

## The Initiative for Broadband South Eastern Europe (bSEE): Regional Development for Growth in a Unified Europe

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### Abstract

This paper focuses on the issue of broadband development in the countries of South-East Europe (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, FYROM, Greece, Moldova, Romania, Serbia & Montenegro and Turkey) from a regional perspective. In fact, it presents the concepts that led to the *Broadband South Eastern Europe Initiative* ('bSEE'), which aims at shaping a regional joint action of the governments of SEE countries on their way to developing a unified broadband telecommunications environment, fully inter-connected to the European and Global networks.

### Introduction

Nowadays, it is being increasingly acknowledged that information and knowledge have become a core aspect of international socio-economic development. The remarkable developments in the field of information and communication technologies (ICT) are at the heart of this global transition. What is evolving is a fundamental change in how business is conducted and how services (including government, health and education services) are provided. The citizens of the developed world are continually experiencing transformations in their daily living and working conditions.

Unfortunately, ICT development is not affecting all parts of the world homogeneously. The concept of the "digital divide" expresses the gap in access to information resources in some countries, the so-called "third", compared with those with state-of-the-art networks; and also between deprived and more advanced regions within a given country. Thus, the digital divide expresses the difference in facilities for people to communicate, relative to their geographic location, their living standard and their level of education. Ultimately, it is an indicator of a country's economic and social situation. Despite the recent boom in the availability of access to communication resources, or even as a consequence of it, the divide is deepening and the differences in the usage of communication resources between countries and regions intensifying. However, as mentioned above, the digital divide exists not only between countries but also within countries, normally between "rich" urban regions and "poor" rural regions. This regional divide is also present within developing countries, even though rural areas have benefited to some extent from the boom in access to communication resources.

This realization justified the convening of the World Summit on the Information Society (WSIS) by the United Nations, in Geneva during December 2003, with a second phase scheduled for 16-18 November 2005 in Tunis. The

digital divide has attracted much attention due to its impact on development within a global economy, increasingly based on the exchange of information and knowledge. Access to ICT as a development tool is becoming a major political, economic and social issue.

Focusing on the South Eastern part of Europe, much remains to be done with regards to ICT development. The main reason for this lack of substantial development for the Information Society is the long-lasting periods of political, economical and social instabilities in the region.

A brief estimate of the situation in the countries of South East Europe (SEE) would undoubtedly include the following key observations:

- o Mobile penetration is still fairly low, although it may be considered by far as the leading factor of ICT development in SEE.
- o Internet penetration (narrowband) is very low, while broadband access is still in its infancy, if at all present.
- o Costs of available services are high compared to the EU average; a fact that is aggravated by the limited income potentials.
- o Independence of the Telecommunications Regulatory Authorities has not been fully achieved yet.
- o Investment interest in the ICT sector is moderate, due to the absence of a genuinely competitive environment.

The region is in need of a driving force that will assist it in utilizing the leapfrogging potential of electronic communication services for countries under development. For SEE countries development according to the EU standards is the only way through.

This realization motivated regional governments and international organizations to take specific action towards the goal of eliminating the digital divide in SEE and achieving equal participation in the European Development/Connectivity for the region. The most significant expression of this intent originated from the Stability Pact for the South Eastern Europe. The eSEE Working Group, established under Working Table II, deals with relevant issues. The 'eSEE Agenda for the Development of Information Society' was adopted by the regional Governments (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and FR Yugoslavia), in Belgrade during October 2002. The corresponding action plan aims at facilitating ICT development in the signatory countries. A large number of parties are acting as advisors/facilitators in the different stages of eSEE implementation, such as the United Nations Development Programme (UNDP), the World Bank Group, the South East European Research Telecommunications and Informatics Institute (INA),

countries like Hungary, Slovenia, Sweden, UK, and US, as well as the United Nations Economic Commission for Europe (UNECE). Progress has already been reported, but it is a common conclusion that more decisive steps have to be taken by the regional authorities and the international community, for SEE countries to avoid falling so far behind, that the process becomes irreversible.

### **Regional Broadband Development in South-East Europe**

#### *Broadband Communications as the leading force*

The creation and nurturing of a knowledge-based society in SEE is essential in order to enhance and maintain the region's international competitiveness. A key factor of realizing this auspicious venture is the provision of competitive, high-quality infrastructure and services. Broadband Communications can be used as an accelerator of economic development, increasing worker productivity and demanding the creation of jobs. In other words, Broadband creates opportunities for bundling services together and enables operators to offer more services to consumers at lower prices, creating added efficiencies in both time and money. New or offshoot industries are created and as penetration rates grow, the demand for computer, home networking equipment, wireless handheld devices and apparatus that facilitate broadband use rises. Economic benefits are also attributed to indirect factors, including increased e-commerce, reductions in commuting, increased consumption of entertainment, Internet telephony and savings in healthcare as a result of sophisticated telemedicine. For the enterprise sector, economic benefits result from efficiencies in the distribution of goods, services and information, while economic growth is also driven by new investment in network infrastructure, Web-based applications, end-user devices and related applications.

Grasping the opportunities afforded by the Information Age and developing communications infrastructure and services is essential, in order to attract and retain inward investment, stimulate job creation and ensure a fully inclusive society. Broadband high-speed always-on connectivity represents the next phase in the evolution of the digital era and underpins the information society. Therefore, widespread availability of open-access, affordable, always-on broadband infrastructure and services for businesses and citizens is critical and should be made a key policy priority for the Governments of the SEE region. Furthermore, the European Union should invest politically and economically in this process, since it will benefit from the establishment of a gradually unified ICT environment in SEE, which is geographically surrounded by EU member states.

Consequently, deploying broadband communications infrastructure and services in SEE countries could make a reality of the leapfrogging effect, which is needed to realize the much desired convergence of the region to the European socio-economic standards.

Considering the above, INA suggested taking affirmative action, focused on the development of a unified broadband market in SEE that will be interconnected with

the European and Global networks. In this context, the Initiative for 'bSEE' (broadband South Eastern Europe) development was conceived and its initial conceptual description was included in the main conclusions of the Workshop on Telecommunications at the 10th Thessaloniki Forum, 24-25 of May 2004, which takes into account the guidelines of the European Union and the Stability Pact. A corresponding Memorandum of Understanding (MoU) between the targeted SEE Governments has been drafted, with the intention to be signed at the Regional Ministerial Meeting that is organized by the Stability Pact, UNECE and INA, under the auspices of the Greek authorities, for the summer of 2005 in Thessaloniki. This Ministerial Meeting will serve the purpose of assessing the progress achieved under the framework of the eSEE action plan and preparing the SEE input to WSIS-2.

The 'bSEE' Initiative will focus on the overall objective of increasing productivity and quality of life in the signatory countries, supporting the strategic decisions for ICT development reached by European Leaders at the Lisbon Council. Broadband communications development could contribute to this goal by building-up a favourable environment, where everyone will afford and have secure Internet access, public services will be available on-line and businesses will implement their supply-chain or financial transactions electronically. Therefore, by building high quality communications infrastructure and boosting demand for broadband services through innovation and sufficient policy-making, the ICT sector in SEE countries will be gradually led to convergence with the eEurope2005 standards and requirements.

#### *Justifying a Regional Approach*

A justified question could be raised with regard to the rationale behind the concept of Regional Development of the Broadband Communications Market. The answer to this question can be found in a combination of socio-economic factors, such as:

- Harmonization of regional regulatory environment  
The SEE countries are characterized by small size geographically and highly versatile population. The socio-economic environment has only recently found equilibrium, which could not be considered as fully stabilized. As a result, the telecommunications market in each of these countries individually exhibits limited investment interest. On the contrary, if approached on a regional level, investment potential appears to be highly interesting and profitable.

The main obstacle that currently weakens this approach is the absence of a harmonized telecommunications regulatory environment in the region, which does not permit telecommunications companies to apply common strategies in their investment plans in the SEE region. Each case has to be treated individually and the overhead cost of such a procedure is frequently an inhibitory factor.

Consequently, harmonization of telecommunications regulations in the region is critical in the process of attracting international investments that would boost the

market rapidly. However this task requires political will and commitment and can only be performed on a governmental, regional level.

Furthermore, this effort will be focused on harmonizing the regional market with EU and international telecommunications regulations, which will constitute one vital step towards EU accession for the countries of the SEE region.

- **Joint Development of Broadband Content**

SEE countries have only recently attained their independence. This fact implies that despite their differences, the citizens of the region are also brought together by their common history and culture. It is also quite common for the citizens in some of these countries to understand a common language, while maintaining their own identity, expressed through different dialects.

The lack of appealing content and services created by private and public sectors coupled with limited consumer confidence and awareness is limiting assimilation of ICT in the region. Public authorities in the digital era should provide valuable on-line content and services including eHealth, eEducation and eGovernment, which would stimulate public interest and promote the use of broadband communications. Such services could be beneficial to the entire SEE region, by facilitating regional and international co-operation.

Hence, regional collaboration, including private-public partnerships, could focus on developing innovative communication services and content designed for broadband communications networks. Such services must respond to regional needs and meet the constraints imposed by the local environment. The challenge is therefore to develop services that bring people closer together, based on high regional added value information content, which would serve a two-fold purpose: on one hand it would help regional reconciliation and culture preservation, while on the other, it would enhance consumer confidence and promote greater user awareness of new technologies and solutions, such as "ease of use" between different ICT platforms, especially in the home environment. In essence, the process will help boost demand for broadband services in the SEE region.

- **Joint Research Activities**

While broadband connectivity is the main practical outcome of the proposed regional collaboration, it may also provide the incentive for the development of fruitful, regional partnerships in Scientific Research. SEE countries are presented with the opportunity of forming a unified broadband communications environment that suits the particularities of their region and its inhabitants, while, at the same time, it establishes a solid framework for future advancement and excellence in scientific research.

Originally, a joint venture of scientists, research institutes and telecommunications experts should be initiated to answer the vital need for investigation of available broadband infrastructure solutions, accompanied by research on inventive technology

combinations that will speed its deployment and optimize the acquired connectivity results by taking advantage of contemporary, innovative ideas with suitable adaptation in the scientific needs of the regional environment. This process should include tasks such as case-by-case assessment of local networking needs, specialized technology evaluation regarding broadband networking techniques and specific targeted solutions' identification, only to name a few.

Nevertheless, the value added benefits of a regional research collaboration are not limited to their immediate result related to broadband communications deployment, but are mainly related to the initiation of a scientific cooperation between scientists and institutes in different SEE countries, which facilitate the development of critical mass in human resources and technological / scientific background leading to an era of excellence in research and innovation. The process will set the foundations for the development of a network incorporating technology transfer, research staff training and scientific innovation capabilities, aiming to underpin and re-affirm the research potential of the regional academic community. Eventually, it will help mitigate the effects of the digital divide by minimizing the so called brain drain that SEE countries severely suffer from.

- **Joint Development Activities**

It is critical for the SEE countries to exploit every funding opportunity offered by international organizations, including the European Commission. Joint regional collaborations could achieve this goal more efficiently and attain valuable results for the development of the telecommunications market.

SEE countries could launch joint development projects that will attract higher international interest and result in valuable collaborations and partnerships in the region, which will enhance the competitiveness of the market and speed up further evolution. On a regional level, communications solutions could be exploited that might be dismissed as inappropriate or as unaffordable on individual country level.

- **Regional competitiveness as motivation**

All SEE countries have clearly stated their willingness to join the EU. Most of them are involved to a different extent in a process of EU accession. Some of them having been granted candidate status and other further away from formal negotiations, they all recognize the need to enhance ICT development and approach European socio-economic standards. On this track, it would be vital to involve the regional authorities, NGOs and private companies in a competitive race that would drift the entire region towards the common ulterior goal.

#### *Issues to be addressed*

Broadband communications development in each SEE country requires substantial public and private nation-wide infrastructure investment consisting of high-capacity backbone networks, upgraded connection infrastructure and

unbundled local loops. Distance and time will no longer be issues for businesses and individual users.

Nevertheless, broadband deployment needs to address several problems that public and private organizations will have to overcome in different stages of their investment plans or even issues that the end-users will face. In the first case, one of the most critical issues originates from the fundamental concept of Return on Investment. Organizations are willing to invest in a broadband infrastructure, only when it is ensured that this will increase their revenues. An example of investment reluctance is the provision of broadband services to the inhabitants of rural and remote areas, where distances are a big issue and Return on Investment is not sufficient to justify the expenditure. The local government and regulatory authorities are responsible for giving the necessary incentives in order to avoid such bottlenecks.

On the other hand, in several cases a demand problem might evolve. In these cases, the end-users, businesses and individuals, do not express an interest for upgrading their communication services to broadband. It is believed that the existing content is not boosting the demand for broadband; hence, telecom operators, ISPs, cable operators, governments, ministries, medical organizations, and financial institutions should extend their services' offering and develop more user-friendly applications as part of a solution to this issue.

Finally, much like in several countries, broadband services' cost is forbidding wide deployment. The major parameter of this problem could be the limited enforcement power of the regulatory authority or even the exploitation of infrastructure ownership. Drastic measures have to be taken to avoid such problems; measures which will involve regulation and policy-making.

Applying solutions to the problems mentioned above, in combination with the creation of a competitive environment will facilitate and accelerate to a great extent the deployment and use of broadband communication services in SEE countries. Therefore, they are considered as priorities in the process of defining the 'bSEE' course of action.

#### **The 'bSEE' action plan**

The 'bSEE' initiative is motivated by the consideration that all countries of South East Europe, would benefit in various ways from building up partnerships in the electronic communications sector. All involved parties recognize the potential for extensive trade between the countries of the region enabled by electronic communications and need to tap the capabilities and opportunities in a more focused and comprehensive manner. They also acknowledge the need to promote integral links between the SEE countries with a view to leverage capabilities and opportunities in the Electronic Communications sector.

The countries of South East Europe have a common interest in advancing the growth of investments, in forming joint ventures and initiatives, in nurturing technology development and Telecom market evolution. Therefore, they intend to take decisive action at a governmental level,

which will facilitate the development of a unified broadband market, fully interfaced with the European and Global networks that will support the implementation of a technology and industry co-operation programme aimed at fostering business partnerships between countries of South East Europe.

The initiative will take action on two fundamental levels related to broadband communications development in the SEE region:

- o The coordination of policies, which involves evaluating and suggesting best practices gathered from international experience and tailoring the various strategic options to the SEE region's broadband environment;
- o The homogeneous development of regional networks for the deployment of Broadband services in a manner coherent to the European Union standards.

#### *The 'bSEE' Memorandum of Understanding*

The 'bSEE' initiative will follow the successful course of the "South Eastern Europe Regional Energy Market" initiative, for which a corresponding Memorandum of Understanding ("The Athens Memorandum") was signed during November 2002 at the Athens Ministerial Meeting, by all the SEE countries, with the Commission and the Stability Pact acting as sponsors, and which led to the Creation of the Energy Association of SEE Countries.

The 'bSEE' course of action will be realized with the formulation of a Memorandum of Understanding (MoU) that will be signed by the countries of the region, the Stability Pact and (potentially) the European Commission.

The MoU will define a Task Force, which will coordinate the actions for its implementation. The signed Parties will agree to promote closer co-operation and exchange of information pertaining to the Electronic Communications sector, in accordance with the MoU and on the basis of equality, reciprocity and mutual benefit. The scope of co-operation between the Parties is related to broadband communications development and will support the creation of a unified broadband market in the region, by implementing a world model that will capitalize on human resource development and modern electronic communications technologies to facilitate excellence in research and enhance competence of the corresponding regulatory framework.

The 'bSEE' MoU will outline a strategy for the progressive achievement of the aforementioned ultimate goal, thus improving the supply of broadband communications and stimulating the services' demand, which is crucial to the empowerment and sustention of economic development in South East Europe. The 'bSEE' initiative requires a strong commitment by the countries of the region towards market oriented reforms, regional integration and sustainable development. Its implementation will offer significant advantages both in terms of improved utilization of existing infrastructure and human capital capacities, but also in fostering more cooperation and integration in the region, which would result in economic growth, stability and investment.

*The 'bSEE' implementation plan*

In order to identify and facilitate the implementation of the 'bSEE' action plan, the following key activities will be on focus:

- o Setting statutory and regulatory objectives and frameworks with respect to European Union Directives and global standards;
- o Aggregating demand leading to broadband development;
- o Evaluating broadband technologies and international best practices;
- o Developing skills through exchange programs, joint sponsorship of conferences, training programs and seminars in the field of Broadband technologies;
- o Prompting planned activities regarding broadband investment that would result in building awareness, increasing level of public interest and empowering SME's to participate in such initiatives;
- o Addressing market failures that are beyond the reach of policy tools;
- o Providing incentives to the private sector for broadband development, especially in rural and remote areas; and
- o Monitoring progress and producing timely reports.

The 'bSEE' Task Force shall be set up, in accordance with the Memorandum of Understanding, to identify and facilitate the implementation of the 'bSEE' action plan. The signed Parties shall designate one or more representatives as members of the Task Force. The designated representatives will be responsible for seeking any required approval for the conduct of specific co-operative activities from their respective Governments and for implementing the overall scope of co-operation. The Task Force may hold consultations to identify and define future activities, review activities in progress or discuss matters related to such activities.

The key Functions of the 'bSEE' Task Force shall include:

- o Monitoring Broadband Development in SE Europe;
- o Networking all actors involved in the broadband development of SE Europe;
- o Harmonization of the region with the EU and global standards;
- o Promoting and increasing Broadband connectivity in SE Europe;
- o Joint development of interactive broadband multimedia content, information security and e-Government; and
- o Facilitating the development, interaction and exchange of know-how between SEE countries and the EU.

**Conclusions**

The SEE countries have been left behind in the race towards the so called *Knowledge Society*, which relies on the development and assimilation of Information and Communications Technologies. The 'bSEE' initiative was conceived to act as the driving force that will assist the

region in utilizing the leapfrogging potential of which it is capable of, in the sector of electronic communication services. Regional high level collaboration is vital, since it is through instruments such as the harmonization of the regional regulatory environment and the joint development of broadband content and R&D activities that this auspicious venture can be achieved.

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