CURRICULUM OUTLINE
FOR CENTRAL ASIA

April 17-20, 2012
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1 INTRODUCTION

The Center for Global Communication Studies at the Annenberg School for Communication, University of Pennsylvania and the American University of Central Asia are pleased to announce a one-week workshop on Broadband Fundamentals and ICT Policy be held in Bishkek from April 16-20, 2012, for public officials, regulators and business leaders with experience or interest in developing policy vision, skills sets, and institutional design in the ICT field, as well as regulatory toolkits for development.

The workshop will consist of two separate components: a basic training, and an advanced topics course, with a total time of 5 days. This document offers a description of the main topics to be discussed in the different sessions:

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<td>ICT trends in Technology for ICT Government Leaders I (Session 1)</td>
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<td>Knowledge Management for Government (Session 5)</td>
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<td>Democratic Governance for Effective ICT Development (Session 6)</td>
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**Day 1 Advanced Training: Thursday, April 19**

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<td>Regulation and Spectrum Management, Digital Migration, Digital Switchover and Digital Divide (Session 10)</td>
<td>Krisztina Rozgonyi, Respondent: Nurmatov</td>
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<td>13:15</td>
<td>Regulation of Broadcasting and Content (Session 11)</td>
<td>Katrin Nyman Metcalf, Respondent: Tattu Mambetalieva</td>
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<td>15:00</td>
<td>Business E-Tools for ICT Leaders (Session 12)</td>
<td>Alisher Abdukadirov</td>
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**Day 2 Advanced Training, Friday, April 20**

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<td>E-Government Tools (Session 13)</td>
<td>Katrin Nyman Metcalf, Respondents: Asomiddin Atoev and Abdukadirov, Alisher</td>
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<td>Krisztina Rozgonyi, Respondent: Almaz Bakenov</td>
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Both international and local trainers and respondents will participate in the delivery of the training with a strong academic, public administration and business background:

**Krisztina Rozgonyi (program director)**

Dr. Krisztina Rozgonyi is a telecom and media regulatory expert with a significant experience and background in the CEE region. Her special areas are media and telecommunications regulation, digital switchover legal strategies, media law focusing on digital age issues and copyright law focusing on digital archives. As a member and the former head of the Hungarian Communication Authority (“HCA”), she was involved in strategic radio spectrum allocation issues and was responsible for digital switchover and convergence policy issues. Krisztina resigned her position as Chairperson of the HCA to join PRK Partners Budapest and became the head of the TMT department. Since then she has served as the key legal and regulatory advisor of the Serbian Government on digital switchover in Serbia, and she has been nominated by the BBC WST as a consortium leader for a 2 million Euro EU/IPA-project. Regarding her practice as legal advisor, she actively worked on the drafting of the Hungarian Telecommunication Act, the Digital Switch-over Act and amendments to the Media Act. As a copyright lawyer, she was also involved in several major digitalization projects, such as the National Audiovisual Archive of Hungary. She has also represented one of the copyright collecting societies in Hungary for eight years.

**Katrin Nyman-Metcalf (trainer)**

Dr. Katrin Nyman-Metcalf is a Professor of International and Comparative Law and Chair of Law and Technology at Tallinn Law School, Tallinn University of Technology, lecturing in public international, EU and comparative law with a special emphasis on communications law. Dr. Nyman received her PhD from Uppsala University, Sweden (1999), conducting her research on legal issues related to the use of outer space for communications. Dr. Nyman-Metcalf has published extensively on international and EU law, including on media issues and on special problems of countries in transition. Apart from her academic work, Professor Nyman-Metcalf is active as an international consultant primarily in the area of media, information and communication technology law. Projects include regular legal analysis of media and communications legislation for the OSCE, EU legislative projects, support to the judicial sector in Palestine on media and data protection issues, work on setting up regulatory systems and professional training especially for post-conflict societies (including areas in the former Yugoslavia, Afghanistan, Iraq and Somalia) and work with the Estonian E-governance academy on legal aspects of e-government.
Asomiddin Atoev (trainer)

Asomiddin completed his first degree in applied mathematics at the Tajik State University. After 2 years experience in the private sector as a software developer he joined an international NGO, Central Asian Development Agency (CADA), the organization responsible for establishing the first network of public email centers across Tajikistan. Working as a system administrator for 3 years, he was promoted to a manager of the Internet project for the local academic community funded by NATO Science Programme, Open Society Institute and CADA. During this time he completed a British Council-sponsored M.Sc in Computer Science at the University of Salford. Upon completion of the Internet project he joined an Internet policy developing project of the Internews Network and the Center for Democracy & Technology, and the Global Internet Policy Initiative (GIPI) as a national coordinator in Tajikistan. Since then he has carried out policymaking, research and consultancy on information and communication technologies for development.

Asomiddin obtained his Msc in the information and communication technologies for development (ICT4D) from the University of Manchester. He is actively involved in various inter-industrial working groups on ICT4D issues, particularly policy, in Tajikistan.

As an International Policy Fellowships (IPF) 2004-2005 fellow he conducted research on issues concerning the intellectual property rights in software market of the Central Asian countries with expansion of Internet in the region (http://www.policy.hu/atoev). It was supported by the Center for Policy Studies at Central European University (http://cps.ceu.hu/) and Open Society Institute Budapest. He has publications in the ICT4D policy in the national journals, international conferences and the Global Information Society Watch reports.

Almaz Bakenov (trainer and respondent)

Almaz Bakenov is currently the Director of the National Information Technology Center of the Kyrgyz Republic in Bishkek. In 2004, he was appointed to this position by the President of the Kyrgyz Republic to perform the Kyrgyz-Japanese project ―IT Human Resources Development in the Kyrgyz Republic‖. He is member of the ICT Council headed by the First Deputy Prime Minister of the Kyrgyz Republic.

Currently he teaches ICT for Development courses to MPA students at the Academy of Management under the President of the Kyrgyz Republic, IT Project Management and System Analysis courses at the National Information Technology Center. His current areas of interest are ICT policy in developing and emerging economies and statistical analysis for political and social research.

He graduated from St. Petersburg Institute of Fine Mechanics and Optics of Russia (Diploma with distinctions) and Brigham Young University (MS in Computer Science) of USA.

Abdukadirov Alisher (trainer and respondent)

Dr. Alisher Abdukadirov is an expert in Telecommunications with 16 years of experience in the field. He is currently working as the Technical Director Of Bitel Service Ltd, managing
Telecoms, IT, and CRM projects, and negotiating with Government and Telecom authorities on industry development. He also serves as a part-time Lecturer at Tashkent University of Information Technologies (TUIT), conducting tutorials and lectures on mobile communications basics, Broadband wireless access technologies, and 4G mobile technologies. Previously, Abdukadirov served as the Country Manager for Motorola GmbH in Uzbekistan and as a project Expert for the Foreign Investment Agency of Uzbekistan, working with the UNDP to attract foreign investment and manage investment projects. Dr. Abdukadirov obtained his Ph.D. from Tashkent University of Information Technologies, researching radio communications development in Uzbekistan. He also has his MBA in International Business from Tashkent University of World Economy and Diplomacy and his Diploma of Engineering in Radio-electronics and Automatics.

Elnura Kudaibergenova (respondent)

Mrs. Elnura Kudaibergenova is a lawyer and Project Coordinator for the Civil Initiative on Internet Policy, a non-governmental organization that aims to advocate for legislative and regulatory reforms and ICT policy that promotes competition, free access to telecommunications services and information resources, as well as transparent and predictable regulations. She graduated from the Kyrgyz-Russian Slavic University, earning a Law degree in 2006 and finishing her post-graduate studies at the same institution in 2010. She has lectured and participated in numerous conferences and round tables on International Humanitarian Law.

Tattu Mambetalieva (respondent)

Dr. Tattu Mambetalieva has significant experience working as an expert on policy and legislation in the field of Information and Communication Technologies (ICT). Working as a legal consultant for Regional (CIS) Commonwealth in the field of Communications and Interparliamentary assembly of CIS countries, Dr. Mambetalieva is actively engaged in the regional CIS and international ICT policy and advocacy activities, and she is often invited to participate as an expert in ICT related seminars and conferences. She has worked on Internet policy in many countries, including Uzbekistan, Kazakhstan, Mongolia, Azerbaijan and others. She currently works as Director of the Public Foundation Civil Initiative on Internet Policy. Dr. Mambetalieva obtained her Ph.D. in Civil Law from Russia’s Academy of Public Service and her Law degree from Kyrgyz National State University.

Baiysh Nurmatov (respondent)

Dr. Nurmatov is a highly qualified expert in the field of communications with over 40 years of experience in the field. He was elected as a member of the Radio Regulations Board (RRB) by the Plenipotentiary Conference of the International Telecommunications Union for two four-year terms. Dr. Nurmatov has extensive experience in research in the field of communications, having been engaged in broadcasting, radio communications and spectrum research for over twenty five years. Since 2000, he has been studying the effect of high altitude on the digital networks of fixed and radio broadcasting. His international experience is also ample, having actively participated in various activities of the International Telecommunications Union and of the Regional Commonwealth in the Field of Communications since 1995. Dr. Nurmatov is the Director of the Institute of Electronics and Telecommunications at Kyrgyz State National
Technical University. He studied at the Moscow Technical University for Communications and Informatics, where he received his undergraduate degree in Radio Engineering and his Ph.D.

From the methodology point of view interactivity and participants active involvement is a priority by means of facilitated group discussion, group exercises and group discussion on case studies.

- In course of facilitated group discussion we want to challenge people to think about the topic at hand, and to create a safe environment for people to share their thoughts—to help everyone feel valued about the input they've offered and to grasp the importance of the discussed issue.

- The selected case studies will be briefly presented (in a simplified form) in order for the participants to “solve” these cases. The participants will be given a short time to discuss the cases in groups and later to present their suggestions to the entire group.

- Group exercise will be designed around specific tasks related to the given session’s main focus, e.g.: create an ICT regulator: set out its composition, how it is created and what its main tasks should be (also in relation to tasks of other authorities and/or business).
2 DAY 1

2.1 Session 1-2: ICT trends in technology for ICT government leaders

Main topics:

- Technological Evolution: Broad Developments
  - The Information Age
  - Technology Timeline
  - Cloud Computing
  - The Digital Divide
  - Digital Divide Indicators
  - ICT Infrastructure and Access Indicators
  - Access to ICT
  - Can Mobile Phones help bridge the Digital Divide?
  - The Telecommunications Evolution and Convergence
  - IPad 3, “Paypal Here”
  - Policy Considerations
  - Assignment 1

- Network Building Blocks
  - Connectivity medium
  - Network devices
  - Policy considerations

- The Internet and its Infrastructure
  - The Internet
  - The Internet in Central Asia
  - Internet Infrastructure Components
  - Internet Traffic Report
  - Policy considerations
  - Assignment 2

- Internet Applications, Internet Organizations
  - Internet Applications
  - SPAM
  - GIS on the Internet (Google Maps)
  - VoIP
  - VoIP and Policy Issues
• Internet Organizations
  o ICANN
  o Policy Considerations
  o Assignment 3

• IPv6, Next Generation Computing, and Broadband Technologies
  o IPv6
  o Next Generation Computing
  o Social Networks
  o Sensor Networks
  o RFID
  o Grid Computing
  o Broadband Access – Wi-Fi, Wimax, 3G
  o IPTV and Internet Television
  o Assignment 4

• Connecting the Modern Organization
  o Hardware considerations (clouds)
  o Free/Open Source Software
  o Software as a Service
  o Intranets
  o Identity management (tokenization)
  o Policy Considerations
  o Assignment 5

Reference material

• Imagining the Internet. A project of the Elon University School of Communications and the Pew Internet and American Life Project. http://www.elon.edu/predictions
• Crocker, Dave. http://www.livinginternet.com
• South East Asia Middle East Western Europe 4 (SEA-ME-WE 4) project website. Sri Lanka Telecom. http://www.seamewe4.com
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- http://www.textually.org
- “Ask the economists: Internet & development - towards a Wider World Web?” Online debate hosted by Sam Paltridge, on OECD website, 21 February 2008, http://www.oecd.org/document/29/0,3343,fr_2649_34855_40067741_1_1_1_1,00.html

2.2 **Session 3-4: Effective leadership for policy makers and regulatory officials**

**Main topics:**

- Modern information society means that information and communication technologies (ICT) play a very important role in both the private and the public sector.
- ICT is what is called a regulated sector: it is not totally open to market forces; even if it is liberalized and privatized there are still special considerations to be made by policymakers and legislators to ensure benefit for all of the services.
- The balance between what should be in law or in policy documents or in secondary legislation may be complicated, as each instrument fulfils a distinct role; they all interrelate but should not interfere.
- There is and should be a distinction between making rules and applying them, although for regulatory agencies in regulated sectors of the economy (such as ICTs) this division looks different than in other areas of the economy.
- Independent regulators should be objective, non-political, and transparent, providing a possibility of appeal. Most regulators conduct the oversight of the sector based on complaints but also do some monitoring.
- The key tasks of a regulator include licensing, monitoring and working with the sector to assist in making agreements and solving disputes. The regulator also makes rules for the sector (secondary legislation) – however, the policy should be made by policy-making bodies.
Some preliminary discussion questions:

- What obstacles are there in law and in fact against effective and independent regulatory agencies?
- What moves are there to overcome such obstacles?
- Is there a recognition in your country/region of the importance to ensure effective, objective and independent regulation?

Reference material

- Module 2 ICT for Development Policy, Process and Governance, UN APCICT-ESCAP: http://www.unapcict.org/academy/academy-modules/english (also available in Russian)
- Web-sites of a number of communications regulators:
  - www.ofcom.org.uk
  - www.art-telecom.fr
  - www.cra.ba
  - www.bakom.ch
  - www.tkc.at
  - www.agcom.it
  - www.fcc.gov

2.3 Session 5: Knowledge management for Government

Main topics:

- The session aims to introduce the essentials of Knowledge Management (KM) for government in the information economy. Through sharing best practices of the private sector institutions, the session will be focused not only on effective usage of the existing knowledge but also on importance of development of new knowledge that helps government to harness the advantages of information and communication technologies for meeting local needs.

- As a result of the training participants will be able to
• apply the KM maturity model to analye the organization's level of knowledge management and identify measures for its improvement;
• share advantages of knowledge generating KM environment with their colleagues for better deployment of ICTs in their organization's activities;
• identify types of knowledge and four modes of the knowledge conversion

• Session will cover the following content:

1. Knowledge management and its benefits for government and society
   KM in information age is vital to increase organizational human capacity, enforce sustainable growth, gain competitive advantage through adding adaptive learning (usage of existing knowledge) and/or generative learning (creating new knowledge) to the organizational culture.

2. What is knowledge management?
   In short, KM is about capturing, creating, storing, sharing and using the required knowledge at required time by a right person. KM attributes (data, information, knowledge). Data-information-knowledge-wisdom continuum. Data, Information, and Knowledge inter-relationships as the core of information system.

3. Types of knowledge and the SECI (Nonaka) Model of knowledge–Modes of Knowledge Transfer
   o tacit and explicit types of knowledge (Nonaka 1994) and their role in creating new knowledge through four modes of conversion: socialization, combination, externalization, internalization.
   o adaptive (focus on solving problems using an existing framework) and generative (creating new knowledge by questioning an existing framework) learnings culture of organization.

4. KM Maturity Model
   KM cycle (identify, create, store, share, apply), new knowledge creation framework. To design the KM Maturity Model, Arling & Chun (2011) applied four stages of the information system architecture development to develop KM competencies organizations (see Figure 2).

Reference material:
2.4 **Session 6: Democratic Governance for effective ICT development**

*Main topics*: 

- For information society to really benefit a state and its people provides a challenge for both public and private sector bodies. It must be determined if different aspects of ICT are better handled by the state or by private companies.

- Liberalization has lead to regulation of ICT being moved from direct government control to independent regulators that should be objective, non-political, and transparent, providing a possibility of appeal.

- If communication is to be a positive player in the creation of a democratic rule of law society, it must have the conditions necessary for this. Such conditions are created by legislation and regulation as well as by the practical and technical conditions for ICTs. Legislation and regulatory work should create an attractive environment for investments in the sector.

- ICT (telecommunications) is a utility, a service of special importance for people and for the economy. There must be universal access to such important service.

- Telecommunications depends on a network and all entities must have access to this network and be able to interconnect with one-another. To ensure this is an important goal for the regulator.

- Because of an imperfect market, the regulator is involved in setting prices. There are different methods like price-cap regulation and rate of return regulation. There must be a balance between different interests when the market is thus interfered with.

- ICT law deals with limited resources like the frequency spectrum and the numbering plan and equitable and efficient division of these between users.

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1 *This sessions builds upon the discussions held in the previous session, in the manner that specific issues that came up will be referred back to and set in a slightly different context of how governance contributes directly to the development of the ICT sector and how democratic principles can be applied in the interface between business and regulation.*
• The infrastructure is also limited and there should be co-location and sharing.
• Private companies are under a number of restrictions in the ICT field and it may be discussed if it is fair and reasonable to force private companies to interconnect, to allow access to networks to competitors and to be forced to share infrastructure.
• One key to obtaining democratic governance is the principle of consultations.
• Many issues should be solved by negotiations between undertakings (or other relevant parties) but if they cannot agree, the regulator must be able to step in.
• Many of the tasks of ICT regulators are such that the issue should first and foremost be set by the market, but if this does not work the regulator steps in. This includes standardization, which should be primarily market driven but in many cases, there is a need for intervention to protect consumers, to allow the market to function and to allow for an international market. National organs may make standards and/or implement existing ones (ITU or other international standards). There should be extensive publication of standards and invitation of public comment before adoption to ensure that the standard is what is suitable for industry. Any decision to make the implementation of standards mandatory should follow a full public consultation.

Reference material

• Also listed under the session for Effective Leadership for policy-makers and regulatory officials:

• Module 2 ICT for Development Policy, Process and Governance, UN APCICT-ESCAP: http://www.unapcict.org/academy/academy-modules/english (also available in Russian)

• ICT Regulation Toolkit, Module 6 Legal and Institutional Framework http://www.ictregulationtoolkit.org/en/index.html (also available in Russian)

2.5 Session 7-8: Institutional design and processes

Main topics:

• The right to freedom of expression is not just an important human right in itself but it is in many ways a precondition for the functioning of other human rights- and freedoms. Information and communication technologies are essential for freedom of expression in a modern society. The institutions set up in the ICT areas safeguard this important freedom.
• Technologies used for telecommunications, for broadcasting or for various uses of the radio frequency spectrum have to a large extent converged, with the same technologies used for different services and uses. This has lead to a convergence of legislation and regulation with the same bodies dealing with different communications aspects (telecom, broadcasting etc).

• Convergence happens not just in the technical sense but also in the sense of the same legal basis for regulation, joint regulators or systems for joint regulation. Convergence may mean that new possibilities open up for a more efficient use of the spectrum as well as of infrastructure related to spectrum use.

• Communications regulation is in a process of change in most countries due to the ongoing processes of liberalization as well as convergence and rise of new means of communication.

• Modern regulators tend to go more toward a complaint driven system where – instead of monitoring everything – the regulator acts on complaints from the public. Thus is must be easy to make complaints and the complaints process must also act to educate people on communication standards. This way the system will be in touch with popular concerns although the regulator must still perform to task of determining if and how to react on complaints and make investigations which will lead to a decision either dismissing the complaint or upholding it and deciding on a sanction.

• It is important that there is confidence in the regulator from those affected by its decisions. Transparency and a firm legal basis are important elements promoting such confidence. If it is seen that the regulator takes into account objective facts, clear performance criteria and bases its decisions on what is best for the entire country, the decisions will be accepted and it is more likely that also those who get a negative decision will accept it.

• One challenge for the regulator is to achieve trust from different sectors of the societies. This challenge is all the greater if the society is divided (ethnically, because of a conflict or for other reasons). If there is no proper implementation of regulatory decisions, this will lead to a lack of credibility for the regulator which may well prevent it from being able to play any positive role.

• The composition of a regulator is very important to achieve independence as well as the perception of independence. Members must have expertise, show examples of diversity, not be connected with business or politics in an inappropriate way. Diversity from ethnic and political viewpoints is important.
• Regulators should be independent. Not only should they be independent from the operators (broadcasters and telecommunications operators) but they should also enjoy an independent status in the state structures. Even if it will be the government that in the end is responsible for policy issues and for spectrum, the day-to-day running of the regulator should not be influenced by the government or other political bodies.

• This can be ensured by making sure that the working methods permit independent decision-making and that members of the governing organs are chosen based on merit and in a manner to ensure a plurality of interests. Civil society organizations should be able to nominate members to the governing bodies of regulators and/or there should be frameworks for the close co-operation between the regulator and such bodies.

• The regulatory authority should act independently based on considerations of what is suitable for communications. This is best ensured if it is politically independent from the government in its decision-making, it is staffed by experts without political affiliation and financially independent through having its own revenues. The regulator should be set up in law and operate in under clear rules, clarity and transparency being important elements of legal security. A possibility of appeal to a court or possibly other independent body should be provided based on the understanding that the right to communication is such a civil right, which merits protection.

Reference material

• See above, session on Effective Leadership for policy-makers and regulatory officials, for links to web-sites of regulators.
3.1 Session 9: Competition and price regulation – regulation in order to enhance competition

*Main topics:*

- A trend the regulation has to accommodate is liberalization. Liberalization and privatization are not the same thing although often occurring in conjunction with one another. Privatization relates to the ownership whereas liberalization means allowing competition.
- The first private telecommunications operator in Europe was in the UK in 1986 so the process is quite new in Europe, as opposed to the US. In much of the rest of the world there is also now a liberalization process, often hand in hand with privatization.
- After liberalization, when the state no longer operates and controls ICT competition law and special issues of competition law such as rules for the market functioning for services of general economic interest are very important.
- The work of a regulator in relation to telecommunications is in many respects an implementation of the competition law principles in a manner suitable for this specific area. This includes the following:
  - Interconnection: ensuring access to networks and interconnection between operators. This should primarily be decided by the sector participants but will be ensured by the regulator who will step in if there is no agreement or to solve any disputes. Regulators publish reference interconnection offers to assist with what is a reasonable cost for interconnection. There are different types of regulation. Price-cap regulation means that the regulator sets price, if operators are efficient they get to keep the profit they make. Another method is rate of return where a guaranteed profit is set.
  - Tariffs, interconnection charges. Should be set by the sector participants but the regulator ensures the fairness (so that competition is possible while still recognizing reasonable costs for maintaining the network, historic costs, etc.)
  - Universal service obligation: content, functioning and payment.
  - Frequency issues
Terminal equipment standards and approval (may be a separate standardization body)
Accounting rules: bans on cross-subsidizing, transparency, etc.
Numbering plan, number portability

Securing network integrity and functioning
Infrastructure sharing, most effective infrastructure
Dispute resolution
Consumer issues (together with or instead with a consumer body)
General competition issues (together with or instead of the regular competition body)

Some preliminary discussion questions:

What is the division of tasks of electronic communication regulation in your country between the following players
- ministry
- national regulatory authority
- media authority
- competition office?

What are the main potential benefits and risks of liberalisation in the network industries (telecommunication, electricity, water, central heating etc.)?

Reference material


3.2 Session 10: Regulation of spectrum management, digital switchover and digital dividend

Main topics:
- As a result of this session, participants will
  - be able to identify the focal points of spectrum management and the need for a more flexible approach,
  - walk through the key questions and challenges emerging in the process of digital terrestrial switchover anywhere in the world,
  - understand the importance of the digital dividend and the need for appropriate actions both on national and European level,
  - be able to draw a draft roadmap of most urgent spectrum policy interventions in the target countries.
- The main topics to be discussed are as follows:
Spectrum management overview

- spectrum as an economic resource
- spectrum as a technical resource
- spectrum scarcity
- main objectives of spectrum management
- fundamental spectrum management approaches
- main spectrum policy and planning dilemmas ahead

Managing digital terrestrial switchover (DSO)

- what is the importance and relevance of DSO?
- what is the role of the state?
- what are the media, ICT and competition policy implications?
- what are the main elements of a successful policy mix?

Digital dividend: opportunities and necessary actions

- What is the digital dividend?
- What could the digital dividend be used for?
- What are the necessary actions on national and European level?

Some preliminary discussion questions

- Who would be the main opponents and supporters of a more flexible and market oriented spectrum policy in your country?
- What can be the main economic and social risks and benefits of digital terrestrial switchover in your countries?
- How could you convince a politician to support the digital terrestrial switchover?
- Who would be the main opponents and supporters of a spectrum policy reform and digital switchover in your country?
- How would you distribute the digital dividend in your country among broadcasters, mobile broadband and other services?

Reference material

3.3 Session 11: Regulation of broadcasting and content

Main topics:

- The basic principle of communications regulation is that there should be no prior control of the content of messages in a society respecting freedom of expression. Censorship should be prohibited regardless of the technologies used for transmission of messages.
- Convergence has lead to a change in terminology commonly used in the communications area: “Audiovisual media services” is used instead of broadcasting to encompass all kinds of services, regardless of technology. “Information and communication technologies (ICT)” and “information society services” replace telecommunications.
- Broadcast media is regulated differently from printed media in countries with freedom of expression, not only because it uses radio frequencies but also as broadcasting is seen to have a different impact than print media due to its immediacy and the stronger effect on the audience that visual and audio messages are thought to have.
- Another reason for the different regulation is that broadcasting (especially television) ever since it was new has been seen as a very important means to communicate messages, thus being something over which governments want to ensure a certain control. The same reason lead to early television in many countries being run by the state or at least through public bodies. In most countries in the world this has changed in more recent times, with liberalization of broadcasting and public service broadcasting remaining (if it exists) as just one actor on the broadcasting scene.
- Generally, electronic communication is handled by an official regulatory authority whereas printed media can be self-regulated, combined with general law for particular issues (like e.g. defamation, prohibition of incitement to violence or of child pornography). Standards upheld by self-regulation may also apply to broadcast media in addition to or in combination with the official regulation.
- Internationalization is an important trend. Media has ever greater possibilities of moving freely across borders. One common question is what can be done about unsuitable broadcasts coming in from abroad, especially when something is specifically aimed at the country from abroad. Internet poses yet more challenges for those wishing to stem the flow of information than satellite broadcasting does and ever newer means of transmitting broadcasting content appear each year – like broadcasting to mobile telephones.
• Broadcasting content regulation is not the same as censorship: it is done after the broadcast was aired and it does not look at the content of specific messages but rather at the general content, any dangers that the message may lead to (incitement, defamation, risk for children and young people etc.).

• There may be special programming requirements as a licensing condition but not about the specific content of programmes but rather on things like how many hours of news there should be, that violent programmes can only be shown after a certain time and so on.

• The regulator monitors and implements standards (together with the self-regulatory system) and it is very important to do this in a proportional, just, transparent and objective manner. Standards for example of what is morally disturbing vary with time and place and the regulator must make the decisions suitable for the society it operates in.

• Some preliminary discussion questions:
  o With regulation of broadcasting content there is always a risk that it becomes a form of censorship, if the regulation is too strict. This is especially a risk in transition societies, what is it like in your country/region?
  o Are there any systems of self-regulation, codes of ethics and similar, and does the implementation of these work?
  o What issues if any should be restricted in broadcasting content and what issues promoted? (In other words, what should the main content of the broadcasting content policy be?)

**Preliminary discussion questions**

• In your opinion, how broadband can contribute to
  o productivity improvement
  o job creation
  o consumer satisfaction
  o social cohesion?

• What is the main roles the state should play and is playing in your countries in order to foster broadband development?

• What is the attitude of main stakeholders (service providers, consumers, civil players, politicians, public institutions etc.) towards broadband development and the related actual and potential public intervention?
Reference material

- UN surveys: [http://www2.unpan.org/egovkb/global_reports/10report.htm](http://www2.unpan.org/egovkb/global_reports/10report.htm)

3.4 Session 12: Business e-tools for ICT

Main topics:

- At this training session
  - The presentation will last 90 min. and consist of 2 parts by 35 and 50 min accordingly with 5 min. break in between.
  - Handouts for advance reading will be distributed to auditory beforehand.
  - Additional handouts to be used during the presentation will be distributed in the beginning of the session.
  - The presentation will start with a video clip of Microsoft on “Future of ICT”, to be shown online from YouTube
  - The overall presentation will not be deep in details, but with ability to go deeper into any interested topic as well as offering additional readings and references
  - Will try to keep auditory in “easy” mode by interactive discussions, fun stories and real cases
  - The culmination of the session should become a group work where a real life business cases will be given for the groups to develop a unique solution with implementing best fit ICT tool.
  - Jury consisting of 3 elected experts from 3 groups will select the best project which then will be awarded by prize.

- The main topics to be examined are as follows
  - Global Trends of ICT development (What will come in our lives in near future in terms of ICT)
  - Broadband technologies evolution (Brief history, current level and perspectives of broadband technologies)
  - Mobile Broadband as one of the fastest growing ICT segment (Classifications, features, applications)
  - Brief presentation of 4G technologies (LTE, WiMAX, Wi-Fi, comparison,)
o ICT applications in Business (Presenting E-Commerce, M-Business, Teleconference, Telemetry, RFID/ZigBee technologies, ERP/CRM systems)

o Case studies of Business conduct in a broadband environment (Best ICT projects implemented, study and analysis of ICT tools in business)

o Group task on ICT-project design for various types of business (Class will be divided into 3 group with individual case and task. Each group will have to work out own project on solving problem by using best fit ICT tools.)

Reference material:

- Материалы Википедии
- Develop a Global Partnership for Development
- Сайт компании Terrasoft: www.terrasoft.ua
4.1 Session 13: E-Government tools

Main topics

- E-services (for private and public sector) can be of great benefit for the state by saving money, being user friendly and secure. E-services are of great benefit to individuals, businesses and states. It allows for efficient, fast and non-corruptible services that the user accesses at any time and place. The states that have been in the forefront of using e-services (both e-government and e-commerce) can show many benefits. If there have been any disadvantages, these have often not been because of the electronic nature of the service but due to human error or carelessness (like allowing unauthorized access to the services, lack of security measures).

- However, there is no automatic link between e-government (or increased use of ICT) and better administration, nor is there a causal relationship as such between e-government and better, more democratic and efficient governance. Fundamental issues must still be addressed, whatever the technology. New technologies can provide important help in improving administration and governance but how this is done is still in the hands of the people designing and running the systems.

- One benefit of e-governance is the possibility to include citizens and give them an easy way to communicate with governing structures. These structures can make information available in a manner which is easy to use for both the sender and receiver of the information.

- For effective e-government interoperability (of databases) is important and such interoperability can offer many benefits.

- E-government raises issues of data protection. Interoperability of databases means that if such a meta-database is not secure, the negative effects if something goes wrong will also be widespread.

- However, it is the content of data that should decide measures of data protection, not its form (electronic or hard copy). It is not modern technology as such that presents risks for data protection but the way technology is used. It may be counter-productive to focus too much on the technology and legislation should normally be technology neutral. To some extent new technologies have created completely new situations (where data gets a new relevance because of the way it can be combined and processed), to some extent new technologies just present a new method and the legal issues are the same as before.

- Modern data protection legislation has been developed to deal with computerized data. Data protection legislation started appearing in the 1970s (Swedish law from 1973). The guidelines of the Organization for Economic Cooperation and Development (OECD) from 1980 and the Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data from 1981 pre-date the extensive use of
computerized data. New technologies presented novel ways in which data could be kept, treated and disseminated, which exacerbated the perception of risk.

- Important legal matters of e-government are who can make databases, how information can be gathered about persons and how it can be kept. It is important that there is a legal basis for processing sensitive data, rules on who can deal with data, different types of responsibilities and duties as well as access to own data. Furthermore, there should be rules on transfer of data between different registers. In many countries such information is in the law on data protection. The key issue is that data protection should be no worse for data kept electronically than for hard copy data.

- The question of responsibility of institutions must be clear. There is no need per se to change administrative provisions and division of competences between institutions just because of a greater use of electronic data, but it is possible that the question where data is kept and can be accesses has become different. A data protection commissioner (or analogue institution) has a specific role and should have specific competence for data protection issues, however the data is kept. Special organs to deal with information technology services to promote and coordinate these may also have a role.

- Laws are needed to recognize e-signatures, as a prerequisite for e-governance and e-commerce. It must be clear that any requirements of special form in any law are met (like stamped documents, double signatures etc.). Some form of document (ID-card) to access e-government services is needed.

- Legal matters that need attention when e-government systems are created include details on the management system of the databases (state information system), including procedure for registering databases; various administrative requirements; terms and procedure for approval of technical documentation of the database; administrative requirements for establishing a database (can also be part of the regulation on general management issues); how databases exchange information (level of information exchange); classification system (unified classifications); address data system; system for allowing creation of geodetic systems; security measures for databases; public procurement procedures related to information technology/databases; creation of supporting organs.

- Examples of specific use of databases/web-services: E-registration of businesses, e-business registers; anti-corruption databases with special an attached web-site for people to report to; e-elections with e-voting and/or allowing people to follow the election process interactively; possibility to discuss with politicians and to view and comment on draft laws. This is just a small sample.

- Use of ICT presents new aspects of criminal law, both in the sense of new crimes and new methods to deal with crimes. Such legislation must exist to back up specific e-services/e-government laws.

- Data retention requirements for telecommunications companies need to be examined under data protection rules as it may violate the right to privacy. At the same time, such retention possibilities may be important for law enforcement.
Reference material

- Module 3 E-government applications, UN APCICT-ESCAP: http://www.unapcict.org/academy/academy-modules/english (also available in Russian)
- Estonian e-government portal: http://www.egov-estonia.eu/
- UN surveys: http://www2.unpan.org/egovkb/global_reports/10report.htm

4.2 Session 14: Development of national broadband strategies

Main topics

- As a result of this session, participants will
  - get an overview about the potential toolkit and best practices in broadband strategy formation,
  - can evaluate the local relevance of the different types of broadband development programmes,
  - collect ideas to increase the efficiency of broadband policy measures.

- The main topics to be discussed are as follows:
  - Overview of main policy approaches to promote broadband development
  - National broadband planning as a tool
  - Competition policies to stimulate infrastructure investment: law and regulation for a broadband word
  - Role of government intervention in promoting broadband deployment
  - Role of government intervention in stimulating broadband demand
  - Addressing taxation as a barrier to broadband adoption
  - Extending universal broadband access and use
  - Case study: Broadband Guidelines of the European Commission
  - Broadband experiences of selected countries (with the participation of the local experts)

Preliminary discussion questions

- In your opinion, how broadband can contribute to
  - productivity improvement
  - job creation
  - consumer satisfaction
  - social cohesion?

- What are the main roles the state should play and is playing in your countries in order to foster broadband development?
What is the attitude of main stakeholders (service providers, consumers, civil players, politicians, public institutions etc.) towards broadband development and the related actual and potential public intervention?

Reference material


4.3 Session 15-16: DISCUSSION

- discussion of open questions from the sessions
- evaluation of the training
- further training and research needs
- proposals for stream 2
- closing remarks
- etc.