



Post and Telecom Administration in Iceland

Annual Report 2013



PÓST- OG FJARSKIPTASTOFNUN

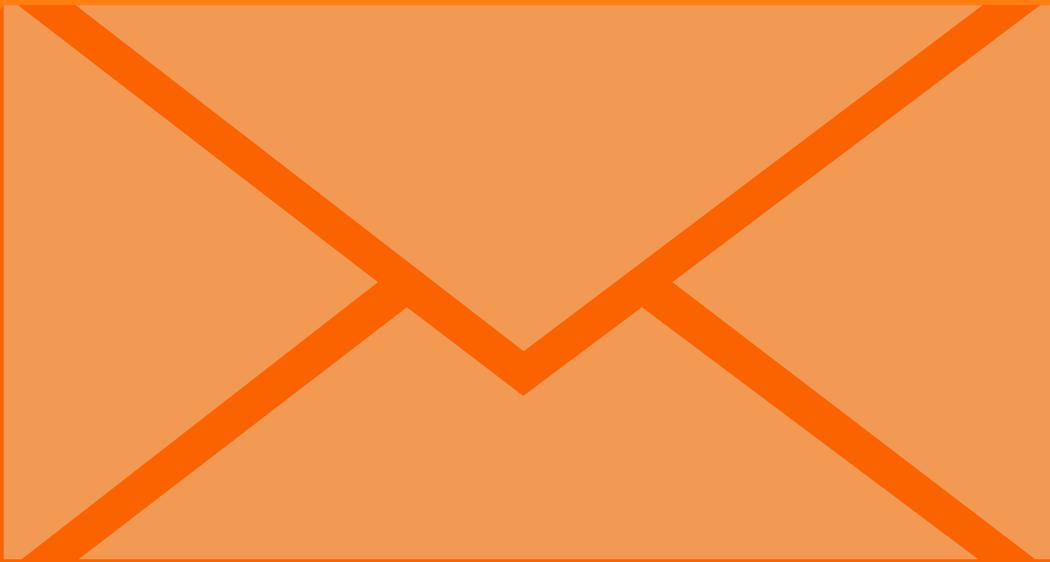


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Address by the Managing Director

Results-oriented performance agreement, plans and budget

The Post and Telecom Administration emphasises clear objectives and well-grounded planning in all its operations. Among other things, a results-oriented performance agreement is made which is renewed annually. The Minister for the Interior and the Managing Director of the PTA signed a new results-oriented performance agreement for the Administration in November 2013. The agreement prescribes among other things that the Administration work on a number of tasks related to the Electronic Communications Plan, concerning access to telecom services, economic and efficient service, security and environmental protection, public administration and services, human resources, quality control issues and operations. The Administration's annual plan is among other things based on the objectives of the agreement and of the objectives of the appropriate legislation. It deals with operations and primary tasks. Approximately 80% of the Administration's operational capacity is dedicated to a number of administrative tasks while the remaining 20% is allocated to tasks related to developments in work practices and to special projects at the initiative of the Administration. In the light of financial cuts in recent years, which in real terms amount to more than 20%, there has been a need to prioritise in a decisive manner which has meant that projects that the Administration considers desirable to implement have had to wait. There was a reduction of 4 in Administration staff during the year, which represents about 15%. This has made a significant impact on the capacity of the Administration to perform its statutory duties and to maintain the surveillance prescribed by law. There is, for example, far too little on-site research and the Administration's surveillance is characterised largely by reactions to complaints and indications, instead of systematic surveillance at the initiative of the Administration and cooperation with parties to the market on developing the regulatory framework and on its interpretation with the needs of the public and the market in mind. This leads to a situation where in some fields the Administration does

not have the overview that it would consider desirable and where there is doubt as to whether parties to the market and others are subject to the restraint prescribed by law.

Security

PTA operations with respect to network security is divided into two main categories. On the one hand there is general surveillance of protection and operation of electronic communications networks and protection and treatment of personal data in electronic communications networks and on the other hand there is the operation of the PTA network security team. The former category can be traced back to the year 2007 when the Administration set rules on these issues. The Administration has monitored the adoption of these rules by parties to the market and their adoption has resulted in larger parties to the market introducing specific security standards in order to strengthen security. The latter category is based on amendments to the Act on Electronic Communications from 2012. The CERT-IS computer emergency response team was then established with the role of mitigating the risk of cyber attacks and mitigating the consequences of possible cyber attacks with coordination and assistance. Discussion on network security and the role of the computer emergency response team was understandably prominent subsequent to serious cyber attacks on the Vodafone website at the end of November 2013, when personal information was stolen and published on the Internet. The team published a special report on the case which it released on its website.

The protection of personal data has also been a prominent issue in the light of Edward Snowden's revelations with respect to the practices of the American authorities. Reactions to espionage of this nature are not specifically within the remit of PTA civil activities, but general security measures pursuant to the Act on Electronic Communications can nevertheless serve the purpose to some extent of preventing misuse.

It is clear that considerable work still needs to be done in the community as a whole to further strengthen security of electronic communications and information

systems, particularly with those parties that operate critical information infrastructure. The Post and Telecom Administration is now working with the Ministry of the Interior, the National Police Commissioner Civil Protection Department and with other parties on further policy-making and elaboration of these matters.

Fourth-generation mobile networks (4G)

Frequency licences for fourth-generation mobile phone networks were auctioned and allocated during the first half of the year. Allocation by auction of frequency licences is new in this country and this methodology was adopted on the one hand for the purpose of ensuring non-discrimination and transparency in the allocation and on the other hand to respect the point of view that parties to the market should pay a normal charge for temporary access to the limited natural resource, i.e. the use of electronic communications frequencies. When designing the terms of the auction, social considerations were paramount, that is to say a requirement was made for allocation of some of the frequency licences that the service should be accessible for all citizens by the end of 2016. 4G service commenced immediately after the frequency licences were issued and at the turn of the year it was accessible for 85% of the population. Consumers have welcomed the service and the use of data service through mobile networks has doubled with the advent of 4G.

Development of electronic communications infrastructure

In the light of the objectives of the Electronic Communications Plan for increased access for the whole population to powerful high-speed connections, the Administration has supported various measures to improve access to high-speed connections such as through distribution requirements in frequency licences, the sharing of frequencies and increased economy in the development of mobile phone networks and through the development of market analysis and universal services with the objective of encouraging parties to the market to develop electronic communications infrastructure. But more has to be done. It is necessary to improve policy-

making and legislation, and strengthen harmonisation in addition to supporting cooperation between stakeholders, to take advantage of potential synergy in development of electronic communications infrastructure where appropriate.

The EU regulatory framework for electronic communications, which has not yet been adopted in this country, supports plans for development of electronic communications infrastructure. It is necessary to adopt the framework as soon as possible. Furthermore, the Administration needs to be given the necessary administrative tools and capacity for it to be truly able to support development and strengthen cooperation between the varying parties to support an economic approach that leverages synergy.

Postal matters

Work on a review of the cost model for monopoly service and for Íslandspóstur universal service costs has been ongoing since the year 2011. The project came into being on the one hand because of the foreseeable adoption of the EU Directive on a new arrangement for postal services where the monopoly on post is among other things lifted and on the other hand because of significant changes on the market where post volume is in continuous decline. The project is complex and wide-reaching and requires among other things a review of the arrangement for the company's separation of accountancy and it requires the gathering of a wide range of data on costs and their allocation.

During this period Íslandspóstur has tended to complain that the Administration has not reacted in a sufficiently timely manner to requests for increases in the company's tariff for monopoly post services, in the light of its operational position. The PTA makes a decision on tariff amendments on the basis of available data and there has been no delay in the Administration discussing and deciding on such requests, where adequate data is available, as has often been stated in decisions made by the Administration. It is also appropriate to point out that the performance of Íslandspóstur is dependent on many factors other than the performance of its monopoly operations, for example on investments in unrelated

operations, product development and other factors. The Administration estimates the negative impact of these factors in the company's performance during recent years has been of the order of hundreds of millions of ISK.

The Administration's decisions relating to the Íslandspóstur tariff apply solely to the monopoly operations which represent about 40% of the company's operations, and the Administration can only take into account in a very limited manner factors that are not directly related to such parts of operations in its decisions on tariffs. The company's operational performance must be viewed in the light of the above.

Conclusion

Postal and electronic communications operations are developing rapidly. The volume of letter post is decreasing and amendments to legislation are foreseen that will support increased opening of the market. Electronic communications are increasingly subject to the rules of the Internet. Traditional voice telephony is now only a small, but very important part of the service offer of traditional electronic communications companies. Competition with these companies comes increasingly from abroad in the form of social media, provision of music and various kinds of communication services. The rules of the market are changing. Discussion on network neutrality will become prominent in the coming months and years, which will revolve specifically around the question of the manner in which services will be provided over the Internet. In a

wider context, the discussion on Internet Governance will develop further, and solutions will be sought to a variety of challenging issues that relate for example to copyright, security of electronic communications, protection of children and the general public on the Internet and to business models of service parties on the Internet. Despite the fact that access to electronic communications services in this country is among the best in the world, one nevertheless must make efforts to ensure that citizens living in sparsely populated areas have access to high-speed Internet.

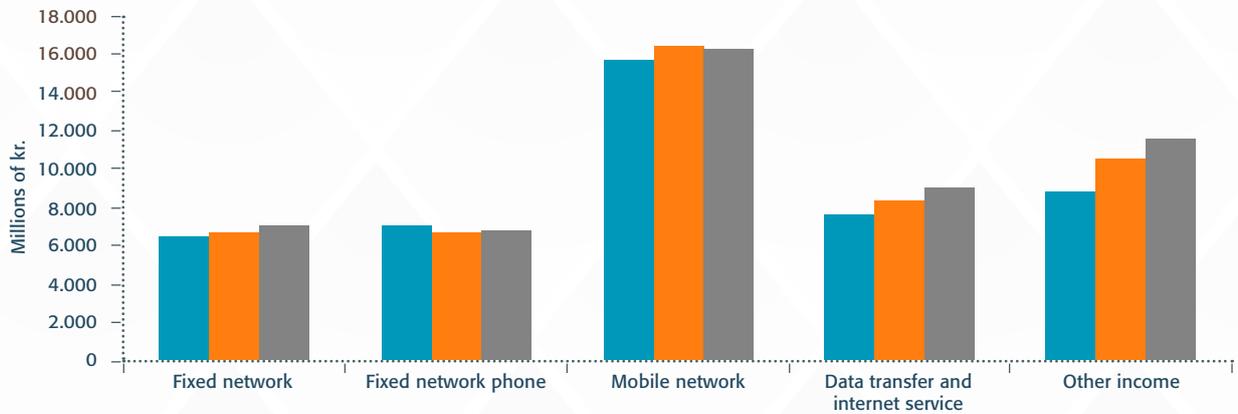
The nature of the PTA operations are thus changing in such a manner that in addition to providing continuing support for an open electronic communications market it is also supporting improved security and access. Furthermore, matters related to the Internet will become even more prominent in the Administration's operations in the coming years.

ELECTRONIC COMMUNICATIONS

The electronic communications market in Iceland

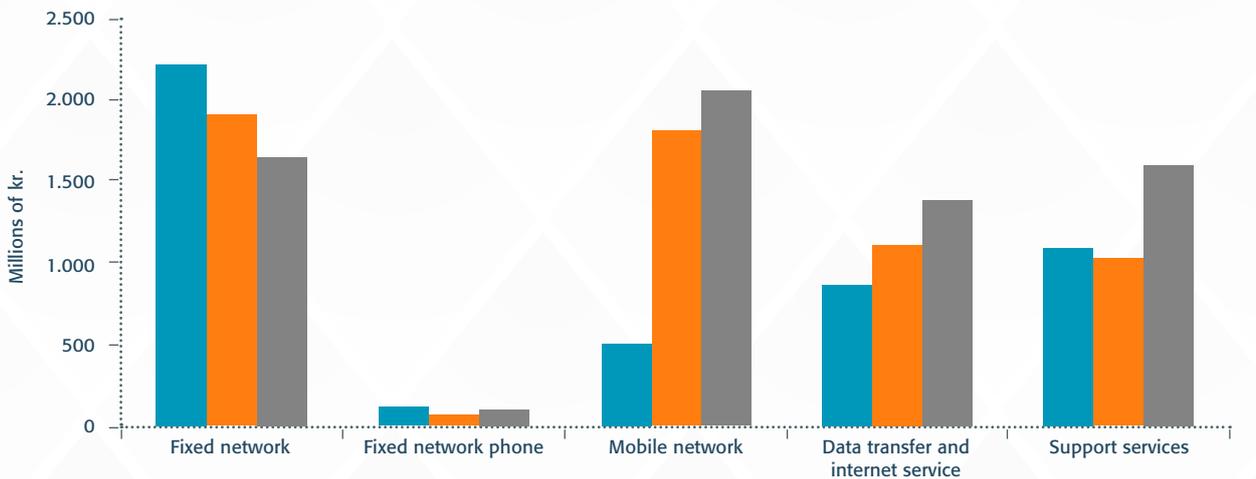
The main changes on the electronic communications market in the year 2013 were related to increased technical development. The most salient of these were a

continuous increase in data transmission through mobile networks and the advent of 4G technology. In the PTA statistical report for the year 2013 one can see this development both in total revenue and investments of companies on the electronic communications market.



Total revenue on the electronic communications market by type of operations for the period 2011-2013

(Source: PTA statistical report for the year 2013, page 35)



Total investment of electronic communications companies by type of operations for the period 2011-2013

(Source: PTA statistical report for the year 2013, page 36)

The PTA publishes a statistical report on the electronic communications market twice a year. The report gives a good overview of technical development, service offers and consumer patterns in Iceland. Selected parts of the statistics are then published on the dashboard for the electronic communications market on the Administration's website. The dashboard displays data in a graphical and accessible form which enables users to view and work with specific factors in the data.

The Administration also actively participates in cooperation between electronic communications regulatory bodies in the Nordic countries for the collection and processing of statistical data on the countries' electronic communications markets. Since 2010 these institutions have regularly published a joint report in the middle of the year, where citizens' use of electronic communications is compared between the countries. In the year 2012, two of the Baltic countries joined the group, that is to say Estonia and Lithuania and in the 2013 report Latvia is also included in the comparison.

Market analysis to strengthen competition

Market analyses are a large part of PTA operations. They are used to strengthen competition on the market by analysing the position of parties to the market and by imposing appropriate measures where competition is not considered adequate. Market analyses are made pursuant to EU rules

and directives which Iceland has adopted through the EEA Agreement. Consultation is made both with national parties and with the EFTA Surveillance Authority (ESA) before final decisions on market analyses are published. In 2008 the first round of market analysis on the electronic communications market was completed. A year later, the second round was commenced, and this work was in full operation in 2013. It is planned that it will be completed in the year 2014. Furthermore, continuing emphasis will be placed on enforcement of the obligations that have been imposed subsequent to market analysis, particularly cost analysis of wholesale prices.

The making of market analysis can be divided into three phases:

1. Define the relevant service markets and geographical markets.
2. Analyse all markets, determine whether there is active competition on these markets and make a decision on whether one can find one or more companies has significant market power.
3. Make a decision on whether obligations shall be imposed, amended or withdrawn on companies with SMP.

The main PTA tasks in the field of market analysis in 2013

Retail market for access to the public telephone network provided at a fixed location

On 18 June 2013 the PTA published Decision no. 8/2013 on the retail market for access to the public telephone network at a fixed location (Market 1).

The PTA conclusion was that Siminn still enjoyed significant market power on this market. For this reason obligations were maintained on the company, among other things to provide access to other electronic communications companies to the Siminn fixed line network and service at wholesale level at cost-analysed prices.

Wholesale market for access to fixed access networks and broadband

In March 2013 the PTA completed a preliminary draft market analysis on the wholesale markets for access to fixed access networks (Market 4) on the one hand and for broadband access (Market 5) on the other and consultation was initiated with stakeholders on the draft. On the market for access to fixed access networks, Mila had been designated as a company with significant market power and appropriate obligations had been imposed on the company according to market analysis in 2007. Now the situation had changed with the advent of fibre-optic connections which meant that the market was technology neutral. Mila still had, as before, a dominant market share on that market and this fact, in conjunction with other factors, led the PTA to believe that the company still enjoyed significant market power on the relevant market. In the consultation document it was stated that the PTA planned to impose appropriate obligations on the company, among other things obligations for access, for non-discrimination and for price control. There was however no intention to impose an obligation for price control on Mila with respect to fibre-optic connections, given that certain conditions were fulfilled.

On the wholesale market for broadband access (Market 5), Siminn had been designated since 2008 as having significant market power on that market and was subject to appropriate obligations. The Siminn market share had changed very little from prior analysis. For this reason the PTA announced in its draft market analysis that it planned to maintain this designation on Siminn along with appropriate obligations. The Administration did not however intend, for the time being, to impose an obligation for price control on Siminn with respect to the provision of broadband access through fibre-optic local loops, given that certain conditions were fulfilled.

A number of comments were received in the consultation in March and subsequent to these comments the PTA made appropriate amendments to the market analysis and initiated a limited additional consultation on these amendments last 20 December. The intention is to publish a final decision on the market analysis on these two markets in the summer of 2014.

Reduction of termination charge improves consumer interests

In October the PTA published its Decision no. 25/2013 on comparison on the wholesale market for call termination in individual mobile phone networks (Market 7). The Administration prescribed that the conclusion of the comparison should be the basis for a maximum termination charge for Siminn, Vodafone, Nova, IMC and Tal in the year 2014, instead of using the Siminn cost analysis endorsed by the PTA in 2010. The price that the Siminn cost analysis in question indicated, ISK 4 per minute, should apply until the end of 2013. According to the above specified comparison, the maximum charge should be reduced to ISK 1.64 per minute from and including 1 January 2014.

This Decision was a more detailed elaboration of a prior Decision made by the Administration on the reduction of termination charges, no. 3/2012, where the termination charge was to be reduced from ISK 4 per minute to ISK 1.66 per minute where the reduction was to come into force on 1 July 2013. This PTA Decision was appealed to the Rulings Committee which considered that the notice given to the companies to reduce the charges was too short. The Committee thus cancelled, with its Ruling no. 6/2012, that part of the PTA decision that related to the coming into force and thus the Administration's Decision no. 25/2013, made in October, where the time of coming into force was extended to the turn of the year 2013/2014.

The changes that these decisions brought about meant that the main prerequisite for varying prices of mobile phone service was no longer in place, that is to say when a call is made to an electronic communications company other than the one that the party in question subscribes to. Competition problems identified by the PTA on this market can be first and foremost attributed to the fact that the electronic communications company which controls the network where the call terminates has a monopoly position on that network. Most competition problems have been related to termination charges and in the opinion of the PTA there have been some instances of overpricing of off-net calls. The cost had been transferred to users that enter the system from other mobile phone or fixed line networks. With the Decision in question the Administration considers that the end is in sight for this competition problem.

Development of the European regulatory framework for electronic communications

Development of electronic communications infrastructure

The European Commission has set ambitious objectives for access for citizens of the Union's member states to high-speed data transmission services. These objectives are published in what is called the Europe Digital Agenda which is the equivalent to the Icelandic Electronic Communications Plan which is regularly endorsed by the Althingi for a number of years at a time. In the European Union Agenda there is among other things a provision for all citizens of the Union having the option of high speed data transfer service with data transfer speed of up to 30 Mb/s by the year 2020. Governments within the Union considered it clear that this objective, along with other objectives for access for citizens of the Union to the next generation networks, will not be achieved without the implementation of measures in addition to those inherent in traditional market solutions. This means that in the more sparsely populated and outlying regions of the Union, competitive and market pre-requisites will not be created for electronic communications companies to be able to support such development without additional involvement or assistance from the authorities.

With the above in mind the European Union considers it necessary to use all possible synergy with other civil works development, such as in the field of electricity, utilities and road-building, to support efficient development of electronic communications infrastructure. For this purpose a bill for a directive was introduced last year on measures to reduce the cost of deploying high-speed electronic communications networks which has now come into force within the European Economic Area (EEA) as Directive no. 2014/61/EC. The Directive prescribes the right of electronic communications companies to use existing physical infrastructure from other fields for joint use for electronic communications and to participate in

new civil works in this field. In order for such synergy and joint use to be possible, the mapping and databases on electronic communications, electricity, utilities and related systems must be strengthened and in addition to this the duty of operators of such infrastructure to provide information must be prescribed. It is important that information of this nature is stored centrally and that electronic communications companies have easy access to it. Among the issues prescribed by the Directive are the following:

- establish a central database on electronic communications infrastructure for the joint use of such infrastructure and the dissemination of information to operators;
- measures to assure the rights of network operators to participate in civil works and development of infrastructure in other fields, such as electricity and utility systems and possibly also road building;
- access for network operators to existing internal in-house conduits for the purpose of offering high-speed data transmission service;
- measures to provide information on licence provision procedures of various kinds, for example in the field of environment and planning, and to simplify such procedures to the extent possible;
- a regulatory authority should be appointed to oversee implementation of the Directive among other things with respect to the building of a database and dissemination of information and in addition to this there will be an independent arbiter who can decide disputes that may arise in connection with the implementation of the Directive.

Security of critical information infrastructure (CII)

In past years there has been a very significant increase in awareness of necessary measures to assure the security of critical infrastructures within states. This includes infrastructures such as electricity control systems, electronic patient registration systems, electronic banking and payment systems etc., which are all critical in a modern technological society. The growing threat from cyber attacks which could lead to such systems being disabled, even destroyed, or theft of sensitive personal data from such systems, has called for the adoption of appropriate measures to protect them.

Within electronic communications there have long been requirements that network operators assure integrity and security of their telecommunications networks, both with respect to their business continuity and to the security of information stored in them or passing through them. The European Commission issued a proposal last year for a directive on measures to assure a high level of security of infrastructures in general within the Union. This proposal for a directive has not yet been finalised in the European Union legislative process, but it is planned for it to be endorsed this year. Essentially, the directive reviews requirements and underlying principles with respect to the organisation of security issues within electronic communications and other critical national infrastructure. These requirements are among other things:

- obligation to report all security events to the regulatory authority;
 - that member states form a computer emergency response team (CERT);
 - that a regulatory authority be appointed to supervise implementation of the Directive, to ensure compliance with requirements for documentation of security organisation, to receive notifications of security events and to make inspections and tests of security measures.
- requirement for documentation of organisation of security, that is to say that an operator of critical infrastructure should elaborate security policy, implement risk assessment and make a written description of security measures;



Information and service for consumers

Consumers are faced with varied and complex options on the electronic communications market, both with respect to choice and configuration of equipment and connections and not least with respect to choice of service provider. The PTA strongly emphasises increased information for consumers on the electronic communications market and service for consumers in the event of something going wrong. The Administration accepts submissions and complaints from consumers regarding their transactions with electronic communications companies. Such complaints are in their hundreds every year though only some progress to the formal complaint process.



The provision of information to consumers and measures to enhance their interests, both on the electronic communications and postal markets are the largest PTA tasks. On the PTA website www.pfs.is one can find a dedicated consumer section where a variety of information on the electronic communications market is targeted specifically at consumers.

The PTA also provides a calculator for consumers at this address www.reiknivél.is. There, in a straightforward manner, one can compare differing service options from electronic communications companies using one's own consumption and criteria.

Changes in universal services

Universal services in telecommunications are those services that according to the Act on Electronic Communications should be available to all consumers at an affordable price, regardless of their geographical location. In recent years the Post and Telecom Administration has imposed essentially unchanged universal service obligations on Siminn hf. and later on Mila hf. The legal environment with respect to universal services has also remained unchanged. In the opinion of the Post and Telecom Administration, one can discern a certain stagnation with respect to systematic renewal of the local loop network, particularly in the more sparsely populated areas of the country. Telephone exchanges are generally located in urban kernels which results in technical limitations on the use of copper local loops for the provision of high speed Internet service to homes located at some distance from the exchanges. For this reason it could be necessary to lay fibre-optic in sparsely populated areas. This has led to a situation where a number of municipalities in the countryside have taken the initiative and connected all homes within the municipality with fibre-optic. However Mila hf., which is now subject to a universal service obligation to provide all homes in the country with a connection to a fixed line network, has not in a systematic and integrated manner embarked on the task of replacing copper local loops with fibre-optic local loops as the company's obligation is technically neutral, which means that copper local loops suffice to comply with the conditions set.

The Post and Telecom Administration considers it necessary to review the universal service obligation currently borne by Mila hf. to provide a connection with a fixed line network with the aim of creating an increased incentive to redevelop the local loop network. In 2013 the PTA prepared a discussion document where the Administration's ideas were aired on how such redevelopment could be encouraged. It was submitted to stakeholders at the beginning of 2014. Among the ideas presented by the PTA in the discussion document were the following:

- to reduce the cost burden on the universal service provider for providing or renewing a connection for each household with a fixed line network from ISK 650,000 to ISK 450,000;
- to withdraw the obligation to provide and maintain a connection with the fixed line network in those municipalities where local loops have been installed in addition to the local loop of the universal service provider;
- to prescribe a specific division of costs for new installation or renewal of a local loop where the maximum cost to the service provider, end-user and possible Universal Services Fund would be decided;
- to issue specific, predefined and transparent rules for the allocation of funds from the Universal Services Fund, such as that civil works should be subject to tenders and that the main principle of open access should apply to such local loop networks;
- a general reservation, with respect to possible amendments to the law, that a universal services provider can fulfil universal services obligations with other technical solutions, for example with a comparable wireless access network.

Amended arrangement for information service on telephone numbers

The issue of electronic and printed telephone directories along with information service on telephone numbers is included in the definition of universal services which shall be available to all citizens at an affordable price. For many years the obligation to provide this service was borne by Siminn hf. (and the company's predecessors) and subsequently on the company Já upplýsingaveitur hf. Experience of recent years has demonstrated that it is possible to operate the service in question on a market and competitive basis, with parties other than Já upplýsingaveitur hf. having expressed an interest in operating on this market.

When the Post and Telecom Administration examined this matter it came to light that there was inconsistency in what was considered to be basic information in a telephone directory and that a telephone company could not entirely ensure accurate registration of this information, for example on unwanted call indicators, as amendments to basic information were not always supplied to electronic communications companies by Já upplýsingaveitur hf. It seems therefore clear that telephone companies cannot fulfil their obligations according to the Act on Electronic Communications to safely disseminate correct basic information on their subscribers to another party that plans to publish a telephone directory or to operate an information service on telephone numbers. For this reason the PTA initiated consultation with stakeholders in June 2013 on a new arrangement for the provision of information for telephone directories and information services on telephone numbers. The new arrangement was to come into force in the summer of 2014. The conclusion of the consultation was that the new arrangement should among other things include the following amendments:

- a telephone company is responsible for the accuracy of basic information on its subscribers in a telephone directory and is obliged to disseminate this information to other electronic communications companies and/or information service providers on request;
- telephone companies are authorised to outsource processing and registering of telephone directory information to external parties;
- in agreements with external parties or service providers on dissemination of information to service providers there shall be a condition that information on all amendments made to subscribers' basic information shall be disseminated back to the telephone company that provides services to the subscribers in question;
- obligations to provide an information service on

telephone numbers and the publication of an electronic telephone directory would be withdrawn from Já upplýsingaveitur hf., but the company would continue to publish a printed telephone directory for the next 3 years pursuant to a binding declaration;

- The 118 number would be withdrawn in order to level competition between parties, and telephone number information service would in future be provided in the number series 18XX;
- the PTA will set rules of procedure on the manner in which information will be provided.

Rapid technical development, better information and enhanced security

During the year 2013 work was done on a number of large projects within the Post and Telecom Administration in addition to normal operations, such as vessel inspection, number allocations, frequency allocations and much more. The largest projects were the auction and allocation of frequencies for 4G electronic communications technology and the building of a new database on electronic communications infrastructure. In addition to this, operations of the PTA computer emergency response team, CERT-IS, commenced formally when the Ministry of the Interior's regulation on the team's operations came into force on 1 June.

Auction of frequency licences for 4G (LTE) services

In February 2013 there was an electronic auction of frequency licences for 4G on a dedicated Post and Telecom Administration auction website. This was the first time that such a method was used in Iceland for the allocation of frequency licences from the frequency range, which is effectively a natural resource. Four parties submitted participation requests to the auction and they all fulfilled the conditions set for participation. The companies that took part were 365 midlar ehf., Fjarskipti hf. (Vodafone), Nova ehf. and Siminn hf. There were 10 frequency licences on auction. A total of five 60 MHz (2x30 MHz) frequency licences were auctioned in the

800 MHz frequency range and five 50 MHz (2x25 MHz) frequency licences in the 1800 MHz frequency range.

The total amount of bids for all frequency licences was ISK 225,120,000 and the minimum bid was ISK 205,000,000. The final amounts accrued to the Telecommunications Fund, less the discount on frequency licence A. A discount was granted because of the substantial development requirements for next generation network on frequency licence A which were made in the light of its importance to the community.

365 miðlar ehf. had the highest bid for frequency licences A and B (2x15 MHz at 800 MHz frequency range), Fjarskipti hf. had the highest bid for frequency licences D, E and I (2x10 at 800 MHz and 2x5 at 1800 MHz frequency ranges), Nova ehf. had the highest bid for

frequency licences C and J (2x5 at 800 MHz and 2x5 at 1800 MHz frequency ranges) and Siminn hf. had the highest bid for frequency licences F, G and H (2x15 MHz at 1800 MHz frequency range).

The conclusion of the auction meant that a new electronic communications company, 365 miðlar, entered the Icelandic electronic communications market. By bidding for frequency licence A the company undertook to develop a next generation mobile network which was to reach 99.5% of citizens in each individually specified geographical area. The mobile network will thus become the country's largest electronic communications network. Its development is to be completed by the end of 2016 and it shall offer 10 Mb/s data transmission speed. Transmission speed shall subsequently be increased and shall be 30 Mb/s at the end of 2020.

The table below shows the results of the auction

Highest bidder	Frequency range	Frequency licence	Highest bid
365 miðlar ehf.	791-801/832-842 MHz	A	ISK 100.000.000
	801-806/842-847 MHz	B	ISK 20.000.000
Fjarskipti ehf.	811-816/852-857 MHz	D	ISK 20.000.000
	816-821/857-862 MHz	E	ISK 21.000.000
	1759-1764/1854-1859 MHz	I	ISK 5.000.000
Nova ehf.	806-811/847-852 MHz	C	ISK 20.000.000
	1779-1784-1874-1879 MHz	J	ISK 10.150.000
Siminn hf.	1725-1730/1820-1825 MHz	F	ISK 5.665.000
	1730-1735/1825-1830 MHz	G	ISK 5.305.000
	1735-1740/1830-1835 MHz	H	ISK 18.000.000
Total:			ISK 225.120.000

Database of electronic communications infrastructure

During the year the PTA worked on development of a database of electronic communications infrastructure which relates to wireless electronic communications networks. The database is intended to manage various information about electronic communications transmitters, including information about location, height of masts and sending strength. This information will be used in a variety

of ways, for example for searching for interference and for pre-emptive measures to prevent interference, for allocation of frequencies and for generating distribution maps. This task will be continued in the year 2014, and among other things a distribution map will be published on the PTA website and work will be commenced on the development of a database of backbone networks and access networks (fixed line).



CERT-IS – PTA’s computer emergency response team

In June 2013 the team’s operations formally commenced with the coming into force of a regulation on computer emergency response team. In this way it was possible to commence work on developing the structure and services provided by the team and a formal description of the team’s service was finally revealed at the end of the year. The main role of operations of the emergency response team is the provision of information on network security events to party is responsible for networks. During the year work was done on introducing an automatic system to handle this provision of information. The first tests of the system have been positive and the use of such a system is of great benefit to this small computer response team where automation and self-service are important factors. Work is being done on integrating this service with the service website for the service group. The aim is for the system to be formally taken into use during 2014.

Cyber outlaw – a national exercise

The first real Internet protection exercise in this country was held in November under the control of CERT-IS. It was entitled Cyber outlaw 2013. The exercise was what is called a table top exercise where participants and organisers sit at the same table. The emergency response team was responsible for preparing and managing the exercise with input from the participants. An imaginary series of events was initiated and observations were made on ensuing reactions. After the exercise the effectiveness of the reactions were examined with the participants, which reactions worked well and where improvements could be made. Such exercises, and exercises where real events are simulated, will be a regular feature of the team’s operations.

Attack on Vodafone

Shortly after midnight on 30 November 2013, web pages of Vodafone Iceland were destroyed, including the company’s service pages, and this marked the end of a break-in into the company’s Internet servers. Shortly after this a large quantity of sensitive data that had been stolen in the break-in was leaked on the Internet.

This event represented the first occasion when the organisation, knowledge and experience of the emergency response team was tested with a major security event, under time pressure. In general the response team’s operational procedures worked in most respects according to plan. A large number of issues however came to light that needed to be improved in the team’s work, in the legal environment and in communications with external parties. For example when the CERT-IS staff was called out some time had passed since the break-in had been discovered, or a period of 11 hours. It is necessary to make appropriate changes to arrangements for notifications to the response team and to its working hours so that this period of time may be shortened significantly.

When the event is reviewed it is clear that improvements have to be made in the gathering and dissemination of information on ongoing events, as the dissemination of such information within the service group is the main and most effective measure that the response group has as its disposal. Without such information, other parties are in a state of great uncertainty about the security of their own systems and inevitably must initiate measures that may possibly be unnecessary.

POSTAL MATTERS

The Post and Telecom Administration issues licences to operate Postal Service pursuant to Article 12 of the Postal Services Act no. 19/2002. Postal services cover the receipt, collection, sorting, transport and delivery of post against payment. There are two types of licences to operate postal services, a general licence and an operating licence. The general licence covers the right to operate the postal services other than that considered to be universal service pursuant to Article 6 of Act no. 19/2002. Three companies have such licences; Burdargjald ehf., Póstmarkadurinn ehf. and Prentsmidjan Oddi ehf. An operating licence is required by those companies that plan to provide universal services, that is to say postal services to which all citizens have a right at an affordable price, without regard to place of residence. When granting licences the PTA is authorised to impose obligations for universal services at all locations in the country or for specified parts of universal service in defined areas. Two companies have operating licences: Íslandspóstur hf. and Póstdreifing ehf.

Icelandic State monopoly

From 1 January 2006 the Icelandic State has had a monopoly on postal service for letter post up to 50 g as long as the postal charge is less than 2.5 times the lowest postal charge that applies to ordinary letters within the country. The same applies to distribution in this country of letters from abroad within the same limits. The Icelandic State also has a monopoly on the issue of postage stamps, the installation of letter boxes in public places and

Universal postal services

Universal services are those services that all citizens have a right to at an affordable price. Universal postal services cover home and foreign post.

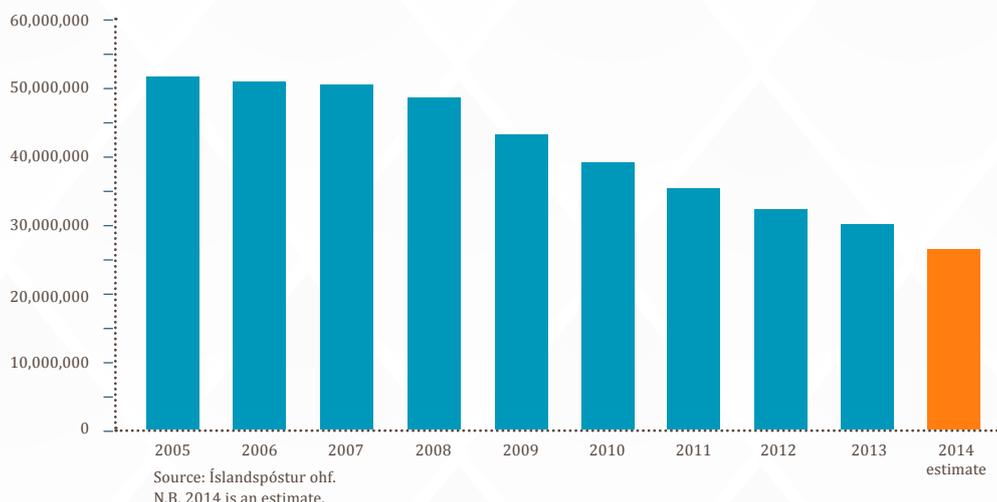
The following services fall within the category of universal postal services:

- access to an operating licence holder's access point;
- delivery once a day all working days except where circumstances and geographical constraints hinder this.
- Postal Service for:
 - o letters and messages with address;
 - o newspapers, weeklies, magazines, books and price lists with address;
 - o registered items;
 - o insured items;
 - o money items;
 - o items for the blind up to 2 kg;
 - o parcels up to 20 kg;

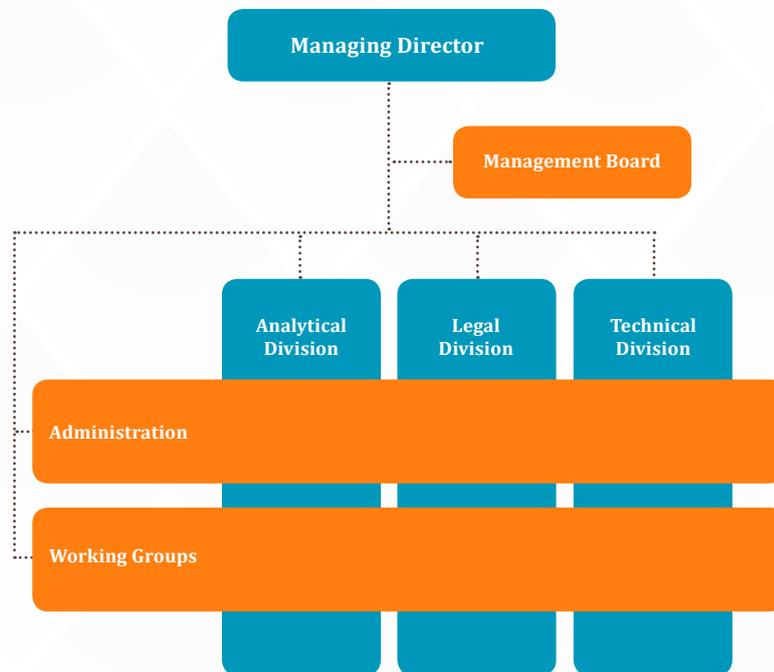
only the State is authorised to use the post horn symbol to indicate postal service. The PTA issues licences to operating licence holders to operate the state monopoly pursuant to Chapter V of Act no. 19/2002. Íslandspóstur ohf. has since 28 January 1998 operated the state monopoly.

Steady decline in number of letters within monopoly

As can be seen in the bar chart here below the trend of a reduction in the number of letters within monopoly is continuing. In 2005 such postal items exceeded 50,000,000. Eight years later, in the year 2013, the number has dropped to just over 30,000,000 and according to projections by Íslandspóstur, it is expected that these postal items will become even fewer and be just under 27,000,000 in the year 2014.



POST AND TELECOM ADMINISTRATION 2013



Hrafnkell V. Gíslason is the Managing Director of the Post and Telecom Administration

The Management Board is composed of the Managing Director and of the directors of the divisions.

The Analytical Division is responsible for market analysis and for imposition and monitoring of obligations subsequent to market analysis.

The Division handles general economic analysis in the field dealt with by the PTA, provides information on pricing and statistics and is responsible for their processing and publication. The Analytical Division also oversees the running of the PTA calculator website which provides information on electronic communications costs for consumers.

The Legal Division is responsible for handling administrative communications, settling disputes, the imposition and monitoring of obligations that are not financial in nature, universal service and consumer issues. The Division also handles international communications.

The Technical Division is responsible for organisation and management of matters relating to frequencies and monitors the use of frequencies. This Division monitors the market for electronic communications devices, is responsible for network and information security and inspects radio equipment on board ships. The Technical Division also provides other departments with consultancy on technical issues that may affect the institution's surveillance role.

The Administration Division is responsible for matters related to operations, information systems, human resources, quality issues and promotion and supports all internal work of the Administration.

Two specialist working groups were operating within the PTA during the year; a team on market analysis and the emergency response team, CERT-IS.

Registered Providers of Electronic Communications Networks and Service

Licence holder	Issued/registered	Services
365-miðlar ehf.	17.1.2013	Mobile and data transmission service
Advania hf.	17.4.2002	Data transmission service
Alterna Tel ehf.	8.1.2010	Voice telephony, mobile and data transmission
Ábótinn ehf.	28.3.2003	Data transmission and service
Backbone ehf.	25.8.2010	Data transmission and service
Bloomberg Finance L.P.	19.7.2007	Leased line and network
Boðleið Þjónusta ehf.	24.9.2013	Data transmission services
Brimrún ehf.	3.4.2008	Data transmission via satellite
Caze ehf.	9.12.2013	Data transmission services
Colt Lux Group Holding S.a.r.l.	9.12.2011	Data transmission services
Datacell ehf.	25.8.2010	Data transmission services
Davíð og Góliát ehf.	3.5.2010	Voice telephony and data transmission
DCN Hub ehf.	10.12.2012	Mobile and data transmission services
DVD-Margmiðlun ehf.	6.2.2004	Broadcast cable network
Einar Ben Þorsteinsson	26.8.2013	Data transmission and service
Emerald Atlantis ehf.	29.6.2011	Submarine cable and data transmission service
Equant á Islandi ehf.	7.7.2004	Data transmission service
Factor ehf.	30.5.2013	Data transmission and service
Farice ehf.	2.9.2003	Submarine cable
Fjarskiptafélag Skeiða- og Gnúpverjahrepps ehf.	8.3.2013	Data transmission network
Fjarskipti hf.	27.3.2007	Voice telephony, mobile, data transmission and network
Fjölnet ehf.	26.10.2001	Voice telephony, data transmission and network
Fónn ehf.	26.5.2009	Voice telephony, data transmission and network
Gagnaveitan ehf.	8.6.2011	Electronic communication services
Gagnaveita Hornafjarðar ehf.	13.2.2013	Electronic communication networks
Gagnaveita Reykjavíkur ehf.	23.3.2007	Data transmission and service
Gagnaveita Skagafjarðar ehf.	30.11.2006	Data transmission service
Gagnaveita Suðurlands ehf.	9.12.2013	Data transmission service
GlobalCall ehf.	4.9.2008	Voice telephony
Gullskógar ehf.	5.2.2010	Voice telephony
Hátíðni hf.	24.1.2001	Voice telephony, data transmission and network
Hringdu ehf.	9.11.2010	Voice telephony and data transmission service

Licence holder	Issued/registered	Services
Hringiðan ehf./Vortex Inc.	3.12.1998	Voice telephony, data transmission and network
Hringtorg ehf.	5.11.2012	Electronic communication services
IceCell ehf.	28.6.2007	Mobile DSC 1800 and VOIP service
iCell ehf.	25.8.2010	Voice telephony, mobile, data transmission and network
IMC Ísland ehf.	27.6.2000	Mobile DSC 1800
Internet á Íslandi hf.	3.2.1998	Network, voice telephony and data transmission
IP fjarskipti ehf. (TAL)	15.9.2004	Voice telephony, mobile and data transmission
IRJA ehf.	3.5.2010	Data transmission
Isavia ohf.	30.12.2010	Voice transmission service for aircrafts
Já upplýsingaveitur ehf.	21.11.2007	Publication of directories, directory enquiry service
Kapalkerfi ehf.	14.5.2004	Cable network
Kukl ehf.	20.3.2009	Voice telephony, data transmission and network
Kviaholt ehf.	20.2.2012	Voice telephony and data transmission service
Lancelot BV	20.2.2012	Mobile network and services
Landhelgisgæsla Íslands	1.1.2011	Management and lease of NATO's optical fibre network
Ljós og gagnaleiðari ehf.	10.8.2009	Data transmission network
Magnavík ehf.	1.4.2004	Data transmission service
Martölvan ehf.	26.11.2007	Voice telephony, data transmission and network
Míla ehf.	4.4.2007	Network
Nepal hugbúnaður	21.2.2005	Data transmission service and wireless data transmission
Netsamskipti ehf.	4.12.2002	Voice telephony, data transmission and network
Netvarpið ehf.	12.8.2013	Voice telephony, data transmission and network
Neyðarlínan hf.	6.10.1999	Voice telephony - emergency service
Nextgen Mobile Ltd.	11.11.2013	Mobile and data transmission service
Nova ehf.	12.7.2006	Voice telephony and data transmission
Nýherji hf.	12.12.2011	Data transmission
OnAir S.A.R.L.	29.4.2008	Mobile communication services on aircraft (MCA)
Opex ehf.	12.9.2013	Voice telephony and data transmission service
Opin kerfi ehf.	25.2.2011	Data transmission service
Orkufjarskipti hf.	24.1.2001	Electronic communication network
Packet ehf.	11.2.2011	Data transmission and service
Radíó ehf. - Íslensk fjarskipti	22.8.2006	Telecommunication service

Licence holder	Issued/registered	Services
Ríkisútvarpið ohf.	29.7.1997	Transmission of radio and television signals
Símafélagið ehf.	15.10.2008	Voice telephony and network
Símaþjónustan ehf.	28.6.2013	Voice telephony
Síminn hf.	30.7.1998	Voice telephony, mobile, data transmission and network
Sjónvarpsmiðstöðin ehf.	8.10.2009	Data transmission service
Smartphone ehf.	8.3.2013	Voice and mobile telephony
Snerpa ehf.	17.8.2000	Network, voice telephony and data transmission
Softverk ehf.	20.3.2009	Voice telephony, data transmission and network
SportTV ehf.	12.8.2013	Transmission of radio and television signals and telecommunication service
Stykkishólmsbær	2.5.2002	Data transmission network
TELE Greenland A/S	24.6.2008	Submarine cable
Tengir ehf.	20.9.2002	Fiber optical network
TSC ehf.	18.1.2002	Voice telephony, data transmission and network
Tæknimiðlun ehf.	27.8.2010	Data transmission service
Tölvu- og rafeindþjónusta Suðurlands ehf.	29.3.2004	Data transmission service
Tölvun ehf.	25.4.2003	Data transmission and service
Tölvustöð ehf.	15.4.2009	Data transmission service
Upplýsingatæknifélagið Omnis ehf.	28.1.2013	Data transmission service
Þekking - Tristan hf.	16.1.2004	Data transmission and service
Örugga símafélagið ehf.	13.12.2010	Voice telephony and network
Öryggisfjarskipti ehf.	6.10.2008	Telecommunication service and network / TETRA



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