Television Goes Mobile: the Transformation of the Audio-Visual Media Market

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Summary. The 21st century is often called the age of information, and the society of this age is often dubbed the society of information and news. Meanwhile, a rapid and efficient transmission of news and the prioritization of this process have become relevant at least already back in the 90s. Information volumes consumed by the society have been growing by the day. Progress in technologies and communication have eliminated time and space barriers. The aim of this article is to answer how and when linear television is going to move online and especially to mobile networks. This aim is broken down into the objective of analyzing issues pertaining to the definition of television, the overview of the impact of media convergence on television, the analysis of the issues related to the definition of television and internet television, and the analysis of prospects for linear versus internet television. The article may be relevant for media experts and analysts, media regulators, users, and the creators of internet television content.
Keywords: television, video on demand, mobile internet, system of audiovisual market, convergence and transformation.

Televizijos transliavimas mobiliaisiais tinklais: audiovizualinės rinkos kaita

Santrauka. Televizija keliasi į internetą. Komunikaciškai jaučiamės vis labiau priklausomi vieni nuo kitų, nors mus skiria šimtai ar net tūkstančiai kilometrų. Televizijų kuriamas vaizdo turinys čia vaidina vieną iš svarbiausių vaidmenų. Straipsnyje siekiama atsakyti, kaip ir kada tradicinė televizija persikels į internetą. Taip pat siekiama išanalizuoti televizijos apibrėžties problematiką, aptarti medijų konvergencijos įtaką televizijai.

Televizijos ateities perspektyvos priklausys nuo vartotojų poreikių. Auditorijos sąmonėje dabartinis televizijos supratimas nyks ir keisis kartu su technologijų vystymusi. Reikia pripažinti, kad technologijos, pirmiausia mobilusis internetas, pakeis audiovizualinių žiniasklaidos rinkų sistemą. Lietuvos patirtis ir raida rodo, kad interneto plėtra turi transformuojamąjį poveikį žiniasklaidos rinkai. Auditorija dar labiau patirs jausmą, kad pasaulis tapo „mažesnis". Į vietines TV rinkas įsibraus globalūs medijų rinkos žaidėjai. Vietiniams televizijos transliuotojams teks su jais konkuruoti ne tik dėl auditorijos dėmesio, bet ir dėl reklamos pajamų.

Esant lengvai interneto prieigai ir didelei interneto spartai, auga žiniasklaidos konvergencija. Kartu keičiasi ir piniginių srautų pasiskirstymas. Vis daugiau pinigų nukreipiama į internetinę žiniasklaidą ir vis mažiau lieka tradicinei. Technologijų plėtra palies ir telekomunikacijų bendroves, kurios, tikėtina, didžiulę dalį pajamų gaus už vaizdo medžiagos turinio perdavimą.

Televizija transformuosis. Keisis ir užsakomosios vaizdo (angl. *video on demand*), ir vaizdo turinio transliavimo (angl. *video streaming*) paslaugos. Tą stebime šiandien. Tikėtina, kad šie sektoriai tarpusavyje susipins, papildys vienas kitą ar net taps vienuma. Dabartinis žiniasklaidos reguliavimas – tobulintinas. Rinka sureguliuota taip, kad linijinė televizija apkrauta įvairiais apribojimais, įpareigojančiais reikalavimais. Užsakomųjų vaizdo paslaugų (angl. *video on*

demand) sektorius sureguliuotas vidutiniškai, o vaizdo dalijimosi (angl. *video sharing*) ir vaizdo turinio transliavimo (angl. *video streaming*) platformoms palikta visiška laisvė. Tokia padėtis ilgai tęstis negalės. Arba įstatymiškai į šias rinkas bus pažiūrėta bendru žvilgsniu ir jų įstatyminis reguliavimas bus suderintas, arba kitas pasirinkimas – nieko nekeisti. Tuomet kartu su besivystančiomis technologijomis pagrindinis vaizdo turinys emigruos į tas platformas, kur bus mažiau suvaržymo.

Pagrindiniai žodžiai: televizija, užsakomosios vaizdo paslaugos, mobilusis internetas, audiovizualinė rinka, konvergencija ir transformacija.

Introduction

By applying a historical-analytical approach, this article overviews the developments of linear versus internet television. The article does its best to forecast the future of the audiovisual market. The predictions are that the growth of mobile internet will transform the contemporary audiovisual market. This article, from a theoretical point of view, scrutinizes the interaction between linear television and the internet. Lithuania is taken as an empirical case study; Lithuania which is known for fierce competition in the audiovisual market and a highly developed telecommunications sector. With the help of analytical and statistical methods, the article will attempt to draw certain distinctions within the economic dimension of the audiovisual market.

A broad analysis will be made of the perception of television. The definition of television is important in the sense that the way in which it is perceived determines the way in which it is regulated. By its own right and from a legal point of view, the legal regulation of similar yet different transmission methods of visual content determines the freedom of the services of these entities.

This paper consists of three parts. The first part analyzes the impact that technology has on television. This article overviews the market of Lithuanian television and the major players of this market. The second part focuses on the perception of contemporary television. Clarification is sought as to what can be regarded as contemporary internet television. A question is raised whether video on demand should be regarded as an individual industry or rather as a subtype of internet television. The third part delves on the mobile internet's power of transformation.

Technical and Media Environment in Lithuania

Mass media and information technologies are used in various fields of private and public life and have become indispensable for contemporary work, learning, communicating, and disseminating information. People use internet for various purposes. It should be stressed that the media market in Lithuania is highly competitive. According the Radio and Television Commission of Lithuania,[1] in the end of 2017, there were 30 broadcasters operating in Lithuania, transmitting 41 television programs (RTC, 2017, p. 22). In 2017, Lithuanians could access 11 free-of-charge (unencrypted) national TV programs using the terrestrial digital television network (RTC, 2017, p. 19). Overall, there is a relatively

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[1] The Radio and Television Commission is an independent regulatory authority (hereafter – RTC).

broad choice of technical methods for broadcasting TV programs. Television signals can reach viewers via:

1. Digital video broadcasting – terrestrial stations;
2. Cable television networks;
3. Internet protocol television (IPTV);
4. The internet;
5. An earth-orbiting satellite.

A wide range of television signal receptors have both advantages and disadvantages. A larger variety of television signal receptors ensure a higher competition among signal transmitters. In other words, television providers may choose the most economical method for transmitting the television signals to their viewers. On the other hand, from the point of view of the absolute number of the population, a small market and a broad choice of signal transmission methods prevent the achievement of the most efficient scale of signal transmission. This situation does not afford the cheapest effect of television signal transmission.

On top of all this, the world has become smaller due to modern communication technologies. We are affected by global developments, while the awareness of the processes happening abroad is becoming just as vital as knowledge regarding domestic news. The rapid progress of technologies and communications has reduced obstacles related to time and space. All this has led to the fact that modern societies attach much greater importance to communication rather than previous generations (Martišius 2010, p. 13). The World Wide Web has further decreased the challenges of time and space, whereas the sense of interdependence has grown to a higher degree. The fact that news are transmitted here and now in the form of sounds and images has affected television tremendously. The internet triggered the transition of mass media to online domains.

John Naughton argues that, in terms of public necessity, the internet is comparable to the invention of the press, railway, telegraph, car, electricity, or television (Naughton 2006, p. 30). One could argue whichever is more important, but there are more than just a few scholars who agree that the opportunities offered by the internet exceed those of television.

During the outset of the internet, it was difficult to realize its true nature and primary purpose. It was believed to guarantee an unrestricted and censorship-free communication system. Approximately 19 years ago (in about 1999), according to the most accurate record of the day, the number of consumers using the internet stood at 120 to 150 million around the world. The *World Internet Users Statistics* data suggest that in December 2017, 54.4% of the global population had access to the internet one way or another (World Internet…, 2018.). Hence, it follows that the number of internet users should be 4.13 billion, which means that the number of internet users over the past 17 years has grown at least 25 times. It took almost 75 years to invent the telephone before it had reached 50 million users. It took 38 years to achieve the same number for the radio, 13 years for television, 4 years for the internet, 3.5 years for social network *Facebook*, and 35 days for the digital game *Angry Birds* (Kamath 2015). Already 22 years ago, Manuel Castells predicted and described a rapid development of the internet, arguing that the ability of the internet to penetrate all walks of life will determine its expansion and its omnipresence in the future (Castells 1996,p . 377).

After the restoration of Lithuania's independence, the technical media environment started to develop at the global pace, perhaps even faster. For instance, already back in 2006, the first licences for wired broadband broadcasts (IPTV) were issued with the broadcasting or rebroadcasting of programs not being their primary designation (RTC, 2013.). For quite some time, Lithuania has been leading in the EU in terms of news read online. According to 2017 data of the Digital Economy and Society Index (DESI), as many as 94% of internet users in Lithuania read news online, compared against the EU average of 68% (European Commission, 2017.). A rapid expansion of online media is illustrated by the growing indicators of internet users (Table 1). Back in 2001, only 11% of the population were using online media services, whereas in 2016, this percentage rose to 78% (Kantar TNS, 2017a.).

According to DESI data, in terms of infrastructure connectivity, Lithuania was in the eighth position in the EU in 2016. Despite the fact that the technical access to broadband networks is ensured in 98% of households in Lithuania, and that this is by far one of the best indicators across the whole EU, only 71% of those having coverage have ordered broadband internet access.

For the sake of comparison, the EU Commission has committed itself to achieve specific broadband coverage objectives across EU Member States – namely "Universal Broadband Coverage with speeds at least 30 Mbps by 2020" and "Broadband Coverage of 50% of households with speeds at least 100 Mbps by 2020" (European Commission, 2016, p. 5). Internet users in Lithuania are just as active users of online banking and video calls. Corporate indicators of e-invoicing and e-sales are far above the EU average. The frequency of the use of e-government services by members of the population is also far above the EU average. In terms of broadband coverage, Lithuania is in the 7th place in the EU. As many as 98% of Lithuanian households have access to (broadband) internet. It is important in the sense that this access guarantees fast internet, i.e., it ensures the speed of at least 30 megabytes (Mgbs) per second (European Commission, 2017.). According to the European Commission data, in 2016, Lithuania stood in the third place in Europe in terms of *Fibre to the Premises* (FTTP) coverage (European Commission, 2016, p. 30). In comparison to household earnings, Lithuanian users are most privileged in terms of having access to the internet. An average EU consumer has to spend almost twice as much of their income on broadband than Lithuanian residents (European Commission, 2017.). According to data obtained by a London-based company OpenSignal, in 2016, 4G mobile internet connection in Lithuania was ranked as the best in the world. 4G Internet penetration covers 84.73% of the national territory, and this was the best result in the whole of Europe (OpenSignal, 2016.). The onset of the online mass media industry in Lithuania dates back to 1997, to the launch of the online version of the daily *Lietuvos rytas*, a decision made by the newspaper's editorial board. In 2000, the current national leader of online mass media – *Delfi.lt* – emerged as another online news outlet. It marked the beginning of the primary stage of the online mass media industry. The number of customers was relatively low, the sales were modest, operations were still unprofitable or earning only modest income, obstacles for entering the market were very low, and competition was scarce. For instance, in 2000, the gross operating profit stood at 7000 EUR, with three companies operating in the market (Statistics Lithuania, 2017.). The growing stage of

the online mass media industry could be regarded to have taken place in 2005, during which, in comparison to 2004, earnings from advertising grew 1.7 times (Kantar TNS, 2017a.). and gross operating profit grew 11 times (Statistics Lithuania, 2017.). The rapid growth of the online mass media industry was put on hold by the economic crisis: for three years in a row (2009–2011), earnings from advertising and gross operating profit were below the 2008 level. The number of market players in this segment had decreased, too. The economic crisis did not shake the online mass media industry too much – earnings from advertising were on the increase again in 2010, while in 2012, they were already higher than the 2008 level and were steadily growing up to 2016, reaching 18 million EUR (2.1 times more than in 2008). In terms of the evolution of this indicator, the online mass media industry is different from the radio and television industries, the earnings of which had stabilized after the crisis and started to grow, albeit failing to recover from the 2008 level. For instance, the television industry earnings in 2016 were 1.4 times below the 2008 level. This failure of linear television to recover its past revenue level could be explained by the fact that, contrary to online mass media, television used to operate on much higher funds. The recovery of online mass media after the crisis was achieved in a shorter period of time than that of television because its pre-crisis baseline was much lower. On the other hand, this explanation would be incomplete. From 2008 to 2018, there were major developments taking place on the global mass media market, including Lithuania. These were mostly related to video broadcasts online, which put linear televisions under increasing pressure from online broadcasters.

In 2008, there was no such pressure yet. At the outset of online television, it was perceived somewhat differently and probably underestimated even, regardless of the very rapid expansion of the internet. For instance, internet television analyst Zenonas Anušauskas was arguing just eight years ago that internet television could not be profitable. He believed that online television could not compete with linear television, rather quite to the contrary (Anušauskas 2010.).

Obviously, the definition of internet television has changed over these years. It now includes various forms, even in advertisements such as promotional pre-roll videos and other forms of advertising. The contents of online television have become almost identical to the contents of written online portals in the sense that they all transmit the most recent news.

If, in addition to the perception of online television, the services of video on demand were added as well, the situation would look even more diverse. The global leader of video on demand services – Netflix – not only allows its users to select their favorite programs from a large library of video recordings, but it also has an installed security code system limiting the access of minors to inappropriate contents; just like linear television, it commissions genuine television output. In this sense, Netflix is becoming very similar to linear televisions, even though it is subject to a completely different regulatory framework, to be demonstrated later.

New means of mass communication do not emerge out of nowhere just as they are not invented overnight. Speaking more precisely, all means emerge gradually, sometimes by evolving from or by converging with each other. Mass communication researcher Roger

Fidler called this phenomenon a *mediamorphosis*. The idea central to the author's theory is that the future lies in the past, and all means of mass communication emerge gradually, in view of the existing ones, while with the birth of new means of mass communication, the old ones do not disappear but rather coexist (Fidler 1997, p. 29). Every new medium helps to better understand its predecessor, because now we know what was unknown to the genuine authors of these inventions. Computers perfectly replicate the operations of typing machines despite the fact that people who used typing machines could have never envisaged this to be possible. Joachim R. Hoflich studies the interaction between public life and the emergence of new means of mass communication and states that "[o]ld means of mass communication will be reinvented anew – all this illustrates that every new means is a new one for every generation or at least is rediscovered anew" (Hoflich 2010). This is true: for example, internet expansion stimulated media convergence. In the following part of the article, the concepts that affect media convergence are going to be reviewed. An important part of the article emerges therefrom, i.e., issues related to the definition of internet television. The future of television lies in the internet; hence, it is necessary to analyze the potential interactions and challenges arising from such concepts as video on demand, video streaming, and television. The emergence of internet television and the interaction between linear and internet television are analyzed in greater detail below.

The Perception of Television, or What is Contemporary Internet Television?

The mass media are beginning to shift themselves onto the internet; newspaper readers have started to browse for the news on online news portals; having missed their favorite broadcasts of the evening news or favorite programs during prime time, people began to look for them on internet television platforms. The distinctiveness of televised video streaming as a form of continuous streaming has been affected as well.

Previously, a TV viewer would be forced to watch television in real time during live broadcasts. TV viewers had no possibility to stop a program, choose another one, rewind to a particular point, or decide on a different viewing time. They were forced to watch what was shown during a given time. Due to media convergence and the emergence of new technologies, the audience has finally got rid of this dependence. Viewers can choose what they want to watch, are free to draw up a favorite playlist and plan their time ahead when they want to watch the desirable contents. For instance, time shifted viewing began to be measured in Lithuania since the autumn of 2016. In response to the changing consumer habits of TV watching and assisted by smart technologies, market research consultancy firm TNS KANTAR LT included in its television ranking portfolio the service of recording time shifted viewing in addition to linear TV watching. According to Živilė Bielskė, representative of advertising agency Media House, time shifted viewing accounts for almost 6 percent of the total viewing time among the general audience and is relatively similar in all age groups. The most prominent time shifted viewing audience falls within the age group of 20–29-year-olds. Overall, in terms of the general audience, time shifted viewing per day extends the average TV watching time per day from 134 to 145 minutes, i.e., by 11 minutes. Out of these 11 minutes, 8

minutes are made up of *vosdal* viewing, when the program is viewed on the same day of the live broadcast, and 3 minutes made up of *coded playback,* when the program is viewed in 1–7 days from the original live broadcast (Bielskė 2016). Examples of media convergence may be seen among many globally renowned media companies, which justifies calling it one of the most pronounced features of contemporary mass media. These are the convergences of various means of mass communication and operations on a single platform, which in turn ensures a growing dissemination of media contents through a broad variety of channels.

Convergence and technological advancement changed the perception of television per se. Joseph Turow divides the television world into three parts: television broadcasting, subscription cable and satellite services, and online and mobile platforms (Turow 2014, p. 371). Broadly speaking, today there are three different areas of video broadcasts subject to different regulatory frameworks: (a) conventional (linear) television, (b) video on demand and (c) video streaming. The same material streamed in various fields is regulated differently. Linear television is regulated most extensively and strictly, video on demand platforms are subject to medium-level regulation, whereas the most liberal is the video streaming area. Hence, we have three different areas, although from the point of view of a layman not aware of any legal or television-specific regulatory framework, all the three are similar to the extent that they would name them all as television on the internet.

If television was described as a home theater or a cinema, this field would cover most of the video on demand services. Major players in the video on demand sector, such as Netflix, Hulu, or Amazon, are largely streaming entertainment contents and could be described as online cinema theaters. From the definitions given above, it follows that these players should be categorized as television. A cinema or a home theater enables the viewing of films or performances and operates as some sort of an entertainment video rental of television contents. Video on demand, online streaming, and linear television – all of these transmit images and emotions.

The Law on the Provision of Information to the Public of the Republic of Lithuania, which was harmonized with the EU's Audiovisual directive, defines a broadcaster of television programs as a "[p]rovider of broadcasting services of television programmes which holds editorial responsibility for the presentation and set-up of contents of public information services by audiovisual means in the television programme schedule and which generates television programmes and/or individual programmes and broadcasts them to the public or authorises another person to broadcast them to the public in an unaltered form" (Lithuanian Republic Parliament …, 2016). There is no definition in the law specifying internet television. It does, however, contain a description of the service of providing information to the public by audiovisual means. In principle, it defines a video on demand service. The law reads that "the service of provision of information to the public by audiovisual means provided by the provider of services of public information by audiovisual means and intended to view programmes at the time selected by the viewer on the basis of an individual request under the catalogue of public information services by audiovisual means offered by the provider of the service" (Lithuanian Republic Parliament …, 2016.). In other words, television on the internet is described in terms of

broadcasts by audiovisual means, which can be specifically provided on demand whenever the viewer wishes to access them. In terms of contents, televisions have program schedules and different genres: for example, TV programs, shows, films, cartoons, news.

If the diversity of the genre is the distinctive feature of television, then the majority of linear televisions, which moved their contents online, should also be regarded as television. For instance, the national Lithuanian broadcaster LRT broadcasts a running stream of material of various genres. This material is later moved online – to an online archive called the *LRT Mediateka* (i.e., a digital archive of the broadcast content). From a legal point of view, it is no longer television but a video on demand service. Even more issues arise with live broadcasts. There is a very fine line between linear and internet television. People watching a program on their PCs are TV viewers. But which type of television are they watching? If it is a live broadcast also visible online, e.g., on a tablet, then the question lies in naming it: television on the internet or internet television? From a theoretical point of view, if the contents are used on the internet, they become internet television. However, in practical terms, a tablet and the internet are just two ways of accessing the same linear television.

According to Sheila C. Murphy, all the video content reaching the public can be called television. Analogue, cable, or satellite television have been featured in the last century, and digital, online, or even social networking has now emerged as parts of the definition. We also assign various platforms like YouTube, Netflix, Hulu, or Apple TV to the same concept (Murphy 2011). Television today performs several key functions: social, informative, cultural, and entertaining functions. Rather often these functions are used to categorize television into niche TV channels of news, sports, fashion, and cooking. Yet the key function of television remains to be the transmission of information in images and sounds. Television could hardly survive if it was offering entertainment or culture alone, as its primary driving force are news programs. The primary function of television is to inform, and the most relevant source of information on TV are news releases. The meaning of television remains the same as it was from its launch, i.e., to inform, educate, entertain, and create the image of a "close friend."

In 2017, the YouTube platform, owned by the company Google, announced its plans to launch YouTube TV in the US. In this way, YouTube has got itself involved in the competition within the US cable TV market. YouTube TV offers over 40 channels in its portfolio, including such TV channels as Disney Channel, FX, or ESPN, and all of this is said to be made available for 35 US dollars per month (Wakabayashi 2017). Having ordered the service, the subscriber will benefit from a cloud-based storage facility for unlimited video materials for up to six months. In addition to YouTube, Apple company and the social network Facebook are also planning to hit the global television market. "The three digital giants have signalled to Hollywood that they are serious about entering a television landscape that Netflix and Amazon shook up just a few years ago. Their arrival will make an already hypercompetitive industry even more ferocious" (Koblin 2017). Due to media convergence, the internet has become the easiest medium to inform oneself. However, as time goes by, news in the article format are more often replaced with visual recordings. Already now one can feel the rapid steps made by internet television toward

ultimate popularity. In 2018, almost nobody gets surprised by this choice of words, with many using it almost every day.

The Power of Mobile Internet and the Ecosystem of Audiovisual Market Players That Is Bound to Change

Technological development is a never-ending process. One of the most recent trends is the transmission of televised content using mobile data. This allows the providers to solve a number of problems. First, the technical framework of mobile phone operators can be used for transmitting televised contents. Second, visual contents may be transmitted to mobile devices. On March 3, 2009, mobile 4G internet services were launched in Vilnius, the capital city of Lithuania. On that day, Lithuania became the first EU member state to have installed and launched WiMAX – the fourth generation (4G) mobile network technology and, incidentally, the most advanced technology available.

In April 2015, 4G+ or, LTE-Advanced communication services, were launched by Bitė Lietuva in five largest cities of Lithuania and along the seacoast (Zubrutė, Migonytė 2015). Within the 4G+ network, the maximum theoretical data transmission speed is 300 Mbps. In practice, though, this speed is usually slower. The average speed provided to users within the 4G+ communication coverage zone is approximately 80 Mbps, and approximately 30 Mbps in the 4G zone. In 2017, a Lithuania-based company Telia installed the main stations for the most advanced mobile communication technology – 4.5G/LTE Advanced Pro – in five largest cities. This technology allows users to benefit from up to 500 Mb/s of data downloading speed (Telia, 2017). In 2018, 80% of the Lithuanian population already had access to 4G communication.

In addition to the 4G standard, 5G standard is also already emerging. At present, many countries around the world are running pilot tests of 5G technology prototypes; the adoption of this standard will facilitate the development of real equipment and pilot testing in various industries. It is just another step toward a fully-fledged standardization of 5G technology, which was scheduled for completion in 2018, whereas the first global commercial networks are expected to be launched in 2020. At the end of September 2017, in Estonia, the IT and telecommunication company Telia, together with Ericsson and Intel Corporation, ran the first 5G technology pilot tests in Europe within the functioning network. Opportunities offered by the new generation 5G communication could be tested by thousands of cruise ship passengers; it was also used to operate an excavator in remote mode (Telia 2017).

Pilot tests of 5G solutions are important for the market, because various technologies are being integrated into different branches of business during these tests. This approach facilitates the understanding of the environment best fitted to operate the new technology, including its interoperability with other network-based systems, cloud computing, and devices. Moreover, many telephones presently have two antennas, whereas in the future, this number is set to increase up to 64. Other solutions will also contribute to higher efficiency gains. For instance, phones may nowadays connect only to main stations or to WiFi, whereas 5G will enable a simultaneous use of both technologies. In addition,

phones will be able to function as repeaters of some sort – for instance, if an individual happens to be in a room which is outside the mobile wave range, their phone will be able to connect to the network via the nearest device of another user. 5G is equally important for television, as it ensures high resolution live broadcasts.

At this point, the most important question about the future of television comes to the fore, namely if internet television is to become the key television platform. First, it is rather difficult to draw the line when television is no longer perceived as it used to be *before* – before internet television. Already now and in the future, people see television solely in terms of audiovisual content transmittable using various means: tablets, phones, cell phones, televisions, or even smart watches. According to Kantar TNS, in 2017, 64 percent of all internet users used smartphones as the main devices to access the Internet in Lithuania. This figure had increased by 6 percent compared to 2016, and by 21 percent compared to 2015. And, most probably, viewers are not keen anymore to wait until a specific time before switching on their TV sets in order to watch the evening news or their favorite programs. It may well be that the definition of television is no longer going to feature the concept of a program schedule, i.e., the offer of "lazy usage." All this is bound to change with television moving online to the full extent.

It is important to stress here that under the valid Law on the Provision of Information to the Republic of Lithuania, a broadcaster shall obtain a broadcasting licence issued by the Radio and Television Commission of Lithuania. A broadcasting licence is a document entitling its holder to engage in radio and television program broadcasting activities within an established territory, subject to broadcasting terms and conditions. One of such terms is the "broadcasting of television programs through electronic communication networks the primary purpose of which is not the broadcasting of radio and/or television programs, and/or broadcasting, and/or rebroadcasting of programs, except for the broadcasting of television programs through means of provision of information to the public (websites, platforms)" (RTC, 2014). It means that as a form of broadcasting, internet television falls within the scope of this law. In Lithuania, there are five main internet television platforms: Play.tv3.lt, lnkgo.alfa.lt, tv.lrytas.lt, lrt.lt/mediateka and delfi.lt/video. As of 2016, Netflix joined the market.

The globalization of television is a common thing. Such internet image broadcasters as, for instance, Netflix or Hulu provide tailor-made contents almost across the globe. These are mostly films and TV series. Using their personal accounts, users may pay for content and get access to globally available videos, DVD and Blu-ray disk rental services on the web. It is important to stress that neither Netflix nor Hulu or any other similar platforms identify themselves as internet televisions. Netflix positions itself as a company streaming global broadcasts in video format, also as an online DVD and Blu-ray disk rental service. One of the reasons why Netflix holds one of the leading global positions is the visual content created by the company itself. In 2013, Netflix debuted with its first TV series *House of Cards*. Since then, Netflix has been offering original content. In 2016, Netflix released 126 original series or films. This is more than just another channel or cable TV. In 2017, Netflix already had more than 100 million users. Hulu describes itself in similar terms –a company providing video streaming services of TV series, shows, and films.

As said earlier, such an approach is debatable. From the user's point of view, anything that travels on the web in an audiovisual format may be regarded as internet television. Similarly, YouTube playlists are also, to some extent, television. Currently, we are facing difficulties. New media creates such content as traditional television, but the rules that govern it are different from the standard rules. Juridical regulation on the internet and on traditional television is very different. For example, traditional TV is governed by the Law on Public Information, the Law on Advertising, and other laws of the Republic of Lithuania. The supervision of activity is also under the jurisdiction of the Lithuanian Radio and Television Commission. The same regulation applies to video on demand services. However, the regulation of online platforms like YouTube or Facebook is out of reach. Higher internet speed is extremely important for new media players. Greater speed enables higher resolution and bigger volumes of video streaming.

From the point of view of an ordinary viewer, this is undisputable proof of technological advancement. For instance, viewers passionate about football can enjoy hundreds of live football matches online wherever there is a good internet connection available. They can get access to broadcasts from the football leagues of Spain, England, Italy, Germany, Argentina, Brazil, and other countries. The question as to whether such video streaming is not infringing somebody's copyright remains open. Most of the time users could not be bothered. In Lithuania, there is a growing problem of set-top box devices. A specially configured device connected to the internet can provide access for television users to hundreds of channels. The problem is that, due to copyright concerns, the broadcasting coverage zone of some of those channels should have a limited territorial scope. For instance, certain contents on a given channel may only be broadcast within the United Kingdom. However, if there is a good internet connection, there are no obstacles from stopping these contents from reaching the territories of other countries, such as Lithuania. The suggestion to restrict the sales of set-top box devices is meaningless. To start with, these devices are not per se prohibited. They are legal, whereas the contents that become accessible through these device can also be accessed through a computer as well. Another thing is that after switching on the device and capturing a broadcast from a foreign TV channel, the user is not expected to know whether such watching infringes upon the copyright of said channel. To make matters worse, it is up to the copyright holder to file a complaint for the infringed copyright, and the legal entity may very well be hundreds or thousands of kilometers away. The provider may very well be unaware of the copyright infringement and, even when being aware, may decide not to pursue any litigation to prevent such broadcasts.

One of the most frequent forecasts about the future of TV appearing in research and general papers or the public discourse is the globalization of television. It means that both now and even more so in the future, a television user wishing to watch the news broadcast by a German national broadcaster will have to pay for the contents and will be granted access to it. With a limited period of time, the person will be able to choose what to watch at any point in time; hence, whenever switching on the German national broadcaster, he will not be watching the Lithuanian evening news at the same time. It seems likely that such a globalization of television should have a certain impact on the television outlets of smaller countries.

With a good internet connection, the ecosystem of the audiovisual market players is changing. A local TV channel should compete with a global media market player. For some, such as a major Indian TV broadcaster, that could be a bearable challenge, but for the Lithuanian media market player, it is a great challenge or even an impossible mission. Small market players will be forced to compete with global media giants. Due to more attractive and entertaining TV contents, the audience will inevitably be shifting toward the global players. Together with the viewers, local advertisement providers will be similarly shifting their focus on global players. With decreasing advertising income, financial possibilities for producing genuine TV content will become scarcer. Then, there is going to be a vicious circle of fewer viewers leading to fewer advertising, and fewer advertising leading to less genuine production, and less genuine production leading to fewer viewers. This impact may become all the most obvious to small, open, and technologically advanced markets, such as the Lithuanian one.

For this process to start, two prerequisites have to be met: (a) the availability of fast internet and (b) the audience having to know the foreign language of a particular global media market player. Otherwise put, in order to watch Hulu in Lithuania, one should have a sufficient command of the English language. The first precondition has been met in Lithuania. The second one is fulfilled only in part. According to the data of Statistics Lithuania, only a percentage of the population have increased their English language skills (from 16.9 to 30.4 percent), compared to the 2001 level (Statistics Lithuania, 2013, p. 5). This process may be furthered by the fact that an increasing number of national televisions have launched English versions of their content, such as Aljazeera or the notorious RT. If people become fluent in English, they will have an absolute global choice of TV content and will avail of these possibilities. If one can choose freely from several thousands of televised materials, including TV series, the chances are very slim that local channels are going to be better.

Naturally, the principle of geographical location will always raise people's interest in what is happening in their state or neighborhood. However, TV shows, films, and series produced by major TV giants, such as HBO, Netflix, Amazon, AMC, etc. are competing intensively with the television providers of small countries. For instance, TV films through are watched linear television by almost nobody, simply because the viewers have already seen them in cinema theaters, on special platforms or acquired them as pirate copies. Films and series make up the fine line distinguishing linear television from internet television. According to popular belief, these may as well vanish altogether from television. The cult American TV series Game of Thrones is a case in point in Lithuania. The TV series produced by the American company HBO are rather expensive to make. It is estimated that every single series out of ten, making one sequence in the new 6th season of *Game of Thrones*, cost approximately 10 million USD to produce (Renfro 2016). This huge investment has not gone down the drain. The final episode of the sixth season – "Dragonstone" – snagged 10.1 million viewers. Another 6 million viewers on the same day watched the series using DVR playback technology or streamed it via HBO Go and HBO Now (Patten 2017). In Lithuania, the series are broadcast by the fourth most popular Baltijos television, with 7.5 percent of the national audience (Kantar TNS, 2017.). There is no publicly data

available on the number of viewers these series have drawn to TV screens. However, it is a fact that none of the series of *Game of Thrones* have ever scored among the top ten of the most popular TV programs. The reason for that is not because the fantasy drama genre is not understandable or not interesting for the Lithuanian audience. The most likely reason for such low popularity is that the audience of these series have already seen it on the internet shortly after its release in the US. Watching an episode of *Game of Thrones* six months later does not look very appealing.

Overall, a major shift in focus can be forecasted in the area of films broadcast on TV. Despite the fact that TV series or feature films account for a substantial share of the overall contents in a linear television, the watching experience interrupted by commercials and announcements is made more complicated. According to the survey conducted by the Radio and Television Commission of Lithuania, 20–30% of the total viewing time in all analyzed TV programs are taken up by announcements of TV programs and shown scenes (RTC, 2018.). Just a small part of audience can afford spending such amounts of time in front of a TV screen.

It is likely that internet television is going to become the main television platform in the nearest future. At the beginning of 2016, paid cable TV provider Viasat, together with mobile communication provider Bitė Lietuva, launched a service enabling the clients of the Viasat television service to choose a mobile internet data plan. At that time, such an offer included the acquisition of digital television and a fast 4G mobile internet connection as a joint service. Clients could select from a number of subscription plans, the prices of which depended on the number of selected TV channels and data downloading volumes. The cheapest plan, giving access to up to 48 channels and 20 GB of mobile data, cost 27.99 EUR a month. The same number of channels with 50 GB of mobile data cost 30.99 EUR per month (Migionytė 2016). At the end of 2015, Viasat had 10.6% of the national broadcasting market in Lithuania (RTC, 2016, p. 28). According to data from the Communications Regulatory Authority, in 2015, Bitė's 4G network was the smallest among other operators, covering 20–25% of the country's territory (Communications regulatory …, 2016.). In order to keep pace with the pace, Bitė Lietuva announced its plans to launch a mini *Bitė* television channel on mobile phones in 2019 (Degutis 2016). It remains to be seen what kind of television it is going to be. It is planned that the said television project is most probably going to be rolled out to users as an app, and that it is going to offer something more than the mere possibility of watching television on the internet.

The emerging 5G technology supports high-resolution video live broadcasts for television. Contemporary televisions often transmit their video images in the SD quality format. Television outlets in developed countries transmit images in HD resolution, which is becoming a standard practice. It is noteworthy that an HD resolution makes the transmission twice or even more expensive. Global television and TV set producers are phasing out the HD resolution with a more advanced 4K or UHD (Ultra High Definition) format. It seems likely that in terms of the future of mobile communication market, one of its driving factors is going to be television broadcasts. New technologies will enable broadcasting television through mobile networks. Technological advancement and penetration will inevitably reshape the television market, which will have to adjust

and adapt. This adaptation will involve not only the choice of a television signal but also the selection of an appropriate operational strategy. Apparently, there are three possible operational strategies that are unfolding at the moment. First, global television companies will have to view the global market as a joint operational space. Netflix, Amazon, Google, etc. will regard the entire world as their market. It may well be that these companies are not going to hold the leading position in any of the countries, but their aggregate global market share is going to be the largest. These companies will be setting the tone, shaping the trends, and hinting indirectly at what is to be fashionable. They are also going to get their fair share of advertising earnings from local markets. The situation in Lithuania is unfolding in a very similar fashion.

At the beginning of 2016, the global leader in the video on demand market – Netflix – announced its entry into the Lithuanian market. Six months into Netflix's presence, a representative poll public opinion revealed that only a fraction – 1.6% – of the total population were giving priority to Netflix (Degutis 2016). In terms of the number of users, Netflix was falling behind the internet platforms of major local TV channels, illegal contents from the internet and cable or smart TV. In absolute terms, however, how can this particular percentage of 1.6 be regarded? If the approximate 3 million of the population are taken as a baseline, 1.6% of that would then total 48 000 people. Given the monthly subscription of 10 EUR, the annual income stands at over 5 million EUR. It must be remembered that Netflix was not targeting the whole of the Lithuanian market. It did not invest in advertising; it did not any run broader marketing campaigns except for the first month free trial. At the end of January 2016, almost a third of Lithuanians did not even know what Netflix was (Balčiūnienė 2016). The company must overcome the linguistic barrier in Lithuania, because its content is neither dubbed nor subtitled in Lithuanian. For a vast majority of the audience, this is still an issue. Another important aspect is the fierce competition. Lithuanian users have long been using video on demand and playback functions. Moreover, in response to Netflix's entry, one of the leaders of commercial TV – the company TV3 – launched its own video streaming platform, Viaplay, in July 2016 (15min. lt, 2016). The platform had a broad menu of contents of various genres targeting different age groups: feature films, TV series, and Lithuanian TV programs. Viaplay also allows viewers to watch sports events. What makes this service exceptional is that the content is deliberately adapted for Lithuania by providing subtitles and dubbing it in Lithuanian, whereas sports events are supplemented with a commentary by Lithuanian commentators.

A second strategy of survival – the ability to persuade the mass media audience that exceptional contents broadcast by mass media companies have an additional price tag on them. What we mean here is not a subscription fee paid by the audience for video on demand services, but rather cases where niche types of television content are offered to smaller, specific audiences ready to pay for them. In practice, these are usually contents of religious nature. The believers donate to a channel to help it run its services. Most of the time there are not that many channels of this type, nor can they boast large audiences, unlike the major mainstream television channels.

A third possible strategy for survival currently practiced by television outlets is to expect somebody else to pay for the contents. Such outlets are not to stay fully independent from

advertising income, as their sponsors are the main source of funding. Most of the time such sponsors are going to be the state, which will agree to fund one or the other television outlet for political reasons. A source of funding could be in the form of a subscription fee, which is the main source of income for quite a few national televisions. Funds may be allocated from the national budget or another source. It would be a misconception to believe that such a model of survival is typical of national broadcasters alone. There may be various geopolitical reasons behind the state's willingness to establish and maintain channels that are to shape the global public opinion.

The American approach to global developments is disseminated by mass media subordinate to the federal television and radio authority – the Broadcasting Board of Governors (BBG). The BBG was established on October 1, 1999. BBG has the following mission statement: the "open exchange of information and ideas in support of democracy around the world" (Martišius 2010, p. 267). In 2008, Al-Jazeera – "the Arabic CNN" – which is established in Qatar, launched its broadcasts in English. The Al-Jazeera International channel was founded. The channel provides an Arab standpoint toward global developments, which offers a different interpretation of events and news other than the one formulated in Western media, in particular with regard to the processes taking place in Muslim countries (Martišius 2010, p. 271).

The Russian approach for non-Russian speaking audiences is presented by the TV channel Russia Today broadcasting news in English on a regular basis, 24/7. In 2009, the channel renamed itself into the RT channel. The official reason for establishing such a channel is to better present Moscow's position on international developments and to improve the country's image. Under the 2005 channel's concept, the television program had to be made up of international news broadcasts taking up 70% of the broadcasting time, while the reminder 30% of air was to be used for presenting news about Russia most relevant to Western audiences (Martišius 2010, p. 134). The Chinese approach is to broadcast in English via satellite the China Global Television Network channel (CGTN), known previously as the CCTV9 channel. This list is not finite and can be continued in the same manner. With major transformations taking place in the media sector due to technological advancements and the internet, there may be quite a long list of television channels that will be funded by relevant states. In the future, they may play a decisive role in competing for the audiences with global commercial TV channels.

Conclusions

Media researchers John V. Pavlik and Shawn McIntosh believe that it is yet too premature to guess whether television is going to take over the functions of computers or whether computers are going to soak in the functions of televisions. Either way, what is known today is that these two items (two monitors) are set to merge into one, to a point when nobody will bother what is the difference between the two. Whichever of the two – computers or televisions – is to take over the other's properties, it will depend on a number of important factors (Pavlik., Mcintosh 2011).

The prospects of television will depend on the users' expectations. In the consciousness of the audience, the contemporary perception of television is going to vanish and to develop in parallel to technological advancements. It is believed that people will no longer care for any differences between televisions and computers, as these two are to become one device used for the same purpose. As a result of these developments, the concept of the television's prime time is changing as well. The principle of buying advertisements is directly linked to the broadcasting time and program schedule, whereas contemporary smart technologies allow viewers to record their favorite programs to be viewed later based on convenience. Therefore, if a buyer of advertisements buys them at a higher price expecting that they will be aired during the prime time, they cannot be sure when in fact this advertisement is going to be shown. This may affect the financial and economic benefit and overhaul the perception of prime time in television.

It has to be acknowledged that technologies, and mobile internet in particular, will reshape the system of the audiovisual media market. A growing speed of mobile internet may change the media market's ecosystem. Global media market players will force their way into local TV markets. Local television broadcasters will have to compete with them not only for the attention of their audiences but also for advertising income.

Television is bound to transform itself. The services of video on demand and video streaming are to change – we already see this happening. They providers of these services are developing genuine films, shaping their editorial policies, moving toward live broadcasts. It is likely that these sectors will merge with one another by complementing each other or perhaps even developing into a single service.

The existing regulatory framework of mass media has room for improvement. The market is regulated in a way that subjects linear television to numerous restrictions and obligations. The video on demand sector is less strictly regulated. Meanwhile, video sharing and video streaming platforms are left to their own devices. This situation may not last long. It could be that these markets may be subject to a general approach and the regulatory framework is to be harmonized. Another option would be to leave everything as it is. Then, in parallel with emerging technologies, video content will migrate to less strictly regulated platforms.

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