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Conference Paper

Electronic communications services in the world of apps: Regulatory challenges

24th European Regional Conference of the International Telecommunications Society (ITS):
"Technology, Investment and Uncertainty", Florence, Italy, 20th-23rd October, 2013

Provided in Cooperation with:

International Telecommunications Society (ITS)

Suggested Citation: Ruhle, Ernst-Olav; Freund, Natascha (2013) : Electronic communications services in the world of apps: Regulatory challenges, 24th European Regional Conference of the International Telecommunications Society (ITS): "Technology, Investment and Uncertainty", Florence, Italy, 20th-23rd October, 2013, International Telecommunications Society (ITS), Calgary

This Version is available at:

<https://hdl.handle.net/10419/88519>

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Electronic communications services in the world of apps – regulatory challenges

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Paper for the 24th European conference of the International Telecommunications Society

20-23 October 2013

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1 Introduction

Driven by technical and economic progress, the transformation of the telecoms markets is also exerting an influence on the business model adopted by classic network operators. For many years, networks were installed and operated, and services were offered to customers, by one and the same entity. Novel services were, as a rule, offerings of the network operators or tied to their technical infrastructure. The market is no longer moulded by such a closed loop, or vertically integrated value chain. Nowadays, access to the market can be gained at any stage of the value creating chain.

From the customer's perspective as well, the world of communications has radically changed. Thanks to smartphones, customers have constant access to a computer. Irrespective of time and place, they can retrieve information from the internet, read messages and get in touch with friends and business partners. In contrast to the situation that prevailed just a few years ago, communication now takes place through a multitude of technologies – by telephone, text message (SMS), iMessage or MMS, through the messaging functions of social networks such as Facebook, and by way of messaging apps, including WhatsApp, Joyn, Viber, KakaoTalk, Skype, SkypeOut, Nimbuzz, NimbuzzOut and others.

On the touch screen of a smartphone, the buttons that give access to the telephone, messages, Nimbuzz, WhatsApp etc., differ only in appearance. In most cases, they stand alongside each other with equal status. Sometimes, the services of the terminal device's manufacturer are even integrated in the network operator's texting service so that the user does not immediately recognise which service he is using. In other words, before engaging in any communications activity, the customer can decide, or the terminal device decides on his behalf, which communications service to select.

The network operator's services are therefore competing directly with all the other communications services that are downloaded from the internet by the customer or pre-installed by the terminal device manufacturer. Only the access is still largely made available exclusively by the network operator. While services and applications on the internet are developed and distributed "globally", and, more to the point, device manufacturers serve the "world market" rather than national markets, another trend is emerging: this globalisation of the service and application markets is taking place within a structure for physical access, whether mobile or landline, that remains firmly national. But how are these applications to be regarded against the backdrop of national operators, markets and, in particular, national legislation? Are they subject to a national regulatory

framework? To what extent does the Telecommunications Act (TKG) apply, and what are the implications of the new form of competition?

It is beyond doubt that these new applications are highly significant for the market. The comparative figures set forth below illustrate the forces that are at play. For June 2012, Facebook reported a total of 552 million daily active users,¹ which represented a year-on-year increase of 32%. Vodafone, one of the world's largest mobile providers, puts its global customer base at 404 million users.² Viber, an instant messaging application for text and photo messages as well as for making HD-quality phone calls, reported 100 million customers in September 2012.³ On 28 October 2012, the Nimbuzz Messenger, a messaging app for voice and video calls, chatting and transferring files, reported in its description in the App Store that it had 105 million registered users. KakaoTalk, a similar app, claims in the App Store that its customer portfolio stands at 62 million users in 230 countries (likewise as of 28 October 2012). According to a press release, WhatsApp customers send one billion messages a day.⁴

This competition is also reflected in the mobile companies' turnover figures. In some countries, their text messaging revenues are declining sharply. In the period from 2009 to 2011, text revenues fell by 10% in Spain and 2% in Italy.⁵ From October 2011 to August 2012, the use of text messaging among Finnish iPhone users dropped by 14%, while the use of mobile data in the same period rose by 68%.⁶ The GSM Association (GSMA)⁷ expects the number of iMessage users to reach around 308 million in 2014, which would represent an annual increase of 131% from 2011 (25 million).⁸ Following its Korean launch in 2010, the number of people using KakaoTalk there climbed to 37 million in 2012. In the same period, SMS/MMS activity contracted from 4 billion to 2.2 billion messages.⁹

The forenamed applications are therefore clearly competing against and substituting the services provided by traditional mobile operators. Although no official figures are currently available for Austria or Germany, it is to be assumed – based on a smartphone

¹ Facebook news release on second quarter 2012 results, <http://www.prnewswire.com/news-releases/facebook-reports-second-quarter-2012-results-163915536.html>.

² Vodafone Group Plc, Annual Report for the year ended 31 March 2012, page 3; http://www.vodafone.com/content/dam/vodafone/investors/annual_reports/Vodafone_Annual_Report_12.pdf

³ <http://www.businesswire.com/news/home/20120911005071/en/Viber-Reaches-100-Million-Users-Takes-Aim> (11.9.2012)

⁴ <http://www.whatsapp.com/press> (28.10.2012)

⁵ The Economist, Joyn them or join them, 11.8.2012, citing research firm Analysys Mason

⁶ <http://www.forbes.com/sites/terokuitinen/2012/10/09/text-messaging-volume-of-iphone-owners-declining-sharply-in-finland/> (30.10.2012)

⁷ GSMA

⁸ GSMA, *ibid.*

⁹ GSMA, *ibid.*

penetration of 36 % in Q1/2012, an average of 25 installed apps¹⁰ and 2.14 million smartphone tariffs¹¹ – that many more than one million smartphone users in Austria were regularly sending messages by way of apps during this quarter. This situation affects network operators, who must be careful that their access offerings do not transform them into "bitpipes" – providers that "only" give access to networks, and leave the business of offering services to the application providers.

The present paper¹² investigates this growing mobile service segment which, from an economic perspective, exists largely independently of the network operators. The increasing prevalence of smartphones in particular is making these services more and more popular. The network operators are thus not only facing increased competition in the segment populated by their own services, but also have to carry a rising volume of traffic on their technical infrastructures,¹³ while the economic return generated by the traffic largely passes them by. In addition, the providers of such applications position themselves as rivals (in some sub-segments) by offering services that compete with those of the network operators. Given that they do not follow the same "rules", as laid down by legislation, the existence or otherwise of a level playing field as regards competition is to be investigated. At the same time, the Paper discusses the economic significance of this development and seeks to define its place within the legal and regulatory framework. In the authors' view, the regulatory approach to this issue adopted thus far needs to be changed in order to maintain equality of competition among the various offerings and players operating at the different stages of the vertical value chain.

After this Introduction, Chapter 2 describes some of the innovative services and categorises them within the portfolio of network operators' and application providers' offerings. Parallels and differences between the individual services are thus revealed. Chapter 3 classifies these offerings from a legal and regulatory perspective, and seeks to measure the applications against the yardstick of TKG 2003. The authors believe that the

¹⁰ Google, Our Mobile Planet May 2012, retrievable at [www. http://www.thinkwithgoogle.com/mobileplanet](http://www.thinkwithgoogle.com/mobileplanet) (29.10.2012).

¹¹ RTR Telekom Monitor Q3/2012

¹² The authors thank Mag. Jörg Kittl for his valuable comments on an earlier version of this paper.

¹³ The signalling network, which enables consumers to use the mobile network by facilitating communication between it and its constituent elements on the one hand, and terminal devices on the other, is therefore being exposed to greater strain as well. It was found earlier, for example, that smartphones were generating 40% of the data traffic, but 99% of the signalling traffic, in a West European mobile network. This phenomenon is attributable to a feature called "fast dormancy", which is intended to prolong battery life. The terminal device interrupts the connection to the mobile network and enters the standby mode after each individual download of a data fragment. When an app is being used, this prompts the terminal device to establish and interrupt the connection to the mobile network extremely frequently (several times a second), however, and therefore imposes a burden on the network. Cf. Nokia Siemens Networks, Understanding smartphone behavior in the network, White Paper, p. 5.

apps under consideration here are to be classified as communications services. The implications are described in Chapter 4, which precedes our conclusions in Chapter 5.

2 Parallels and differences between network operators' services and those of app providers

2.1 Messaging portals becoming mobile

As mobile phones become ever more popular, messaging portals and (instant) messaging systems are being accessed by mobile users to an increasing extent. And as the prevalence of smartphones grows, more and more apps are seeking to capture the space previously occupied by classic text messaging. In this climate, the boundaries between "social networks" and "communications services" are becoming more and more blurred.¹⁴ In principle, all the systems operate in a very similar way.

By way of an application, messages can be sent to one or several platform users. Most platforms allow both text-only and text-with-picture messages. Figure 1 shows a typical message session, in this case taking place via the Facebook Messenger app.

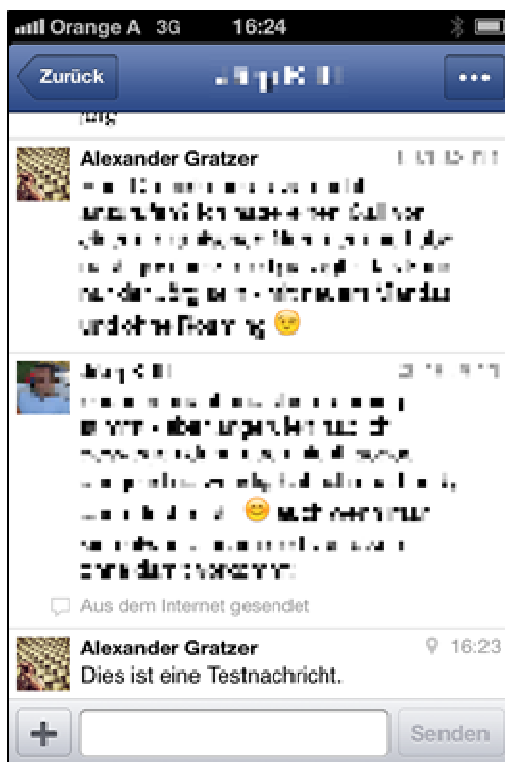


Figure 1: Message history in the Facebook Messenger app

¹⁴ The "Facebook" social network, for example, in August 2011 launched the "Facebook Messenger", an app for the mobile exchange of messages between Facebook users; cf. Protalinski, E.: Facebook is killing text messaging, <http://www.zdnet.com/blog/facebook/facebook-is-killing-text-messaging/12911>.

In view of these systems' large user numbers,¹⁵ they are now taking the place of classic text message services.¹⁶

Two of the apps, WhatsApp and iMessage, are described below as examples of this genre.

2.2 WhatsApp

The WhatsApp Messenger uses an IP-based proprietary data protocol. The front end is an app for the most popular smartphone operating systems (iOS, Android, BlackBerry, Nokia and Windows Phone). According to WhatsApp, it was created "to build a better SMS alternative".¹⁷

WhatsApp operates rather like an instant messenger, but it addresses the called party by way of the E.164 telephone number. The user logs on with his own telephone number, which is verified by way of an SMS. The messages are then composed in an app, following more or less the same rules as a conventional text message.

The app examines the terminal device's telephone book and accepts all the entries whose numbers are registered with WhatsApp. An internet connection is required for the sending of messages to and from the WhatsApp server. As a rule, this connection is provided by a mobile broadband service to which the user subscribes through his network operator.

At first sight, the app is little different from the mobile manifestations of classic instant messaging systems. One user can send to another (or to a predefined group of users) text messages, photos, videos and his current location. In 2013, voice messages were added to this portfolio. Messages are exchanged over the public internet.

¹⁵ According to the German website "All Facebook", on 5 September 2012 there were 914,258,940 active Facebook users worldwide; in Austria alone, 2,794,300 users logged on with Facebook in the last 30 days (cf. <http://allfacebook.de/userdata>). However, much smaller platforms are generating appreciable demand as well; the kik messaging platform launched in April 2010, for instance, has already reported more than 19 million users (cf. <http://kik.com/about>, 5 September 2012).

¹⁶ Pingdom put the number of instant messaging users in 2011 at around 2.6 billion; cf. <http://royal.pingdom.com/2012/01/17/internet-2011-in-numbers>, 5 September 2012. The messaging platform WhatsApp announced on 31 October 2011 that it had passed the global delivery milestone of 1 billion messages a day for the first time; cf. <http://blog.whatsapp.com/index.php/2011/10/one-billion-messages>, 5 September 2012.

¹⁷ <http://www.whatsapp.com/about>, 18 October 2012



Figure 2: Message history in the WhatsApp Messenger app

Apart from the network operator's charges for using the internet, the messages are sent for free. iPhone users are currently charged a one-time fee of EUR 0.89 for downloading the app.¹⁸ For the users of other operating systems, the software is free for the first year and can be used thereafter for an annual subscription of USD 0.99.¹⁹

WhatsApp differs from other portals and social networks, however, insofar as it uses the message recipient's general address. With other popular systems, the recipient must initially register with the messaging platform and either notify potential senders of his assigned identity or send them a message. WhatsApp, in contrast, addresses the recipient with his normal telephone number, which is linked to the relevant mobile phone on the WhatsApp server. WhatsApp is therefore able simply to use the addresses in the normal telephone book without saving an additional user name; in this respect, it operates exactly like a conventional text messaging service.

2.3 iMessage

Apple is pursuing a very similar concept with its iMessage service but made a significant advance when it launched the iOS 5.0 operating system and integrated the messenger in the mobile phone's existing SMS/MMS application.

¹⁸ Cf. <https://itunes.apple.com/at/app/whatsapp-messenger/id310633997?mt=8>, 21 November 2012

¹⁹ Cf. <http://www.whatsapp.com/faq/de/general/20965922>, 18 October 2012

Like WhatsApp, Apple links the relevant E.164 telephone number to the user's mobile phone number.²⁰ Here again, the telephone number is verified by way of a text message (a system SMS that is invisible to the user). In contrast to the WhatsApp approach, however, iMessage users do not need a separate application. Instead, the user composes his messages in the mobile phone's usual messaging app. If the device is connected to the internet when the user wishes to send the message, the app examines whether an iMessage connection exists for the recipient's phone number. If such a connection exists, iMessage sends the message over the public internet. If there is no such connection, the message is sent as a conventional SMS or MMS by way of the network operator's SMSC or MMSC. Like WhatsApp, iMessage sends individual messages free of charge; the only costs are the network operator's fees for using the internet.

When sending a message, therefore, as a general rule the user does not consciously select a particular protocol (SMS/MMS, or iMessage over the public internet) for the communication.²¹ From the user's perspective, iMessage is consequently no different from a conventional SMS or MMS service.

2.4 Commonalities and differences in apps

The forenamed applications thus primarily use the broadband access provided by the mobile operator. They are competing against the operators' own messaging and texting services.

From an economic perspective, therefore, the two applications described above are substituting the operators' SMS and MMS services. They differ inasmuch as one is marketed by a smartphone manufacturer, and the other by a third party, namely a service provider. Furthermore, the applications operate on foundations that differ from those of the "classic" services offered by network operators. These differences are outlined below.

- The service is generally used on an "as is" or "as available" basis. The conditions that have to be accepted by the user include liability exclusions, data protection provisions in some cases, as well as provisions concerning applicable law and jurisdiction (often outside the EU). As a result, the user often accepts conditions that are neither transparent nor compatible with the yardsticks that apply in the EU.
- Formerly, the purchase of a terminal device did not directly entail the use of services implemented by way of the device (unless in connection with a subsidised terminal

²⁰ Following the launch of OS X 10.8, iMessage can also be used with Macintosh computers. For this purpose, one or more e-mail addresses can be declared alongside the E.164 telephone number.

²¹ The user does not have the option of making a direct choice – he can intervene only by completely deactivating the iMessage service in the mobile phone's settings.

device offering the network operator's own telephone services, typically for a fixed period). The situation is different nowadays. A smartphone user now utilises applications provided by the device manufacturer (or third parties) – in some cases such apps are pre-installed on the device – in combination with the network operator's mobile internet services.

- If the use is governed by standard business conditions, these are often formulated pursuant to the law of a third country, not consistent with Community law, and have not been examined for compliance with TKG 2003. Customer-specific data concerning purchasing behaviour in particular are collected and evaluated or, for example, processed to obtain movement profiles; the data can also be used by the provider for other commercial offerings. Given that users in many cases do not read or understand such standard business conditions, the public authority has a statutory duty to check them in advance.
- Against the background of this problem concerning consent to standard business conditions, the application of data and customer protection regulations is likewise not assured. As already indicated, such offerings are not subject to national scrutiny in many cases.
- Applications are developed for all users of certain smartphones. Since the market for devices is global, applications are also developed for the global market. A national outlook adopted from a legal / regulatory perspective, or by the network operators that implement the services, can give rise to contradictions and incompatibilities.

As a consequence, the offering of services and applications (by network operators and app providers) that are indistinguishable for the user as a general rule is taking place on economically diverse conditions. Application providers are subject to much "softer" regulation and, thanks to the more "relaxed" rules governing the treatment of users and their data, can garner competitive advantages and thus (further) strengthen their market position. The key questions in this context concerning the services and applications outlined above are: Can they be classified as electronic communications networks or services? What are the implications for a legal assessment of these services?

3 What statutory regulations apply to apps and "new services"?

As regards the legal classification of the applications for statutory regulatory purposes, the Telecommunications Act and the E-Commerce Act could apply to the problem at issue. It is to be examined below whether the forenamed applications fall within the scope of the E-Commerce Act (ECG) and/or the TKG 2003. In particular, the issue raises questions concerning the extent to which the country-of-origin principle applies, and how this principle is to be interpreted in connection with TKG 2003. The specific question raised is: Does a service provider have to disclose its service in every country in which it operates, or is it sufficient for the service to be disclosed in the country in which the provider's head office is situated?

3.1 Directive 2000/31/EC in conjunction with the ECG

The "Directive on electronic commerce"²² was implemented in Austria by the enactment of the E-Commerce Act.²³

The ECG provides a legal framework for certain aspects of electronic commerce and legal relations. It regulates the authorisation of service providers, their duties to provide information, the conclusion of contracts, the responsibility of service providers, the country-of-origin principle, and the cooperation with other member states in electronic commercial and legal transactions.²⁴

Pursuant to Art. 3 No. 1 ECG, a messaging service is an information society service because, among other things, it transmits information via an electronic network.²⁵ The service provider and its service thus fall within the scope of ECG. The provider must therefore meet the obligations imposed by the Act and can also exercise the rights arising therefrom, including in particular the country-of-origin principle pursuant to Art. 20 ECG. As a consequence of this principle, the legal requirements to be satisfied by a service provider established in a member state are governed by the law of the state concerned. In other words, if the service provider complies with all the statutory provisions of its country

²² DIRECTIVE 2000/31/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce", Official Journal of the European Communities L 178/1 of 17.7.2000)

²³ Federal Gazette I No. 152/2001

²⁴ Cf. Art. 1 (1) ECG

²⁵ Art. 3 No. 1 ECG defines "information society service" as follows: a service normally provided in return for consideration electronically by distance selling at the individual retrieval request of the recipient (Art. 1 (1) No. 2 of the Notification Act of 1999), particularly the online marketing of goods and services, online information offers, online advertising, electronic search engines and data retrieval tools, as well as services that transmit information via an electronic network and provide access to such a network or store the information of a user.

of origin, such as data and consumer protection regulations or provisions concerning the legal responsibility of service providers (Art. 3 No. 8 ECG), it cannot be made subject to stricter local rules. The services are to be supervised for all Community citizens at the source of the activity.²⁶

An exception exists, however, that is highly relevant to our investigation. Pursuant to Art. 4 (2) ECG, legal provisions that regulate the authorisation for taking up or pursuing any trade, business or profession, but do not apply specifically and exclusively to information society services or the providers thereof, shall not be prejudiced. The same applies to legal provisions concerning the disclosure (notification) and concession duties for telecommunications services. The explanatory remarks²⁷ concerning Art. 4 (2) ECG accordingly make it clear that the E-Commerce Act, including the underlying principle excluding prior authorisation, shall not prejudice the notification and concession duties for certain telecommunications services (cf. Art. 13 and Art. 14 TKG 2003). This also corresponds to Directive 2000/31/EC insofar as its Art. 4 (2) rules that the principle excluding prior authorisation shall not prejudice authorisation schemes which are not specifically and exclusively targeted at information society services, or which are covered by 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 (Authorisation Directive).²⁸

The first finding is, therefore, that pursuant to ECG, the country-of-origin applies as a general rule. Consequently, the law of the country in which the country has its head office is to be applied. Against the background of Art. 4 (2) ECG, if the applications are to be classified as telecommunications services, Austrian TKG is to be applied irrespective of the location of the relevant company's head office.

If this assumption is rejected, it could be argued that, although Art. 4 (2) ECG envisages the application in any event of TKG 2003 for telecommunications services as regards the classification of the apps that are at issue here, this applies exclusively to cases in which Austrian law applies because of the country-of-origin principle. It could thus be argued that a company offering telecommunications services over the internet is governed by the commercial and telecommunications law of the EU country of origin and therefore cannot be made subject to any additional requirements in other EU member states. This interpretation would allow such a service to be offered in Austria without disclosure.

²⁶ Cf. recital 22 of Directive 2000/31/EC, Official Journal of the European Communities L 178/4 of 17.7.2000

²⁷ Explanatory remarks on government bill 817, annexes to the shorthand records of the National Assembly, 21st legislative period

²⁸ Official Journal of the European Communities L 117/15 of 7.5.1997

According to this construal, a point of contact with Austrian telecommunications law would depend on the EU provider developing activities in Austria that do not have to comply with TKG 2003. The available evidence gives too little indication of whether this particular outcome actually formed part of the legislative intent; after all, a service provider could opt to establish its head office and offer its services in and from a country whose regulations are "conducive" to its business. In turn, such a provider could entirely avoid the scope of application of TKG 2003 because only the regulations of its country of origin would apply, irrespective of the countries in which it offers its services and the regulations that apply there.

If the providers of these new services can be classified as operators of telecommunications services or networks, and the applications themselves are classified as telecommunications services, they are subject to all the obligations set forth in the Authorisation Directive within its scope of application. At this stage of the debate, the authors therefore believe that, in the case under consideration here, the Telecommunications Act, namely TKG 2003, applies as a general rule alongside ECG. Any other conclusion would both entail reverse discrimination (against domestic providers)²⁹ and contradict customary practice and the statutory requirement that providers of electronic communications services who are active in Austria must also give notice of their activity pursuant to Art. 15 TKG 2003. Against this background, it is to be examined which provisions of TKG 2003 apply in the case at issue here.

3.2 Austrian Telecommunications Act

Art. 3 No. 3 TKG 2003 defines a communications service operator as an undertaking which exercises legal control over the functions in their entirety that are needed to provide the respective communications service and which offers the service to others. It is to be assumed that a provider of applications exercises legal control over the functions in their entirety that are needed to provide the respective communications service. This assumption is likely to hold even if the messages are routed via the internet because – as set forth in Chapter 2 – verification takes place by way of a text message in the case of these applications as well. If the existence of legal control were to be rejected, text messaging would presumably likewise not qualify as a communications service. The Austrian regulatory authority does, however, recognise text messaging as a communications service.

²⁹ Otherwise, every provider would select a country having "favourable" commercial law provisions, establish itself there and then offer services in every EU member state without being subject to the regulations that apply in each individual country.

A messaging service can be compared with a VOIP product. In this context, the guidelines of the Austrian regulatory authority indicate that a service shall qualify as a communications service even if the operator only provides the called IP address.³⁰ The infrastructure extends even further, however, in the case of messaging services – messages are transmitted via the provider's server, where they are also apparently buffered. This supports the assertion that a service is being operated.

In the case of VOIP services, by analogy, all providers qualify as service providers if they give access to the public network by way of numbers belonging to the national or international numbering plan (publicly available telephone service, PATS). WhatsApp and Apple in particular address the called party by way of an E.164 telephone number. This also supports the argument that the provider is an operator. Although the app provider does not possess legal sovereignty over the entirety of the transmission, nor does a classic VOIP provider, who is nonetheless classified as a service provider. An equal evaluation of services and providers therefore makes it necessary to classify applications as the operating of a telecommunications service.

In summary, the conditions of Art. 3 No. 3 TKG 2003 are satisfied and the qualification as an operator can therefore be affirmed; the extent to which the conditions governing the existence of a communications service are satisfied is to be examined below.³¹

Whether, and the extent to which, the relevant applications constitute communications services in the meaning of TKG 2003 is defined in Art. 3 No. 9 TKG 2003. "Communications service" is defined there as a commercial service which consists wholly

³⁰ Cf. RTR (Austrian Regulatory Authority for Broadcasting and Telecommunications): Richtlinien für Anbieter von VoIP Diensten, p. 4 ff, see <https://www.rtr.at/de/tk/RichtlinienVoIP>

³¹ The definitions contained in the German Telecommunications Act (dTKG) are as follows: (1) Pursuant to Art. 3 No. 24 dTKG, "telecommunications services" means services normally provided for remuneration consisting in, or having as their principal feature, the conveyance of signals by means of telecommunications networks, and includes transmission services in networks used for broadcasting. This definition differs from the one enshrined in Austrian law only to the extent that the Austrian TKG contains the word "commercial" instead of "for remuneration", and that the defined term itself is "telecommunications services", rather than "communications services" as in Austrian TKG 2003; (2) Art. 3 No. 27 dTKG defines "telecommunications network" as transmission systems and, where applicable, switching and routing equipment and other resources, including the inactive network components, in their entirety which permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means, including satellite networks, fixed and mobile terrestrial networks, electricity cable systems to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed. Here again, the definition is very similar to the one contained in Austrian TKG 2003, and differs only as regards the defined term ("communications network" in Austrian TKG, "telecommunications network" in dTKG). The public communications network mentioned in Art. 3 No. 17 TKG 2003 (a communications network used wholly or mainly for the provision of publicly available communications services) also exists in dTKG as "public telecommunications network", which is defined therein as a telecommunications network used wholly or mainly for the provision of publicly available telecommunications services that allow the transmission of information between network termination points. In view of the practically identical definitions, the classification of applications pursuant to the German Telecommunications Act must correspond to their classification pursuant to Austrian TKG 2003.

or mainly in the conveyance of signals on communications networks, including telecommunications services and transmission services in networks used for broadcasting, but excluding services providing, or exercising editorial control over, content transmitted using communications networks and services. The term does not include information society services, as defined in Art. 1 (1) No. 2 of the Notification Act [Notifikationsgesetz], Federal Law Gazette I No. 183/1999, which do not consist wholly or mainly in the conveyance of signals on communications networks.

On the one hand, the offering of apps is a commercial service,³² and on the other, signals are conveyed by way of communications networks. If for no other reason, these claims are substantiated because the user, as in a text message, determines the content. It follows that the provider does not have a duty to perform any content monitoring whatsoever and, therefore, has no opportunity whatsoever to censor "impermissible" content. The defining characteristics of "communications service" pursuant to Art. 3 No. 9 TKG 2003 are thus satisfied by the apps under consideration.

It is to be examined whether the provided apps are ancillary services. If they were deemed to fall within the scope of the term, the apps would consequently be excluded from the definition contained in Art. 3 No. 9 TKG 2003.³³ Although the underlying performance would as a general rule be regarded as the reselling of a communications service, it would constitute only a small part of another contract having a different content and being at variance with the main purpose of a communications service (e.g. accommodation, provision of office premises, industry-overarching customer loyalty programmes, regionalised marketing services), whereas such contract would not consist wholly or mainly in the conveyance of signals on communications networks. Not least against the background of the increasing use of these applications, there are no arguments to substantiate the claim that they are ancillary services, in particular, among other reasons, because they are not a small part of another contract having a different content and being at variance with the main purpose of providing a communications service, and whose content is wholly or mainly different from the conveyance of signals on communications networks.

³² Remuneration is not an essential defining characteristic of the term "commercial", which means "of, connected with or engaged in economic activity".

³³ Cf. explanatory remarks on government bill 128, annexes to the shorthand records of the National Assembly, 22nd legislative period. The argument concerning an ancillary service was put forward by Skype Communications S.a.r.l. in relation to its Skype Out service in the procedure R 8/08 before the Telecoms Control Commission. The regulatory authority found, however, that the assertion lacked substantiation. Cf. in this connection the particulars of the Telecoms Control Commission's decision R 8/08 of 23.6.2008.

This reflects the reasoning of the Telecoms Control Commission when it ruled that Skype Communications S.a.r.l. was obliged to give notice of its Skype Out service pursuant to Art. 15 TKG 2003. In this light, there are no evident arguments against the classification of the apps described here as communications services, as defined by TKG 2003, which are to be disclosed to the regulatory authority pursuant to Art. 15 TKG 2003.

4 Consequences

The discussion outlined in Chapter 3 has revealed a lack of clarity in relation to both the application of the country-of-origin principle pursuant to ECG and the additional requirements of TKG 2003. If, in view of the globalisation of the app and terminal device markets, the country-of-origin principle were to be invoked, a provider would be able to circumvent the provisions of TKG 2003 even if it developed activities in Austria. Hereinafter, the authors describe the regulatory implications of this scenario; in other words, the consequences that would arise if the relevant applications were classified as communications services.

For undertakings that are to be classified as operators of communications networks or providers of communications services, the provisions of TKG 2003 set forth below come into question. The list that follows contains the provisions that can be regarded in the broadest sense as "duties" of network operators and service providers. According to the findings of Chapter 3, application providers are therefore subject to these duties and requirements as well:

- Notification obligation (Art. 15 TKG 2003)
- Security and integrity (Art. 16a TKG 2003)
- Service quality (Art. 17 TKG 2003)
- Terms and conditions as well as tariffs (Art. 25 TKG 2003)
- Special information obligations (Art. 25 b TKG 2003)
- Financial contribution (Art. 31 TKG 2003 and Art. 34 KOG (KommAustria Act))
- Market analysis/SMP/remedies (regulation of competition pursuant to Art. 35 et seq. TKG 2003)
- Duties to provide information (Art. 90 TKG 2003)
- Data protection (Art. 92 to Art. 97 TKG 2003)³⁴

"Classic" network operators are subject to these provisions of TKG. Material provisions among these are briefly illuminated below:

³⁴ Data retention pursuant to Art. 102a TKG 2003 would also come into question as a general rule, but the applications are outside the scope of services for which data retention is to be practised.

a) Notification obligation (Art. 15 TKG 2003)

First, pursuant to Art. 15 TKG 2003,

*"The intended provision of a public communications network or service as well as its modifications and its termination shall be notified to the regulatory authority prior to the start of operation, modification or termination."*³⁵

To date, companies that offer such apps or similar services, including Google,³⁶ Apple, Amazon, WhatsApp and others, have not submitted any notification pursuant to Art. 15 TKG 2003.

b) Security and integrity (Art. 16a TKG 2003)

Art. 16a TKG 2003 requires operators of public communications networks and services to guarantee the security and integrity of their networks. Among the steps cited in this connection are:

"reasonable technical and organisational measures"

as required to control risks to network security. Information concerning such measures must be provided to the regulatory authority. Security breaches and integrity losses are to be reported to the regulatory authority.³⁷ In such cases, obligations can be imposed, including the requirement to submit to a security audit at the operator's expense (Art. 16a (4) TKG 2003). If a service is not disclosed, the authority is unlikely to be able to make such demands and insist that information is furnished. Operators of public communications networks and services that do not meet their notification obligation are therefore not monitored by the authority.

³⁵ The notification must indicate the name and address of the provider, the legal structure of the undertaking, where appropriate, a short description of the network or service, and the anticipated date of the start of operation, modification or termination of the service.

³⁶ This notification has to be submitted irrespective of the role played by the provider in the market. An entirely different subject under discussion is the possibly existing market dominance of Google in certain online and search engine segments, cf. for example Rosenbach, M.: "Google ist extrem dominant" and Müller, M.U. et al: "Der Türsteher", both articles in Der Spiegel No. 43/2012, p. 90 and p. 86 ff respectively.

³⁷ The numerous security problems associated with the WhatsApp service, for example, have been well publicised (typical of many articles is <http://www.20min.ch/digital/news/story/-Die-Probleme-bei-WhatsApp-sind-Tatsache--24514892>), but, as far as is known, the regulatory authority has not taken any counteraction.

c) Service quality (Art. 17 TKG 2003)

Pursuant to Art. 17 (1) TKG 2003, operators of public communications services shall

"publish comparable, adequate and up-to-date information on the quality of their services and on the measures taken to ensure equivalence in access to publicly available telecommunications services for users with disabilities, and provide the regulatory authority with this information at its request prior to publishing."

Applications constituting economic substitutes for existing services would have to be subject to this provision as well. No such published requirement is to be found, however, and, if a service is not disclosed, the regulatory authority does not submit any such request to the relevant provider. It is worthy of note that the quality assurance requirements affect operators of public communications services, even if they implement their service by way of a third-party network.

d) Terms and conditions as well as tariffs (Art. 25 TKG 2003)

Art. 25 TKG 2003 contains provisions governing standard business conditions (terms and conditions; AGB) and tariff conditions (EB). Art. 25 (1) TKG 2003 states that operators of communications networks or services

"shall issue general terms and conditions which shall also comprise a description of the services, as well as define the relevant tariff conditions. General terms and conditions as well as tariffs shall be notified to the regulatory authority before provision of the service is started and shall be promulgated in an appropriate form."

In addition, Art. 25 (2) TKG 2003 stipulates that

"Changes in general terms and conditions as well as in tariffs shall be notified to the regulatory authority before they take effect and shall be promulgated in an appropriate form."

Art. 25 (4) TKG 2003 governs the requirements that apply to terms and conditions. Here again, the terms and conditions of application providers are not subject to such scrutiny by the regulatory authority. Their compliance with Austrian law is therefore not ensured.

e) Universal service (Art. 26 et seq. TKG 2003)

TKG 2003 contains extensive provisions concerning universal service. According to these provisions,

"The provider of universal service shall be compensated, at his request, for the established costs incurred by the provision of the service that are unrecoverable despite efficient management if these costs constitute an unreasonable burden."
(Art. 31 (1) TKG 2003)

Pursuant to Art. 32 TKG 2003, if required, the regulatory authority shall set up and administer a Universal Service Fund for the financing of universal service (Art. 31 (1) TKG 2003). Para. 2 rules that operators of telecommunications services with an annual turnover from these activities of more than € 5 million shall contribute to the financing of the Universal Service Fund and to the financing of the fund administration in proportion to their market shares (universal service charge). The share shall be determined according to the proportion of their turnover to the total turnover of the companies assessed as liable to contribute on the relevant product market in Austria. In the absence of relevant data, whether and the extent to which application providers generate turnover of more than € 5 million cannot be assessed. If such providers were generating revenues in this amount, they would, by omitting to disclose their services, be evading their financing obligation and thus obtaining a benefit at the expense of providers that disclose their services. Given that for many years in Austria a universal service deficit of A1 Telekom Austria was mitigated by other providers' payments, the apportionment of these payments to the individual providers on the Austrian market is absolutely relevant.

f) Duties to provide information (Art. 90 TKG 2003)

Art. 90 TKG 2003 governs the reporting requirements imposed on the operators of communications networks and services, according to which the regulatory authority is to be furnished with extensive information. Here again, in the current situation, application providers that do not disclose their networks and services de facto avoid these duties, while "classic" network operators and service providers have to submit the following and other items of information:

- information required for the systematic or individual review of the obligations arising from this Federal Act or an ordinance or official decision issued under this Federal Act;

- information required for the individual review of the obligations if a complaint has been addressed to the regulatory authority, or if it assumes a violation of duties for other reasons or conducts investigations on its own behalf;
- information in procedures for the licensing of frequencies or communications parameters;
- information required for a procedure pursuant to Arts. 36 to 37a;
- information required for the publication of quality and price comparisons for services to the benefit of consumers; and
- information on future network or service developments which may affect the relevant services existing at the wholesale level.

g) Supervision measures (Art. 91 TKG 2003)

The regulatory authority also disposes of supervision measures pursuant to Art. 91 TKG 2003, which it can impose on operators that must comply with TKG 2003. Here again, an unregistered provider can therefore evade the measures which the regulatory authority can impose pursuant to Art. 91 TKG 2003.

h) Data protection (Art. 92 et seq. TKG 2003)

Data protection and data security are significant issues for many applications. This claim is underpinned by questions concerning the security of applications such as WhatsApp (see above). In this connection, Art. 95 TKG 2003 imposes special data security requirements on every operator of a public communications service for each service provided by that operator. Art. 95 (2) TKG 2003 rules that

"[...] in case of a particular risk of a violation of confidentiality, the operator of a public communications service must inform the subscribers about such risk and, where the risk lies outside the scope of the measures to be taken by the operator, about any possible remedies including their costs."

This requirement is not being met by application providers.

Later, Art. 95a TKG 2003 contains provisions on security breaches. Pursuant to Para. 2, in the event of a breach of the security of personal data,

"[...] the provider of public communications services shall, without delay, notify the Austrian Data Protection Commission of the personal data breach. In cases where such a breach is likely to adversely affect the privacy or personal data of individuals, the operator shall also notify the individuals affected by the breach without delay."

Para. 6 requires that operators of public communications networks maintain an inventory of personal data breaches. This inventory must comprise the facts surrounding the breaches, their effects and the remedial action taken, and must be sufficient to enable the Data Protection Commission to verify compliance with the provisions of Paras. 1 to 4. As in other instances, undertakings that have disclosed their services comply with these obligations; application providers, in contrast, avoid the work and expense.

i) Financing of RTR-GmbH (Art. 34 KOG)

The telecommunications industry has to pay financial contributions in order to finance the expenses of RTR-GmbH (Austrian Regulatory Authority for Broadcasting and Telecommunications) incurred in the performance of its duties concerning the industry. The telecommunications industry encompasses the providers that are subject to the notification obligation of Art. 15 TKG 2003.³⁸ The financial contributions are assessed and charged according to the proportion of the liable undertaking's turnover to the industry's total turnover (Art. 14 (3) KOG). The budgeted expenditure of RTR-GmbH for the telecommunications industry in 2012 is € 7.501 million.³⁹

The forenamed provisions give rise to substantial work and expenditure on the part of the relevant undertakings in some cases, for human resources, technical implementation, and the implementation of processes and systems. If application providers perform services that are notifiable pursuant to TKG 2003, but omit to comply with their notification obligation, they thus obtain the following competitive advantages:

³⁸ Art. 34 KommAustria Act (KOG), Federal Law Gazette I No. 32/2001, as amended by Federal Law Gazette I No. 125/2011.

³⁹ Cf. public consultation document of RTR-GmbH on the 2013 budget for telecommunications, post and media regulation (only in German), published on 19.11.2012, p. 5, retrievable from www.rtr.at.

- The quality of their services is not monitored. The regulatory authority is unable to monitor compliance with quality yardsticks or take exception to defects; quality complaints raised by consumers "fall on deaf ears".
- The terms and conditions of these companies are often accepted "implicitly" when customers use the service. The compliance of the terms and conditions with TKG 2003 is not examined.
- In the absence of an opportunity for the relevant provisions of TKG 2003 to be applied, these undertakings are not obliged to furnish the regulatory authority with information. Their costs are therefore lower than those of providers that collect and furnish the relevant information in compliance with the TKG; and this situation reduces the market's transparency.
- The companies do not make any financial contribution to the Universal Service Fund. Network operators and service operators that have disclosed their operations therefore pay an elevated contribution and incur a competitive disadvantage.
- The regulatory authority is financed only by companies that have disclosed their operations. Application providers avoid this expense.
- The undertakings do not take part in the market analysis proceedings, which can give rise to a distorted picture of market forces and offerings.
- Customers cannot invoke consumer protection standards. The same deficit applies as regards data protection.
- Compliance with provisions concerning data security and security breaches is not examined, and these provisions are possibly avoided.

These circumstances lead to the conclusion that the app providers, by omitting to disclose the operation of electronic communications networks and the offering of electronic communications services, obtain a considerable financial and non-financial advantage over undertakings that have complied with their notification obligation and thus satisfy the requirements of TKG 2003.⁴⁰ The lack of regulation

⁴⁰ In relation to Germany as well, the question arises as to which statutory provisions are applied to the providers of telecommunications services and networks. The following is a brief summary of the relevant provisions: (1) participation in the procedures of market regulation (market definition, market analysis and, if applicable, market dominance), Art. 9 et seq. dTKG; (2) interconnection undertaking (applies to operators of public telecommunications networks), Art. 16 et seq. dTKG; (3) if the existence of significant market power is established, ex ante obligations can be imposed, e.g. non-discrimination, transparency, access, price control; (4) compliance with the net neutrality requirement, Art. 41 a dTKG; (5) customer protection requirement, Arts. 43 a, 43 b, 44, 44 a and 45 a-p dTKG, depending on the stipulation and customer

of the app providers therefore impairs competition and imposes disadvantages on both the companies competing with such providers and the public sector, which is unable to guarantee compliance with its statutory duties.

protection regulation, in some cases these provisions apply to providers of public telecommunications services, telecommunications services or publicly available telecommunications services; (6) provisions concerning numbering, including price indication, announcement and display, price caps etc. pursuant to Arts. 66 and 66 a-m dTKG; (7) if applicable, contribution to financing the universal service pursuant to Arts. 78-87 dTKG; (8) data protection provisions (Art 91 et seq. dTKG): Worthy of particular stress here are, for example, the duties to provide information pursuant to Art. 93 dTKG; (9) data security (Art. 109 a dTKG, applies to providers of publicly available telecommunications services); (10) implementation of intercepts, provision of information (Art. 110 dTKG). In this connection, the provisions of Arts. 111 and 112 dTKG also apply in relation to data for information seeking security authorities and the automated information procedure; (11) information requests (Art. 127 dTKG). Contraventions of, or non-compliance with, the requirements of the Telecommunications Act are punishable by fines pursuant to Art. 149 dTKG. Both the contraventions and the amount of the fines for administrative offences are defined in Art. 149 dTKG.

5 Conclusion

The preceding analysis has shown that providers of applications are to be classified as operators of electronic communications services as per TKG 2003 at least insofar as they offer services that constitute economic substitutes for the network operators' own services. The privilege of the country-of-origin principle enshrined in the E-Commerce Act does not apply in this instance, so that the notification obligation pursuant to Art. 15 TKG 2003 becomes effective. If this were not the case, the outcome would hand a competitive advantage to foreign providers and discriminate against domestic providers by imposing only upon them the more rigorous obligations pursuant to TKG 2003.

The consequence of this argument is that app providers too are subject to the provisions of TKG 2003. To date, it has not become the established practice for these providers to disclose the services to the regulatory authority, so that their activities are out of line with those of undertakings that have properly disclosed the operation of electronic communications networks and services. By omitting to give notification, these app providers enjoy numerous competitive advantages, manifest either in lower costs, or in their own definition of "rules", in particular in their relationship with customers, that disregard consumer protection standards. Unequal regulatory treatment gives rise to massive economic benefits for the application providers, both directly in respect of economic (financial) advantages, and indirectly inasmuch as their less stringent regulation reduces the undertakings' direct and indirect costs.⁴¹

The refusal of an application provider to observe the provisions of TKG 2003 can give rise to the imposition of administrative penalties. Some of these penalties are as follows:

⁴¹ The scope of this debate extends beyond apps, as illustrated by an article in the German daily *Frankfurter Allgemeine Zeitung* of 8.2.2013, p. 7, in which the author questions whether access regulation, as envisaged by the (German) Telecommunications Act can be applied to social networks. He writes, "According to Article 16 of the Telecommunications Act (TKG), every telecommunications provider shall, upon request, undertake to make an interconnection offer to other providers in order to secure user communication, the provision of telecommunications services and service interoperability. Pursuant to Article 21 TKG, the regulatory authority can even directly compel providers having significant market power to interconnect their networks. The reason for these provisions – which originate in the requirements of European law and exist in a similar form in the United States as well – is the concern that telecommunications providers could be unwilling voluntarily to allow up-and-coming providers access to their networks. Articles 16 and 21 TKG create the conditions in which an O2 customer can contact a T-Mobile customer and vice versa. As a consequence, customers sign up to the provider that offers them the best conditions, not necessarily the provider with the most subscribers. If the same principles were applied to virtual social networks, the basic functions of the existing (and new) platforms would have to be (made) interoperable. In social networking, the activity corresponding to the making of calls in the mobile phone market would be in particular – but not exclusively – making contact with individuals or several persons by text. In order to make such contact possible from any platform to the users of other platforms, a unique address – accessible from every platform – could be assigned to the profiles in social networks."

- Pursuant to Art. 109 (4) No. 1 TKG 2003, a provider that fails to fulfil the notification obligation and is thus guilty of an administrative offence can be punished by a fine of up to € 58,000.
- An administrative fine in the same amount can be imposed if terms and conditions are not disclosed pursuant to Art. 25 TKG 2003.
- A fine of up to € 37,000 can be payable if the obligation to take steps in order to ensure security and integrity is infringed (Art. 16 a TKG 2003).
- In the event of non-compliance with the provisions concerning service quality, the regulatory authority can impose a fine of up to € 37,000.

In view of the applications' classification as electronic communications networks and services as per TKG 2003, competitive equality has to be established. For this purpose, providers of such networks and services must be subject to the provisions of TKG 2003. As a first step, the authority must therefore call on the app providers to comply with the notification obligation pursuant to Art. 15 TKG 2003 concerning the operation of electronic communications services and networks. If such action proves fruitless, appropriate administrative penalties are to be established and implemented.

Competitive equality implies that – insofar as the network operators are required to observe neutrality as regards the services they carry ("net neutrality") and are not allowed to treat the Facebook service preferentially to the detriment of WhatsApp, for example – at the same time, the network operators are to be treated with "regulatory neutrality", so that their services are afforded equal rights by the regulatory regime and can therefore be performed under equivalent economic conditions. The current situation gives rise to discrimination and distorts competition. It can be resolved by adopting one of two approaches. The first entails granting "regulatory freedom" to classic services in order to facilitate the free play of forces on the market populated by network operators and application providers. In view of the history of telecommunications regulation in Europe, this solution appears to offer little likelihood of success. The other solution requires the regulation of the application providers according to the provisions of telecommunications law; in other words, the establishment of a "level playing field" based on telecommunications law.
