

## COMMISSION DECISION

of 30 April 2003

relating to a proceeding under Article 81 of the EC Treaty and Article 53 of the EEA Agreement  
Case COMP/ 38.370 — O2 UK Limited / T-Mobile UK Limited ('UK Network Sharing Agreement')

(notified under document number C(2003) 1384)

(Only the English text is authentic)

(Text with EEA relevance)

(2003/570/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Whereas:

Having regard to the Treaty establishing the European Community,

## 1. THE FACTS

Having regard to the Agreement on the European Economic Area,

## 1.1. INTRODUCTION

Having regard to Council Regulation No 17 of 6 February 1962, First Regulation implementing Articles 81 and 82 of the Treaty<sup>(1)</sup>, as last amended by Regulation (EC) No 1/2003<sup>(2)</sup>, and in particular Articles 2, 6 and 8 thereof,

Having regard to the application for negative clearance pursuant to Article 2 of Regulation No 17 and the notification with a view to an exemption pursuant to Article 4 of Regulation No 17 submitted by O2 UK Limited and T-Mobile UK Limited on 6 February 2002,

Having regard to the summary of the application and notification published pursuant to Article 19(3) of Regulation No 17 and to Article 3 of Protocol 21 of the EEA Agreement<sup>(3)</sup>,

After consulting the Advisory Committee for Restrictive Practices and Dominant Positions,

Having regard to the final report of the Hearing Officer in this case<sup>(4)</sup>,

- (1) On 6 February 2002, O2 UK Limited ('O2 UK') (formerly BT-Cellnet Limited and BT3G Limited) and T-Mobile UK Limited ('T-Mobile UK') (formerly One2One Personal Communications Limited) notified the Commission of an Agreement dated 20 September 2001 concerning infrastructure sharing and national roaming on the UK market for the third generation of mobile telecommunications networks ('3G') ('the Agreement'). In their notification O2 UK and T-Mobile UK ('the Parties') requested either negative clearance under Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement or, alternatively, an exemption under Article 81(3) of the Treaty/Article 53(3) of the EEA Agreement<sup>(5)</sup>.
- (2) In February 2002 the Commission published a first notice summarising the notified Agreement and inviting observations from third parties<sup>(6)</sup>. This was followed in September 2002 by a notice pursuant to Article 19(3) of Regulation No 17 which set out the Commission's preliminary view and gave third parties an opportunity to comment on the proposed favourable approach<sup>(7)</sup>. This Decision represents the final step in the Commission's decision-making procedure.

<sup>(1)</sup> OJ L 13, 21.1.1962, p. 204/62.

<sup>(2)</sup> OJ L 1, 4.1.2003, p. 1.

<sup>(3)</sup> OJ C 214, 10.9.2002, p. 17.

<sup>(4)</sup> OJ C 187, 7.8.2003.

<sup>(5)</sup> The Commission is also dealing with a related notification from T-Mobile Deutschland GmbH and O2 Germany (formerly VIAG Interkom GmbH) dated 1 February 2002 which concerns a 3G Network Deployment and 3G Bilateral Roaming Agreement in Germany (Case COMP/38.369 — 'Rahmenvertrag').

<sup>(6)</sup> OJ C 53, 28.2.2002, p. 18.

<sup>(7)</sup> Case COMP/C1/N.38.370 — BT Cellnet & BT3G/One2One Personal Communications (United Kingdom Agreement), OJ C 214, 10.9.2002, p. 17.

## 1.2. THE PARTIES

- (3) O2 UK is an operator of digital mobile telecommunications networks and services in the United Kingdom using the GSM ('global system for mobile communications') family of standards. It is building and will operate a new 3G network<sup>(8)</sup> in the United Kingdom. O2 UK is a wholly owned subsidiary of mmO2 plc, the mobile telecommunications business previously controlled by British Telecommunications plc. Through its subsidiaries, mmO2 operates networks in the United Kingdom (O2 UK), Germany (VIAG — renamed O2 Germany), The Netherlands (Telfort — renamed O2 Netherlands), Ireland (Digifone — renamed O2 Ireland) and the Isle of Man (Manx Telecom). In the financial year ending 31 March 2002, the mmO2 group had a turnover of GBP 4,3 billion (about EUR 6,7 billion).
- (4) T-Mobile UK is a mobile telecommunications operator of GSM networks in the United Kingdom and is a wholly owned subsidiary of Deutsche Telekom Mobile Holdings Limited, a wholly owned subsidiary of T-Mobile International AG. The parent company of T-Mobile International is the incumbent fixed network operator in Germany, Deutsche Telekom AG ('DTAG'). T-Mobile International AG owns interests in mobile telecommunications operators in the United Kingdom (T-Mobile (UK) Limited, T-Motion, Virgin Mobile), Austria (max.mobil.), the Czech Republic (RADIOMOBIL) and the USA (VoiceStream). T-Mobile International AG also has subsidiaries active in the Netherlands (BEN, CMobil), Russia (MTS) and Poland (PTC). In the 2001 financial year, T-Mobile International AG had a worldwide turnover of EUR 14,6 billion.

## 1.3. LEGAL AND FACTUAL BACKGROUND

### 1.3.1. THE DEVELOPMENT OF 3G MOBILE COMMUNICATIONS IN THE COMMUNITY

- (5) In Europe, the first generation ('1G') of mobile communication systems was based on analogue technology. This was followed at the beginning of the 1990s by the second generation ('2G') systems which introduced digital technology, namely GSM 900 (the European Global System for Mobile Communications) and DCS 1800 (so-

called Personal Communications Networks PCN services). Both GSM 900 and DCS 1800 services are now commonly referred to as GSM services. Standard GSM communications are 'circuit-switched', which means that for any call a physical path is set up for and dedicated to a single connection between the two communicating end points in the network for the duration of the connection. Transmission rates for GSM are 9,6 kB/s (kilo bits per second) to 11,4 kB/s, or with compression 14 kB/s, which allows the delivery of basic voice telephony, short messaging service (SMS) and e-mail, and circuit-switched data.

- (6) Enhanced '2,5G' mobile technologies that use more efficient packet-switched communications to send data in packets to their destinations, via different routes, without requiring the reservation of a dedicated transmission channel (using radio resources only when users are actually sending or receiving data) are being developed to provide a greater range of services including mobile e-mail, visual communications, multimedia messaging and location-based services. General Packet Radio Service ('GPRS') is one of the principal 2,5G technology platforms that offers 'always-on' connection, higher capacity and packet-based data services. GPRS data transmission rates are between 30 kB/s and 40 kB/s and with EDGE technology 80 kB/s to 130 kB/s, depending on the specific usage situation<sup>(9)</sup>.
- (7) Work is now underway to bring about a third generation ('3G') of mobile technology, applications and services to the market<sup>(10)</sup>. 3G builds on 2,5G technology, integrating packet- and circuit-switched data transmission. It is technically capable of reaching a speed of 144 kB/s and will eventually allow transmission rates that are expected to have a practical maximum rate of 384 kB/s outdoors and up to 2Mb/s indoors<sup>(11)</sup>. 3G services are mobile communications systems capable of supporting in particular innovative multimedia services, beyond the capability of second generation systems such as GSM, and capable of combining the use of terrestrial and satellite components.

- (8) Annex I to Decision No 128/1999/EC of the European Parliament and of the Council of 14 December 1998 on the coordinated introduction of a third-generation

<sup>(8)</sup> In May 2000, the UK Government awarded five 3G licences following a frequency auction procedure worth EUR 38,5 billion. The companies awarded the licences were Orange, BT3G, Vodafone, One2One Personal Communications Limited and H3G. BT3G has now been rebranded O2 Third Generation Holdings Ltd and still holds a 3G licence, but this will be operated by O2 UK. One2One has now been renamed T-Mobile (UK) Limited. The 3G licence will be operated by T-Mobile (UK) Limited.

<sup>(9)</sup> Other less widespread technologies include WAP (Wireless Application Protocol), HSCSD technology (High-speed circuit switched data) and EDGE (Enhanced Data GSM Environment).

<sup>(10)</sup> UMTS (Universal Mobile Telecommunications System) is one of the major new 'third generation' (3G) mobile communications systems being developed within the framework defined by the International Telecommunications Union (ITU) collectively known as IMT-2000.

<sup>(11)</sup> The exact transmission rate depends on parameters like the time and location of the call, the number of users within a cell and the applications used as the available speed will be divided between the different users and applications.

mobile and wireless communications system (UMTS) in the Community<sup>(12)</sup> (the UMTS Decision) sets out the characteristics which UMTS must be capable of supporting. These include multimedia capabilities, full mobility and low mobility applications in different geographical environments beyond 2G capabilities, efficient access to Internet, Intranets and other Internet-protocol-based services, high quality speech transmission commensurate with that of fixed networks, service portability across 3G environments and operation in one seamless environment including full roaming with GSM as well as between the terrestrial and satellite components of UMTS networks. Given that 3G networks and services are not yet available it is not possible to provide a reliable catalogue. However, examples of anticipated services include mobile video-conferencing, mobile video phone/mail, advanced car navigation, digital catalogue shopping and various business to business (B2B) applications<sup>(13)</sup>.

- (9) The development of 3G in the Community is based on the common UMTS technological platform, on the harmonisation of the radio spectrum and on the definition of a harmonised regulatory environment. The first step towards achieving these harmonisation objectives was the adoption of Directive 97/13/EC of the European Parliament and of the Council of 10 April 1997 on a common framework for general authorisations and individual licences in the field of telecommunications services<sup>(14)</sup>. This was followed, at the end of 1998, by the UMTS Decision, which required Member States to enable the introduction of UMTS services on their territory by 1 January 2002 and emphasised the role of technical bodies such as the European Conference of Postal and Telecommunications Administrations ('CEPT') and the Europe Telecommunications Standard Institute ('ETSI') in harmonising frequency use and promoting a common and open standard for the provision of compatible UMTS services throughout Europe.
- (10) Finally, in March 2001 the Commission published a Communication setting out the state of play and the way forward for the introduction of third generation mobile communications in the European Union<sup>(15)</sup>. In that Communication, the Commission took note of

the difficult financial situation of telecommunications operators throughout the European Union and of the high infrastructure investment costs involved that led operators to engage in infrastructure-sharing arrangements. It concluded that economically beneficial sharing of network infrastructure should in principle be encouraged, provided the competition rules and other relevant Community law are respected<sup>(16)</sup>. In its follow-up Communication of 11 June 2002 entitled 'Towards the Full Roll-Out of Third Generation Mobile Communications'<sup>(17)</sup>, the Commission emphasised that it would continue to work with national administrations towards establishing a best-practice approach for network sharing.

### 1.3.2. NETWORK SHARING

- (11) 3G network sharing can take place at a number of different levels and involve varying degrees of cooperation. The degree of independence retained by an operator depends on which network elements are being shared and its remaining ability to install separate elements (planning freedom). The basic distinction that is relevant in the context of the Parties' network-sharing agreement is that between the Radio Access Network ('RAN') and the core or backbone network.

#### 1.3.2.1. RAN

- (12) The RAN includes mast/antenna sites, site support cabinets ('SSCs') and power supply, as well as antennae, combiners and transmission links, Nodes B, that is to say, the base stations that receive and send data across frequencies and control a particular network cell, and the radio network controllers ('RNCs') that each control a number of such Nodes B and that are linked to the core network.

#### 1.3.2.2. Core network

- (13) The core network is the intelligent part of the network that consists of mobile switching centres ('MSCs'), various support nodes, services platforms, client home location registers and operation and maintenance centres. It is linked to the fixed ISDN (integrated services digital network) and Internet networks.

<sup>(12)</sup> OJL 17, 22.1.1999, p. 1.

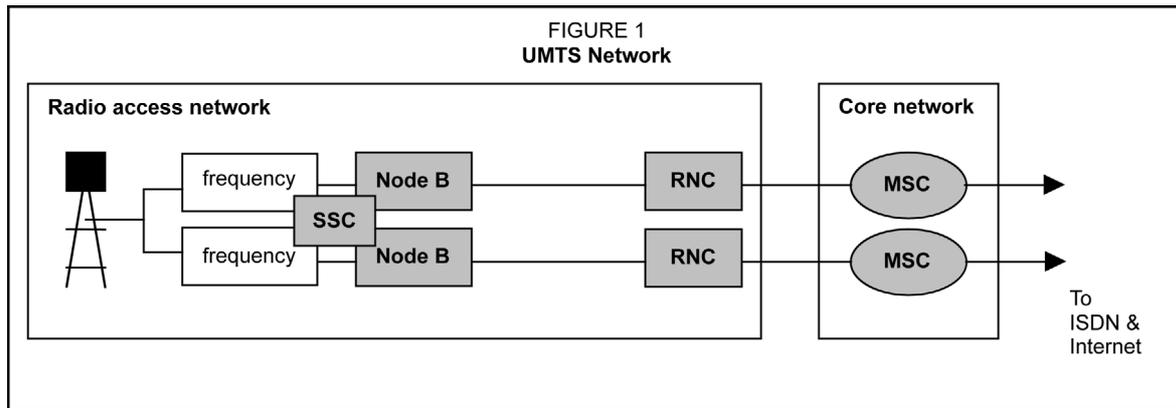
<sup>(13)</sup> For further information and examples, see <http://www.umts-forum.org>.

<sup>(14)</sup> OJL 117, 7.5.1997, p. 15. This Directive sets out the procedures associated with the granting of authorisations for the purpose of providing telecommunications services, and the conditions attached to such authorisations.

<sup>(15)</sup> 'The introduction of Third Generation Mobile Communications in the European Union: State of Play and the Way Forward' (Introduction of 3G in the EU), COM(2001) 141 Final (20.3.2001).

<sup>(16)</sup> Introduction of 3G in the EU, paragraph 4.3.

<sup>(17)</sup> COM(2002) 301 Final.



(14) Ranked by the increasing degree to which the network is shared it is possible to distinguish between shared use of:

- (a) sites, which ranges from sharing individual mast sites up to grid sharing (requiring a uniform layout of networks), and may include site support infrastructure, such as site support cabinets (SSC);
- (b) base stations (Nodes B) and antennae;
- (c) radio network controllers ('RNCs');
- (d) core networks, including mobile switching centres ('MSCs') and various databases;
- (e) frequencies.

(15) Finally, national roaming concerns a situation where the operators concerned do not share any network elements as such but simply use each other's network to provide services to their own customers.

(16) In their notification the Parties use the term 'site sharing' for shared use of infrastructure up to the level of, but not including, Nodes B and RNCs (point (a) in recital 14). The Parties may consider RAN sharing (point (b) in recital 14) for specific point solutions, although this is not currently planned. The Parties do not envisage sharing their core networks, but their Agreement does cover national roaming.

### 1.3.3. NATIONAL REGULATORY FRAMEWORK

(17) Subject to the principle of the primacy of Community law, the applicable national licensing and regulatory

requirements must be taken into account in the context of network infrastructure sharing<sup>(18)</sup>. Both the general national regulatory framework in the United Kingdom and the terms of the Parties' 3G licences set out parameters for network sharing. These include:

- (a) network roll-out requirements in terms of effective coverage related to a specific timetable, notably a requirement to cover 80 % of the population by the end of 2007;
- (b) general obligations as regards, for example, site and antenna sharing relating to planning restrictions and environmental concerns;
- (c) the possibility to impose facility sharing, including network sharing, on a case-by-case basis;
- (d) limitations as regards the extent of network sharing allowed in relation to, for example, sharing network intelligence and sensitive customer data.

<sup>(18)</sup> A number of national regulatory authorities (NRAs) in the Community have issued guidance on the conditions under which infrastructure sharing would be consistent with national licensing and regulatory requirements. In the UK Ofcom published a position in May 2001, '3G Mobile Infrastructure Sharing. Note for information', available at <http://www.ofcom.gov.uk/publications/mobile/infrashare0501.htm>. In Germany, RegTP issued its Interpretation of the UMTS Award Conditions in the light of more recent technological advance, RegTP (6 June 2001), available at [www.regtp.de](http://www.regtp.de). The Dutch and French NRAs have published similar documents, available at [http://www.opta.nl/download/concept\\_notitie\\_nma\\_vw\\_opta\\_umts\\_netwerk-en\\_190701.pdf](http://www.opta.nl/download/concept_notitie_nma_vw_opta_umts_netwerk-en_190701.pdf) and at <http://www.art-telecom.fr/dossiers/umts/partage-infras.htm>.

(18) Oftel is the national telecommunications regulatory authority ('NRA') in the United Kingdom that is responsible for the notified Agreement. In May 2001, Oftel published general guidance in which it encouraged infrastructure sharing subject to a case-by-case assessment of individual proposals<sup>(19)</sup>.

(19) The national regulatory framework and the Community competition rules are of parallel and cumulative application. National rules may not conflict with the Community competition rules nor can compatibility with national rules and regulations prejudice the outcome of an assessment under the Community competition rules. Hence a full assessment of the notified Agreement under the Community competition rules is required.

#### 1.4. THE AGREEMENT

(20) O2 UK and T-Mobile UK entered into an Agreement ('the Agreement') on 20 September 2001 to cooperate by way of 3G site sharing and national roaming. The Agreement also covers certain 2G and 2,5G infrastructure. The Parties will maintain separate networks and service provision. The Agreement also includes specific provisions to ensure that no more information than strictly necessary is exchanged. The Parties differentiate in the Agreement as notified between three areas: (i) the Initial Build Area ('IBA'); (ii) the Divided Area ('DA'); and (iii) the Remaining Area. At meetings on 6 and 7 March 2003 the Parties informed the Commission that they had agreed to further subdivide the IBA into two parts. On 12 March 2003 they provided the Commission with a statement setting out what they had agreed and how the Agreement would be amended accordingly. The subdivision of the IBA was to be as follows:

(a) a 'core area' of the IBA consisting of the top 10 cities in the United Kingdom covering approximately [32 to 38 %] (\*)<sup>(20)</sup> of the population where both parties would separately roll out their networks<sup>(21)</sup>;

(b) a 'residual area' of the IBA consisting of a further 13 cities covering [less than 10 %] (\*) of the UK population where each Party has been allocated a number of cities in which to roll out its network<sup>(22)</sup>.

##### 1.4.1. SITE SHARING AND NATIONAL ROAMING IN THE INITIAL BUILD AREA

(21) The IBA as a whole represents an area covering around [30 to 50 %] (\*) of the UK population and more than [50 to 80 %] (\*) of UK businesses (the main urban areas). In this area, the Parties' cooperation will focus on site sharing rather than national roaming, although the latter is not excluded. Within this area, the Parties agree:

(a) pursuant to Clause 2.3 of the Agreement, to cooperate in the planning, acquiring (not on the basis of joint ownership), building and deploying and sharing of 2G, 2,5G and 3G sites. This site sharing involves shared housing, that is to say, structures including mast, materials and equipment (power supply, racking and cooling) for 3G, 2,5G and/or 2G equipment, in particular transceivers and base station racks or Node B base station cabinets, but not transmission and antennae;

(b) to disclose and if practical revise respective radio plans to make best use of possible common locations for individual cell sites (Clauses 6.2.1 to 6.2.4 and 6.7 of the Agreement);

(c) to grant the other Party an option over sites identified as suitable for site sharing exercisable for two years and thirty days after 31 December 2001 (Agreed Document 8 of the Agreement);

(d) to grant the other Party first refusal in the event that a third party wishes to share the same site (Agreed Document 8);

(e) in the 'residual area' of the IBA, to roll out a network in the set of cities allocated to the Party concerned and provide roaming services to the other Party until the latter has achieved its own network coverage in this area (in the 'core area' of the IBA, the Parties will both build out their networks separately from the outset and there will be no reliance on roaming).

(22) The degree of site sharing that is envisaged by the Parties does not involve the entire RAN (notably Nodes B and RNCs are not included), nor does it involve sharing of frequencies or the core network.

<sup>(19)</sup> 3G Mobile Infrastructure Sharing. Note for Information.

<sup>(20)</sup> Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

<sup>(21)</sup> Greater London, Birmingham, Manchester, Glasgow, Leeds, Edinburgh, Liverpool, Nottingham, Newcastle and Bristol.

<sup>(22)</sup> [Sheffield, Leicester, Brighton, Northampton, Cambridge, Southampton, Cardiff, Belfast, Coventry, York, Preston, Stoke-on-Trent and Oxford] (\*).

(23) The Agreement also provides for information to be exchanged regularly in order to allow site sharing and roaming. Information to be exchanged includes technical information about present and future sites such as the location and antenna height of the site, the nature and extent of the space available and any specific rights or restrictions and the site configuration parameters to allow seamless roaming. Specific confidentiality provisions are included as a safeguard.

#### 1.4.2. SITE SHARING AND NATIONAL ROAMING IN THE DIVIDED AREA

(24) In the DA (an area covering about a further [40 to 70 %] (\*) of the population), the Parties adopt a common radio and roll-out plan for 3G that is based on the principle of a separate territory for each Party. Each Party has been allocated a 'Designated Area' (separate geographic area) of the DA to build and operate its 3G network in accordance with the unitary radio and roll-out plans. Within the respective Designated Area, each Party will provide roaming services to the other Party on a 'retail minus minus' price formula (Clause 22.1), and cannot enter into similar Agreements with third parties in order to provide this service to the other Party (Clause 2.5). In limited cases, RAN sharing may be considered for specific point solutions but this is not currently planned. Clause 9.2 of the Agreement also provides that a Party shall not deploy 3G infrastructure in the Designated Area of the other Party, although this is subject to a number of exceptions which do not require prior consent of the other Party, set out in Clause 11 (for example, for special events, to meet market demand and/or for special needs of important customers).

(25) The Parties also agree that all new sites in the DA will be built with sufficient accommodation and mast space to fit a minimum of two operators, with space reserved by the Party to which the Designated Area has been allocated for later occupation by the other Party. The Parties have an option to share, exercisable after 31 May 2002 for two years and 30 days or for five years and 30 days followed by a right of first refusal of indefinite duration (Agreed Document 8). After the expiry of the Option, if one Party operating a site receives an offer from a third party at a site-sharing fee which is equal to or higher than the fee (price list) agreed and commercially negotiated between the parties and based on fair market prices for sites owned by or under the control of the parties, the 'Site Operator' shall notify the other Party

of such a request. The other Party then has 14 days to confirm that it will enter into a site-sharing Agreement with the Site Operator (the Party controlling the site).

(26) Pursuant to Clause 14.7, each Party is able to conclude 3G national roaming Agreements with third-party national 3G operators (for the network it has built and operates itself), but the third-party operator would not have access to the network of the other Party to the Agreement unless the latter gave its approval. However, nothing in the Agreement prevents either Party from reselling its 3G telecommunications wholesale services to non-operator third parties (for example service providers and/or Mobile Virtual Network Operators (MVNOs), whether carried on its own network equipment or via roaming in the other Party's Designated Area. Clause 14.7 does not affect arrangements concerning international roaming.

(27) As is the case in the IBA, the Parties will exchange technical information to allow site sharing and roaming, but the adoption of a common radio plan will require them to also exchange further information, including coverage targets and coverage roll-out plans, Quality of Service (QoS) targets, expected traffic requirements for UMTS services and Node B radio design parameters. Confidentiality provisions are also included as a safeguard.

#### 1.4.3. SITE SHARING AND NATIONAL ROAMING IN THE REMAINING AREA

(28) The Parties agree, when market conditions permit, to extend their respective 3G networks into the Remaining Area, which covers the least densely populated areas of the United Kingdom, using the same principles applied in the DA.

#### 1.4.4. DURATION

(29) The Agreement is for an unlimited duration but can be terminated after 31 December 2007 by either Party giving two years' notice.

### 1.5. ARGUMENTS OF THE PARTIES

(30) The Parties justify the Agreement in terms of the financial difficulties experienced by 3G operators, the regulatory timeframe (the UK requirement of 80 % population coverage by the end of 2007) and the need to address environmental concerns.

## 1.5.1. ARTICLE 81(1) OF THE TREATY/ARTICLE 51(1) OF THE EEA AGREEMENT

(31) The Parties argue that the Agreement does not have the object or effect of appreciably restricting competition within the common market contrary to Article 81(1) of the Treaty/Article 51(1) of the EEA Agreement as they claim the Agreement will increase competition rather than reduce it. This claim is based on the argument that the Parties will compete with each other at network level in the IBA, whereas cooperation in the DA will enable the Parties to compete at services level with other 3G operators nationwide at an earlier stage than if they did not cooperate.

## 1.5.2. ARTICLE 81(3) OF THE TREATY/ARTICLE 51(3) OF THE EEA AGREEMENT

(32) If the Agreement is considered to restrict competition, the Parties argue in the alternative, that it may be exempted under Article 81(3) of the Treaty/Article 53(3) of the EEA Agreement. They argue that the Agreement will speed up the provision of 3G services by enabling the Parties to reduce 3G network deployment costs, making 3G services available earlier to end-users. The Parties argue that consumers will benefit through the delivery of faster, more innovative 3G services at lower prices. Finally, as a result of their cooperation, the Parties will not produce standardised services to end-users but will continue to compete directly on content applications, retail pricing, wholesale pricing, terms and conditions of service, channel to market and customer-care services and marketing. Hence they conclude that as a result of the Agreement competition will not merely be preserved but will be increased in the UK markets for 3G networks and services.

## 1.6. COMMENTS FROM THIRD PARTIES

(33) The initial administrative notice and the subsequent notice pursuant to Article 19(3) of Regulation No 17 led to input from the United Kingdom national competition authorities ('the UK authorities'), two mobile network operators and a specialised equipment manufacturer. All respondents indicated that they were in principle in favour of network sharing but the UK authorities and one mobile operator made detailed comments which were critical of the Agreement in its current form.

## 1.6.1. COMMENTS BY THE UK AUTHORITIES

(34) The UK authorities submitted detailed comments which focused in particular on the possible competition concerns arising from the cooperation in the IBA as originally notified<sup>(23)</sup>. The UK authorities considered that the Agreement appeared to limit network competition in so far as it limited competition on coverage and quality between the two Parties. They were particularly concerned about clauses in the Agreement which appeared to have the effect of limiting network competition in the IBA. Moreover, they were of the view that the Agreement might facilitate tacit collusion between the two Parties and there might be spill-over effects which could weaken competition at the retail level. However as regards site foreclosure, the UK authorities did have concerns but considered that the market for sites was sufficiently competitive for any problem to be relatively minor. Difficulties for another operator gaining access to sites was likely to be limited to particular circumstances in isolated areas of the United Kingdom.

(35) In light of these concerns, the UK authorities recommended that the following conditions should be imposed:

- (a) the exemption should lapse within a relatively short time period to allow review of actual benefits to consumers;
- (b) the Parties should amend the Agreement so as to prohibit in the IBA the reciprocal roaming arrangements as well as the use of the Joint Radio Plan (so as to optimise the use of common locations);
- (c) the exemption should be conditional on the management and control of the Parties remaining the same, and there should be an obligation to notify the Commission of any change in ownership;
- (d) it might be desirable to have independent auditing of the confidentiality arrangements, to be subject to periodic reports to the Commission.

<sup>(23)</sup> A public version of the UK authorities' response of 10 October 2002 was published on OFTEL's website and can be found at [http://www.oftel.gov.uk/publications/oftel\\_response/](http://www.oftel.gov.uk/publications/oftel_response/).

## 1.6.2. COMMENTS FROM MARKET PARTIES

- (36) One third party stated that it was in favour of network-sharing agreements provided they were open to third parties. As regards this Agreement, it was concerned that the option to site-share and the right of first refusal amounted to de facto exclusivity and could foreclose other operators from the market. It was also concerned that the Agreement gave the Parties an unfair advantage in the market as a result of the cost savings brought about by the Agreement. It concluded that the Agreement would lead to less competition and provide fewer cost savings and consumer benefits compared to an open agreement.
- (37) Another third party expressed concerns that the Commission appeared to be excluding antenna-sharing solutions as a technical solution, notwithstanding the operational, environmental and financial benefits.
- (38) All third-party comments received were carefully reviewed and to the extent that the comments reflected genuine competition concerns, they were duly considered. The Commission's reasoning on the concerns raised is presented in the Legal Assessment in Part 2 of this Decision.

## 2. LEGAL ASSESSMENT

- (39) As the Agreement is mainly technical in nature and does not have as its object the restriction of competition, the effect of the Agreement must be analysed. Whether the Agreement is likely to have negative effects on competition depends not only on the nature of the Agreement but also on its economic context, such as the market power of the Parties and other factors relating to market structure. This analysis requires a definition of the two relevant wholesale markets that are directly affected by the Agreement, and an identification of a number of other wholesale and retail markets where effects may be felt.

## 2.1. RELEVANT MARKET

## 2.1.1. INTRODUCTION

- (40) Markets can generally be divided into wholesale and retail markets. In telecommunications, wholesale markets typically consist of the provision of access to

networks or network elements and of network services to operators of networks and services. Retail markets consist of the provision of communications services to end-users<sup>(24)</sup>. Within these broad categories, narrower markets can be defined not only on the basis of the characteristics of the service concerned and the degree to which it can be substituted by other services based on price, usage and consumer preference, but by an analysis of competitive conditions and the structure of demand and supply<sup>(25)</sup>. It is evident given the advantages of mobility and the premium paid for it that mobile services are in general not substitutable by fixed services. Mobile and fixed voice services are therefore part of different services markets, as has been determined in a number of Commission decisions<sup>(26)</sup>.

- (41) The network access and services markets that are primarily concerned by the Agreement are:
- (a) the market for sites and site infrastructure for digital mobile radiocommunications equipment;
  - (b) the market for wholesale access to national roaming for 3G communications services.
- (42) In addition, the markets for wholesale access to 3G services, as well as the downstream retail markets for 3G services are affected indirectly.

<sup>(24)</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector — framework, relevant markets and principles (Access Notice), OJ C 265, 22.8.1998, p. 2, paragraph 45; Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (SMP Guidelines), OJ C 165, 11.7.2002, p. 6, paragraph 64.

<sup>(25)</sup> Commission Notice on the definition of relevant market for the purposes of Community competition law, OJ C 372, 9.12.1997, p. 5; Guidelines on the application of EEC competition rules in the telecommunications sector, OJ C 233, 6.9.1991, p. 2.

<sup>(26)</sup> SMP Guidelines, paragraph 66. Cf. Commission Decision 98/2001/EC in Case COMP/M.1439 — Telia/Telenor (OJ L 40, 9.2.2001, p. 1); Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 20 September 2001 in Case COMP/M.2574 — Pirelli/Edizione/Olivetti/Telecom Italia (OJ C 325, 21.11.2001, p. 12); Commission Decision of 10 July 2002 in Case COMP/M.2803 — Telia/Sonera (OJ C 201, 24.8.2002, p. 19).

### 2.1.2. WHOLESALE MOBILE NETWORK ACCESS MARKETS

- (43) Access to physical facilities, such as sites, and site infrastructure, that is to say masts and antennae, as well as ducts, leased lines and rights of way, that serve as part of a mobile telecommunications network infrastructure, may constitute access to particular mobile network markets. In addition, there are wholesale network access and services markets for the provision of digital mobile communications services to other operators. These can be divided broadly into two categories:
- (a) wholesale network services related to interconnection that allow communication to take place between the users of different networks;
  - (b) wholesale access services that relate to the use of a host or visited network by customers of other operators.
- (44) The wholesale network services related to interconnection include call termination (the wholesale service of completing a call to an end user), call origination (the wholesale service of enabling a call to be originated by an end user), as well as direct interconnection services (the provision of a direct physical link between terminating and originating networks) and transit services (the provision of an indirect link between terminating and originating networks by means of transit across one or more third networks). Access services that relate to the use of a 'host' or 'visited' network by customers of other operators include the wholesale provision of national and international roaming, and the wholesale provision of airtime.

### 2.1.3. MARKETS DIRECTLY AFFECTED BY THE AGREEMENT

#### 2.1.3.1. *The market for sites and site infrastructure for digital mobile radiocommunications equipment*

#### **Product/infrastructure market**

- (45) Both 2G and 3G mobile telecommunications networks rely on a cellular network architecture based around antennae that are distributed across the coverage area, allowing radio signals to be received from and transmitted to end users within a certain cell radius<sup>(27)</sup>. The operators of 2G and 3G mobile telecommunications

networks require sites for the location of these antennae and the related site infrastructure such as masts, site support cabinets, power supply, combiners and transmission links.

- (46) Acquiring (either purchasing or, more commonly, leasing) such sites requires agreement with the site owners and planning permission from local authorities, and in some cases approval from regulatory authorities to limit the risk of radio frequency interference. Although the number of properties that can be converted into sites for digital mobile communications equipment is in theory unlimited, in practice the number of suitable sites is limited due to planning regulations, health or environmental considerations or space constraints in 'hot spots' (for example, in city centres or airport and railway terminals). To be considered a site, a particular property must therefore be usable as such from a technical point of view, must be made available in accordance with regulatory constraints, and must fit into the planned network architecture spaced across the coverage territory according to capacity needs.
- (47) From a demand perspective, sites are at present required primarily by the five operators that hold 3G licences in the United Kingdom and are planning 3G network roll-out, four of which also operate 2G networks<sup>(28)</sup>. In principle 2G and 3G sites are interchangeable, although due to the nature of the different frequencies used and the added capacity desired for 3G services, the density of a 3G network is greater, and requires up to twice as many sites as a 2G network. Only a limited part of the demand for 3G sites can therefore be met by using existing 2G sites. Finally, unlike 2G networks, which are already fully rolled out, the roll-out of 3G networks in the United Kingdom is still in its initial stage. Given regulatory roll-out requirements of 80 % population coverage by the end of 2007, the initial demand for sites is highest in urban and other densely populated areas. Although there is some room for substitution between different types of sites (for example, between rooftop sites and mast sites, or between multiple sites serving smaller cells, such as micro or pico cells and single sites serving larger macro cells) there are no other products that can substitute for 2G and 3G sites and site infrastructure.

- (48) From a supply perspective, access to 2G and 3G sites and site infrastructure can firstly be provided by 2G and 3G network operators that have located, acquired and developed sites for the purposes of operating their own networks. This is because in principle sites can be shared

<sup>(27)</sup> Because 2,5G is based on an overlay of existing 2G networks this is not analysed separately.

<sup>(28)</sup> Sites are also required by, for example, digital broadcasters and to a more limited extent by providers of TETRA (Terrestrial Trunked Radio).

between multiple operators, although there are technical limits on the number of operators that can share a particular site, in most cases up to three, depending on the lay-out of the specific site. There appear to be economies of scope involved at the supply side, because network operators are likely to prefer dealing with parties that can provide them with the largest possible number of sites across the largest possible number of locations in order to minimise search costs and to minimise transaction costs. Operators may prefer site sharing with other operators so as to allow the sharing of more elements of site infrastructure, thereby further reducing their costs. Finally, it is possible that in hot spots such as city centres many of the most favourable sites have already been developed and are therefore not always available to market entrants.

(49) There is limited scope for supply by operators of broadcasting networks. In general, broadcast transmission equipment is located on sites affording a much higher level of geographical coverage when compared to the coverage requirements of cellular systems. Consequently, broadcast sites tend to be tall structures in elevated locations that transmit at high powers (tens of kilowatts) in order to achieve optimal population coverage using a limited number of sites. In view of capacity considerations, mobile radio networks are cellular in nature, each site providing sufficient but limited coverage, reducing inter-cell interference and allowing the frequency allocations to be reused in other areas. The size of each cell may range from a few hundred metres to several kilometres, the actual range determined by the level of network capacity required. Site height and transmitted power are the main factors in controlling cell size with typical powers of tens of watts and antenna heights between 10 and 20 meters. There is a tendency for mobile operators to utilise broadcast structures where they are suitable for the local requirements of the service.

(50) There has been market entry by independent companies that specialise in the location, acquisition and provision of sites for use by third parties. Other parties that control sites, such as public authorities or utilities, can likewise enter the market and have already done so in the United Kingdom. Moreover operators have historically also acquired and leased individual sites on a commercial basis directly from the site owners, and continue to do so. Apart from the general planning permission constraints, health rules and requirements to minimise electromagnetic interference, there are no serious legal,

statutory or other regulatory requirements that could defeat a time-efficient entry into the market and as a result discourage supply-side substitution. No significant investments or scarce technical expertise are required to enter the market. Market entry therefore remains possible.

- (51) Based on the above analysis of supply and demand it should be concluded that there is a market for sites and site infrastructure for digital mobile radiocommunications equipment.

### Geographic market

- (52) Based on the structure of demand, which is by nationally licensed operators, the market is likely to be national, namely the United Kingdom, although stricter planning rules for sites hosting mobile radiocommunications equipment in Scotland may mean that there is a separate market in Scotland.

### 2.1.3.2. Wholesale market for access to national roaming for 3G communications services

#### Product/service market

- (53) Mobile roaming occurs when customers use their mobile telephone handset, or more specifically the SIM (Subscriber Identification Module) card which identifies the subscriber, on a different mobile network (host or visited network) from that to which they subscribe and which issued their SIM card (home network). Roaming can be either national or international. In both cases it is based on agreements between the home network operator and the visited network operator for the provision of wholesale roaming access to the visited network which is then passed on as a retail service by the home network to its subscribers. However, the market for national roaming is distinct from international roaming, *inter alia* because it does not involve agreements between foreign operators, it is not based on the standard arrangements developed within the GSM Association<sup>(29)</sup>, and the prices are significantly different.
- (54) Notwithstanding a possible initial overlap between 2G, 2,5G and 3G retail services, from a demand perspective, wholesale access to national roaming for 3G communications services will be distinct from 2G or 2,5G roaming, because the range of both voice and data services that can be provided based on 3G roaming is broader and different, given that significantly higher

<sup>(29)</sup> The GSM Association consists of over 690 different 2 and 3G mobile network operators, manufacturers and suppliers who collectively develop technical platforms to make wireless services work seamlessly, with a focus on roaming and inter-operability. Cf. <http://www.gsmworld.com>.

transmission speeds will be available (in practice from 144 up to 384 kB/s for 3G versus between 20 and 60 kB/s for 2,5G and between 9 and 14 kB/s for 2G). A more complete discussion of the relevant voice and data services is provided in section 2.1.4.2.

- (55) From a supply perspective, only operators of 3G networks or other parties able to provide the relevant type of access to the 3G networks of such operators will be able to supply wholesale access to national roaming for 3G services. Given licensing requirements, the barriers to entry, apart from secondary entry based on access rights to an existing 3G network, are absolute. Wholesale access to national roaming for 3G communications services therefore constitutes a distinct product/service market.

### Geographic market

- (56) Since licensing of 3G networks takes place at national level, and given pricing differences between national and international roaming, the relevant market is national, namely the United Kingdom.

#### 2.1.4. OTHER POTENTIALLY AFFECTED WHOLESAL AND RETAIL MARKETS

##### 2.1.4.1. *Potentially affected wholesale markets for 3G network services and access*

### Product/service markets

- (57) There are a number of other possible wholesale markets for 3G network services and network access that may be affected by the Agreement, such as the market for the provision of wholesale airtime access to service providers, which has existed in the United Kingdom on the basis of regulatory obligations. Wholesale airtime access is similar to national roaming in that it also concerns the wholesale provision of network access and minutes (airtime) by a host network. It has been supplied to service providers by licensed mobile operators in the United Kingdom as a condition of their licences<sup>(30)</sup>. The

difference between the two forms of access is that an operator relying on national roaming can itself determine the range of services available to its subscribers, and can provide services that are not available to customers of the host network. A service provider, however, can only provide simple resale of the range of services offered by the network operator that is providing it with wholesale airtime.

- (58) Another possible wholesale market is the market for call origination services where providers of carrier selection services purchase the right to obtain access to mobile networks in order to originate calls that they terminate under their own responsibility. It is possible that, in addition, new forms of wholesale access to 3G networks and services may develop and come to constitute separate relevant markets.

- (59) Wholesale 3G network services and network access are likely to be distinct from network services and access for 2G or 2,5G services, because the range of services that can be provided based on 3G networks is broader and different, given the availability of significantly higher transmission speeds. However given the degree of development of 3G wholesale markets, which are still emerging, it is too early to describe in detail the demand side for network services and access on commercial terms in such markets, with the exception of demand from service providers for access to wholesale airtime. From a supply side these markets are logically limited to 3G network operators and to any other parties that may obtain a right to provide the relevant degree of access to 3G networks.

### Geographic market

- (60) Given national licensing and pricing patterns, the geographic scope of such wholesale markets is likely to be national<sup>(31)</sup>. For the purposes of the present Decision it is not necessary to define those markets more closely. Their definition will therefore be left open.

#### 2.1.4.2. *Potentially affected retail markets*

- (61) Whereas the cooperation covered by the Agreement is limited to site sharing and national roaming at wholesale network level, the effects of this cooperation could be felt in the downstream retail services markets

<sup>(30)</sup> Vodafone and O2 UK were held to hold market influence and required to supply wholesale airtime. OFTEL decided to make determinations to remove the MI determinations (5 April 2002), <http://www.oftel.gov.uk/publications/mobile/2002/mide0402.htm>

<sup>(31)</sup> However cf. Commission Decision of 4 October 2001 in Case COMP/M.2598 — TDC/CMG/MIGway JV (OJ C 16, 19.1.2002, p. 16), which identifies EU-wide markets for connectivity to the international signalling network and for wholesale access (SMS) to mobile telephony infrastructure.

where the Parties are active independently of each other. Within the area of mobile retail services, voice and data services have so far been offered in a bundled manner, suggesting that they may be part of the same market. The 3G network operators are likely to offer 'seamless' 2G and 3G voice and data services by providing both types of services on a single SIM card. However, the balance between voice and data services is expected to shift fundamentally: whereas 2G data services are largely limited to fax and SMS, and voice services typically account for over 90 % of 2G mobile operators' revenues, for 3G networks, with services like teleshopping, video telephony and video conferencing, it is expected that eventually between 50 % and two thirds of revenue may be generated by data services. It is therefore useful to analyse digital mobile voice telephony services and digital mobile data services separately. At least initially this distinction largely corresponds with that between circuit-switched and packet-switched services.

### Digital mobile voice services

- (62) Concerning mobile voice telephony markets the Commission has so far generally not distinguished between different technologies. Most decisions have determined that both analogue and digital GSM 900 and 1800 are part of the same mobile voice telephony market, while testing narrower market definitions to ensure that no dominant positions arose on any market definition<sup>(32)</sup>. However, as analogue mobile telephony has been phased out by the operators in the United Kingdom, the services concerned by the

Agreement are digital mobile voice telephony. So far the Commission has not defined different markets for 2G, 2,5G and 3G retail services<sup>(33)</sup>.

- (63) Over time, however, industry sources anticipate that 'rich voice over 3G networks' services may develop that consist of voice services integrated with data services such as consumer videophones and multimedia conferencing that go beyond the capacity of 2G and 2,5G networks. Hence it is possible that a distinct retail market for 3G voice services will develop or, indeed, that 3G voice and data services will merge into a single market. Developments in the quality and the scope of the voice services concerned brought about by 3G technology are likely to enable 3G voice services to command a price premium. Moreover, they are likely to lead to one-way substitution between 2G services on the one hand, and 3G services on the other hand (that is to say, users will substitute 3G services for 2G services, but not vice versa), which would be evidence of the existence of separate markets. For the purposes of the present Decision, however, it is not necessary to conclude on whether 2G and 3G voice services should be considered separate product markets. The relevant product market definition is therefore left open.

### Digital mobile data services

- (64) A fundamental difference between 2G data services, on the one hand, and 2,5 and 3G data services, on the other, is that the former is circuit-switched, whereas the latter are packet-switched, that is to say, based on a different technology with different and increased technical capabilities. Because services and content available over 3G networks are expected to be considerably improved in relation to 2G both as regards data speeds and the range of services that is consequently enabled, any substitutability between 2G and 3G is likely to be one way. This leads to the conclusion that 2G and 3G services are likely to be separate markets. Although it appears clear that there will be some overlap between 2,5G and 3G services as 2,5G allows, for example, mobile e-mail, multimedia messaging and continuous Internet access, it does not have sufficient data transmission rates to provide the high end of data services that are expected

<sup>(32)</sup> Cf. Commission Decision of 21 May 1999 in Case IV/M.1430 — Vodafone/Airtouch (OJ C 295, 15.10.1999, p. 2); Commission Decision of 21 May 1999 in Case COMP/IV.17 — Mannesmann/Bell Atlantic/Omnitel (OJ C 11, 14.1.2000, p. 4); Commission Decision 98/2001/EC in Case COMP/M.1439 — Telia/Telenor (OJ L 40, 9.2.2001, p. 1); Commission Decision of 20 December 1999 in Case COMP/M.1760 — Mannesmann/Orange (OJ C 139, 18.5.2000, p. 15); Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 4 August 2000 in Case COMP/M.2053 — Telenor/BellSouth/Sonofon (OJ C 295, 18.10.2000, p. 11); Commission Decision of 11 August 2000 in Case COMP/M.2016 — France Telecom/Orange (OJ C 261, 12.9.2000, p. 6); Commission Decision of 25 September 2000 in Case COMP/M.2130 — Belgacom/Tele Danmark/T-Mobile International/Ben Nederland Holding (OJ C 362, 18.12.2001, p. 6).

<sup>(33)</sup> Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 31 July 2000 in Case COMP/M.1954 — ACS/Sonera Vivendi/Xfera (OJ C 234, 18.8.2000, p. 6); Commission Decision of 25 September 2000 in Case COMP/M.2130 — Belgacom/Tele Danmark/T-Mobile International/Ben Nederland Holding (OJ C 362, 18.12.2001, p. 6).

to emerge on 3G networks. It therefore appears that there may be an emerging market for the provision of 3G mobile data services.

(65) Based on the distinguishing factor of mobility, the Commission has so far considered that mobile and fixed data services are in separate markets<sup>(34)</sup>. However the highest bandwidth 3G data services are likely to be deliverable only under conditions of optimal coverage with very low or no mobility. At the same time wireless local area network services (WLAN) are developing that provide data communications, including broadband Internet access, allowing limited mobility within a circumscribed area (such as within buildings or at public locations). It is possible that a similar measure of limited mobility will, in future, become the norm for all or most high bandwidth data services. Consequently, it is an open question whether services like WLAN will be a complement to or a substitute for 3G services and whether, as a result, the distinction between fixed and mobile data services will break down and a market for broadband wireless data communications may emerge.

(66) Because 2,5G services are still emerging, and 3G services are presently only at the planning stages, it is not possible to determine accurately whether they are in the same market or in different markets, whether digital mobile voice and data services are in the same market or whether certain 3G services are in the same market as broadband data services such as WLAN. However, for the purposes of the present Decision, it is not necessary to conclude on whether 2G, 2,5G and 3G data services and/or voice services should be considered separate product markets. The relevant product market definition is therefore left open.

### Geographic markets

(67) Given the fact that retail pricing and services offers of digital mobile telephony are currently national, markets remain national in scope, with the exception of the emerging market for the provision of seamless pan-European mobile telecommunications services to internationally mobile customers that the Commission first identified in the Vodafone/Mannesmann

Decision<sup>(35)</sup>. International roaming services are not a substitute given the high prices and limited functionality of international roaming<sup>(36)</sup>. In addition, network operators have generally refused to allow permanent roaming based on international roaming access, that is to say, to allow a customer of a foreign network to roam permanently on their own network. Consequently the market or markets identified above are national.

## 2.2. MARKET STRUCTURE

### 2.2.1. THE MARKET FOR SITES AND SITE INFRASTRUCTURE FOR DIGITAL MOBILE RADIOCOMMUNICATIONS EQUIPMENT IN THE UNITED KINGDOM

(68) According to the UK Radiocommunications Agency, there are approximately 35 000 externally sited base stations for cellular transmitters. In order to provide 3G services, the Agency has estimated that the operators will need approximately a further 30 000 to 50 000 sites, although it is difficult to determine the number required with any accuracy as the final figure depends on a number of factors, including the success of 3G.

(69) Information provided by mobile operators confirms that there are approximately 35 000 sites used for 2G transmission (over 95 % population coverage)<sup>(37)</sup>. The Commission has estimated on the basis of the operators' replies that a minimum of 40 000 sites will be required to provide 3G covering 80 % of the UK population. A greater number of sites will be required to cover the whole of the UK population.

(70) All the mobile operators control a significant number of sites and, in most cases, lease them from corporate entities such as public utilities, commercial property owners as well as from private landlords. There are also specialist companies ('tower companies') that lease antenna space on wireless and broadcast towers that can accommodate multiple tenants and wireless networks.

<sup>(34)</sup> In relation to dial-up access to Internet via mobile handsets and via fixed means. Cf. Commission Decision of 20 July 2000 in Case COMP/JV 48 — Vodafone/Vivendi/Canal+, <http://europa.eu.int/comm/competition/mergers/cases/>.

<sup>(35)</sup> Cf. Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 11 August 2000 in Case COMP/M.2016 — France Telecom/Orange, (OJ C 261, 12.9.2000, p. 6).

<sup>(36)</sup> Cf. Commission Decision of 22 June 1998 in Case IV/JV.2 — ENEL/FT/DT (OJ C 178, 23.6.1999, p. 15); Commission Decision of 21 May 1999 in Case IV/M.1430 — Vodafone/Airtouch (OJ C 295, 15.10.1999, p. 2); Commission Decision 98/2001/EC in Case COMP/M.1439 — Telia/Telenor (OJ L 40, 9.2.2001, p. 1).

<sup>(37)</sup> For general information see Mobile Operators Association [www.mobilemastinfo.com/information/masts.htm](http://www.mobilemastinfo.com/information/masts.htm).

(71) O2 UK has about 7 600 2G sites and owns or controls about 6 000 2G sites. T-Mobile UK has [about 8 600] (\*) sites of which around 2 000 are managed by Crown Castle International.

(72) As regards the other operators, Vodafone has about 8 000 sites and Orange has about 9 500 sites. Hutchison, as a new entrant, is still building up its portfolio of 3G sites and has about 4 000 sites, to provide approximately 50 % population coverage. It is expected to add a further [...] (\*) sites.

(73) All operators are seeking to acquire further sites in order to provide 3G services across the United Kingdom.

#### 2.2.2. WHOLESALE ACCESS TO NATIONAL ROAMING FOR 3G COMMUNICATIONS SERVICES

(74) Apart from the Parties, three other mobile operators were allocated 3G mobile licences under the Wireless Telegraphy Act 1949 by means of an auction in April 2000: Vodafone, Orange and Hutchison 3G UK (a new entrant). Although there are plans by the UK Government to introduce spectrum trading<sup>(38)</sup>, the barriers to entry are high, if not absolute given the cost of rolling out a 3G network and the difficulty of obtaining sufficient appropriate spectrum. New entry via spectrum trading is unlikely for the foreseeable future, if at all.

(75) In addition to the operators, service providers (SPs) and, possibly, MVNOs will operate in the 3G wholesale market. SPs — either Tied (TSPs) or Independent (ISPs) — resell minutes purchased (wholesale airtime) from a network partner operator and have their own billing relationship with subscribers, primarily business subscribers. Enhanced SPs (ESPs) represent the next tier of service providers and offer their own tariff structures and packages, including value added services. Virgin Mobile (a 50:50 venture with T-Mobile UK) is an example of an ESP that caters successfully for the private customer. MVNOs are the final tier in the hierarchy of SPs. MVNOs provide similar services to ESPs but they have their own identity and issue their own SIM (subscriber identification module) cards. In

certain cases, they may even own network infrastructure elements. However, they are ultimately dependent on a mobile operator's network for the use of the radio spectrum.

(76) Currently 3G national roaming is foreseen only between O2 UK and T-Mobile UK pursuant to the notified Agreement. However, it is possible that further roaming agreements may be entered into between operators, especially to cover remote parts of the United Kingdom.

(77) The supply of wholesale airtime in 3G is likely to be more significant given the scope for new services and SPs and MVNOs operating in niche markets. In 2G, all wholesale airtime has been provided by BT Cellnet and Vodafone<sup>(39)</sup>, with the exception of the ESP deal between T-Mobile UK and Virgin Mobile.

#### 2.2.3. 3G RETAIL LEVEL

(78) The five licensed operators are all planning to roll out their networks and, depending on the operator, are expecting to start providing 3G services sometime in 2003 or 2004. As 3G networks and services have not yet been launched commercially, no market shares or assessment of substitutability between 2G and 3G services can at present be provided. For 2G retail services in 2002, the market share by operator by revenue was the following: Vodafone — 34 %, Orange — 27 %, O2 UK — 22 % and T-Mobile UK — 17 %<sup>(40)</sup>. However, it is not clear to what extent the position will be replicated in 3G and in addition, the 3G market will see the introduction of a new entrant — Hutchison 3G UK operating under the brand '3'. The entry of Hutchison 3G UK combined with the potential for ESPs and MVNOs to play a greater role may enhance competition, but the market is still likely to see the established operators, including both Parties, with strong market positions due to their existing 2G network and customer base.

### 2.3. RESTRICTION OF COMPETITION

(79) Article 81(1) of the Treaty prohibits agreements between undertakings which may affect trade between Member States and which have as their object or effect

<sup>(38)</sup> Radiocommunications Agency, 'Implementing Spectrum Trading', A Consultation Document, July 2002. See <http://www.radiocomm.gov.uk/topics/spectrum-strat/consult/implementingspectrumtrading.pdf>.

<sup>(39)</sup> Vodafone and O2 UK were held to hold market influence and required to supply wholesale airtime. OFTEL decided to make determinations to remove the MI determinations (5 April 2002), <http://www.oftel.gov.uk/publications/mobile/2002/mide0402.htm>.

<sup>(40)</sup> Ofel, Market Information Mobile Update, October 2002.

the prevention, restriction or distortion of competition within the Common Market. Parallel provisions in respect of trade between Contracting Parties and effect on competition within the EEA are set out in Article 53(1) of the EEA Agreement. Agreements restricting competition contrary to Article 81(1) of the Treaty and Article 53(1) of the EEA Agreement can be exempted provided the conditions set out in Article 81(3) of the Treaty/Article 53(3) of the EEA Agreement are met.

(80) The Agreement between O2 UK and T-Mobile UK involves cooperation in the roll-out of the Parties' 3G networks, via site sharing and national roaming. These key objectives are pursued in three distinct areas of the United Kingdom (i) the Initial Build Area ('IBA'), (ii) the Divided Area ('DA') and (iii) the Remaining Area ('RA'). They are implemented by the Parties cooperating in the planning, acquiring, building, deploying and sharing of 2G sites, 3G sites and 2G/3G sites as well as through the provision of reciprocal roaming services. The Agreement includes detailed implementing provisions, in particular in relation to the exchange of confidential information for the purposes of managing the project.

(81) The Parties are cooperating extensively in the roll-out of their 3G mobile networks. Such far-reaching cooperation between two key players in a market with only a limited number of competitors and high, if not absolute, barriers to entry raises competition concerns. Therefore the Agreement, or more particularly the site sharing and the national roaming, need to be analysed under Article 81 of the Treaty/Article 53 of the EEA Agreement.

(82) The Parties' plans in relation to the RA (the least populated parts of the United Kingdom) are not sufficiently developed to allow the Commission to determine the possible impact of the Parties' cooperation on competition in that area. This Decision therefore does not apply to the Parties' plans for the RA.

#### 2.3.1. SITE SHARING

(83) Site sharing between competitors has been commonplace in 2G but principally on an ad hoc basis. However, the need for up to a twofold increase in the number of sites for 3G heightens environmental and health concerns. Site sharing is therefore increasingly favoured for policy considerations and is expressly encouraged by Community rules. For example,

recital 23 of the preamble to Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive)<sup>(41)</sup> states that 'Facility sharing can be of benefit for town planning, public health or environmental reasons, and should be encouraged by national regulatory authorities on the basis of voluntary agreements'.

(84) However, site sharing may have an adverse impact on competition, in particular by reducing network competition, denying competitors access to necessary sites and site infrastructure, thus foreclosing competitors and, possibly in some cases, facilitating collusive behaviour.

(85) The Parties are direct competitors in 2G and 3G wholesale and retail markets and both have well-established positions in 2G mobile telephony. They are therefore in a strong position to individually roll-out their networks, particularly in built-up areas, such as the IBA, which are likely to see the greatest demand for 3G services. The site sharing therefore needs to be analysed under Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement to see if it is compatible with the competition rules.

#### 2.3.1.1. *Shared network components and radio plans*

(86) The site sharing by the Parties in the IBA and the DA covers certain 'passive' components of the network, such as the aerial support structure, base station (Node B) cabinets, cooling and power supply<sup>(42)</sup>. The Parties have also indicated that they may consider RAN sharing (for example, sharing Node Bs)<sup>(43)</sup> for specific point solutions in the DA, although this is not currently envisaged.

(87) The site sharing between the Parties in the IBA and the DA is limited due to the network elements involved. The Parties will retain independent control of the key components of their access networks as well as their core networks, including all intelligent

<sup>(41)</sup> OJ L 108, 24.4.2002, p. 33.

<sup>(42)</sup> Point (a) in recital 14 above.

<sup>(43)</sup> Point (b) in recital 14 above.

parts of the network and the service platforms that determine the nature and range of services provided. Although there is the possibility that additional network elements may be shared in the DA, this should not significantly undermine the Parties' ability to retain independent control of their networks since RAN sharing is only intended to be used in a few specific cases. However the Parties' plans are not sufficiently developed for a conclusion to be reached on this specific issue.

(88) The use of RAN sharing could also increase the risk that the Parties would have a significant level of costs in common which could facilitate the coordination of market prices and output. However, given the limited extent to which the network components are shared by the Parties, the level of common costs arising from the site sharing is likely to be low. This is supported by estimates provided by T-Mobile which show that [a very small proportion of the costs savings] (\*) of the capital expenditure cost savings arising from the Agreement will result from site sharing (operational expenditure savings are [limited] (\*)). O2 UK has provided figures using a different methodology but the cost savings from site sharing can be expected to be similar. Consequently, the level of common costs arising from site sharing will also be limited.

(89) The Parties were planning to adopt a Joint Radio Plan in the IBA and a Common Radio Plan in the DA, deploying their radio equipment on the same or a substantial number of the same sites. This could have led to an adverse effect on competition since it could have resulted in the assimilation of the Parties' networks, especially in terms of coverage. However, the Parties have decided not to adopt a Joint Radio Plan in the IBA (the most significant area in terms of traffic) and expect less than [7 to 12 %] (\*) of the total number of sites used by them in the IBA to be common sites. The Common Radio Plan is limited to the DA and therefore the Parties will not be rolling out similar networks across the whole of the United Kingdom.

(90) As the scope of the site sharing is limited and the Parties will not adopt a Joint or Common Radio Plan across the whole of the United Kingdom, this particular aspect of the site-sharing arrangement does not raise competition concerns.

### 2.3.1.2. *Designated Areas in the DA*

(91) The Agreement provides for each Party to be responsible for rolling out the network in the DA, in particular Designated Areas which are broadly consistent. The Parties have also agreed not to build out and deploy 3G sites or networks outside of their own Designated Area, although this is subject to a number of exceptions.

(92) The restriction on rolling-out in the Designated Area of the other Party could be viewed at its simplest as a form of market sharing which is considered as per se restrictive of competition under Article 81(1) of the Treaty. However, the Agreement permits either Party to build out without the other Party's permission in the Designated Area of the other in a wide range of circumstances, including (i) to the extent that either Party considers it necessary to do so due to market demands, to meet competitive challenges or to meet regulatory requirements; (ii) to the extent necessary to meet the 80 % coverage requirement by 31 December 2007 as provided for in the Parties' 3G licences; (iii) on a temporary basis for the purpose of providing coverage at a set of popular or special events such as concerts etc; (iv) for special customers (Clause 11). The Agreement therefore allows either Party to build out in all conceivable situations in the Designated Area of the other Party, including in line with market demand and to meet regulatory obligations. It is also designed for operational reasons to ensure that the Parties concentrate their resources in particular areas so as to develop the sites as quickly and effectively as possible. Given the wide exceptions, the Clause does not therefore have any appreciable adverse effect on competition.

### 2.3.1.3. *Option in IBA and DA*

(93) The Parties have provided for a period of exclusivity over the sites, initially on the basis of an exclusive Option and subsequently via a Right of first refusal. The granting of exclusivity raises concerns since it could potentially prevent third parties, in particular new entrants, from gaining access to sites and site infrastructure for the installation of their network equipment and thereby potentially limit their ability to provide services via an effective network. However, a certain degree of exclusivity can be commercially justified as it may lead to more effective site sharing between the Parties.

- (94) The Agreement provides for the following exclusivity periods to apply:
- (a) IBA — an Option period of two years and thirty days from 31 December 2001 (until 30 January 2004) over the sites of the other Party;
  - (b) DA — an Option period of five years and thirty days from 31 May 2002 (until 30 June 2007) for a Party in its own Designated Area over 2G sites of the other Party;
  - (c) DA — an Option period of two years and thirty days from 31 May 2002 (until 30 June 2004) over 3G sites (namely upgraded 2G sites and new 3G sites) of the other Party in that Party's Designated Area.
- (95) The Agreement allows the Parties to alter the start date from which the Option periods begins to run. It is therefore conceivable that the Option periods will end later.
- (96) One of the third parties which submitted comments in response to the notice pursuant to Article 19(3) of Regulation No 17 raised specific concerns about the impact of the Option and Right of first refusal on other mobile network operators. It emphasised that the Option and the Right of first refusal could be used selectively as a blocking tactic to foreclose market entry. However this is only likely to be a concern if (i) there is a lack of suitable sites available, (ii) the period of exclusivity is too long, leading to market foreclosure, and (iii) no appropriate regulatory solution exists.
- (98) Site sharing is increasingly prominent amongst mobile operators and around 26 % of all external sites are shared sites<sup>(45)</sup>. In addition, the existence of an important secondary market in the leasing of sites and infrastructure for radio communications equipment which helps to ensure that mobile operators do not control access to all sites is also a significant factor. These so-called 'tower' companies have a financial incentive to ensure that their sites are used as extensively and efficiently as possible by operators. There is therefore an inherent incentive for them to allow site sharing. For example, Crown Castle supplies a significant number of sites to each of the five 3G mobile operators and [a significant proportion] (\*) of the approximately 3 200 sites that it controls are shared by more than two operators.
- (99) However, the public are increasingly concerned about possible health and environmental side-effects resulting from the siting of masts, particularly near schools. This has led in the United Kingdom to a modification of the planning system on the siting of masts to ensure greater public consultation<sup>(46)</sup>. In Scotland, the Scottish Executive has introduced stricter planning rules, which has lengthened the time it takes to obtain planning permission<sup>(47)</sup>. In addition, 3G requires a greater number of sites and there are five operators, including a new entrant, seeking to simultaneously roll out their networks<sup>(48)</sup>. It is therefore possible that in specific areas for example, areas of very high demand

### Availability of sites

- (97) In the United Kingdom, there does not appear to be an overall lack of sites available for use by mobile network operators. In their response to the notice pursuant to Article 19(3) of Regulation No 17 the UK authorities stated that 'overall, we judge that the potential for site foreclosure is likely to be relatively minor. There is a wide range of potential landowners of sites, and site sharing by two or more operators is common. Any difficulties for another operator gaining access to sites may be limited to particular circumstances in isolated areas, where locally there is a strict interpretation of the planning regulations by the planning authority'<sup>(44)</sup>.

<sup>(45)</sup> Department for Transport, Local Government and the Regions ('DTLR') 2001 Regulatory and Statistical returns (Source: Radio-communications Agency). See also Reply by Minister for Department for Transport, Local Government and the Regions: 'The industry sends site-sharing statistics to the Department on a quarterly basis as part of this commitment. Latest figures show that, out of the current 10 416 sites that are capable of some form of mast/tower share, 3 669 sites have at least one sharer present. In addition, 2 713 applications for site share are pending', 13 May 2002, column 445W, Hansard, see <http://www.parliament.the-stationery-office.co.uk>.

<sup>(46)</sup> Report by the Independent Expert Group on Mobile Phones 'Mobile Phones and Health', May 2000, <http://www.iegmp.org.uk>; UK ODPM, 'Planning Policy Guidance Note 8 — Telecommunications', PPG8, August 2001, <http://www.planning.odpm.gov.uk/ppg/ppg8>.

<sup>(47)</sup> 'Executive toughens telecommunications mast planning rules', Press Release SE 1534/2001 of 25 June 2001, available at <http://www.scotland.gov.uk>.

<sup>(48)</sup> In the UK network roll-out for 2G was staggered due to the allocation of licences under the Wireless Telegraphy Act 1949 at different times. GSM 900 operators were granted licences in July 1992 (Vodafone and BT Cellnet). DCS 1800 were granted licences later (Mercury One2One in March 1993 and Orange in February 1994).

<sup>(44)</sup> UK authorities' public response, paragraph 16.

in urban areas, areas near schools and hospitals, and environmentally sensitive areas, there may be a potential risk that third party operators could be prevented from providing high network quality and coverage by the lack of availability of appropriate sites in certain pressure spots.

### Duration of exclusivity

- (100) There are a number of suppliers of sites for digital mobile radio communications equipment in the United Kingdom. However the Parties themselves control access to a significant number of sites, the majority of which can be modified for use in 3G.
- (101) Some exclusivity is justified to ensure the commercial success of the Agreement. However, if there were an overall lack of sites, a period of exclusivity which would significantly prevent competitors and, in particular, new entrants from site sharing with either of the Parties until just before or after the deadline for operators to meet the coverage requirements in their licence, would require special scrutiny. It could make it more difficult for third party operators to meet their licence conditions as well as to roll out a competitive network. It could also go against the policy of encouraging widespread site sharing.
- (102) In the IBA, the Parties enjoy a period of exclusivity over each other's sites until 30 January 2004. In its own Designated Area within the DA, a Party enjoys a period of exclusivity until 30 June 2007 over the 2G sites of the other Party in that area. In the other Party's Designated Area in the DA, a Party enjoys a period of exclusivity until 30 June 2004 over 3G sites of the other Party in that area. Notwithstanding these end dates, there remains the possibility for the Parties to extend the exclusivity periods by agreeing new starting dates for any of the Options due to roll-out delays. There could therefore be a concern, especially in the DA, that the Option periods would not lapse until near or after the roll-out deadline of December 2007. This could potentially impact on the ability of third-party operators to site share with either of the Parties and could make effective market entry more difficult.
- (103) Nevertheless, the areas where third-party operators may face difficulties in gaining access to sufficient sites to provide effective coverage are likely to be relatively few, since there is not a general lack of sites in the United Kingdom. The UK authorities stated that difficulties were likely to be limited to particular circumstances in isolated areas, where there was a strict

interpretation of the planning rules. The Parties have indicated that the Option does not preclude access for third parties to spaces on sites which are capable of accommodating more than two operators during the Option period. Although not all sites will be capable of accommodating more than two operators, many 'greenfield sites' (built without making use of any existing structures) are capable of being redeveloped to allow this. There is also the possibility for site sharing with other mobile operators and there is increasing use by all operators of tower companies, which have a financial interest in allowing multiple use of their structures. Therefore the actual areas of the United Kingdom where third parties may have problems finding sites due to the use of the Option are likely to be few in number and very localised. In any event, there is a specific regulatory remedy available for problem areas where a scarcity of sites would adversely affect third party operators.

### Regulatory remedy

- (104) Potential problems of third parties gaining access to infrastructure have been foreseen by Community legislators and, although the problem is often one of planning, both the existing rules and the new regulatory framework which is to be applied from July 2003<sup>(49)</sup> include specific provisions on infrastructure sharing. Those provisions do not only apply to operators enjoying a monopoly position over infrastructure, such as incumbent owners of the local loop<sup>(50)</sup>, but also to any undertaking operating an electronic communications network, such as a mobile operator. Article 12 of the Framework Directive provides that '... Member States may impose the sharing of facilities or property (including physical collocation) on an undertaking operating an electronic communications network ...'. Under the new regulatory framework there is therefore a wide-reaching solution should the Agreement have the effect of restricting competition by denying competitors access to specific sites and/or site infrastructure where the topography of area and/or the specific parameters of demand means that sites are scarce and site sharing is a necessity.

<sup>(49)</sup> Article 28 of the Framework Directive.

<sup>(50)</sup> 'Local loop' means the physical circuit connecting the network termination point at the subscriber's premises to the main distribution frame or equivalent facility in the fixed public network. Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to and interconnection of electronic communications networks and associated facilities (Access Directive) (OJ L 108, 24.4.2002, p. 7), Article 2(e).

#### 2.3.1.4. *Right of first refusal in IBA and DA*

(105) The existence of the Right of first refusal over sites — a lesser form of exclusivity than the Option — does not directly harm competition in this case since there is no general scarcity of sites in the United Kingdom. In addition, the time period of 14 days for the exercise of the Right of first refusal allows third parties to know very quickly whether they need to make alternative plans and does not cause a significant bottleneck. However, the fact that the Agreement provides for third parties to pay a licence fee equal to or higher than that of the Parties limits the commercial freedom of the site-owning Party and potentially raises the cost of entry for third parties, even if it is meant to be tempered by the fact that the fee is based on fair market rates. It may even be considered to amount to an agreement to set a minimum price which is per se illegal under Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement.

(106) On the basis of the Commission's concerns, the Parties have agreed to modify the clauses requiring third-parties to pay a licence fee equal to or higher than that of the Parties. The clauses, as amended, now state the following:

'If at any time after the expiration of the option the Site Operator receives a bona fide third-party offer at a price acceptable to the Site Operator, it shall promptly notify the Sharer of the third-party offer and the price, whereupon the Sharer shall within 14 days confirm to the Site Operator whether or not it wishes to enter into a Site share Licence for the Site concerned either at that price or at the price agreed on the Rate Card (whichever is lower).

In the absence of written confirmation within such time the Site Operator shall be free to enter into site-sharing arrangement at the Site concerned with the third party concerned on the terms of the bona fide offer of the third party'.

(107) The new wording removes the concern over possible price fixing and also ensures that the Parties cannot raise the entry costs for third party operators by requiring them to pay a higher licence fee. Therefore the clauses as amended no longer have an appreciable effect on competition.

#### 2.3.1.5. *Conclusion*

(108) The Parties are sharing a limited number of passive components of the access network and they retain independent control of their networks, including the critical core network. The Parties retain the ability to differentiate their services downstream since the level

of common costs brought about by site sharing is not significant and the Parties retain control of the core network and service platforms that determine the nature and range of the services provided. The exclusivity over the sites (the Option and Right of first refusal) does not lead to widespread foreclosure for third-party operators since there is not an overall lack of availability of sites in the United Kingdom. In any event, if there are specific problem sites, the new regulatory framework allows National Regulatory Authorities to impose site sharing.

#### 2.3.2. ROAMING

##### 2.3.2.1. *Background*

(109) The Agreement provides for the Parties to provide 3G services to their customers through the use of national roaming where they have coverage gaps in the IBA, but particularly in the DA. National roaming involves the customer of one mobile operator using the network of another operator within the same country to make or receive phone calls and is underpinned by complex technical arrangements relating to the identification of the roaming customer, the switching of calls, and the exchange of billing information. The Parties are expecting to deploy new software to allow their customers to benefit from 'seamless national roaming', which will allow calls to be handed over when the caller moves across the networks without the call being dropped or any loss of service functions.

(110) Unless parties to a roaming agreement would be unable to roll out their networks individually, such an agreement raises significant competition concerns as it limits almost all network infrastructure based competition and impacts on service-level competition. The operators involved will face similar costs and may only be able to differentiate their customer offering on the basis of the services on offer, rather than on price or quality. The Parties are both established operators in 2G and are in strong positions to roll out their 3G networks individually across the United Kingdom because they have existing infrastructure that can be modified for use in 3G and a strong customer base. Therefore the supply of roaming services needs to be analysed under Article 81(1) of the Treaty.

- (111) The Parties have not been able to roll out their network as rapidly as they had initially planned due to capital expenditure constraints. There have also been delays in the availability of the software to enable seamless national roaming. The Parties have therefore agreed to further subdivide the IBA into two parts. First, they have agreed to designate a 'core area' within the IBA where each Party will separately build out its network. In this area, which covers the top 10 cities in the United Kingdom and accounts for approximately [32 to 38 %] (\*) of the UK population, the Parties will not rely on national roaming as each Party will have already separately built out its own network by the time seamless national roaming is expected to be available (sometime in [...] (\*)). Second, the Parties have designated a 'residual area' of the IBA which covers a further 13 cities ([less than 10 %] (\*) of the UK population). Within this residual area, each Party has been allocated a number of cities in which to roll out the network and each Party will supply roaming services to the other Party for such time as the other does not have full 3G network coverage within this area. In the DA, the Parties will continue to roll out the networks in the respective Designated Areas as originally planned, subject to possible delays, and will rely on the provision of national roaming to provide 3G services in the Designated Area of the other Party until such time as they have their own network coverage. However, the Parties are required in their licences to cover 80 % of the population by the end of 2007.
- (112) On the basis of the latest available plans, [T-Mobile is expecting to launch 3G services towards the end of 2003 whereas O2 UK does not intend to launch commercial services until the second half of 2004 <sup>(51)</sup>. The Parties will not cover the whole of the UK population at launch but coverage will grow between 2004 and 2007] (\*).
- (113) The Parties have argued that roaming falls outside Article 81(1) of the Treaty and have put forward four main reasons, namely:
- (a) roaming will be limited in duration in the IBA and in the majority of the DA, since the Parties are required to comply with roll-out obligations in their 3G licences;
  - (b) each Party will build separate networks, particularly in the IBA, and will still be able to compete against the other, especially in terms of network quality;
  - (c) the Parties will be in a stronger position to compete against third party operators and the use of roaming ensures that the launch of full 3G services is not delayed unnecessarily vis-à-vis other operators;
  - (d) due to the enhanced technology, competition at the retail (service) level will be more important than infrastructure level competition in the 3G market.
- (114) In their response to the notice pursuant to Article 19(3) of Regulation No 17, the UK authorities were in favour of allowing the Parties to roam in the DA but were strongly opposed to allowing roaming within the IBA on the basis that it would undermine network competition:
- 'Competing networks compete in terms of the full range of costs and the quality and variety of network and retail services. Competition at the network level positively enhances competition at the service level. In an infrastructure-sharing scenario, there would be arguably less competition on issues such as network coverage and quality. In 3G, there are additional network performance parameters for data transmission where competition might be dampened as well <sup>(52)</sup>'.
- (115) The UK authorities' reasoning was in part based on the fact that 'network competition will be important particularly in the initial stages of development of 3G infrastructure in higher densely populated areas' <sup>(53)</sup> and that 'economies of scale through infrastructure sharing are not strong outside rural areas' <sup>(54)</sup>.

#### 2.3.2.2. *Network competition*

- (116) National roaming between network operators who are licensed to roll out and operate their own competing mobile networks by definition restricts competition between those operators in all related network markets on key parameters such as coverage, quality and transmission rates. It restricts competition on coverage because instead of rolling out its own network to obtain the maximum degree of coverage of territory and population, a roaming operator will rely on the

<sup>(51)</sup> Press release of 22 January 2003, 'Response to the [UK] Competition Commission's Recommendations regarding mobile termination charges' — 'delay the planned launch of commercial 3G services until the second half of 2004', see <http://www.mmo2.com>.

<sup>(52)</sup> UK authorities' public version, paragraph 12.

<sup>(53)</sup> UK authorities' public version, paragraph 13.

<sup>(54)</sup> UK authorities' public version, paragraph 13.

degree of coverage achieved by the network of the visited operator. National roaming also restricts competition on network quality and on transmission rates, because the roaming operator will be restricted by the network quality and the transmission rates available to it on the visited network, which are a function of the technical and commercial choices made by the operator of the visited network.

(117) Finally, based on the Agreement, national roaming will be charged at wholesale rates. Given that national roaming will account for a small but not insignificant proportion of their capacity in the IBA, and potentially up to half in the DA, it is possible that the wholesale rates that one Party will be able to charge to purchasers of its own wholesale network and access services will, to a significant extent, be constrained by the wholesale rates it has to pay to the other Party.

(118) Given the resulting constraints on the ability of O2 UK and T-Mobile to compete on coverage, on quality, on transmission rates, and on wholesale prices, 3G national roaming between O2 UK and T-Mobile will have an impact on competition in all 3G network markets in the United Kingdom including the market for wholesale national roaming access for 3G communications services and the market for wholesale airtime access to 3G services.

(119) In the market for wholesale national roaming access for 3G communications services there are five licensed operators that have the ability to roll out networks. Barriers to entry are very high if not absolute as a result of licensing requirements and investment requirements. As 3G markets are emerging markets there are no market shares available. However, it is clear that cooperation between two established operators in 2G who can be expected to have strong positions on the 3G market has an appreciable effect on competition.

#### 2.3.2.3. *Retail level*

(120) In addition the question should be examined whether the Agreement on wholesale 3G roaming access restricts competition for 3G retail services. National roaming at wholesale level will lead to a greater uniformity of conditions at retail level, given the fact that the underlying network coverage, quality and transmission speeds are likely to be similar. Transmission speeds will determine to a significant extent the types of service that a particular operator will be

able to provide. In addition, the timing of the introduction of particular services will be determined by the moment when certain transmission speeds are reliably available at network level, which will have to be coordinated for purposes of national roaming. Finally, as operators using wholesale national 3G roaming will have to pay charges for wholesale access that will be based on retail minus minus system, the scope for price competition will as a result be limited. Also the retail minus minus system itself could give rise to a risk of coordination on retail price levels.

(121) It is therefore likely that the cooperation between the Parties on wholesale 3G national roaming will have effects on competition between the Parties in downstream retail markets. Although the number of parties present in these retail markets will be greater than at network level and there are no precise market shares available, if the combined market shares of the Parties for 2G retail markets are used as a proxy, this market share is significant (40 %).

#### 2.3.2.4. *Conclusion*

(122) The reciprocal roaming arrangement has an appreciable effect on competition since it limits the Parties' ability to compete at the network level on coverage, quality and transmission rates. It also has effects downstream since the Parties are dependent on the coverage, quality and transmission rates of each others' networks to provide services.

#### 2.3.3. EXCHANGE OF INFORMATION

(123) There is a presumption that the exchange of commercially sensitive information between competitors is prejudicial to effective competition as it may reduce market uncertainty and may facilitate collusive behaviour. A significant proportion of the information exchanged between the Parties can be considered as business secrets. In this case, the exchange of information is primarily of a technical nature and does not allow one Party to understand the overall competitive strategy of the other Party. It must, however, still be considered in the context of the whole Agreement and the wider market and therefore the issues, including the existence of safeguard provisions, must be analysed in more detail.

- (124) As regards site sharing, the commercially sensitive information exchanged in the IBA relates principally to the configuration parameters of the sites. In the DA, the information is more extensive due to the adoption of the Common Radio Plan and also includes information that relates to the functioning of the network, including coverage roll-out plans, Node-B radio design parameters and expected traffic requirements.
- (125) For roaming, two types of information will be exchanged on a regular basis. The first is functional, defining, on a national basis, the functionality to be supported on the networks and through the roaming service. The second type of information concerns capacity, whether for different types of service or traffic (Bearer, Teleservices or SMS). It is principally quantitative, relating to types and volumes of traffic to be expected over the network.
- (126) Notwithstanding the confidential nature of the information being exchanged, the cooperation must be analysed in the context of the overall agreement. The exchange of information is necessary for the Parties to site share and to provide seamless roaming to their customers. The information being exchanged is primarily of a technical nature and does not allow one Party to understand the overall competitive strategy of the other Party. In particular, a Party cannot determine with any accuracy the nature of the end user applications.
- (127) The Parties have introduced safeguards to limit the risk that the cooperation could spill over into anti-competitive activity in downstream markets. The Agreement specifically prohibits the exchange of information on the pricing of products and services, product development and launch plans. The Parties have also undertaken to ensure that all employees engaged in the implementation of the project are provided with appropriate guidance as to relevant competition law, confidentiality and regulatory issues and obligations.
- (128) The information being exchanged is necessary to bring about effective site sharing and roaming between the Parties and does not relate to the end-user applications. In addition the safeguard measures help to limit the risk that the exchange of information could spill over into collusive behaviour. The Commission therefore considers that the information sharing does not have an appreciable adverse effect on competition.
- (129) The UK authorities have expressed concerns that the close coordination between the Parties and the extensive information exchange could spill over into collusive behaviour and have asked for the Parties to provide the Commission, periodically, with a report on the functioning of the confidentiality arrangements following an independent audit.
- (130) The Commission agrees with the UK authorities that in certain specific cases an independent audit of the confidentiality safeguards may be appropriate. In this particular case, the Parties are active in markets which are closely monitored by the competition authorities at national and Community level and by the national regulator. The national competition authorities can seek information directly from the Parties if they have reasonable grounds for suspecting any infringement of the competition rules. Therefore a requirement to audit independently the safeguard measures so as to allow monitoring by the Commission would appear to be disproportionate.
- #### 2.3.4. OTHER POSSIBLE RESTRICTIONS
- (131) The Agreement also includes a number of other restrictions which could raise competition concerns. In particular the following clauses must be considered under Article 81(1) of the Treaty/Article 51(1) of the EEA Agreement:
- (a) contract concluded '*intuitu personae*';
  - (b) access to other Party's network
- ##### 2.3.4.1. *Intuitu personae*
- (132) The Agreement provides that neither Party shall build out or make arrangements for building out its network in all or any part of its Designated Area or provide the other with 3G services in its Designated Area by means of any arrangement with any other licence holder in any material respect similar to the arrangements contemplated by the Agreement.
- (133) This clause does impact on the extent to which each Party can enter into similar arrangements in its own Designated Area with third-party mobile operators. However, it ensures that both Parties invest comparable resources and is intended to guarantee the quality of the roaming services provided as well as to maintain the confidentiality of the information provided between the Parties. In the light of the overall aim of the Agreement, it does not have an appreciable effect on competition.

#### 2.3.4.2. *Access to other Party's network*

(134) The Agreement states that each Party remains free to make arrangements for 3G national roaming with third-party licensed 3G operators but that the other Party shall not be obliged to allow subscribers or customers of that third party on to its network via roaming. According to the Parties, there are significant technical complications from allowing national roaming by another major operator on either of the Parties' mobile network. However, in any event, the provision of roaming services between network operators has been identified as a restriction on competition in its own right requiring analysis under the competition rules. Therefore a limit on other licensed 3G network operators joining in this form of cooperation cannot be interpreted as constituting a restriction of competition. On the contrary, should one of the Parties conclude an agreement to resell significant volumes of national roaming access to any of the other licensed 3G network operators, this would require a separate analysis under the competition rules. In such circumstances, the clause does not have an adverse effect on competition, especially as the Parties can offer national roaming to MVNOs and service providers without restriction.

#### 2.4. *EFFECT ON TRADE BETWEEN MEMBER STATES*

(135) The conditions for access to 3G infrastructure and wholesale services of mobile network operators affect trade between EEA States. This is because the services provided over telecommunications networks are traded throughout the Community and the EEA — for example, wholesale access to 3G international roaming — and the conditions for access to telecommunications infrastructure and wholesale services determine the ability of other operators or service providers who require such access to provide their own services<sup>(55)</sup>. The conditions for network sharing will also affect purchases of network equipment from producers of network equipment located in different EEA States. In addition the conditions for access to 3G infrastructure and wholesale services significantly affect the climate for investment including investment between EEA States in 3G infrastructure and services. There is therefore an effect on trade in the Community and the EEA.

#### 2.5. *ARTICLE 81(3) OF THE TREATY/ARTICLE 53(3) OF THE EEA AGREEMENT*

(136) The provision of roaming between O2 UK and T-Mobile UK falls within Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement as it has an appreciable effect on competition and affects trade between EEA States. An Agreement that restricts competition contrary to Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement can be exempted provided that it meets the following conditions set out in Article 81(3) of the Treaty/Article 53(3) of the EEA Agreement:

- (a) it must contribute to improving the production or distribution of goods or services and promote technical or economic progress;
- (b) it must allow consumers a fair share of the resulting benefit;
- (c) it must not impose on the undertaking concerned restrictions which are not indispensable to the attainment of these objectives;
- (d) it must not afford the undertaking concerned the possibility of eliminating competition in respect of a substantial part of the products in question.

#### 2.5.1. *CONTRIBUTION OF THE AGREEMENT TO IMPROVING PRODUCTION OR DISTRIBUTION AND PROMOTING TECHNICAL OR ECONOMIC PROGRESS*

(137) By offering each other 3G national roaming access the Parties will be able to provide better coverage, quality and transmission rates for 3G wholesale and retail services more rapidly. Their joint networks can be expected to have both a greater density and a more extended footprint than they would have individually. Since they compete with three other operators at network level, the Parties also have an incentive to realise greater density and a more extended footprint rather than merely economising on their network costs. In the light of competition from these other parties as well as from a number of service providers and possibly MVNOs at retail level, the Parties individually have an incentive to provide a wider range and better quality of services.

(138) National roaming allows the Parties to provide better coverage, quality and transmission rates for their services during roll-out phase in the IBA in competition with the other providers of 3G wholesale and retail

<sup>(55)</sup> Cf. Access Notice, paragraphs 144 to 148.

services. In particular, roaming within the 'residual area' of the IBA allows the Parties to provide coverage across a number of cities significantly earlier than would be the case without the arrangement.

(139) Moreover, the allocation of Designated Areas in the DA combined with reciprocal roaming arrangements allows the Parties to roll out better quality networks across a wider coverage area in areas where the economic incentives to roll out are lower. This is particularly the case for the areas beyond the 80 % coverage requirement (20 % of the UK landmass). The Parties will be covering at least a further [...] (\*) of the UK population which represents a significant increase in the coverage of the UK territory (a further [...] (\*) of the UK landmass). This allows 3G services to be made available more quickly to a greater number of customers, thus allowing new technology to be much more widely accessed. It is also likely to enhance competition in the DA between the Parties and the three other operators.

(140) The Agreement therefore promotes competition in the markets for 3G national roaming, for wholesale airtime and at retail level, and consequently contributes to the production and distribution of these services. Because the 3G services concerned are expected to constitute a broad range of new technologically advanced products of enhanced quality and functionality compared to 2G services, the Agreement also promotes technical and economic progress.

(141) In the IBA and the majority of the DA, the Parties are required to roll out separate networks by the end of 2007 under the terms of their licences. However, there are clearly different economic benefits arising from roaming in the IBA and the DA. The IBA covers the most strategically significant area of the UK market where the economic incentives to roll out independent networks are high and where competition between competitors will be the most critical in determining the competitiveness of the market. Even in the 'residual area' of the IBA, the economic benefits arising from roaming between the Parties, both of which are established network operators, are limited. The economic incentives to roll out in the DA, which includes less densely populated and less commercially attractive parts of the United Kingdom, are significantly lower than in the IBA, and the economic benefits arising from the roaming arrangement are correspondingly more significant, especially in the more rural areas.

#### 2.5.2. FAIR SHARE OF THE BENEFITS RESULTING FROM THE AGREEMENT TO CONSUMERS

(142) By enabling the Parties to compete more effectively, the Agreement on 3G national roaming will enhance competition both in digital mobile network and services markets. Competition will develop more quickly and competitors will have incentives to introduce new services into the market and will be under greater pressure to reduce prices as the result of enhanced market entry with wider coverage based on 3G national roaming access between the Parties. This is likely to enable consumers to benefit earlier from a greater range of new and technically advanced 3G services that are expected to be enhanced in quality and range of choice as compared to 2G services. It also makes price competition more likely. For example, as a result of increased competition at retail level, any cost-saving benefits due to the increased competition on national roaming access and on resale of wholesale airtime to MVNOs and service providers can be expected to be passed on to end-users.

#### 2.5.3. INDISPENSABILITY

(143) Although national roaming between licensed network operators has been identified as restrictive of competition, the Clauses in the Agreement that provide for national roaming are indispensable to the benefits.

#### 2.5.4. NO ELIMINATION OF COMPETITION IN RESPECT OF A SUBSTANTIAL PART OF GOODS AND SERVICES CONCERNED

(144) As set out above in section 2.5.1, the competition between the five licensed operators of 3G networks and services that intend to roll out 3G networks in the United Kingdom and between MVNOs and service providers is enhanced by the Agreement.

(145) The Agreement also leaves scope for effective competition between the Parties. In spite of relying on roaming for part of its coverage, the home network operator will control its own core network, enabling it to offer differentiated services. In addition, one of the principles underpinning the Agreement is the maintenance of full competition between the Parties in the supply of 2G services and 3G services to consumers, both directly and through intermediaries (Clause 2.1.f).

(146) The ability of the home-network operator to retain control over the traffic generated by its customers outside the home network and to provide access to services that are not available on the host network is improved by the use of the Camel (customised application for mobile network enhanced logic) technology, including by means of call-back features. For 3G retail services, the control of the home-network operator over the services available to its end-users while roaming will increase because for all data transfers, users will be connected to the packet data network via their home network.

(147) In addition, the responsibility for pricing and billing remains with the home operator. Although billing data is provided by the host operator to the home operator, there is no direct relationship between the commercial conditions for the wholesale roaming offer and for the specific retail services that are based on this offer.

(148) The wholesale costs of 3G roaming are only a transport cost, albeit a significant one, in addition to which there are content costs, which for content-rich 3G data services are expected to increase in significance in relation to transport costs over time. For the core network, the costs of the operators will differ based on vendor decisions, mode of transmission within the core network (for instance based either on fixed leased lines or on a wireless microwave network), the relationship between the number of users and available capacity, operational costs and maintenance and operations. Finally, given the existence of a margin between the applicable wholesale rates and anticipated retail rates, and given that most traffic will not be roamed, it is likely that the potential for a significant degree of price differentiation remains. The Agreement also allows either Party to supply wholesale airtime to MVNOs and SPs, including via roaming on the other Party's network. Competition is therefore not eliminated for a substantial part of any of the markets identified as affected by the Agreement.

#### 2.5.5. CONCLUSION ON ARTICLE 81(3) OF THE TREATY/ ARTICLE 53(3) OF THE EEA AGREEMENT

(149) It is concluded that all the conditions for an individual exemption pursuant to Article 81(3) of the Treaty and Article 53(3) of the EEA Agreement are met in respect of the restrictions of competition related to the

Agreement on wholesale national 3G roaming between the Parties. In particular, it allows the Parties to launch 3G commercially earlier and to provide services across a wider geographic area to the benefit of consumers.

#### 2.6. DURATION

(150) Pursuant to Article 8 of Regulation No 17 and to Protocol 21 of the EEA Agreement respectively, the Commission must issue a Decision pursuant to Article 81(3) of the Treaty and Article 53(3) of the EEA Agreement for a specified period, and may attach conditions and obligations.

(151) The IBA covers the urban areas with the greatest potential for infrastructure competition. Therefore an exemption for roaming even in the 'residual area' of the IBA between two established operators can only be justified for such time as the cooperation helps to promote competition during the initial roll-out phase of the network and the commercial launch and early take-up of 3G retail services. Barring significant unanticipated changes to the commercial or regulatory environment, the economic justification for applying Article 81(3) of the Treaty/Article 53(3) of the EEA Agreement to roaming in the IBA thereafter will cease to exist. In the light of the limited population covered by the 'residual area' of the IBA, the regulatory coverage obligation in the United Kingdom as well as the Parties' own plans and developments by third parties in the United Kingdom, it is appropriate to exempt roaming in the 'residual area' of the IBA until 31 December 2007.

(152) The DA covers less densely populated and commercially less attractive areas of the United Kingdom. Therefore an exemption for roaming in the DA can be justified for a longer period than in the IBA, in particular to the extent that the Parties are going beyond their regulatory obligations to cover some of the more remote parts of the United Kingdom. However, the markets affected by the restrictions in the Agreement are emerging markets and therefore the likely effects of those restrictions cannot be evaluated for a period that substantially exceeds five years. Consequently the Commission considers it appropriate to grant an exemption until 31 December 2008. The commercial and regulatory situation prevailing at the end of that period may be such that Article 81(3) of the Treaty continues to apply to roaming across parts of the DA.

(153) According to Article 6 of Regulation No 17, a Decision pursuant to Article 81(3) of the Treaty must not take effect from an earlier date than the date of notification. Accordingly, in so far as it grants an exemption from Article 81(1) of the Treaty/Article 53(1) of the EEA Agreement, this Decision should take effect from 6 February 2002. It should apply:

- (a) until 31 December 2007 in relation to national roaming in the 'residual area' of the IBA;
- (b) until 31 December 2008 in relation to national roaming in the DA.

(154) This Decision is without prejudice to the application of Article 82 of the Treaty and Article 54 of the EEA Agreement,

HAS ADOPTED THIS DECISION:

*Article 1*

On the basis of the facts in its possession, there are no grounds under Article 81(1) of the Treaty or Article 53(1) of the EEA Agreement for action on the part of the Commission in respect of the provisions of the Agreement between O2 UK Limited and T-Mobile UK Limited dated 20 September 2001 and amended on 9 April 2002 ('the Agreement') that relate to site sharing and the exchange of information necessary to permit site sharing and national roaming.

*Article 2*

Pursuant to Article 81(3) of the Treaty and Article 53(3) of the EEA Agreement, the provisions of Articles 81(1) of the Treaty and Article 53(1) of the EEA Agreement are declared inapplicable to the provisions of the Agreement that concern

national roaming within the residual area of the Initial Build Area as defined in the Parties' statement of 12 March 2003 from 6 February 2002 until 31 December 2007.

*Article 3*

Pursuant to Article 81(3) of the Treaty and Article 53(3) of the EEA Agreement, the provisions of Articles 81(1) of the Treaty and Article 53(1) of the EEA Agreement are declared inapplicable to the provisions of the Agreement that concern national roaming within the Divided Area, from 6 February 2002 until 31 December 2008.

*Article 4*

This Decision is addressed to:

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and

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Done at Brussels, 30 April 2003.

*For the Commission*

Mario MONTI

*Member of the Commission*