CZ.NIC ASSOCIATION CONCEPT FOR THE 2016–2019 PERIOD

CZ.NIC | CZ DOMAIN REGISTRY

Content

Vision: The main mission of the Association is to operate and develop trusted, secure and stable infrastructure and publicly beneficial Internet services, especially the .cz domain for the benefit of the Internet community in the Czech Republic. The Association will actively promote the development of Internet services primarily through innovative open-source projects and will increase awareness and debate on aspects of Internet technologies. The Association will strive to increase the level of cyber security.

1 Introduction

This document builds on the previous concept valid for the period 2012–2015. The previous concept proved to be very appropriate, as it was not necessary to revise it throughout the period of its validity, and almost all fields of the Association's activities have been developing. In the area of domain registrations, the penetration level achieved is comparable to those in Western European countries. The Association confirmed its relationship with the state with several important agreements and memoranda; among other things, the Association was selected as the operator of the National Security Team of the Czech Republic. The Association hosted several meetings of leading Internet institutions, such as ICANN (Internet Corporation for Assigned Names and Numbers) and IETF (Internet Engineering Task Force). In the field of awareness-raising, some interesting campaigns were launched, and they received positive feedback from the majority of the Czech population. Finally, the Association gave birth to some very innovative open-source software and hardware projects that have received a lot of recognition both on the domestic and international scene.
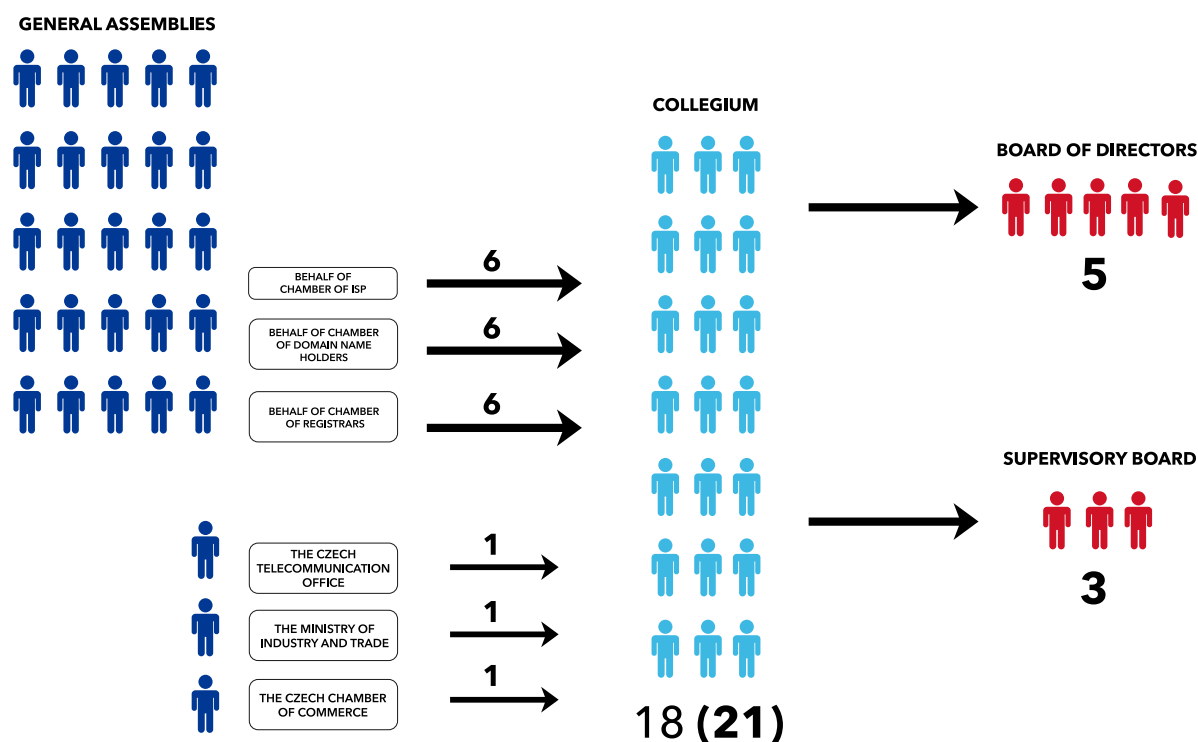
2 The Association and its main activities

2.1 Organizational structure

The Association underwent the biggest change in its organizational structure in 2005 when the membership base was divided into three interest chambers. Besides the chamber of domain name holders, two new chambers of ISP (Internet service provider) and registrars were created. To maintain a balanced ratio of voting power between the individual chambers, a new body was created – the Collegium to which all chambers elect an equal number of representatives. Additionally, representatives of important state institutions: The Ministry of Industry and Trade (MIT) and The Czech Telecommunication Office (CTO) and a representative of the Czech Chamber of Commerce were also invited into the Collegium. A time period was introduced for new entrants, during which they have observer status, having almost all the rights of a member, except the right to vote at general meetings. These changes significantly contributed to the stability of the Association which could continue its liberal policy of accepting new members. However, with the growth in the overall number of members, the number of passive ones also increased, so the Association faced the threat of the activities of the General Assembly becoming paralyzed. This risk was reduced at the General Assembly meeting in June 2012, when changes were made to the Statute of the Association to assign observer status to members who do not participate in general meetings.

The Association is still attractive for new members and yet remains stable, which means there is no need for a radical change of its internal structure, as it has proven over time to be very successful and functional. If during the period of validity of this concept the Association receives a request for the extension of the current arrangement, for example, the need of some of the Chambers to change its internal structure, the Association will be ready to respond to such a request.

The continuing increase in the number of the Association members, on the other hand, brings new challenges. In the beginning, new members need to get the lay of the land in all the activities of the Association. In the past, members were invited to seminars of the Association, which they did not attend very often (with the exception of registrars), and so the only formal mechanism of discussion between members and representatives that was actually used, was the general meeting of the Association held once a year in person. In the upcoming period, the Association will try to find new ways of motivation for members to participate in the activities of the Association more actively.

GENERAL ASSEMBLIES

BEHALF OF CHAMBER OF ISP	6	
BEHALF OF CHAMBER OF DOMAIN NAME HOLDERS	6	
BEHALF OF CHAMBER OF REGISTRARS	6	
THE CZECH TELECOMMUNICATION OFFICE	1	
THE MINISTRY OF INDUSTRY AND TRADE	1	
THE CZECH CHAMBER OF COMMERCE	1	

COLLEGIUM

18 **(21)**

BOARD OF DIRECTORS

5

SUPERVISORY BOARD

3

2.2 Relationship with the state

In the past, the Association defined its position in relation to the state through memoranda with major state institutions. The memorandum with the Ministry of Informatics in 2006 was followed by further documents, many of which were signed in the period of validity of the previous concept. Namely it was the memorandum with the Ministry of Industry and Trade from the year 2012, which confirmed the validity of the previous document and allowed to deepen the cooperation with the Ministry. Based on this memorandum, CZ.NIC provides counseling for the Ministry mainly on the international administration of the Internet (Internet Governance) and related issues. In 2015, a memorandum with CTO was concluded, which confirmed the cooperation of the two bodies in the area of security and the development of the electronic communications network.

In the past, the Association actively supported state institutions in relevant areas such as the electronisation of public administration (eGovernment), cyber security, network speed measurement and others. The client applications for data boxes Datovka and iDatovka were awarded the best projects of the Czech eGovernment of the year 2013.[1] In 2014, the Association has won the prestigious Czech At-Sign Prize.[2]

The above-mentioned awards prove that the support of the Association in the field of eGovernment is highly appreciated on the domestic scene. It is therefore appropriate to continue to develop this activity in the areas that are a priority for the Association. CZ.NIC will continue to provide counseling and to send its professional representatives to the relevant working groups, and it will consider the support of some major projects in this area.

In the current period, the approach of the state towards the development of eGovernment is not very active; the Association will therefore increase its initiative and allocate resources for the formulation of specific visions and analyses in this area. The Association will be an active partner in the preparation of legislation concerning domains and Internet technologies.

2.3 Finance

As in the past, payments for the domain registration remain the main source of revenue of the Association, thanks to which the Association has created a financial reserve, a highly liquid part of which is approximately twice the level of the annual operating costs of the Association. This reserve serves as an important stabilizing and insuring element. Its level seems to be optimal to maintain the operation of the Association even in the event of turbulent changes, and it is not necessary to programmatically increase it. The Association will use this reserve primarily in emergencies or large-scale occasions.

With regard to the above, the Association will plan its budgets as approximately balanced. The price list of the Association will reflect the priorities of the Association, e.g. in the areas of support of the legitimate domain holders and law enforcement. With regard to the stability of the environment, it is appropriate to keep the domain prices unchanged and to announce any changes far in advance. The Association will carefully analyze the situation on the market of domain names (for example, in connection with the launch of new generic TLDs) and then respond accordingly.

In the current situation, there is a slowdown in new domain registrations. The number of domains per capita in the Czech Republic is already very similar to conditions in the comparatively populous countries of Western Europe[3]; therefore, no significant change of this trend is expected. The Association does not plan to raise the prices for domain registration but in order to develop and cover the cost increased due to inflation, it will search for new opportunities to increase revenue in areas other than domain registration; it will not search for common business opportunities but it will try to implement projects which will be primarily focused on the support of advanced technologies.

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1 The Best 2013 in the category Best eGovernment Project implemented at the national level. The competition is announced by the eGovernment magazine in cooperation with the consulting company KPMG.

2 This award is decided by the jury within the traditional conference Internet in the State and Local Government (ISSS). The aim of the award is to call attention to organizations and projects that have significantly contributed to spreading the information technologies in public administration institutions.

3 For example, Austria: 1.3 mil, Sweden: 1.4 mil.

When planning and implementing its projects, the Association will not programmatically aim at spin-off opportunities. If such an opportunity does arise, however, this option will be analyzed and taken advantage of, if this significantly benefits the project or if the nature of the project is essentially distinct from the main activities of the Association.

2.4 Domain administration

The administration of the Czech national domain is the core activity of the Association; therefore, this activity will have the highest priority among the various tasks of the Association. In the past, the Association has developed the FRED (Free Registry for ENUM and Domains), a registration system that fully corresponds to the needs of the Czech environment in terms of capacity and the implemented properties. The development of this system will continue in order to reflect current administrative and technological needs of the local community, registrars and the Association. Great emphasis will be placed on the stability, availability and security of the solution on each level (from hardware and software, through network implementation to administrative activities).
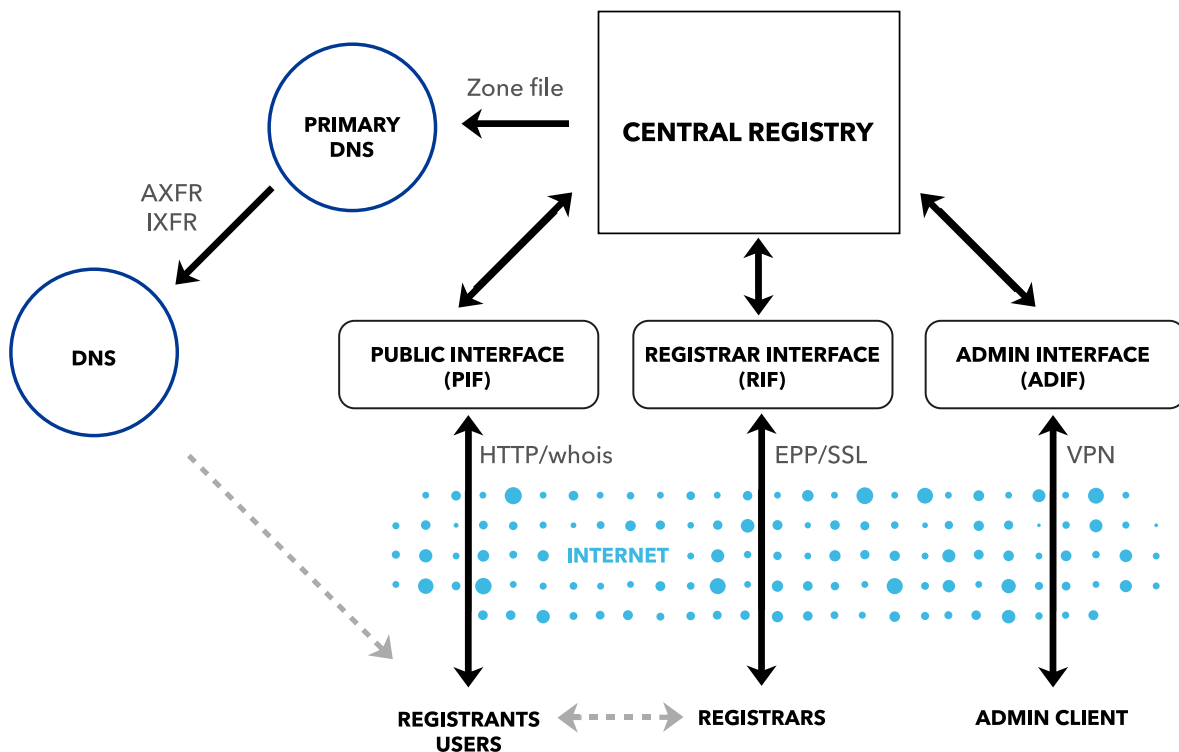
The Association will actively monitor developments on the international scene and will consider the introduction of any novelties relating both to the DNS technology and to the top-level domain administration in case it will be relevant for the local environment.

Implementation of essential changes concerning the domain administration, registration policy, registration system, etc. will always be discussed well in advance with the respective group depending on the type of the change. Every change will be duly explained and potential future impacts will be analyzed.

Domain administration will not lead to discrimination against any group or individual; on

the contrary, the Association will promote the natural competition and fair market environment in the relevant market.

The interests of legitimate holders of domain names remain one of the main priorities for the Association in the domain administration activity. The Association will look for further ways to increase the comfort of use and strengthen the safety of such domain holders, including their legal guarantees. The Association shall carry out a review of mandatory standards for the authorization of changes in the central registry. The Association will also continue to strengthen the mechanisms ensuring the security of personal and technical information in its databases and will actively prevent unauthorized attempts to use this data; therefore, the Association will not normally provide a list of domain names and zones.

The Association will also continue to ensure the validity of the data contained in its registry (e.g. by using mojeID) and will develop activities to eliminate unauthorized and false registrations.

The Association will also continue the mutual cooperation and exchange of information with the general courts, the Arbitration Court attached to the Czech Chamber of Commerce and the Czech Agrarian Chamber, Police of the Czech Republic, The Office for Personal Data Protection and other interested state authorities and organs. The Association will contribute to the creation of the environment free from the unfair competition conduct. The Association will not support activities that lead to the production of worthless content empty of information that results in confusion of the user (with the aim of achieving a "click-through" on the page), and, indirectly, in the depreciation of the .cz domain value.

The proof of the quality of the FRED registration system is the fact that it was introduced by a number of top-level domain registries.[4] Thanks to the fact that the FRED was implemented in completely different environments outside the Czech Republic, the Association gained a number of interesting incentives to the further development and improvement of this software. Some partners were able to contribute to the development of the FRED, also by coding new modules. For these reasons, the implementation of the FRED in foreign registries became very beneficial and the Association will continue to pursue it actively.

2.5 IDN[5]

In the past, the Association has declared repeatedly and publicly that the question of the introduction of diacritics should be decided by the local Internet community. Therefore, every two years the Association organizes polls, in which it seeks to inform the respondents to the highest possible extent about the possible options of introduction of IDN in the .cz domain zone, e.g. different types of combining diacritical and non-diacritical variants of a domain name, ways of implementation of the so-called sunrise period, etc. The practice of public polls will continue and before the next survey, the Association shall make the revision of questions to ensure that the formulations do not favor or disfavor any option.

In the case that the interest in the introduction of IDN in the .cz domain zone prevails, the Association is prepared to implement this feature. The speed of implementation would depend on the selected option.

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4   By the end of the year 2015, it has been implemented in Faroe Islands, Angola, Albania, Costa Rica, Tanzania, and Macedonia. The process of implementation is currently underway in Guatemala and Malawi.

5   IDN (Internationalized Domain Names) is a system that allows the use of nation-specific alphabetical characters in domain names.

2.6 Cooperation with registrars

Accredited domain registrars are in terms of the main activities of the Association a unique group, which will continue to be given significant attention by the Association. The Association will continue its close cooperation with registrars and promote their activities, particularly in the form of regular consultations, training, seminars, etc.

The Association will also provide active support (including financial participation in the marketing campaign) for the activities of registrars that help promote the Czech national domain, including related services and technologies, in accordance with the current objectives set forth by this concept.

If appropriate, the Association will try to offer new paid services, which could expand the sales portfolios of registrars. Such services, however, must fit into the concept of domain management and must not affect the neutrality of the Association.

Especially with regard to the strengthening of the securities of domain holders, the Association will continue to define the minimum level of standards of registrar operations and the provision of services to end holders. This support is currently implemented by using certification of registrars. The Association will continue this work and every year it will carry out the revision of the certification program rules to ensure that the controlled items are relevant from the viewpoint of technological development, market situation and user habits and needs.

The Association will also actively monitor compliance with the standards and other relevant regulations and rules.

3 Other activities of the Association

3.1 New projects

The Association will continue to search for new technological challenges and respond to them with new innovative projects. For projects with an impact on the budget of the Association, an introductory document will be created to lay down the criteria for the success of the project and its form of funding. The primary ambition of the Association is to enter already existing markets and compete with similar products of commercial entities. Therefore, new projects should be highly innovative and focus on advanced technology or focus on areas that are not interesting for commercial use. Among the main priorities of the Association in this area are cyber security, low-level Internet protocols such as DNS including DNSSEC (DNS Security Extension), DHCP (Dynamic Host Configuration Protocol), NTP (Network Time Protocol), IPv6, routing, support of open source, user safety, safe behavior on the Internet, assistance for disadvantaged users and eGovernment.

As for projects whose long-term functionality can critically affect the activity of other bodies, the Association will operate them provided that after a certain period of time (for example, after exceeding a critical number of users), their operation will become financially self-supporting.

The projects will be approved by the Collegium of the Association in the context of the budget approval. The Association will seek ways to involve other partners from the private or public sphere in funding. The Association will continue to actively participate in national and European projects as long as the announced topic relates to the priorities of the Association.

The Association will try to take advantage of a part of its infrastructure by offering services to other registries or related bodies which will be beneficial (especially financially) to the Association and would not jeopardize the stability and robustness of the registration system of the .cz domain zone.

Individual projects will periodically be evaluated at the level of the Board of Directors. In the case of major changes to the project, the new version should be again submitted to the Collegium for approval.

3.2 The development of the Internet infrastructure

The Association currently operates several projects supporting the local Internet infrastructure, such as mirrors of root DNS servers, NTP server, mirrors of certain services associated with the priorities of the Association, especially open-source projects, etc. Support of such projects increases the safety, stability and robustness of the local infrastructure. This aspect is not necessarily noticeable in standard operation of local networks but it can prove a considerable advantage in case of large attacks on the Czech Republic.

The Association, together with other operators, established the group FENIX[6], on the platform of the national node NIX.CZ, the aim of which is to contribute to greater safety and robustness of the Czech Internet.

The Association will continue to support projects and services contributing to a higher comfort of Internet users or increasing its efficiency, stability or security in the Czech Republic.

3.3 MojeID

The MojeID service is an example of a project for the development of the Internet infrastructure. The main objective of the project is to increase the validity of data in the domain name registry while providing authenticated identities, which can be used by third-party applications. So far, about 500 thousand of users have created their mojeID accounts which they can use to log in to thousands of services including the major ones. The service became popular especially with libraries and local governments that use it to expand the forms of direct democracy. MojeID is involved in the European system of electronic identification eIDAS (Electronic Identification and Services) as the only service in the Czech Republic.

Despite the extensive user base and a large amount of supporting services, the potential of this technology can be further developed.

The Association will continue to promote and develop the mojeID service. A great emphasis will be placed on linking of mojeID with the systems of public administration and services that use high levels of authentication. In terms of user base, the Association will promote, in particular, the activity of the users of the service. MojeID will continue to expand its functionality based on requirements of users and partner services or public administration.

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6   FENIX is a security project which in case of a DoS attack enables access to Internet services within the network of member organizations.

3.4 CSIRT.CZ

CZ.NIC started operating the national security team CSIRT.CZ (CSIRT = Computer Security Incident Response Team) on the basis of the memorandum with the Ministry of Interior of the Czech Republic from December 2010. The agenda of cyber security was later transferred to the National Security Authority (NSA). With the new agent, we managed to build on the existing cooperation and on the basis of the memorandum concluded in 2012, the Association operated the team CSIRT.CZ until the end of 2015. This year, the newly approved law on cyber security has already been valid and effective, and on its basis, a contest for the new operator of the national security team was announced. The CZ.NIC Association won the contest and at the end of the year, it concluded a contract with the NSA on the operation of the team.

The Association will continue to operate the CSIRT.CZ national security team in accordance with the law on cyber security and the public contract with the NSA. For the team, the Association will obtain the highest level of trust in internationally recognized organizations, such as Trusted Introducer and FIRST (Forum for Incident Response and Security Teams).

The Association will continue to develop the related services that will help to increase the cyber security of the Czech Republic and it will also cooperate with the local Internet community represented by the workgroup of the CSIRT.CZ. The Association will actively assist in the creation and development of security teams in the Czech Republic.

3.5 Support for education and awareness raising

The Association has long been actively striving to support education and awareness-raising on topics such as Czech domain, domain usage and DNS protocol, Internet technology, cyber security, user safety, and Internet usage in general.

This activity takes more forms with regard to the target group and the level of knowledge.

ACADEMY

The Association has long been operating the training center CZ.NIC Academy, aiming primarily at a narrower group of specialists. To maximize the coverage in the Czech Republic, the Association started organizing the same courses in other cities in addition to Prague, currently in Brno and Ostrava. The courses are focused mainly on the priority areas of the Association and on modern technologies associated with IT. For specific groups, particularly from the public administration and education, the Association organizes custom specialized courses. The training center in Prague is also used for a variety of related events, such as internal seminars, user group meetings, etc.

The Association will continue to promote and develop these activities. The Association will continue to search for topics that will be attractive not only for the members of the Association or registrars and highly qualified specialists from the private sector, but, in the context of its activities in the field of Internet security and the activities of the team CSIRT.CZ, also for experts from the concerned bodies of state administration and the security authorities of the state. The courses will cover not only the technological topics, but also topics from other related disciplines, such as law.

The Association will try to extend its courses for the public and their topics, and to achieve this, it will work on appropriate forms of e-learning and webinars.

CZ.NIC PUBLICATIONS

Another way for the Association to support education is technical book publishing. The Association mainly looks for topics that are not sufficiently attractive to local commercial publishers, while being interesting for professionals and the general public. CZ.NIC Publications is dedicated both to books by domestic authors and translations of foreign books. To maximize the readership of these titles, the Association sells them for prices that only cover the publishing costs, while also making available the electronic version of the books on its website, free of charge, in formats suitable for printing and viewing on PC or electronic readers. The Association has published more than ten of such books in its publishing so far.

The Association will continue this activity and will consider new ways of distribution of these materials.

COOPERATION WITH SCHOOLS

The Association actively seeks cooperation with schools in the Czech Republic, primarily in areas that are considered a priority by the Association. Employees of the Association give lectures in schools and supervise or oppose Bachelor and Master theses.

This activity will continue in the next period. As for universities, the Association will prefer projects that will lead to deeper and individual cooperation. In the case of lower-level schools, the Association will provide support for teaching and search for opportunities to reach out to more of these bodies.

EDUCATION FOR THE GENERAL PUBLIC

In the past period, the Association prepared a number of projects for the education of the general public. Probably the most distinctive was the TV series How to use the Internet which currently has over 100 episodes. The Association also focused on the preparation of programs for youth.

The Association will continue to engage in the education of the general public. It will create training materials of an appropriate form which will be able to reach out to particular risk groups, such as seniors and young people. The main topics will be, for example, safe behavior on the Internet and cyber security, as well as other topics related to the priorities of the Association.

SUPPORT FOR NEW INTERNET TECHNOLOGIES

In the past period, the Association was active in supporting new Internet technologies, such as IPv6, DNSSEC etc. Many of the new technologies, in spite of being innovative and beneficial, need the initial support to promote their use.

Such support had several forms in the past, such as PR or marketing campaigns, awareness-raising activities in the form of lecturing on the relevant Internet events, organizing of conferences and seminars, publishing of professional articles and books in the CZ.NIC Publications and courses in the CZ.NIC Academy.

In the CZ.NIC Labs department, the Association employs a team of professionals who are dedicated to the research and development of new technologies and products. A whole range of high-tech products that attained international recognition came to life in the Labs, such as the DNSSEC validator, the routing daemon BIRD (The BIRD Internet Routing Daemon), the authoritative and recursive Knot DNS server, the Turris project, etc. For the local community, support tools for working with data boxes were developed, for example. The

Labs issue reports on professional topics and its employees give presentations at national and international conferences, actively join working groups of organizations such as the IETF (Internet Engineering Task Force), DNS-OARC (Operations, Analysis, and Research Center), CENTR (Council of European National Top Level Domain Registries). The Association will seek to increase the awareness of these activities in the relevant groups of the local Internet community.

The Association will continue to promote new technologies while seeking for appropriate forms of support and education, given the benefits of these technologies and further synergies with the other priorities of the Association, such as the domain management, security and mojeID. The Association will continue to develop the CZ.NIC Labs department and search for more topics of interest to the local Internet community for this department.

TECHNOLOGY CONFERENCES

Technology conferences are another form of public education and communication, especially with the professional public. Twice a year, the Association organizes its own conference Internet and Technologies which is the main domestic communication channel of the Association's projects. Furthermore, the Association sponsors a number of domestic conferences related to its priorities.

In the past, the Association contributed to the hosting of important international conferences of major organizations, with whom the Associations cooperates, such as RIPE, ICANN, IETF, CENTR, DNS-OARC (DNS Operations, Analysis, and Research Center) and TERENA (Trans-European Research and Education Networking Association).

The Association will continue in organizing major conferences in the Czech Republic, at the same time trying to search for co-financing partners. For this purpose, the Association will create a financial fund to cover interannual fluctuations and the financial demands of individual events.

3.6 The Turris Project

One of the most significant technological projects of the Association is the Turris project. This project clearly illustrates strong coherence between the individual priorities of the Association. The main mission of the first part of the project was security research, which managed to reveal several significant security weaknesses; revealing a botnet with tens of thousands of devices was another success.

Project participants were sought out through communication with the media and at conferences that the Association organizes. The user portal of the project supports the use of mojeID and the current work addresses the implementation and testing of the recursive DNS daemon Knot Resolver using the Turris OS distribution on Turris routers. The first phase was completed with the production and distribution of 2,000 routers of versions 1.0 and 1.1 among users; security research is currently still carried out on these devices.

In the second phase of this project, the demand of domestic and foreign applicants led to a decision to use the gained experience to develop a new, publicly available SOHO (Small Office/Home Office) router called Turris Omnia. The development stage was completed at the end of 2015 and a campaign was launched whose goal was to obtain sufficient resources to cover the costs of production and distribution.

The outcome of this phase will decide whether the Turris project goes on, and whether

further versions of the device are to be developed depending on the requirements of ordinary users, corporate sector, operators and business partners of the project.

3.7 Tablexia

Tablexia is a typical example of a project that covers an area that is of no interest to commercial companies. It is a modern educational application created to support the development of cognitive abilities. It is designed primarily for secondary school children with dyslexia.

Tablexia currently consists of six games, each of which focuses primarily on training of one cognitive ability. In the individual games, the player trains their working memory, auditory perception, spatial orientation, visual memory, attention and seriality. The games are interconnected by an attractive detective theme and the environment of the application evokes the atmosphere of the 1930s. The player plays the role of a young detective who, under the supervision of his older colleague, is practicing the skills needed for this challenging profession.

This tablet application found its use both in schools as a supplement to standard teaching, and in pedagogical-psychological counseling rooms and other counseling facilities for pupils with learning difficulties, and is very well rated by experts on this issue as well as by its users. In 2015, this game was played by more than a third of children in the target group in question. The Association will continue to develop educational applications and applications that will promote the development of children with special needs.

3.8 International Cooperation

Due to its activities, the Association is involved in the activities of a number of international organizations whose activities are related to DNS, Internet Governance and new Internet technologies. These are mainly the organizations ICANN, RIPE NCC, NANOG (North American Network Operators Group), CENTR, IETF, DNS-OARC, TERENA, ENISA (European Union Agency for Network and Information Security), EuroISPA (European association of European Internet Services Providers) and FIRST (Forum for Incident Response and Security Teams) The Association will continue to support the activities of international institutions that are responsible for Internet governance and its technological and security development; it will send its representatives to the relevant meetings of these organizations.

The association will continue to develop cooperation with international organizations with similar aims, such as regional Internet registries, domain registry associations and above all domain registries.

4 Employees

The Association will pay constant attention to the development of professional abilities and skills of its employees and their further education. It will encourage their active participation in expert discussions and conferences, publishing activities, in order to increase their contribution not only to the Association, but also to the wider Internet community. The Association will enable selected employees to obtain a quality education in order to improve their skills; one of the objectives will be also establishing cooperation with other research teams. These

employees will be required to conclude a fixed-term contract of employment with the Association.

For its employees, the Association will try to build a friendly, stimulating and open environment encouraging creativity and innovation. The Association will follow the modern trends in the field of the working environment and will apply them appropriately.

The number of the CZ.NIC Labs team members will be adjusted according to the needs and the number of individual projects. If the operational and project needs or the situation on the labor market requires so, creation of new branches in other cities will be considered.

5 Conclusion

The aim of this concept is to define the main priorities and tasks for the mentioned period. Unexpected changes may occur during the validity period of this concept which may fundamentally alter the conditions on which this document was based. In such case, the Board of Directors will propose a revision of the concept that will allow to address the changes flexibly.