

STANDARD SUMMARY PROJECT FICHE

PROJECT N°2002/000.620.04.01

1. Basic Information

- 1.1 CRIS Number:** 2002/000.620.04.01
- 1.2 Title:** Pilot project for promotion of information society via development of regional broadband wireless access (data, voice, video transmission and other ITT services infrastructure)
- 1.3 Sector:** Economic and Social Cohesion
- 1.4 Location:** Neringa Municipality, Klaipeda region, Lithuania

2. Objectives

2.1 Overall Objective

The overall objective of this **1.737 MEUR** social and economic cohesion project, of which **0.449 MEUR** are provided as national co-financing, is the improvement of business related infrastructure, contributing to economic and social cohesion and regional development in Neringa municipality (Klaipeda region).

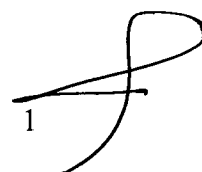
2.2. Project purpose

- A. To develop organizational and technical infrastructure (broadband wireless telecommunication access system), which will enable fast Internet access, data transmission, voice and video data exchange in Neringa and to enhance development of a new and effective business infrastructure in this peripheral resort region. An increase of the usage of fast Internet access in Neringa will be achieved through installation of municipally-owned technical facilities and start up of various information and telecommunication services and innovative businesses.
- B. To connect regional broadband wireless access network with national and international core backbone systems of data transmission, providing a good alternative for existing monopolistic telecommunication network and its low quality and expensive services in Neringa.
- C. To support the municipality of Neringa in the utilisation and exploitation of the Broadband Wireless Access (BWA) infrastructure to promote sustainable economic and social development of the region, its attractiveness for international and business tourism and to develop a specific development strategy to promote participation in the information society.

2.3. Accession Partnership and NPAA priority

In line with the Accession Partnership the project will:

- Improve the business environment and enhance the creation of new enterprises
- Improve the business infrastructure



1

2.4. Contribution to National Development Plan

The National Development Plan (preliminary) has stressed the negative impact of the telecommunications monopoly of "Lietuvos Telekomas", which results in slower development of knowledge-based society and knowledge based economy in Lithuania. Measure 3 ("Industry and business development") includes "Development of information technologies and telecommunications". The project is also implementing Measure 4 "Economic Infrastructure" in relation to the "Development of infrastructure of information technologies and telecommunications".

This project will also contribute to the measure 2 ("Local and regional development"), in relation to "National support for target regions".

In addition to the contribution to the NDP, the project is also in line with the the Klaipeda Regional Development Plan. This plan, which was financed by PHARE and which was recently adopted by regional institutions, has a part, called "Information infrastructure development". This emphasises that Klaipeda region (including Klaipeda city) has high potential but is very backward in comparison with the average national level of Internet usage. 10% of the national population use Internet, whereas the figure for the region is only 5%, and even in Klaipeda city the usage is less than 6% (source: SIC Gallup Media, 2001). The development of the information infrastructure in Neringa will help solve its social and economical problems; these are linked with the remoteness of this region and the deep seasonal fluctuations of business and social life. In this way the project will enable the peripheral region to use its strength and opportunities, linked with resort and business tourism and other unique perspectives.

One of the priorities formulated in the Information Infrastructure Development (IID) part of the Regional Development Plan is:

"The creation of adequate competitive environment in the market of data transmission, in order to achieve lower cost of ITT services and to diminish disproportions in information infrastructure".

The first measure of this priority is directly linked with the purpose of this pilot project. This measure is formulated, as follows: "The programmes of support to specific business projects, which will empower and/or create conditions for interconnection with alternative data transmission sources, technical access, core backbone and distribution networks, which will result in growth of faster and cheaper Internet services."

3. Description

3.1. Background and justification

To promote economic and social cohesion within Lithuania it is necessary to support those peripheral regions that would otherwise be denied access to the potential benefits of the information society. An important part of this is access to the necessary telecoms infrastructure to support effective local and regional development.



2 

Neringa municipality does not have the same conditions as other regions of Lithuania in terms of telecommunications infrastructure. There are many technological and physical possibilities in the "mainland" to develop telecom alternatives (radio-relay, other wireless links, optical and other cable networks) and they are in the process of being developed. However, the Neringa municipality has no cable networks (not even TV) and there is no other alternative available.

On June 25, 1998, Neringa municipality adopted its strategy, called "Neringa – international communication centre" (hereafter referred to as – MS - Municipal Strategy). Since then there have been many attempts to create adequate communication infrastructure. One of the most realistic possibilities two-three years ago was to use digital microwave multipoint distribution system (MMDS) stations. However, the private company "Mikrovisata", which got the national licence for MMDS, did not start any activities in Neringa despite a very active interest which was expressed by Neringa municipality (including the possibility of partial subsidies, proposed by it). "Mikrovisata" did not come to this region because of two reasons: 1) small market in Neringa, which potentially can return such investments only in decades (taking into account future revenue from voice communication and pay TV) or will not return at all; 2) deep seasonal fluctuations of social life in this resort region (which is a rather destabilising factor to private business). Furthermore, the MMDS bandwidth (2,5-2,6 GHz) is planned to be closed altogether by 2008.

Until now, there was no alternative telecom "corebone" system in Lithuania, as well as there is a lack of competitive "distribution networks" (last mile problem). Therefore "Lietuvos telekomas" remains monopolistic telecom business entity throughout the country (though there are no technological possibilities for fast Internet services in Neringa even for "Lietuvos telekomas", there is no and cannot be any optical cable link to Neringa, etc., because of the geographical location of the municipality. Neringa municipality is geographically the most western municipality of Lithuania, situated on a Curonian Spit, surrounded by the Curonian Lagoon from the East, the Baltic Sea from the West and the Kaliningrad Region (Russia) from the South. The only connection to the mainland is by a ferry. Therefore, any cable connection to the mainland would have to be installed underwater, which the private sector would regard to be too expensive (more expensive than BWA) and which would be risky because of the shallowness of Curonian Lagoon. Besides, the physical laying of cables in the municipality may have unwelcome effects on the environment, because of the special nature conservancy status of the area.

The state owned company "Lithuanian Radio and TV Centre" (LRTC) is finalising its digital relay network in all Lithuanian territory (except Neringa), and this is one of possible "corebone" alternatives to "Lietuvos Telekomas", but LRTC has no investment potential to develop competitive distribution networks throughout the country. Other two state owned companies - "Lietuvos Energija" (Lithuanian Energy) and "Lietuvos Geležinkeliai" (Lithuanian Railways) - have installed several alternative optical cable links throughout the country (Neringa region excluded), but these companies have no further plans to develop distribution networks themselves. Cable TV networks are developed only in urban areas, though not sufficiently, but national cable penetration reaches 30%, already.

Development of Broadband Wireless Access Systems (LMDS) is already acknowledged in Lithuania to be effective in solving the last mile problem alternatively to "Lietuvos Telekomas". There was no intensive development of these technologies in Lithuania until now, because other technologies in "the mainland" were regarded as appropriate and had been developed earlier. However, Broadband Wireless Access is the only possible way to info-include Neringa municipality, to help it overcome its geographical isolation and widespread of population, to provide information infrastructure for local businesses as well as the public sector and help use the potential strength of the region.

Neringa is a region with good potential not only due to the attraction of resort tourism but, for example, also as a possible location for various international symposiums (conferences, seminars, etc.) and other business related, scientific, educational and similar activities, including international events which involve intensive exchange in the Baltic Sea Region as a whole. Moreover, according to the Municipal Strategy, the public sector in Neringa should be reorganized into the system of modern public entities, oriented to open international cultural relations and integrated into the communication network of the Baltic region. These activities need adequate information infrastructure, which, in case of Neringa municipality is a BWA system.

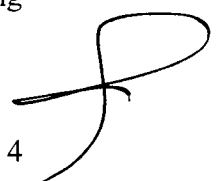
BWA development is still considered a very risky investment even in urban regions of Lithuania. Therefore, the Licencing Committee is going to issue only a few national BWA licences and use only a part of the 26GHz bandwidth. At least one of these licences will be split to five regional licences (there are five major cities in Lithuania). It is very likely, that 2-3 GSM operators will participate in the bid for these BWA licences in order to use LMDS technologies as an additional resource in major cities. As far as 28Ghz bandwidth is also open for LMDS, this project implies application for a pilot regional licence in Neringa territory in this bandwidth.

However, it is not realistic that a BWA system or any other alternative telecoms infrastructure will occur in Neringa without major public investment, as such investment in technical infrastructure would not bring a return from private business investment in the short term due to the small market in Neringa.

Moreover, in order to take full advantage of the new opportunities offered by the BWA infrastructure, it is also necessary to combine purchase of equipment with technical assistance. First of all, the municipality must develop its own capacity in certain key areas, such as local management of the physical infrastructure (via contractors/service providers), further development of local strategies and action plans to get real economic benefit from the public investment, assisting local companies and institutions in using the new infrastructure, etc.

Finally, the project is justified as a pilot-test for the future operation of Structural Funds. This is one of the first larger-scale concrete investments in Business Infrastructure being supported within the Phare Economic & Social Cohesion programme in Lithuania, and is also one of the few major projects to be led at the local level. This means that the national and regional institutions will be able to learn how to deal with such projects; the combination of investment in physical infrastructure and support in using the infrastructure is a very useful model. In particular, the inclusion of support to the demand-side will act as a useful learning

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4 

tool for future investments under Structural Funds where infrastructure investment in telecoms cannot be supported (due to the potential profitability of private investment).

The co-ordination role of the Ministry of Interior, and the active participation of the Information Society Development Committee and the Ministry of Economy in the Steering Committee should help to make sure that these lessons can be learned and applied in all Lithuania in future support to demand-side actions to develop the information society.

In addition, civil society organisations, public and business entities have been consulted (namely: Baltic Office of Coastal Union; Association of Enterprises "Kursiu nerija", representatives of complex of hotels in Urbas Hill, in particular; Association of Small and Medium enterprises, office of Neringa National Park, Lithuanian Writers Union, Lithuanian Radio and Television Center Neringa affiliate, Business Solutions Department of Lietuvos Telekomas and others) and the results of the consultations have been incorporated into the development of the project.

3.2. Linked activities

N/A

3.3. Results

1. BWA will be installed and will cover the population of Neringa at a comparatively low cost. This will be a municipally-owned infrastructure, resulting in fast and cheap Internet access and the possibility of other ITT services, such as: video on demand, interactive communication projects, video conferences, LAN connections, other multimedia projects (e-commerce; tele-banking, etc), voice communication, multi-channel TV, etc.

2. The system will be linked with national and international core bone telecommunication networks.

3. Neringa Municipality staff (Department of Economy, Business and Foreign Relations, especially) and other local institutions got acquired enough competence in relation to the management of the local infrastructure and appropriate management procedures and applications set up. Local information society development plan produced with active involvement of various local stakeholders. Awareness campaign designed and implemented in local institutions, SMEs, tourism operators, and other appropriate target groups, inside and outside the region.

3.4. Activities

The project activities will include the following:

Supply Contract:

The supply part of the budget of BWA project will cover acquisition of necessary transmission and data processing equipment by Neringa municipality, including installation costs; BWA will include 11 transmitting stations (using 26GHz or 28GHz, allocated to LMDS by Communications Regulatory Authority and which will be assigned by Communication and Transport Ministry), receiving network and related organizational infrastructure of service providers. More detailed information is provided in Annex 4. The acquisition of BWA equipment will be carried out



through international open tender in accordance with the Practical Guide to Phare, Ispa and Sapard (PRAG). The full tender documentation, technical specifications and related documentation is all being prepared in advance of the project within the Phare Project Preparation Facility (PPF).

Also, under this contract, the necessary physical infrastructure of the BWA project will be prepared and will include BWA master control and managing office arrangement (reconstruction and installation). This activity will be completed in advance of the main equipment supply and necessary technical documentation will be prepared in advance under the PPF.

Service Contract:

A single service contract for technical assistance will be issued via international restricted tender in accordance with PRAG. All tender documentation is being prepared in advance of the project within the Phare Preparation Facility (PPF). The service contract will cover the following elements:

- Assistance to the Municipality of Neringa in relation to the setting up of the management arrangements for the local operation of the BWA infrastructure.
- Assistance in the evaluation of the local development plan in relation to the new infrastructure, and support to the municipality and to other local institutions in the development of a new local information society development plan to take advantage of improved infrastructure.
- Assistance in the development of promotional materials and marketing applications and an awareness campaign to ensure that all the key target groups understand the potential benefits of the BWA.
- Assistance in ensuring that revenue collection is sufficient to meet the ongoing maintenance and promotional/marketing work in the future.

In addition to the above two contracts, further development of the BWA receiving network (further installation of receiving network) will be financed by Neringa municipality (see Works contract in 5.Budget table). The technical documentation for this will be prepared as a part of the PHARE PPF support before the project starts.

The financing from the municipality will last until the end of completion of Supply Contract in the framework of the project and will be continued further from BWA revenue. In the documentation prepared within PPF, a detailed revenue forecast will be prepared and support in relation to future revenue collection will be provided within the service contract.

3.5. Lessons learned

N/A.

4. Institutional Framework

The Ministry of Internal Affairs (MIA) will be responsible for the overall co-ordination of the project. The contact person is Sergejus Krispinovicus, Head of Regional Management Division in the Regional Policy Department of the MIA.

The Ministry of Interior in Lithuania has competence and obligations not only in regional development policy, but also public administration reform and a big part of

information society development, including national "e-government" strategy and coordination of its implementation. Ministry of Transport is involved in regulation of telecommunications sector only in a very narrow aspect and only until January 1, 2003, when almost all of this regulation field will come to independent regulator – Communications Regulation Authority (CRA, Ryšių reguliavimo tarnyba). CRA will evaluate technical documentation of the project and will control technical installation process (see Logframe and Opinion of CRA on Annex 5, attached).

Under this control, operational implementation of the project will be the responsibility of the Municipality of Neringa. In the municipality a special project unit is being established under the chairmanship of the Vice-Mayor and led by the Department of Economy, Business and Foreign Relations. Department of Economy, Business and Foreign relations of Neringa municipality has only 3 employees, but there is also a special municipal institution "Center of information, culture and tourism" (15 employees), which will serve as a basis for management and development of eContent aspect of the project. This aspect (the demand side) will be not less important than merely to install and exploit technical facilities (in this aspect very important role goes to General Consultant and Service provider, which will be chosen in an open bid process by Neringa municipality). LRTC has its affiliate company in Neringa, but there is a realistic possibility and essential need of this project to involve also other companies (telecom operators and service providers) from Vilnius, Kaunas or Klaipeda.

A project steering committee will be established, chaired by the Ministry of Internal Affairs and involving Neringa Municipality, the Information Society Committee, the Ministry of Economy, the Ministry of Communication and Transport, and the Ministry of Finance. One representative from local social/business community will be a member of Steering committee, as well (there are five major business associations/non-government organizations in Neringa municipality). In addition, the project co-ordinator will be part of the Horizontal Steering Committee established for all Phare 2002 ESC projects, chaired by the Ministry of Finance.

All technical facilities of BWA will be owned by Neringa municipality. Neringa municipality will establish a non-profit public entity which will be 100% owned by the Municipality and will own the BWA (LMDS) licence and will operate BWA system in consortium with the General Consultant and Service Provider (GCSP).

Neringa municipality will investigate possibilities of further private investment and public/private co-ownership in the framework of this project.

5. Budget (MEUR):

Project Components	Investment Support	Institution Building	Total Phare	National Co-financing	TOTAL
Supply	0.953		0.953	0.429	1.382
Service		0.335	0.335		0.335
Works				0.020	0.020
TOTAL	0.953	0.335	1.288	0.449	1.737

The PHARE amount is binding as a maximum amount available for the project. The ratio between the PHARE and national co-finances is also binding and has to be

applied to the final contract price. The national co-financing amount is a tax-excluded net amount.

6. Implementation arrangements

6.1. Implementing agency

PAO: **Zilvinas Pajarskas**, Director of the CFCU
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Mr. S. Krispinovicius, Head of Regional Management Division,
Department of Regional Politics
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6.2. Twinning

N/A

6.3. Non-standard aspects

There are no non-standard aspects. The PRAG will be strictly followed.

6.4. Contracts

Two contracts will be concluded:

1. A Supply contract with a total value of 1.382 MEUR (including national co-financing of 0.429 MEUR);
2. A Service contract with a value of 0.335 MEUR.
3. Works contract. In addition to above mentioned contracts involving PHARE funds, additional works contract for BWA receiving network further installation will be undertaken by Neringa Municipality using local funds. The value of these works will be 20,000 Euros in 2003 and 2004.

7. Implementation schedule

Component	Start of Tendering	Start of Project Activity	Project Completion
Supply	1Q/03	2Q/03	2Q/04
Service	1Q/03	3Q/03	1Q/05
Works	1Q/03	3Q/03	2Q/04

8. Equal Opportunity

The project will provide equal opportunity for all citizens regardless of gender, age and geographical location, because of the better telecommunication access for all Neringa's community. The development of the information society and related new business infrastructure will help to use tele-working and other new employment and participation possibilities for women, which are generally more unemployed in the region.

9. Environment

A full environmental impact assessment is being undertaken as part of the Project Preparation Facility.

Implementation of this Project and further functioning of BWA will not have any negative impact on environment, because of the usage of ITT technologies, which are environmentally protective. The maximum signal strength of installed LMDS transmitting equipment will comply with norms which are approved by Ministry of Health and which are generally stricter than in most EC countries. According to national regulation, technical documentation of the Project must include signal strength estimations before the installation of transmitters and these must be approved by the regional Public Health Centre. Generally, LMDS technologies need low power transmitters and do not make any danger for public health.

The environmental and public health aspect of the Project is an important point also because of the fact that Neringa region is recognized by UNESCO as a nature and culture heritage of the world and because of resort and tourism priorities in this region.

10. Rates of Return

A comprehensive assessment of rates of return is being undertaken as part of the Project Preparation Facility.

With regard to the potential for commercial investment in the infrastructure, the estimated financial internal rate of return of the BWA project investment would be negative in the next 20 years and hence is not attractive for private investment (as far as it is pure infrastructure investment). However, the economical rate of return will reach 10-15% (see the report on pre-feasibility study of the project, presented in Annex 4.). BWA will make multiply positive spill-over effect on neighboring regions (Klaipeda and Silute region on the other side of the Curonian Lagoon) and a similar cross border effect on the Kaliningrad region. In addition, BWA project will contribute to preserving nature and culture heritage through sustainable development and coastal management improvement.

A full study of financial and economic rate of return of the investment will be presented in the feasibility study financed out of the PPF before applying for the LMDS licence and before other procedures, linked with the start up of telecommunication activities.

11. Investment Criteria

11.1. Catalytic effect	Phare investment support to the Project has a catalytic effect , because otherwise Neringa municipality would have no financial and technical possibility to improve its information infrastructure in order to meet its strategic developmental requirements and to promote economic development via access to the information society.
11.2. Co-financing	Co-financing will be provided from the national budget and from the municipality budget
11.3. Additionality	PHARE investment support will be additional, because no other public or private resources have been assigned to develop alternative telecommunication network in Neringa municipality
11.4. Project readiness and size	Full technical and tender documentation, and licensing is being prepared under the PPF and will be ready by the end of 2002 (i.e. before the start of the project).
11.5. Sustainability	<p>The project will have a long-term positive effect on information infrastructure and new business infrastructure development in Neringa municipality, because it will provide full alternative telecommunication access for public and business entities (and for every permanent and temporary resident in the region, as well). It will help in the short term to create competitive environment for ITT services in the region and will make them affordable and attractive for Neringa community and for visitors. Telecommunication services (including cable TV) provided by BWA system, will generate sufficient revenue, in order to maintain and develop this broadband infrastructure for many decades after PHARE investment project will be fulfilled. This project will comply with specific environmental protection regime in Neringa region.</p> <p>The project will also support the municipality in developing the revenue generation to support ongoing maintenance and operational costs.</p>

11.6. Compliance with state aids provisions	Competition Council of Lithuania, has concluded (see letter attached in Annex 6) that there are no restrictions, which could be applied to the project according to the Law of State Aid for Private Entities and that there are no problems concerning fair competition regulation in Lithuania. After 1 January 2003, when telecom monopoly ends <i>de jure</i> , this project is even more actual, because it helps to break monopoly of "Lietuvos telekomas" <i>de facto</i> in Neringa region.
11.7. Contribution to National Development Plan	The project contributes to the NDP part "Industry and business development" measure 3; "Economic infrastructure" measure 4 and "Local and regional development" measure 2.

2. Conditionality and sequencing

The following conditionalities will apply:

1. The prior issuing of the LMDS licence by Ministry of Transportation to Neringa Municipality (via its wholly owned entity).
2. Sufficient national co-financing ensured.
3. Investment in, and completion, of necessary works of receiving network by Neringa Municipality.
4. The feasibility study demonstrates that there will be a positive and significant socio-economic impact on the region should the equipment be installed.

With regard to sequencing, the preparation of necessary works must be complete before the equipment can be installed.

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule
4. Report on pre-feasibility study
5. Opinion of the Communications Control Service (CRA)
6. Opinion of the Competition Council of the Republic of Lithuania
7. Opinion of the Information Society Development Committee at the Government of the Republic of Lithuania

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Annex 1.

Pilot project for promotion of information society via development of regional broadband wireless access (for data, voice, video transmission and other ITT services) infrastructure			Programme name and number	Disbursement period expires: 3Q/05
			Contracting period expires: 3Q/04	
			Total budget : 1.737 MEUR	Phare budget: 1.288 MEUR
Overall objective	Objectively verifiable indicators	Sources of Verification		
<ul style="list-style-type: none"> Improving business related infrastructure, contributing to economic and social cohesion and regional development; 	<ul style="list-style-type: none"> Number of regular Internet users reaches the level of developed EU countries (30%); Diminished cost of ITT services (by 50%); Public Internet access sites available (7) International business involved (10 international conferences and similar events per year). Additional econometric value of nature and cultural heritage achieved through increased international awareness and internal value added of improved regional information infrastructure (100% in 3 years perspective). New jobs created (200) 	<ul style="list-style-type: none"> Official sociological and statistical data ITT services sales in the region data; Neringa municipality report; Representative econometric study of Neringa region in EU perspective ("willingness to pay" method) 		
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions	
<ul style="list-style-type: none"> To develop organizational and technical infrastructure (broadband wireless telecommunication access system), which will enable fast Internet access, data, voice and video transmission in all Neringa region and will enhance development of eBusiness infrastructure. To connect regional broadband wireless access network with national and international core backbone systems of data transmission, providing an alternative for telecommunication network of Lietuvos Telekomas and better quality services. To support the municipality of Neringa in the utilization and exploitation of BWA infrastructure to promote economic and social development. 	<ul style="list-style-type: none"> Speed of available (independent from fixed telephony networks) information and data transmission (technically will exceed 130 Mbs inside Neringa region); New ITT services and information systems through technical access and network of service providers (10) Interconnections with Lithuanian radio and TV Center digital relay corebone and other interconnections alternative to Lietuvos Telekomas (5 interconnections and/or alternative access to international, national and neighboring regional telecom networks); Development of non-seasonal business tourism in Neringa region (50 conferences and/or other public meetings per year, 250% increase). 	<ul style="list-style-type: none"> Technical project of broadband wireless access system; Technical data and documentation on parameters of installed system; Report of Neringa municipality; Reports of Communications Regulatory Authority; 	<ul style="list-style-type: none"> BWA will compensate weaknesses of the Neringa city (remoteness, isolation, small market); BWA will enhance potential business strength of the region (international cooperation, tourism; unique resort possibilities, etc.); Digital TV relay network will be installed by Lithuanian radio and TV centre in terms, according their business plan throughout the country; Neringa municipality is committed to 	

<p>Results</p> <ol style="list-style-type: none"> Existing broadband wireless access system which covers all the territory of Neringa city; Fast and cheap Internet access and the possibility of alternative telephone, multimedia and other services for everyone in Neringa.. System is linked to the national and international core bone telecommunication network Neringa municipality staff trained in relation to management of local infrastructure. Local development plan produced with active involvement of local stakeholders Awareness campaign completed on utilizing access to information society 	<p>Objectively verifiable indicators</p> <p>Coverage of population (100%) with broadband radio signal</p> <p>Percentage of the users of alternative telecommunication services (40%);</p> <p>40 international, national and local TV channels available</p> <p>100 commercial Internet sites</p> <p>150 local companies having attended awareness raising events.</p>	<p>Sources of Verification</p> <p>Report of National Communications Regulatory Authority (CRA)</p> <p>Technical data about connected audience, official data of sociological research;</p> <p>Data of sociological research, official statistical data of the region;</p> <p>Official data on eBusiness market research (SIC Gallup)</p> <p>Project Reports</p>	<p>Assumptions</p> <ul style="list-style-type: none"> Despite the small amount of population in Neringa and small market, this region will remain attractive for various international scientific, business, educational and similar projects; 	<p>implementation of programme to exploit the potential of BWA</p>
<p>Activities</p> <ul style="list-style-type: none"> acquisition of necessary transmission and data processing equipment; installation of transmitting equipment; <p>Assistance to the Municipality of Neringa in the following:</p> <ul style="list-style-type: none"> Setting up management arrangements for the local operation of the BWA infrastructure Evaluation of local development plan and assistance in preparing new development plan in the context of information society infrastructure. Development of promotional materials and awareness campaign to ensure all target groups will understand benefits of BWA and be able to exploit them Setting up revenue collection system to meet ongoing maintenance and promotion work 	<p>Means</p> <ul style="list-style-type: none"> Supply contract for purchase and installation of equipment Service contract for Assistance to Municipality of Neringa 		<p>Assumptions</p> <ul style="list-style-type: none"> All technical documentation prepared in advance via PPF Municipality is fully committed to the development of effective management systems and to the development and implementation of an local plan to maximize the value-added for local institutions and companies from the infrastructure 	

	Preconditions
	<ul style="list-style-type: none">• Co-financing available• Financing and commitment to investment in works/receiver network by Neringa Municipality.• Regional LMDS licences issued• Positive results of the feasibility study which confirm the statements in pre-feasibility study

22

Annex 2
Detailed Implementation Chart for the Project

Year		2002												2003												2004												2005					
Month		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6						
Supply																																											
Service																																											
Works																																											

Design
Tendering
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Annex 3
Cumulative Contracting and Disbursement Schedule (Phare contribution only)

	Date											
	2002			2003			2004			2005		
	30/06	30/09	31/12	31/03	30/06	30/09	31/12	31/03	30/06	30/09	31/12	31/12
Contracting												
• Supply					0.953							
• Service						0.335						
Total contracting (cumulative)					0.953	1.288						
Disbursement												
• Supply					0.57	0.57	0.57	0.85€	0.953			
• Service						0.1	0.13	0.16	0.19	0.22	0.25	0.335
Total disbursement (cumulative)					0.57	0.67	0.7	1.01€	1.142	1.172	1.202	1.288

Annex 4

Summary report of pre-feasibility study

A full feasibility study will be prepared under the PHARE LI01.15.01 Project Preparation Facility by November 2002.

1. Background.

1.1. National policy in ITT sector.

There are two main features of the national telecommunication sector, which affect the regional level:

- significant market power (monopoly) belongs to "Lietuvos telekomas" in the market of telecommunications ("last mile" problem, the cost and quality of Internet services);
- new developments of corebone networks and local data distribution networks all over the country are slow; but the need for national alternative telecommunication platform is acknowledged, already. It has realistic market development perspectives in major cities of Lithuania.

Until now, there was no alternative telecom "corebone" system in Lithuania, as well as there is a lack of competitive "distribution networks" (last mile problem). Therefore, "Lietuvos telekomas" remains monopolistic telecom business entity throughout the country (though there are no technological possibilities for fast Internet services in Neringa even for "Lietuvos telekomas", there is no and cannot be any optical cable link to Neringa). There are many technological and physical possibilities in the "mainland" to develop telecom alternatives (radio-relay, other wireless links, optical and other cable networks) and they are in the process of development. Neringa region until now has no such possibilities.

State owned company - "Lithuanian radio and TV centre" (LRTC) has almost finished its digital relay network in all Lithuanian territory (except Neringa, it is not included even in 10 years business plan of this business entity), and this is one of possible "corebone" alternatives to "Lietuvos Telekomas", but LRTC has no investment potential to develop competitive distribution networks throughout the country. Other two state owned companies - "Lietuvos Energija" and "Lietuvos Geležinkeliai" ("Lithuanian railway") have installed some alternative optical cable links throughout the country (Neringa region excluded), but these companies have no further plans to develop distribution networks themselves. Cable TV networks are developed only in urban areas, though not sufficiently, but national cable penetration reaches 30%, already).

Broadband Wireless Access could provide local data distribution network in Neringa region, which is the only possible way to info-include Neringa region, to overcome its geographical isolation and widespread of population and to provide high quality services.

Development of Broadband Wireless Access systems (LMDS) is already acknowledged in Lithuania to be effective in solving the last mile problem alternatively to "Lietuvos Telekomas", but there has been no intensive

development of these technologies in Lithuania until now, because other technologies in "the mainland" were regarded appropriate and had been developed earlier. Because BWA development is still a very risky investment even in urban regions of Lithuania, the Licencing Committee is going to issue only a few national BWA licences and use only a part of the 26GHz bandwidth. At least one of these licences will be split to five regional licences (there are five major cities in Lithuania). It is very likely, that two or three GSM operators will participate in the bid for these BWA licences in order to use LMDS technologies as an additional resource in major cities. As far as 28Ghz bandwidth is also open for LMDS, this project implies application for a pilot regional licence in Neringa territory in this bandwidth.

1.2. Background of Neringa region and regional development policy

Neringa municipality is geographically the most western municipality of Lithuania, situated on a Curonian Spit. It is surrounded by the Curonian Lagoon from the East, the Baltic Sea from the West and the Kaliningrad Region (Russia) from the South. The only connection to Lithuanian mainland is by a ferry. Neringa municipality consists of four major settlements (Juodkrantė, Preila, Pervalka and Nida), which are rather isolated from each other.

Neringa region is recognized by UNESCO as a nature and culture heritage of the world (another place in Lithuania, which have such status is old town of Vilnius city). During the year 1997 Klaipėda university and Estonian Institute of Economics carried out econometric survey, which was financed by PHARE and which followed the goal to estimate the value of Neringa's nature and cultural heritage in the national context. This value was estimated by three methods:

1. Willingness to pay, contingent valuation, referendum format (2,2 MEUR).
2. Consumer surplus, travel cost analysis; separational value over the next best alternative – Palanga resort, which is 25 kilometers to the north from Klaipėda city on the coast of Baltic sea (1,1 MEUR).
3. Marginal implicit price, hedonistic price analysis (2,6 MEUR).
(GDP of Lithuania from that time has grown 1,23 times. Maybe, the national econometric value of Neringa's nature and cultural heritage has grown at similar rate).

Until now there has been no survey estimating the European context (the best method in this case would be the "willingness to pay" method, provided that the EU citizens are aware of Neringa's uniqueness and resort services or this survey could be weighted against the level of such awareness). Any measures which would improve marketing of Neringa on the EU level and improve local services to the level of international standards, would enlarge its econometric value and development perspectives, dramatically.

The main branch of the Neringa's economy is tourism. Though Neringa has only 2.5 thousand permanent population, every summer more than 700 000 tourists visit this "city" region (which is 9,8 thousand hectares and stretches more than 52 km. at the coast of Baltic sea and Curonian Lagoon). Neringa has 54 hotels and resort centers, more than 170 SME entities. Hotels in Neringa can host up to 700

participants of business conferences per day. But they use only 10-15% of this potential (during the critical, non seasonal periods of social life).

Neringa for many years has been a traditional place for various cultural events, educational programs. Neringa municipality has cooperation contracts with main Lithuanian universities (Klaipėda University, other similar municipalities in Baltic region (Gotland in Sweden, Fehmarn in Germany, Zelinogradsk in Russia).

During the summer time more than half of Neringa household transform into business entities (buy patents for individual businesses in Neringa municipality). A big part of patents is bought by Lithuanian citizens, living outside Neringa (the total number of patents, bought on the third quarter, reaches 600, but it hardly exceeds 30 on the first quarter of the year). There is no sound statistical data concerning the profile (structure) of Neringa's visitors.

In 1998 the Council of Neringa municipality approved several programs in crucial spheres for sustainable development of the region (Coastal Management, Energy Infrastructure, Management of Waste, Transport Infrastructure, Water Supply and Wastewater treatment, Recreation Development, Tourism Development, Social and Economical Development). Investments concerning water supply renovation and wastewater treatment will exceed 40 mln. LTL. and have been approved as ISPA investment, already. Only environmental issues (according to the Coastal Management, Recreation Development and Waste Management programs) need additional investment of approximately 28 mln. LTL. Implementation of all these programs requires an adequate management system and high quality labor force in Neringa municipality.

According to the data of the Lithuanian Labor and Social Research Institute, which prepared the Program for Economic and Social Development of the Region, trends of social and economical development of the region are not favorable:

- number of permanent population in the region is constantly diminishing (it has diminished almost 15% in last ten years, because younger people leave this region);
- percentage of population with high education is constantly diminishing for the last ten years;
- the community of Neringa becomes older at a higher rate than average rate in the country.

Following a study of numerous social-economic problems of the region, the authors of the above survey made a general conclusion, that harmonic (sustainable) development of an open society in Neringa city in the period of last ten years has been hampered. Starting from the year 1997, the revenue of municipality budget is constantly diminishing. The need to maintain existing social and economical infrastructure and to ensure national park preservation in Neringa requires growing additional national subsidies to the region (the revenue of Neringa municipality budget in 2002 is estimated to be 17521,2 LTL. A bigger part of it (13 165LTL) comes from direct national subsidies. Only 3823 LTL of those subsidies are allocated according to the approved public investment programs, while the other part of subsidies goes to compensate revenue disproportion and to maintain existing social infrastructure. The average disposable income per capita in Neringa region in 2001 was 344 LTL (according

to estimations of the Department of Economics, Business and Foreign Relations), when the average national disposable income per capita last year was 409,5 LTL. Due to additional transportation costs in the region, the ratio of average expenditure on food and non-alcoholic beverages vs. total average expenditure has always been larger in Neringa region than the average numbers of the whole country.

The Program for Social and Economical Development of the Neringa region has formulated four directions of social and economical development of Neringa, in order to ensure sustainability and protection of harmonic environmental-cultural area:

- development of Neringa region as a communication center, which would attract intellectual production, enhance renewal of high quality human resources and in turn improve local services to the level of international standards (intellectual value added to local sector of services, included);
- realization of Neringa's nature and culture heritage through economical activities, related to tourism (it means not enlargement of tourism in numbers of visitors, but on the contrary – to diminish the volume of visitors, to give priority to organized tourism, which will lead to shift from recreational tourism to cultural and business-like forms of tourism; make use of environmental value added for better quality services);
- development of unique forms of tourism;
- development of tourism infrastructure.

On June 25, 1998, as a direct consequence of the Program for Social and Economical Development, Neringa municipality adopted its strategy, called "Neringa – international communication center" (hereafter referred to as – MS - Municipal strategy). The priority of business-like tourism in Neringa region is reflected in the National tourism development strategy 2000-2005, which formulates the strategic necessity to develop business conference tourism in Western Lithuania.

Regretfully, there is no appropriate information and telecommunications infrastructure in the region which is necessary in order to implement MS and to ensure sustainable development of the region.

Following the adoption of the strategy, there have been many attempts to create adequate communication infrastructure. One of the most realistic possibilities three years ago was to use digital MMDS (microwave multipoint distribution system) stations. However, the private company "Mikrovisata", which got the national licence for MMDS, did not start any activities in Neringa despite a very active interest which was expressed by Neringa municipality (including the possibility of partial subsidies, proposed by it). Furthermore, the MMDS bandwidth (2,5-2,6 GHz) is planned to be closed altogether by 2008.

Broadband wireless access system is an effective solution to create the competitive market of information and telecommunication services in the short term. This is the strategy, which is used in EU countries for "unbundling of local loop" in the telecoms market. BWA will help compensate the weaknesses of Neringa (isolation, spread of population throughout rather big territory, seasonal fluctuations of business and social life) and will provide economically available

information infrastructure for local businesses as well as the public sector and help use the potential strength of the region (resort, tourism, international cooperation). This project fits very well with the Municipal strategy, which is based on the concept of better and wider communications and participation in international cooperation (including active involvement in Baltic Sea Co-operation, where special attention is paid on infrastructure of the coastal regions of Baltics - "Programme on actions of cooperation of Baltic region countries", July 3, 1996, Calmar).

Geographical and economical barriers of Neringa region for information society development (parameters of info-exclusion) are:

- Problems of "last mile" alternatives in Neringa region and the cost and quality of Internet services. The impact to Internet usage and constraints to information society development are very obvious; despite the fact that almost 12% of Neringa population have computers and access to Internet at home, only 2% do use Internet at home and 5% in the office more often than twice per year (non representative research data of "Center of Information, tourism and culture"). Internet usage becomes very expensive because it is provided mainly through fixed telephony network and consumers must pay not only for Internet access (25-30 EUR per access point), but also for local voice communication, which may lead to the total average Internet price of up to 75-100 EUR, if the usage is regular or the price for leased lines which in the case of 1Mb access exceeds 250EUR per month. DSL services are not available in Neringa region, either.
- Due to environmental and economical specifics (seasonal fluctuations of economic and social life; geographical isolation; low density of population and small market; environmental restrictions) of Neringa region, there are no TV cable networks (20% of population use satellite downlinks, but this way does not solve local, regional and national TV exclusion of the region (Juodkrante, Preila and Pervalka in particular). This fact is obvious weakness of tourism infrastructure in Neringa region..

Development of information society is the bottleneck for sustainable tourism development and strengthening of its international (European) dimension of Neringa region. Most effective way to make use of Neringa as one of the world's nature and culture heritage would be to provide this region with modern ITT infrastructure. This task becomes crucial strategy for future social and economical development of the region.

2. Demand and supply of project's inputs.

It is necessary to cover all population of Neringa region with new local telecommunication services infrastructure (LMDS), which will provide three input elements:

- 1) Alternative "last mile" solution for competitive local voice communication services (IP telephony), which will lead to decrease of the prices of telephony services; it will contribute to:
 - o reducing the prices for voice communication in the region and, possibly, in all south- western part of Klaipėda region;

- ensuring independence from Lietuvos Telekomas and reducing the prices for Internet usage;
 - improvement of tourism infrastructure.
- 2) “Last mile” solution for permanent and affordable access to Internet services, ensuring independence from “Lietuvos Telekomas” and providing fast data exchange, which will reflect and even anticipate actual needs of Neringa community; it will contribute to:
- reducing the price for Internet access (fixed prices for BWA “channel”, without any other expenses), which will enable permanent access and use of Internet at the same price;
 - the boost of development of specific information systems in the region (and other networking possibilities);
 - development of tele-working and e-commerce (and address the seasonal unemployment and fluctuation of social and economical life);
 - development of distance learning and possibilities of acquiring new qualifications, which are in demand (and address isolation of the region and help fight with hampering of social-economical development of the region);
 - community services, e-municipality and tele-democracy (including community information services, as far as Neringa has no local media at all, there are no public Internet sites as well);
 - health care and tele-medicine (will address the region without hospital);
 - improvement of the quality of secondary education;
 - expanding of regional and international communication and cooperation (including other resort municipalities and municipalities of coastal area), helping to solve environmental and tourism development issues;
 - positive (integrated) effect on neighboring regions of Lithuania in Curonian Lagoon (including Russia); synergy with needs of Klaipeda city concerning intellectual work and services;
 - triggering and start-up of intellectual and innovative businesses (attracting high quality employees, and businesses outside the region);
 - expanding “business conferences” tourism (including enforcement of the shift from national recreational to international and domestic business-like tourism); development of non-seasonal tourism will make fluctuations of social and economic life in Neringa milder;
 - enable national and international marketing and reservation services for tourism business entities (national and international trading of nature and cultural heritage of Neringa, unique possibilities of the region; providing better access to specific services and products);
 - improvement of multicultural communication and cultural tourism;
 - development of eco-tourism and other eco-businesses (eco-labeling, etc.);
 - enable “Integrated cross boarder web-based management support system for Curonian Lagoon region”;
 - other information systems, which will support sustainable development and environment preservation of the region;
 - well maintained social structure of Neringa will in turn make effect in better preservation and sustainable development of the region.

- 3) Wireless access to TV services (regional, national and satellite TV programs); it will contribute to:
- tourism infrastructure improvement (international standard of hotel services, various leisure services);
 - creation of community information system (Neringa municipality has no possibilities to inform community, not even local newspaper) and other local services;
 - additional possibilities to regional, national and international communication information exchange and communication (TV info-inclusion of the region);
 - extra-motivation and speeding-up of connection of major part of Neringa community to BWA system;
 - future possibilities of interactive TV projects.

3. Beneficiary and partners in implementation of the project;

Beneficiary of the project is Neringa municipality (new development strategy of the region, related to BWA, will be prepared and implemented in coordination with the Department of Economics, Business and Foreign Relations and through direct participation of Information, tourism and culture center (public entity of Neringa municipality).

Main partners in the process of new strategy implementation will be:

- Managing Office of Neringa National Park;
- Baltic office of EUCC (The Coastal Union);
- Non-government business organizations and associations in the region;
- ITT business entities inside and outside the region (from Klaipėda and other major cities of Lithuania);
- Klaipėda university and other academical institutions of Lithuania and outside it;
- Creative (art, music, literature, etc.) unions of Lithuania and outside it;
- Neighboring municipalities and regional social partners;
- Various other public institutions and organizations outside Neringa region.

4. Appropriate technology, alternative solutions and options:

4.1. To use fixed telephony lines for data transmission (worst option):

- 4.1.1. The distance from Klaipėda to other end of Neringa would be too long in order to provide high quality data transmission via fixed telephony network of Lietuvos Telekomas.
- 1.1. Needs rather expensive equipment for data transmission, but still would not provide access for TV services;
- 1.2. No independence from LT and, therefore, Internet services would be too expensive in order to catalyze information society development;

4.2. To cover region with optical fiber network.

- 1. Advantages:
 - 2. Can provide access to all three crucial services (voice communication, Internet, TV and etc.);
 - 3. Can provide unlimited speed of data exchange;

2. Disadvantages:
3. Needs not less than 6 000 000 EUR investment in order to reach Nida across Curonian Spit and further investment to develop distribution network;
4. Do not fit to constraints of National Park (restrictions to dig, etc.).

4.3. Mixed usage of optical fiber and fixed telephony lines:

- optical fiber across Curonian lagoon to Juodkrante;

Main disadvantage: too risky, as far as Curonian Lagoon is rather shallow.

- fixed telephony lines used for data transmission in Juodkrante and covering the distance from Juodkrante to Preila, Pervalka and Nida;

Relative advantages: the distance of used fixed telephony network will be reduced; it will ensure satisfactory quality for services; investment for equipment supply and installation would be less than BWA.

Main disadvantages: no independence from Lietuvos Telekomas; would not ensure access to cheap Internet services in all region; would not provide access for TV services.

4.4. Mixed usage of optical fiber and non-broadband radio links.

1. Optical fiber to Juodkrante;
2. Non-broadband radio links from other side of Curonian Lagoon (Vente lighthouse) to Preila, Pervalka and Nida (in 2,3-2,4 GHz bandwidth, for example);
3. Non-broadband radio links for data distribution network inside all four main settlements in Neringa;

Main advantages:

1. Cheaper solution for Internet services and data transmission, independent from fixed telephony lines of "Lietuvos telekomas";
2. Enough data transmission speed for SME and household offices;

Main disadvantages:

1. Does not create enough competition in the field of telephony services.
2. Does not provide access to TV services;

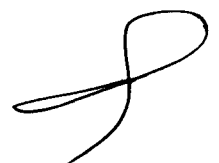
4.5. Usage of individual and/or collective satellite TV downlinks in addition to 4th option:

Advantages:

1. Provides access to certain packages of satellite (international) TV services;
2. In the case of high penetration would not require broadband distribution of TV programs;

Disadvantages:

1. Does not fill the gap of access to local, regional and national TV programs and do not support community information system (Neringa does not have even a local newspaper) ;
2. Less international TV programs available than in cable or wireless-cable systems;



3. Will not enhance accelerated connectivity of the community into modern telecom network.

4.6. Broadband satellite services are not available and will be too expensive in order to support local information system.

5. Implementation.

Preliminary inventory of BWA (LMDS) and its cost structure would be:

The cost of Supply contract in order to install BWA system in the region (physical part of the project and installation of equipment) would reach 1 382 000 EUR. The realisation of contract will consist of:

1. Installation of basic LMDS station in Nida (in the Hill of Urbas, where the resort center of Lithuanian writers is situated). It will enable access to external Internet sources and will form the package of not less than 40 TV programmes, all national and regional ones, included. This part of the project, together with master control and main office arrangements and VSAT Internet terminal will constitute not less than 30%-35% of Supply contract.
2. LMDS transmitters (small power and will be installed in 10 places of Neringa region and in another coast of Curonian Lagoon (see the Scheme, attached).)/upconverters and LMDS receivers/downconverters; inband links which will connect Nida-Vente-Kintai-Drevertina; Vente-Preila, Vente-Pervalka; Drevertina-Juodkrante (antennas, amplifiers, receivers/downconverters, etc.). Radio relay connection to Klaipėda and/or to Šveškė. This part of supply will constitute approximately 15-20% of the total cost.
3. Receiving equipment: Long, media and short distance LMDS transceivers, downconverters; Internet modems, cables, amplifiers, splitters, etc., TV tuners, etc. This part, according preliminary estimations will constitute 30-35% of Supply. If during international bid process, the prices for transmitting equipment will be reduced significantly against recent estimations, "the receiving part" will be enlarged proportionally (in order to subsidize accelerated connection of Neringa community).
4. Installation, transportation, other costs (for example, licences) will not exceed 15-20% of Supply contract.

6. Organization and implementation procedures, time schedule.

BWA project requires more detailed feasibility study and other technical assistance, which will include detailed technical project, other documentation, related with acquiring of necessary licences, international bid documentation for supply, open bid for selection of general Consultant and Service Provider to the project, environmental assessment. All technical documentation should be provided and all necessary procedures implemented (through support from PPF) before October, 2002. Project will start from the very beginning of 2003 year in order to make possible installation of LMDS equipment during summer time. Last quarter of 2003 will be used mainly for marketing documentation and procedures; new strategy of the region development,

making use of broadband services will be prepared, municipality staff and key representatives of local business and public sector will be aware of and trained to implement such strategy effectively.

7. Financial analysis.

Assumptions:

1. BWA can expect to connect at least 400-450 household (up to 60%) and about 80-100 SME and entities of the public sector (up to 60 %). This amount of clients can be reached very quickly (until the end of 2004);
2. BWA launching expenses in the last quarter of 2003 will be covered by revenue from installation works of receiving network and finance of marketing works;
3. Basic prices for Internet and Telephony is estimated to be at least twice less than that prices of Lietuvos Telekomas and will remain stable. After four-five years those prices could be further reduced at the expense of development of new ITT services. TV services are estimated to be open to community at a fixed price, close to market prices of cable TV services in small towns. Thus, revenue of BWA is estimated in terms which allow to cover costs of maintenance of the system and provide good quality services for affordable price (prices of Lietuvos Telekomas services are distorted, because of monopolistic impact). Detailed analysis of telecom prices will be presented in a feasibility study.
4. Internet, TV, telephony and other services can be outsourced (security services, for example) under contract agreements with certain service providers. Provided NET PROFIT ACCOUNT PROGNOSIS is cumulative for all services, directly linked to BWA (see Table No.1 in Technical appendices below the text of this annex). Profit of BWA activities is estimated to grow 5% per year (due to sustainable macro-development of Neringa region which will be supported by BWA itself).
5. The life of BWA is estimated to be 25 years, but in order to achieve more realistic view, cash flow prognosis of the project is presented in the horizon of 20 years (see Table No.2 in Technical appendices, below the text of this annex).

In accordance to presented tables of preliminary financial analysis, the financial internal return rate (FIRR) of this investment project would be negative: -9% and financial Net present value (FNPV) of the project would be 257 481,3 EUR. (discount rate – 7%).

This preliminary analysis reveals very clearly, that there is no possibility for private investment into sound information infrastructure of the region, even if the prices of telecommunication services would be somewhat close to monopolistic prices of Lietuvos Telekomas.

8. Economic analysis.

BWA will create infrastructure which will support:

1. Non-seasonal tourism business increase (up to 50-60 business conferences, 10 of them – of international character);

2. Innovative business increase (new ITT services, public Internet sites and support to information systems – at least 10 new entities, also new tele-working possibilities).

This effect will create not less than 200 new jobs in non-seasonal period (9-10 months) and up to 20-30 new jobs in tourism season.

This indicator makes possible to calculate economic rate of return of this investment project (taking into account all investment, according supply and support contracts, that is: 1 717 000 EUR). ERR in 20 years horizon will be 10-15% (5% discount rate). Economic net present value of investment will increase against initial investment.

Project will have other multiply social effects and benefits which are difficult to measure in quantitative manner. Major effect will be from decrease of Internet and local telephony prices (by 50%) and increase of social income from restructured tourism businesses (shift toward domestic and international business and cultural tourism) and because of improved standards of tourism infrastructure.

Project will have good merit in helping to preserve unique nature and culture heritage of the region. Maintained and improved social infrastructure and renewal of human resources will support sustainable development of the region.

As far as BWA technical reach (in Vente, Kintai, Dreverna) and spill-over effect reaches other regions on the other side of Curonian Lagoon (Klaipeda and Silute region) and make spill-over effect on Kaliningrad district of Russia, BWA will trigger positive regional and cross border developments (see SCHEME OF BWA in Technical appendices below this annex).

The Support Contract will help to increase international awareness of Neringa tourism possibilities. Internal value added of improved information infrastructure and international awareness will increase econometric value of nature and culture heritage (as to be measured by “willingness to pay” method in EU area perspective).

9. Monitoring and evaluation.

All measurable indicators of the project are presented in the Logframe and are easy to monitor through project reports, public sociological research data and monitoring provided by Communication regulation Services.

10. Technical appendices.

1. Scheme of BWA (see bellow);
2. Table No.1 (Provisional Cumulative Net Profit Account as of 2004)
3. Table No.2 (Provisional Cash Flow Analysis, FIRR and FNPV).

3



**TABLE
No.1**

**PROVISIONAL CUMMULATIVE BWA NET
PROFIT ACCOUNT PROGNOSIS thousands of
EUR**

2004

Revenue		04.02.	04.03.	04.04.	04.05.	04.06.	04.07.	04.08.	04.09.	04.10.	04.11.	04.12.	Total by year
TV	3	3	3	3	5	6	6	7	5	3	3	3	50
Internet	7	7	7	7	7	9	10	11	9	8	7	7	96
Telephony	3	3	3	3	3	3	3	3	3	3	3	3	36
Other	5	5	5	5	5	5	5	5	5	5	5	5	60
Total by month	18	18	18	18	20	23	24	26	22	19	18	18	242

EXPENSES	04.01.	04.02.	04.03.	04.04.	04.05.	04.06.	04.07.	04.08.	04.09.	04.10.	04.11.	04.12.	Total by year
Salaries	5	5	5	5	5	5	5	5	5	5	5	5	60
External Internet sources	4	4	4	4	4	4	4	4	4	4	4	4	48
BWA network expl.	2	2	2	2	2	2	2	2	2	2	2	2	24
Adm. and other expenses	1	1	1	1	1	1	1	1	1	1	1	1	12
Licence fees	2	2	2	2	2	3	3	3	3	2	2	2	28
Deprecitation (tang.)	4	4	4	4	4	4	4	4	4	4	4	4	48
Total by month	18	18	18	18	18	19	19	19	19	18	18	18	220
NET PROFIT	0	0	0	0	2	4	5	7	3	1	0	0	22

TABLE No.2
PROVISIONAL CASH FLOW PROGNOSIS, IRR, NVP (EUR)

Income	2003	2004	2005	2006	2007	2008	2009
NET PROFIT	5500	22000	23100	24255	25468	26741	28078
Investment and reinvestment	-1285000			-45000			-45000
Total cash	-1279500	22000	23100	-20745	25468	26741	-16922

Expenses	2003	2004	2005	2006	2007	2008	2009
Less depreciation	-10298	-20594	-20594	-20594	-20594	-20594	-20594
Equipment acquis. and renov.	-1285000			-45000			-45000
TOTAL:	-1295298	-20594	-20594	-65594	-20594	-20594	-65594
Balance	15798	42594	43694	44849	46062	47336	48673
Total balance	15798	58392	102087	146936	192999	240334	289007

Income	2009	2010	2011	2012	2013	2014	2015
NET PROFIT	28078	29482	30956	32504	34129	35836	37627
Investment and reinvestment	-45000		-45000		-45000		-45000
Total cash	-16922	29482	-14044	32504	-10871	35836	-7373

Expenses	2009	2010	2011	2012	2013	2014	2015
Less depreciation	-20594	-20594	-20594	-20594	-20594	-20594	-20594
Equipment acquis. and renov.	-45000		-45000		-45000		-45000
TOTAL:	-65594	-20594	-65594	-20594	-65594	-20594	-65594
Balance	48673	50077	51551	53098	54724	56430	58222
Total balance	289007	339084	390634	443733	498456	554887	613109

Income	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
NET PROFIT	39508	41484	43558	45736	48023	50424	52945	55592	732946
Investment and reinvestment		-45000		-45000		-45000		-45000	-1690000
Total cash	39508	-3516	43558	736	48023	5424	52945	10592	-957054

Expenses	2016	2017	2018	2019	2020	2021	2022	2023	Total
Less depreciation	-20594	-20594	-20594	-20594	-20594	-20594	-20594	-20594	-422188
Equipment acquis. and renov.		-45000		-45000		-45000		-45000	-1690000
TOTAL:	-20594	-65594	-20594	-65594	-20594	-65594	-20594	-65594	2112188
Balance	60103	62078	64152	66330	68617	71018	73539	76187	1155134
Total balance	673211	735289	799442	865772	934389	1005407	1078947	1155134	

IRR:

NPV:

ANNEX No.5

Opinion of the Communications Control Service

Translation from Lithuanian

**THE COMMUNICATIONS CONTROL SERVICE
AT THE GOVERNMENT OF THE REPUBLIC OF LITHUANIA**

To the Neringa Municipality
Taikos Street 2, Neringa 5872
Fax: (8-259) 52572

Our Ref. No 10-01-1436 of 13th May 2002 To
Your Ref. No 01-565 of 3rd May 2002

Dear Sirs,

**Concerning the Possibility of Installing a Broadband Wireless Communications System in the
Town of Neringa**

The Communications Control Service has estimated positively the Neringa Municipality's initiative of creating a data transmission and TV network through access to a broadband wireless Communications network and establishing, at the same time, an economic entity that will apply for an adequate licence. Taking into consideration the fact that it is very difficult to adjust analogical or digital TV channels within the seacoast area in a way which would satisfy the demands of the residents and holidaymakers within the entire Neringa zone, we are of the opinion that the offered project would be able to solve the difficult problem of receiving TV signals. The project is technologically realisable, yet, we shall be able to conclude a technical evaluation of your project only upon receipt of same.


Yours respectfully,

/Signed/

Tomas Barakauskas
Director

M. Žilinskas, tel. (8-5) 216 14 07, e-mail: mzilinsk@rrt.lt

WV



Code 2144221 Algirdo St. 27 E-mai: rrt@rrt.lt, http://www.rrt.lt
LT-2006 Tel.: (8-5) 21611 77, (8-5) 213 98 74

Acc.No 10002410679with
Hansa-LTB Bank J. St. Co.
Bank No 73000

Vilnius Fax: (8-5) 216 15 64

Translation Bureau DISKUSIJA, Seimyniskiu. g. 1A, 2600 Vilnius.
Tel. : (3702) 790 574

Translator Asta Rusakeviciene.

*Translator has been acquainted with the content of Art.293 of the
Criminal Code of the Republic of Lithuania which provides for
criminal responsibility for not true
translatic*

*Signatur**



ff



Date 14. 05.2002

FROM

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P. 01

**RYŠIŲ REGULIAVIMO TARNYBA PRIE
LIETUVOS RESPUBLIKOS VYRIAUSYBĖS**

Neringos miesto savivaldybė
Taikos g. 2 |
5872 Neringa

2002-05-13 Nr. 10-01-1286
2002-05-03 Nr. 01 -565

Faksas (8 -259) 52572

DĖL PLAČIAJUOSČIO BEVIELIO RYŠIO SISTEMOS ĮDIEGIMO NERINGOS MIESTE GALIMYBĖS

Kyšių reguliavimo tarnyba teigiamai vertina Neringos savivaldybės iniciatyvą sukurti duomenų perdavimo ir televizijos tinklą, naudojant plačiajuostes bevielės prieigas, kartu steigiant ūkio subjektą, kuris sieks šios licencijos. Turint omenyje, kad pakrantės zonoje, labai sunku sukoordinuoti analoginės ar skaitmeninės televizijos kanalus taip, kad tenkintų visos Neringos gyventojų ir poilsiautojų poreikius, manytume, kad siūlomais projektas galėtų išspręsti susidariusią sudėtingų televizijos signalų priėmimo klausimą.

Technologiškai projektą realizuoti įmanoma, tačiau techniškai įvertinti Jūsų projektą galėsime tik jį gavę.

Pagarbiai,



Tomas Barakauskas¹
Direktorius



ANNEX No.6
Opinion of the Competition Council of the Republic of Lithuania

Translation from Lithuanian

THE COMPETITION COUNCIL OF THE REPUBLIC OF LITHUANIA

To the Neringa Municipality

Our Ref. No 10-06-562 of 9th May
2002 To Your Ref. No 01-564 of 3rd
May 2002

Dear Sirs,

**Concerning the Possibility of Installing a Broadband Wireless
Communications
System in the Town of Neringa**


The Competition Council has analysed your letter No 01-564 of 3rd May 2002 and the addenda attached thereto, and hereby informs that the funds specified in the project will be allocated for the development of the infrastructure which would be accessible to all users. Therefore, the above-mentioned funds are not the government-financed support as it is defined in part 1 of Article 2 of the Government-Funded Support to Economic Entities Control Act of the Republic of Lithuania (Gazette, 2000, No 45-1292).

The Competition Council is of the opinion that the materialisation of the above-mentioned project would not violate the principles of a fair competition because a company established for the above-mentioned activity would obtain a licence in accordance with a general procedure, i. e. through a competition, and the operator of the created network will also be selected by means of competition.

/Signed!
R. Stanikunas
Chairman

S.Cernolonskis, 62 95 78 D. Stadalnikiene, 62 26 17

Code 8866819 Vienuolio St. 8, LT-2600 Vilnius. Tel. 226492 Fax 22 64 92 E-mail:
tarnyba@konkuren.it Account No 120739 with Naujamiescio Branch of Vilnius Bank J. St. Co., Bank
No 260101730


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Translation Bureau DISKUSIJA, Seimyniskiu. g. 1A, 2600 Vilnius.

Tel. : (3702) 790 574

Translator Asta Rusakeviciene.

Translator has been acquainted with the content of Art.293 of the Criminal Code of the Republic of Lithuania which provides for criminal responsibility for not true translati

Date 14. 05.2002

Signatur*



09. MAY. 2002 (THU) 10:37 . L R KONKURENCIJOS TARYBA

370 2 226492

PAGE. 1



LIETUVOS RESPUBLIKOS KONKURENCIJOS TARYBA

Neringos savivaldybei

2002-05-9Nr,10-06-5b3*

I 2002-05-03 Nr.01-564

DĖL PLAČIAJUOSČIO BEVIELIO RYŠIO SISTEMOS ĮDIEGIMO TREKINGOS
MIESTE GALIMYBĖS

Konkurencijos taryba, išanalizavusi Jūsų 2002 m. gegužės 3 d, raštą Nr.01-564 ir prie
rašto pateiktus priedus informuoja, kad projekte nurodytos lėšos bus skirtos

infrastruktūros plėtrai, kuri būtų prieinama visiems vartotojams. Todėl minėtos lėšos nėra valstybės pagalba taip, kaip tai apibrėžta LR valstybės pagalbos ūkio subjektams kontrolės įstatymo 2 straipsnio 1 dalyje (Žin., 2000, Nr.45-1292).

Konkurencijos tarybos nuomone minėto projekto realizavimas nepažeistų sąžiningos konkurencijos principų, kadangi licenciją minėtai veiklai įsteigta įmonė gautų bendra tvarka, ty. konkurso būdu, o operatorius sukurtų tinklo eksploatavimui, taip pat bus atrinktas konkurso būdu.

Pirmininkas :


Xjv<7j

R. Stanikūnas

S.Cernolonskis, 62 95 78
D.Stadamikienė, 62 26 17

Kodas 8866819 Vienuolio g. 8 LT-2600 Vdnfos Td. 12 64 92 Faks, 22649Ž Ei*: tfOTyba@k6nkiiren.lt
Atsiskaitomoji sąskaita 120739 AB Vilniaus banke Vūniaus Naujamiesčio filiale Kodas 260101730





ANNEX No. 7

Opinion of the Information Community Development Committee at the Government of the Republic of Lithuania

Translation from Lithuanian

***THE INFORMATION COMMUNITY DEVELOPMENT COMMITTEE AT THE
GOVERNMENT OF THE REPUBLIC OF LITHUANIA***

Code 8877243 Gedimino Ave. 11. LT-2039 Vilnius Tel. (8-22) 66 39 72 Fax (8-22) 66 39 80

*To the attention of Mr. V. Giedraitis,
Vice-Mayor of Neringa Municipality*

*Our Ref. No: 72-205
To Your Ref. No:*

Date: 14th May 2002

Dear Sir,

CONCERNING THE LMDS PROJECT FOR NERINGA ZONE

In reply to your letter on the LMDS Project for Neringa zone we would like to state that this pilot project is very challenging as regards the development of an information community.

When materialised, the project will enable an alternative access to the communications system and will additionally create favourable conditions for the development of the ITT business infrastructure. Should the project be realised the Information Community Development Committee intends to take part in the coordination of this project in order that all the possibilities provided by the access to broadband communications are used to the utmost extent and in the ways beneficial to the public.

/Signed/

*Juozas Zalatorius,
Director*

Translation Bureau DISKUSIJA, Seimyniskiii g. 1A, 2600 Vilnius.

Tel.: (3702) 790 574

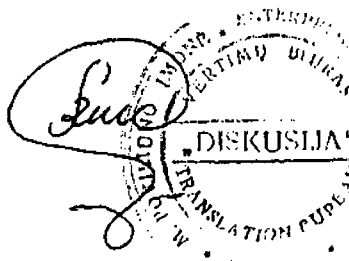
Translator Asta Rusakeviciene.

Translator has been acquainted with the content of Art.293 of the Criminal Code of the Republic of Lithuania which provides for



criminal responsibility for not true translation.

Signature



Date 14.05.2002

**INFORMACINĖS VISUOMENĖS PLĖTROS KOMITETAS PRIE
LIETUVOS RESPUBLIKOS VYRIAUSYBĖS**

Kodas 8877243 Gedimino pr. 11, LT-2039 Vilnius Tel. (8-22) 66 39 72 Faks. (8-22) 66 39 80

Neringos savivaldybės
Vicemerui V.Giedraičiui

2002-05-14 Nr.

I

DĖL LMDS DIEGIMO NERINGOS TERITORIJOJE PROJEKTO

Atsakydami į Jūsų raštą dėl LMDS diegimo Neringos teritorijoje projekto, konstatuojame, kad šis pilotinis projektas yra labai įdomus informacinės visuomenės plėtojimo požiūriu.

Realizavus projektą, bus ne tik sukurta alternatyvios ryšių prieigos galimybė, bet ir sudarytos palankios sąlygos ITT verslo infrastruktūros vystymui. Jei projektas bus realizuojamas, IVPK ketina dalyvauti, koordinuojant šį projektą, kad visuomenei naudingų būdų būtų maksimaliai išnaudotos visos galimybės, kurias teikia plačiąjuostė ryšių prieiga

Direktorius

Juozas Zalatorius