Regional Initiatives: Dubai Action Plan 2015-2017

Commonwealth of Independent States (CIS)

CIS1: Creating a child online protection centre for the CIS region ................................................................. 4
CIS2: Ensuring access to telecommunication/ICT services for persons with disabilities ............................................. 16
CIS3: Introduction of training technologies and methods using telecommunications/ICTs for human capacity building .............. 26
CIS4: Development of broadband access and adoption of broadband ........................................................................... 38
CIS5: Building confidence and security in the use of ICTs in the CIS countries .............................................................. 42
“The Dubai Action Plan sets out a road map for ITU-D’s work and a shared vision to make a tangible difference to people’s lives. Regional Initiatives guide BDT, Member States and Sector Members in implementing specific projects that focus on the priority needs of each region. I call upon all our members and partners to join forces with BDT to implement the Regional Initiatives. I thank you for your continued support.”

Mr Brahima Sanou, Director, ITU Telecommunication Development Bureau

FOREWORD

BY OROZOBEK KAIYKOV, HEAD OF THE ITU AREA OFFICE FOR CIS

The World Telecommunication Development Conference in 2014 (WTDC-14) adopted five regional initiatives for the Commonwealth of Independent States (CIS). Intensive work on the part of the ITU Member States at the CIS Regional Preparatory Meeting for WTDC in 2013 resulted in identifying the following five priority areas: child online protection; ensuring access to ICTs for persons with disabilities; using ICTs for human capacity building; development of broadband access; and building confidence and security in the use of ICTs.

The priorities articulated as the CIS regional initiatives are not unique to this region, and in fact reflect global trends addressed in the Dubai Action Plan, providing further proof of their relevance. Indeed, some of them were identified as priority areas by several regions, notably broadband, which is a key factor in information society development and constituted the main theme of WTDC-14. Equally important are building confidence in the use of ICTs and cybersecurity, including child online protection, which stem from the rapid development of ICTs in recent years and the increasingly ubiquitous role of the Internet in almost all spheres of human life; and ensuring access to ICTs for persons with disabilities, which is particularly significant for the CIS region, where insufficient attention has hitherto been paid to issues relating to persons with disabilities.

Implementation of the Dubai Action Plan has already begun, and will be discussed in detail at the ITU Regional Development Forums this year, with particular emphasis on regional initiatives. The forums provide the ITU membership with an opportunity to exchange experiences and best practices in the implementation of these initiatives. We hope that, armed with the experience gained during the previous four-year periods, the Member States from the CIS region, in cooperation with ITU, will successfully implement the regional initiatives adopted by WTDC-14 for the benefit of people living in the region, and will approach WTDC-17 enriched with new experience and ready for new and bright achievements.
Regional initiative 1

Creating a CHILD ONLINE protection centre for the CIS region
Since 2006, one of ITU’s fundamental roles has been to build confidence and security in the use of information and communication technologies. At the World Summit on the Information Society, Heads of State and Government, other world leaders and ITU Member States instructed ITU to adopt practical measures aimed at limiting threats and vulnerabilities associated with the information society.

The ITU Plenipotentiary Conference has invited Member States and Sector Members to contribute to enhanced cooperation on international public policy issues relating to the Internet, and instructed the Director of the Telecommunication Development Bureau to support the efforts taken by ITU Member States at national and regional levels to build capacity to protect against cyber threats.

The international seminar on “Integrated aspects of child protection on the Internet”, held in Odessa (Ukraine) in April 2011, and the interregional seminar for Europe, the Asia-Pacific region and the Commonwealth of Independent States on “Modern methods of combating cybercrime”, held in March 2012, identified the main problems typically faced by developing countries in strengthening trust and the protection of children on the Internet. Participants in the seminars particularly stressed the importance of international cooperation to exchange experiences and improve methods to protect children on the Internet; the need to develop unified approaches to establishing a database of recommended Internet resources; and the desirability to study the possibility of creating an ITU-based centre for disseminating recommended Internet resources.
All countries of the region without exception have acceded to the Convention on the Rights of the Child without any declarations or reservations to Articles 16, 17 and 34 (c). All countries in the region have also acceded to, signed and/or ratified the Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography without any declarations or reservations to Articles 2 and 3 of this document.

Thus, based on international regulatory documents, the legislation on child online protection in individual countries differs to some extent. In most countries of the region, the criminal code envisages penalties for crimes related to the exploitation of children in the online environment. For example, Article 263 of the Criminal Code of the Republic of Armenia provides for penalties including imprisonment for up to 3 years for forcing underage people to participate in creating media products with pornographic content. Similar articles exist in the criminal codes of other States: Azerbaijan (Article 242), Belarus (Articles 343 and 343.1), Georgia (Articles 255 and 255.1), Kazakhstan (Article 273.1), Moldova (Article 208 (1)), Russian Federation (Articles 242 and 242.1), Uzbekistan (Article 130).

Some countries have additional laws or other means to ensure child online protection. For example, in the Republic of Azerbaijan, Article 10 of the law on mass media prohibits the use of mass media for the publication of pornographic materials.
It should be noted that in some countries of the region (for example, Georgia and the Russian Federation) the computer emergency response team (CERT) and some non-governmental organizations have established mechanisms for notifications concerning child protection on the Internet.

From the point of view of content-filtering among countries of the region, the most important steps have been taken by the Republic of Belarus and the Russian Federation, where lists of resources for which viewing is forbidden were introduced at government level. In contrast to purely technological projects, however, the measures taken today in Belarus and the Russian Federation are more administrative in nature, and are without specific technical implementation.

In many countries of the region, software developers, telecommunication operators and educational institutions are actively developing their own programmes dedicated to child protection on the Internet. Striking examples of such programmes include two Ukrainian projects: “Child safety on the Internet”, implemented by the Coalition for Child Safety on the Internet, and the “System of restricting access to untargeted Internet resources”, which the A.S. Popov Odessa National Academy of Telecommunications implements.
In May 2012, the project “Building a safer Internet for educational institutions” presenting the concept of “System of restricting access to untargeted Internet resources” was recognized as the best project in category C5 “Building confidence and security in the use of ICTs” in the competition organized under the World Summit on the Information Society (WSIS) Forum in 2012 (Geneva, 14-18 May 2012). WSIS was recognized by the then ITU Secretary-General as one of the greatest achievements in establishing connections in the world.

Having a common political, economic, environmental, humanitarian and cultural history, the countries of the CIS region share a number of characteristics which in principle unite them in their use of the Internet space in so far as the interests of users and viewed resources are affected. The key factors explaining the emergence of such characteristics include the linguistic environment (most of the population of CIS countries are fluent in Russian), the similar level of ICT development and penetration of broadband Internet access, common problems in the field of ICT application (sharp contrast in the training of teachers in cities and rural areas, common “post-Soviet” model of education, lack of qualified system administrators in rural schools, and so on), and the similar level of legal regulation of issues related to use of the Internet space.
Objective

To provide ITU Member States in the CIS region with centralized advisory and technical assistance on various aspects of child online protection.

EXPECTED RESULTS

1. Distance training courses on safe use of Internet resources, with provision for testing children, parents, and teachers.

2. National systems for updating and disseminating lists of useful Internet resources for children, as well as lists of other Internet resources flagged as unsuitable.

3. Provision of more complete information for representatives of administrations, law-enforcement agencies, educational establishments and the private sector regarding the current legal/regulatory and organizational/technical frameworks in the area of child online protection.

4. A database with data on existing technical solutions for child online protection.

5. Provision of recommendations for any interested party on selecting the best solution for child online protection for a given organization.

6. Training courses on solutions for child online protection as part of school and university programmes.

7. Trial areas for systems restricting access to inappropriate resources for educational establishments in the region.
CONCEPT
Ideologically, this course is divided into three parts:
• Basic (for pre-school and younger school children).
• Middle (for children in classes 5-9).
• Advanced (for senior students, parents and teachers).
Structurally, each course is divided into thematic modules with tests after every 1-2 modules. Every course should be colourful, contain text, pictures, photos, video, animation, and be professionally voiced. Informative courses should vary and be presented within the framework of the terminology corresponding to the age category for which the course is designed. With progression from basic to advanced, concepts can be updated, disaggregated, and accompanied by additional explanations. The oriented structure of the course is detailed in Document RGQ/22-1/1/33-E (Rapporteur Group Meeting for Question 22-1/1, Geneva, 19 April 2013, http://www.itu.int/md/D10-RGQ22.1.1-C-0033/en).

OBJECTIVES
• Assessment of the preparedness of teachers and parents (development and support of the remote teaching courses on the safe use of Internet resources for the CIS countries (by analogy with the course “Basic (Advanced) Security in the Field”).
• Organization of the testing process for children, parents, teachers, law-enforcement officials, and network administrators; distribution of certificates that can be considered by the heads of enterprises (for example, school principals and rectors of universities) for the employment of teachers, network administrators, as well as parents in decisions on a child’s mode of access to the Internet).
Estimated budget
USD 115 000
(USD 45 000 from ITU, USD 70 000 from partners).

Potential partners
1. Ministries of education of CIS countries
2. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine
3. MKM Service Ltd, Ukraine.

Country or countries involved
All CIS countries.

2015 Activities
- Development of detailed scenario and content of each module.
- Development of test questions. Proofreading of prepared texts and questions.
- Post-scoring of prepared text blocks.
- Development of videos, cartoons (animation) for each module.
- Preparation of photos and images (drawings) for each module.
- Development of software platform for online courses.
- Mark-up, layout and compilation of all prepared materials for the software platform.
- Installation on the Internet and testing of online courses.

2016 Activities
- Development of educational courses within the school and university programmes.
- Training and testing of no fewer than 500 children from different CIS countries.
- Training and testing of no fewer than 100 parents and teachers from different CIS countries.

2017 Activities
- Development of information resource dedicated to COP in the CIS region.
- Training and testing of no fewer than 1000 children from different CIS countries.
- Training and testing of no fewer than 250 parents and teachers from different CIS countries.
CONCEPT

It is proposed to incorporate, in the automated systems, freely circulated copies of a central database of “black” and “white” lists of Internet resources that are typical in CIS countries. The lists would be developed based on regular analysis of the logs of visits automatically collected from all systems, with content filtering using the images provided for the “black” list. The principles proposed for the system were presented within the framework of the third meeting of ITU-D Study Group 1 (Document 1/157), and the first meeting of the ITU Council Working Group on COP (Document WG-CP/1/2).

OBJECTIVES

Updating and distribution of lists of access blocked to inappropriate Internet resources, as well as lists of recommended resources (creation and support of the automated distribution system will require images that are representative of the CIS countries of “black” and “white” lists for individual organizations (universities, schools, public institutions and private companies) and solutions providers for content filtering (for example, anti-virus vendors and firewall). Creation and support of system for expert evaluation and cataloguing of Internet resources characteristic of the CIS countries. Creation of criteria for expert evaluation and involvement (on a competitive basis) of experts for processing information on the CIS resources most visited).
**Estimated budget**

USD 70,000  
(USD 20,000 from ITU, USD 50,000 from partners)

**Potential partners**

1. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.  
2. Telecommunication operators, CIS countries.

**Country or countries involved**

All CIS countries.

---

**2015 Activities**

- Creation of automated system (AS) for updating and disseminating lists of useful Internet resources for children, as well as lists of other Internet resources flagged as unsuitable.

**2016 Activities**

- Development of “black” and “white” lists (typical in CIS countries).  
- First stage (up to 500,000 resources) connecting up to 200 subscribers (including schools, operators, and organizations) to AS.  
- Presentation workshop.

**2017 Activities**

- Development of “black” and “white” lists (typical in CIS countries).  
- First stage (up to 1,000,000 resources) connecting up to 300 subscribers to AS.
CONCEPT

The database with information on existing technical solutions in the sphere of content filtering must contain sufficient characteristics for the complex estimation of the cost of implementing and operating the system under certain conditions. The system for choosing the optimal content filtering solution should be based on a model that will allow the development of technical requirements for the system’s content filtering regardless of its principles of operation. This approach will be applied in the educational institutions that have no specialists in network technologies. Choice of the optimal filtering system should be based on the maximum economic efficiency of the proposed solution, assuming compliance with all technical requirements.

OBJECTIVES

Database support on available technical solutions for restricting access to inappropriate content and the provision of recommendations on the application of any other solution for each specific case (gathering of information on available technical solutions to restrict access to inappropriate Internet resources, testing of existing solutions and preparation of reports, creation and support of a unified database with information about current (recommended) technical solutions. Creation and support of the automated system for choosing the optimal (for a particular organization) system for content filtering. Provision of assistance with installation of concrete technical decisions (especially open source solutions, for example, on the networks of organizations and enterprises of CIS countries).
**Estimated budget**

USD 55,000
(USD 20,000 from ITU, USD 35,000 from partners)

**Potential partners**

1. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.
2. Software and hardware developers of content filtering solutions.

**Country or countries involved**

All CIS countries.

### 2015 Activities

Creating a unified database with data on existing technical solutions for child online protection and automated system for selecting the best solution for child online protection for a given organization.

### 2016 Activities

- Installation of copy of the database at the ITU CIS Area Office in Moscow.
- Updating of database with data on existing technical solutions for child online protection.
- Presentation workshop.

### 2017 Activities

- Updating of database with data on existing technical solutions for child online protection.
Regional initiative 2
Ensuring access to telecommunication/ICT services for PERSONS WITH DISABILITIES
In 2011, ITU, in cooperation with the UNESCO Institute for Information Technologies in Education (IITE) and with the support of the Ministry of Transport and Communications of the Republic of Armenia and the National Commission of the Republic of Armenia for UNESCO, implemented a project to create an Internet access centre for blind and visually impaired people in Yerevan, Republic of Armenia. The project was highly appreciated by public authorities and attracted ample positive comments from average citizens. It was also noted that it would be useful to create similar centres in other countries of the CIS region. Within the framework of the project, the Internet access centre for blind and visually impaired people was created in the city of Yerevan, based on which UNESCO IITEE experts conducted a training of trainers course to allow them to work further with blind and visually impaired people.

When preparing for the World Telecommunication Development Conference in 2014 (WTDC-14), the CIS countries, drawing on the positive results of a project in Armenia, proposed a regional initiative entitled “Ensuring access to telecommunication/ICT services for persons with disabilities”. WTDC-14 endorsed this regional initiative, which aims to provide assistance to the CIS countries in settling the issues relating to the use of ICTs by people with disabilities. These issues unfortunately receive little attention in the region.
According to the World Health Organization, as of 1 January 2014, persons with disabilities account for approximately 10 per cent of the world’s population. In the Kyrgyz Republic, there are 155,893 people with disabilities, of whom 26,672 children under 18 years of age. In 2010, 18,380 people were first recognized as people with disabilities, of whom 3,943 children under 18; in 2012, 18,659 people, of whom 4,663 children; and in 2013, 16,687 people, of whom 4,342 children. Thus, the number of people with disabilities grows progressively: about 3,000 to 4,000 people are first recognized as people with disabilities in the Kyrgyz Republic each year.

Most of them cannot gain the necessary qualifications to find employment. Only 7,442 children in the Kyrgyz Republic (or 28 per cent of all persons with disabilities under 18 years of age) are covered by basic education services. In the Republic of Kazakhstan, psychological, medical and pedagogical consultations conducted in 2013 identified 138,500 children with disabilities, of whom 44,800 aged 0-6 and 93,700 aged 7-18. A total of 151,200 children were identified as having disabilities in 2012. Currently, 118,200 children (or 85.3 per cent) receive education with corrective and pedagogical support, including 83,500 children of school age and 34,700 children of pre-school age. Of them, 6,210 children are taught under special programmes, including 14,000 children taught in special organizations and 8,500 in special classes; 30,000 children are covered by inclusive education and 8,400 are taught at home; 1,200 are taught in private teaching institutions.

What is the situation today?
Of the seven million people currently constituting the population of the Republic of Tajikistan, 146,000 have disabilities, of whom 12,500 are children under 16 years of age.

In the Republic of Uzbekistan there are 740,000 people with disabilities, including 97,000 children under 16 years of age. The Republic of Uzbekistan led the CIS countries, passing a law for the social rehabilitation of persons with disabilities: 14,627 persons with disabilities, including 1,528 children, completed rehabilitation in rehabilitation centres in the Republic of Uzbekistan.

In the Republic of Azerbaijan, there are 60,000 children with disabilities, of whom 1,105 are taught in special schools, 2,664 are taught in special boarding schools, 7,750 are taught at home, and 268 are covered by inclusive education.

In Turkmenistan, data for 1 January 2011 show 89,967 people with disabilities, including 10,100 children under 16 years of age.

Upon completion of school, people with disabilities, like other people of the same age, want to continue their education in universities. This could help them to adapt to living in society.
As is well known, the Internet is the most suitable and sometimes the only way for people with disabilities to obtain education, a job and information, maintain communication, participate in social life, and pursue an active lifestyle. Today, the websites of public authorities are still not accessible for people with disabilities, including the websites supposed to provide public services.

Although an inclusive education policy is implemented on an equal footing with professional education in all countries of the central Asia region, the printing of textbooks in braille for blind people or in enlarged font for people with impaired vision is still a problem.

The right of children with disabilities to receive high-quality education is not fully realized. The higher education financing system does not make it possible to equip teaching institutions with the necessary equipment to work with people with disabilities.
Objective

To assist ITU Member States of the CIS region to elaborate regulatory documents and technical solutions and implement special training programmes aimed at ensuring ICT accessibility and usability for people with disabilities.

EXPECTED RESULTS

1. Recommendations and regulatory documents, setting out requirements regarding infrastructure and ICT content in terms of their accessibility and usability for people with disabilities.

2. Recommendations for the adaptation of web resources to ensure their maximum accessibility for people with disabilities.

3. Public Internet access points for people with disabilities, equipped with special hardware and software.

4. Information and training centre to provide training for people with disabilities in the CIS region.

5. Methodologies to train people with disabilities to use telecommunications/ICTs and training of teachers to enable them to use the methodologies developed.
OBJECTIVES

• Elaboration of recommendations and regulatory documents, setting out requirements regarding telecommunication/ICT services and web resources to make them more accessible for people with disabilities. Elaboration of recommendations and regulatory documents, setting out requirements regarding the educational process to adapt it to people with disabilities.

• Elaboration of requirements regarding the buildings of educational institutions to make them accessible for people with disabilities; requirements regarding logistical support to the educational process to make it accessible for people with disabilities.

• Elaboration of methodology and criteria for evaluating the accessibility of web resources for people with disabilities.

2015 Activities

• Development of recommendations to improve the accessibility of ICTs for people with disabilities in terms of regulations.

• Development of recommendations and regulatory documents setting out requirements for telecommunication/ICT services and web resources to make them more accessible for people with disabilities.

• Development of recommendations and regulatory documents setting out requirements for the educational process for people with disabilities.

• Development of methodology to train people with disabilities in the use of telecommunications/ICTs. Training of teachers to enable them to use the methodologies developed.

• Publication of the materials.

• Organization of training courses and round tables on issues related to the training of people with disabilities.

• Organization of training courses for teachers to enable them to use the methodology for training people with disabilities in the use telecommunications/ICT.

• Provision of professional orientation work for young people with disabilities.
2016 Activities

- Study of standards and recommendations of experts in the field of Internet technologies of the World Wide Web Consortium (www.W3C.org) and Web Content Accessibility Guidelines (WCAG 2.0) to carry out a survey on the accessibility of the web resources of public authorities.
- Development of methodology and criteria for evaluating the accessibility of web resources for people with disabilities.
- Organization of training and workshops for the developers of public authority websites.
- Organization of a survey on public authority website accessibility for people with disabilities with the aim of taking measures to improve web content accessibility.
- Testing of public authority websites in terms of their accessibility for people with disabilities.
- Publication of the materials.
- Matriculation and education of people with disabilities at selected courses at the Kyrgyz State Technical University n.a. I. Razzakov.
- Development of teaching and learning aids for the subjects studied by people with disabilities.

2017 Activities

- Development of information and education web portal for people with disabilities.
- Conducting of professional orientation work with young people with disabilities.
- Matriculation and training of people with disabilities in Kyrgyz State Technical University n.a. I. Razzakov.
- Development of teaching and learning aids for the subjects of study by people with disabilities.

Estimated budget

USD 69 000
(USD 7 000 from UNESCO IITE, USD 14 000 from ITU, USD 48 000 from IET)

Potential partners

1. Ministries of education of the CIS countries.
2. Institute of Electronica and Telecommunications under Kyrgyz State Technical University n.a. I. Razzakov (Kyrgyz Republic).
4. Equal Opportunities Social Centre (Kyrgyz Republic).
5. UNESCO Institute for Information Technologies in Education (IITE).

Country or countries involved

Kyrgyz Republic and Republic of Belarus:
These countries were involved in the implementation process by decision of the Board, but the implementation results will be provided to all CIS countries.
OBJECTIVES

• Creation of information and training centre for people with disabilities, equipped with special equipment for training people with disabilities.
• Development of methodologies for training people with disabilities to enable them to use telecommunication/ICT devices and training specialists to enable them to implement the methodologies.
• Development of information and education portal, equipped with special software for people with disabilities, for use by the entire CIS.

2015 Activities

• Preparation and improvement of premises in accordance with the recommendations and regulatory documents elaborated setting out requirements for the education process for people with disabilities regarding the buildings of educational institutions and logistical support for the educational process, to make them accessible for people with disabilities.
• Preparation and improvement of the premises.
• Selection of special equipment; development of documentation on selection of special equipment.
• Training of teachers for further work with people with disabilities.
• Activities to organize education process for people with disabilities (development of training materials, profession-oriented modules, multimedia training aids, monitoring and test materials, etc.).
• Provision of textbooks and courseware.
• Development of the report on the work of the centre.
2016 Activities

- Realization of professional orientation work for people living with disabilities.
- Matriculation and education of people with disabilities at the KSTU n.a. I. Razzakov in accordance with the chosen professions.
- Activities to organize the education process for people with disabilities (development of training materials, profession-oriented modules, multimedia training aids, monitoring and test materials, etc.). Provision of textbooks and courseware.
- Creation of database of people with disabilities trained at the centre.
- Elaboration of the report on the work of the centre. Publication of materials.

2017 Activities

- Realization of professional orientation work for people living with disabilities.
- Realization of activities to organize the education process for people with disabilities (development of training materials, profession-oriented modules, multimedia training aids, and monitoring and test materials). Provision of textbooks and courseware.
- Provision of methodological assistance to educational institutions working with people with disabilities.
- Organization of workshop to provide professional training for people with disabilities to upgrade their professional competence.
- Elaboration of the report on the work of the centre. Publication of the materials.
Regional initiative 3

Introduction of TRAINING TECHNOLOGIES AND METHODS using telecommunications/ICTs for HUMAN CAPACITY BUILDING
In the period from 17 to 19 April 2013, the regional seminar for CIS countries “Strategic aspects of using ICTs in education” was held in Odessa, Ukraine. The results of the work of more than 55 participants representing over 40 organizations from 9 countries of the region were recommendations forming the basis of this regional initiative. In particular, seminar participants noted the need to strengthen public-private partnership in implementing ICT in education, the advisability of intensifying work towards the creation of new technical training facilities using ICT, the importance of a systematic approach in the implementation of ICT in education at all levels, the need to develop the legislative framework for the implementation of ICT in education, the advisability of intensifying work on capacity building through the implementation of ICT in education, including improvement of the ICT competence of teachers, the need to develop a legislative, methodological and technical basis of education providing for children with limited abilities, the need to introduce joint work between educational institutions of CIS countries in order to develop interactive educational materials, involving the use of ICT in education, the importance of developing existing and new learning methods using ICT, as well as the need to intensify research and studies on the impact of ICT on the development of student personality.
As is well known in the modern world, human resources continue to be the most important asset. Thus the development of any skills requires continuous and permanent professional training and the exchange of ideas with other areas of expert professional skills, training and development. This is especially important in rural areas today, where people have limited opportunities to use ICTs to their full measure.

The CIS countries share certain characteristics which include, in particular, the general “post-Soviet” model of education which paid insufficient attention to the personal characteristics of the individual student, for example individual differences regarding the supply, perception and assimilation of information. Now, however, the use of a single Internet space and a shared level of ICT development, general language environment (knowledge of the Russian language) and end-user broadband access offer the possibility of significantly improving education with the use of telecommunications/ICTs and practical implementation of a learning approach focused on personality.

Almost all countries of the region have their own projects on ICT in education. Some of these have the status of national programmes.

For example, the Republic of Azerbaijan has the State programme on informatization of the education system, which includes the project AzEduNet (Azerbaijan Educational Network). AzEduNet provides high-speed Internet connection for Azerbaijan’s academic and educational institutions.

Another example is Armenia’s concept to develop information technologies and achieve an information society in the country by 2018. The main purpose is to develop the information...
society, for example, through a robust, ICT-intensive infrastructure, high information literacy of the population, and public electronic services. The concept provides for the creation of a multilayered national communication network. The basis of the State policy in education is “The State programme of education development in the Republic of Armenia for 2008-2015”. The Ministry of Education and Science of the Republic of Armenia approved the “Regulations on the usage of distance learning in higher and post-graduate education”.

The main goal of the education development strategy of the Kyrgyz Republic for 2012-2020 is to create conditions for sustainable development of the education system through effective use of internal and external resources to improve the quality of educational services.

As part of the consolidated efforts of educational institutions to solve practical problems related to distance education in the Kyrgyz Republic, the Kyrgyz Association of Distance Education (KADE) was established.

The introduction of methods and technologies involving the application of telecommunications/ICTs in the educational system of the Kyrgyz Republic and CIS countries is based on many factors, including: the demand for mobile, enthusiastic professionals capable of making optimal decisions in uncertain market conditions and increasing competition in the labour market of specialists in the former Soviet Union. With changing forms and methods of training, the emphasis should be directed towards learning on the job, productive work in small groups, building individual learning paths and personal responsibility in decision-making.
Education is one of the priorities of the long-term strategy “Kazakhstan-2030”. In accordance with the country’s 2007 “Law on education”, the informatization of education is the most important mechanism for implementing the State educational policy, and distance education is defined as a new innovative technology for education. Kazakhstan’s strategic development plan up to 2020, approved in 2010, confirmed the focus on further informatization of the entire education system and mass adoption of electronic learning.

Questions relating to the informatization of education are under close scrutiny by the Government of Uzbekistan. In particular, it is examining the need to develop digital libraries and their effective application in close connection with the project for an integrated network of information and library institutions, with the aim of creating a national network of electronic learning, using electronic resources and multimedia products in all higher educational institutions.

- In the Republic of Belarus, the main activities to informatize education are implemented within the framework of the State programme “Information society”. It is planned to complete the creation of the national information environment of the education system of the Republic of Belarus during 2015.
- In the Republic of Moldova, the objectives of the national strategy for the information society “Electronic Moldova” have included implementation of the pilot institutions of secondary vocational education for distance-learning modules for accessing electronic books.
- In the Russian Federation, as part of the federal target programme to develop education, new-generation electronic educational resources in all subjects of the school curriculum and multimedia resources for pre-school education are being created gradually.
- In Ukraine, the action plan for the development of ICT for education is defined within the framework of the State programme “Information and communication technologies in education and science”.


### Objective

To assist ITU Member States in the CIS region in setting up and developing national programmes for introducing telecommunications/ICTs into education.

### EXPECTED RESULTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Further training courses, training sessions and seminars on introducing telecommunications/ICTs into education and human capacity building, including in rural areas.</td>
</tr>
<tr>
<td>2</td>
<td>Development of distance-learning technologies and methods in areas including the protection of ethnic minorities’ rights to receive education in their own languages by providing additional educational opportunities.</td>
</tr>
<tr>
<td>3</td>
<td>Development of methods for assessing personality traits in order to select the most suitable teaching methods for individual students using telecommunications/ICTs.</td>
</tr>
<tr>
<td>4</td>
<td>Recommendations on methods of setting up national programmes for the introduction of telecommunications/ICTs into education.</td>
</tr>
<tr>
<td>5</td>
<td>Comprehensive human capacity building through education using modern developments in telecommunications/ICTs.</td>
</tr>
</tbody>
</table>
CONCEPT

Development of standard project documentation for creating online educational districts, including guidelines for choosing hardware and software and instructions on installation and configuration with a view to organizing a standard e-district technical platform. Development of a standard set of software for online e-district with maximum use of open source software (or freeware). Development of methodological recommendations on organizing lessons using online districts, including electronic access to educational materials, video conferencing, preparation of content for e-training, etc.

OBJECTIVES

Creation of recommendations for building a single information environment for educational institutions to ensure the rights of ethnic minorities by providing additional educational opportunities, including recommendations for providing remote access to the educational resources of educational institutions (including at weekends, during holidays or quarantine).
2015 Activities
Not planned.

2016 Activities
Development of standard project documentation for creating online educational districts, including guidelines for choosing hardware and software and instructions on installation and configuration with a view to organizing a standard e-district technical platform. Development of a standard set of software for online educational district with maximum use of free software.

2017 Activities
Development of methodological recommendations on conducting lessons using online districts, including electronic access to educational materials, videoconferencing, preparation of content for e-training, etc.

Estimated budget
USD 30 000
(15 000 – ITU, 15 000 – partners)

Potential partners
1. Ministries of education of CIS countries
2. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.
3. Institute of Electronics and Telecommunications at I.Razzakov KSTU.

Country or countries involved
All CIS countries.
CONCEPT
The project proposes to develop methodological recommendations and an online system to diagnose the personal traits of the students so as to choose the most suitable individual techniques and forms.

OBJECTIVES
Identification of personal traits of students that affect the achievement of top results in the educational process. Determination of the optimal forms and methods for presenting educational materials using telecommunications/ICTs. Creation of a platform for the mass testing of students in the region to determine the optimal supply of educational and other materials taking into account the specifics of a particular educational institution in the use of electronic working methods.
CIS3: TRAINING TECHNOLOGIES AND METHODS USING TELECOMMUNICATIONS/ICTS FOR HUMAN CAPACITY BUILDING

Estimated budget
USD 65,000
(20,000 – ITU, 45,000 – partners)

Potential partners
1. Ministries of education of CIS countries
2. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.

Country or countries involved
All CIS countries

2015 Activities
Organization of a pilot survey of target groups to identify the most appropriate techniques for their further use in creating and deploying the system.

2016 Activities
Processing of survey data and development of guidelines for the diagnosis of personal traits of students with the aim of selecting the most appropriate methods for supplying educational materials for teaching using telecommunications/ICTs.

2017 Activities
- Development of an online diagnostic system for analysing the personal traits of students with the aim of selecting the most appropriate methods for teaching using telecommunications/ICTs.
- Test the questionnaire designed for no fewer than 500 students.
- Development, coordination and application of programmes implemented using distance learning technologies in various educational spaces: CIS, and the virtual world educational space. Testing in the Kyrgyz Republic and transfer of methodologies and guidelines to ITU and the CIS countries.
CONCEPT
The project aims to introduce technology and provide for the development and dissemination of electronic educational resources and services for all levels of education, and the cataloguing of electronic educational resources of various types through the use of common information model metadata, based on well-known and widely accepted standards. E-learning modules are to be created on the thematic elements of subjects and disciplines, with complete interactive multimedia products aimed at providing solutions. Methodology and guidelines developed for creating high-quality interactive educational resources are to be tested by the Kyrgyz Republic and transferred to ITU and the CIS countries.

OBJECTIVES
Development of distance education guidelines and methods in order to provide a quality interactive educational resource using ICTs. Development of the concept of electronic resource:
• collection of educational material and its editing;
• development of forms of control and preparation of test tasks and practical tasks for mastering the material;
• software implementation of educational resources;
• development of virtual multimedia components;
• development of graphic and animated materials, recording of video clips;
• development of user interface;
• preparation of educational resource for dissemination and application in the educational process;
• development of guidelines for the creation of a high-quality interactive educational resource, with testing in the Kyrgyz Republic and transfer to ITU and the CIS countries.
2015 Activities
• Not planned.

2016 Activities
• Development of the concept of quality interactive educational resource that will contribute to the needs of stakeholders, especially as regards educational programmes and quality-assurance mechanisms.

2017 Activities
• Development, coordination and application of programmes implemented using distance learning technologies in various educational spaces: CIS, and the virtual world educational space. Testing in the Kyrgyz Republic and transfer of methodologies and guidelines to ITU and the CIS countries.

Estimated budget
USD 151 500
(25 000 – ITU, 126 500 – partners)

Potential partners
2. Kyrgyz Association of Distance Education (KADE).
3. Institute of Electronics and Telecommunications at I. Razzakov KSTU.
4. JSC “Kyrgyztelekom”.
5. State Communications Agency under the Government of the Kyrgyz Republic.
6. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.

Country or countries involved
All CIS countries.

Potential partners
2. Kyrgyz Association of Distance Education (KADE).
3. Institute of Electronics and Telecommunications at I. Razzakov KSTU.
4. JSC “Kyrgyztelekom”.
5. State Communications Agency under the Government of the Kyrgyz Republic.
6. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.

Country or countries involved
All CIS countries.

Potential partners
2. Kyrgyz Association of Distance Education (KADE).
3. Institute of Electronics and Telecommunications at I. Razzakov KSTU.
4. JSC “Kyrgyztelekom”.
5. State Communications Agency under the Government of the Kyrgyz Republic.
6. A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.

Country or countries involved
All CIS countries.
Regional initiative 4
Development of BROADBAND ACCESS and adoption of broadband
Projects implemented in the CIS
under Hyderabad WTDC-10, and projects to be implemented in 2015-2017

The ITU Regional Development Forum for the CIS region was held in Chisinau, Republic of Moldova, on 18 February 2013. It took place on the eve of the ITU Regional Preparatory Meeting for the CIS region (RPM-CIS), the main goal being to consider key set-up trends in the development of telecommunications/ICT over the past year. The open exchange of experiences and in-depth discussion led to the identification of a series of key challenges faced by CIS countries, including the development of broadband access and adoption of broadband. Various issues were discussed. The strategic significance of broadband infrastructure and e-services for socio-economic development of CIS countries was reiterated. Rural areas remain a challenge for many countries and significant efforts need to be made in order to avoid a broadband divide. Even though in some countries fixed broadband deployment is still low, the rapid implementation of 4G technologies creates an opportunity for connecting people to broadband. The ongoing coordination of efforts in the region led to the creation of the new Strategy and Action Plan on the Information Society, in which broadband, e-applications, cybersecurity and capacity building remain at the top of the agenda.
All countries of the CIS region are countries with developing economies that are actively implementing their national socio-economic development plans. One key element affecting the fulfillment of those plans is the need to implement national programmes to reduce the digital divide. The key component of national programmes for the development of ICTs is the provision of access to the Internet, essentially broadband access. The current view is that growth of broadband Internet access (BIA) penetration by 10 per cent leads to an increase in gross domestic product (GDP) of 1 per cent. Thus doubling the average speed of BIA in a country increases GDP by 0.3 per cent.

This shows that the construction of high-speed broadband networks has a direct influence on development of the national economy. By September 2014, the level of penetration of broadband services in the Russian Federation, according to the Ministry of Telecommunications and Mass Communications, was 61 per cent, of which about 35 per cent in rural areas. According to the ministry’s plans, BIA connection should be available to 93 per cent of the population by 2018. There are similar plans for the development of BIA in other countries of the region. For example, during the period 2015-2018 the Republic of Kazakhstan is planning to bring BIA in rural areas to about 1700 settlements with populations of over 2 million people. Despite the efforts of the countries of the region, BIA coverage remains low, and many settlements remain unconnected; only a few countries of the region have developed national strategies and the concept of BIA development. A further problem lies in the allocation of radio-frequency spectrum for new technologies (such as LTE, LTE
Advanced and IMT-Advanced). An example of a successful concept for the development of broadband access with the allocation of radio-frequency spectrum for new technologies would be the Republic of Moldova. The project concept in this country is called “Digital Moldova 2020”.

Analysis of existing approaches to the construction of modern access networks makes it possible to identify numerous options in terms of the technologies and scenarios as well as architectural and topological solutions on which networks can be built. The choice of a particular architectural model for building an access network in a specific country, region or even locality is a far from trivial task, based on analysis of technical and economic indicators.

The correct choice of a particular technology makes it possible not only to use funds for the construction of networks more efficiently, but also to ensure an appropriate level of quality customer service.
Advanced training of human resources in the usage of broadband access networks includes organizing and conducting educational online seminars.
Objectives

To assist interested Member States in developing broadband access, including in rural and remote areas, using energy-efficient technologies.

Expected Results

1. Recommendations for Member States on the development of national ICT plans to meet the demands of populations in participating countries.

2. Improved infrastructure for broadband access to ICT services of acceptable price and quality, in urban, rural and remote areas.

3. Measures to promote the development of broadband access with a view to connecting State social institutions, training centres, and healthcare and social rehabilitation centres, and to promote the use of ICTs by the general public in order to access social services.

4. Improved skills in the use of broadband access networks; this will involve online training seminars and other activities.

5. Recommendations on selecting the most suitable technologies for constructing broadband networks for countries with regions with low population densities.

6. Assistance in the construction of satellite networks for broadband Internet access in countries with low population densities.
CONCEPT
The development of clear methodological recommendations makes it possible to determine the optimal design of network access for a specific country, region or locality. Software to automate the choosing process provides the optimal script for a particular populated locality for building a BIA network. The automation base must incorporate an approach based on simulation of the network construction process using different technological solutions depending on the parameters of specific areas (for example, population density, demand for services, existence of competition, and availability of radio-frequency spectrum). Optimization criteria can include the required investment amount and timing of construction with technical indicators at the appropriate level.

OBJECTIVES
• Analysis of BIA development in the CIS region (existing legislative base, regulations conducive to BIA development, including a licensing system for use of the radio-frequency spectrum for new wireless systems).
• Development of recommendations to the CIS countries on drawing up strategies and the concept of BIA development based on the use of the radio-frequency spectrum for possible wireless broadband systems, including satellite systems, allowing the optimum use of different technologies for BIA development taking into account the geographical location and economic status of CIS countries (up to specific populated localities).
• Development of recommendations on choice of technological bases for the construction of broadband access networks for the CIS countries, which have areas with low-population densities.
• Advanced training of human resources in use of broadband access networks, including the organization of educational online seminars and other events.
2015 Activities
Collection, analysis, and generalization of materials and statistical data and expert evaluation of the information received. Creation of a database with information about existing technical solutions, analysis and development of a methodology for choosing technologies.

2016 Activities
- Development of first version of the recommendations.
- Development of programme for choosing technology in accordance with the chosen methodology.

2017 Activities
- Completion of recommendations, taking into account the results of consultations conducted and data received.
- Testing and debugging of solutions developed to ensure their readiness.
- Organization of a training seminar.

Estimated budget
USD $55,000
(35,000 – ITU, 20,000 – partners)

Potential partners
- Communication administrations of CIS countries
- OJSC “Intellect Telecom”, Russian Federation
- A.S. Popov Odessa National Academy of Telecommunications (ONAT), Ukraine.

Country or countries involved
All CIS countries (the recommendations developed will be for all countries of the region, taking into account their characteristics).
Regional initiative 5
Building CONFIDENCE AND SECURITY in the use of ICTs in the CIS countries
The ITU Regional Development Forum for the CIS region was held in Chisinau, Republic of Moldova, on 18 February 2013. It took place on the eve of the ITU Regional Preparatory Meeting for the CIS region (RPM-CIS), the main goal being to consider key set-up trends in the development of telecommunications/ICT over the past year. The open exchange of experiences and in-depth discussion led to the identification of a series of key challenges faced by CIS countries. The Forum considered a number of upcoming trends in the ICT activities that emerged following the World Summit on the Information Society, including the further internationalization of Internet governance and international efforts aimed at building confidence and security in the field of information, energy and transport. The ongoing coordination of efforts in the region led to the creation of the new Strategy and Action Plan on the Information Society, in which building confidence and security in the use of ICTs and human capacity building remain at the top of the agenda.

ITU provided expert assistance in the field of cybersecurity to the Kyrgyz Republic and the Republic of Armenia in 2011 aimed at the development of national cybersecurity strategies in these countries. In addition, in order to build human capacity in countries in the field of cybersecurity, ITU organized the EUR-ASP-CIS Cross-Regional Seminar on Current Methods for Combating Cybercrime (Odessa, Ukraine, 28-30 March 2012), attended by 90 specialists from 16 countries.
The countries of CIS, which is the region of emerging economies, are actively implementing their national plans for social and economic development. One of the key elements affecting implementation of those plans is building confidence and security in the use of ICTs, which is one of the most important WSIS activities. ITU’s activities in this area are defined by the relevant resolutions of the United Nations, the decisions of the ITU plenipotentiary conference, and the decisions of WTDC-14.

There is currently an action plan in place for implementation of the strategy of cooperation between CIS Member States in the design and development of the information society for the period up to 2015 (approved by the CIS Heads of Government on 28 September 2012). The urgency of building confidence and security in the use of ICTs was noted in Decision No. 1106 “The initial list of confidence-building measures in the framework of the OSCE in order to reduce the risk of conflicts as a result of the use of information and communication technologies” (OSCE Permanent Council PC.DEC / 3 December 1106 2013). The Saint Petersburg Declaration on ICT “Building Confidence and Security in the Use of ICT to Promote Economic Growth and Prosperity” (APEC August 7-8, 2012) noted the need to build confidence and security in the use of ICT to stimulate economic growth and prosperity.

In Ukraine, the company “Kyivstar” conducts systematic work to improve literacy, ethical conduct and the safety of children on the Internet. Similar work is also carried out by “Beltelecom” and a number of other telecommunication operators of CIS countries.

By January 2015, the Russian Federation had developed a number of professional standards determining the requirements for telecommunication/ ICT specialists, and elaborated baseline security parameters for operators that ensure balance between the interests of operators, users and the State. The IPA CIS-RCC Expert Council created in 2003 has developed and adopted over nineteen model laws. In addition,
in order to implement efficient e-services, several CIS countries have elaborated legal documents setting out minimum formal guarantees of access to information held by public authorities, defining a framework of requirements for the categorization and provision of information. Such texts include:

- the resolution of the Council of Ministers of the Republic of Belarus No. 192 of 11 February 2006 “On Approval of Regulations on Internet sites, accompanied by national government bodies and other State organizations subordinate to the Government of the Republic of Belarus”;
- the decision (approved and implemented) regarding the State Standard of the Republic of Belarus of 13 December 2012 No. 79 State standard STB 2105-2012 “Websites of government bodies and organizations”;
- the Republic of Kazakhstan’s “Law on Informatization” (with amendments and additions as of 6 January 2011) dated 11 January 2007, Law No. 217-W.

The Russian Federation has developed and implemented a number of similar laws, including the Order of the Ministry of Communications of Russia of 27 June 2013 No. 149 “On Approval of the Requirements for technological, policy and linguistic facilities necessary to accommodate the information of State bodies and local self-government “Internet” open form data and to provide its use”.

Recommendations for the preparation of the national plans of CIS countries on the development of human capacity building and increased confidence and security in the use of ICTs provide not only for choosing correct monitoring technology and criteria and indicators to assess the level of confidence and safety in the use of ICTs, but also for ensuring an appropriate level of qualifications and training for ICT specialists.
Objective

To develop the potential of Member States in the CIS region in building confidence and security in the use of ICTs, within the framework of the concept of information ecology for sustainable development and combating the potential negative consequences of the impact of the information environment.

Expected Results

1. Human capacity building in the countries of the region in building confidence and security in the use of ICTs, with adaptation for age, health condition and area of activity, including for effective use of e-government services.

2. Assistance to CIS countries aimed at joint participation in global Internet governance policy.

3. Parameters of the information environment and criteria for assessing their impact on humans.

4. Recommendations on conducting information and ecological expert analyses of ICT projects and the information environment in which they are applied (for example, region, country, and town).

5. Organization of an international conference on health care using ICTs by providing the population with telemedicine services in rural and remote regions, for discussion of the key technical and regulatory aspects of implementing telemedicine services. Formulation of recommendations on the necessary refinement of legislation in the countries of the region for developing telemedicine.

6. Continuous professional development courses, training and seminars on monitoring the status of the information environment and its effect on humans, including building trust and security in the use of ICTs.
CONCEPT

The development of clear methodological recommendations will make it possible to determine the demands for optimal levels of confidence and security with the aim of enhancing international cooperation, transparency, predictability and stability and reducing the risk of misperception, escalation and conflict that may arise from the use of ICTs. The development of criteria/indicators to assess the level of trust and safety in the use of ICTs, and recommendations on methods involving information/ecological expertise to assess the impact of ICT projects on the environment will help the ITU Member States of the CIS region to organize the monitoring and rating of countries according to their level of confidence and security in the use of ICTs. The organization of training courses and seminars on monitoring the status of the information environment and its impact on people, including influence in strengthening confidence and security in the use of ICTs, will contribute to harmonizing requirements for all professional skill levels of telecommunication/ICT engineers.

OBJECTIVES

• Development of recommendations on the preparation of plans in the CIS countries for monitoring and rating countries according to level of confidence and security in order to enhance international cooperation, transparency, predictability and stability and reduce the risk of misperception, escalation and conflict that may arise from the use of ICTs.

• Development of methodology for assessing the professional skill level of specialists in the field of ICT to provide a sufficient level of confidence and security in the establishment and operation of telecommunications/ICTs.

• Organization of training courses and seminars on monitoring the status of the information environment and its impact on people, including influence in strengthening confidence and security in the use of ICTs.

Developing recommendations for the preparation of national plans in CIS countries on the DEVELOPMENT OF HUMAN CAPACITY BUILDING in increasing confidence and security in order to enhance international cooperation, transparency, predictability and stability and reduce the risk of misperception, escalation and conflict that may arise from the use of ICTs for ITU Member States in the CIS region. (Expected results 1-4).
1. Communication administration of the CIS countries
2. Moscow Technical University of Communications and Informatics (MTUCI), Russian Federation
3. The Russian Union of Industrialists and Entrepreneurs (RSPP), Russian Federation.

Estimated budget
USD 45,000
(30,000 – ITU, 15,000 – partners)

Potential partners
All CIS countries (the recommendations developed will be for all countries of the region, taking into account their characteristics).
2015 Activities

• Collection, analysis, and synthesis of materials and statistical data and expert evaluation of the information received.
• Creation of a database of information environment parameters and criteria to assess their impact on people, including in regard to confidence and security in the use of ICTs.
• (Financing by ITU in 2015 is not required.)

2016 Activities

• Development of the first version of the recommendations on drawing up plans in the CIS countries for monitoring and rating countries according to level of confidence and security in the use of ICTs.
• Development of the first version of the recommendations on evaluation of the professional skill level of specialists in the field of ICT in terms of providing confidence and security in the establishment and operation of telecommunications/ICTs.
2017 Activities

Finalization of recommendations based on consultations and findings, including:

- Development of criteria/indicators to assess the level of confidence and safety in the use of ICTs.
- Development of recommendations on methods involving information/ecological expertise to assess the impact of ICT projects on the environment for all stakeholders: government, civil society, business community.
- Development and discussion of professional standards to ensure the credibility of the experts in the interests of the CIS Member States and business community.
- Development and discussion of the professional skill level of telecommunication/ICT specialists.
- Harmonization of requirements for each of the professional skill levels.
- Development of recommendations for the establishment of training courses in the field of ICT to meet requirements for ensuring trust and security.
- Scientific-Methodical Forum (Training) for the ITU Member States of the CIS region “Monitoring and Parameters of the information environment and criteria for assessing their impact on building confidence and security in the use of ICTs in the CIS countries”, facilitated by the ITU Area Office for CIS.