PUBLIC CONSULTATION

January 2006

The Market for International Roaming

Public consultation on the national market for international roaming services on public mobile telephone networks

(January 10th 2006 – February 21th 2006)

Notice on the consultation

The *Autorité de Régulation des Communications Electroniques et des Postes* (ARCEP) is submitting this document for comments for a period of six weeks. It contains ARCEP's overview of the national market for international roaming services on public mobile networks. This document is available for downloading on ARCEP's website.

Comments must be submitted to ARCEP, **preferably by email** at m17@arcep.fr as explained in Appendix E.

ARCEP will **publish all comments it receives**, except for sections covered by business confidentiality. Therefore, contributors are invited to separate in a clearly identified appendix all elements they consider to be covered by professional secrecy. As regards transparency, contributors are invited to limit as much as possible sections covered by professional secrecy.

ARCEP wishes to emphasise the importance of the comments made in this public consultation, and is willing to make modifications to this document should it receive any new and relevant elements. In drafting this document, ARCEP has used the answers it received in autumn 2003 to questionnaires on the market analysis.

Following any necessary modifications, this document could lead to the publication of a formal market analysis, which would be submitted to France's Competition Authority, the *Conseil de la concurrence*, for an opinion. This authority will give its opinion on the market definition and the designation of operators with significant market power. After considering the comments made by the Competition Authority, ARCEP will submit its final version of the document to the European Commission in accordance with article L. 37-3 of the *Post and Electronic Communications Code* (hereafter Code des Postes et Communications Electroniques, CPCE).

As regards Metropolitan operators, the outbound roaming traffic volumes and turnovers stated in the following public consultation are taken from the answers to the questionnaire issued in December 2004. In particular it must be stressed that this data corresponds to revenues and volumes made within the EEA zone, as opposed to worldwide.

Contents

Summary and status of this document

This document describes the functioning of the national market for international roaming services on public mobile telephony networks and examines changes to come for the years 2005-2008. Within this framework, ARCEP conducts, amongst other things, a formal analysis that falls under the provisions for the market analysis (market 17).

This public consultation describes (Chapter 2) the functioning of the retail and of the wholesale international roaming markets and considers the state of competition on these markets ; in Chapter 3, three means of action are suggested.

Regarding these three means of action, one consists in demonstrating significant market power on the wholesale market, and in imposing appropriate remedies within the framework of the market analysis.

This analysis tends to show that the relevant markets for wholesale international roaming products consist in the products market on which all of the mobile network operators (MNOs) of the geographical zones considered (Metropolitan France, the Antilles-Guyane area, La Réunion, Mayotte, Saint-Pierre et Miquelon) are suppliers.

In terms of market power on the Metropolitan market, none of the three Metropolitan operators holds single market power. Moreover, even though the cumulative criteria for tacit collusion may not be fulfilled, operators benefit from joint market power in the form of the absence of price-led competition on the wholesale market. The Authority considers that such a situation can fall under a joint dominance qualification in the sense of the Framework Directive, and that such a possibility is implicitly admitted by the European Commission's guidelines on market analysis.

As regards overseas markets, given the fact that entry barriers are lower than in the Metropolis, and that there are perspectives of entry of potential competitors on these markets, the current operators on these geographical markets are not deemed to hold significant market power.

A second means of action consists in submitting to the Commission's appreciation, with respect to competition law on agreements, the GSM Association's different interventions on the market and/or the recent pan-European integrations of network operators.

Should these two means of action fail or not be given sufficient backing, ARCEP considers that an EU regulation setting wholesale or retail price levels is a legitimate means of action.

Chapitre 1 Introduction

1.1 The European Context of the Present Public Consultation

ARCEP wishes to highlight the fact that the present public consultation mirrors an important European involvement in the field. Given the transnational aspect of the market (buyers and suppliers belong to different territories), ARCEP has cooperated with other NRAs of the European Economic Area (EEA), within the Independent Regulator's Group (IRG) and the European Regulator's Group (ERG), the latter being a consultant for the European Commission.

In this respect, a questionnaire has been sent on the 9th of December 2004 to all the operators of the EEA, and the information collected has enabled the setting, within the IRG, of a Joint Action Program and the drafting of a Common Position warranted by the ERG and submitted, during the summer of 2005, to a public consultation (http://erg.eu.int/doc/whatsnew/reg_intens_wrk_intl_roaming_mtg.pdf).

This Common Position considers that the national markets for wholesale international roaming cannot be considered competitive, despite the fact that the current state of the market doesn't fall under a legal qualification of single dominance or collective dominance under the form of tacit collusion.

1.2 The Market Analysis Process

In accordance with articles L. 37-1 *et seq*. of the Post and Electronic Communications Code (CPCE), the market analysis process involves:

- drafting a list of markets whose characteristics, as concerns the development of competition, justify the imposition of ex ante regulation ;
- designating those operators having significant power on these markets ;
- establishing specific obligations, which are suitable and proportionate to the state of competition observed.

Article 15 of the Framework Directive states that the Commission establishes a recommendation on the "*relevant markets*", that is, "*product and service markets within the electronic communications sector, the characteristics of which may be such as to justify the imposition of regulatory obligations set out in the Specific Directives*", and that it publishes "*guidelines for market analysis and the assessment of significant market power which shall be in accordance with the principles of competition law*". These two documents have been published under the following references : Commission guidelines on market analysis and the assessment of significant market power dated 11 July 2002[1], and Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation[2]. In March 2003, ARCEP

[1] JOCE number C165 dated 11 July 2002
[2] JOCE number L114/45 dated 8 May 2003

distributed a document analysing the content of the recommendation, and on May 9th 2003, it published a summary of the comments it had received regarding this document.

The analysis developed in Chapter 3 aims, by application of article L. 37-1 of the CPCE, at determining whether the markets are effectively competitive and deducing from this the consequent regulatory obligations that should be imposed. Therefore, if ARCEP's analysis concludes that the market is effectively competitive, ARCEP must remove any obligations which had applied to date. If it is not, ARCEP identifies the firm or firms detaining market power, that is to say whose situation is equivalent to a dominant position under competition law, and imposes on them specific and appropriate regulatory obligations.

Upon completion of this internal process, if adopted, and after having consulted the Competition Authority and taken its' opinion into account, ARCEP will submit its draft decisions to the Commission and the NRAs of the other Member States, in accordance with article L. 37-3 of the CPCE. The NRA and the Commission will then have at least one month to make their observations. ARCEP will take into account all observations made by the Commission and the other NRA in drafting the decision it will then adopt.

Furthermore, in accordance with article 7§4 of the Framework Directive, if the aim of the draft decisions is to either define a relevant market different from those listed in the recommendation, or to designate an operator with significant market power, and if the planned measure would have an impact on trade between Member States, the aforementioned deadline may be extended by an additional two months if the Commission considers that the measure would obstruct a single market or would be incompatible with Community law and, in particular with the general objectives of the directive. The Commission may also ask the NRA to withdraw its draft measure.

1.3 Time interval and Geographical Scope

1.3.1 Time interval of the Analysis

In keeping with the provisions of the CPCE, and more specifically with articles D. 201 to D. 303, the Authority must set the time interval of this analysis, which cannot exceed three years.

This analysis covers the period from January 1st 2006 to December 31st 2008. ARCEP considers itself able to conduct a forward-looking analysis of the market for this period of time. Nevertheless, should the market structure or available technologies evolve to a significant degree, ARCEP may be required to conduct a new analysis of this market before the period ends.

1.3.2 Geographic Perimeter

The wholesale market for international roaming is necessarily transnational, in the sense that the buyer(s) on the market belong to a distinct territory from the supplier(s). In the following public consultation, only the geographical scope of offer/supply is taken into account. This approach doesn't prejudice the finding of other geographical markets, which would be the case if the market were to display a transnational dimension.

France's territory is composed of four major types of administrative areas: Metropolitan France, Overseas Departments, Territorial Regions and Overseas Territories.

The CPCE is applicable in Metropolitan France, the Overseas Departments, Mayotte, and Saint-Pierre et Miquelon.

European law is applicable in Metropolitan France and in the Overseas Departments.

Appendix A explains these elements.

1.3.3 French Mobile Network Operators

Mobile network operators are best described through their physical networks and respective capitalistic structures.

1.3.3.1 Coverage Areas

Under the former regulatory framework, a decree from the Minister of Telecommunications was required to authorise the establishment of public mobile telephony networks.

In Metropolitan France, three mobile operators operate a GSM networks.

Firm	**Authorisation**	**Awarded**	**Duration**	**Coverage**
Orange France[3]	GSM F1	1991	15 years	Metropolitan France
SFR[4]	GSM F2	1991	15 years	Metropolitan France
Bouygues Telecom[5]	DCS F3	1994	15 years	Metropolitan France

All three mobile operators now have equivalent frequency resources in the 900 MHz and 1800 MHz bands.

These three operators have also received an authorisation to operate a UMTS network.

Firm	**Authorisation**	**Awarded**	**Duration**	**Coverage**
Orange France[6]	UMTS	2001	20 years	Metropolitan France
SFR[7]	UMTS	2001	20 years	Metropolitan France
Bouygues Telecom[8]	UMTS	2002	20 years	Metropolitan France

The situation overseas is more complex because the operators' authorisations do not cover the same geographic areas. Also, some operators do not use GSM or UMTS standards. And, finally, not all have launched their service commercially.

Ten operators have an authorisation operate a mobile network.

[3] Decree dated 17 August 2000 modified authorising Orange France to establish a public wireless network in order to provide pan-European GSM F1 digital service in the 900 MHz band
[4] Decree dated 25 March 1991 modified for an extension authorisation, in the 900 MHz band, for a public wireless network in order to provide pan-European GSM F2 digital service
[5] Decree dated 8 December 1994 authorising the establishment of a public wireless network in order to provide DCS F3 personal communication service
[6] Decree dated 18 July 2001 authorising Orange France to establish and operate a third-generation public wireless network and to provide public telephone service
[7] Decree dated 18 July 2001 authorising Société française du radiotéléphone (SFR) to establish and operate a third-generation public wireless network and to provide public telephone service
[8] Decree dated 3 December 2002 authorising Bouygues Telecom to establish and operate a third-generation public wireless network and to provide public telephone service

Firm	Authorisation	Awarded	End	Coverage
SRR[9]	GSM DOM 1	1995	2010	Réunion
Orange Caraïbe[10]	GSM DOM 2	1996	2011	Guadeloupe, Martinique, Guyane
Orange Réunion[11]	GSM DOM 4	2001	2006	Réunion
Bouygues Telecom Caraïbe[12]	GSM DOM 5	2001	2009	Guadeloupe, Martinique, Guyane
Dauphin Télécom[13]	GSM DOM 8	2002	2017	Saint Martin, Saint Barthélemy
SRR	GSM CT 1	2001	2016	Mayotte
SPM Télécom[14]	(GSM)	2000	2015	Saint Pierre and Miquelon
Saint-Martin Mobile[15]	(AMPS)	2001	2006	Saint Martin, Saint Barthélemy
Outremer Télécom[16]	GSM DOM 3	2000	2015	Antilles, Guyane, Réunion
Saint-Martin & Saint-Barthélemy TelCell	GSM DOM 6	2001	2016	St Martin and St Barthélémy

Before it operated a GSM network, Dauphin Télécom used the DECT standard. Migration to GSM is now complete.

Saint-Martin Mobile's authorisation, which was renewed in 2001, states:

"*This authorisation is issued for a duration of five years, beginning 1st October 2001. Two years at the latest prior to the expiration of this authorisation, its holder must inform the Autorité de régulation des télécommunications of its intention to continue its activities according to technical specifications using the frequencies which have been allocated to the Autorité de régulation des télécommunications, or to terminate its activities. The conditions*

[9] Decree dated 23 February 1995 authorising the establishment of a public wireless network in the *département* of Réunion in order to operate a digital pan-European GSM DOM 1 service

[10] Decree dated 14 June 1996 authorising the establishment of a public wireless network in the Antilles in order to operate a digital pan-European GSM DOM 2 service ; Decree dated 22 September 1998 modifying the decree dated 14 June 1996 authorising the establishment of a public wireless network in the Antilles in order to operate a digital pan-European GSM DOM 2 service and extending this authorisation to the *département* of Guyane; Decree dated 23 January 2002 modifying the decree dated 14 June 1996 modified authorising France Caraïbe Mobiles to establish a public wireless network in the Antilles in order to operate a digital pan-European GSM DOM 2 service

[11] Decree dated 24 April 2001 authorising France Telecom Mobiles la Réunion SA to establish a public wireless network in order to operate a GSM DOM 4 service in the 900 MHz and 1 800 MHz bands in the *département* of Réunion

[12] Decree dated 19 July 2001 authorising Bouygues Telecom Caraïbe to establish a public wireless network in order to operate a digital pan-European GSM DOM 5 service in the 900 MHz and 1 800 MHz bands

[13] Decree dated 12 December 2002 authorising Dauphin Télécom to establish a public wireless network in order to operate a GSM DOM 8 personal communication service in the 900 MHz and 1 800 MHz bands

[14] Decree dated 21 June 2000 authorising SAS SPM Télécom to establish and operate a public telecommunications network and to provide public telephone service

[15] Decree dated 30 September 2001 authorising Saint-Marin Mobiles to establish a public wireless network in order to operate a mobile service in the 800 MHz bands

[16] Decree dated 30 November authorizong Outremer Telecom to establish a public wireless network in order to operate a mobile service in the 1800 MHz bands

of renewal of the authorisation are defined in article L. 33-1 of the Post and Telecommunications Code."

To this day, Saint Martin Mobile hasn't proceeded to a formal demand for a frequency authorisation.

Finally, one operator has an authorisation but had not yet launched his service by 1st December 2005.

Firm	Authorisation	Awarded	End	Coverage
Oceanic Digital FWI	GSM DOM 7	2002	2017	Antilles

1.3.3.2 *Ownership Links*

Orange France is a 100%-owned subsidiary of Orange SA, in itself a 100% subsidiary of the France Telecom Group, a publicly traded company owned in part by the French government. Orange Réunion is a 100%-owned subsidiary of Orange France and Orange Caraïbe is a 100%-owned subsidiary of Orange SA. SAS SPM Télécom is a subsidiary of Orange Caraïbe.

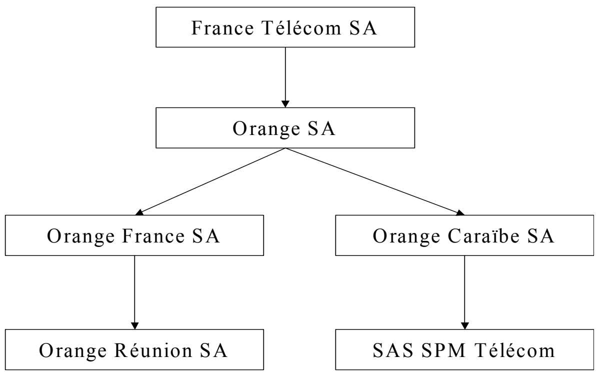


Figure 1: Ownership relationships of France Telecom's mobile subsidiaries

SFR is a 100%-owned subsidiary of the group SFR Cegetel, of which 56% is owned by Vivendi Universal and 44% by Vodafone. SRR is a 100%-owned subsidiary of SFR. Vivendi Universal and Vodafone are publicly traded companies.

Bouygues Telecom is an 83%-owned subsidiary of the Bouygues Group, a publicly traded company. Bouygues Telecom Caraïbe owned by Bouygues Telecom by over 80%.

Dauphin Telecom is not publicly traded.

Saint Martin Mobile is a subsidiary of the American firm Innovative Communication Corporation (ICC), which owns other subsidiaries in the Carribean.

Outremer Telecom is a subsidiary of Apax Partners, an American investment fund specialised in telecommunications.

1.3.4 Virtual Operators

Selling mobile communication services under one's own responsibility and for one's account isn't the sole preserve of operators who detain a frequency resources and thus a radio network. Other actors, usually designated as Mobile Virtual Network Operators (MVNOs) do so. As they have no networks, they contract access with a host network.

The terms of the MVNO deals usually reflect the degree of autonomy of the virtual operator as regards his host network (duration of the contract, ownership of the SIM cards, of the customer base, possession of core network elements). According to the countries where MVNOs have been set up, deals have been signed on a commercial basis or through the intervention of public authorities.

In France, there were practically no virtual operators as of June 2004, despite the demand (Tele2 in 2002).

• In fact, since 2001, only Transatel has been offering an innovative international roaming service on the Bouygues Telecom network, aiming the market for roaming travellers in France, The Netherlands and Belgium.

• In June 2004, an MVNO contract was signed between SFR and Debitel in order to enable the latter to sell mobile voice and SMS services over the SFR network. An MVNO deal was also signed in the 7th of July 2004 between Omer Telecom SAS and Orange France in view of selling mobile phone services under the Breizh Mobile brand.

• In February 2005, SFR announced an MVNO deal with Futur Telecom, specialized in small and medium-sized firms. Another MVNO deal was set up with NRJ Mobile on the 10th of February in order for the latter to become the first virtual 3G operator. NRJ launched its' offer beginning of November 2005.

• In March 2005, SFR concluded two MVNO deals, one with Neuf Telecom, and the other with Cegetel, aiming the businesses.

• In April 2005 a deal was signed by Tele2 and Orange France in order to launch an MVNO on the 17th of July 2005.

• In June 2005, an deal was signed between SFR and Coriolis, and on June the 9th M6 signed a co-branding partnership with Orange (which the Authority doesn't deem to be an MVNO)

• Lastly, on October the 18th 2005, the original OMER-Orange deal was reformed in order to extend the OMER offer to a national scale under the Virgin brand.

Chapitre 2 Description and Analysis of Competition on the Retail and Wholesale Markets for International Roaming

2.1 Description and Functioning of the Retail Market

The description and the functioning of the retail market relate to the examination of the offer made to the end-user, the recent changes in prices made by the network operators, and the turnovers and volumes made by the operators on these products.

The statements made below do not aim at a legal and economic qualification in the sense of a formal market analysis, as the retail roaming products belong chiefly to the access and call origination market. However the following description of the retail market tends to shed light on aspects of competition on the wholesale roaming market.

2.1.1 Retail roaming products : the "roaming out" market

Roaming services offered to the end-user consist in a general manner in the offer of seamless communications to customers travelling abroad ("roaming" customers). In other words, the retail international roaming service market, called "roaming out" (due to the fact that roaming customers "roam out" of their home country), provides the end-user with most of the services of his initial mobile communications offer, may it be for voice (outbound/originating calls and receiving/terminating calls, voice-mail), SMS or data, according to the usual means of use (access shortcodes etc.). Roaming out services are usually available automatically or upon simple request to the user's network operator.

Roaming services are billed within the scope of the mobile communications offer (also known as the access and call origination mobile offer), just as any other service relating to the offer. However, they do not follow the same billing schemes as the communications made or received on the subscriber's home territory ; indeed, roaming out services are billed in addition to the subscription fee.

As regards incoming traffic, contrarily to the "*calling party pays*" principle, which prevails in France, the reception of an incoming call when roaming is billed to the roaming customer (this adds to the price paid for call origination). This reception tariff pays for the international transport of the call and the eventual additional cost of termination with respect to the national termination rate. Thus, wherever the called party is, the calling party's expense doesn't exceed the cost of a call made within the called party's usual geographical zone (*i.e.* the place where he contracted his service – the same principle applies to diverted calls).

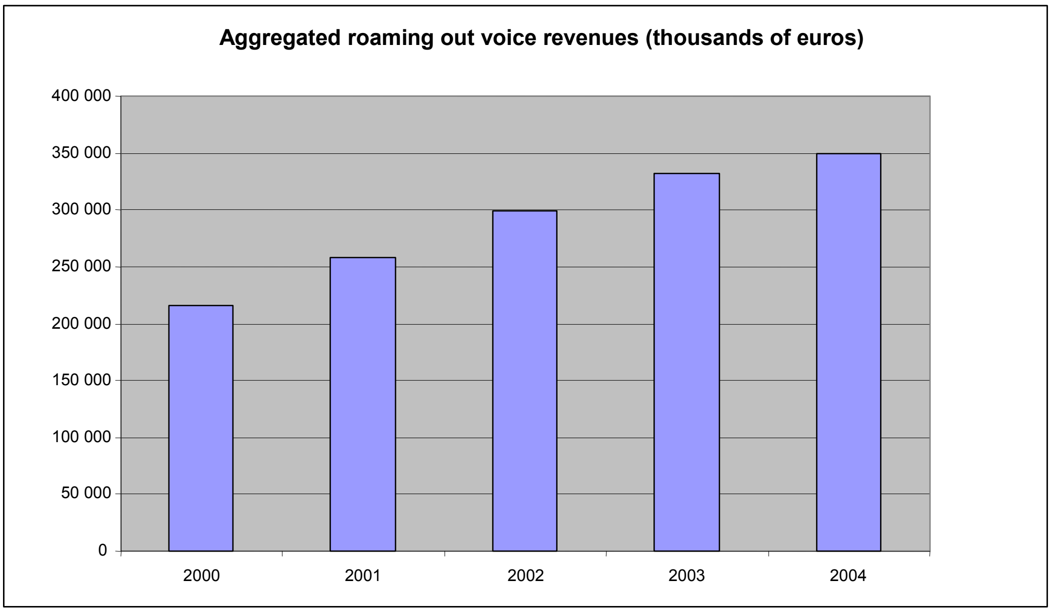
As said above, international roaming services chiefly relate to the retail market for mobile communications (retail market for acces and call origination), in that this latter market constitutes the retail market by which operators provide the customer with the possibility of making and receiving calls from public mobile networks. In particular, a consumer is unable to contract with different mobile service providers for each service offered (this is the "cluster" principle, described further on).

The provision of international roaming services to the retail customer stems from the equivalent wholesale service, known as "roaming in", as provided by a mobile network operator on a given territory to the operator of the roaming customer. The operator providing the roaming out service is known as the "visiting network", whereas the operator providing the roaming in service is known as the "visited operator".

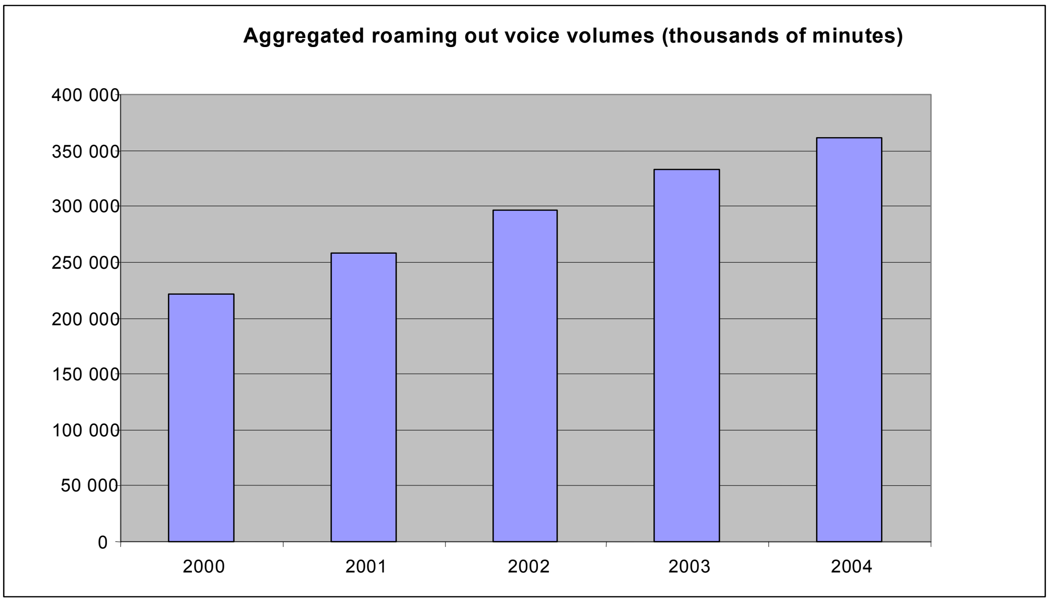
As mentioned above, since 2001, Transatel has been offering an innovative international roaming service relying on an MVNO deal with Bouygues Telecom for calls sent and received in France. For users travelling between France and several countries of the European Union, Transatel offers retail roaming services using a multi-IMSI SIM card, thanks to which a user can subscribe simultaneously to as many access and call origination offers as countries travelled in. Thus, although present on the retail international roaming market, Transatel's offer stems from the wholesale access and mobile network call origination market. Since Transatel does not offer wholesale international roaming services on the national market, it is not covered by this analysis.

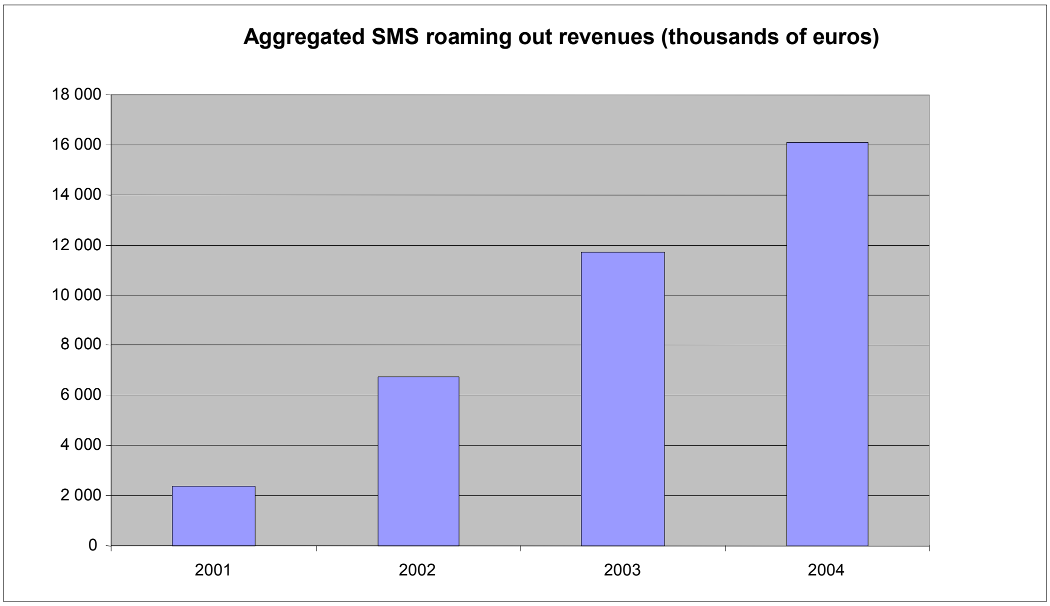
2.1.2 Activity of the Operators on the Market

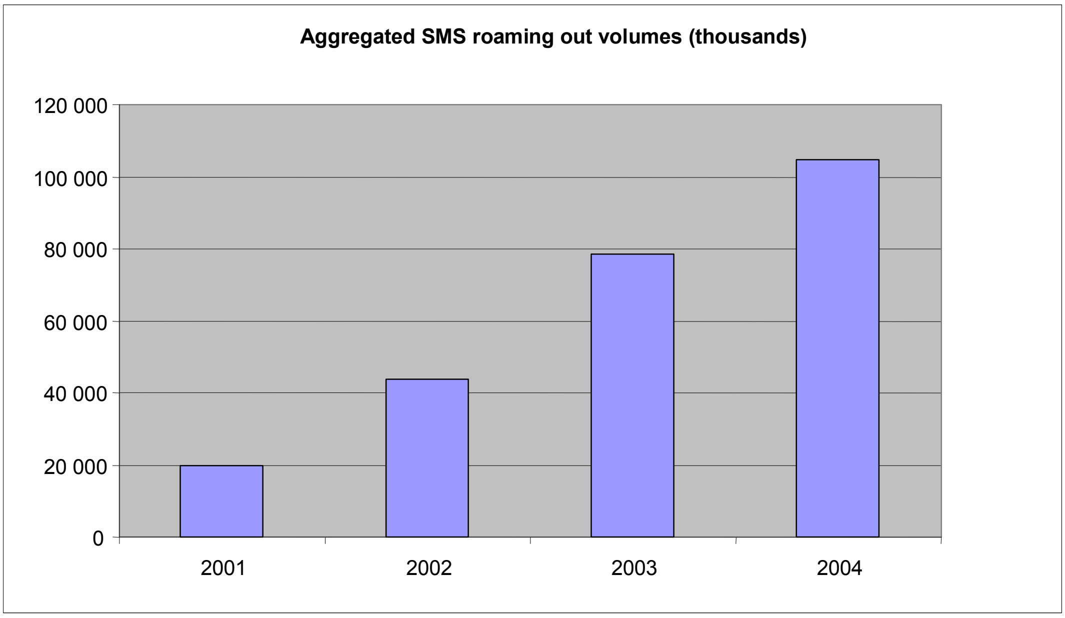
The graphs below represent the traffic revenues and volumes of two key roaming services, voice and SMS[17].



[17] An operator has communicated to ARCEP only his voice volumes for 2003 and 2004. The aggregation of voice volumes for the other years has been achieved by extrapolating to this operator the average evolutions of the two other operators. The aggregation of SMS volumes, for which no data was given by the aforementioned operator, was achieved by extrapoltaing to him the average volumes of his competitors, weighted by their respective market shares. The aggregation of voice and SMS revenues was achieved in a similar fashion.


Aggregated roaming out voice volumes (thousands of minutes)
400 000
350 000
300 000
250 000
200 000
150 000
100 000
50 000
0
2000
2001
2002
2003
2004


Aggregated SMS roaming out revenues (thousands of euros)
18 000
16 000
14 000
12 000
10 000
8 000
6 000
4 000
2 000
0
2001
2002
2003
2004



2.1.3 High and converging price levels

Preliminary remarks

National operators do not carry out retail price differentiation according to the visited network's identity (except for SFR with the "Vodafone Passport" offer). Therefore, the retail price offer of the roaming out minute is the same, whichever the visited network. An end user may manually select a given network, but this won't make a difference to his bill.

Generally speaking, operators carry out a « zoning » partition of the geographic territories for which they implement roaming partnerships, that is to say that their billing schemes set outbound and incoming call rates according to the geographical zone in which they occur, each zone covering many States. Nonetheless, as of recently, some operators implement a more attractive rate on countries within which the operator has preferred roaming partners (Vodafone Eurocall scheme for instance).

Moreover, MVNOs acquire roaming products through their host operators ; given the fact that they don't have access to the wholesale market, they must pay these products at a price which is close to the host operator's retail price ; the MVNO's retail pricing policy follows thus their host operator's.

Retail prices – excluding special deals

The prices billed by the operators are presented in Appendix C.

As this Appendix shows, pricing schemes have changed over the past years. Thus, till 1999-2000, Orange France, SFR et Bouygues Telecom billed on a country-by-country basis, and their billing schemes could include a setup charge or be linked to some of the visited networks' retail prices.

Current tariffs seem much more simple, but also much closer from one operator to the other. These tariffs contain 3 to 5 pricing zones, set an undivisible first minute, and a high public price tariff of 1€ or more for zone 1 (which corresponds roughly to the EU).

The table below summarises the tariffs of the three Metropolitan operators for outbound/ originating voice calls in zone 1, for post-paid consumers, excluding specific pricing schemes. An average price per minute, calculated on the basis of the call profile described in Appendix G, is also presented.

	Public price	**Average price**
Orange France	1 € TTC / min (indivisible first minute then billing to the second)	1,15 € TTC / min
SFR	1 € TTC / min (indivisible first minute then billing to the second)	1,15 € TTC / min
Bouygues Telecom	1 € TTC / min (indivisible first minute then billing to 30 seconds)	1,24 € TTC / min

Roaming out–specific pricing schemes

As far as the Authority knows, there are two roaming out–specific offers on the national market :

• The "*Orange sans frontière*" offer is an option available upon demand with the customer service, by which the end-user benefits from a 15% discount on communications made in zone 1, against a subscription of a least 3 months and for a minimum price of 34€/month.

• The "Vodafone Eurocall" offer grants a 15% discount to the end-user, against a subscription of 2,5€/month.

The "Vodafone Passport" offer, unavailable for *Le Compte*, *Accès* and *La Carte* offers, is an evolution of the "Vodafone Eurocall" offer. This offer presents a preferential price for calls made or received over one of the 17 Vodafone partner networks. The national retail tariff applies, after a setup charge of 1 € for zone 1 (Vodafone in Germany, Spain, UK, Greece, Ireland, Italy, Netherlands, Portugal and Sweden ; Proximus in Belgium and Swisscom in Switzerland), 1,20 € TTC for zone 2 (Vodafone in Albania, Hungary etc.) and 2,20 € TTC in zone 3 (Vodafone in Australia, Japan and New-Zealand).

The table below presents the average prices calculated according to the hypothesis of consumption presented in Appendix G. In any case, the pricing advantages of the Passport offer must be interpreted with the greatest caution as they are very sensitive to the length of the average call.

	Public price	**Average price**
Vodafone Eurocall	0,85 € TTC / min (indivisible first minute then billing to the second)	0,98 € TTC / min
Vodafone Passport	1 € TTC per call + price of a national call	0,94 € TTC / min

Access to Eurocall is billed 2,5€/month, which isn't taken into account in the calculation of the average price represented above.

2.2 Functioning of the wholesale market

2.2.1 The wholesale market's functioning

The WIR market is relatively structured : the GSM Association has drafted a standard roaming partnership contract, the "S.T.I.R.A.", which is used by foreign operators to purchase wholesale products that are billed in the form of "I.O.T.s".

A recent development on the wholesale market is the possibility for operators to "direct" their traffic to a given visited operator, which has led to the establishment of exclusive, crossed procurement relations between the operators which have formed alliances or which are members of the same group (in the latter case, this amounts to self-supply).

2.2.1.1 Institutional functioning

All European mobile operators are members of the worldwide GSM Association. The association's goal is to promote, protect and improve the position of member mobile operators. It invests in a variety of projects such as technical missions (standardisation, improving encryption, etc.), handset fraud prevention, health issues and environmental protection.

The GSM Association has a strong influence over the international roaming market, and has significantly contributed to shaping it, by setting the rules for publication of operators' tariffs, establishing the pricing principles applying to tariffs and determining how these tariffs are applied.

2.2.1.1.1 The STIRA, a model for international roaming contracts

For international mobile roaming to be possible, the visiting and the visited networks need to conclude a roaming agreement which determines the commercial terms and conditions according to which roaming will take place. These agreements are concluded, generally on a bilateral basis, between the individually licensed mobile network operators that are members of the GSM Association (GSMA). They are usually (but not necessarily) reciprocal in nature : that is to say, roaming partners agree to reciprocally provide wholesale roaming services. The roaming agreements are based on a common framework agreed upon by the members of the GSMA, and consisting in a Memorandum of Understanding (MoU) which provides the general basis for establishing international roaming, the Standard International Roaming Agreement (STIRA) which sets the standard clauses of bilateral roaming agreements between GSM operators, and the Inter Operator Tariff (IOT) which is the wholesale roaming currency.

The STIRA is the standard contract used by all network operators to establish roaming partnership agreements. The STIRA was drafted by the GSM Association and defines all the technical and financial conditions under which roaming-in services are exchanged between operators.

The STIRA stipulates that contracting parties are public mobile telephone network operators, thereby theoretically excluding MVNOs from obtaining roaming-in services for themselves, in order to offer them to their end customers.

2.2.1.1.2 The Inter Operator Tariff (IOT)

Between May 1998 and April 1999, the GSM Association set up a wholesale pricing unit called "Inter Operator Tariff" (IOT), which is the currency for the charges billed to the visiting network for the use of the visited network. IOT pricing replaced the "Normal Network Tariff" (NNT) pricing system by which wholesale roaming charges were composed of domestic retail prices to which were added a mark-up no greater than 15% (which created an indirect competition constraint on wholesale tariffs).

There are different IOTs for minutes of voice calls, SMS units and data volumes. IOTs vary chiefly according to the destination (domestic/foreign, foreign destinations are grouped in pricing zones), the time of the call (peak/off-peak), the charging interval (10 seconds/30 seconds/1 minute, etc. - for data, the unit is 10 or 15 kb), an eventual setup charge or a first indivisible unit of consumption, and can take account of whether the terminating network is fixed or mobile.

According to the principles of tarification set in the Memorandum of Understanding elaborated by the GSM Association, IOTs are applied in a non-discriminatory way, at least for gross IOTs (no principle of non-discrimination applies to discounts), offers of IOTs are valid for a minimum period of 6 months, and increases to IOTs require 60 days' notice, except when the IOTs are being brought in line with measures imposed by a regulator, when interconnection costs are modified or when new services are introduced. Discounts can be applied to gross IOTs, on a discretionary basis. Discounts are agreed upon by the operators on a confidential basis and according to quantitative and qualitative criteria specific to them.

2.2.1.1.3 The GSM Infocentre

Each network operator's wholesale tariffs are published on the "GSM Infocentre", which is the GSM Association's information website. It is important to note that the discounts operators set between themselves are not published on the Infocentre; they remain confidential. Therefore, only gross prices are published on the website.

IOTs are available only to foreign operators. This means that, in principle, national operators cannot have direct knowledge of the gross prices practiced by their competitors.

2.2.1.2 <u>Technical functioning</u>

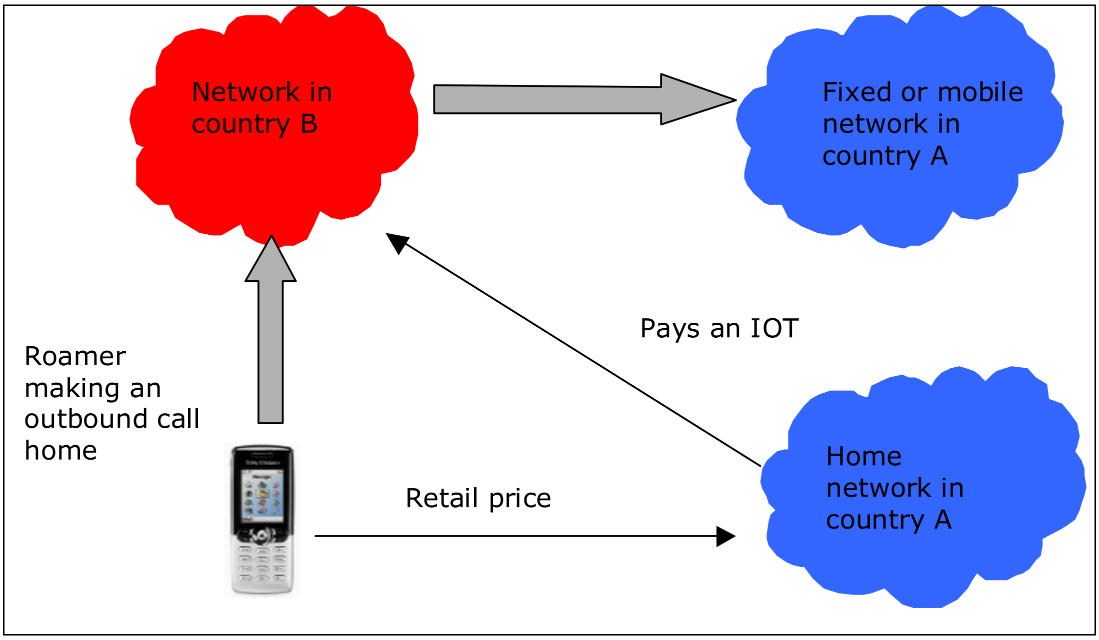
2.2.1.2.1 Technical aspects

Providing international roaming services corresponds to a technical service through which a public mobile network operator sells wholesale access and communication services (voice, SMS, data) to a foreign network operator in order to enable the latter to offer to his end-users the possibility to make and receive calls when on the former's network. Thus international roaming services are provided by a visited network operator to the visiting/ home network. The end-user keeps his IMSI-number, and thus benefits from the full use of his SIM card.

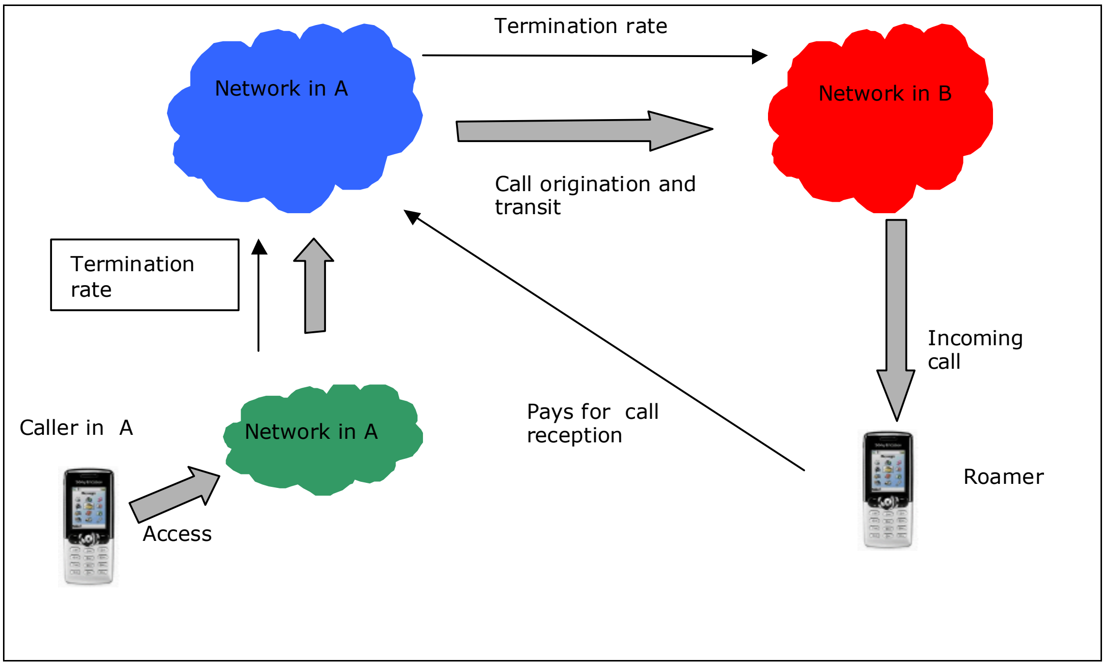
Network operators sell international roaming services in bundles. They do not offer unbundled wholesale products of call origination, access and termination. Thus, voice, SMS, MMS and data services are bought in bundles by foreign networks, who cannot split their wholesale purchases according to the offers of different networks. In other words, the visited network offers an end-to-end service.

2.2.1.2.2 Technical diagram for a call made from a visited territory to a called party in the home territory or in the same visited territory

• Outbound (originating) call made towards the visited/home network : the roamer is billed a roaming tariff corresponding to this international call to country A. The roamer's home network pays an IOT to the network in country B. Network in B provides the whole call.



• Receiving an incoming (terminating) call from a caller in the home country : the home network of the roamer in country A perceives a termination charge from the caller's operator and bills the reception of the call to the called party. The called network charges no IOT.



2.2.1.2.3 *Traffic direction*

Until recently (September 2003), visiting network operators had no means of routing their roaming traffic onto a specific network in the visited country. The roaming handset selected the foreign network offering the best signal strength ("connectivity") at the time and location where it was first activated in the visited country. Because of this, some networks tried to improve their coverage around ports of call (airports, train stations etc.) in order to attract as many roaming customers as possible onto their network.

One of the consequences of this absence of traffic direction was that network operators signed roaming-in agreements with all or most of the network operators in the geographic areas for which they wished to offer retail roaming services, in order to ensure that their end customers would receive network coverage from at least one operator, regardless of the time and location of handset activation in the visited area.

Recent technological advances have made it possible to end this random allocation of calls made in roaming-out by the end customer. With varying degrees of efficiency, these techniques route the activated handset onto a given network, thereby matching supply and demand more effectively on the wholesale international roaming market. Indeed, when supply and demand are no longer totally—or almost totally—random, operators can, at least in principle, choose their roaming partners based on the quantitative and qualitative characteristics of their respective offers and can commit themselves to traffic volumes on the foreign networks.

There are currently several traffic direction technologies. In principle, the handsets provided by operators are programmed to direct all traffic towards the network operator detaining preferred partner status, thereby minimising the risk that users would make calls on a competing network :

• In the "last network prevalence" technique, each time the handset is activated, it connects itself to the most recently visited network even if the signal has been lost or the user has switched networks.

• Automatic selection from a list : if the handset cannot connect to the last network used, it scans a list of networks (PLMN) in the SIM card and connects to the first available network (called "assisted roaming", and its more recent variant, "managed roaming"). There can be a list of networks to which access is forbidden (called forbidden PLMN, FPLMN or "call barring"). If none of the networks in the list are available, the handset selects a network based on the quality of the signal received. If no network is selected by the handset, the end user can configure the handset and choose a network him/herself. It should be stressed that manual selection is relatively complex, and would therefore be used only by a small number of customers (business customers, technology buffs, etc.) which surveys carried out by NRAs evaluate at around 2-3% of total customers.

• A combination of two recent techniques—the "SIM application toolkit" (the programmable SIM card) and "over-the-air programming" (remote programming of the SIM card)—should make traffic direction more effective. The SIM application toolkit, provided in new GSM standards (GSM Phase 2+), lets the operator program its SIM cards and partially control the functioning of the handset. The operator can program the SIM card to connect to a specific network in a roaming situation (just as the card can be instructed to switch networks in off-peak times). Thanks to their increased memory capacity, SIM cards can be remotely programmed in order to update the PLMN.

• As regards the highly efficient aforementioned "managed roaming" technology, the handset is reinitialised at regular intervals, ensuring that the network to which the handset is connected is indeed the network preferred by the home operator. If it is not, the home operator can switch the handset to the preferred network. In this way, a network selected manually by a customer would be "overridden" by the handset after a few minutes, and switched to the partner network preferred by the operator. This regular re-initialisation prevents the end customer from choosing a roaming operator of his own.

2.2.2 Economic and Strategic Functioning

The fact that an operator can direct his roaming customer's traffic to a chosen network, paves the way to the use of traffic direction between two operators of separate countries, as a technical basis for exclusive or majority-based procurement agreements. In this case, roaming partners reciprocally benefit from a preferred network status (hence the implementation of the techniques).

Such a policy is conceivable within groups providing mobile communication services that possess subsidiaries in different territories, and could be best described as self-supply.

However operators who do not belong to trans-national mobile communications groups can set up similar agreements within the framework of an inter-operator alliance.

This last type of horizontal integration, which could be said to be "commercial", as opposed to the first form, of a "corporate" nature, consists in the setting up of reciprocal procurement deals by which contractors are bound to mutually address themselves a minimum volume of roaming out traffic, expressed for instance as a percentage of their overall roaming out volumes. This enables every operator to counterbalance the expenses incurred to purchase roaming-in services with the revenues he makes selling roaming in products to his partner. Thus, roaming-in bought from the foreign operator is offset by the roaming-in bought by the foreign operator, and operators pay only net roaming-in costs, defined as the difference between the traffic flows (roaming-in to and from a foreign country). In this way, contracting operators carry out a mutual exchange by which they can level out their expenses whatever the wholesale price.

In principle, roaming alliances (and, by definition, groups) admit one operator per given territory. Operators can enforce these partnerships by granting substantial discounts to their partners.

From October 2003 (coinciding with the effective implementation of traffic direction), European mobile telephony operators initiated the following integration manoeuvres:

• Launch of the "Starmap" alliance, which includes the following network operators: One (Austria), Eurotel (Czech Republic), Sonofon (Denmark), O2 (Germany), Pannon GSM (Hungary), O2 (Ireland), Wind (Italy), Telenor Mobile (Norway), Amena (Spain), Sunrise (Switzerland) and O2 (United Kingdom)

• Launch of the "Freemove" alliance, established in March 2004, which includes the following network operators: Orange (9 countries), TIM (2 countries), T-Mobile (13 countries) and Telefonica MoviStar (Spain), for a total retail clientele of 170 million customers in 21 European countries.

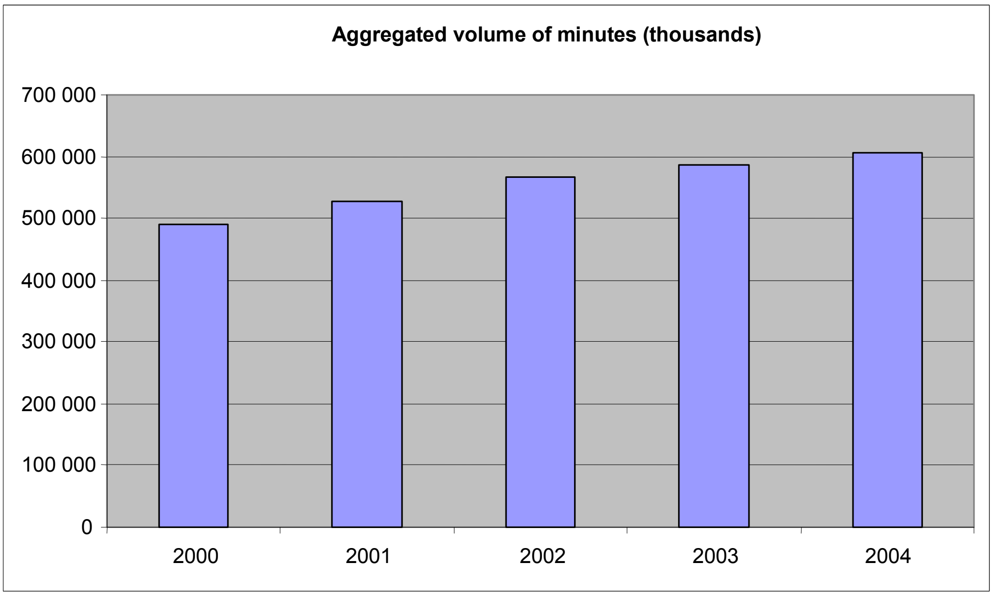
• Intensification of the group logic for Vodafone, which covers 12 countries with subsidiaries in the United Kingdom (Vodafone UK), Ireland (Eircell), Germany (D2), Hungary, Sweden (Europolitan), Greece (Panafon), Malta, Portugal (Telecel), Spain (Airtel) and Italy (Omnitel). It is a shareholder in companies in Belgium (Proximus), France (SFR), Poland (PLUS), Switzerland (Swisscom) and Romania (Connex).

2.2.3 Volume of Activity of the Operators on the Wholesale Market

The figures presented below include self-supply, that is to say the volumes traded between operators belonging to the same group (such as for Orange and Vodafone).

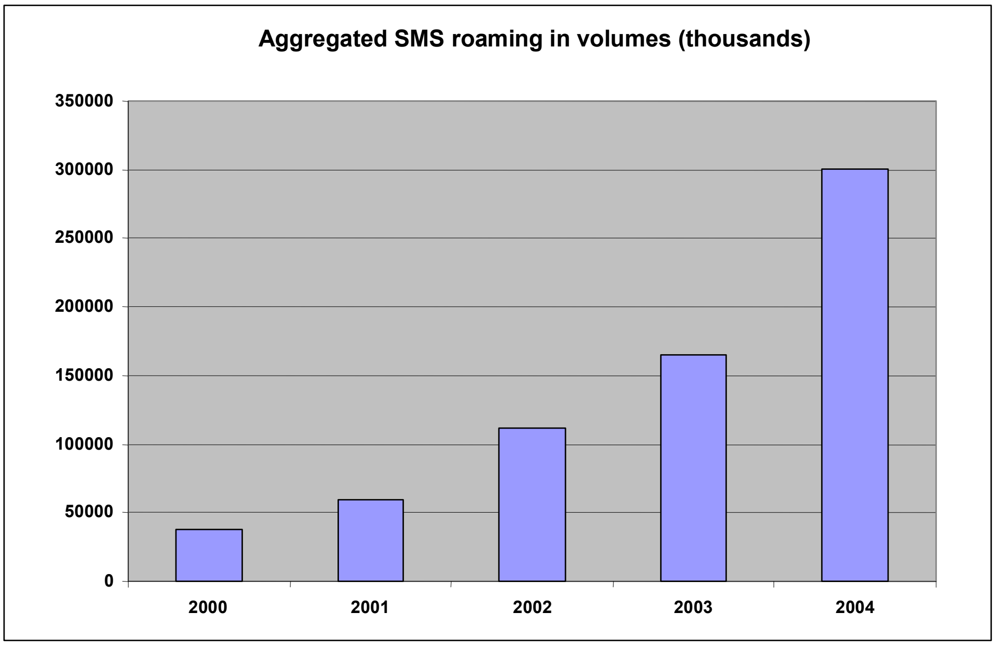
2.2.3.1 Volume of roaming in minutes sold

By comparing the volumes of roaming in voice traffic (approximately 600 million aggregated minutes) and of roaming out (near 350 million) for 2004, there appears a net trade surplus in favour of Metropolitan operators.



2.2.3.2 Volume of roaming in SMS sold

Just as for voice, by comparing SMS traffic volumes for roaming in (300 million) and roaming out (100 million) for 2004, appears a net surplus in favour of the national operators.



2.2.4 Prices on the wholesale market for international roaming

The figures given by the operators on IOT levels and the discounts granted over the questionnaire's time interval tend to show that the level of IOTs set by the Metropolitan operators are close to one another and have increased or only very slightly decreased over time. Moreover, gross prices appear very high in relation to the prices of technically equivalent products as well as with regards to underlying network costs. Lastly, over this period of time discounts have been granted sparingly.

2.2.4.1 Price dynamics

This section examines the dynamics of wholesale roaming in prices.

2.2.4.1.1 Past changes

In 1997, the GSM Association sent a request for a formal approval by the Commission (comfort letter) of a new pricing mode to replace the NNT. As seen above, this new means of pricing, named IOT, is not linked to the retail market. It was put in place by the operators over 1998-1999.

In 1999, the European Commission launched a sector enquiry on roaming, which it published on 13 December 2000[18]. According to this survey, far from reducing wholesale tariffs, the introduction of IOTs eliminated the price cap linked to the structure of the NNT, allowing operators to "*substantially increase*" their wholesale tariffs. The Commission noted that a comparison between the last NNT prices and the IOTs of Q4 2000 demonstrated that the prices of international calls in the EEA had increased by 212% in peak periods, and by 294% for domestic calls in off-peak periods.

In this respect, the Commission concluded that switching from NNTs to IOTs resulted in a drop in competition in prices on the wholesale market.

2.2.4.1.2 Changes in gross IOTs between 2000 and 2004

This section presents the pricing behaviour of the operators over 2000-2004. The IOTs are confidential, and described in Appendix F, which is submitted to business confidentiality.

It appears that over the time interval of the questionnaire (2000-2004), wholesale offers have been substantially stable, though traffic has increased by approximately 20% over that time (section 3.1.4.3.1.).

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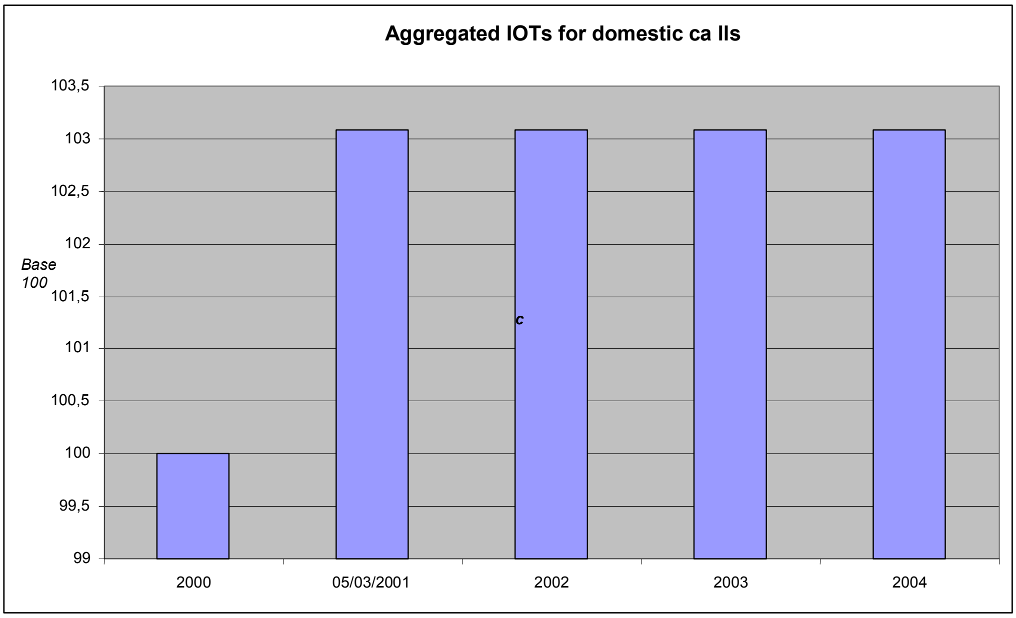
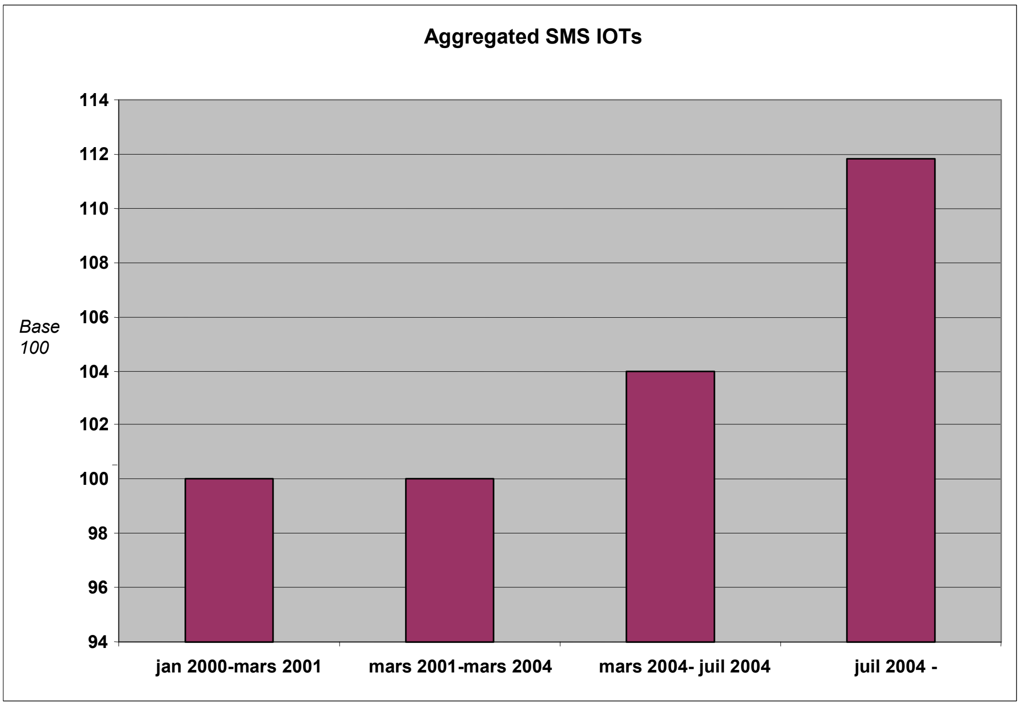
[18] "Working Document on the initial findings of the Sector Inquiry Into Mobile Roaming Charges", disponible sur http://europa.eu.int/comm/competition/antitrust/others/sector_inquiries/roaming/working_document_on_initial_results.pdf

IOTs for domestic calls (i.e. calls made from a visited countries' network to another network of same country) and SMS are substantially unvarying, and have even increased over 2000-2004. The graphs represented below represent the average IOT of the three operators for domestic calls and SMS (base 100)[19].



[19] Prices are not weighted according to roaming in market shares. The average is calculated using gross public prices per minute (without taking into account billing schemes such as undivisible minute, call setup charge, charging intervals)



As for international calls made while roaming, over 2000-2004 two operators have increased their tariffs, whereas one has proceeded to a review of his call zones, leading to a small decrease (less than 5%) of IOTs for calls to 9 territories.

The overall picture is thus that of a significant stability and even increase in international IOTs.

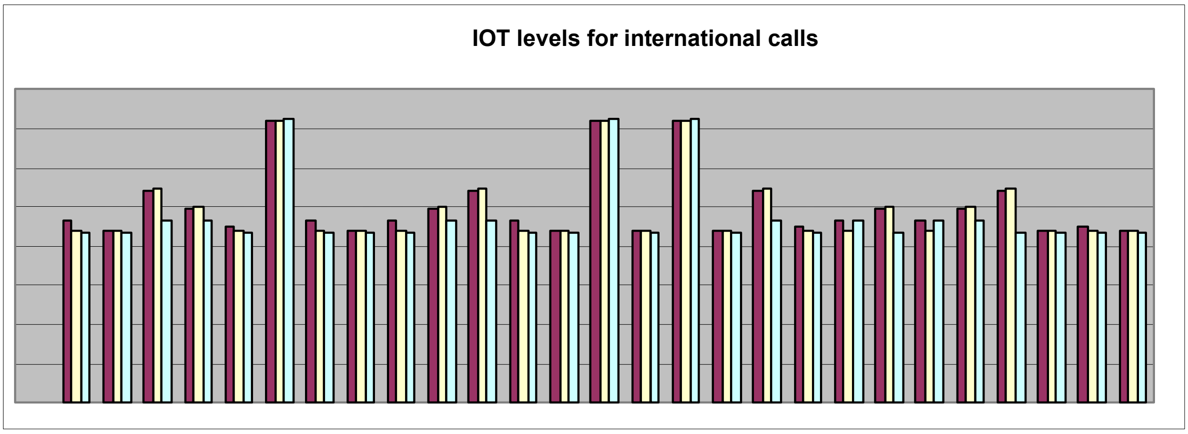
Lastly, over the time-period, charging/billing intervals for voice have systematically varied in an unfavourable way, i.e. have increased in length.

2.2.4.1.3 Operator's Gross IOTs are very Close

Operator's gross IOTs are very close to one another, both for domestic and for international calls.

As regards domestic calls, by comparing the public prices of the IOTs of each operator, it appears that the average difference between Orange France's and SFR's IOTs is less than 1%. The difference between Bouygues Telecom's public IOTs and those of the two other operators stands under 20%.

In 2004, the average difference between the public IOTs for international communications is of less than 2% between SFR and Orange France, whereas Bouygues' stands at 5% less. The graph below depicts the public IOTs for international calls of the three Metropolitan operators for every destination (each set of three columns corresponds to a destination within the EEA).



It seems that the three Metropolitan operators' IOTs stand at very close levels.

2.2.4.2 <u>Level of the Wholesale Prices</u>

In this section, wholesale prices for roaming in are compared with the prices for technically equivalent services, as well as with network and interconnection costs specifically related to roaming in.

In order to proceed with these comparisons, a consumption profile described in appendix G has been set up, corresponding to the average consumption of EU roamers in France. From this profile have been calculated the prices or average costs per minute (or per SMS).

2.2.4.2.1 *Technical Perimeter of the Roaming in Service*

Conveying of outbound (originating) or incoming (terminating) traffic is achieved in the same way, on a technical level, for a customer of a given network or of an MVNO hosted on the network, and for a roaming customer.

Roaming-specific services are linked to information system requirements. These are :

- Requests made to the HLR of the visiting operator

A roaming end-user in a given territory is identified as such by his IMSI number (International Mobile Subscriber Identity), which indicates to the visited network his country code as well as his home network (network code). The visited network makes a request, through the international SS7 network, to the HLR of the visiting network, who carries out an examination of the customer status in order to check if roaming out is authorized for the latter. This information is communicated to the HLR of the visited network. Normally, this checking procedure isn't repeated for each call (depending on the roaming contract signed by the operators).

- Billing the visiting network for communications made on the visited network

Communications passed on the visited operator's network are billed to the visiting operator. If traffic levels are high enough, this can be externalized to a clearing house[20].

These roaming-specific services aren't deemed to represent a significant cost.

2.2.4.2.2 Gross Roaming In Prices (2004)

Using the consumption profile in appendix G, it is possible to evaluate an average price per roaming minute for each Metropolitan operator. As indicated above, these price levels are very close between operators and stand[21] at the average levels of :

- **over 0.90 €/min for an outbound (originating) call** towards a fixed line (a third of the traffic by hypothesis) or mobile line (two thirds) in Metropolitan France (a quarter) of to the home country (three quarters), for a roaming end-user coming from an EU country sharing a frontier with France (which represents a high part of the roaming in traffic sold by the Metropolitan operators) ;
- 0.19 €/SMS in the same conditions.

2.2.4.2.3 Examples of Prices for Technically Equivalent Services (2004)

As indicated above, the roaming in service is almost equivalent, technically speaking, to the call service offered by an operator to his retail customers or to an MVNO on the wholesale access and call origination market. Wholesale prices granted to MVNOs are not indicated, given their confidentiality.

In view of evaluating retail prices for Metropolitan communications and those made towards EU countries sharing a frontier with France (part of zone 1), are given the retail prices for calls made on top of a subscription corresponding to the main post-paid offers for Metropolitan France :

[20] Characteristics of the call are memorized by the visited operator and transferred to the clearing house in a standard format conceived by the GSM Association (Transferred Account Procedure). In case of a mistake, the clearing house generates an "error" message and requests the transmission of a file of corrected data. Corrected data is transmitted to the visiting network.
[21] Under the hypothesis of equal amounts of traffic between Orange France, SFR and Bouygues Telecom

Public prices tax incl	Outbound call		Outbound SMS	
	Metropolis	Zone 1	Metropolis	Zone 1
Orange France (« Orange Classique » offer)	0,35 €/min	0,48 €/min (1st minute undivisible)	0,15 €	0,13 € HP 0,10 € HC
SFR (« Essentiel » offer)	0,34 €/min	0,51 €/min (1st minute undivisible)	0,30 €	0,15 € HP 0,10 € HC
Bouygues Telecom (« Référence » offer)	0,30 €/min	0,47 €/min (1st minute undivisible and 30 second billing thereafter)	0,30 €	0,20 €

Average price levels are then established[22] from the consumption profile in appendix G. They represent the average prices that a Metropolitan customer would be billed by its' operator (for the tariff schemes considered) for the same call as that of a roaming traveller from the aforementioned zone 1 countries. The levels attained are the following :

- 0,43 €/min (tax excl.) for an outbound (originating) vocal call
- 0,15€ tax excl. for an outbound SMS

2.2.4.2.4 Network and Interconnection Costs (voice traffic)

Network and interconnection costs relating to an on net call in a roaming scenario are :

- network costs that relate in particular to the actual call, the use of the initial local loop, of localizing the caller and, in case of a successful call, of termination ;
- roaming in-specific costs : requests to the HLR (billing is linked to commercial costs).

Network and interconnection costs relating to an off net call in a similar scenario are :

- network costs relating to the call, the initial local loop and interconnection ;
- interconnection costs, transit and termination on the fixed/mobile, national/international network of the called party's network ;
- roaming in-specific costs : requests to the HLR of the visiting operator (billing is charged as a commercial cost).

As regards network costs, the Authority holds at its' disposal the accounting reports transmitted by the three Metropolitan network operators for 2003, in keeping with article 7 of the decisions 04-937, 04-938 and 04-939 of December 9th, 2004, relating to the market analysis of the wholesale access and vocal call origination on mobile networks. These reports are made up of 5 reporting files, according to the format and cost allocation rules outlined in the appendix of decision n°01-458 setting guidelines for interconnection of mobile operators detaining SMP on the national market for interconnection. In accordance with articles L. 38 5° and D. 312 of the CPCE, these reports have been audited by Ernst & Young, as designated by the Authority in decisions n°05-272, 05-273 and 05-274 of March 24th 2005.

[22] Under the hypothesis of equal amounts of traffic between Orange France, SFR and Bouygues Telecom

Using these cost elements, the Authority is able to evaluate an average cost per minute corresponding to the technical services put in place for the provision of outbound voice calls as a roaming in product.

Secondly, as regards interconnection costs, the Authority has elements of reference to evaluate the prices charged for :

- intra- Metropolitan transit or between France and most of Western European countries ;
- mobile or fixed termination for Metropolitan or West European operators ;

Thirdly, the cost of roaming-specific services, relating to the use of the signalling canals, can be set at less than 1€c/min.

Thus, average network and interconnection costs for roaming in stand at less than 0,23€/min, for calls made by roaming customers from EU countries sharing a frontier with France.

2.2.4.2.5 Conclusion

	Outbound call	Outbound SMS
Average wholesale gross prices	> 0,90 €/min	0,19 €
Example of a retail price (tax excl.)	0,43 €/min	0,15 €
Average network and interconnection cost	< 0,23 €/min	

These elements tend to show that wholesale roaming in tariffs are (given the existence of discounts) **3 to 4 times higher** than underlying network and interconnection costs. This evaluation is confirmed by the comparison of these tariffs with the retail prices for technically equivalent products : in fact, these retail prices must in addition cover commercial costs, yet they are more than two times than the wholesale rates for roaming in.

2.2.4.3 <u>A Recent, Limited and Non-objective use of Discounts</u>

The discounts actually granted are described in more depth in Appendix F, submitted to business confidentiality.

With the exception of one, the operators having answered the questionnaire of December 9th 2004 don't rely on a formal discount scheme. The criteria used do not appear objective in that the discounts granted do not seem to be correlated to the volumes consumed and to their variations. In other words, the discounts seem to depend mostly on the commercial policy of the operators concerned.

The appearance of discounts on gross IOTs is recent, and the latter have grown with the development of traffic direction techniques.

According to the information the Authority disposes of, Orange France has signed discount offers since 2000, SFR grants discounts since 2001 and Bouygues Telecom has been setting up discount schemes since 2002.

As regards 2004, the number of operators benefiting from these discounts was limited, standing at 13 out of the 78 operators of the EEA.

The level of discounts granted is variable, ranging from 5-10% to approximately 30%. The average level of discounts granted in 2004 is comprised between 10 and 20%.

Lastly, the discounts actually granted are decreasing in number since 2003, and are essentially limited to alliance or group partners, as regards SFR and Orange France (even though relating to self-supply, intra-group purchasing is billed in the same way as any other acquisition).

2.2.5 Conclusion : a Compartmentalization of the Wholesale Market

Traffic direction : a potentially pro-competitive element

The ever-increasing use of recent traffic direction techniques could profoundly affect the price levels of wholesale products offered by national operators.

In the absence of traffic direction techniques, roaming in volumes are allocated to different network operators in a visited territory in a quasi-random way, as call allocation depends only on signal strength in a zone in which the roaming user activates his handset. It is impossible for a visiting network to effectively choose the visited network to which it will send traffic according to its' roaming offer. In such a context, in theory, no operator of the visited territory has an incentive to lower his prices, as this would not have an impact on the quantities of traffic originating on its network[23].

Increasingly effective traffic direction techniques enable an operator to choose a specific supplier and address a greater volume of traffic to the network operator making a more attractive offer than his competitors. In theory, traffic direction can lead to effective competition between network operators, each operator having a strong incentive to make his offer more attractive than those of his competitors in order to attract more demand from foreign networks.

Implementation of traffic direction and discount policy within groups and alliances

The examination of the gross IOT levels and of the discounts carried out by the operators shows that gross prices are unchanged and close to one another over 2000-2004, and that moreover the discounts granted are limited in terms of number of benefactors (most often group members or alliances) as well as in terms of the actual levels attained.

In fact, traffic direction techniques have mostly been used within integration policies inside groups or trans-national alliances, according to the following principle : the traffic is systematically or mainly directed towards an operator of the same group or within the same alliance, discounts being used in this respect to ensure a purchasing discipline that a simple reciprocity would not be able to achieve.

[23] The Commission's sector survey of 13 December 2000 notes "*Mobile operators have no incentive to offer lower wholesale rates because their counterparts, to date, cannot guarantee traffic direction to their networks. This inability to direct traffic to the cheapest of several parallel networks in a visited country makes it difficult for the home operator to realise the type of price-volume trade-offs that could lead the visited countries' operators to cut their IOTs in order to benefit from attracting additional traffic.*"

In this respect, purchasing agreements may not rely on absolute exclusivity, in that the operators only commit themselves to send a certain percentage of traffic to their privileged roaming partners. In this respect, if it is conceivable that the residual part of traffic can be addressed by competition, such competition is necessarily limited in its scope.

As a result of this, the choice of suppliers on the national wholesale market is greatly affected by the group or alliance membership, whose main effect is to compartmentalise the articulation of demand and supply on the market, thus restricting price competition.

Integration policies benefit mostly to the integrated operators

The level of retail tariffs charged by the operators and their stability over time seems to indicate a low elasticity of demand on the retail market to the levels of prices charged by the operators.

However, the comparison of retail prices (section 2.1.3.) and of wholesale prices (section 2.2.4.) tends to indicate a margin level that is not abnormally high. This shows that the wholesale market benefits in the first place of the high level of prices (as regards costs), and that as a consequence network operators carry out a vertical integration that enables them to transfer into their wholesale margin the end-users capacity to pay at the retail level.

Such an integration of wholesale and retail markets through groups and alliances is doubly beneficial for network operators, with respect to the retail market. On one hand, it enables operators to offer retail products that function only on their networks, and whose prices benefit from the suppression of the double margin ("pancake problem") resulting from the sum of the visited network's wholesale margin and the visiting network's retail margin, hence an improved economic efficiency. Moreover, this decrease also enables operators to promote higher roaming consumption, a good example being the Vodafone Passport offer (strategy of the discriminating monopoly).

Given the low elasticity of demand to retail price levels, vertical integration enables operators to maintain retail prices at an overall high level and suppress any advantages that could be had from a competitive intermediary wholesale market.

A prima facie analysis would tend to show that horizontal integration resulting from the prevalence of a group (corporate integration) or alliance (commercial integration) policy between providers and consumers of wholesale international roaming services would significantly reduce operators' ability to switch roaming service providers. Indeed, by purchasing wholesale roaming-in services from partners or foreign subsidiaries, an operator is bound to these partners for the long term and therefore its' ability to switch suppliers is significantly reduced.

This is especially true when roaming partners belong to the same group. In such a case, it appears highly unlikely that a subsidiary would choose a procurement source from outside the group. Not only would this contravene the group and brand logic, but the subsidiary would also lose the quantitative (guaranteed reciprocal roaming-in revenues, counterbalancing of roaming-in and out expenses) and qualitative advantages (ability to offer their end customers a proprietary environment with short-codes that let them keep their access codes to the services offered by the domestic operator, such as message services, etc. even while abroad) of belonging to the group.

To a slightly lower extent, the same is true for alliances, by which operators are contractually obliged to conduct a significant percentage of their roaming service purchases with their partners. This limits the likeliness of switching suppliers, which in return limits competition on the wholesale market, and compartmentalises demand.

In contrast, a foreign operator not restricted by a group or alliance logic has, theoretically speaking, total freedom in choosing its wholesale services supplier in any given country. However, it would not be in its best interest to buy these services from horizontally integrated operators, as it is highly unlikely that it would benefit from any reciprocity, since any horizontally integrated operator would not be likely to send in return the bulk of its' roaming-out traffic, given that it sends its traffic first to its corresponding subsidiary. Because of this, the independent operator would incur roaming-in expenses which would not be counterbalanced by roaming-in revenues from the integrated operator, thereby generating a substantial net trade deficit[24]. It is thus more likely that the independent operator would end up dealing with an independent operator in the foreign country which might agree to reciprocal roaming-out services. This would create a *de facto* integration between independent operators.

Thus, roaming alliances and partnerships compartmentalise supply and demand on the WIR market.

[24] A notable exception would be if, due to the respective sizes of the visiting and visited network operators, the quantity of roaming-in acquired by the visitor were equal to that of roaming-out received on this network through random allocation (low traffic direction efficiency).

Chapitre 3 Intervention of the Authority on this Market

As a preliminary development, it must be stated that the wholesale and retail markets of international roaming are by definition geographically distinct : roaming in products offered in a country are by definition used to offer seamless services in other countries.

From then on, the intervention of a national regulator on the wholesale market of his country is beneficial only to consumers of other countries. The Authority considers that any intervention on this market must necessarily be coordinated amongst member states, in order to avoid causing a regulatory imbalance that would go against the interests of the operators of a given territory. Thus, the Authority calls for a significant involvement of the Commission, that could extend to an intervention.

Moreover, the wholesale international roaming market has been institutionally shaped, at a European level, via the GSM Association. For instance, the STIRA, as the model contract applicable to any roaming partnership, tends to homogenise the functioning of the different markets to which it applies. In this respect, the conclusions that the Authority could take on the French market, could be extended, *in ceteris paribus*, to other member states of the EU.

The Authority wishes to submit three options to public consultation :

• *Definition of Remedies within the Framework of a Market Analysis*

The first option consists in implementing remedies within the framework of the market analysis carried out below, which comprises a definition of the relevant markets as well as an analysis of market power.

Such an exercise implies that the Authority applies the current regulatory framework (Framework Directive and relevant Commission guidelines) to the facts of the market, leading to a relatively open definition of joint dominance.

Very briefly, a "tacit collusion" takes place when firms are able to implicitly (hence "tacit") follow a group behaviour ("collusion"), which amounts to monopolisation effects. In doing so, firms abstain from betraying/straying from the equilibrium in order to ensure the benefit of a long-term collaboration. For instance, EU merger control case law ("Airtours") considers that a merger can lead to a market situation that is conducive to a tacit collusion when the following conditions are met : the market must be transparent in order for any deviation to be detected, firms must have a means of deterring or punishing isolated rivals from challenging the cooperative outcome ; lastly, the tacit behaviour must be sustainable with regards to new entrants on the market.

On the wholesale international roaming market, the market situation seems different from that of a "tacit collusion", in any case at a strictly national level. Indeed, each of the firms on the market individually implements a monopoly price on its wholesale products ; this reflects the fact that the current wholesale prices were established at a time when for technical reasons traffic was randomly allocated between networks of a given country, which is conducive to monopoly pricing. Contrarily to a collusive outcome, this market outcome is stable, in that it does not proceed from collaboration but from individual decisions relating to short term interests. According to ARCEP, the fact that this equilibrium hasn't been challenged by the appearance of effective and widely-used traffic direction techniques, which made the market potentially competitive, characterises a joint dominance on the market by which operators are able to maintain the offers made under their previous monopolies.

Such a joint dominance relates to a "tight oligopoly" market configuration of oligopolistic interdependence, of which tacit collusion is a specific case.

To ARCEP's knowledge, no point of European law outlaws the use of such an economic concept to legally qualify joint dominance ; thus, ARCEP esteems it has the legal backing to put forward this qualification, and notes that it can thrive as long as the Commission refrains from limiting joint dominance to tacit collusion.

• *Examination by the European Authorities of the Market Situation with respect to Article 81 of the EU Treaty*

ARCEP considers that the market for roaming has been shaped, on an institutional basis, at a European level by the GSM Association, who has in particular set pricing rules, wholesale tariff transparency, as well as the model contract. This involvement may have, for certain aspects, led to a homogenization of behaviour between European operators and thus between national operators.

For instance, the STIRA, which is the standard form of agreement applicable to any roaming partnership, presumes that only network operators have access to the wholesale market, which tends to exclude MVNOs, thus limiting the perspectives of competition by the latter, acting as suppliers on the retail market and as demanders on the wholesale market.

In this respect, the compatibility of STIRA with article 81 of the Treaty is under examination of the Commission (Case Comp/C-1/37034). The STIRA applies in an identical fashion for all national markets, thus it seems that the Commission seems to be the only institution competent to carry out this analysis.

Moreover, the Freemove and Starmap alliances are currently being checked as regards their conformity to article 81 by the European Commission. By a press release on the December 1st 2005, Bouygues Telecom announces it had brought a case concerning alliances before the Commission.

Generally speaking, the constitution of alliances and other forms of exclusive cross-purchasing between operators belonging to a same group may facilitate parallelisms of behaviour between firms on a pan-european scale. Such a parallelism consists in an integration policy compartmentalising the wholesale market, which enables operators at a European level to maintain high price levels with respect to underlying costs despite traffic direction techniques.

This behaviour could contravene with article 81 TEU, and ideally the Commission could pronounce itself on this point.

• *Direct regulation by the European Legislator*

In case there are no grounds for a legal case and the current framework for a market analysis proves to be inadequate, one last means of action could be direct regulation implemented by a EU act of legislation. The European legislator has over the past years adopted such means of regulation in the fields of unbundling and trans-frontier retail banking services (regulation n°2560/2001).

The implementation of such a regulation has to be further defined, and in any case the actual possibilities are multiple. A regulation could, at a wholesale level, consist in setting an obligation of offering roaming in (including to MVNOs), that would be accompanied by a price control consisting in a principle of non-excessive prices on these products, and/or the adoption of price caps by the Commission.

Another form of regulation, completing the previous, could consist in offering retail customers the possibility of selecting a roaming operator, as a form of carrier pre-selection.

Lastly, as for international retail banking services, it might be possible to consider a mechanism of indexation of retail or wholesale roaming tariffs with other tariffs.

3.1 Market Analysis

In application of the aforementioned directives, the Commission has adopted a recommendation defining a list of 18 markets and has published guidelines on the market analysis procedure. Market n°17 of the list of the aforementioned recommendation is called "*national market of international roaming services on public mobile telephony networks*". The market analysis conducted by the Authority leads to a probable lack of tacit collusion at a national level, but to a finding of market configuration presenting the characteristics of a tight oligopoly, through which operators are able to price products at a much higher rate than competitive prices, without any perspective of competition limiting this power.

It seems to the Authority that though the EU framework (Framework Directive and Commission guidelines[25]) recommends that the national regulatory authorities (NRAs) refer to the Airtours CFI case-law (June 6th 2002) when considering oligopolistic market configurations that do not lead to competitive market outcomes, it doesn't exclude that the notion of joint dominance, as applied in an ex ante regulatory context, could be applied to other market configurations than tacit collusion, and in particular to a tight oligopoly situation, that is to say to a market configuration in which the sub-competitive market outcome stems from a non-collusive strategic complementarity of operators. Indeed, according to article 14 of the Framework Directive, joint market power is defined as the capacity to behave, to an appreciable extent, in an independent manner from competitors, customers, and consumers, which is fully the case.

The market analysis procedure has been launched by the Authority, in keeping with the directives, as soon as possible after the adoption in February 2003 by the Commission of the recommendation on relevant markets, given the need to carry out a trans-national request for information drawn out in the ERG, and given the time the operators took to answer the questionnaire.

3.1.1 Definition of the relevant market

[25] Commission guidelines on the market analysis and the evaluation of market power in application of the EU framework for electronic communications networks and services 2002/C 165/03

According to the Commission's recommendation[26]:

"*Wholesale international roaming services provide access and capacity (airtime minutes) to a foreign mobile network operator for the purposes of enabling its subscribers to make and receive calls while on another operator's network abroad. International wholesale roaming services are thus provided by a domestic mobile network operator (visited network) to a mobile network operator in another country (home network).*

Wholesale international roaming satisfies a demand by foreign mobile network operators whose main objective is to offer their own subscribers a seamless service, not limited to the territory in which they have their own physical network. This operators' demand results from a demand from their subscribers to be able to make and receive calls on their mobile terminals abroad without having to acquire a new SIM card, or enter into another subscription with a foreign GSM operator, while enabling them to keep the number they use on their home network."

In order to understand the functioning of the wholesale international roaming market, it is necessary to describe the set of retail services whose provision is made possible by the wholesale service. The Authority wishes to remind that such a description doesn't entail a legal qualification.

3.1.1.1 Market Definition

The delineation of the markets aims at defining the scope, in product and geographic terms, of markets that might fall under ex ante regulation. In accordance with the European Commission's aforementioned guidelines, which the Authority must apply as stringently as possible (article D. 301 of the CPCE), this market delineation is carried out in keeping with the provisions of the Framework Directive and in compliance with competition law principles.

As a preliminary remark, article L. 37-1 CPCE stipulates that the Authority must delineate markets « *with particular regards to obstacles to the development of an effective competition* ».

Thus, in order to qualify a relevant market for the sake of sectorial regulation, one must conduct a market analysis of competition.

In order to define the markets for international roaming, the Commission recommendation relies on three criteria :

- The presence of high and non-transitory barriers to market entry ;
- The absence of evolution towards a situation of effective competition ;
- The insufficient efficiency of competition law.

The Authority considers, in keeping with §36 of the Commission guidelines, that, the wholesale international roaming market being defined by the Commission, it is not necessary to demonstrate again the elements that have been taken into account by the Commission in its' recommendation, and upon which the Authority shares the same

[26] Explanatory memorandum pp. 31 et seq.

appreciation. The recommendation precises indeed that these criteria must be re-examined by the NRAs when they consider regulating « *markets that do not figure in the recommendation* ».

However, in keeping with article L. 37-1 CPCE, the Authority shall, within the present analysis, demonstrate that the identified markets are relevant.

3.1.1.1.1 Methodology of the delimitation of markets in terms of products and services

In delineating market boundaries in terms of products/services, must be analysed :

- Demand-side substitutability: two products belong to the same market if they are sufficiently interchangeable for their users, in terms of the use made of them, of their characteristics, their price, their conditions of distribution, the cost of "migrating" from one product to the other, etc. Case law shows that, independently of public regulations, three factors are generally accepted as differentiating the markets for products having identical or similar technical characteristics: the product characteristics, its conditions of use and its mode of sale.

- Supply-side substitutability: there is supply-side substitutability if an operator which is not currently present on a given market could enter it in the near future in response to an increase in the prices of the products sold on it, without exposing itself to excessively high costs. If it is easy for firms to move from one market to another with only minor entry barriers (few differences requiring adaptations to technical production or equipment, reasonable times and investments to modify production facilities), it would be impossible for the suppliers present on either of these markets to avoid competition, so it would be appropriate to treat these markets as a single market. If, however, potential competition is weak, the two markets would have to be treated as different markets to reflect the real market power of the firms present.

- A third criterion which can be analysed is related to the existence of shared competitive constraints, and especially prices, in addition to the first two criteria. Certain products are mutually unsubstitutable on the markets we analyse, primarily because of how they are used, so they are sold or consumed together: such as ranges of services offered in bundles. It might be relevant, then, to include the services in the same market.

One possible way of assessing the existence of demand or supply-side substitution is to apply the "hypothetical monopolist test", as suggested by the Commission guidelines. On the demand side, this involves asking what consumers' reactions would be to a small but significant and permanent increase in the price of a given product or service (5 to 10%), in order to determine whether substitutable services do exist. As the guidelines explain, this test's importance lies primarily in its use as a conceptual tool; so it does not require any systematic extensive econometric study.

3.1.1.1.2 Delineation of the market boundaries in geographical terms

According to point 56 of the aforementioned guidelines, from a geographic viewpoint, a relevant market is a "*territory on which the firms concerned involved in providing or demanding products or services are exposed to similar or sufficiently homogeneous competition conditions and which is different from neighbouring countries on for which the competition conditions are significantly different*".

Under the Commission guidelines, two main criteria are used to delineate the geographic boundaries of electronic communications markets : on one side the territory effectively covered by the networks, and the existence of legal instruments which distinguish between geographic areas or, on the contrary, which show that the market is of a national scale.

3.1.1.2 Examination of the retail market for international roaming ("roaming out")

3.1.1.2.1 Services available in international roaming situations

International roaming services enable an end-user to use, from his handset, access to the network of a visited territory, and receive incoming (terminating) calls, as well as carry out outbound (originating) calls.

• Incoming and outbound voice calls

Outbound calls are billed by the minute on top of the subscription rate or prepaid offer. For incoming calls, a retail reception charge is billed by the operator of the subscriber having made the call.

• SMS

SMS services were launched in 1996, appearing with the GSM standard. In addition to interpersonal contacts, SMS are used by mobile operators to send targeted information to their customers.

Recently, network operators have begun offering their customers SMS sending and receiving services in a roaming situation, under the same conditions as for domestic use, but with specific pricing conditions. Receiving SMS is usually free of charge for the end-user.

• Voice services provided by third parties and value-added SMS

Value-added services can be accessed from a mobile line either through a voice call or by SMS. Currently, however, SMS access is offered only in Metropolitan France, and by Orange Caraïbe in Antilles-Guyane.

Charges for these services include remuneration for the mobile operator and content supplier as well as any transit operators. Operators have set up a two-part pricing menu comprising a base price (one minute of voice or one SMS) and a mark-up which depends on the billing threshold chosen by the service supplier.

However, currently, these services do not seem accessible in roaming under operators' retail offers. They are therefore *de facto* excluded from the retail international roaming market.

• Low-band multimedia services other than SMS

Currently, multimedia services other than SMS are offered using essentially GPRS technology.

It is important to note that a specific handset with GPRS abilities is required to access services based on GPRS technology.

Two main types of services[27] are offered using GPRS technology :

- interpersonal communication services via multimedia message services:
  - MMS
  - instant message services (from MNOs or third party operators)
  - mobile access to fixed e-mail message services
- mobile browsing services, which can take different forms:
  - free Internet browsing: World Wide Web (WWW)
  - access to the mobile operator' own portal (which, for Orange, SFR and Bouygues Telecom are respectively Orange World, Vodafone Live!, and I-Mode)

It is important to note that retail roaming offers for MMS and e-mail, launched in Metropolitan France, have been available only since 2003 (1st January 2003 for Bouygues Telecom's GPRS service, 1st May 2003 for Orange and 1st December 2004 for UMTS, 13 March 2002 for SFR).

• Broadband multimedia services

From a prospective point of view, it cannot be excluded that these services (Visiophony, mobile TV, etc.) may develop within an international roaming context.

3.1.1.2.2 Services available when roaming belong to a much wider set of services

Mobile telephony services include roaming out as standard in their offers. In other words, a mobile telephony offer necessarily includes the possibility to consume mobile telephony services as a roamer. The end-user may consume these services automatically or after registration with his operator. He may not contract with an other mobile operator.

The services examined above most often have different uses. To strictly apply the substitutability criterion on the demand side, might lead to defining a separate market for each mobile communications service, since these services are not strictly substitutable. On the other hand, users are indifferent to the technology used (GSM/GPRS or UMTS) for any given service, as long as it offers equivalent functions in a roaming context.

However, these services all belong to the same offer of the network operator, as a bundle[28].

[27] This list is not exhaustive and may also include new services currently under development or in the commercial launch phase (e.g. services based on position determination technology)

3.1.1.3 Conclusion

As the Commission points out in its' guidelines, an analysis focused on the sole substitutability in demand terms can lead to multiplying relevant markets, which burdens the analysis of the conditions of competition on the considered markets. Market delineation must thus take account of offer substitutability of the homogeneity of competition constraints, which leads to bundling within the same retail market the set of services offered by operators to their consumers, including those who roam.

3.1.2 Delineation of the Wholesale Roaming-in Market

In its recommendation[29], the Commission states that the definition of a vast retail market for retail outbound calls, comprising national, international and roaming calls does not preclude the definition of a specific national market for the provision of international roaming services. This has led the Commission to define a national market for the wholesale provision of international roaming on public mobile telephony networks (market 17 in the recommendation) corresponding to the provision of the wholesale service which lets an operator guarantee seamless service for its mobile customers on a provider network located in another country.

ARCEP distinguishes between this service provided on the wholesale international roaming market and the service by which network operators in one country resell on the access and call origination market (market 15) international roaming services they have acquired from the MVNOs they host on their networks. This type of service is not covered by the market discussed in this analysis, but by the wholesale access and call origination market.

3.1.2.1 Delineation of the Boundaries for Products and Services

According to the Commission's recommendation[30], there is a very limited scope for either demand -or supply-side- substitution for wholesale international roaming offered by an MNO. Mobile international roaming is characterised by the following requirements :

- coverage (having signal)
- accessibility (being reached at a given number on a particular SIM card, *i.e.* on the usual mobile number)
- mobility (being reached when on the move)

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[28] Newell/Rubbermaid decision, by which the Commission indicated that "*Although both product lines are composed of a variety of individual products, which possibly differ in their physical characteristics, such as their shape, colour or material, however, it can be held that each product line, that is, home storage systems, on the one hand, and food storage containers, on the other, constitute separate relevant product markets. In line with the previous practice of the Commission, the relevant product markets could qualify as a 'full line' or 'cluster' of individual products that are marketed by all (or most) suppliers and are purchased by all (or most) customers in this particular industry. A strictly applied demand-side substitutability analysis driven only by the products' physical and functional characteristics for end-users would support the conclusion that many of the several individual storage products would constitute separate "micro" product markets. This would, however, give a misleading picture of the relevant competitive dynamics*" (decision n°IV/M.1355 Newell/Rubbermaid January 13th 1999).

[29] "*Explanatory memorandum*" pp. 31 et seq.

[30] More precisely its explanatory memorandum: *Explanatory memorandum*, *Commission Recommendation on Relevant Product and Service Markets within the electronic calls sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services*, p. 31 et seq.

With respect to the three criteria above, we will examine below why international roaming offers cannot be substituted by other fixed or mobile products.

3.1.2.1.1 Substitutability with other Mobile Offers in the Visited Country

It could be considered that retail international roaming offers could find a substitute in the retail offers of mobile communications emanating from other mobile operators in the visited territory, which would be conducive to a competitive pressure on wholesale roaming products.

As operator pre-selection is not possible, the mobile customer has to purchase a new SIM card and install it in the handset in order to use this type of offer. Not only does this require certain manipulations on the handset –which has to be de-simlocked- but it also results in the loss of the original number as well as of various functions linked to the original SIM card (directory, etc.).

The obligation to provide a new SIM card goes against the accessibility criterion mentioned above. It is true to say that on the retail market certain users (especially those staying for a relatively long time in the visited country) might consider this duplication as a backup solution to avoid the extensive consumption of roaming-out services. However, it seems that the differences in the conditions of use between the consumption of roaming-out and the provision of a new SIM card make it impossible to consider these two solutions as substitutable.

The differences in rates between local rates and those billed in case of roaming tend to demonstrate this lack of substitutability.

3.1.2.1.2 Substitutability of Mobile Wholesale Access and Call Origination Offers

Another possibility would be, for the visiting operator, to become MVNO on the visited territory and to provide thus seamless service to its' customers, for instance through a multi-IMSI SIM card that could be registered with different networks, associated with a re-routing of calls to a home number. Thus, an end-user could subscribe to different networks, and benefit from local rates for his calls made from abroad, and could be called on the same number whichever network he roams on. Such a service is offered on an operator-specific basis by Transatel. Relying on a proprietary technology, it cannot be offered on a generic basis.

In this sense, the provision of wholesale international roaming offers may find a substitute in the provision of access and call origination wholesale products, but this configuration is currently limited, which isn't conducive to a competition-led pressure on roaming in prices, as demonstrated by the difference in prices with these products.

3.1.2.1.3 Substitutability of National Roaming Offers

National roaming services are provided by one mobile network operator to another mobile operator licensed for the same geographic area —or for part of it— in order to provide its' customers with seamless service on the parts of the geographic area not covered by the client-operator's own mobile network. Therefore, from a regulatory point of view, these national roaming services cannot be offered to a foreign operator. Moreover, national roaming offers are limited to zones which don't benefit from full network coverage ("*zones blanches*"), and thus their scope is necessarily limited.

Therefore, ARCEP does not consider that the consumption of national roaming offers constitutes a possible substitute to the acquisition of wholesale international roaming services.

3.1.2.1.4 Limitation of the Wholesale Market to Outbound (originating) Communications

The wholesale roaming market only offers outbound (originating) communications, as inbound (terminating) communications relate to market 16. In this respect, this analysis only deals with outbound communications offered on the wholesale market.

3.1.2.2 Multi-network Market

The wholesale international roaming market identified above is a unique market integrating all network operators, i.e., it is not formed by individual markets for each operator.

Since national networks have similar coverage and quality of service, if a mobile operator increases its wholesale tariffs, a foreign operator wishing to purchase wholesale services in order to provide roaming services to its customers on the retail market could simply choose the offer of another network operator. This means that roaming services are basically substitutable one for another.

It is likely that this conclusion remains valid even if traffic direction were only marginally effective, in that the services offered are very comparable, whatever the possibility of effectively preferring a network to another.

3.1.2.3 Conclusion

International roaming services consist in wholesale products of conveying outbound end-to-end communications in 2G or 3G, comprising to this day voice, SMS, low-band multimedia services other than SMS (such as MMS or GPRS data transfer services), from a visited network located on a territory on which the visiting operator has no license.

3.1.3 Delineation of the Geographic Market

According to the Commission guidelines for the market analysis and on the evaluation of market power (2002/C 165/03), the relevant geographic market is composed of an area in which firms supply and demand relevant products or services on similar or sufficiently homogenous competitive terms, and which can be distinguished from neighbouring areas because the competitive terms are appreciably different from those areas.

In the hypothesis that the network operators present in a given territory offer complete coverage of their country, and given the fact that according to the GSM Association only mobile network operators are able to conclude roaming agreements, a foreign network operator wishing to purchase wholesale roaming services for this country may purchase these services from each of these network operators, without being able to turn to the network operators of another territory. Because of this, the geographic market covered is national. In this respect, the geographic market covered is national, and can, as is the case, be subdivided into different territories.

Given the authorizations of use of frequencies granted to operators on the French territory and reminded in section 1.3.3.1, different geographic markets corresponding to Metropolitan France, the Antilles-Guyane zone (consisting in, as Appendix A reminds, Guadeloupe, Martinique and Guyane), Réunion, Mayotte, Saint-Pierre et Miquelon. As regards the aforementioned guidelines, the network operators present on these territories offer unsubstitutable services ; thus these territories constitute separate relevant geographic markets.

The Authority might consider, in the long run, that the current policy of partnership between national operators belonging to a same group or alliance may lead to the delimitation of a trans-national market. In any case, this delineation is up to the European Commission, in application of article 15.4 of the Framework directive.

3.1.3.1 Conclusion

In conclusion, the relevant geographic market for wholesale international roaming services from French networks comprises 5 zones : Metropolitan France, the Antilles-Guyane zone, Réunion, Mayotte and Saint-Pierre et Miquelon.

Incidentally, it must be noted that the expression "international roaming" is improper, in that the actual service it describes covers the administrative boundaries of a single nation.

3.1.3.2 List of markets

In conclusion, the Authority has identified five wholesale markets for international roaming on public mobile networks that consist in end-to-end outbound communications in 2G and 3G, comprising voice, SMS, low-band multimedia services other than SMS, such as MMS or GPRS, from the visited network, on the following territories : Metropolitan France, Antilles-Guyane, Réunion, Mayotte and Saint-Pierre et Miquelon.

3.1.4 Analysis of market power on the wholesale market

The Commission has designated the wholesale market considered as relevant in its' recommendation (market 17). Thus, the Authority carries out a legal qualification of competition dynamics on this markets with respect to the concept of significant market power. Certain aspects of the retail market shall be evoked in this analysis, however the Authority shall not conduct a formal analysis of the retail market. In any case, it is worthwhile mentioning that wholesale offers aren't related to the retail products offered on the same geographic market (in other words, the French retail market isn't situated in the downstream of the wholesale market).

3.1.4.1 General Principles of Analysis and Methodology Undertaken

3.1.4.1.1 General Principles of Analysis in view of Qualifying Individual Power

Under article L. 37-1 of the CPCE, "*an undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers*".

As stated in the Commission guidelines, in application of the principles of case-law, a firm's market share is an essential—though not sufficient—criterion for market power, i.e. of a dominant position on this market. Indeed, very large market share—in excess of 50%—makes for strong evidence of a dominant position, except under exceptional circumstances.

Furthermore, changes to the market share of the firm and its' competitors are another factor for appreciating a dominant position on this market. A market share can be determined using volumes or turnover ; the characteristics of each market will determine the most relevant indicator. Furthermore, in accordance with the Commission guidelines, because the analyses are dynamic and forward-looking, the information has to cover an appropriate period of time.

Market share alone is not sufficient to establish the existence of individual dominance. In application of both national and Community case law and the Commission's market analysis guidelines, more qualitative criteria must also be taken into account:

- overall size of the firm
- control of infrastructure not easily duplicated
- technological advantages or superiority
- lack of or low countervailing buying power
- product/service diversification
- vertical integration of the firm
- a highly developed distribution and sales network
- lack of potential competition or high entry barriers on the market
- existence of price competition
- easy or privileged access to capital markets/financial resources, economies of scope or of scale
- the firm's reputation and anteriority on the market[31]

[31] This criterion does not appear in the Commission guidelines but is taken from case law.

3.1.4.1.2 ARCEP's approach to appreciating joint dominance

In discussing the examination of joint dominance, article D. 302 of the CPCE states "*significant influence as understood by article L. 37-1 may be exercised by several operators when the market presents a structure considered as favourable to producing coordinated effects, even if there is no structural or other link between these operators. Such a situation may appear on a market presenting several appropriate characteristics, especially in terms of concerted practice and transparency, as well as other characteristics, including*:

- *mature market*
- *stagnation or moderate growth on the demand side*
- *low demand elasticity*
- *homogenous products*
- *similar cost structures*
- *similar market shares*
- *lack of technical innovation, mature technology*
- *absence of excess capacity*
- *high entry barriers*
- *lack of countervailing buying power*
- *lack of potential competition*
- *various kinds of informal or other links between the firms concerned*
- *retaliatory mechanisms*
- *lack or reduced scope of price competition*

It states: "*The above list is not an exhaustive, nor are the criteria cumulative".*

According to the Commission guidelines on the market analysis and the evaluation of market power in application of the Community regulatory framework for networks and electronic communication services (2002/C 165/03), "*in the Access notice, the Commission had stated that, (...) [it would] consider two or more undertakings to be in a collective dominant position when they had substantially the same position vis-à-vis their customers and competitors as a single company has if it is in a dominant position, provided that no effective competition existed between them"*.

In addition to the criteria defined explicitly by the Commission or by legislation, ARCEP has examined the case law of the Court of First Instance of the European Communities, which in its Airtours/Commission ruling of 6 June 2002 (case T-342/99) expressly stated that three cumulative conditions were required for a position of collective dominance to be determined legally, in the form of tacit collusion.

Appendix B focuses upon the concept of collective dominance from a competition law and economic viewpoint.

3.1.4.2 Specific nature of ARCEP's analysis

It is important to remember that this analysis, which is conducted in a forward-looking manner, aims at determining whether *ex ante* regulation would be appropriate on the market.

Therefore, this analysis may have different results than if *ex post* competition rules were applied, in that ARCEP does not examine past conduct, abuses of dominance or agreements. Furthermore, ARCEP's analysis is also different from an *ex ante* merger control, which consists in analysing the risk of a merger for the market's structure, as opposed to the regulator's task of qualifying the market structure and assessing the chances that this structure would be unlikely to change in the absence of intervention.

Moreover, the reasons listed in the Commission's recommendation state that "*The starting point for carrying out a market analysis for the purpose of Article 15 of the Framework Directive is not the existence of an agreement or concerted practice within the scope of Article 81 EC Treaty, nor a concerted practice within the scope of the Concentration Regulation, nor an alleged abuse of dominance within the scope of Article 82 EC Treaty, but is based on an overall forward-looking assessment of the structure and the functioning of the market under examination.*".

Therefore, an examination of market power in a market analysis is a new exercise with respect to the practice of competition authorities. So, while ARCEP will seriously consider EU case law, it will also be very attentive to the specific nature of the exercise it is conducting.

3.1.4.3 Analysis of the Metropolitan market for wholesale international roaming

The analysis of the wholesale market (Chapitre 2) has led to highlight an absence of competition between the network operators, ascertained by the existence of high, unvarying prices presenting a stable and even increasing level.

The following developments rely mostly on the operator's answers to the questionnaires issued on December 9th, 2004, and consist in describing market and operator characteristics that are conducive to a joint dominance, after which are examined the perspectives for a collusive outcome of the market, whose sustainability could be verified by the CFI's Airtours case-law, or, as may be the case, of a non-cooperative equilibrium (tight oligopoly), by which firms individually carry out sub-competitive pricing.

3.1.4.3.1 A market structure that is conducive to joint dominance

A review of demand and supply characteristics leads to the conclusion that the market is concentrated and relatively mature.

• A market with high entry barriers

As the Commission explains in its recommendation, two types of entry barriers must be distinguished : those resulting from "*legislative, administrative or other state measures that have a direct effect on the conditions of entry and/or the positioning of operators on the relevant market"* and those which result from economic or technical conditions inherent to the market.

From a strictly technical point of view, to ARCEP's it knowledge, it seems difficult to conceive that an MVNO may provide wholesale international roaming services. Thus the only potential suppliers on the latter market are network operators.

Because of the identity of service providers on the wholesale roaming market and on the access and call origination market, ARCEP considers that the entry barriers on this wholesale market are the same as those which were identified on market 15[32].

In the analysis of market 15, ARCEP considered that the mobile telephony market had high entry barriers for any player wishing to become a network operator.

- Regulatory entry barriers

Mobile network operators require frequencies. But because frequencies are rare resources, their allocation is governed by the CPCE (article L. 42 *et seq.*).

The services included in the retail market, that is, primarily voice calls and SMS, can be provided primarily using GSM (2G) or UMTS (3G) frequencies. Because of the scarcity of these resources and the investments that have to be made in order to cover the country, the number of operators active on the mobile market is limited.

In Metropolitan France, the scarcity of available GSM frequencies is warranted by the fact that they have all been attributed to the three operators in place so there would be no resources available for a new entrant wishing to become a mobile network operator.

One authorisation is still available for UMTS frequencies. If it were to be allocated under the same conditions as the other three authorisations, an operator would be required to pay a large sum, with a fixed fee of €619 million and an annual fee equal to 1% of turnover. To date, ARCEP has received no specific requests for the last available UMTS authorisation.

The recipient of this authorisation would also have to respect other obligations, in particular, minimum coverage of the population in Metropolitan France within a specific time interval. The mandatory minimum coverage rate (within 8 years of the date of issue of the authorisation) is 60% of the Metropolitan population, and the operator must have covered at least 20% of the population within 2 years of the date of issue of the authorisation.

- Economic barriers to entry

In order to launch commercial offers to end customers, a firm wishing to become an electronic communications operator using a network must not only obtain an individual frequency usage authorisation but also have significant financial resources at its disposal in order to be able to deploy a network compatible with a commercial launch, independently of any coverage obligations such a launch.

As a general rule, the need for initial investments in capital-intensive industries constitutes a high natural entry barrier, even when compared with prospects of future profits.

Beyond the commercial launch, the eventual deployment of a mobile network covering the entire Metropolitan territory requires investments estimated at several billion euros

[32] http://www.arcep.fr/dossiers/mvno/projet-art-05-0331.pdf

(according to data available to ARCEP) regardless of whether the network uses 2G or 3G technology. The largest percentage of the investment is the radio part of the network which can include more than 10 000 radio sites.

To these infrastructure investments, must be added difficulties in acquiring wireless network deployment sites ("high points"). These are rare for a new entrant because of the presence of three players already deployed, and are relatively inaccessible because of negative public opinion regarding the installation of new wireless transmission sites.

The investment required for sales penetration in order to establish a sufficient customer base in a relatively mature market is also high.

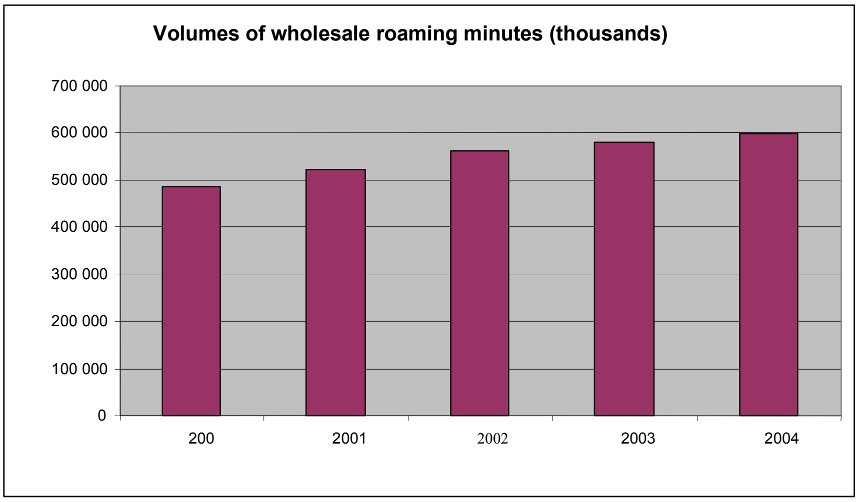
Since, according to the instructions of the GSM Association, MVNOs cannot purchase services on the WIR market (e.g. for resale to foreign network operators), it is not relevant to examine the barriers to providing retail mobile services without owning a wireless network.

In conclusion, there are real entry barriers as a mobile network operator and provider on the WIR market in Metropolitan France.

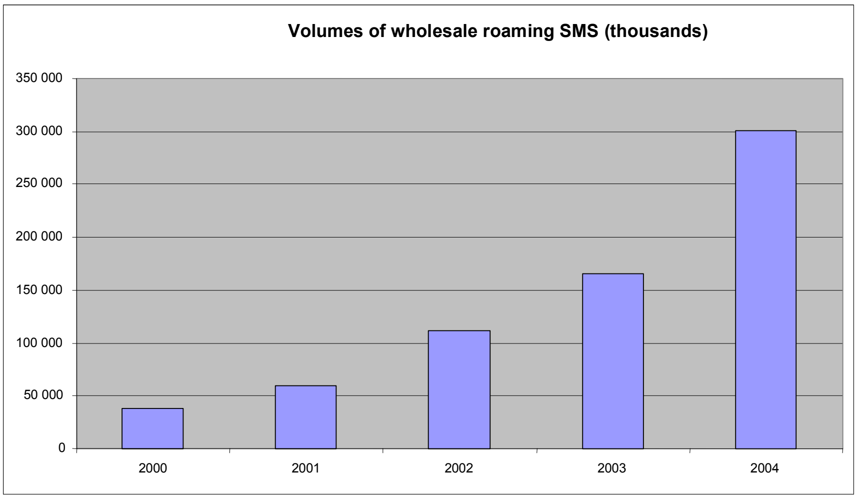
• Market maturity, stagnation or moderate growth of demand

The following data indicates a moderate market growth :

- *Volumes of wholesale roaming in minutes sold by French operators*



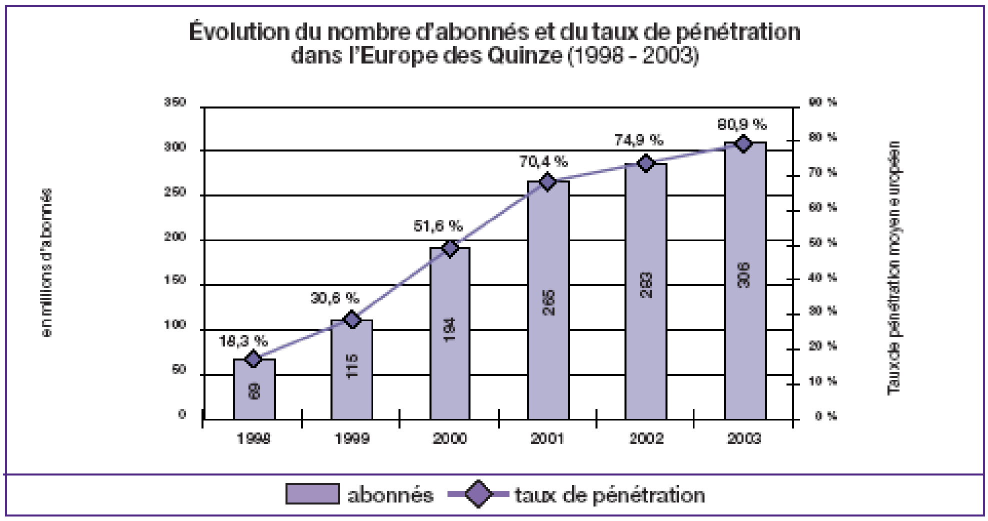
- Volumes of wholesale roaming in SMS sold by French operators



- Analysis

One can observe growth of approximately 20% in volumes of wholesale international roaming minutes for the period 2000-2004, for annual growth of close to 3.6%.

This can be compared with the growth of the penetration rate on the European market during the period, +76.1% for 2000-2003 (cf. graph below), with an increase in use (between 2001 and 2004, in France, voice traffic rose 30%) and also with an annual increase in national tourist numbers (excluding business visitors) of 2.8% between 1990 and 2003 (or 8.6% during the period 2000-2003, according to the governmental statistics agency INSEE).



Source : 9e rapport de la Commission européenne, données août 2003

Given these elements of comparison, and taking into account the growth of travel and of retail mobile communications market over the time period, the wholesale market seems to be experiencing modest growth similar to that of a mature market.

3.1.4.3.2 A market configuration that is conducive to strategic proximity of the operators

The Framework directive sets a series of market characteristics that are conducive to a strategic proximity/convergence between operators, or at least to the fact that they share the same interest in muted competition. Such a situation is all the more likely that the operators share a similar profile. In this respect, the Framework directive[33], as transposed in the "Market Analysis" decree (art. D. 302 CPCE) holds that significant joint market power is conceivable on a market presenting several appropriate characteristics, especially in terms of :

- *homogeneous products*
- *similar cost structures*
- *similar market share*
- *lack of technical innovation*
- *mature technology*
- *lack of excess capacity*

• Lack of excess capacity, production capacity

The lack of excess capacity can be a factor reinforcing the stability of a shared strategy. However, it makes it difficult to apply retaliatory mechanisms should an operator deviate from the shared strategy.

Also, for this criterion, the similarity in profiles depends primarily on whether the operators have excess capacity. To ARCEP's knowledge, the situation of all three mobile operators is similar on this level, especially when taking into account Orange France's and SFR's roll-out of UMTS networks in high-density environments.

• Market share and shared strategy

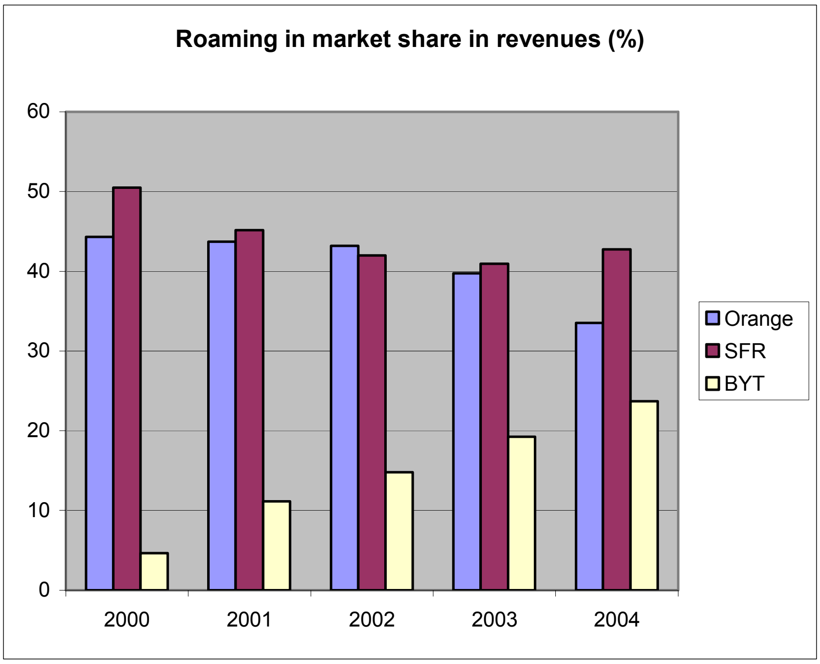
No single operator appears to possess a large enough market share and/or a significantly greater share than its competitors, characterised by its' stability.

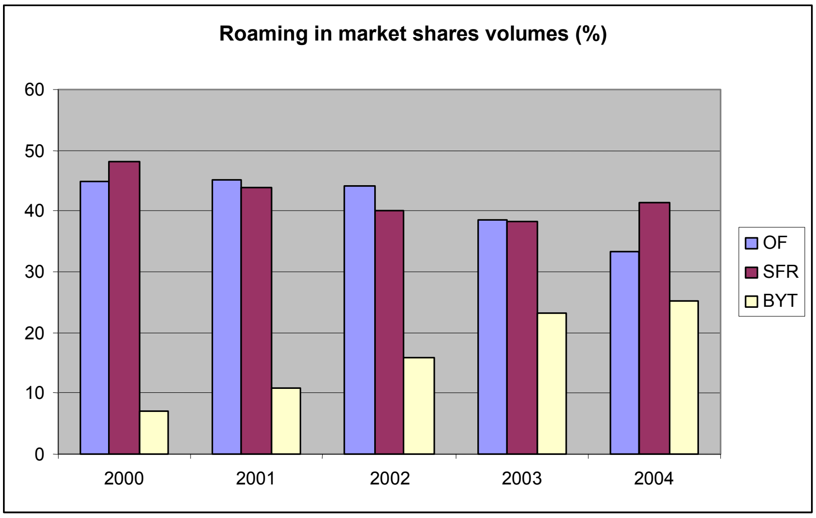
• Production capacity

A lack of excess capacity can increase the stability of a concerted strategy. On the other hand, retaliatory mechanisms are less likely.

[33] of which appendix II states that two firms or more may occupy a joint dominant position in the sense of article 14 even if there is no structural link or other between them, as long as they operate in a market whose structure is considered to be conducive to coordinated effects

Thus, for this criterion, the similarity in profiles depends primarily on the shared presence or lack of excess capacity. However, to ARCEP's knowledge, the situation of the three mobile operators is similar on this level.





Orange France and SFR can be considered as having similar market share, and Bouygues Telecom has been approaching this market share significantly over the five years considered. In any case, ARCEP considers, with the European Commission[34], that asymmetrical market shares are not incompatible with the existence of a shared strategy between operators.

[34] Cf. for example the *UPM/Kymmene* case, COMP/M-2499

To the knowledge of the Authority, the very strong variations of market shares stem from two main elements :

- a structural/technical reason, due to the roll-out of the Bouygues Telecom network, which has probably gained in connectivity from a gradual switch from 1800 Mhz to 900 Mhz frequencies ;

- the Vodafone Group policy of promoting a systematic use of traffic direction in terms of internalisation, having for effect that SFR has a proportionally higher market share than its competitors

Thus, the variations in market shares are more due to exogeneous factors than to a significant increase in competition (price-led for instance).

• *Similarity of costs and levels of output capacity*

In principle, operators with the same cost structures have a strategic interest in establishing a collusive equilibrium, which is made even more sustainable when no player has a higher incentive than the others in leaving this shared equilibrium. Thus, the probability that firms tacitly coordinate their conduct is all the greater if the firms have the same understanding of what constitutes an equilibrium sale price.

Although, at the start of their deployment, the operators had frequencies in different bands, they now have equivalent quantities of frequencies in the 900 MHz and 1 800 MHz band. They have also deployed GSM networks with large coverage in accordance with their authorisations, which impose a minimum coverage rate of 90% of the Metropolitan population (for those in force until March 25th 2006[35]). Therefore, they must have similar investment costs, as confirmed by their financial reports. This would indicate a general similarity in costs for the three Metropolitan mobile operators. Certain operators have increased their coverage of certain travel transit areas (BTS, advertising), yet this type of additional cost seems marginal given the operating costs of national networks.

In conclusion, ARCEP considers that the three network operators have very similar variable and marginal costs on the WIR market.

• *Lack of technological advantages*

The maturity of the technology limits the number of possible technical innovations. Maturity increases visibility on the market, and therefore transparency, while it reduces the possibility for players to obtain a technological edge conducive to a competitive advantage.

Second generation technologies allowing operators to offer services such as access, voice, or SMS, have reached such a degree of maturity that they are accessible to all mobile operators without offering any particular advantage. Furthermore, no operator is likely to benefit from a competitive advantage because of significantly greater coverage or better quality of service. Within the time interval of the present analysis, the offer of roaming in services in UMTS is too recent for it to be possible to infer that such an offer could constitute a competitive advantage for some suppliers, that could hinder a common conduct between operators.

[35] Orange France and SFR's GSM authorisations will likely be renewed under the same conditions as Bouygues Telecom's GSM authorisation, which expires in December 2009.

• *Homogeneous products*

As discussed in the market definition, there is demand on the wholesale market for products which allow MVNOs to provide retail services for roaming consumers. These services, whether gross voice minutes or SMS or data volumes, may differ in terms of billing (setup charges, billing intervals) or, in a very marginal way, according to coverage and quality of service conditions varying between operators. ARCEP considers that on the national market considered these conditions are largely identical between the different operators. Therefore, the products on the wholesale market are currently homogeneous.

In general, perspectives for differentiation on this wholesale market are low. They consist mostly in the provision of direct access codes to the handsets' usual functions. Thus, some network operators, such as Orange, offer additional "*short-code*" services, which let roaming customers on a visited network continue to use their short numbering codes to services at home (voicemail, etc.). These services could be considered as differentiating technical offers. Still, ARCEP considers this technical differentiation to be secondary, because it does not affect the electronic communication product in itself, but simplifies its' conditions of use.

Notwithstanding the technical similarities between wholesale products, one must take notice of the fact that partnerships and alliances can induce a very strong product differentiation, that could be compared to that of a make/brand, for a host of reasons :

• alliances tend to group operators that have more or less the same profile ; for instance, the Freemove alliance is made up of the subsidiaries of former fixed-line historic operators, the Starmap alliance is made up of numerous "third players" of their respective markets. At first look, these groups are made up of operators presenting similar characteristics in terms of respective market shares. This implies that an operator searching for a privileged roaming partner in a given territory will be largely constrained in his choice by the differences of profiles between potential suppliers. This dimension is all the more obvious within groups, where capitalistic links dictate the identity of the main roaming partner.

• As said earlier, it seems impossible for a visiting operator implementing traffic direction to switch to another main/privileged roaming partner to the benefit of an operator that would be foreign to his group or alliance, for two reasons :

- Firstly, he would expose himself to being able to purchase roaming services only off operators of different size than himself, and, therefore, of market share than himself, which would, *in paribus ceteris*, lead to an imbalance between his roaming in expenses and revenues ;

- Secondly, in a market featuring numerous alliances and groups, this operator would expose himself to not being able to conclude an exclusive, reciprocal purchasing agreement, but only a unilateral/one-sided agreement, in that any new main roaming partner would probably be integrated, and would thus not be able to grant preferred roaming partner status to an operator who doesn't belong to the same alliance of group as himself. The fact of not being able to benefit from reciprocity deprives the operator from the possibility of balancing his roaming in expenses and revenues, leading to an expense in absolute terms instead of having just the balance to pay ;

However, it is possible that this criteria of balanced flows may not function in a satisfactory manner within an alliance when territories present high asymmetries of touristic/business traveller frequentation, which in theory leads to a risk of deviation/exit of the alliance.

• Alliances enable operators to set up a brand strategy as regards homogeneous services available on a series of territories (aforementioned short-codes), which can heavily restrict alliance exiting. Indeed, choosing as a main roaming partner an operator which doesn't belong to the same group or alliance entails that end-users lose the benefit of the proprietary functionalities associated with group/alliance membership.

• More generally, subscribing to an alliance or falling under a group logic entails investing in a trans-national brand. This investment may limit roaming in switching possibilities and lead to the heterogeneity of services offered by the suppliers of a given territory.

At the end of the day, roaming in products are fully homogeneous only in the following circumstances :

• Traffic allocated on a random basis on a third-party network, for instance in case of ineffectivity or absence of traffic direction

• In theory, for the residual fraction of traffic that doesn't fall under the provisions of internalization or exclusivity within the alliances or groups

• For the traffic of independent operators that aren't interested in obtaining preferred roaming partnership status (in which case, they would probably wish to deal with an independent operator)

3.1.4.3.3 Sustainability criteria for a common line of conduct within tacit collusion (Airtours case-law)

According to the *Airtours* case of the European Community Court of First Instance (6 June 2002), a market configuration of tacit collusion can arise only if the market presents certain specific characteristics :

• The market is transparent allowing detection of any deviation by a competitor from the joint action
• The market offers a dissuasion or a retaliatory mechanism which prevents a firm from deviation
• The market protects firms from new competitors which might contest the joint action and from countervailing buying power

These three points are examined below.

• *Sustainability against countervailing buying power and new entrants*

- *Countervailing buying power*

Traffic direction techniques pave the way to countervailing buyer power that would have been difficult to conceive of in a context of random traffic allocation. The scope of this buyer power must be assessed in a context of traffic direction mastered by all operators. In this respect, to this day, some operators rely heavily on traffic direction as they wish to internalise traffic as fully as possible, and other operators, mostly independent, do not even attempt to use these techniques. However, from a prospective viewpoint, all operators are likely to implement these techniques[36].

Moreover, the effectiveness of the possibility to switch service providers, and thus countervailing buyer power, strongly depends on the homogeneity of products on the market. Therefore, in a context of product heterogeneity, this countervailing buyer power is significantly constrained.

A structural element reduces evermore an eventual buyer power. The relative size of a customer may have an impact on his negotiation power, to be more precise the volume/value of the traffic brought influences in principle the outcome of partnership negotiations[37]. In this respect, France receiving a big net inflow of visitors (1st touristic destination worldwide), foreign network operators are net debtors of roaming in services. *In ceteris paribus*, they are thus in a structurally unfavourable negotiation position.

- *New entrants*

The stability of a collective dominance situation depends highly on the lack of potential competition which could contest the sub-competitive equilibrium. Were a new network operator to acquired the fourth 3G authorisation and enter the mobile telephony market, the current state of the market could be challenged.

However in France no new 3G player has recently emerged and no operator has announced his intention to ask for a 3G license, nor initiated a commercial launch in this respect. Within the time interval of the present analysis, it is unlikely that an operator will eventually be granted the fourth UMTS authorization ; on the wholesale market examined, the likeliness of such an entry is low given the time necessary for network roll-out and the signature of roaming agreements. In any case, roll-out takes time, during which such a 4th operator could only offer an incomplete coverage, leading to an unattractive roaming in offer.

In this respect, perspectives for potential competition on the wholesale international roaming market are low in the time interval of the present analysis.

• Sustainability in terms of detection transparency

Deviation transparency can be based on both informal links between operators and on the transparency of detection on the market.

- *Transparency of detection through informal links between network operators*

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[36] In a context of « asymmetrical » use of these techniques, operators implementing a vertical integration policy are likely to carry out a policy of high IOTs and of discounts limited to their allies or group partners. This may create a greater attractivity for their retail offers, whilst maintaining a high yield of roaming in sales to foreign networks who master to a lesser extent traffic direction techniques, and therefore have a lower countervailing buyer power.

[37] Independently of product heterogeneity, buyer power strongly depends on the roaming in supplier's need for roaming in services, especially if this volume is superior or equal to that which he will buy as a consumer of roaming in services on the foreign territory. A buyer's negociation power weakens when his size or his territories' size enables his partners to realise a structural net income with roaming in services.

Informal contacts and links between players through bilateral wholesale contracts and associations may increase transparency by allowing players to monitor each other's strategies. This can also increase the retaliation power of the firms, because a deviation from the shared strategy could affect other areas related to the market under examination (multi-market contacts).

As a general rule, there are numerous opportunities for exchanges or meetings (interconnection, standardisation, etc.) on the mobile telephony retail market—like other network industries, but unlike other generic markets.

This is particularly true of roaming, given the predominance of the GSM Association.

- Detection of a Deviation by the Market

Price transparency

As explained above, the GSM Association's "*Infocentre*" publishes the IOTs of each operator, and can be consulted by any foreign network operator. This means that, in principle, an operator in a given country cannot know the IOTs practiced by its competitors in the same country. However, in practice, it seems obvious that every operator may have an indirect knowledge of these tariffs, either by consulting its' subsidiaries present in other countries, which would have access to this data, or by requesting which prices are being asked by its' competitors during negotiations.

The question of the transparency of the IOT wholesale market depends on the transparency of discounts on these wholesale tariffs granted by operators. It is important to note that the identity of the recipient and the amount of these discounts are confidential, and are not made public. In theory, this prevents any direct detection of a deviation from the collective equilibrium on the market, whether this equilibrium has a quantitative (respect of a certain level of wholesale tariffs) or qualitative focus (respect of a common line of conduct to not grant discounts on the published wholesale tariffs).

However, through alliances and group policies, that are public, operators are aware of the identity of the operators to whom discounts are granted. As members of these groups and alliances, and more generally as buyers of roaming in each foreign country, operators are aware of the discounts generally offered. It can't be excluded therefore, that operators are able to estimate the levels of prices carried out by their competitors with a limited margin of error.

Quantity transparency

Network operators could monitor the pricing conduct of their competitors indirectly, by observing traffic volumes on their networks. Since, in principle, any drop in prices deviating from the collective equilibrium would lead to demand shifting to the cheaper operator (in a context of effective competition by prices), it should be possible for any operator to spot a deviation by monitoring its' own traffic volumes. Still, this type of indirect transparency of deviation seems unrealistic, because traffic volumes vary over time, are seasonal in nature, and above all, because operators cannot know to which of their competitors their lost traffic has gone.

Nonetheless, it is conceivable that operators proceed to tests consisting in observing on which networks foreign mobile lines roaming in France preferentially activate themselves.

• Dissuasion/retaliation

As stated the CFI in its Airtours case (June 6th 2002, §194-195), the possibility of retaliation ensures the cohesion of members of the oligopoly in the long run, by preventing them from deviating from the common conduct. In such a context, the Commission doesn't necessarily have to establish the existence of a "retaliation mechanism" as such, that would be more or less strict, but must show, in any case, the existence of dissuasive elements that are sufficiently strong for each of the members of the dominant oligopoly to not have an interest in deviating from the common conduct at the expense of the other members of the oligopoly.

For the tacit collusion to be sustainable, it is necessary that for every step of the game coming after a deviation, the profit anticipated by each firm is significantly inferior to the focal point's profit. Thus, every firm is deterred from deviating, out of fear of the consequences.

Given the considered market, one must establish factors of dissuasion (including retaliation mechanisms), that is to say credible mechanisms, punitive or simply competitive, by which the future profits of network operators are supposed to drop significantly in the long run in case of a deviation from the focal point.

On the WIR market, several factual elements oppose the prospect of credible retaliation/ dissuasion :

- The development of group or alliance policies makes switching to another supplier unlikely, and thus affects retaliatory actions consisting in attracting customers away from a deviating operator. Membership of an alliance or – even more to the point- of a group implies a long term implication in the roaming partnership, that rallies international roaming buyers and sellers around a durable brand and service logic, internalising the purchase costs of wholesale international roaming services, which goes against the possibility of switching roaming in partners in the short term.

- Independently of retaliatory price measures, the only other foreseeable form of retaliation on the wholesale market could be the termination of roaming agreements in retaliation against an operator having deviated from a joint action. This could be implemented by its' foreign partners upon request from a competitor of the deviant operator. However, this is highly unlikely since it requires an agreement that could fall under article 81 as a boycott, between competitors and the foreign roaming partners ; for a foreign partner, terminating a roaming agreement would deprive its customers of additional connectivity and itself of the reciprocal purchase of wholesale services by the deviant operator. As a general rule, operators prefer using traffic direction over terminating roaming agreements.

Generally speaking, the prospect of unanimous abandonment of a line of conduct in favour of maximised individual profits seems unlikely given the low demand elasticity to prices, the relative efficiency of traffic direction techniques, the prevalent internalisation logic within groups and alliances, and the lack of potential competition, in particular from MVNOs.

It seems more likely that on this market firms find themselves in stable equilibriums (non-cooperative), indicating that none has an individual interest in changing line of conduct, without the market presenting a competitive outcome. This strategic complementarity opens perspectives for non-collusive joint dominance.

3.1.4.3.4 Perspectives for non-collusive joint dominance

EU law has recently given a legal qualification to the economic notions of tight oligopoly (and of unilateral effects in competition law), as explicated by Appendix B. Thus, according, to the guidelines on mergers (2004/C 31/03), unilateral or non-coordinated effects are generated on an oligopolistic market when mergers imply the elimination of important competitive pressure on one or more suppliers concerned by the merger, and whose market power is consequently increased.

As regards joint significant influence, the criteria set by the Framework directive (§27) relate to the absence of effective competition on a given market. According to the Commission's guidelines on market analysis and the evaluation of market power, in keeping with the ECJ case-law[38], a dominant position doesn't exclude a certain degree of competition on the market, but simply puts the firms that benefit from this dominance in a position, if not to decide, at least to influence notably the conditions in which such a position develops, and in any case, to behave itself without having to take it into account, without incurring any consequences of such an attitude (§72). Furthermore, the designation of a firm as enjoying market power simply signifies that, from a structural viewpoint and in the short and middle run, the operator benefits and will benefit, on the relevant market considered, from sufficient market power to conduct itself, to an appreciable extent, independently from its' competitors', its' customers, and, lastly, consumers (§30).

The guidelines add that, in an *ex ante* context, this power can mostly be measured through the possibility of the dominant firm to raise prices and restrict output without incurring a loss of sales or revenue (§73).

Lastly, the guidelines add that the series of criteria defined in appendix II of the Framework directive tend to illustrate the types of criteria that could be used to establish a joint dominance "*in the form of a tacit coordination*" (§98), which implies that tacit collusion is not the only form of joint dominance.

The developments that follow describe the causes for the actual level of wholesale prices and show in what way their stability is due to a stable joint market power, consolidated by integrations between operators.

• The current prices were set in a monopolistic way in 1998-1999

The current price levels on the market are substantially identical or even superior to those on the wholesale market in 1999, when wholesale prices were no longer indexed on retail prices.

In this respect, at that time, traffic was near-randomly shared out between operators ; in an almost total absence of a possibility of price competition, each operator was able to

[38] ECJ Hoffmann La Roche February 13th 1979

implement monopoly pricing[39]. It follows that the prices set in 1999 constituted monopoly prices, exploiting the low sensitivity of the consumer to prices.

• The ability to maintain these price levels on a market made potentially competitive by traffic direction tends to prove a joint market power

The ability to uphold high and, as may be the case, close monopoly prices on a market that has opened up to traffic direction techniques, and is thus potentially competitive, clearly demonstrates market power exerted by the network operators, as a rational expression of a supply that isn't constrained by competition from within the oligopoly or from out of it. In a normally competitive market, the margin levels attained would probably be challenged. This absence of constraint can be explained by the characteristics of a closed and concentrated market, as well as by the absence of interest of firms to deviate from their mutual positions.

To sum things up, the constitution of a market equilibrium by which every firm is in a stable equilibrium on price levels inherited from a past monopoly combines the stability of a static market equilibrium with the sub-competitive outcome of a coordinated equilibrium.

• The considered market power is stable

The stability of the market equilibrium can be appreciated as regards the absence of interest of the firms to deviate.

In this respect the perspective of a drop in wholesale prices by an operator seems unlikely given the low elasticity of demand to price, the relative efficiency of traffic direction, the absence of potential competition or the countervailing buyer power. In other words, the benefits that could result from a price decrease do not seem to be able to compensate for the corresponding loss of profit.

The oligopolistic interdependence materializes itself on the wholesale market for international roaming through a strategic complementarity, consisting for each of the firms in place to implement a price far superior than that which would be carried out in a competitive market, without any need for collusion and in particular for a strategic focal point that would have to be respected.

• The constitution of roaming alliances and groups consolidates this market configuration

Alliances and group roaming policies may facilitate pan-European parallelisms of conduct consisting in a vertical integration of wholesale and retail markets, with the effect of constraining price-led competition on the wholesale international roaming market.

- The traffic from "integrated" operators follows an internalisation logic similar to self-supply or bill-and-keep, and the absolute level of prices is less important than the net balance of roaming-in payments. This is because each firm strives to reduce the difference between its sales of roaming-in services to foreign operators and its own purchases from these operators, or even to obtain a positive balance (that is to receive more from sales than is spent on purchases). This can lead to discounts which aim to cancel out or limit net flow balances, or at least to encourage the use of traffic direction. This integration effect strongly limits the perspectives for price-led competition that traffic direction made possible.

[39] In such a market configuration each operator on the market benefits from a monopoly power over his fraction of the national market, in that whatever his price for wholesale products, the operator is assured to perceive an unvarying part of the demand expressed on the market

- Integration in groups or alliances limits competition between integrated operators, but also between "independent" (i.e. those not belonging to a group or alliance) operators because of the bilateral nature of the roaming partnerships. Indeed, in such a context, an independent operator wishing to buy roaming services on a reciprocal basis will not be able to satisfactorily profit from competition as many of his potential suppliers will probably themselves belong to group or an alliance. To a certain extent, this may create a *de facto* integration in a given country where there is only one independent operator.

- *In fine*, integration reduces competition to the sole part of traffic that isn't integrated. Indeed, roaming agreements concluded within groups or alliances do not necessarily rely on the whole of traffic addressed to foreign operators, but on a majority of this traffic, which the contracting parties are bound to address themselves. In this respect, it is likely that operators on the market are in a position to compete on prices in order to attract residual traffic of the integrated operator on their network ; more generally, they might equally compete in order to attract the traffic that foreign operators may want to address on a unilateral (i.e. non-reciprocal) basis. As regards the information that the Authority has at its' disposal, there is no evidence to prove that this competitive fringe could develop itself above a very limited part of the traffic. In particular, if this were the case, the discount policy of the operators would be developed ; as developed in section 2.2.4.3, discounts are almost exclusively limited to preferred roaming partners and are in any case limited to a small –and even decreasing- number of operators.

3.1.4.4 Conclusion on the Market Power in the Metropolis

On this given market, the aforementioned elements enable to conclude to the absence of significant competitive constraint exerted on the operators supplying wholesale products, which leads, as mentioned in section 2.2.4.2, to price levels three to four times higher than underlying interconnection and network costs. The integration policies within groups or through the constitution of alliances enabling total or partial purchasing exclusivity considerably limits price-led competition on the market.

Oligopolistic interdependence on the market is materialised by the fact that operators jointly refrain from competing on gross IOTs and grant discounts in a restrictive manner, mainly or even exclusively to operators from the same group or alliance, in order to establish and consolidate the latter.

This strategic complementarity in prices doesn't seem to be related to a coordinated conduct, unless considered on a pan-European scale. Such conduct is not conducted at the expense of foreign operators. Indeed, alliances enable operators to globally recover a monopoly profit from the sector, at the expense of the end-user. Independent operators are penalized by the limited amount of discounts that are offered to them.

The Authority wishes to collect the actor's opinion on the conclusion according to which Orange France, SFR and Bouygues Telecom exert jointly a significative market power over the Metropolitan wholesale international roaming market

3.1.4.5 Analysis in Overseas France

In order to take into account the specificities of the various geographic areas outside Metropolitan France, ARCEP has studied the four markets identified in section 3.1 separately in this present analysis.

3.1.4.5.1 Analysis of zone 1 : Antilles-Guyane

• General market data

The Antilles-Guyane market has currently seven authorised operators of which six have effectively launched their service commercially.

For each of the authorised operators, the table below presents the date of publication of their authorisation in the *Journal Officiel* as well as the status of their commercial launch. The authorisation mentioned in the table may be an "addendum" to the operator's first authorisation, in particular for Saint-Martin Mobile.

ZONE 1: Antilles - Guyana	Authorisation date	
Orange Caraibes	JO date:	16/07/1996
Bouygues Telecom Caraibes	JO date:	19/08/2001
Oceanic Digital SAS	JO date:	25/04/2002
Outremer Telecom	JO date:	25/02/2001
St Martin St Barthelemy TelCell	JO date:	22/08/2001
Dauphin Telecom	JO date:	24/12/2002
Saint Martin Mobiles	JO date:	21/10/2001

It is important to note the differences between the authorised operators in terms of geographic coverage. Not all of the operators above have requested an authorisation for the same perimeter. Only Orange Caraïbe, Bouygues Telecom Caraïbe and Outremer Telecom's GSM authorisations cover the entire geographic area under examination. At their request, the other operators hold authorisations for a more limited perimeter: Oceanic Digital SAS's authorisation does not cover Guyane while those of St Martin St Barthélemy TelCell, Dauphin Telecom and Saint-Martin Mobiles cover only Saint-Martin and Saint-Barthélemy.

	Couverture géographique de l'autorisation				
ZONE 1 : Antilles - Guyane	Guadeloupe	Martinique	Guyane	Saint Martin	Saint Barthelemy
Orange Caraibes	x	x	x	(x)	(x)
Bouygues Telecom Caraibes	x	x	x	(x)	(x)
Oceanic Digital SAS	x	x		(x)	(x)
Outremer Telecom (*)	x	x	x	(x)	(x)
St Martin St Barthelemy TelCell				x	x
Dauphin Telecom				x	x
Saint Martin Mobiles				x	x

It is also important to note that not all the authorised operators in Saint-Martin and Saint-Barthélemy have a network compatible with the GSM network : the operator Saint-Martin

Mobiles commercially operates an AMPS network[40]. This operator has obtained a renewal of its' authorisation, until 30 September 2006, by which time its' AMPS authorisation will expire and it may operate a mobile GSM network if it so requests. Similarly, Dauphin Telecom has a still valid authorisation to operate a network using the DECT standard[41], which it received in 1996 when it was refused a GSM authorisation. Following ARCEP's announcement in August 2000 of a "first-come, first-served" allocation process, Dauphin Telecom obtained a GSM authorisation in 2002 which allowed it to launch its network commercially in July 2003.

• Operators' offers

The offers of the mobile operators are more limited than in Metropolitan France with few of them offering a complete range of services. The table below shows all the services available in the Antilles-Guyane area[42].

Zone 1 : Antilles - Guyana	*Voice*					
Contract / services	*Postpaid*	*Prepaid*	*Roaming*	*SMS*	*MMS*	*Data/GPRS*
Orange Caraibe	***O***	***O***	***O***	***O***	***O***	***O***
Bouygues Telecom Caraibes	***O***	***O***	***O***	***O***	***N***	***N***
St Martin Mobile	***O***	***N***	***O***	***N***	***N***	***N***
Dauphin Telecom	***N***	***O***	***O***	***O (*)***	***N***	***N***

(*) : only on-net

The most notable fact is that only Orange Caraïbe proposes an access offer for GPRS service, on the entire Antilles-Guyane zone.

• Market structure

- Entry barriers

One of the barriers to becoming mobile operator in the Antilles-Guyane geographic area is the fact that mobile services can be provided solely using GSM frequencies, since UMTS frequencies are not yet available outside Metropolitan France.

The frequency availability table shows that there are un-used resources in GSM 900 although their quantity is limited. This shows that entry barriers depend less on receiving an individual frequency use authorisation than on the technical and financial resources required to deploy a mobile network, once an authorisation has been obtained. This last point must be nuanced given the recent opening of Outremer Telecom, and more generally the perspectives of development in the area in the near future.

Thus, if the market presents barriers to entry, the latter are quite lower than those of the metropolis, and in any case seem to be overcome by a certain number of operators of a small dimension.

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[40] AMPS: Analogue technical standard which stands for "Advanced Mobile Phone System", and which uses resources in frequencies below the 900 MHz GSM band. A digital AMPS network is called "D-AMPS", with "D" for "Digital".

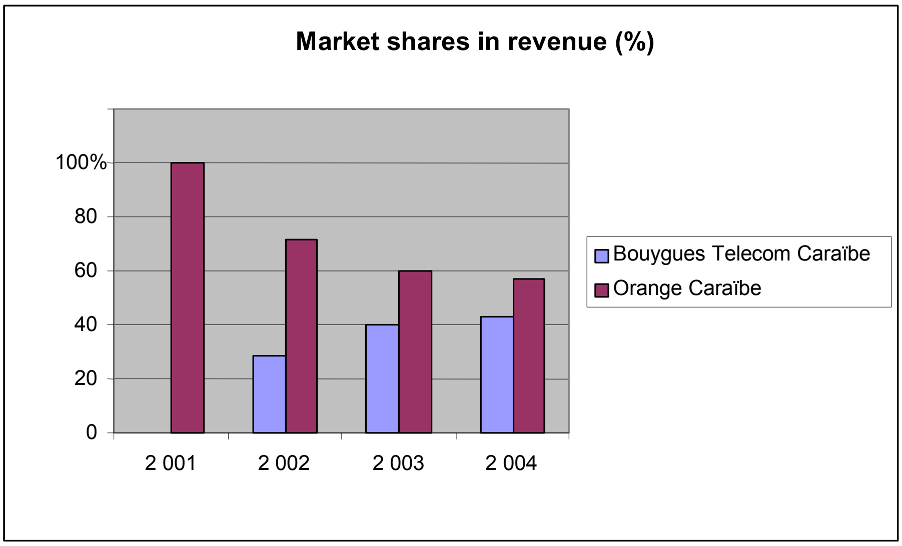
[41] DECT: Digital wireless network technical standard which stands for "Digital Enhanced Cordless Telecommunications".

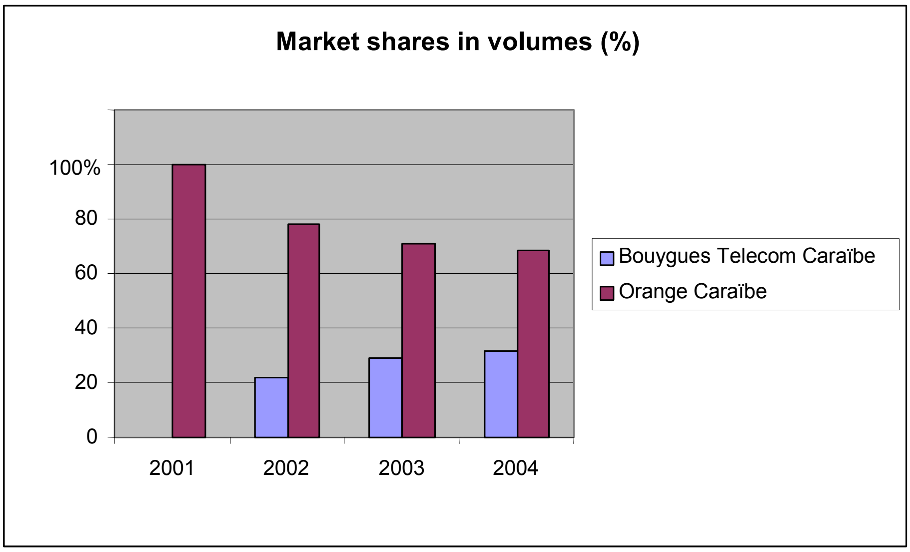
[42] This table takes into account Orange Caraïbe's comment to the public consultation, in which this operator states that it "*proposes a GPRS access offer for the entire area, not limited to Guadeloupe and Martinique*".

• Market shares

ARCEP has examined the market share of various operators in the area, in terms of subscriber numbers, turnover and traffic volume. Saint-Martin Mobile and Dauphin Telecom have no roaming in activity for the period[43].

The graphs below represent the evolution of market shares in terms of revenue and volume over 2001-2004 *(Source : operators' responses to the quantitative market analysis questionnaire)*.





[43] Dauphin launched his first offer in November 2005

The market shares for volumes and revenues data show that the two operators present on the wholesale market corresponding to the geographic area under examination have a market share which varies quite strongly over time. It would appear that one operator's dominant position could be contested by the other.

- Other market characteristics

As regards joint dominance, the data collected on the Metropolitan market dealing with countervailing buying power, the homogeneity of products/lack of technological advantage, market concentration, relative maturity and the similarity of operators regarding production capacity are fully transposable onto the market in the area under examination.

Nevertheless, the wholesale market for international roaming on the geographic area considered doesn't present the same characteristics as on the Metropolitan zone, in the sense that entry barriers are much less high, and that operators are of a much more variable size. In themselves, these structural characteristics seem to justify that operators aren't able to exert a significant influence, may it be simple or collective, on the wholesale market for international roaming.

- Conclusion

On the Antilles-Guyane zone no operator detains a significant influence on the wholesale market for international roaming on public mobile telephony networks.

3.1.4.5.2 Analysis of zone 2 : La Réunion

- General market data

By the end of 2003, the Réunion market had three authorised operators: SRR, Orange Réunion and Outremer Telecom[44]. SRR launched its services commercially in 1995, followed by Orange Réunion in 2001. As a result, SRR enjoyed a monopolistic position on Réunion for many years. Outremer Telecom, which received an authorisation for the Réunion department on 25 February 2001 has not yet launched its services commercially there.

Zone 2: La Réunion	Authorisation date		Status
SRR	JO date:	30/03/1995	LAUNCHED
Orange Réunion	JO date:	15/05/2001	LAUNCHED
Outremer Telecom (*)	JO date:	25/02/2001	Not launched

(*) Outremer Telecom's authorisation also covers the departements of Martinique and Guadeloupe

- Status of frequency allocation

[44] Under its authorisation, Outremer Telecom must cover 90% of the Réunion population by 25 February 2004. ARCEP is currently verifying that this coverage obligation has been met.

The table below shows the percentage allocated of all GSM frequencies available to ARCEP.

Allocation rate of available frequencies

	GSM 900	GSM 1800
Zone 2: La Réunion	100%	87%

(Source: ART)

This table shows that there are still unused GSM 1800 resources which are available. However, ARCEP has not received any requests for them. This shows that entry barriers on this market depend less on receiving an individual frequency use authorisation than on the technical and financial resources required to deploy a mobile network, once an authorisation has been obtained. This is confirmed by Outremer Telecom which has not yet launched its network commercially even though it has received a frequency use authorisation.

- Operators' offers

The two authorised operators for Réunion area have similar service offers.

Zone 2 : Réunion	Voix					
Type de contrat / services	Postpayé	Prépayé	Roaming	SMS	MMS	Data/GPRS
SRR	O	O	O	O	O	O
Orange Réunion	O	O	O	O	O	O

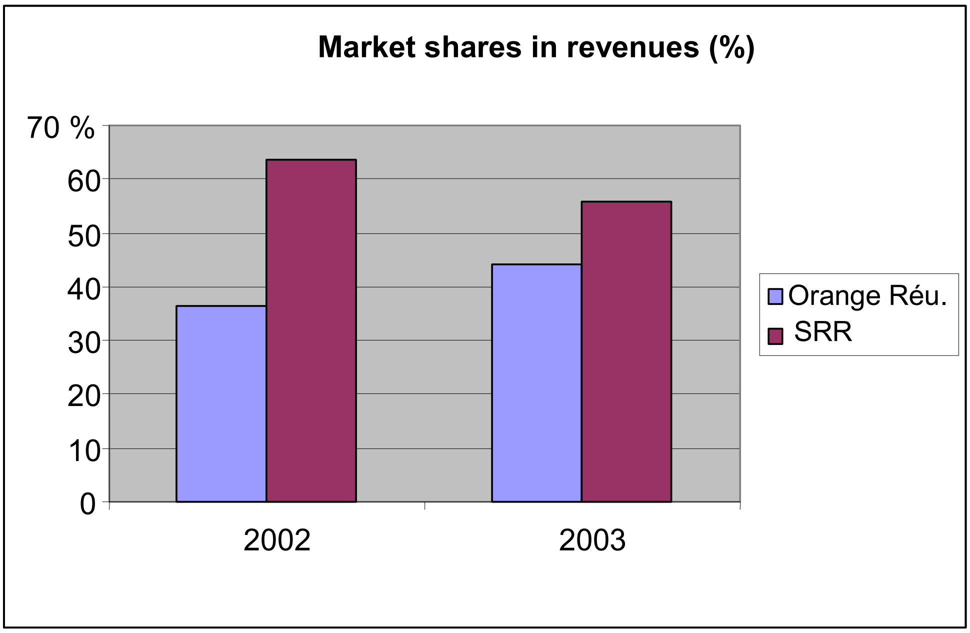
• Market structure

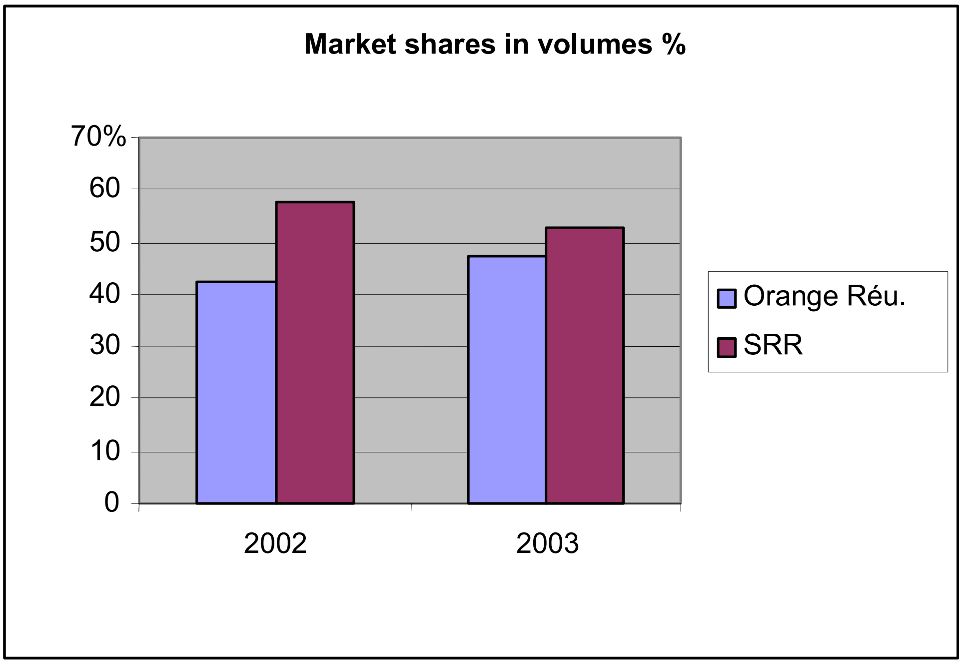
- Entry barriers and perspectives of potential competition

For the entry barriers on the La Réunion market, the observations made for the entry barriers on market area 1, Antilles-Guyane are valid. Indeed the market presents similar characteristics. Furthermore, the market seems sufficiently attractive for at least potential competition to discipline in the long run an eventual significant market power.

- The evolution of market share

There is no difference between SRR's roaming-in volumes and revenues sold in Réunion and Mayotte. Therefore, the operator's volumes and revenues data below include volumes for Mayotte without separating them. *(Source: operators' responses to the quantitative market analysis questionnaire)*





- Market power on the wholesale market

On the geographic market considered and over 2002-2003, the similarity of market shares in roaming in volumes and revenues of SRR and Orange Réunion are exclusive of a finding of single dominance.

As regards joint dominance, the wholesale international roaming market on the geographic market taken into consideration presents characteristics that distinguish it from the Metropolitan zone ; given the lower barriers to entry and the fact that the current market concentration could be challenged in the middle-run.

• Conclusion

On the market of the Réunion zone no operator exerts significant market power over the wholesale international roaming market on public mobile telephony networks.

3.1.4.5.3 Analysis of area 3 : Mayotte

A single operator is in activity in Mayotte, operated by SRR under the brand name Mayotte Telecom Mobile. As mentioned above, ARCEP has received no roaming-in revenue or volume data specific to the Mayotte market.

The table below shows that the GSM frequencies in the 1 800 MHz bands have all been allocated to the operator Mayotte Telecom Mobile. On the other hand, frequencies in the 900 MHz bands are still available on this area and should be sufficient to support a new GSM network.

Frequency attribution rate

	GSM 900	GSM 1800
Zone 3 :	50%	0%

(Source : ARCEP)

Given the fact that GSM frequencies are still available, the Authority concludes to an absence of significant market power of Mayotte Telecom Mobile on the wholesale market in the zone considered.

3.1.4.5.4 Analysis of area 4 : Saint-Pierre et Miquelon

Only one operator is in activity in Saint-Pierre et Miquelon : SAS SPM Telecom. According to this firm, no roaming-in service is offered on this market at the time of this analysis, but negotiations are in progress. In the absence of service offer, there doesn't exist, at the time of the present public consultation, a market for wholesale international roaming products on public mobile telephony networks.

The Authority wishes to collect the actor's opinions on the analysis of the overseas market

3.2 Examination by the Commission of the Practices relating to the WIR market as regards Competition Law (article 81 of the Treaty)

• ARCEP points out that the roaming in market was shaped, from an institutional point of view, at a European level via the GSM Association, who set up billing rules, wholesale market transparency, as well as the standard agreement for roaming in. This may have, in turn, induced a homogeneisation of practices between european operators and thus between national operators.

Thus, the STIRA, as the standard agreement applicable to any roaming in contract, presumes that only network operators have access to the wholesale market ; however it is conceivable that an MVNO could be able to supply itself on this market in order to offer roaming out services, rather than having to rely upon his host network operator on the wholesale access and call origination market. Therefore, STIRA provisions can prevent MVNOs from enhancing retail (as suppliers) and wholesale (as consumers) market competition dynamics.

In this respect, the compatibility of the STIRA with article 81 of the Treaty for the European Union is under examination of the Commission (Case Comp/C-1/37034). It must be noted that a Commission comfort letter of 1996 partially approved the MoU, given the promise to prevent eventual anticompetitive effects (confidentiality of sensitive commercial information).

Generally speaking, a remarkable fact is that the STIRA takes no account of the specificities of the different national markets to which it applies. As a result, the outcome of the analysis that can be made of it with respect to competition law applies to all territories whose operators implement it. This leads to the conclusion that the Commission is the only institution that could efficiently carry out this analysis task.

• Furthermore, Freemove and Starmap alliances are currently being checked for conformity with article 81 of the Treaty by the EU Commission.

Moreover, by a press release of December 1st, 2005, Bouygues Telecom announces it had brought before the Commission a “Roaming” complaint against the alliances existing between the main operators.

In general, the constitution of alliances and roaming policies consisting in exclusive and reciprocal purchases between operators belonging to the same group may facilitate parallelisms of conduct between firms at a pan-European level.

Such a parallelism of conduct will consist in eliminating the wholesale market (or at least seriously limiting its scope), by compartmentalising supply on the market, which goes against effective competition, to the expense of independent operators and end-users. This enables operators at a European level to maintain price levels that are far superior to costs despite traffic direction techniques.

In this way, the constitution of alliances, and exclusive purchasing contracts made within groups, as long as they fall under competition law on agreements, could be contrary to article 81 TEU and the Commission should give its view on this.

The Authority wishes to collect the operator’s views on the relevance of the examination by the Commission, of the roaming practices as regards competition law applicable to agreements.

3.3 Intervention on Roaming Prices by an EU Regulation

In case competition law proves unsufficient and the market analysis framework is inadequate, the Authority notes that a regulation or directive on roaming tariffs is conceivable, given that competition seems ineffective, that *ex post* law would be insufficient and *ex ante* law inappropriate.

In the past years, EU legislation has, in the past, proceeded to the adoption of a regulation setting rates (EC regulation n°2560/2001 on transfrontier banking services, “unbundling” regulation). The price regulation itself can be done in many ways.

• The regulation could act at wholesale level, setting an obligation to grant roaming in (including to MVNOs), assorted with a non-excessive princing rule, and/or the setting of price-caps by the Commission. This price regulation, applicable to EU members, could be widened to non-EU countries under a rule of reciprocity

• Another form of regulation, complementary to the previous, could consist in setting on the retail market a possibility, for the end-user, to select an operator for his roaming communications, as is possible for retail fixed-line communications (carrier preselection)

• Lastly, as for transfrontier banking services in the EU, an indexation of wholesale and retail roaming out rates (respectively roaming in rates) on other retail (respectively wholesale) rates, for instance those set for communications from a non-roaming user.

The Authority wishes to collect the operator’s views on the relevance of an EU regulation, if ever none of the two first means of action were to succeed

Appendixes

Appendix A Geographic scope

A.1. List of French territories

France is composed of four major units :

- Metropolitan France : the mainland and Corsica
- The **overseas departments** : Réunion[45], Guadeloupe, Martinique and Guyane
- The **territorial units** : Mayotte[46] and Saint-Pierre et Miquelon[47]
- The **overseas territories** : New Caledonia, French Polynesia, south polar regions and French Antarctic regions, Wallis and Futuna Islands

The *Post and Telecommunications Code* is applicable in Metropolitan France, the overseas departments, Mayotte and Saint Pierre and Miquelon.

It is important to note that voters on the islands of Saint Martin and Saint Barthélemy, which are currently members of the overseas department of Guadeloupe, voted in a referendum to change their islands' statuses. If their status were to be changed, the islands of Saint Martin and Saint Barthélemy would become two overseas units under article 74 of the Constitution. Saint Martin would retain its status as an outermost region of the European Union. Saint Barthélemy would have autonomy in setting prices and in telecommunications.

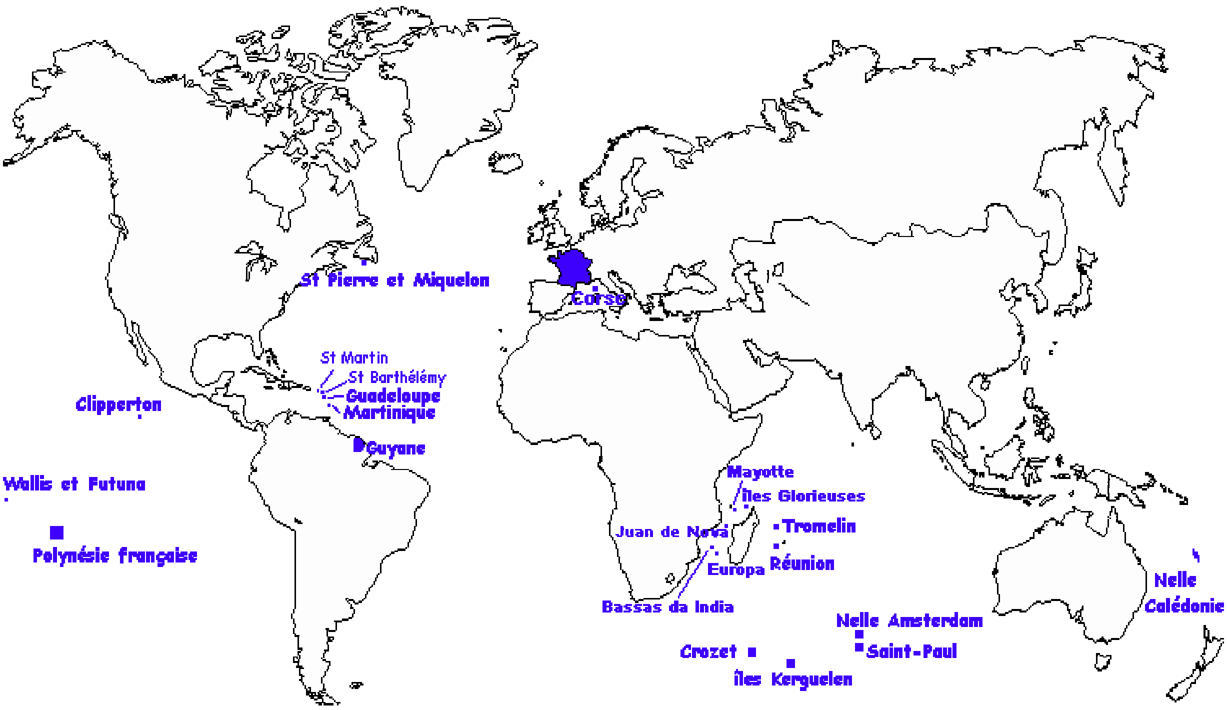


Figure 2: Source: TTFR - http://a.ttfr.free.fr

[45] The Iles Eparses, although administered by the Réunion regional prefect, are not part of the European Union.
[46] Departmental unit by virtue of law number 2001-616 dated 11 July 2001.
[47] Territorial unit of the French Republic under law number 85-595 dated 11 June 1985.

A.2. List of specific territories of Member States of the European Union

The European Union classifies the specific territories of Member States of the European Union in three categories:

- **Outermost regions**: Guyane, Guadeloupe, Martinique and Réunion (France); Azores Islands, Madera (Portugal), Canary Islands (Spain)
- **Overseas countries and territories:** Mayotte, New Caledonia, French Polynesia, Saint Pierre and Miquelon, French south polar regions and Antarctic regions, Wallis and Futuna Islands (France); Greenland (Denmark); Anguilla, Cayman Islands, Falkland Islands, South Georgia and South Sandwich Islands, Montserrat, Pitcairn, Saint Helena and Dependencies, British territories of Antarctica, British territories of the Indian Ocean, Turks and Caicos Islands, British Virgin Islands (United Kingdom); Dutch Antilles, Aruba (Netherlands)
- **Specific territories**: Jersey, Guernsey, Isle of Man (United Kingdom); Faeroe Islands (Denmark)

Community law does not apply to overseas countries and territories.

Concerning France, Article 299 of the EC Treaty stipulates that Community law applies to France and its overseas departments. Articles 182 *et seq.* indicate that the other territories attached to France (listed in appendix II of the treaty) are subject to the special arrangements for association.

Appendix B Joint Dominance

B.1. <u>Legal Background of the Concept of Collective Dominance in Competition Law</u>

B.1.1. EU Case-law and its' Evolution

In the February 1978 "*United Brands Company and United Brands Continental BV vs Commission*" landmark decision, the European Court of Justice defined the concept of dominant position as a situation of "*economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of its consumers*"[48].

The concept of a "collective dominant position" appeared more recently in Community case law. It is essentially a legal concept, different from a cartel, which is based on a market structure and according to which the relative position of players favours coordinated behaviours.

Initially, the CFI restricted the concept of collective dominant position to firms united by strong capitalistic, commercial or "economic" ties : "*There is nothing, in principle, to prevent two or more independent economic entities from being, on a specific market, united by such economic links that, by virtue of that fact, together they hold a dominant position vis-à-vis the other operators on the same market*." (CFI ruling, 10 March 1992, Societa Italiana Vetro SpA, Case T-68/89, T-77/89, Rec.p II-1403, pt 358).

The Court of First Instance then admitted that the existence of structural links is not a necessary criteria for the qualification of a dominant position. Indeed, from a legal and economic viewpoint, there exists no reason to exclude from the notion of economic link the relation of interdependence in a tight oligopoly within which, on a market presenting the appropriate characteristics, in terms of concentration, transparency and product homogeneity, members are able to predict their reciprocal conducts and thus are strongly incited to align their behaviour on the market, in view of maximising their common profit by restricting production in order to raise prices (Gencor Ltd case, March 25th 1999).

In its' Airtours/Commission ruling dated 6 June 2002 (case T-342/99), the Court of First Instance established that collective dominance can correspond to a situation in which "*each member of the dominant oligopoly, as it becomes aware of common interests, consider[s] it possible, economically rational, and hence preferable, to adopt on a lasting basis a common policy on the market with the aim of selling at above competitive prices, without having to enter into an agreement or resort to a concerted practice within the meaning of Article 81 EC and without any actual or potential competitors, let alone customers or consumers, being able to react effectively.*"

The CFI indicates that three conditions are necessary to characterise such a situation :

"- *first, each member of the dominant oligopoly must have the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common*

[48] Case 27/76 United Brands v. Commission [1978]

[49] That is to say under the usual hypothesis of these schematical models, especially product homogeneity and identical cost functions.

policy. In that regard, it is not enough for each member of the dominant oligopoly to be aware that interdependent market conduct is profitable for all of them but each member must also have a means of knowing whether the other operators are adopting the same strategy and whether they are maintaining it. There must, therefore, be sufficient market transparency for all members of the dominant oligopoly to be aware, sufficiently precisely and quickly, of the way in which the other members' market conduct is evolving ;

- second, the situation of tacit coordination must be sustainable over time, that is to say, there must be an incentive not to depart from the common policy on the market. It is only if all the members of the dominant oligopoly maintain the parallel conduct that all can benefit. The notion of retaliation in respect of conduct deviating from the common policy is thus inherent in this condition. In that context, the Commission must not necessarily prove that there is a specific retaliation mechanism involving a degree of severity, but it must none the less establish that deterrents exist, which are such that it is not worth the while of any member of the dominant oligopoly to depart from the common course of conduct to the detriment of the other oligopolists. For a situation of collective dominance to be viable, there must be adequate deterrents to ensure that there is a long-term incentive in not departing from the common policy, which means that each member of the dominant oligopoly must be aware that highly competitive action on its part designed to increase its market share would provoke identical action by the others, so that it would derive no benefit from its initiative ;

- third, it must also be established that the foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardize the results expected from the common policy."

Lastly, in a recent *FIFA* case (26th january 2005), the CFI implicitly links tacit collusion with collective dominance. To be more precise the qualification of a collective dominance depends on the reunion of three cumulative criteria : firstly, each member of the dominant oligopoly must be able to monitor the conduct of the other members, in order to check that they adopt or not the same line of conduct ; secondly, the situation of tacit co-ordination must be sustainable over time, which means that there must exist an incentive to not stray from the common line of conduct on the market ; thirdly, the foreseeable reactions of current and potential competitors as well as of consumers must not challenge the results expected from a common line of conduct.

B.1.2. Underlying Economic Concept

B.1.2.1. *The definition of tacit collusion*

In an oligopolistic market structure, the behaviour of each supplier has an effect on the market. Each firm then takes into account the behaviour of other firms as well as the foreseeable reactions of these firms to his own actions (individual decisions). This phenomenon of strategic interaction must be distinguished from a co-operative behaviour by which firms explicitly collaborate (cartel), typically to share a monopoly profit. In a non co-operative equilibrium, each firm maximises indeed its own profit, by considering the strategies of other firms as given : it is said that each firm is on its curve of best response (or reaction function).

This mechanism of interactions must however be studied differently in an instant equilibrium or a dynamic equilibrium.

In the case of an instant (or static) equilibrium, firms meet only once on the market, in which case each firm adopts a behaviour that corresponds to its immediate interests. Schematically[49], price-led competition in a Bertrand way leads to a marginal cost because in setting a higher price every firm would take the risk of losing all its demand. In contrast, a Cournot model of capacity-based competition, leads to an equilibrium price set between the marginal cost and the monopoly price.

In the case of a dynamic equilibrium, firms meet many times (repeated games in a continuous time). They integrate thus in their decisions, for each step of the game, the consequences of their behaviour, not only for the game considered (short-run), but also for the following games (long-run). A firm may then have an interest in adopting an aggressive competitive behaviour in the short-run (typically, to drop its prices in order to instantaneously increase its market share), but gives up such a behaviour because it anticipates its' competitors reactions in the long-run (typically, alignment of the competitors and a return to the initial market situation, or even fully-fledged price-based competition).

The firm thus arbitrates between :

• the level of profit foreseen by the firm for the step of the game following an eventual deviation ;

• the level of profit anticipated for the following steps due to retaliation ;

• the importance given to the future as opposed to the present by the firm ;

Tacit collusion designates precisely a market situation in which firms may maintain over time a dynamic equilibrium (focal point), through which they collectively generate a profit higher than that which they would individually retrieve. In other words, in such a situation, each firm, if it shows to deviate, would obtain, in the step of the game following deviation, a profit higher than the focal point profit, but would then see this profit more than cancelled by the lower profit resulting from retaliation.

B.1.2.2. <u>Finding of a Tacit Collusion</u>

<u>Sustainability of the Equilibrium</u>

The likeliness of a dynamic equilibrium of this kind is generally considered as stemming from many factors :

• identical actors (equivalent market shares, similar cost structures) : an actor having a decisive advantage has little incentives to coordinate his strategy with other firms ;

• high visibility on competitor's behaviour (market transparency, informal links between firms) : each firm must be able to detect quickly in deviation of a competitor ;

• dissuasion factors, especially credible retaliation in case of deviation ;

• high visibility and predictability on the market (mature market, moderate growth of demand, homogeneous products, absence of technological innovation and mature technology) : retaliation is less effective when demand is volatile ; deviation is less profitable when products are differentiated ;

• a small number of actors (high barriers through entry, absence of potential competition, market concentration) facilitates collusion ;

The Airtours case-law deals with the sustainability of a tacit collusion situation. Nonetheless, the aforementioned criteria do not have all the same importance, some being necessary for the tacit collusion to take place (small number of actors), whereas others simply lead to a lesser degree of tacit collusion (similarity of actors). Moreover, some criteria are double-sided: market maturity can enhance visibility and thus favours tacit collusion ; however a growing market can give more weight to retaliation by leveraging long-term losses.

Incentive to deviation and lack of deviation

Lastly, in order to set Airtours in an ex-ante regulatory context, one must explicit the differences in appreciating a tacit collusion through merger control and through regulation.

Indeed, tacit collusion characterises a situation in which every firm has an individual interest in adopting a competitive behaviour (i.e. an interest to deviate), but abstains from doing so by anticipation of the foreseeable reactions of competitors to a deviation. Thus the demonstration of such a situation requires chiefly ***a finding of an individual interest to deviate linked to an absence of deviation***.

Regarding this, Regulatory Authorities work within a market analysis that seems to differ substantially from that of Competition Authorities in merger control. Indeed, in this last case, the merger control body must find a ***high risk of creation of a tacit collusion following an operation of concentration***, by using the theory of dynamic equilibrium (Airtours case-law criteria). In a market analysis, the task has more to do with ***proving the existence of a tacit collusion which would probably maintain itself in the absence of regulatory intervention***. Thus, the forward-looking reasoning of Airtours seems only necessary when demonstrating, as a second step of the analysis, the sustainability of tacit collusion over time.

B.2. Unilateral Effects and Tight Oligopoly

The review of the characteristics of the wholesale international roaming market and the analysis of competition on this market lead to the conclusion that the firms implement a behaviour of strategic complementarity characterised by the high level of prices, without any interest in deviating from this behaviour (every firm implements its best reactions to the behaviour of competitors given the structure of the market and given demand characteristics). Such behaviours of non collusive oligopolistic interdependence fall under the economic concept of tight oligopoly (the merger control uses the phrase unilateral effect).

The notion of tight oligopoly describes a stable market configuration by which firms in a situation of oligopolistic interdependence may unilaterally adopt a behaviour that is more favourable for them than that which would result from a competitive functioning of the market. Tight oligopolies constitute therefore a background for non co-ordinated behaviours, sometimes named 'unilateral', and recently qualified as such by North American and European merger control law.

B.2.1. Unilateral effects and mergers

EU merger law has been recently modified (regulation 139/2004 of May 1st 2004) in order to qualify non co-ordinated effects (described as 'static' in that they do not depend on a dynamic game between operators, as every operator is on his own reaction function), resulting from merger operations. Whereas in the previous framework, a merger operation could only be refused if it led to the creation or the reinforcement of a dominant position ('dominance' test), the new framework has a wider scope, enabling the rebuttal of operations resulting in a substantial loss of competition ('substantial impediment to competition'), resulting for instance from the disappearance of a minor market player whose dynamism or reputation previously stimulated other firms competitive behaviour.

Thus, a merger can eliminate a part of competition on the market by increasing the market power of firms on the market whether they are concerned by the merger or not (non-merging firms benefit from the general increase of prices initiated by the merging firms). This market evolution does not relate to the creation of a tacit collusion, but simply to a shift in the market outcome, each firm being before and after the merger situated on its best reaction function[50].

This change in EU merger law follows the reactions of EU Courts to the Commission's attempt to integrate non co-ordinated behaviours within the 'dominance test'. Thus, according to the guidelines on the appreciation of mergers with respect to the European Council Regulation :

"*A merger may significantly impede effective competition in a market by removing important competitive constraints on one or more sellers, who consequently have increased market power. The most direct effect of the merger will be the loss of competition between the merging firms. For example, if prior to the merger one of the merging firms had raised its price, it would have lost some sales to the other merging firm. The merger removes this particular constraint. Non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices. The reduction in these competitive constraints could lead to significant price increases in the relevant market* (…)*. Furthermore, mergers in oligopolistic markets involving the elimination of important competitive constraints that the merging parties previously exerted upon each other together with a reduction of competitive pressure on the remaining competitors may, even where there is little likelihood of*

[50] The Economics of Unilateral Effects, Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole, IDEI, Toulouse, November 2003, Interim Report for DG Competition, European Commission: "*What exactly is the difference between these two concepts? Both are instances of oligopolistic conduct, contrasting with monopoly on the one hand and perfect competition on the other. Both imply strategic interaction between a small number of firms, each of which is sufficiently large to influence the market but which cannot act without taking the actions of competitors into account. Where they differ, however, is in the precise way in which they suppose firms take into account their competitors' conduct. Under individual rivalry firms take their competitors' conduct as in some sense given, and not open to influence by the firm's own actions [...]. Market power may nevertheless result from their conduct, since some or all firms in such a market may be able to raise prices profitably above competitive levels. This might be due to a firm's technological advantage over its rivals or from significant product differentiation and entry barriers.*"
(…)"*Tacit collusion (*...*) requires that a firm make a choice which would not be in its interest if it assumed that other firms would be uninfluenced by its choice. For instance, under tacit collusion a firm can choose to set an output which, when added to the output produced by other firms, yields the monopoly output in the market as a whole. This could not be a short-term profit-maximising choice for all firms in the market if each were able to increase output without other firms' reacting, since in the absence of such reactions at least one firm and possibly all firms would find it profitable to deviate from the monopoly level. One way to see this is to note that each firm is a monopolist on its residual demand, that is demand for its own products given the other firms' outputs or prices.*"

coordination between the members of the oligopoly, also result in a significant impediment to competition. The Merger Regulation clarifies that all mergers giving rise to such non-coordinated effects shall also be declared incompatible with the common market."

Regarding this last point, introductory clause 25 of the regulation specifies :

"*This Regulation permits effective control of all such concentrations by providing that any concentration which would significantly impede effective competition, in the common market or in a substantial part of it, should be declared incompatible with the common market. The notion of "significant impediment to effective competition" in Article 2(2) and (3) should be interpreted as extending, beyond the concept of dominance, only to the anti-competitive effects of a concentration resulting from the non-coordinated behaviour of undertakings which would not have a dominant position on the market concerned."*

The guidelines set a certain number of factors which, reunited, can influence the probability that a merger will lead to significant non co-ordinated effects and points out that theses factors do not necessarily all have to be met for such effects to be likely :

- merging parties detain a high market share ;
- merging parties are close competitors ;
- customers are unlikely to switch providers ;
- competitors are unlikely to increase their output if prices increase ;
- the firms resulting from the merger can hinder the growth of competitors ;
- the merger eliminates unimportant incentive for competition.

The adoption of this new framework for controlling mergers has led the Commission to integrate unilateral effects in its merger decision-making : see for instance Comp/M.3465 Syngenta CP/Adventa of August 17th 2004.

B.2.2. The tight oligopoly, a static and sub-optimal market configuration

As has been said above, the notion of tight oligopoly covers a stable market configuration by which the firms in a situation of strategic interdependence may adopt a behaviour which is more favourable than the one which would result from a fully competitive market outcome.

B.2.2.1. *A stable market configuration*

As seen above, a coordinated behaviour constitutes an unstable equilibrium, that can be changed by any firm putting its short-run interest before its long-run interest (as materialised by the strategic focal point).

A tight oligopoly market configuration presents itself when firms may, given certain factors such as market concentration, absence of perspective of market entry, the weakness of demand elasticity to prices and more generally, the weakness of price led competition, unilaterally set prices far above the underlying costs without having any interest, even in the short term, of setting lower prices. The equilibrium resulting from these unilateral behaviours is stable and fully sustainable over time, in that every firm carrying it out sets itself on its' best reaction function, which means that the market shares gained after a decrease in prices would not compensate the loss of margins incurred.

From an economic viewpoint, the concept of tight oligopoly covers a continuum of market outcomes comprised between those of tacit collusion (co-ordinated behaviour) and those of workable competition.

B.2.2.2. Suitable economic models

A host of economic models account for tight oligopoly outcomes. Amongst these models are the Cournot model with homogeneous products (capacity-based competition), and the Bertrand model with differentiated products (price-led competition).

In a Cournot model with homogeneous products, firms set a level of output which maximises their profits, given the production levels of their competitors. As opposed to a collusion, firms do not take into account the profits that could be obtained through a coordinated behaviour, but only their individual profits. The market price of each firm is theoretically lower to that obtained through a collusion, but higher to a price on a fully competitive market. The capacity of firms to raise their prices in such a way is due to many criteria, of which demand elasticity to prices or unlikeness of market entry.

The relevance of the Cournot model is curtailed by the fact that it deals with market for homogeneous goods and a capacity-based competition. An analysis based on the Bertrand model with differentiated products accounts for the equilibrium attained with heterogeneous goods.

Indeed, given that differentiated products are imperfectly substitutable to one another, prices higher than marginal costs can be sustained. According to the Bertrand model, a firm chooses its prices in view of maximising its profits, taking into account the prices set by its' competitors. Therefore in a context of heterogeneous goods, the fact that a firm sets high prices leads other firms to conduct a similar pricing policy. This is sustainable because of the fact that goods are imperfectly substitutable to one another.

B.2.2.3. Tight oligopoly and joint dominance

The European law embodied by the Framework directives, European case law or Commission guidelines on market analysis and the evaluation of market power[51] tend to show that

[51] The Framework Directive indicates an absence of effective competition on a given market (§27). According to the Commission guidelines on market analysis and evaluation of market power, in accordance with the ECJ case-law, *a dominant position does not preclude some competition in the market. It only enables the undertaking that enjoys such a position, if not to determine, at least to have an appreciable effect on the conditions under which that competition will develop, and in any case to act in disregard of any such competitive constraint so long as such conduct does not operate to its detriment* (§72). Moreover, the designation of a firm as being powerful (…) "*merely implies that, from a* structural *prospect, and in the short to medium term, the operator has and will have, on the relevant market identified, sufficient market power to behave to an appreciable extent independently of competitors, customers, and ultimately consumers"* (§30).
The guidelines add that, in an ex ante context, this market power can be appreciated chiefly as the possibility for a firm to increase its' prices by restraining output without incurring a significant drop in sales or turnover (§73)

significant influence depends on the capacity for a firm to conduct itself without taking into account competition, that is to say by behaving independently from competitors, especially from a structural point of view in the short and middle run, without incurring any consequences from this attitude.

Joint dominance under of the form of tacit collusion constitutes a configuration of this significant power. For the Authority, a tight oligopoly market configuration leads to a similar market power, in the sense that operators are able, given market concentration, the absence of price led competition, of low consumer elasticity to prices, to maintain price levels resulting from a monopoly, and unsustainable in a normally competitive market.

Appendix C Retail roaming out prices

The tables below present the roaming-out tariffs practiced by operators from 1999 to 2005 excluding 2004. Virtual operators conduct similar tariffs given the underlying wholesale rates.

C.1. Orange France's Retail Prices and Billing Intervals

Prices € TTC / min			Before June 1999	11-Oct-99	21-June-01	2005
Orange France	Post-paid	Access		6,1€ / 60 days	Free	Free
		zone 1	1 € + 17%	1,00 €	1,00 €	1,00 €
		zone 2		No zone – per country	1,30 € 2,50 €	1,18 €
		zone 3				2,40 €
	Prepaid	zone 1	1,07 €	0,73 €	1,00 €	1,00 €
		zone 2	1,22 €	0,73 €	1,30 €	1,50 €
		zone 3	2,13 €	1,55 €	2,50 €	2,40 €

As regards billing intervals :

	Jan-98	26-March-01	15-April-01	15-Sept-02
Post-paid	1' then 15"		1' then 30"	1"
Prepaid	20"	1' then 30"		1' then 1" (incl. Compte mobile)

Call reception is prices according to the zone 0,34 €, 0,55 € et 1,10 € per minute (respectively 0,65 €, 0,75 € and 1,50 € per minute for prepaid and the "compte mobile" postpaid offer).

C.2. SFR's Retail Prices and Billing Intervals

C.2.1. Retail Prices and Billing Intervals

Operators rates in euro/mn			Before June 1999	1th Oct. 199	Before June 2000	June 2000	June 5th 2001		2002-2003		2005	
SFR	postpaid	access	national operators rate + 15%		13,72 €	0,15€/day	15 €	Eurocall +3€/month (april)	ree of charg	Eurocall +3€ then 2,5/month	free of charge	Eurocall +2,5€/month
		zone 1			1,30 €	1,00 €	1,00 €	0,85 €	1,00 €	0,85 €	1,00 €	0,85 €
		zone 2			1,50 €	1,20 €	1,20 €	1,02 €	1,20 €	1,02 €	1,20 €	1,02 €
		zone 3			2,50 €	2,20 €	2,50 €	2,13 €	2,50 €	2,13 €	2,20 €	1,87 €
		other countries			4,60 €	4,30 €	4,60 €	3,91 €	4,60 €	3,91 €	4,60 €	3,91 €
	prepaid	accès	unavailable			13,72 €	13,72 €		gratuit		gratuit	
		zone 1				1,30 €	1,30 €		1,30 €		1,18 €	
		zone 2				1,50 €	1,50 €		1,50 €		1,49 €	
		zone 3				2,50 €	2,50 €		2,50 €		2,50 €	
		other countries				4,60 €	4,60 €		4,60 €		4,60 €	

Calls received by a prepaid user are billed respectively 0,58€/min, 0,70€/min and 1,05€/min for zones 1 to 3. Post-paid users are billed 0,35€/min, 0,58 €/min, 1€/min.

Since 1998 billing intervals have varied as thus (and are currently the same as in 2003) :

Services	March 1997	November 1997	October 1999	lovember 199	ay 15th 200	anuary 200	une 4th 200	Sept. 2002	ept. 26th 200	Jan. 2003
Postpaid	1' + 1" franchise 3"		1' + 1"	1' + 15" new consumers	1' + 15" all consumers	1' + 30"		1" ABC 1' + 1" all consumers		1' + 1" 1" (+3€)
Prepaid		1' + 1"			1' + 15"		1' + 30"		1' + 1"	

C.2.2. The « Passport » Offer

C.2.2.1. <u>Description</u>

In the Autumn of 2005, in addition to the Eurocall offer, SFR launched the « Passport » offer consisting in offering national rates, after a setup charge of 1 € (tax incl.), to any user subscribing to the offer, for voice communications from abroad to France of the visited territory.

This offer, available on a conditional basis (unavailable for Le Compte, Accès and La Carte end-users), is offered for calls originating from a Vodafone network, to a zone 1 territory (Vodafone in Germany, Spain, UK, Greece, Ireland, Italy, Netherlands, Portugal, Belgium (Proximus), Sweden and Switzerland). The setup charge stands at 1,20 € for calls from zone 2 (Vodafone in Albania, Hungary), and at 2,20 € from zone 3 (Vodafone in Australia, Japan and New-Zealand). Calls must not exceed 20 minutes, and are billed per second after a first undivided minute (from the first minute for Evolution Pro and Essentiel offers).

C.3. <u>Bouygues Telecom's Retail Rates and Billing Intervals</u>

Operators Price in €/min			Before June 1999	11 October 1999	Before June 2000	June 2000	04 March 2001	May 2002
Bytel	flat rate	area 1	no zoning country-by-country charge				€1.00	€1.00
		area 2					€1.50	€1.50
		area 3					country by country	€2.30
	pre-paid	area 1					€1.00	€1.00
		area 2					€1.50	€1.50
		area 3					country by country	€2.30

It costs €0.47/min, €0.67/min and €1.00/min to receive calls in all three areas for flat-rate customers, €0.60/min, €1.00/min and €1.50/min using pre-paid cards.

Billing intervals have varied as such (and are currently identical to those of 2003) :

<table>
<tr><th>Services</th><th>January 1998</th><th>Feb. 1999</th><th>March 1999</th><th>Feb. 2000</th><th>Jan. 2001</th><th>Sept. 2002</th><th>Nov. 2002</th><th>Jan. 2003</th><th>April 2003</th></tr>
<tr><td rowspan="4">Post-paid</td><td rowspan="4"></td><td rowspan="2">30" "Premier" postpaid offer</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4">1' + 30"</td><td>1" (+ 3€) postpaid offers: 1H30", 2H,</td><td>1" postpaid offer 45'</td><td>1" "mini forfaits" offers</td><td rowspan="2">1 " (+3€) all offers</td></tr>
<tr><td rowspan="2">1' + 30" postpaid offers: 1H30", 2H, 4H</td><td>1" (+ 3€) offers: 1H30", 2H, 4H</td><td>1" (+ 3€) offers: 2H et plus</td></tr>
<tr><td rowspan="2">1' + 15" other postpaid offers</td><td>1' + 30" offers: 1H30", 2H, 4H</td><td rowspan="2">1' + 30" offers : 2H et plus</td><td rowspan="2">1' + 30" all offers</td></tr>
<tr><td>1' + 30" other offers</td><td>1' + 30" other offers</td></tr>
<tr><td rowspan="2">Prepaid</td><td rowspan="2">1'</td><td rowspan="2"></td><td rowspan="2">30"</td><td rowspan="2">1' + 15"</td><td rowspan="2">1' + 30"</td><td>1" "carte à la s." offer</td><td rowspan="2"></td><td rowspan="2">1"</td><td rowspan="2"></td></tr>
<tr><td>1' + 30" other offers</td></tr>
</table>

Appendix D

Questionnaires of December 9th 2004

In December 2004, ARCEP began conducting an information collection phase using qualitative and quantitative questionnaires which were sent to mobile operators

For the quantitative section of these questionnaires, the aim was to collect data which was relevant and necessary for analysis, i.e. turnover data, volumes and numbers for the period 2000-2004, since the elements collected for these years were useful for a forward-looking analysis. For the qualitative section, the questionnaires asked players about aspects of market definition and for a competition analysis (responses have helped ARCEP better understand the competitive problems and barriers existing on the market).

List of answers

- Bouygues Telecom
- SFR
- Orange France

Appendix E **Comments to this consultation**

Comments to this consultation are to be sent **preferably by e-mail** to m17@arcep.fr[52].

ARCEP invites each contributor to clearly identify each specific point or section of ARCEP's analysis to which their comments refer.

In a concern for transparency, ARCEP will **publish all comments it receives**, except for sections covered by professional secrecy. Therefore, contributors are invited to separate in a clearly identified appendix all elements they consider to be covered by professional secrecy. Again, in a concern for transparency, contributors are invited to limit as much as possible information covered by professional secrecy.

[52] Otherwise, they may be sent by post to the address below:

Service Régulation des marchés fixes et mobiles
Autorité de Régulation des Télécommunications
7 square Max Hymans
75730 Paris Cedex 15
France

Appendix F Confidential data

Appendix G <u>Call profile</u>

Using information at its' disposal on the consumption of roaming in services in the Metropolis by foreign operators, the Authority has established a call profile, supposedly corresponding to the average call of a customer from an EU country neighbouring France.

Characteristics of this call profile are the following :

- call length distributed according to a Law of Poisson of a length of 100 seconds
- 90% of traffic is peak
- 25%of traffic goes to a French called party, 75% to a foreign party ;
- 33% of traffic is fixed to mobile against 67% mobile to mobile ;
- 50% of mobile to mobile traffic to the home country is on-net.

The Authority points out that the use of a call profile is to constitute a standard by which the prices of different tariff schemes can be compared. This call profile must by hypothesis be uniform, and thus can't correspond to traffic effectively for a given operator or end-user. Amongst the parameters of the call that change from one user to another are :

- the average length of the calls, generally higher for big customers ;
- the rate of off-peak calls, generally higher for the general public.