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## **Deliverable D.2.3: Legal and Political Environment of NRENS**

### **Deliverable D.2.3**

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## 0 Executive Summary

This document presents the results of the study on legal and political environment of NRENS of the Baltic States, Eastern Europe and Southern Caucasus countries. The deliverable examines the current regulatory environment in which the NRENS are operating with particular reference to their use of dark fiber. The conclusions of this deliverable are very important for the future project activities, such as economic analysis, dark fiber usage cost model and model of operation (D3.2) and fiber optic development plan (D3.3).

The following issues are investigated in the deliverable:

1. Situation with ICT strategies in the countries;
2. Situation with legislation addressing DF installation and maintenance and regulatory authorities;
3. NREN organization and supervising bodies;
4. The ability of NRENS to obtain network development funding through national or international programs to fulfill the increasing users demands;
5. The legal ability to operate a fiber network and provide international connectivity;
6. The mandate to act as a country research and education community representative.

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# 1 Introduction – Main Objectives

The Legal and Political Environment study is based on the questionnaire that was filled in by the partners from the Baltic States (Estonia, Latvia and Lithuania), Eastern Europe (Belarus, Moldova and Ukraine) and Southern Caucasus (Armenia, Azerbaijan and Georgia) and on e-mail exchange through the dedicated mailing list. The necessary information was obtained from the meetings with national regulators, ICT companies, funding bodies and other decision-making institutions. The questionnaire template is presented in Annex I.

The main aim of the study is to evaluate the current situation with legal and political aspects of the IT field in each partner country, especially details directly or indirectly related to Dark Fiber (DF) installation and the maintenance process. The result of this document will be better understanding of feasibility of any DF deployment or leasing activities in each partner country. The study is a snapshot of a certain time with few attempts to predict the situation in the nearest future.

- Chapter 2 investigates the current situation with national ICT strategies in each partner country, relation of these strategies to DF activities. The chapter also identifies ongoing large scale ICT projects that are being implemented under the scope of these strategies.
- Chapter 3 provides summarized information about the legislation status in the ICT field: the presence of monopolies on the market and possible restrictions related to DF deployment and maintenance. This chapter also lists the preliminary activities necessary to start any DF-related operations including associated delays and expenses.
- Chapter 4 lists the national regulator authorities, identifies their type and role and shows the impact they may have on the DF acquisition or deployment decisions and activities.
- Chapter 5 provides basic information on the NREN(s) status in each partner country and its state of independence in the decision-making process. This chapter also includes the views of each NREN on the future operation on the DF network infrastructure.
- Chapter 6 investigates the political and economical environment in each participating country, and lists preferred DF routes from the technical and political point of view.
- Chapter 7 tries to identify issues that may arise in the future and are related to DF deployment and maintenance. Possible solutions to potential problems are also discussed in this chapter.

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## 2 Situation with ICT strategies in the participating countries

ICT strategies approved by the national governments do not exist in all countries under study. However, there are public documents and programs concerning telecommunication network development in all countries covered in this study. Below is the information concerning ICT strategies and other related public documents and existing programs:

**Table 2.1**

Country	Existence of ICT Strategy	Other Related Public Documents	Programs
Armenia	No	1. Armenian Law for Electronic communication. 2. Telecommunication sector development conception.	School connectivity project.
Azerbaijan	Yes	1. Law of Telecommunications 2. National ICT Development Strategy (2003-2012) 3. State program and action plan on the development of the ICT in the Republic of Azerbaijan (2005-2008)	1. National E-Governance Networking Initiative project 2. Azerbaijan Networking and Education Technologies project 3. School connectivity project
Belarus	Yes		School connectivity project.
Estonia	Yes	Several ICT institutions have strategies. Municipal DF projects have been part of strategy of EENet and Tiger Leap Foundation.	eCitizen, X-Road, eGovernment, eLegislation, eHealthcare, e-services for social care, eLibrary, Various ICT programs in Education and Science (eSchool, Estonian Grid etc). Reformation of digital registers. Digitalisation of cultural heritage.
Georgia	No	Telecommunication sector development conception.	Deer Leap - school connectivity project. Georgian Governmental network project.
Latvia	No	No special strategy of ICT exists,	1 The program of the electronic

		though there are several programs elaborated by the governmental institutions that deal with ICT, and ICT are also discussed in the National development Plan adopted at 2001.	government development 2005-2009. National program "Informatics 2000". 2. Concept of the integrated state information system. 3. System for education informatization of Latvia (LIIS). Etc.
Lithuania	Yes	1. Strategy of the development of the economy of Lithuania to the year 2015 and its specific strategy for development of IT and telecommunications. 2. Strategy of the development of broadband infrastructure in Lithuania for years 2005 – 2010.	1. Development program of Academic and Research Network in Lithuania LITNET in 2005-2009. 2. Rain - Rural area Interconnection network. 3. Infrastructure modernization and integration program according to IT and Telecommunication development strategy. 4. Strategy for the development of broadband infrastructure in Lithuania for years 2005-2010. 5. Program of information society development in Lithuania in years of 2006-2008.
Moldova	Yes	1. The decree of the President of the Republic of Moldova No 50-52 issued 26.03.2004 on creation of the information society in Moldova. 2. The concept of the national policy of the information society building in Moldova approved by the Government of Moldova in March 2002. 3. The national strategy of building the information society – e-Moldova.	1. National E-Governance project 2. Libraries connectivity project (SIBIMOL). 3. School connectivity project "SALT".
Ukraine	Yes	1. Ministry of Ukraine: resolution dated 07.12.2005 # 1153: About admission of the state program "Information and telecommunication technologies in science and education" for 2006-2010 2. President of Ukraine: decree dated 31.07.2000 # 928/2000: "About measures for development of the National part of Internet and providing wide access to the Internet in Ukraine". 3. Parliament of Ukraine: law dated 04.02.1998 # 75/98-BP: "About the concept of the National Informatization Program"	The state program "Information and telecommunication technologies in science and education", (approved on December 7, 2005 by the cabinet of the Ministry of Ukraine) declares the creation of fiber optic telecommunication infrastructure in Ukraine for science and education (URAN based on DF CEF technology) and connection of this infrastructure to GEANT.

There is no direct correlation between the existence of the ICT strategy and the level of ICT development in the country. The Baltic States clearly have the most developed ICT infrastructure; however, Latvia has not approved the ICT strategy. The data demonstrates that the governments of targeted countries are paying attention to the development of ICT. However, the actual level of ICT development is closely related to the economic situation in the country. Complexity of the programs under implementation also depends on the level of ICT development in the countries, for example, the strategy for the development of broadband infrastructure in Lithuania for years 2005-2010 is applicable only for countries with developed infrastructure. In the Baltic States, the high level of existing ICT infrastructure also stimulates the implementation of such applications as the Grid.

In all countries there are laws of public procurement. The actual procurement procedure depends on the cost of goods or services and varies from country to country. In all countries costs above certain limits are regulated with procurement acts. In most complicated (expensive) cases procurement procedures can take several months.

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### 3 Situation with legislation addressing DF installation and maintenance

It is very important to have a clear view on legal requirements and restrictions related not only to DF deployment and operation, but also more general issues concerning local and international connectivity, as it allows to foresee all the legislative obstacles that may arise before the infrastructure deployment stage. Table 3.1 summarizes the main points of DF-related requirements for each partner country:

**Table 3.1**

Country	International Connectivity Restrictions	DF Deployment License	DF Operation License
Armenia	Yes	Yes	Yes
Azerbaijan	Yes	Yes	No
Belarus	Yes	Yes	Yes
Estonia	No	No	No
Georgia	Yes	Yes	No
Latvia	No	No	No**
Lithuania	No	No	No
Moldova	No	No	No**
Ukraine	Yes	No*	No

\* Only permission for general construction works by local regulation authority is required.

\*\* Only permission for general public services by local regulation authority is required.

According to the collected data the situation varies from country to country. For the Baltic States there are almost no additional permissions or licenses needed beyond mere permission for public service provisioning required in Latvia. The same applies to cross-border connectivity which is regulated only by a contract between the parties. In Latvia anybody performing DF-related tasks must have a qualification in the field.

As for the Southern Caucasus countries, in Azerbaijan and Georgia it is necessary to get a permission from the regulatory authorities to provide international connectivity and obtain a license in order to perform DF deployment activities, though these permissions are estimably not difficult to receive. For

Georgia and Azerbaijan the license for DF deployment activities is issued correspondingly by the Georgian National Communication Commission and the Ministry of Communication and IT. There are no preliminary tender procedures required for the license acquisition. In case of Georgia, the license fee is approximately 500 Euros and the license acquisition period is up to 60 days. In Armenia the situation is more complex, because of the economical monopoly of a local company Armentel. The monopoly expires in 2009. All cross-border communications are obliged to use the Armentel infrastructure. DF deployment/operation activities need a license acquisition of which requires a relatively long period of 6 months and a high fee - 5000 Euros per year, though the DF deployment/operation license is estimably not difficult to obtain. There is no special tender required to obtain the license.

In Azerbaijan the situation is complicated by the existence of the governmental monopoly for international connectivity. Two companies, BTRIB and AzTELECOM, under the supervision of the Ministry of Communication and IT are the main owners of 90% commercial DF in Baku and all over the territory of Azerbaijan. Some minor companies possess their own DF channels, but their number is very small. Their DF infrastructure is limited by city perimeters and can not be considered as a country-wide or cross-border connectivity solution. An exception is a fiber-optic cable belonging to the oil company. At the same time no official license is needed for the customers of the DF service, only for subcontractors performing direct DF deployment.

A similar situation with ICT exists in Belarus in relation to international connectivity. The Ministry of Communications and Informatization of Belarus has an exclusive right to provide international connectivity and link Belarus to networks of foreign countries. It is possible to get access to fiber cross-border infrastructure only through the company Beltelecom, which is directly under control of the Ministry of Communications and Informatization of Belarus. DF deployment and operation also needs a license which can officially be obtained in quite a short period of 30 days and at a small fee of approximately 200 Euros, but is very difficult to acquire in reality.

In case of Moldova the only license that a DF provider/operator has to obtain is the general public service permission in the telecommunication field.

For Ukraine cross-border connectivity needs a special permission from the State Security Service of Ukraine. For DF installation activities only a permission for general construction works is required.

There are almost no limiting factors for foreign companies to perform DF deployment activities in all partner countries except Belarus, where cooperation with a local organization is required. At the same time there are no obstacles to foreign investments into the DF infrastructure and telecommunication sector in general.

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## 4 National ICT Regulator Status

Table 4.1 lists the national regulation authorities, their types, roles and relation to the DF installation and operation process.

**Table 4.1**

Country	Name	Type	Role	Influence on DF Tariffs
Armenia	Public Services Regulation Commission	Gov	Approval	No
Azerbaijan	Ministry of Communication and IT	Gov	Approval	Yes
Belarus	Ministry of Communication and Informatization	Gov	Approval	Yes
Estonia	Estonian National Communications Board	Gov	Approval	No
Georgia	Georgian National Communication Commission	Other	Approval	Yes
Latvia	Public Utilities Commission	Gov	Approval	Yes
Lithuania	Communications Regulatory Authority	Gov	Approval	No
Moldova	National Regulatory Agency in Telecommunications and Informatics	Gov Agency	Approval	No
Ukraine	Ministry of Transport and Communication of Ukraine	Gov	Other	No

In most cases the national regulators are governmental bodies that have an approving role in the decision-making process. In Azerbaijan, Belarus and Ukraine the role of a national regulator is performed by the corresponding ministry which is a part of the national government. In other cases the regulator is a separate entity which is controlled by the government and financed from the state budget. In Georgia the national regulator is subordinated to the national parliament and is not financed from the state budget; its sources of revenue are the license fee and the regulation fee paid by the licensees.

In most countries there are no explicit regulation laws for DF construction except in Latvia and Armenia and the DF-related activities are regulated according to the laws governing general construction works. As such general construction activities are very common; this should not be a problem.

In most cases the regulator authorities do not have influence on the tariffs of DF purchase / lease. Exceptions are Georgia and Latvia, where the impact on tariffs is possible only in case of monopoly threat, and Azerbaijan and Belarus, where the regulator authority is in full control of the DF pricing environment. For these countries the prices for DF services are established not via normal market laws, but are directly enforced by the corresponding ministry.

In conclusion, minimal interference in the DF deployment process and DF deployment and maintenance procedures is expected from national regulators, except when violating antimonopoly legislation. Belarus may require special treatment as all activities in telecommunication field including DF related activities are subject to approval of the Ministry of Communication and Informatization.

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## 5 NREN Status

Information in the following table was obtained from TERENA Compendium <http://www.terena.nl/activities/compendium/> and by direct contacts with representatives of NRENs. More detailed information on NREN status and development plans can be found in D1.2 of this project.

**Table 5.1**

NREN	Form of Organisation	Number of staff engaged in NREN activities	Number of PoPs on the network	Aggregate capacity of the network in Gbit/s*km	Connection to GEANT in Mbit/s	Total number of connected institutions
ARENA	Legal entity	5			3	
ASNET-AM	Part of legal entity	25	8			67
AzRENA	Legal entity	9	8		3	44
AZNet	Part of legal entity	15	13		2	45
BASNET	Part of legal entity	15	21	35	34	86
EENet	Legal entity	17	16	500	622	306
GRENA	Legal entity	15	19	27	6	105
LATNET	Part of legal entity	42	48	602	155	119
LITNET	Part of legal entity	69	27	273400	622	1329
RENAM	Legal entity	32	18	35	32	68
URAN	Part of legal entity	4	18	20		43
UARNet	Part of legal entity	30	6	450		150

As seen in the table 5.1, the NRENs are at different stages of development. The Baltic States NRENs are clearly more advanced in comparison to the other countries and they are almost meeting European standards according to the level of network development, provided services and the number of connected institutions. BASNET, RENAM and UARNet are at an intermediate stage; however, because of the neighboring location to the countries with a developed NREN infrastructure they have a good chance to considerably upgrade their connectivity to GEANT2 soon. In addition they need to upgrade their countrywide network. Taking into account the size of the country, URAN has the smallest network, but the existence of the other NREN - UARNet is compensating the situation. NREN infrastructure is less developed in Southern Caucasus countries. A serious problem for international connectivity is long distances between these countries and Europe. Connectivity to GEANT2 in these countries is still provided by a satellite channel (NATO Science Programme “Virtual Silk Highway” project) which has clear limitations. However, during the last 2 years prices for fiber optic connectivity have considerably decreased and most ISPs in Azerbaijan and Georgia are already using fiber optic channels for the Internet connectivity. Countrywide networks of NRENs of these countries also need development. The main problem here is extremely high prices of renting communication infrastructure.

As seen in table 5.1, all NRENs except ARENA and URAN can be considered as the country research and educational community representatives based on the number of the connected institutions. In Armenia most of the research and educational community is served by ASNET-AM and in the western part of Ukraine UARNet is the main supplier of network services to the research institutions.

Table 5.2 presents additional information about the countries under study.

**Table 5.2**

Country	Existence of Multiple NRENs	Approval by Another Organization for the Decision of DF Deployment	Operation and Maintenance of DF Infrastructure	Possession of Permission for Direct International Connectivity	Ability to Obtain Additional Funding
Armenia	Yes	Yes	Outsource	No	Yes
Azerbaijan	Yes	Yes	Outsource	Yes	Yes
Belarus	No	Yes	Outsource	No	Yes
Estonia	No	No	Outsource	Yes	No
Georgia	No	No	Outsource/On its own	Yes	Yes
Latvia	No	No	Outsource	Yes	Yes
Lithuania	No	No	Outsource	Not required	Yes
Moldova	No	No	Outsource/On its own	No	Yes
Ukraine	Yes	No	Outsource/On its own	No	Yes

In Armenia and Azerbaijan there are multiple NRENs which are not competing with each other. In case of Armenia there is a discussion to join the existing two NRENs: ARENA and ASNET-AM. In Azerbaijan AZNet is a joint project of UNDP, OSI and AzRENA, so all activities in research and education networking are coordinated by these organizations. Although AzRENA is one of the donors of the AzNET project, they should

be considered as a single entity. In Ukraine the NRENS are serving research and educational institutions in different parts of the country and have a small number of points of intersection.

Very close cooperation between the NREN and the national government exists in Azerbaijan. As a result of this cooperation AzRENA is getting the network infrastructure free of charge by the decision of the Ministry of Communication and IT.

An approval from another organization for the NREN in order to deploy DF is needed in Armenia, Azerbaijan and Belarus. In Armenia it is caused by the monopoly of Armentel and all deployments of DF (both national and international) must be preliminarily agreed with Armentel. In Belarus and Azerbaijan a consent from the government is required in order to perform any D- related activities.

Most NRENS outsource the operation and maintenance of the DF infrastructure, in Georgia, Moldova and Ukraine a part of the DF infrastructure remains under NREN maintenance. In these countries the DF infrastructure is partially owned by the NREN and outsourcing the maintenance will be more expensive than operating it on their own.

In Armenia, Belarus, Moldova and Ukraine the NRENS have no legal permission to provide direct international connectivity. In Armenia it is related to the Armentel monopoly, and in Ukraine it is currently not needed, as they are not providing a direct international connectivity service. In Belarus the state law requires that direct international connectivity is only possible through renting fiber bandwidth capacity from Beltelecom, and in Moldova a special governmental permission is required to provide direct international connectivity.

Almost all participating NRENS are optimistic about the ability to obtain additional funding from national and/or international sources. National funding sources are usually either direct financing from the country government through the state budget or connected institutions fees. Several sources of international funding exist: EU and UNDP programs, NATO and OSI grants. However, it is difficult to estimate the amount of this additional funding during the next 2-3 years and whether it will be enough to improve the existing networking situation in Eastern Europe and Southern Caucasus countries.

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## 6 DF Related Political Concerns

In each participating country there are several possibilities to organize connection to the GEANT2 network. However, in designing the topology of these connections it is necessary to take into account the political aspects in conjunction with technical preferences. Below is the list of neighboring countries preferred for organizing international connectivity via DF from the political point of view:

**Table 6.1**

Country	Neighboring Countries
Armenia	Georgia, Iran
Azerbaijan	Georgia (Turkey)
Belarus	Poland, Lithuania, Ukraine, Russia
Estonia	Finland, Latvia
Georgia	Turkey, Ukraine
Latvia	Estonia, Lithuania, Belarus, Sweden
Lithuania	Poland, Latvia, Belarus, Kaliningrad enclave
Moldova	Romania, Ukraine
Ukraine	Poland, Slovakia, Hungary, Russia

For Belarus, Lithuania and Ukraine the organization of international connectivity via Poland has the highest priority. Estonia prefers to use the existing fiber routes through either Finland or Latvia. As for Latvia, the preferred neighboring countries are Estonia and Lithuania, where DF connectivity already exists. For Moldova a very natural connection is via Romania and it is already being organized. The situation with Southern Caucasus countries is more difficult. Armenia and Azerbaijan mentioned Georgia as their highest priority; however, Georgian NREN has no direct fiber optic connection yet and is considering using Turkey for this connection. During the Black Sea Initiative meeting on November 9, 2006, the possibility of organizing a GEANT2 connection for Armenian, Azerbaijan and Georgian NREs was discussed with TUBITAK (Turkish NREN). Representatives of the countries agreed to work together on the preparation of this project. This is an example of cooperation of the countries despite of existing political issues.

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## 7 Potential Problem Estimation

Potential problems are mainly related to the DF deployment/operation licensing process for the countries where some kind of monopoly in IT or telecommunication field exists. There are 2 limiting factors: legal difficulties with the construction of a cross-border DF infrastructure and legal difficulties with the permission for international connectivity service provisioning. According to the collected information problems potentially occur in the following countries: Armenia, Azerbaijan, Belarus, Georgia and Ukraine. In Armenia and Belarus a single entity owns an exclusive right for any cross-border telecommunication service. There exists only a theoretical possibility to obtain a license for an independent DF infrastructure deployment. In Azerbaijan and Ukraine a special permission from the national government is needed, which is estimably hard to obtain. In Georgia all telecommunication infrastructure has been privatized but about 95% of communication ducting infrastructure in the cities belongs to the United Telecom of Georgia. The company has recently temporarily stopped giving permission for any cable installing in their ducts. This will cause problems for the development of DF infrastructure in the country.

The solution can be a long term lease of the DF link from the monopoly holder. If leasing is not possible, then the renting of bandwidth in the existing DF link is the only option. In the next 2-3 years renting bandwidth is the only possibility for Southern Caucasus countries. In the countries where the national regulator is part of the national government, the participation of government representatives in any future DF-related projects will be necessary in order to make the DF licensing process easier.

For the markets that are not yet fully liberalized another possible solution is the creation of an institution of research cooperation and consequently the establishment of the research cooperation contract with DF owner companies. A good example of such cooperation is the construction of the Prague - Brno fiber link according to the research cooperation contract concluded in 1999 between CESNET and DF owner, an oil distribution company.

## 8 Conclusions

Correct evaluation of the legal and political environment is very important for the overall success of the Porta Optica Study project, as it tries to predict possible future difficulties in the DF deployment process as well as suggest alternative solutions for these problems. The results of this study in combination with the data about the current and expected technical situation with the dark fiber infrastructure in the participating countries will provide the base for complete understanding of the future process of seamless integration of NRENs into the GEANT2 network.

Though some problems were identified through the presented study, the deployment of the DF infrastructure connecting NRENs with the GEANT2 network is realistic for the Baltic States and Eastern European countries. As for Southern Caucasus, though pure DF infrastructure deployment seems to be problematic here, it is still possible to obtain bandwidth sufficient for the local NREN service provisioning through the lease of channels in the existing national and international fiber infrastructure.

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# Annex I

Legal and Political Environment Questionnaire Form:

## 1. Legislative Information

1.1 Does national ICT strategy exist?	
<i>Please indicate Yes or No</i>	
If Yes, please shortly describe its relation to DF projects	
1.2 List existing programs and other public documents concerned with telecommunication network development	
1.3 Describe shortly conditions of public procurement process	
Indicate approximate projected lead time	
1.4 Does the legislation addressing DF installation and maintenance procedures exist?	
<input type="checkbox"/> a) Exists	<i>Please provide a website reference or other available reference where such legislation is available [in English]</i>
<input type="checkbox"/> b) Draft	<i>Please, provide a list of any applicable drafts, and their approval status</i>
<input type="checkbox"/> c) Does not exist	
1.5 Are there any regulations concerning international connectivity service provisioning?	
<i>Please indicate Yes or No</i>	
If Yes, please indicate	

1.6 Does the law assign the regulatory authority for the DF regulation?	
<i>Please indicate Yes or No</i>	

**2. Regulatory authority information**

2.1 General information	
a) Authority Name	
b) Legal status	<input type="checkbox"/> Governmental Body
	<input type="checkbox"/> Agency
	<input type="checkbox"/> Corporation
	<input type="checkbox"/> Other:
c) Role	<input type="checkbox"/> Approval
	<input type="checkbox"/> Proposal Commenting
	<input type="checkbox"/> Other:

2.2 Does the regulatory authority have any direct or indirect influence on DF purchase/lease/IRU tariffs?	
<i>Please indicate Yes or No</i>	
If Yes, please, describe	

**3. DF related legal procedures**

3.1 Is special license needed for performing DF deployment procedures?	
<i>Please indicate Yes or No</i> <i>If Yes:</i>	
a) Which regulatory authority has the power to issue the license	
b) What is the set of documents needed for acquisition of the license for initiation of the DF installation procedures?	
c) What is the approximate time period after the submission of all necessary documents before the acquisition of the license?	_____days
d) How can be the level of difficulty of the license acquisition be evaluated?	<input type="checkbox"/> Nearly Impossible
	<input type="checkbox"/> Very Difficult
	<input type="checkbox"/> Troublesome
	<input type="checkbox"/> Easy
e) Please indicate license acquisition fee (if any)	

3.2 Is special license needed for performing DF operation/acquisition/maintenance procedures?	
<i>Please indicate Yes or No</i>	
<i>If Yes:</i>	
a) which regulatory authority has the power to issue the license	
b) What is the set of documents needed for acquisition of the license for initiation of the DF operation/acquisition/maintenance procedures?	
c) What is the approximate time period after the submission of all necessary documents before the acquisition of the license?	_____ days
d) How can be the level of difficulty of the license acquisition be evaluated?	<input type="checkbox"/> Nearly Impossible
	<input type="checkbox"/> Very Difficult
	<input type="checkbox"/> Troublesome
	<input type="checkbox"/> Easy
e) Please indicate license acquisition fee (if any)	

3.3 Are there any legal restrictions on DF infrastructure and sub-channel leasing?	
<i>Please indicate Yes or No</i>	
If Yes, please indicate the restriction(s)	

3.4 Are there any legislative or other restrictions concerning deployment/maintenance of DF infrastructure by a foreign organization?	
<i>Please indicate Yes or No</i>	
If Yes, please indicate the limitation(s)	

**4. Additional NREN information**

4.1 Is there any competitive NREN(s) in your country?	
<i>Please indicate Yes or No</i>	
If Yes, please, list them. Indicate which part of community they represent	

4.2 Does NREN need any approval by another organization for the decisions concerning DF deployment issues?	
<i>Please indicate Yes or No</i>	

If Yes, please indicate the approving organization	
--	--

4.3 How NREN is performing/planning to operate and maintain DF infrastructure?	<input type="checkbox"/> On its own <input type="checkbox"/> Outsource
In case of outsourcing, please indicate to whom	

4.4 Does NREN have legal permission to provide direct international connectivity?	
<i>Please indicate Yes or No</i>	
If No, please indicate the reason	

4.5 Is NREN able to obtain additional funding from external sources?	
<input type="checkbox"/> Yes, National sources	<i>If Yes, please, indicate expected sources</i>
<input type="checkbox"/> Yes, International sources	
<input type="checkbox"/> No	

4.6 List institutions influencing possible funding decision:

### 5. Political and Economical Environment

5.1 Is there any monopoly in IT sector?	
<input type="checkbox"/> Yes, Economical monopoly	<i>If Yes, please, provide short description of its influence on DF deployment operation</i>
<input type="checkbox"/> Yes, Governmental monopoly	
<input type="checkbox"/> No	

5.2 What are the neighboring countries preferred from political point of view for direct international connectivity via DF infrastructure? <i>(Please, list the countries in the order of preference)</i>	
1)	
2)	
3)	
4)	

5.3 Are there any legislative or other obstacles limiting investments in the IT sector by foreign organizations?	
<i>Please indicate Yes or No</i>	

If Yes, please indicate the reason(s)	
---------------------------------------	--

<b>5.4 Is there possibility of public-private partnership?</b>	
<i>Please indicate Yes or No</i>	
If Yes, please shortly indicate existing procedures and restrictions	