for mobile roaming rates for featured destinations.
- **Use International Traveller Services (ITS):** Some Irish operators may offer an International traveller service (ITS) when roaming abroad. In general, this is offered on an overseas partner network. (For the destinations featured, Vodafone offer an ITS service)
- **Avail of cheaper off-peak tariffs:** Off-peak rates can be significantly cheaper than peak rates when roaming abroad. See Annex B for mobile roaming rates in each destination. The times for off-peak will vary across

¹ Consumers should note that in some instances an additional charge may apply for call diversion.

² Most phones have a manual network selection feature that lists the available roaming networks. The handset user guide should inform the consumer how to manually select a network.

networks and some operators charge peak rate on Saturday so care should be given to network selection.

- **Swap the "SIM card" in your phone:** Functionality in the SIM (Subscriber Identity Module) card allows a mobile phone to operate on a mobile network. By using the SIM card of a foreign mobile network, the consumer may cut their bill significantly as they now avail of that foreign operator rates for making and receiving calls. In general this option may not suit the holidaymaker (in particular the weekend traveller) unless usage is extremely high. However consumers should take the following into consideration.
 - Do the alternative SIM cards have expiry dates?
 - Does the Irish operator need to unlock the handset first, and if so, is there any additional cost associated with this?
 - Are the contact numbers needed abroad stored in the mobile phone memory or the SIM card memory? By storing numbers on the phone memory those numbers will still be available regardless of SIM changes.
 - When using a foreign SIM the consumer will need to change to a different mobile number. The cost may then increase to consumers calling this number from Ireland. This option may only suit consumers with higher mobile roaming usage.
- **Other Options:** Consumers could consider buying or renting a different mobile phone to use while abroad or using payphones for making calls.

3 Costs for Irish consumers roaming

This chapter examines the cost of mobile roaming for a typical holidaymaker using a snapshot of tariff data provided in June 2002. For each profile the impact on cost to the consumer is assessed under some of the options listed in chapter 2. A more detailed analysis of costs on each profile is outlined in Annex A of this report.

3.1 Overview of Profiles

As already stated the operator tariff data used in this report was current as of June 2002 and is available in Annex B of this report. Consumers should be aware that mobile roaming tariffs change on a regular basis and therefore should **contact their operator** for an update on roaming tariffs before visiting any of the destinations listed.

The following profiles have been used:

- **Profile 1:** an Irish consumer taking a two week holiday in each destination.
- **Profile 2:** an Irish consumer taking a weekend break in a number of popular European destinations.

3.2 Summary of Profile Results

Table 3.1 presents a summary of the potential savings on international roaming costs for consumer profiles 1 and 2, when switching from a pre-pay to a post-pay contract or by manually selecting the least expensive network in the destinations featured.

These savings have been calculated using operator tariff data that was current as of June 2002 and more detailed calculations on these rates can be found in Annex A of this report.

However, consumers should be aware that these potential savings may have changed due to operators changing their international roaming tariffs and therefore **consumers should contact their operator for up to date tariff data.**

Table 3.1 Summary of potential savings across profiles 1 and 2.

		Profile 1		Profile 2	
		2 week holiday		Weekend break	
		Changing From pre-pay to post -pay	Manually Selecting the least expensive network on post pay	Changing From pre-pay to post -pay	Manually Selecting the least expensive network on post pay
France	O2	61% to 65%	9%	71% to 75%	15%
	Meteor	See Note Below	26%	*	10%
	Vodafone	41% to 59% ♦	30%	55% to 64% ♦	19%
Spain▪	O2	62% to 63%	3%	69% to 75%	19%
	Meteor	*	3%	*	7%
	Vodafone	42% to 44%♦	3%	52% to 60% ♦	17%
The Netherlands	O2	48% to 72%	46%	60% to 80%	51%
	Meteor	*	30%	*	31%
	Vodafone	18% to 57% ♦	48%	35% to 68% ♦	52%
Portugal	O2	39% to 52%	22%	39% to 67%	46%
	Meteor	*	29%	*	53%
	Vodafone	7% to 27% ♦	22%	8% to 49% ♦	45%
Greece	O2	60% to 63%	8%	71% to 74%	10%
	Meteor	*	39%	*	35%
	Vodafone	37% to 44%♦	8%	53% to 58%♦	10%

These % savings apply to a wide range of different roaming rates. For example, a 50% reduction on a €1 roaming rate (50c) still leaves the customer paying more than a 25% reduction on a 60c roaming rate (45c).

* Meteor offers the same rates to pre and post pay customers and for these particular profiles offers the cheapest rates for pre-pay customers. For post-pay customers, the cheapest destination for the profiles used varies across all operators.

▪ The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.

♦ Vodafone savings when moving from pre-pay to post pay are listed for those pre-pay customers using the Vodafone partner network when roaming. Prepay customers using an alternative to the Vodafone partner network will pay more when making certain roaming calls and therefore the level of saving will increase when switching to post-pay.

Other methods may also reduce costs:

- Bar or divert incoming calls
- Use text messages (SMS) instead of voice calls – receiving an SMS in all featured destinations is free of charge
- Use a payphone, if cheaper, for outgoing calls
- The operator may offer an International Traveller Service or have a special offer for certain destinations
- Buying a SIM card in the destination country – this may only be cost effective for heavy usage consumers.

3.3 Profile 1: Irish customer taking a two week holiday abroad

For this profile the assumed mobile phone usage pattern is:

- Makes 15 minutes of off-peak calls back to Ireland (fixed lines)
- Makes 3 minutes of off-peak calls to fixed lines within the destination country
- Receives 6 minutes of off-peak calls while roaming

3.3.1 Summary of Advice for Profile 1

The best advice to a consumer with usage similar to the profile 1 consumer is to contact your operator for up to date charges before travelling and request your operator to outline ways of minimising those costs.

With the exception of Meteor pre-pay customers, profile 1 consumers can reduce costs by switching to post-pay for all destinations. However, the saving available varies depending on the destination. As most profile 1 consumers are only travelling to these destinations on a once off holiday, special consideration should be given to the long term costs of switching from pre-pay to a post pay contract.

Profile 1 post pay customers on Post-pay with O2 and Vodafone, (and pre-pay customers with Meteor) can make savings by selecting the least expensive network in each destination *eg: up to a 30% saving in France 48% in the Netherlands, 29% in Portugal and up to 39% in Greece.* A point to note regarding Spain is that an additional consideration for the post pay customer is a once off call-set up charge which may apply to each call made on a Spanish network. This charge has not been included in the profile 1 calculation. These call set up charges are listed with operator tariff data in Annex B of this document.

Both pre-pay and post pay profile 1 customers can make savings by replacing certain calls with a text message and by controlling incoming calls using call barring and call diversion.

There is an International Traveller Service available from Vodafone however for the profiles used no saving was found. The calculations for the profile 1 consumer using an ITS are listed in Annex A of this document.

3.4 Profile 2: Irish consumer taking a short weekend break

For this profile the assumed mobile phone usage pattern is:

- Makes 1.5 minutes of off-peak calls back to Ireland (fixed lines)
- Makes 7.5 minutes of off-peak calls to fixed lines in the destination country
- Receives 3 minutes of off-peak calls while roaming

3.4.1 Summary of Advice for Profile 2

The best advice to a consumer with usage similar to the profile 2 consumer is again to contact your operator for up to date charges before travelling.

With the exception of Meteor pre-pay customers, profile 2 consumers can reduce costs by switching to post-pay for all destinations. As the profile 2 consumer is only on a short break and is making fewer calls than the profile 1 consumer the long term costs of switching from pre-pay to post-pay may not be justified by the amount saved when roaming.

Profile 2 post pay customers on post-pay (and pre-pay customers with Meteor) can make savings by selecting the least expensive network in each destination *eg: up to a 19% saving in France, 52% in the Netherlands, 46% in Portugal, 35% in Greece and up to 19% in Spain.* As outlined in profile 1 a call-set up charge may apply for each call made on a Spanish network.

Both pre-pay and post pay profile 2 customers can make savings by replacing certain calls with a text message and by controlling incoming calls using call barring and call diversion.

There is an International Traveller Service available from Vodafone. However no saving was found for the profiles used. The calculations for the profile 2 consumer using an ITS are listed in Annex A of this document.

Annex A: Detailed analysis of the cost for Irish consumers

This Annex examines the potential international roaming cost savings for an Irish consumer roaming in a number of European destinations

Profile 1: Irish customer taking a two week holiday

For this profile the assumed mobile phone usage pattern is:

- Makes 15 minutes of off-peak calls back to Ireland (fixed lines)
- Makes 3 minutes of off-peak calls to fixed lines in featured destinations
- Receives 6 minutes of off-peak calls while roaming

Overall cost for profile 1 consumer : The overall cost for the profile 1 consumer is shown in Table A1 and has been calculated using operator tariff data that was current as of June 2002 as outlined in Annex B.

Table A1: Overall Cost for Profile 1 consumer

Country	Network	O ₂		Meteor		Vodafone	
		Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay
France	Bouygues	€41.82	€14.73	€23.40	€23.40	€38.40	€11.83
	FranceTelecom		€16.08	€23.70	€23.70		€17.02
	SFR		€16.11	€17.40	€17.40	€28.80	€17.02
Spain [▪]	Airtel Vodafone	€41.82	€15.96	€25.41	€25.41	€28.80	€16.70
	Telefonica	NA	€15.45	€25.26	€25.26	€38.40	€16.23
	Amena		€15.54	€24.57	€24.57		€16.41
The Netherlands	Ben Nederland BV	NA	€16.59	€17.91	€17.91	€38.40	€17.46
	Dutchtone NV		€21.63	NA	NA		€23.71
	Libertel Vodafone	€41.82	€20.13	NA	NA	€28.80	€13.72
	PTT Telecom/ KPN	NA	€15.78	€12.60	€12.60	€38.40	€12.27
	O2 (Telfort)		€11.73	€12.60	€12.60		€12.63
Portugal	Optimus	NA	€25.68	€26.52	€26.52	NA	€26.75
	Telecel Vodafone	€41.82	€20.01	€19.83	€19.83	€28.80	€20.95
	TMN		€25.47	€18.96	€18.96	NA	€26.28
Greece	Panafon Vodafone	€41.82	€16.71	€11.10	€11.10	€28.80	€18.04
	Stet Hellas	NA	€15.45	€16.62	€16.62	€38.40	€16.55
	Cosmote		NA	€18.21	€17.10		€18.04

▪ The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.

Table A1 indicates that the cost of mobile roaming costs for a profile 1 consumer can vary significantly depending upon:

- The home network operator of the Irish consumer
- The type of contract/service that the consumer has with its network operator (pre-pay, post-pay or post-pay International Traveller Service)
- The travel destination
- The network that the consumer selects when roaming in a particular destination

International Traveller Service (ITS) : Vodafone offer an ITS for all destinations above however no saving on mobile roaming costs was found for the profile 1 consumer using an ITS . For profile 1 consumers the ITS would cost €27.17 when using the Vodafone partner network and up to €31.49 when using other non-partner mobile networks in each country. This calculation applies to all destinations in this report and also includes a monthly access fee of €6.05 per month.

Potential consumer savings by changing contract/service with operator

For each featured destination Table A2 below shows the potential international roaming savings that a profile 1 consumer can make by changing their contract /service with their network operator from a pre-pay service to a post-pay contract. Apart from the costs of international roaming, there are further considerations which consumers should take into account when deciding upon the appropriate contract/service. These have been outlined in section 2.3 of this report.

Table A2: Potential consumer savings by changing contract/service with network operator – Profile 1

Destination	Network Operator	Potential Saving (€)	Potential Saving (%)
France	O2	€25.71 to €27.09	61% to 65%
	Meteor	*	-
	Vodafone♦	€11.78 to €16.97	41% to 59%
Spain	O2	€25.86 to €26.37	62% to 63%
	Meteor	*	-
	Vodafone♦	€12.10 to €12.57	42% to 44%
The Netherlands	O2	€20.19 to €30.09	48% to 72%
	Meteor	*	-
	Vodafone♦	€5.09 to €16.53	18% to 57%
Portugal	O2	€16.14 to €21.81	39% to 52%
	Meteor	*	-
	Vodafone♦	€2.05 to €7.85	7% to 27%
Greece	O2	€25.11 to €26.37	60% to 63%
	Meteor	*	-
	Vodafone♦	€10.76 to €12.25	37% to 43%

** Meteor offers the same rates to pre and post pay customers and for these particular profiles offers the cheapest rates for pre-pay customers. For post-pay customers, the cheapest destination for the profiles used varies across all operators.*

♦ Vodafone savings when moving from pre-pay to post pay are listed for those pre-pay customers using the Vodafone partner network when roaming. Prepay customers using an alternative to the Vodafone partner network will pay more on certain roaming calls and therefore the level of potential saving will increase when switching to post-pay.

Potential savings by manually selecting the least expensive network

Table A3 shows the potential savings that can be made by manually selecting the least expensive European network for a profile 1 consumer on a post-pay contract (plus a pre-pay service for Meteor).

Table A3: Potential savings by manually selecting the least expensive network- Profile 1 (applies to post-pay and Meteor pre-pay customers)

Destination	Irish Operator	Cost of most Expensive Network for Profile 1	Cost of least Expensive Network for Profile 1	Potential Savings	Potential Savings
				€	€
France	O2	€16.11	€14.73	€1.38	9%
	Meteor	€23.40	€17.40	€6.00	26%
	Vodafone	€17.02	€11.83	€5.19	30%
Spain [▪]	O2	€15.96	€15.45	€0.51	3%
	Meteor	€25.41	€24.57	€0.84	3%
	Vodafone	€16.70	€16.23	€0.47	3%
The Netherlands	O2	€21.63	€11.73	€9.90	46%
	Meteor	€17.91	€12.60	€5.31	30%
	Vodafone	€23.71	€12.27	€11.44	48%
Portugal	O2	€25.68	€20.01	€5.67	22%
	Meteor	€26.52	€18.96	€7.56	29%
	Vodafone	€26.75	€20.95	€5.81	22%
Greece	O2	€16.71	€15.45	€1.26	8%
	Meteor	€18.21	€11.10	€7.11	39%
	Vodafone	€18.04	€16.55	€1.49	8%

▪ The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.

Profile 2: Irish resident taking a short weekend break

For this profile the assumed mobile phone usage pattern is:

- Makes 1.5 minutes of off-peak calls back to Ireland (fixed lines)
- Makes 7.5 minutes of off-peak calls to fixed lines in the destination country
- Receives 3 minutes of off-peak calls while roaming

Overall cost for profile 2 consumer : The overall cost for the profile 2 consumer is shown in Table A4 and has been calculated using operator tariff data that was current as of June 2002 as outlined in Annex B.

Table A4: Overall Cost for Profile 2 consumer

Country	Network	O ₂		Meteor		Vodafone	
		Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay
France	Bouygues	€20.91	€5.15	€6.54	€6.54	€19.20	€5.19
	FranceTelecom		€6.00	€7.29	€7.29		€6.41
	SFR		€6.08	€6.66	€6.66	€14.40	€6.41
Spain*	Airtel Vodafone	€20.91	€6.54	€9.05	€9.05	€14.40	€6.90
	Telefonica	NA	€5.27	€9.03	€9.03	€19.20	€6.17
	Amena		€5.85	€8.39	€8.39		€5.72
The Netherlands	Ben Nederland BV	NA	€6.20	€6.86	€6.86	€19.20	€6.62
	Dutchtone NV		€8.36	NA	NA		€9.40
	Libertel Vodafone	€20.91	€4.97	NA	NA	€14.40	€4.68
	PTT Telecom/ KPN	NA	€4.53	€4.74	€4.74	€19.20	€4.54
	O2 (Telfort)		€4.13	€4.74	€4.74		€4.57
Portugal	Optimus	NA	€12.84	€13.26	€13.26	NA	€13.30
	Telecel Vodafone	€20.91	€8.39	€6.26	€6.26	€14.40	€8.80
	TMN		€6.92	€6.60	€6.60	NA	€7.33
Greece	Panafon Vodafone	€20.91	€6.14	€4.23	€4.23	€14.40	€6.77
	Stet Hellas	NA	€5.51	€6.15	€6.15	€19.20	€6.10
	Cosmote		NA	€6.53	€6.53		€6.33

- *The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.*

Table A 4 indicates that the cost of mobile roaming can vary significantly depending upon:

- The home network operator of the Irish consumer
- The type of contract/service that the consumer has with its network operator (pre-pay, post-pay)
- The travel destination
- The network that the consumer selects when roaming in a particular destination

International Traveller Service (ITS): Vodafone offer an ITS for all destinations above however no saving on mobile roaming costs was found for the profile 2 consumer using an ITS. For profile 2 consumers the ITS would cost €16.61 when using the Vodafone partner network and up to €18.77 when using other non-partner mobile networks in each country. This calculation applies to all destinations in this report also includes a monthly access fee of €6.05 per month.

Potential consumer savings by changing contract/service with operator

For each featured destination Table A5 shows the potential international roaming savings that a profile 2 consumer can make by changing their contract /service with their network operator from a pre-pay service to a post-pay contract.

Apart from the costs of international roaming, there are further considerations which consumers should take into account when deciding upon the appropriate contract/service. These have been outlined in section 2 of this report.

Table A5: Potential consumer savings by changing contract/service with network operator – Profile 2

Destination	Network Operator	Potential Saving (€)	Potential Saving (%)
France	O2	€14.84 to €15.77	71% to 75%
	Meteor	*	-
	Vodafone	€7.99 to €9.21	56% to 64%
Spain	O2	€14.37 to €15.65	69% to 75%
	Meteor	*	-
	Vodafone	€7.50 to €8.68	52% to 60%
The Netherlands	O2	€12.56 to €16.79	60% to 80%
	Meteor	*	-
	Vodafone	€5.00 to €9.86	35% to 68%
Portugal	O2	€8.07 to €14.00	39% to 67%
	Meteor	*	-
	Vodafone	€1.10 to €7.07	8% to 49%
Greece	O2	€14.78 to €15.41	71% to 74%
	Meteor	*	-
	Vodafone	€7.63 to €8.30	53% to 58%

* Meteor offers the same rates to pre and post pay customers and for these particular profiles offers the cheapest rates for pre-pay customers. For post-pay customers, the cheapest destination for the profiles used varies across all operators.

◆ Vodafone savings when moving from pre-pay to post pay are listed for those pre-pay customers using the Vodafone partner network when roaming. Prepay customers using an alternative to the Vodafone partner network will pay more on certain roaming calls and therefore the level of saving will increase when switching to post-pay

Potential savings by manually selecting the least expensive network

Table A6 shows the potential savings that can be made by manually selecting the least expensive European network for a profile 2 consumer on a post-pay contract (plus a pre-pay service for Meteor).

Table A6: Potential savings by manually selecting the least expensive network - Profile 2 (applies to post-pay and Meteor pre-pay customers)

Destination	Irish Operator	Cost of most Expensive Network for Profile 2	Cost of least Expensive Network for Profile 2	Potential Savings	Potential Savings
				€	€
France	O2	€6.08	€5.15	€0.93	15%
	Meteor	€7.29	€6.54	€0.75	10%
	Vodafone	€6.41	€5.19	€1.22	19%
Spain [▪]	O2	€6.54	€5.27	€1.27	19%
	Meteor	€9.05	€8.39	€0.66	7%
	Vodafone	€6.90	€5.72	€1.18	17%
The Netherlands	O2	€8.36	€4.13	€4.23	51%
	Meteor	€6.86	€4.74	€2.12	31%
	Vodafone	€9.40	€4.54	€4.86	52%
Portugal	O2	€12.84	€6.92	€5.92	46%
	Meteor	€13.26	€6.26	€7.00	53%
	Vodafone	€13.30	€7.33	€5.97	45%
Greece	O2	€6.14	€5.51	€0.63	10%
	Meteor	€6.53	€4.23	€2.30	35%
	Vodafone	€6.77	€6.10	€0.67	10%

[▪]The post pay standard rates listed are the peak per minute rate on Spanish networks. In Spain post-pay calls (excluding ITS packages) may incur a call set up charge. These additional charges are listed in Annex B – operator tariff data.

Annex B: Irish operator tariff data for each destination

The following tables list the operator submitted tariff data (June 2002) used in this report.

FRANCE

Table B1: Roaming charges: Irish Consumer roaming in France. All charges in € and to include VAT at 21%														
operator	tariff type	tariff option	Network	Minimum Monthly Access* ITS only	Deposit	cost of receiving call € per min		cost of within country (fixed) € per min		cost of calling home (fixed) € per min		SMS costs € per message		
						peak	Off peak	Peak	Off Peak	peak	Off Peak	receiving	In Country	sending home
O2	Post	Standard	Bouygues	NA	NA	€0.63	€0.48	€0.81	€0.35	€1.21	€0.72	€0.00	€0.20	€0.20
O2	Post	Standard	France Telecom	NA	NA	€0.63	€0.48	€0.86	€0.45	€1.29	€0.79	€0.00	€0.25	€0.25
O2	Post	Standard	SFR	NA	NA	€0.63	€0.48	€0.85	€0.46	€1.29	€0.79	€0.00	€0.25	€0.25
O2	Pre	Speakeasy	SFR	NA	NA	€1.27	€1.27	€1.90	€1.90	€1.90	€1.90	€0.00	€0.44	€0.44
Meteor	Pre and post pay	Pay as you go/ Pay Later	Bouygues	NA	€60.00	€0.70	€0.70	€0.80	€0.35	€1.21	€1.21	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	France Telecom	NA	€60.00	€0.70	€0.70	€0.86	€0.45	€1.29	€1.21	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	SFR	NA	€60.00	€0.70	€0.70	€0.85	€0.45	€1.29	€0.79	€0.00	€0.09	€0.09
Vodafone	Post	Standard	Bouygues	NA	NA	€0.76	€0.62	€0.81	€0.35	€0.80	€0.47	€0.00	€0.36	€0.36
Vodafone	Post	Standard	France Telecom	NA	NA	€0.76	€0.62	€0.86	€0.45	€1.29	€0.80	€0.00	€0.41	€0.41
Vodafone	Post	Standard	SFR	NA	NA	€0.76	€0.62	€0.85	€0.45	€1.29	€0.80	€0.00	€0.41	€0.41
Vodafone	Post	ITS	SFR	€6.05	NA	€0.61	€0.61	€0.97	€0.97	€0.97	€0.97	€0.00	€0.41	€0.41
Vodafone	Post	ITS	Other Networks	€6.05	NA	€0.61	€0.61	€1.21	€1.21	€1.21	€1.21	€0.00	Bouygues&SFR Standard charges	
Vodafone	Pre	Ready 2 Go	SFR	NA	NA	€1.20	€1.20	€1.20	€1.20	€1.20	€1.20	€0.00	€0.65	
Vodafone	Pre	Ready 2 Go	Any Other Network	NA	NA	€1.60	€1.60	€1.60	€1.60	€1.60	€1.60	€0.00	€0.65	

SPAIN

Table B2 : Roaming charges: Irish Consumer roaming in Spain. All charges in € and to include VAT at 21%														
operator	tariff type	tariff option	Network	Minimum Monthly Access* ITS only	Deposit	cost of receiving call € per min		cost of within country (fixed) € per min		cost of calling home € per min		SMS costs € per message		
						peak	Off peak	Peak	Off Peak	peak	Off Peak	receiving	In Country	sending home
O2	Post	Standard	Airtel Movil	NA	NA	€0.71	€0.56	€1.00	€0.50	€0.84	€0.74	€0.00	€0.42	€0.42
O2	Post	Standard	Amena	NA	NA	€0.71	€0.56	€0.67	€0.41	€0.84	€0.73	€0.00	€0.29	€0.29
O2	Post	Standard	Telefonica	NA	NA	€0.71	€0.56	€0.75	€0.33	€0.84	€0.74	€0.00	€0.42	€0.42
O2	Pre	Speakeasy	Airtel & Telefonica	NA	NA	€1.27	€1.27	€1.90	€1.90	€1.90	€1.90	€0.00	€0.44	€0.44
Meteor	Pre and post pay	Pay as you go/ Pay Later	Airtel Vodafone	NA	€60.00	€0.70	€0.70	€1.16	€0.67	€1.38	€1.28	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	Telefonica	NA	€60.00	€0.70	€0.70	€0.92	€0.67	€1.36	€1.27	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	Amena	NA	€60.00	€0.70	€0.70	€0.83	€0.59	€1.34	€1.24	€0.00	€0.09	€0.09
Vodafone	Post	Standard	Airtel Vodafone*	NA	NA	€0.85	€0.69	€1.00	€0.50	€0.85	€0.74	€0.00	€0.58	€0.58
Vodafone	Post	Standard	Amena*	NA	NA	€0.85	€0.69	€0.68	€0.40	€0.83	€0.74	€0.00	€0.44	€0.44
Vodafone	Post	Standard	Telefonica*	NA	NA	€0.85	€0.69	€0.75	€0.34	€0.85	€0.74	€0.00	€0.58	€0.58
Vodafone	Post	ITS	Airtel Vodafone	€6.05	NA	€0.61	€0.61	€0.97	€0.97	€0.97	€0.97	€0.00	€0.58	€0.58
Vodafone	Post	ITS	Other Networks	€6.05	NA	€0.61	€0.61	€1.21	€1.21	€1.21	€1.21	€0.00	Telefonica & Amena Standard charges	
Vodafone	Pre	Ready 2 Go	Airtel Vodafone	NA	NA	€1.20	€1.20	€1.20	€1.20	€1.20	€1.20	€0.00	€0.65	
Vodafone	Pre	Ready 2 Go	All other networks	NA	NA	€1.60	€1.60	€1.60	€1.60	€1.60	€1.60	€0.00	€0.65	

Call set up charges that apply on Spanish Networks				
	o2		Vodafone	
	Domestic	International	Domestic	International
Airtel Vodafone	0.17	0.17	0.17	0.53
Amena	0.17	0.52	0.17	0.53
Telefonica	0.17	0.54	0.17	0.52

* One call set up charge applies to each call made

THE NETHERLANDS

Table B3 : Roaming charges: Irish Consumer roaming in the Netherlands. All charges in € and to include VAT at 21%														
operator	tariff type	tariff option	Network	Minimum Monthly Access* ITS only	Deposit	cost of receiving call € per min		cost of within country (fixed) € per min		cost of calling home € per min		SMS costs € per message		
						peak	Off peak	Peak	Off Peak	peak	Off Peak	receiving	In Country	sending home
O2	Post	Standard	Ben Nederland BV	NA	NA	€0.63	€0.48	€0.63	€0.47	€0.82	€0.82	€0.00	€0.38	€0.38
O2	Post	Standard	Dutchtone NV	NA	NA	€0.63	€0.48	€0.70	€0.70	€1.11	€1.11	€0.00	€0.28	€0.28
O2	Post	Standard	Libertel Vodafone	NA	NA	€0.63	€0.48	€0.83	€0.25	€1.75	€1.10	€0.00	€0.36	€0.36
O2	Post	Standard	PTT Telecom/ KPN Mobiel	NA	NA	€0.63	€0.48	€0.87	€0.25	€1.43	€0.81	€0.00	€0.32	€0.32
O2	Post	Standard	O2	NA	NA	€0.63	€0.48	€0.85	€0.25	€1.21	€0.54	€0.00	€0.38	€0.38
O2	Pre	Speakeasy	Libertel Vodafone	NA	NA	€1.27	€1.27	€1.90	€1.90	€1.90	€1.90	€0.00	€0.44	€0.44
Meteor	Pre and post pay	Pay as you go/ Pay Later	Ben Nederland BV	NA	€60.00	€0.70	€0.70	€0.63	€0.47	€0.82	€0.82	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	PTT Telecom/ KPN Mobiel	NA	€60.00	€0.70	€0.70	€0.86	€0.25	€1.43	€0.51	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	O2 (Telfort)	NA	€60.00	€0.70	€0.70	€0.86	€0.25	€1.22	€0.51	€0.00	€0.09	€0.09
Vodafone	Post	Standard	Ben Nederland BV	NA	NA	€0.76	€0.62	€0.63	€0.47	€0.82	€0.82	€0.00	€0.53	€0.53
Vodafone	Post	Standard	Dutchtone NV	NA	NA	€0.76	€0.62	€0.77	€0.77	€1.18	€1.18	€0.00	€0.43	€0.43
Vodafone	Post	Standard	Libertel Vodafone	NA	NA	€0.76	€0.62	€0.83	€0.25	€1.39	€0.62	€0.00	€0.52	€0.52
Vodafone	Post	Standard	PTT Telecom/ KPN Mobiel	NA	NA	€0.76	€0.62	€0.87	€0.25	€1.14	€0.52	€0.00	€0.47	€0.47
Vodafone	Post	Standard	O2 (Telfort)	NA	NA	€0.76	€0.62	€0.85	€0.25	€1.21	€0.54	€0.00	€0.53	€0.53
Vodafone	Post	ITS	Libertel Vodafone	€6.05	NA	€0.61	€0.61	€0.97	€0.97	€0.97	€0.97	€0.00	€0.52	€0.52
Vodafone	Post	ITS	All other networks	€6.05	NA	€0.61	€0.61	€1.21	€1.21	€1.21	€1.21	€0.00	Ben Nederland BV, Dutchtone, KPN & O2	
Vodafone	Pre	Ready 2 Go	Libertel Vodafone	NA	NA	€1.20	€1.20	€1.20	€1.20	€1.20	€1.20	€0.00	€0.65	
Vodafone	Pre	Ready 2 Go	Other Networks	NA	NA	€1.60	€1.60	€1.60	€1.60	€1.60	€1.60	€0.00	€0.65	

PORTUGAL

Table B4 : Roaming charges: Irish Consumer roaming Portugal. All charges in € and to include VAT at 21%														
operator	tariff type	tariff option	Network	Minimum Monthly Access* ITS	Deposit	cost of receiving call		cost of within		cost of calling home		SMS costs € per message		
						peak	Off peak	Peak	Off Peak	peak	Off Peak	receiving	In Country	sending home
O2	Post	Standard	Optimus	NA	NA	€0.71	€0.56	€1.24	€1.24	€1.24	€1.24	€0.00	€0.35	€0.35
O2	Post	Standard	Telecel	NA	NA	€0.71	€0.56	€0.70	€0.70	€0.97	€0.97	€0.00	€0.35	€0.35
O2	Post	Standard	TMN	NA	NA	€0.71	€0.56	€0.42	€0.42	€1.39	€1.39	€0.00	€0.28	€0.28
O2	Pre	Speakeasy	Telecel & TMN	NA	NA	€1.27	€1.27	€1.90	€1.90	€1.90	€1.90	€0.00	€0.44	€0.44
Meteor	Pre and post pay	Pay as you go/ Pay Later	Optimus	NA	€60.00	€0.70	€0.70	€1.24	€1.24	€1.24	€1.24	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	Telecel Vodafone	NA	€60.00	€0.70	€0.70	€0.70	€0.36	€0.97	€0.97	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	TMN	NA	€60.00	€0.70	€0.70	€0.42	€0.42	€0.90	€0.90	€0.00	€0.09	€0.09
Vodafone	Post	Standard	Optimus	NA	NA	€0.85	€0.69	€1.25	€1.25	€1.26	€1.26	€0.00	€0.50	€0.50
Vodafone	Post	Standard	Telecel Vodafone	NA	NA	€0.85	€0.69	€0.70	€0.70	€0.98	€0.98	€0.00	€0.50	€0.50
Vodafone	Post	Standard	TMN	NA	NA	€0.85	€0.69	€0.42	€0.42	€1.39	€1.39	€0.00	€0.43	€0.43
Vodafone	Post	ITS	Telecel Vodafone	€6.05	NA	€0.61	€0.61	€0.97	€0.97	€0.97	€0.97	€0.00	€0.50	€0.50
Vodafone	Post	ITS	TMN	€6.05	NA	€0.61	€0.61	€1.21	€1.21	€1.21	€1.21	€0.00	Optimus & TMN Standard charges	€0.50
Vodafone	Pre	Ready 2 Go	Telecel Vodafone	NA	NA	€1.20	€1.20	€1.20	€1.20	€1.20	€1.20	€0.00	€0.65	€0.65

GREECE

Table B5 : Roaming charges: Irish Consumer roaming Greece. All charges in € and to include VAT at 21%														
operator	tariff type	tariff option	Network	Minimum Monthly Access*	Deposit	cost of receiving call		cost of within		cost of calling home		SMS costs € per message		
						peak	Off peak	Peak	Off Peak	peak	Off Peak	receiving	In Country	sending home
O2	Post	Standard	Panafon	NA	NA	€0.63	€0.48	€0.46	€0.46	€0.83	€0.83	€0.00	€0.17	€0.17
O2	Post	Standard	Stet Hellas	NA	NA	€0.63	€0.48	€0.56	€0.39	€0.89	€0.76	€0.00	€0.21	€0.21
O2	Pre	Speakeasy	Panafon Vodafone	NA	NA	€1.27	€1.27	€1.90	€1.90	€1.90	€1.90	€0.00	€0.44	€0.44
Meteor	Pre and post pay	Pay as you go/ Pay Later	Panafon Vodafone	NA	€60.00	€0.70	€0.70	€0.28	€0.20	€0.42	€0.42	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	Stet Hellas	NA	€60.00	€0.70	€0.70	€0.56	€0.39	€0.89	€0.75	€0.00	€0.09	€0.09
Meteor	Pre and post pay	Pay as you go/ Pay Later	Cosmote	NA	€ 60.00	€ 0.70	€ 0.70	€ 0.42	€ 0.42	€ 0.85	€ 0.85	€ 0.00	€ 0.09	€ 0.09
Vodafone	Post	Standard	Panafon Vodafone	NA	NA	€0.85	€0.69	€0.46	€0.46	€0.83	€0.83	€0.00	€0.32	€0.32
Vodafone	Post	Standard	Stet Hellas	NA	NA	€0.85	€0.69	€0.56	€0.39	€0.90	€0.75	€0.00	€0.36	€0.36
Vodafone	Post	Standard	Cosmote	NA	NA	€0.85	€0.69	€0.40	€0.40	€0.85	€0.85	€0.00	€0.29	€0.29
Vodafone	Post	ITS	Panafon Vodafone	€6.05	NA	€0.61	€0.61	€0.97	€0.97	€0.97	€0.97	€0.00	€0.32	€0.32
Vodafone	Post	ITS	All other networks	€6.05	NA	€0.61	€0.61	€1.21	€1.21	€1.21	€1.21	€0.00	Stet Hellas & Cosmote Standard	
Vodafone	Pre	Ready 2 Go	Panafon Vodafone	NA	NA	€1.20	€1.20	€1.20	€1.20	€1.20	€1.20	€0.00	€0.65	
Vodafone	Pre	Ready 2 Go	Other Networks	NA	NA	€1.60	€1.60	€1.60	€1.60	€1.60	€1.60	€0.00	€0.65	