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## Mobile Regulatory Issues in the EU and the United States

FRANCESCO LIBERATORE

This article considers whether U.S. and EU perspectives on mobile regulatory issues are converging. As the EU is close to finishing sweeping reforms of the existing regulatory framework, comparing and contrasting present EU perspectives with the situation across the Atlantic best illustrates the potential for change.

### I. Introduction

The mobile sector has developed at a different pace in the United States and in the European Union (EU), as have perspectives on mobile regulatory issues. Although the United States has adopted a light-touch approach toward regulation, mainly limited to promoting public interest objectives, the EU has adopted a complex set of sector specific rules promoting both public interest and competition policy objectives.

This article compares U.S. and EU perspectives on mobile market structure and conduct related issues. It concludes that the Federal Communications Commission's (FCC) and the European Commission's (Commission) perspectives are increasingly converging, in spite of the different legal instruments at their disposal, and key differences between the U.S. and EU mobile sectors. However, a detailed comparison of the two regulatory frameworks is outside the scope of this article.

### II. U.S. and EU Mobile Sectors

There are some key differences between the U.S. and EU mobile sectors.

In 2007-08, approximately 99.6 percent of the U.S. population used a mobile phone,<sup>1</sup> while mobile penetration in the EU averaged 119 percent during

the same period.<sup>2</sup> Although EU mobile penetration has continued to increase, the rate of growth has slowed slightly, possibly indicating that the EU mobile sector is beginning to mature.<sup>3</sup> By contrast, the U.S. mobile sector has shown a steady growth of 19 percent in the last decade and is expected to continue growing until 2010.<sup>4</sup> U.S. average usage per mobile phone (minutes per month) is nearly eight times higher than in the EU, and mobile calls are significantly less expensive on a per minute basis.<sup>5</sup> Finally, U.S. mobile Internet penetration is higher than the EU average.<sup>6</sup>

U.S. and EU mobile sectors not only differ in penetration, growth, and usage, but also in market players.

In the United States, there are four main nationwide mobile network operators (MNOs)—AT&T, Verizon Wireless, Sprint Nextel, and T-Mobile—and various other smaller players (cable consortia and regional carriers, which are able to offer pricing plans with nationwide coverage through roaming agreements). The two largest MNOs (AT&T and Verizon Wireless) have a combined market

*Francesco Liberatore is an associate in the London office of Jones Day. This article appeared in the October 2009 issue of Convergence, published by the International Bar Association, and was the winning paper in the 7th Young Lawyers' Writing Competition of the IBA's Communications Law Committee. It was presented at the IBA 20th Annual Communications and Competition Law Conference, May 19-20, 2009, in Florence. All opinions expressed in this article are solely those of the author. The author dedicates this work to Bea and Greta. © International Bar Association 2009. Reprinted by permission.*

share that is lower than that of the two largest MNOs in any EU Member State (with the exception of the UK), and one of the lowest worldwide (close to India).<sup>7</sup> There are about fifty-five Mobile Virtual Network Operators (MVNOs), which purchase air time from MNOs and resell services to the public for profit. In addition, there are other providers offering mobile broadband services (including Voice over Internet Protocol) using new wireless technologies, such as WiMax (e.g., New Clearwire Corporation)<sup>8</sup>; mobile video (e.g., MediaFLO and MobiTV)<sup>9</sup>; narrowband data services, such as paging and telemetry (e.g., USA Mobility and Space Data Corp); as well as mobile satellite providers (e.g., Globalstar, Inmarsat, Iridium Satellite LLC, MSV, and Orbocomm Inc.).<sup>10</sup>

In the EU, there are a total of ninety-nine MNOs and well over 200 MVNOs. There is an average of three to four MNOs in each EU Member State.<sup>11</sup> The number of MVNOs in each EU Member State varies more significantly.<sup>12</sup> Of all these operators, ninety-three offer 3G commercial services, including Internet access, content services, and video telephony. MNOs and MVNOs provide their services on a national basis within the EU. The leading MNOs' average market shares have reduced 3 percent in the last year, after being fairly stable over the previous five years; in general, they are now between 30 percent and 40 percent.<sup>13</sup> In some EU Member States, the incumbent MNO is vertically integrated with the incumbent fixed line operator (the only exceptions are Vodafone and 3). The major MNOs—Vodafone, Orange, 3, 02, T-Mobile, Tele2, TeliaSonera, and TeleDanmark—are active in more than one EU Member State either through their own network, or through partnerships, joint ventures, or alliances (such as Freemove,<sup>14</sup> Starmap,<sup>15</sup> and the Vodafone Group<sup>16</sup>) or through bilateral cooperation agreements (such as network sharing agreements).<sup>17</sup> There are other providers offering alternative mobile broadband services using new wireless technologies, such as Wi-Fi, but only in a limited number of EU Member States (e.g., the Czech Republic and Slovakia);<sup>18</sup> and there are currently no mobile satellite providers, although the assessment of four applications for the provision of EU mobile satellite services is ongoing.<sup>19</sup>

Finally, two additional markers

highlight the differences between U.S. and EU mobile sectors: (1) the Herfindahl-Herschman Index (HHI) that is a measure of market concentration and (2) entry by alternative players. On the one hand, the U.S. mobile market's HHI is lower than that in the UK and well below that of any other EU Member State.<sup>20</sup> On the other hand, entry by alternative players is expected in the United States, but is somewhat delayed in the EU. For example, Google has been reported to be planning to enter the U.S. mobile sector,<sup>21</sup> but its entry plans in the EU mobile sector are still limited to carrier services agreements with incumbent MNOs.<sup>22</sup>

It follows that the EU mobile sector scores higher in penetration rate, but the U.S. mobile sector scores higher in terms of growth, usage, and number of market players. This contrast exists despite the percentage of population using a mobile phone being approximately the same on both sides of the Atlantic. There are various possible reasons for such differences between the U.S. and EU mobile sectors,<sup>23</sup> including divergent regulatory policies.

### III. U.S. and EU Regulatory Policies

A common goal of U.S. and EU regulatory policies has been the creation of self-sustaining competition.<sup>24</sup> In particular, infrastructure-based competition is preferred over service-based competition. Accordingly, mobile operators can build their own networks, acquire or merge existing assets, or use third party networks while developing their own. However, the practical results of this deployment have been different on both sides of the Atlantic.

First, U.S. MNOs negotiate mobile termination rates (MTRs) on their networks subject to an obligation to interconnect and usually subject to the requirement that MTRs received by both origination and termination networks are reciprocal (so-called Bill & Keep).<sup>25</sup> By contrast, EU MNOs apply the so-called Calling Party Pays (CPP), so that the origination network must pay MTRs to the termination network.

Second, while mobile technology deployment was left to market forces in the United States, without mandating any particular network standard, EU regulation mandated single harmonized network standards for 2G (GSM) and 3G (UMTS) services, respectively.

Third, while in the United States, the main competing mobile networks developed with full coverage within the entire country, mobile networks developed on purely national lines within the EU.

Against this background, the FCC has adopted a light-touch regulatory ap-

## A common goal of U.S. and EU regulatory policies has been the creation of self-sustaining competition.

proach, largely limited to public interest policy objectives and market structure-related issues, leaving the market conduct of mobile operators subject to general competition rules.<sup>26</sup> The Commission has, by contrast, set out a complex regulatory framework promoting (1) public interest objectives, (2) competition through sector specific regulation and general competition rules, and (3) the creation of a single pan-European market.<sup>27</sup> However, despite their different regulatory frameworks, the Commission's approach is converging toward that of the FCC, as evidenced by its perspectives on market structure-related issues.

### IV. Market Structure-Related Issues

Market structure-related issues include consolidation and entry barriers.

#### A. Consolidation

Both the FCC and the Commission acknowledge that transactions leading to the restructuring of the mobile industry can be beneficial, if they rationalize and achieve economies of scale in a way that enables investments in research and development of the sort that are necessary in order to remain competitive in a global market. They also both state that not all mergers and acquisitions have positive economic benefits and some will result in anticompetitive effects.

Certain transactions require the FCC's or the Commission's prior approval<sup>28</sup> (or both in cases of transatlantic mergers and acquisitions<sup>29</sup>) before they can be put into effect. In this respect, the geographic allocation of turnover for the

purposes of asserting the Commission's jurisdiction is problematic in the mobile sector. The general rule is to allocate turnover to the so-called point of sale, i.e., where the customer is located at the time of the sale. However, in the mobile sector, it is not established whether the point of sale ought to be (1) the country where the call terminates, or (2) the country where the call originates. The Commission usually uses the approach that grants it jurisdiction.<sup>30</sup> International roaming adds complexity to this issue, because of the risk of double counting turnover generated by the merging parties' reciprocal roaming charges.<sup>31</sup>

There has been no prohibition decision to date in the mobile sector. However, in a number of cases, the FCC and the Commission have imposed certain commitments on the parties to remedy the alleged anticompetitive effects, e.g., commitments to sell frequencies and assets to competitors with lower market shares. Recent examples in the United States include *AT&T/Dobson*,<sup>32</sup> *Verizon Wireless/Rural Cellular*,<sup>33</sup> and *Verizon Wireless/Alltel*.<sup>34</sup> Examples in the EU include *Vodafone Airtouch/Mannesmann*,<sup>35</sup> *France Telecom/Orange*,<sup>36</sup> *Pirelli/Edizione/Olivetti/Telecom Italia*,<sup>37</sup> and *T-Mobile/Tele.ring*.<sup>38</sup>

In other cases, the vertical relationship between the parties to the transaction was examined (e.g., in relation to international roaming). In the majority of such cases, the transactions would not harm competition and the merger was cleared without commitments, taking into account the efficiency of the regulatory framework in preventing anticompetitive behavior that would occur as a result of the transaction.<sup>39</sup> However, in other cases, certain regulatory conditions were imposed to make up for the shortcomings of the existing sector specific rules, in addition to more traditional divestment conditions.

In the United States, for example, in *Sprint Nextel/Clearwire*,<sup>40</sup> the parties agreed to combine their next generation wireless broadband businesses to form a new mobile company, called New Clearwire Corporation. The FCC cleared the transaction on the condition that Sprint Nextel commits (1) to phase out its requests for high-cost universal support over a five-year transition period, and (2) to use counties for measuring compliance with the FCC's wireless E911 location accuracy rules governing

handset-based technologies.

In the EU, relevant examples include:

- *Telia/Sonera*,<sup>41</sup> concerning the combination of incumbent MNOs in different EU Member States. The Commission considered that the transaction might risk foreclosing other operators terminating calls on the merged entity's network. To remedy this issue, the Commission imposed (1) open access obligations to the parties' fixed and mobile networks and international roaming services, (2) legal separation of the different fixed and mobile networks and services businesses of the parties, and (3) divestment conditions.
- *Telefonica/O2*,<sup>42</sup> concerning the combination of roaming partners belonging to separate alliances into a single alliance. The Commission considered this might risk eliminating an independent contracting partner for the mutual exchange of traffic through international roaming. To remedy this issue, the Commission imposed a commitment on the parties to avoid integrating under the same roaming alliance.
- *Vodafone/Airtel*,<sup>43</sup> and *Vodafone/Eircell*,<sup>44</sup> in which the Commission was concerned that the transaction would result in the creation of a dominant position in relation to advanced wireless services for business customers across the EU. To remedy this issue, the Commission imposed a package of remedies, including (1) open access, (2) nonexclusive roaming, (3) open standards, and (4) SIM card unlocking obligations.

It follows that, although under different legal instruments, there is a substantial convergence in the assessment of consolidation in the mobile sector across the Atlantic. As consolidation continues in the sector, a likely difficulty will be the impact of regulatory issues surrounding entry barriers.

## B. Entry Barriers

Market entry is a key issue in the mobile sector. If entry is easy, then it may prevent incumbent MNOs from exercising market power, either collectively or unilaterally.<sup>45</sup> The ease or difficulty of entry in mobile markets generally

depends on radio spectrum management, number portability, and network sharing. The Commission's policy is converging with that of the FCC on these issues.

## 1. Radio Spectrum Management

In the United States, radio spectrum has already been fully deregulated for quite some time; mobile licenses are technology neutral and the assigned spectrum can be used for any mobile service, regardless of the underlying technology used.<sup>46</sup> For example, in the latest auction of 700 MHz band licenses, the FCC attached a condition to a section of the auctioned spectrum requiring the owner to allow *open access* to the spectrum (i.e., any kind of device and software must be able to run on the resulting network), as long as it does not create any harmful interference.<sup>47</sup> In addition, the FCC eliminated the so-called spectrum cap, which used to prohibit any entity from holding more than a certain amount of spectrum in a geographic area.<sup>48</sup> The purpose of the spectrum cap was to prevent the anticompetitive effects that can arise from the aggregation of spectrum in the hands of a single operator.<sup>49</sup> In eliminating the spectrum cap, the FCC found that the mobile market was sufficiently competitive. However, the FCC retained power to evaluate the effect of transfers of an assigned portion of spectrum on competition on a case-by-case basis.<sup>50</sup> It follows that the United States has adopted a light-touch regulation approach for spectrum management, which includes full deregulation and trading. The FCC, however, monitors the impact on competition of any transfers of spectrum on a case-by-case basis.

In the EU, the spectrum bands used to provide mobile services have traditionally been allocated and managed centrally at the national regulatory level through a command-and-control approach. National regulators decided both the allocation and assignment of spectrum, which frequency bands could be allocated, and how much spectrum could be applied for.<sup>51</sup> In particular, specific frequency bands have been tied with specific technologies.<sup>52</sup> The 2002 Regulatory Framework,<sup>53</sup> however, introduced provisions aimed at relaxing this command-and-control approach. In particular, the allocation of a given portion of radio spectrum exclusively for exploiting a specific technology is permitted

only where this is necessary in order to ensure the efficient use of that frequency, i.e., to avoid harmful interference in the transmission of specific broadcast services, but not mobile communications.<sup>54</sup> It follows that EU Member States may reallocate spectrum currently allocated under the strict requirements of the previous legislation in order to maximize the efficient use of frequencies.<sup>55</sup> In addition, EU Member States may allow the transfer of an assigned block of spectrum, with or without change of use.<sup>56</sup> However, the 2002 Regulatory Framework ultimately left it up to each EU Member State to decide whether and how to implement spectrum liberalization and trading. Given the lack of national implementation by the EU Member States, the Commission has more recently proposed to make spectrum liberalization and trading mandatory across the EU,<sup>57</sup> and it remains to be seen whether the European Parliament and Council will accept the recommendation.<sup>58</sup> The proposal also includes the possibility for the Commission to adopt new provisions to prevent the distortion of competition as a result of the transfer or accumulation of portions of radio spectrum.

Ahead of the implementation of the Commission proposal, the UK regulatory authority, Ofcom, has recently issued a consultation document.<sup>59</sup> On the one hand, Ofcom will remove spectrum cap and restrictions that currently apply to spectrum bands, first to allow 3G (UMTS) technology to be used in the 900MHz and 1800MHz (currently reserved to GSM or 2G); and, in the longer term, to allow any technology that does not cause harmful interference to neighboring users to be deployed in both these bands and the 2.1GHz band (currently reserved to UMTS or 3G). On the other hand, Ofcom will allow 900MHz, 1800MHz, and 2.1GHz bands to be traded. It will, however, monitor transfers of spectrum in the 900MHz band to prevent aggregations of spectrum that would risk having anticompetitive effects. It remains to be seen what the impact of Ofcom's proposals on existing operators and new entrants will be<sup>60</sup> and what competition test Ofcom will use to assess aggregations of spectrum in the 900MHz band. However, the proposed approach would mark a move toward convergence with the FCC's approach that may be followed by other EU Member States.<sup>61</sup>

## 2. Number Portability

Telephone numbers, like radio spectrum, are limited resources. The need to change telephone numbers when changing mobile providers has been identified as an important deterrent for mobile users who want to change operators.

In the United States, mobile number portability is referred to as wireless local number portability (WLNP) and allows mobile subscribers to change service providers within a given location while retaining the same phone number. WLNP has been fully available across the United States since May 2004.<sup>62</sup> As a result, if you transfer service from one mobile operator to another, it takes only one day at most, and usually only a few hours, to complete your number transfer in the United States.

In the EU, the Universal Service Directive introduced mobile number portability (MNP) for the first time throughout the EU for all mobile operators, regardless of their market power.<sup>63</sup> Overall, however, MNP implementation remains very patchy with negligible porting in a number of EU Member States and excessive porting times in others. EU average time taken for MNP was 8.5 days in 2007–08.<sup>64</sup> Consequently, the Commission has proposed to reduce to one working day the time allowed for operators to execute MNP.<sup>65</sup> If accepted by the European Parliament and Council, this amendment to the existing rules would bring MNP toward convergence with WLNP.

## 3. Network Sharing

In addition to radio spectrum and numbers, mobile operators need access to masts, antennae, and tower sites, to send and receive radio signals. In some instances, it may not be possible to install facilities because of the need to protect the environment, public health, and security, or to meet town and county planning objectives. In such cases, mobile operators may negotiate network sharing,<sup>66</sup> thereby facilitating the commencement of competition on the downstream services market. However, network sharing may also lead to anticompetitive coordination, depending on the precise parts of the network that are shared.

Although the approaches taken across the Atlantic and within the EU itself vary considerably, the sharing of masts and passive network elements are generally

permissible, while the sharing of core network components or frequencies are usually regarded as problematic. For example, the FCC encourages network sharing of masts, antennae, and towers but not core aspects of a network.<sup>67</sup> Similarly, in *T-Mobile Deutschland/O2 Germany: Network Sharing Rahmenvertrag*,<sup>68</sup> the Commission found that the network sharing in question did not infringe competition rules, because it did not involve sharing the MNOs' core networks, nor did it involve the sharing of any frequencies or network controllers. Moreover, the Commission concluded that any restrictions that may have occurred in relation to infrastructure competition were outweighed by the benefits consumers would derive from new 3G services competition. More recently, the Commission has proposed to limit compulsory sharing under sector specific rules, regardless of market power, to "masts, antennae, towers and sup-

## Number portability in the EU lags behind that in the United States.

porting constructions."<sup>69</sup> This approach, if accepted by the European Parliament and Council, would be in line with the FCC policy.

From the above comparison, it follows that EU policy is converging toward the United States in relation to market structure-related issues (such as consolidation, spectrum management, number portability, and network sharing).

The Commission's recent policy initiatives also indicate the possibility of convergence with the U.S. on control of market conduct-related issues, although differences are likely to remain for the near future.

## V. Market Conduct-Related Issues

In principle, mobile operators' market conduct, such as price rivalry, is subject to the simultaneous application of sector specific rules and competition law on both sides of the Atlantic.<sup>70</sup> However, in practice, the FCC adopts a market-based approach in which competition law is the primary instrument of regulation of mobile operators' conduct, while the Commission considers that competition law alone is

insufficient to reduce MTRs and international roaming charges.

### A. MTRs

One of key differences between U.S. and EU perspectives on mobile regulatory issues is arguably the regulation of MTRs. The U.S. Bill & Keep system has obviated the need for regulatory intervention and arguably led to lower retail prices for call origination and flat-rate offers promoting increased usage.<sup>71</sup>

By contrast, the EU CPP system has arguably encouraged infrastructure competition and spurred competition in the retail mobile market. However, it also creates a disconnection between the caller who pays for the termination service and the called party who chooses the provider of that service (CPP externality).

#### 1. Commission's Current Policy

Against this background, the Commission considers that (1) each MNO's mobile termination network constitutes a separate relevant market; (2) each MNO has a *de facto* monopoly position on such a market; and (3) there is a risk that MNOs would extract excessive profits by charging high MTRs, unless the existence of countervailing buyer power can be demonstrated. Moreover, the Commission considers that MNOs may have an incentive to raise rivals' costs by setting MTRs at a level that impedes their ability to compete in downstream markets (so-called margin squeeze).<sup>72</sup> The EU Member States' national regulatory authorities unanimously agree on this issue, although they suggest different remedies to solve it.<sup>73</sup>

#### 2. Commission's Future Policy

The Commission believes that MTRs merit *ex ante* price regulation across the EU, because *ex post* intervention under competition rules would not be sufficient to solve the issue,<sup>74</sup> and recommends cost price regulation based on long-run incremental costs (LRIC) by December 31, 2011.<sup>75</sup>

The Commission's recommendation, if adopted, would be nonbinding on the EU Member States,<sup>76</sup> but some of them, such as the UK, have already voiced their concerns.<sup>77</sup> Similarly, MNOs complained that cost price regulation would have a negative impact on competition in innovation.<sup>78</sup> By contrast, MNVOs, smaller MNOs, and fixed operators

support the Commission.<sup>79</sup> It therefore remains to be seen whether the proposed recommendation will ultimately be adopted and, if so, in what form.

#### 3. Convergence with the U.S.?

The Commission has explicitly considered whether to adopt the U.S. Bill & Keep in the EU as an alternative to CPP and cost-oriented price regulation. However, it concluded that this alternative would be difficult for two reasons: (1) developing reciprocity at zero rate would be impossible given the current high MTRs; and (2) customers would resist having to pay to receive calls as in the United States. Nevertheless, the Commission seems to indicate that an approach similar to that of the United States may emerge if a significant reduction in MTRs creates the appropriate incentives for voluntary reciprocal interoperator agreements. In such a scenario, operators would in practice abandon CPP and move toward Bill & Keep. The emergence of Next-Generation-Networks (NGN) using Internet interconnection models is expected to favor this process.<sup>80</sup>

#### 4. Competition Law

The key competition law provisions applying to MTRs are: (1) Section 1 of the Sherman Antitrust Act, and Article 81 EC Treaty (prohibiting anticompetitive agreements); as well as (2) Section 2 of the Sherman Antitrust Act (prohibiting monopolization and attempts of monopolization) and Article 82 EC Treaty (prohibiting abuses of dominant positions), respectively. Crucial to the application of both sets of rules is the definition of the relevant market.

##### a. Market Definition

The FCC and the Commission follow the same principles in defining the relevant market, in terms of product<sup>81</sup> and geographic<sup>82</sup> scope. In applying these principles, the Commission concluded that the relevant market for assessing MTRs is the national market for "wholesale call and SMS termination on individual mobile networks" because of the CPP externality.<sup>83</sup> The FCC has not yet defined a similar relevant market. It is therefore difficult to speculate whether the Commission's market definition would be different in a Bill & Keep system.

If mobile networks were to migrate to NGN, Internet connectivity principles

would likely apply. The FCC and the Commission have considered the market definition for Internet connectivity in various previous cases.<sup>84</sup> Internet connectivity differs significantly from mobile termination in the EU. However, differences between Internet connectivity and mobile termination are less obvious in the United States, where the principle of reciprocity (mobile) is broadly similar to peering (Internet).<sup>85</sup> Both the FCC and the Commission consider that Internet connectivity markets are effectively competitive and there is no termination monopoly. If termination on mobile NGNs were to become like peering, there would be an argument that the relevant market definition might change. For example, it might include termination on all mobile NGNs, because reciprocity would remove the CPP externality.<sup>86</sup> However, it is hard to speculate whether Internet connectivity-based termination on mobile NGNs will change the definition of the relevant market for the assessment of MTRs in the EU, because market definition under competition rules is case specific.<sup>87</sup>

##### b. Anticompetitive Agreements

Mobile termination agreements are unlikely to be anticompetitive, because (1) the risk of foreclosure is limited, since most networks have more capacity than any single user is likely to need, and (2) they likely have procompetitive effects, as they can improve access to the downstream services market.<sup>88</sup> This holds true in relation to termination on mobile NGNs, because of the efficiencies inherent in developing the new technology.

Certain clauses, however, may have anticompetitive effects, in breach of Section 1 of the Sherman Antitrust Act or Article 81 EC, e.g., (1) an exchange between the interconnecting parties of certain commercially sensitive customer and traffic related information; (2) long-term exclusivity; (3) collusion on retail prices or market sharing; or (4) discrimination with regard to price, quality, or other commercially significant aspects of the termination agreement.<sup>89</sup>

##### c. Abuse of Dominant Position

Key to the application of Section 2 of the Sherman Antitrust Act and Article 82 EC is the finding of monopolization and a single or collective dominant position, respectively. Under Section 2,

the basic elements of a monopolization claim are: (1) the possession of monopoly power in the relevant market; and (2) the wilful acquisition or maintenance of that power.<sup>90</sup> Under Article 82 EC, a company is in a dominant position if it can operate on a market without regard to its competitors, customers, or suppliers.<sup>91</sup> In practice, relevant market definition is crucial for a finding of monopolization or dominance.

Having defined the relevant market as “wholesale call and SMS termination on individual mobile networks,” the Commission considers that virtually all MNOs would have monopoly power (i.e., single dominance) on their own individual network, because of the CPP externality, unless there is countervailing buyer power.

In a mobile NGN termination scenario, however, single dominance would seem unlikely because the CPP externality is removed. In fact, there is no precedent of monopolization in relation to MTR in the United States. However, the Commission may consider whether MNOs hold a position of collective dominance,<sup>92</sup> depending on other characteristics of the market, such as:<sup>93</sup>

1. The market must be sufficiently transparent to make it possible both for mobile operators to signal and reach a collusive outcome and then to monitor that outcome once it is in place;
2. There must be adequate deterrents to ensure that there is a long-term incentive in not departing from the collusive outcome; and
3. The foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardize the results expected from the collusive outcome.

Assuming that monopolization or a dominant position can be found, the two main types of abuse which would likely be relevant to MTRs are: (1) excessive pricing,<sup>94</sup> and (2) margin squeeze.<sup>95</sup> However, there is no U.S. or EU precedent to date of either excessive pricing or margin squeeze in Internet connectivity markets that would shed light on how to assess these abuses in relation to NGN-based mobile termination.

It follows that in the short-term future the FCC and the Commission will continue to diverge in their perspectives on MTRs. Nevertheless, the Commission

has signaled that an approach similar to that of the United States may emerge if a significant reduction in MTRs and migration to NGN creates the appropriate incentives for voluntary reciprocal interoperator agreements, thus making competition law the primary tool for MTR regulation.

### **B. International Roaming**

Roaming is another area where the FCC and the Commission’s perspectives diverge. In fact, although both U.S. and EU mobile operators are required to provide roaming services to other operators outside their home areas upon reasonable request and on a just, reasonable, and nondiscriminatory basis,<sup>96</sup> the Commission considers that cross-border roaming charges are too high<sup>97</sup> and has imposed cost-oriented price regulation.<sup>98</sup> In contrast, the FCC noted that interstate roaming charges continue to decline without regulatory intervention.

As above noted, there are arguably two reasons for this discrepancy: (1) the Commission has mandated standards for mobile networks; and (2) there is no pan-European mobile license and authorization. A comparison with the United States illustrates the relevance of these two points. The FCC mandated the use of a single standard Advanced Mobile Phone Service (AMPS) for the first generation of analog cellular service. This standardization (like in the EU) meant that a customer could use the same phone anywhere across the country and promoted compatibility between competing mobile networks.<sup>99</sup> Roaming was generally easy, although interstate roaming prices were extremely high.<sup>100</sup> When digital technology emerged, the FCC did not mandate a standard and instead tried to facilitate the adoption of nationwide licenses.<sup>101</sup> With nationwide licenses, operators are better able to internalize the effects of roaming charges, which might lead to lower prices.<sup>102</sup> In fact, while more than three incompatible 2G technologies are in operation in the United States, there are now many plans that allow nationwide service for a single price, and roaming revenues and charges have continued to decline.<sup>103</sup>

The U.S. example arguably demonstrates that competition among mobile providers with nationwide licenses using incompatible network technologies leads to product variety and differentiation of services, more technology competition,

and greater price competition.<sup>104</sup>

The potential for change toward the FCC approach, however, is limited in the EU under the current rules. The Commission must in fact promote standardization across the EU,<sup>105</sup> and, despite the harmonisation of spectrum at EU level,<sup>106</sup> the granting of authorizations or usage rights continue on a

## **Roaming is another area where the perspectives of the FCC and the European Commission diverge.**

national basis.<sup>107</sup> The only way to promote the emergence of pan-European services, in practice, is through mergers and acquisition or strategic alliances.

In the meantime, the Commission is proposing to amend its cost-oriented price regulation for international roaming charges across the EU,<sup>108</sup> because it considers *ex post* intervention under competition rules as insufficient to solve the issue.<sup>109</sup>

### **VI. Conclusion**

The Commission’s perspectives on mobile regulatory issues in the EU are increasingly converging with the FCC’s perspectives in the United States. This is evident from their approaches to regulation of market structure and conduct-related issues. However, the potential for convergence is more limited in relation to MTRs and international roaming, at least for the foreseeable future. ■

### **Endnotes**

1. Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Thirteenth Report, FCC DA 09-54 (2009), at 5 [hereinafter FCC 13th Rep.], available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-09-54A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-54A1.pdf). According to OECD data, however, mobile penetration in the period 2007–08 in the United States was slightly lower (87 percent).

2. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Progress Report on the Single European Electronic

Communications Market 2008, COM (2009) 140 final, at 6 [hereinafter EC 14th Rep.].

3. EC 14th Rep., Annex, *supra* note 2, at 12. However, some EU Member States, such as Italy (with 152 percent) and Lithuania (149 percent), continue to show signs of growth.

4. U.S. Census Bureau, Bernstein estimates, and analysis.

5. Merrill Lynch, *Interactive Global Wireless Matrix 4Q07*, estimates that average revenue per minute in the United States is less than one-third of the EU average.

6. FCC 13th Rep., *supra* note 1, at 10, 103–05. *Cf.* EC 14th Rep., Annex, *supra* note 2, at 17: “[I]t is estimated that there are around 91.3 million 3G subscribers in the EU (15.5% of the total mobile operators’ subscribers).” These figures would indicate a similar mobile Internet penetration in the EU and in the United States (15.6 percent of mobile subscribers). However, the figure mentioned in the EU 14th Report for “3G and data services” relates mainly to SMS data volume rather than mobile Internet services. For a detailed comparison by mobile data services in the United States and the EU, see FCC 13th Rep., *supra* note 1, at 109, table 17. *Cf.* Press Release, Comscore, Comscore Reports That the US Catches Up with Western Europe in Adoption of 3G Mobile Devices (Sept. 4, 2008), according to which the only EU Member States exceeding the United States in penetration of 3G enabled devices are Italy and Spain.

7. Ofcom, *The International Communications Market 2008*, available at: <http://www.ofcom.gov.uk>.

8. Press Release, Sprint Nextel and Clearwire Corp., Sprint and Clearwire to Combine WiMAX Businesses, Creating A New Mobile Broadband Co. (May 7, 2008); *In Re Applications of Sprint Nextel Corp. and Clearwire Corp. for Consent to Transfer Control of Licenses, Authorizations, and Leases*, WT Docket No. 08-94, Memorandum Opinion and Order (statement of FCC Comm’r Jonathan S. Adelstein).

9. While MediaFLO uses its own dedicated spectrum, MobiTV transmits over MNO networks.

10. FCC 13th Rep., *supra* note 1, at 15–20.

11. With the exception of Cyprus and Malta, where there are only two MNOs; Romania and the UK, where there are five MNOs; and Sweden, where there are six MNOs. EC 14th Rep., Annex, *supra* note 2, at 15, Chart 12.

12. There are, for example, sixty MVNOs in the Netherlands, fifty in Germany, thirty in the UK, and fourteen in Italy. Edward Segantini, *Low cost phones, rates compared*, CORRIERE DELLA SERA, Mar. 29, 2009, available at [www.corriere.it/economia/09\\_marzo\\_29/](http://www.corriere.it/economia/09_marzo_29/)

[focus\\_cellulari\\_low\\_cost\\_8559fbf0-1c10-11de-9485-00144f02aabc.shtml](http://focus_cellulari_low_cost_8559fbf0-1c10-11de-9485-00144f02aabc.shtml).

13. With the exception of the UK, where the average market share of the leading MNOs is 25 percent, and Cyprus and Slovenia, where the average market share of the leading MNOs is 85.2 percent and 60.35 percent, respectively. EC 14th Rep., Annex, *supra* note 2, at 16, Chart 13.

14. Roaming and seamless services among Orange, TIM, T-Mobile, and TeliaSonera.

15. Roaming and seamless services among One, Sonofon, Eurotel, Pannon, Wind, Telefon, Amena, Sunrise, and O2.

16. Vodafone has a number of minority interests in other mobile operators with which it has an alliance in the EU.

17. *See, e.g.*, Andrew Parker, *O2 and Vodafone consider network sharing*, FIN. TIMES, Mar. 12, 2009, available at [www.ft.com/cms/s/0/07091f6c-0edf-11de-ba10-0000779fd2ac.html?nclick\\_check=1](http://www.ft.com/cms/s/0/07091f6c-0edf-11de-ba10-0000779fd2ac.html?nclick_check=1).

18. EC 14th Rep., Annex, *supra* note 2.

19. *Id.*

20. FCC 13th Rep., *supra* note 1; IDATE; national regulators; OECD; and Ofcom research.

21. Rob Minto, *Android’s progress elevates Google’s mobile aspirations*, FIN. TIMES, Feb. 15, 2009, available at [www.ft.com/cms/s/0/4f90c95c-f9f3-11dd-9daa-000077b07658.html](http://www.ft.com/cms/s/0/4f90c95c-f9f3-11dd-9daa-000077b07658.html).

22. Umberto Torelli, *Il Googlefonino parte un po’ scarico*, CORRIERE ECONOMIA, Mar. 23, 2009, available at [http://archiviostorico.corriere.it/2009/marzo/23/Googlefonino\\_parte\\_scarico\\_ce\\_0\\_090323074.shtml](http://archiviostorico.corriere.it/2009/marzo/23/Googlefonino_parte_scarico_ce_0_090323074.shtml).

23. For example, higher mobile penetration in the EU can be explained by an increasing number of consumers possessing more than one subscription to benefit from online tariffs when traveling abroad. *See* Communication Staff Working Document Accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Progress Report on the Single European Electronic Communications Market 2007 (EC 13th Rep.) (SEC (2008) 356), Mar. 19, 2008, at 9, available at [http://ec.europa.eu/information\\_society/policy/ecomms/doc/library/annualreports/13th/SEC\(2008\)356DTSVol2final.pdf](http://ec.europa.eu/information_society/policy/ecomms/doc/library/annualreports/13th/SEC(2008)356DTSVol2final.pdf).

24. *See, e.g.*, Viviane Reding, Member of the European Commission Responsible for Information Society and Media, *From Service Competition to Infrastructure Competition: The Policy Options Now on the Table*, ECTA Conference 2006, Brussels, Nov. 16, 2006 (SPEECH/06/697).

25. These operators often choose to set

MTRs at virtually zero and charge their customers for received calls without resorting to wholesale charges from other operators. There are differences such as between mobile to mobile calls and fixed to mobile calls. Mobile to mobile and long distance fixed (ILEC) to mobile calls apply terms that are established through voluntary negotiations, often as Bill & Keep. Local fixed (CLEC) to mobile calls apply a reciprocal compensation system that is paid to the CLEC or mobile operator at a rate limited to the ILEC’s forward looking marginal cost unless the CLEC or mobile operator can demonstrate a higher forward looking marginal cost.

26. More information on the FCC’s mobile policy is available at [www.fcc.gov](http://www.fcc.gov).

27. More information on the Commission’s mobile policy is available at [http://ec.europa.eu/competition/sectors/telecommunications/overview\\_en.html](http://ec.europa.eu/competition/sectors/telecommunications/overview_en.html).

28. In the United States, the FCC must approve the transfer of licenses and authorizations involving the transfer of control before such a transfer can take place. All transactions are subject to potential review under Section 7 of the Clayton Act, which prohibits mergers, acquisitions, and joint ventures that would substantially lessen competition in a relevant market. Only transactions involving more than US\$59.8 million in stock or assets are subject to a mandatory suspensory filing under the Hart-Scott-Rodino (HSR) Act. In the EU, the Commission must approve all transactions involving the transfer of control and parties with worldwide and EU annual turnover that is above certain thresholds before the transactions can take place. Council Regulation (EC) No. 139/2004 of 20 January 2004 on the control of concentrations between undertakings, O.J. L 24, 29.01.2004, at 1.

29. A number of transatlantic mobile transactions have been assessed under the national competition rules of individual EU Member States, because they fell below the EC Merger Regulation thresholds. *See, e.g.*, *AT&T Wireless/Cingular Wireless*, *infra* at note 50.

30. *See* Case M.1741, *MCI WorldCom/Sprint*, Commission Decision of 28 June 2000, OJ 2000 C14/6.

31. *See* Case M.1069, *WorldCom/MCI*, Commission Decision of 8 July 1998, OJ 1999 L166/1.

32. Recent examples in the United States include: Applications of AT&T Inc. and Dobson Communications Corporation for Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, 22 FCC Rcd 20295, 20296, ¶ 2 (2007).

33. Applications of Cellco P’ship d/b/a Verizon Wireless and Rural Cellular Corp.

for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager Leases, and Petitions for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act, WT Docket No. 07-208, Memorandum Opinion and Order and Declaratory Ruling, FCC 08-181, ¶ 3 (2008).

34. Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and *de facto* Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction Is Consistent with Section 310(b)(4) of the Communications Act, WT Docket No. 08-95, Memorandum Opinion and Order, FCC 08-258, ¶ 233 (rel. Nov. 10, 2008).

35. Case M.1795, *Vodafone Airtouch/Mannesmann*, Commission Decision of 12 April 2000, OJ 2000 C141/19.

36. Case M.2016, *France Telecom/Orange*, Commission Decision of 11 August 2000, OJ 2000 C261/6.

37. Case M.2574, *Pirelli/Edizione/Olivetti/Telecom Italia*, Commission Decision of 20 September 2001, OJ 2001 C325/12. In this case, the Commission was concerned that the transaction would result in the creation of a dominant position in the retail market for mobile voice telephony services in Italy. The Commission imposed the divestiture of assets and reallocation of frequencies through a nondiscriminatory process entrusted to the national regulatory authority. *See also* Case M.2958, *Wind/Blu*, Commission Decision of 12 September 2002, OJ 2002 C239/20, which concerned Wind's acquisition of certain assets of the divested business.

38. Case M.3916, *T-Mobile/Tele.ring*, Commission Decision of 26 April 2006, Press Release IP/06/535, concerning the elimination of closest competitor without single or collective dominant position being created. To remedy the risk of unilateral anticompetitive effects, the Commission required the divestiture of 3G frequencies and mobile telephony sites.

39. *See, e.g., FT/Amena* (Press Release IP/05/1340) and *Cesky Telecom/Telefonica* (Press Release IP/05/713), concerning the integration of roaming partners belonging to separate alliances into a single alliance. The Commission considered that the mergers might eliminate an independent contracting partner for the mutual exchange of traffic through international roaming. However, it concluded that the regulatory framework governing the alliance would continue to ensure independence.

40. Sprint Nextel Corp. and Clearwire Corp. Seek FCC Consent to Transfer Control

of Licenses and Authorizations, Public Notice, WT Docket No. 08-94, DA 08-1477 (rel. June 24, 2008).

41. Case M.2803, *Telia/Sonera*, Commission Decision of 10 July 2002, OJ 2002 C201/19.

42. Case M.4035, *Telefonica/O2*, Commission Decision of 10 January 2006, OJ 2006 C29/14.

43. Case M.2469, *Vodafone/Airtel*, Commission Decision of 26 June 2001, OJ 2001 C207/9.

44. Case M.2305, *Vodafone/Eircell*, Commission Decision of 2 March 2001, OJ 2001 C128/3.

45. *See* U.S. Dep't of Justice and Fed. Trade Comm'n, Horizontal Merger Guidelines, ¶ 3, available at [www.usdoj.gov/atr/public/guidelines/horiz\\_book/hmg1.html](http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html); Commission Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ 2004 C31/5, para. 68-75.

46. *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Ninth Report, 19 F.C.C.R. 20597, 20611-612, ¶¶ 31-33 (2004) (FCC 9th Rep.).

47. FCC 13th Rep., *supra* note 1, at 37.

48. 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services, Report and Order, 16 F.C.C.R. 22668 (2001) (Spectrum Cap Order), at 22693, ¶ 46. A number of EU Member States still provide for a spectrum cap regulation (e.g., Italy). *See* Agcom, Decision No. 286/02/CONS, available at [www.agcom.it](http://www.agcom.it).

49. *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Third Report and Order, 9 F.C.C.R. 7988 (1994).

50. 47 U.S.C. § 310(d). *See* Spectrum Cap Order, *supra* note 48, at 22693-96, ¶¶ 48-55. For example, the acquisition of AT&T Wireless Services by Cingular Wireless in 2004 was the first major mobile transaction considered by the FCC after the elimination of the spectrum cap. In its order approving the transaction, the FCC found that the merger would have an adverse effect on competition in certain local markets and required the merging parties either to divest the spectrum holdings, or the entire operations, of one of the parties, depending on the local market concerned. *See* Applications of AT&T Transfer Control of Licenses and Authorizations, File Nos. 001656065 et al., Memorandum Opinion and Order, FCC 04-255, WT Docket No. 04-70, ¶¶ 251-58.

51. Council Directive 87/372/EEC of 25 June 1987 on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community (GSM Directive), in OJ 1987 L196/85; Communication from the Commission on the coordinated introduction of the pan-European digital cellular mobile communications systems (COM/90/565 final); Council Resolution of 14 December 1990 on the final stage of the coordinated introduction of pan-European land-based public digital mobile cellular communications in the Community (GSM), OJ C329, 31.12.1990, at 25; Council Directive 90/544/EEC of 9 October 1990 on the frequency bands designated for the coordinated introduction of pan-European land-based public radio paging in the Community, in OJ 1990 L 310/28; Council Directive 91/287 of 3 June 1991 on the frequency bands designated for the coordinated introduction of digital European cordless telecommunications (DECT Frequencies Directive), in OJ L144/45; Decision 128/1999 of 14 December 1998 on the coordinated introduction of a third generation of the mobile and wireless communications system (UMTS) in the Community (UMTS Decision), in OJ 1999 L17/1 (now expired).

52. For example, in the UK, the 900MHz and 1800MHz frequencies can be used only for 2G services, and the 2.1GHz can be used only for 3G services.

53. Directive 2002/21/EC of 7 March 2002, on a common regulatory framework for electronic communications networks and services (Framework Directive), in OJ 2002 L108/33, Art. 9; Decision 676/2002 of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision), OJ 2002 L108/1, Art. 4.

54. Although allocation of radio spectrum is a matter for each EU Member State, such allocation must be made in conformity with Directive 2002/20/EC of 7 March 2002, on the authorisation of electronic communications networks and services (Authorisation Directive), OJ 2002 L108/21, Art. 6(1) in conjunction with Annex, Part B(1).

55. In July 2007, the Commission announced a proposal to repeal the GSM Directive and to replace it with a Decision which will allow the harmonized opening up of the 900MHz and 1800MHz bandwidth for further use.

56. Framework Directive, *supra* note 53, Art. 9.

57. *See* Amended proposal for a Directive of the European Parliament and of the Council amending Directives 2002/21/EC

on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and services, and 2002/20/EC on the authorisation of electronic communications networks and services - COM(2008) 724. The texts of the full proposals package and other related documents are available at [http://ec.europa.eu/information\\_society/policy/ecomm/library/proposals/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomm/library/proposals/index_en.htm).

58. See Press Release, Meeting of Telecommunications, Transport and Energy Council, Commission MEMO/08/774 and MEMO/08/745.

59. Ofcom, Application of spectrum liberalisation and trading to the mobile sector: a further consultation, Consultation, Feb. 13, 2009, available at <http://www.ofcom.org.uk/consult/condocs/spectrumlib/spectrumlib.pdf>.

60. In previous cases, similar proposals have given rise to complaints under State aid rules (see, e.g., Case C-431/07 P, *Bouygues SA and Bouygues Telecom Sa against the judgment of the Court of First Instance delivered on 4 July 2007 in Case T-475/04 Bouygues and Bouygues Telecom v Commission*, in OJ 2007 C269/37), or nondiscrimination rules (see Case C-462/99 *Connect Austria* [2003] ECR I-5197, ¶¶ 113–18).

61. See Decision No. 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision), OJ 2002 L108/1, Art 1 (procedures to ensure coordination of radio spectrum management approaches across the EU).

62. See FCC 13th Rep., *supra* note 1, at 87; FCC, Wireless Commc'ns Bureau, Wireless Local Number Portability, FAQs, available at <http://wireless.fcc.gov/wlnp/index.htm?job=home>.

63. Directive 2002/22/EC of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive), OJ 2002 L108/51, Art. 30.

64. EC 14th Rep., *supra* note 2, at 16.

65. Commission, *EU Telecoms Commissioner calls for consumer right to change phone operator in 1 day*, 23 March 2009 (MEMO/09/126).

66. There may be various models of network sharing, e.g., Vodafone, Different models of network sharing, available at [www.vodafone.com/start/responsibility/our\\_network/network\\_sharing.html](http://www.vodafone.com/start/responsibility/our_network/network_sharing.html).

67. Telecommunications Act, U.S.C. § 332(c)(7) (1996). See FCC, Wireless Telecommunications Bureau Seeks Comment on a

Draft Programmatic Agreement with Respect to Colocating Wireless Antennas on Existing Structures, DA 00-2907, App. A at 2.

68. See Case No. 38.369, *Network Sharing Germany*, OJ 2002 C 189/22; Case No. 38.370, *Network Sharing UK*, OJ 2002 C214/17; Case T-328/03, *O2 v Commission*, available at [www.curia.europa.eu](http://www.curia.europa.eu).

69. See *supra* note 57.

70. The European Court of First Instance has recently confirmed that such simultaneous application of remedies by national regulators and competition law authorities in the EU would address different problems in electronic communications markets, including mobile markets, and are therefore not mutually exclusive. Case T-271/03, *Deutsche Telekom v Commission*, Judgment of 10 April 2008 (not yet reported in ECR). This ruling arguably widens the divergence from the U.S. approach where the U.S. Supreme Court suggested that the scope of competition law in a regulated sector such as electronic communications is limited in practice to situations where no sector-specific remedies are available. *Verizon Commc'ns, Inc. v. Law Offices of Curtis Trinko, LLP*, 540 U.S. 398 (2004). However, the Court's holding was limited to antitrust claims based on violations of the access obligations under § 251 of the 1996 Telecommunications Act (broadly relating to access to the fixed local network of the incumbent carrier).

71. FCC 13th Rep., *supra* note 1, at 59. The FCC notes that all of the nationwide MNOs and many smaller operators offer some version of a national pricing plan in which customers can purchase a bucket of minutes to use on a nationwide or nearly nationwide network without incurring roaming or long-distance charges.

72. Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (second edition) (C(2007) 5406), at 39.

73. European Regulators Group (ERG), *Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates*, ERG (07) 83 final 080312, at 73; see also Commission Staff Working Document Explanatory Note to Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, available at [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/public\\_consult/termination\\_rates/explanatory.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/explanatory.pdf).

74. Cf. Commission Sector Inquiry into

wholesale tariffs for the termination of calls between fixed and mobile networks (1999), Press Release IP/99/298; and COMP/37.704.

75. Draft Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2008), available at [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/public\\_consult/termination\\_rates/termination.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/termination.pdf).

76. As part of the 2002 Regulatory Framework reform, see *supra* note 57, the Commission has also proposed to extend its veto powers under Article 7 of the Framework Directive. At present, the Commission can veto any decision of a national regulatory authority to impose certain regulatory obligations on operators deemed to possess significant market power in a particular relevant market. However, the Commission can only make comments on the type of regulatory obligations chosen by the national regulatory authority. The national regulatory authority in turn must take utmost account of the Commission's comments. Under the new proposals, the Commission could veto the type of regulatory obligations chosen by the national regulatory authority in relation to MTRs, in addition to its current veto power on designation of operators with significant market power and relevant market definition for the purposes of *ex ante* regulation. If the European Parliament and the Council accepted such a proposal, the Commission could force, under the revised Article 7 of the Framework Directive, the national regulatory authorities to comply with its recommendation on MTRs. However, at the time of writing, it appears that the European Parliament and the Council may not be prepared to accept such a proposal.

77. UK Dep't for Bus. Enter. & Reg. Reform and Ofcom, Draft European Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, available at <http://www.ofcom.org.uk/telecoms/ioi/euteration/response.pdf>.

78. Frontier Economics, *Assessing the Impact of Lowering Mobile Termination Rates*, July 2008, available at [www.frontier-economics.com/library/publications/Frontier%20publication\\_MTRimpact.pdf](http://www.frontier-economics.com/library/publications/Frontier%20publication_MTRimpact.pdf).

79. See, e.g., responses of Mobile Challengers, available at [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/public\\_consult/termination\\_rates/mobile\\_chall.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/mobile_chall.pdf); and ECTA, available at [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/public\\_consult/termination\\_rates/ecta.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/ecta.pdf).

80. OLIVIER BOMSEL ET AL., HOW MOBILE TERMINATION CHARGES SHAPE THE DYNAMICS OF

THE TELECOM SECTOR (2003), available at [www.cerna.ensmp.fr/Documents/OB-GLB-F2M-FinalReport.pdf](http://www.cerna.ensmp.fr/Documents/OB-GLB-F2M-FinalReport.pdf).

81. Product market definition involves identifying those products that are reasonably interchangeable as indicated by buyer behavior. However, given the pace of technology evolution in the mobile sector, supply substitution is also important. See, e.g., *United States v E.I. DuPont de Nemours & Co.*, 351 US 377 (1956); *United States v. Microsoft Corp.*, 253 F.3d 34, 81 (D.C. Cir. 2001); Commission Guidelines on market analysis and the assessment of significant market power (SMP Guidelines), OJ 2002 C165/6, ¶¶ 33–54.

82. Geographic market definition has traditionally been determined by reference to two main criteria: (1) the geographic area covered by the network; and (2) the existence of legal and regulatory barriers, such as the license, authorization, or right of use the assigned portion of radio spectrum. See *S. Pac. Commc'ns Co. v. AT&T*, 740 F.2d 980 (D.C. Cir. 1984); SMP Guidelines, *supra* note 81, ¶¶ 55–60.

83. Commission Recommendation on Relevant Product and Service Markets within the electronic communication sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Second Edition), C (2007) 5406, Explanatory Note, at 41.

84. See Press Release, FCC Approves SBC/AT&T and Verizon/MCI Mergers, Fed. Commc'ns Comm'n (Oct. 31, 2005), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-261936A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-261936A1.doc); Case M.3752; *Verizon/MCI*, OJ 2005 C309/10, ¶¶ 8–24.

85. There are two types of Internet connectivity: (1) peering (barter arrangements between top-level Internet Service Providers (ISPs) that allow traffic to be exchanged between them without payments); and (2) transit (arrangements where an ISP agrees to carry traffic on behalf of another ISP or an end user for a fee).

86. *Cf.*, by analogy, Ofcom, *Suspected margin squeeze by Vodafone, O2, Orange and T-Mobile*, (CW/00615/05/03), ¶ 71, where Ofcom concluded that the relevant market was that for the provision of call termination for closed user group (CUG) calls across all mobile operators networks covering the whole of the UK, because the CPP arrangement does not apply in respect of CUG calls.

87. See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee,

15 FCCR 9816, ¶ 6 (rel. June 6, 2000); SMP Guidelines, *supra* note 81, ¶ 35; see also *Joined Cases T-125 and 127/97, Coca-Cola Company v Commission* [2000] ECR II-1733, ¶¶ 81–82, where the European Court of First Instance held that markets defined in previous cases are not binding on the Commission, so a new analysis is always required in subsequent cases.

88. Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector (Access Notice), OJ 1998 C265/2, ¶¶ 132–33.

89. *Id.* ¶¶ 134–43. Similar principles have been developed by the U.S. courts in relation to fixed network interconnection agreements, which apply *mutatis mutandis* to the mobile sector.

90. *United States v Grinnell Corp.*, 384 U.S. 563, 570–71 (1966); *accord United States v. Microsoft Corp.*, 253 F.3d 34, 50 (D.C. Cir. 2001) (en banc).

91. Case 322/81, *Michelin v Commission* [1983] ECR 3461; Case 311/84, *Télémarketing* [1985] ECR 3261; Case 27/76, *United Brands v Commission* [1978] ECR 207; Case 85/76, *Hoffmann-La Roche v Commission* [1979] ECR 461.

92. The concept of collective dominance is not recognized under U.S. antitrust law.

93. Case T-342/99, *Airtours plc v Commission*, [2002] ECR II-02585, ¶ 60; see Ofcom, *Suspected margin squeeze by Vodafone, O2, Orange and T-Mobile*, (CW/00615/05/03), ¶¶ 96–104, in which Ofcom applied these criteria and concluded that the MNOs in question did not hold a collective dominant position on the relevant market for mobile termination.

94. The author has not found any case in the United States of excessive pricing under antitrust rules in the mobile sector. In the EU, see generally Case T-228/97, *Irish Sugar plc v Commission* [1999] ECR 2975; Case 26/75 *General Motors Continental v Commission* [1975] ECR 1367, ¶ 12; Case 27/76 *United Brands v Commission* [1978] ECR 207; in relation to electronic communications in particular, see Access Notice, *supra* note 88, ¶¶ 105–09; Commission, *ITT Promedia/Belgacom*, 27th Report on Competition Policy (1997), at 67.

95. See generally *United States v. ALCOA*, 148 F.2d 416, 436–38 (2d Cir. 1945); *accord Town of Concord v. Boston Edison Co.*, 915 F.2d 17, 18 (1st Cir. 1990); *Bonjorno v. Kaiser Aluminium & Chem. Corp.*, 752 F.2d 802, 808 (3d Cir. 1984); *City of Batavia v. FERC*, 672 F.2d 64, 86 & n.50 (D.C. Cir. 1982); in the electronic communications sector, see *Ameritech Corp. & SBC Commc'ns, Inc.*, 14 FCCR 14712, ¶¶ 231–35 (1999); *NYNEX Corp. & Bell Atlantic Corp.*, 12

FCCR 19985, ¶¶ 115–18 (1997); Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, respectively, FCC 99-355, ¶ 141 (Dec. 9, 1999); *Covad Commc'ns Co. v. Bell-south Corp.*, 374 F.3d 1044 (11th Cir. 2004). In the EU, see generally Commission Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, C (2009) 864 final, at 23; and in the European electronic communications sector, see Case T-271/03, *Deutsche Telekom v Commission*, Judgment of 10 April 2008 (not yet reported in ECR); Access Notice, *supra* note 88, ¶¶ 117–19.

96. See sections 201 and 202 of the Communications Act (Roaming Obligations of Commercial Mobile Radio Service Providers, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817, 15818–19, ¶ 2 (2007), *petitions for recon. pending*; 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 2002 L108/7, Art. 2(a) in conjunction with Art. 4(1).

97. See EC 14th Rep., Annex, *supra* note 2, at 20. The Commission has adopted various policy initiatives to reduce international roaming tariffs under both sector specific and competition rules. For background information, see [http://ec.europa.eu/information\\_society/activities/roaming/index\\_en.htm](http://ec.europa.eu/information_society/activities/roaming/index_en.htm). For background information on the Roaming Sector Inquiry, see <http://ec.europa.eu/competition/sectors/telecommunications/archive/inquiries/roaming/index.html>.

98. Regulation (EC) No 717/2007 on roaming on public mobile telephone networks within the Community and Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services.

99. The FCC notes that the main advantage of compatibility between competing mobile networks is that greater economies of scale in the production of terminals tend to lower the unit cost of handsets, chipsets, and other network equipment. Lower equipment costs have arguably promoted more rapid adoption of mobile services. In addition, standardization tends to produce greater variety of handsets. See FCC 13th Rep., *supra* note 1, at 66.

100. See Jerry Hausman, *Mobile Telephone*, in 1 HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 564, 573 (M. Cave et al. eds, 2002).

101. FCC 9th Rep., *supra* note 46, at 35.

102. Hausman, *supra* note 100, at 573.

103. Implementation of Section 6002(b) of Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, 8th Report, 18 FCCR 14783, 14804–75 (2003) (FCC 8th Report), at 96–97.

104. FCC 13th Rep., *supra* note 1, at 66.

105. Framework Directive, Art. 17.

106. Radio Spectrum Decision, Art. 1.

107. Authorisation Directive, Art. 5. A limited one-stop shop mechanism for the provision of certain telecommunications services was set up within the framework of the European Telecommunications Office. However, this procedure is not available for mobile services and covers only some of the EU Member States. For more information, see <http://www.eto.dk/oss.htm>.

108. Proposal for a Regulation of the European Parliament and of the Council

amending Regulation (EC) No 717/2007 on roaming on public mobile telephone networks within the Community and Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services, COM(2008) 580 final. Recent press reports indicate that the Regulation is close to a final adoption. *EU in draft deal on capping phone roaming prices*, Reuters, Mar. 24, 2009.

109. Commission, *Mobile telephones/international roaming FAQs*, MEMO/05/44.