# wbc-inco.net Co-ordination of Research Policies with the Western Balkan Countri



SPECIAL EDITION | 100<sup>TH</sup> ISSUE

## Editorial

#### Dear readers.

at the end of October 2012 we have published the 100th issue of the e-newsletter of the Western Balkan countries INCO-NET (project on Coordination of Research Policies with the Western Balkan Countries). This was also a good opportunity to look back and think about developments achieved so far in the region in the fields of S&T and Innovation. Thus, we have issued a call in order to collect inspiring success stories from the Western Balkan Countries and to present them to a wider public - some of them are also presented in this printed version of the newsletter, which you are holding in your hands. Since we hope that WBC-INCO.NET could contribute to some of the positive experiences in the region, we decided to collect also such stories that highlight our impact in the region.

We would like to express our thanks to the authors of the interesting stories received so far and also to congratulate Marjan Petreski (Vice-Dean for Research at the School of Business Economics and Management in Skopje) and his team for their inspiring success story "Unlocking researchers' potential" which was also selected to be presented in Belgrade at the General Assembly on December 5, 2012.

The regional stakeholders are all invited to share success stories through WBC-INCO.NET throughout the upcoming year. Our objective is to further increase the visibility of the regional potentials and strengths and to promote networking among centers of excellence. Feel free to get in touch with us at office@wbc-inco.net.

You might also be interested in some of the WBC-INCO.NET reports focusing on scientific priorities in the region such energy, health or transport - find out more in this newsletter.

Ines Marinkovic, Elke Dall and the WBC-INCO.NET Team

## Imprint

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Marjan Petreski Vice-Dean for Research, School of Business Economics and Management University American College Skopie

# Unlocking researchers' potential

## Research shapes the dream at the University American College Skopje

I can still remember the first day at the University American College Skopje (UACS) as a research coordinator at that time. We set our goal to increase research and be 'teach and research' university, when all the others are 'teach only'. On top, the state has set aside only 0.2% of GDP for research and science as compared to the 3% at the European level, and favored the state universities. What a pity!

However, there was a guiding thought, a steering idea that helped me and my university benefit from the situation. When nobody else promotes and favors research, at least as much as teaching at universities, why don't we use that vacant field and be the first to make an inroad? So, the stiff road commenced by simple no-cost activities: disseminating information to the faculty for research opportunities, including conferences, publications and proposal calls. We started organizing a Research Monday, which is still operating as a research seminar series, whereby faculty presents its own research, their own experiences gained either through research or at a conference/seminar. We believed this would be an inspirational forum to stimulate a research-friendly atmosphere, a place where everybody gets informed on what the other does, exchanges ideas, proposes cooperation...

Slow but safe, we established our own budget for supporting the faculty for paper presentation at conferences and for publication in international peerreviewed journals. At that time, it was only 1% of our university budget set aside for research promotion, but it appeared to be highly productive: people felt encouraged to apply for conferences and submit in journals: they overcome their 'fear' that their research is not worthy enough; they felt confident that they have what to say, their voice is relevant, their research may someday be beneficial for the society and improve our living standard...

Soon afterwards, I was promoted a Vice-Dean for Research. The management believed that the story that started some months earlier has its own value, a value that may bring us a considerable competitive advantage, when the other universities do not invest in research at all or invest only a little. This boost, coincidently or not, happened along with two won projects for small-scale research. Small-scale, but even the longest trip stars with the first step, I believed. Moreover, at times, even the small-scale research may become a real promoter of ideas: frequently it requires an emphasized policy component, which may bring you to the forefront of the policy debate, where you really think that you are changing the world which surrounds you!

A real wind in the back was the discovery of WBC-INCO.NET. How come we did not know this before? A true hoard of information for conferences, journals, calls, cooperation... Fine, no time for regret – we will use this opportunity from now onwards: the portal will help the amplification and promotion of research we would like to make at our university, but we may also support the portal by being convinced that we contribute with a high-quality research! So, the story continued its adventure with quite intensified speed. Soon, we applied for two RRPP projects and one FP7 project. We got the positive response from all almost simultaneously. Our happiness was at the high. It was not only that we managed to secure funding for our ideas, but basically the recognition that we are really able to produce first-class research and be competitive at the European and even world level fuelled us.

In the meantime, let me not forget, the University Senate proposed that we elevate the research agenda even at a higher level: the University Research Committee has been established and I as a chairman, with the objective to steer the research work at the university level. As a Committee, we set quite ambitious agenda, given our earlier success: the dissemination of research-related information must continue, the funding of conferences and publications must continue; the proposal preparation must go on; in addition, we have to establish contacts with universities and research centers from the region and abroad, since we can create synergies and become even stronger. I argued and I believe, WBC-INCO.NET has played a vital role in this endeavor. We even participated at a regional training in Tirana and a regional conference in Sarajevo, both steered and supported by the WBC-INCO project. And, I still

loudly discuss at my university that the project is presently one of the major sources of our research energy.

Two years afterwards we are proud to have nearly 30% of our budget devoted to research from only 1% before. We are proud to have about one internationally published paper in a peer-reviewed journal listed in the Web of Science at every three members of the faculty, improving from over double lower two years before. Our research portfolio includes projects from the European Commission FP7, the Regional Research Promotion Program from the Swiss Development Agency, the World Bank, LSE Enterprise, Erasmus, the Global Development Network and so on (www.uacs.edu.mk/research). We are pleased to have recently signed the European Charter of Researchers, which will guide us to make our University even a better place to research in. And, last but not the least, we are presently strongly forcing the agenda for steering joint research with the industry and attracting, as associates, Macedonians who research abroad, as we believe these two pillars will give not only boost to our research, but will accelerate the recognition that the industry cooperation may give to our students, hence supporting their applied skills upgrade and, eventually, increase their probability of getting employed soon after their graduation. We believe these two pillars are presently also an un-ploughed field, similarly as we believed for the scientific research projects two years before.

Overall, our research aircraft presently flatters with the utmost power and I am proud that my faculty permanently fuels it with their ideas for projects, cooperation, networks... We are all proud that research shapes the dream at the University American College Skopje.

Our message to the Balkan researchers in particular is to unlock their hidden potential and consider the low level of research as an eternal opportunity and not a threat. Ideas need to be heard in the Balkans and even the smallest raised voice through research may be the biggest call for colleagues and policymakers to step in and may hence change our lives.

LINK More information at: http://wbc-inco.net/object/document/11047

## Marjan Petreski

is the Vice-Dean for Research at the Business School of the University American College Skopje. He also chairs the University Research Committee. Marjan specializes in research and teaching in applied macro. He earned his postgraduate degrees in Economics in the UK. Regularly publishes and presents at conferences. He has been awarded Young Scientist Award 2009 by the Macedonian Academy of Sciences; Olga Radzyner Award 2010 by OeNB and Postgraduate Teaching Award 2012 by CERGE-EI.

# Winning FP7 project: Mission possible

## Successful project application from Bosnia and Herzegovina is not a fairy tale

Quite often I listen to researchers from universities in Bosnia and Herzegovina complaining that it is practically impossible to win a FP7 project without some highly influential lobbyist assistance. Additionally, they mention their problems in lack of knowledge on how to prepare FP7 project, highlighting the complexity of the application procedure and so on. Couple of years ago, I would have had the same impression. But now, I just smile and tell a story of successful FP7 project application with the main applicant from Bosnia and Herzegovina.

My first encounter with Framework Programme was through FP6 project in which my institution, Human Rights Centre of the University of Sarajevo, has been involved as a partner. At that time, series of Info Days on Framework Programme have been organized by the National Contact Point for EU Framework Programmes in Bosnia and Herzegovina. Even going to the Info Days couldn't get me from the feeling that it is too complex to even try to apply for a project within the Framework Programme. I was so wrong. It was not the complexity that was the main problem but our (by that I mean researchers, project managers and other staff at universities) fear of even trying to invest efforts (or to say it in more common language: why bother when the outcome is uncertain).

In February 2009 I've had the opportunity, as one of the coordinators within the Regional Research Promotion Programme in the Western Balkans (RRPP), to participate at the workshop on "International Project Management for Social

Scientists from Western Balkan countries". The workshop was held by Ms. Elke Dall from Centre for Social Innovation, project manager of WBC-INCO.NET project. The workshop was really good, especially because we were provided with advice on what to pay attention to while writing a project proposal, but also the examples Ms. Dall shared with us from her own experience. This training has been of great help to me and in 2010, when the call for FP7 Capacities - Science in Society was published (of which I was informed through the WBC-INCO.NET website) I decided to apply to this call through my institution - the Human Rights Centre of the University of Sarajevo as the main applicant. The workshop and tips and tricks shared by Ms. Dall with us, plus contacts established through the Regional Research Promotion Programme in the Western Balkans and a bit of my own experience gave me enough potential for developing the application for FP7. We had quite smooth process with the European Commission and not much has been changed from the first draft of the application after the negotiation process. We had no lobbyist engaged in order to win the project. Finally, our project entitled "Support for Establishment of National/Regional Social Sciences Data Archives (SERSCIDA)" has been approved and the Grant Agreement with EC signed. SERSCIDA project has come to life on 01 January 2012 (more info on the project: https://www. serscida.eu/en/).

Let's be honest, it wasn't easy to write the application for FP7. It means investing a lot of efforts, time and energy. It can be stressful, time consuming and sometimes seem as too much trouble. But it pays off. To me, it paid off with the fact that it proved that it is possible to win a FP7 project even when you're coming from Bosnia and Herzegovina and not from some of the EU countries, even when you're not hiring a lobbyist to do the part of the job and even when it is your first time to apply for project within Framework Programme. This case was a proof that it only takes a decision to use all the existing resources available to make a winning project.

My advice to all researchers/university staff from WBC countries is to take a step forward: if you have idea for a project just wait for the call for proposals within Framework Programme/Horizon 2020 which fits the objectives of the

project. WBC-INCO.NET website was the main information source for me and I would recommend it as key resource for both information on existing or upcoming calls for projects plus opportunity to find partners or even useful documents. Choose your partners in the project carefully and read thoroughly the guidelines provided in the call for proposals. Find someone who had the experience with this kind of projects and seek for advice (or even organize training). And most of all: be brave and take the risk of applying even with the uncertainty of winning the project first time. There is always a second chance.



Anđela Lalović Human Right Centre of the University of Sarajevo

## Anđela Lalović

is coordinator for Bosnia and Herzegovina within the Regional Research Promotion Programme in the Western Balkans (RRPP) at the Human Rights Centre of the University of Sarajevo. She obtained MA degree at the School of Economics and Business at the University of Sarajevo. She has years of experience in project management and writing project proposals. Her research focus is on economic and social rights (mainly labour rights) and corporate social responsibility.

LINK More information at: http://wbc-inco.net/object/document/11039

LINK SERCIDA project: http://wbc-inco.net/object/project/10776

# Forest Policy and Economics Education and Research – FOPER

Capacity building framework for improving capacities in forest governance, policy and economics in Western Balkan Region

## A Story of FOPER

The FOPER story started in 2003, when a consortium of forestry faculties and research institutes decided to bring to life Ilpo Tikkanen's idea to establish an innovative capacity building program in the Western Balkan region for forest policy and economics. This consortium of organizations led by European Forest Institute developed a project proposal for the Finnish Ministry for Foreign Affairs (MFA). In 2004, this proposal was approved and FOPER I - Strengthening Capacities of Education and Training for Forest Policy and Economics Development in Western Balkan Region was officially launched. From that day on, FOPER is writing its own story.

# The idea of FOPER had both innovative and pioneer elements.

Europe and the world were about to get their first human and institutional capacity building program, which combined Forest Policy and Forest Economics graduate education and research. Herein lies the innovativeness of FOPER idea.

The collapse of Yugoslavia and the intensity of the1990s wars divided researchers, teachers, students, universities, and research institutes in a previously strongly interconnected region. The FOPER project reconnected and rebuilt a regional network focused on research and education in forest policy and education. Over the eight years of the project, forest governance became the interlinking framework for how political, economic, and civil society worked together for the sustainability and management of forests. Thus, the FOPER education and research incorporated this focus, as it is a critical element of the reforms needed for EU accession.

The importance of forest policy and economics to the region was clear. Since late 1980s, Europe placed sustainable forest management high on the political agenda. At the same time, the Western Balkans was struggling to recover from the collapse of Yugoslavia. There were many issues on the agenda of decision makers, but forestry and natural resources were not among them. In the Western Balkan Region, the forestry sector, both state and private organizations and actors, were faced with the challenge of adjusting to the new democratic society and a market economy. Furthermore, those challenges were complicated by the reforms required to meet the legal requirements of the EU accession process.

The Western Balkan region is known for its rich natural forests, but in its long history of forest management, it nonetheless lacked the capacity to tackle the forestry issues outside the forest – in political agendas, market economics, and civil society. FOPER had two phases - "Strengthening Capacities of Education and Training for Forest Policy and Economics Development in Western Balkan Region – FOPER I" (2004-2009) and "Consolidation of the Human Capacities in Forest Policy and Economics Education and Research in South-East Europe – FOPER II" (2009-2013). Both were designed to create human capacity in Western Balkan region in order to bring forestry to political agenda by implementing policy relevant research and increasing higher education capacity. Both projects were financed by the Ministry for Foreign Affairs of Finland and coordinated by the European Forest Institute. The following organizations in the Western Balkan region are or have participated in the project as full partners:

- Croatian Forest Research Institute, Jastrebarsko, Croatia
- Faculty of Forestry, Zagreb, Croatia (2004-2006)
- University of Belgrade, Faculty of Forestry, Belgrade, Serbia
- Institute of Forestry, Belgrade, Serbia
- Forest and Pasture Research Institute, Tirana (later Agency), Albania (2004-2011)
- Agricultural University of Tirana, Faculty of Forestry Sciences, Tirana, Albania
- University of Sarajevo, Faculty of Forestry, Sarajevo, Bosnia and Herzegovina
- University of Banja Luka, Faculty of Forestry, Banja Luka, Bosnia and Herzegovina
- Ss. Cyril and Methodius University, Faculty of Forestry, Skopje, Macedonia
- Institute of Lowland Forestry and Environment, Novi Sad, Serbia

To achieve its goals, FOPER I and FOPER II (now simply FOPER) designed several capacity building frameworks each filled with innovative approaches. During the first part of the project, the main goal was to strengthen human capacities. During this period, FOPER designed and implemented a brand new International Master Program in Forest Policy and Economics (MSc FOPER), Professional Training in Forest Policy and Economics, and research focused on the Science Policy Interface. In the second phase, the project focused on consolidation of these gains and the components included: the second generation of the International Master Program in Forest Policy and Economics, increased training of university teachers, expanded training for regional researchers, the creation of six Collaborative Regional Research Teams, and a Doctoral College to support FOPER MSc students working on a doctoral degree.

## **Obstacles and Incentives**

Internally lack of trust, incompatible legislative frameworks, isolated state bureaucracies, to name a few barriers, were some of problems FOPER addressed. Furthermore, coordination capacities and communication in the region needed substantial improvements.

Building trust between FOPER network members started from the first days of the project and was strongly supported by positive individual motives. Awareness of potential positive impacts of FOPER overcame a lack of trust and resulted in one of the most integrated research networks in the Western Balkan region and in Europe.

Innovativeness naturally collides with existing, often conflicting, legislative frameworks. New approaches for policy, economics, and governance require a new foundation in the legislative framework. At first, since FOPER was building something new, the support was not there. However, there was awareness that innovation has a high value. Awareness of the importance of innovation was complemented with individual efforts of FOPER regional researchers together with the EFI Project Management Team and the result is a strong,

collaborative, international research and education network. The willingness to work together in collaborative regional, self-organizing, research teams has increased tremendously regional communication and research capacity. Today, many regional teams organize to provide assessment (e.g., for the European Environment Agency) of conditions in the Western Balkan region for biodiversity and multifunctional forest management, analysis (e.g., Sustainable Forest Industries and Products – Balkan Group, The Lviv Forum on Forests in a Green Economy), and new research initiatives (e.g., new research and analysis teams supporting companies and governments confronting corruption and illegal logging). This self-organizing capacity at the regional level creates the long-term sustainability of the FOPER research and education network.

The main external drivers for FOPER are EU accession and a global forestry agenda focused on interdisciplinary, sustainable multi-functional forest management, and improved governance of forests. Successful participation and response to these processes required knowledge and capacities in forest governance, policy and economics. Our donor, the Ministry for Foreign Affairs of Finland, recognized how this project would support its development strategy for the enlargement of the EU. Together the MFA, EFI, and regional partners provided the coordinated support necessary for success. Thus, the initial regional and international support and hopes for the FOPER project created the conditions for its long-term success. The long-term sustainability of the international FOPER research network is assured by the cooperative and collaborative relationships created through education and research.

## Lessons learned

Looking back at the more than 8 years of FOPER, it is clear that the often heard statement "everything is possible" is an overarching slogan of each innovative effort. Aiming at the highest possible goals and setting up clear milestones is the way to go forward, and once started there is no looking back. FOPER is now an incubator of new ideas, opportunities, and visions as new young researchers join forestry faculties, research institutes, government ministries, state forest enterprises and private forest companies, and NGOs.

It takes courage to support innovation. Imagination is necessary to create innovation. Belief and commitment is essential to make innovation real. The commitment and belief from the deans and directors, from EFI, the MFA – and absolutely most importantly, the MSc and doctoral students - created the potential for success of the FOPER project. But results are what supports long-term commitment and that is what FOPER did – it got results.

FOPER had what it takes to build its own story of success. This is the secret – no one gives you success, you must build and create it in order to sustain it.

LINK More information at: http://wbc-inco.net/object/document/11147



National Park Plitvice, Croatia: Field trip - Foper M.Sc. students

## **Research and Development Institute RT-RK**



The success story of R&D RT-RK Institute dates back to 7th of April 2005 when it was founded as a company with only 3 employees, while by the end of 2008 it had 40 employees. Micronas NIT was founded in 2001 as a spin-off company from the Faculty of Technical Science, University of Novi Sad with 94 employees. It seized to exist when its partner company Micronas sold its consumer electronics division to Trident Microsystems, Inc. in 2009. From this difficult turn over point it was recognized that the company has to grow and survive in difficult global market conditions using knowledge and innovation as a foundation of future products as well through diversification and expansion of its customer base.

Research and Development Institute RT-RK Research and Development Institute RT-RK was founded and accredited on 28th of December in 2010 and reflects cross-fertilization between the commercial company and research and development institution which places innovative solutions at a heart of its progress. Today it employs over 300 hundred people who are actively working on commercial and innovative projects. RT-RK is focused on research and product development in fields of consumer electronics, communications and multimedia. It offers number of services, such as Embedded System Design, Mobile Software Development, TV Software Development, Digital Signal Processing, FPGA Based Rapid Prototyping, Hardware Development, Small Scale Production and products, such as: Testing Solutions, Audio/Video Capture Devices, Connected TV Software and Microphone Array Technology. Product and services are developed for leading world companies, for example RT-RK is established as a Cirrus Logic Design Centre, while other customers were, namely: Bosch, Germany; ABB, Switzerland; Micronas, Germany; The University of Sheffield, United Kingdom; Dmist Technologies, United Kingdom; Openwave, USA; Nuance, USA; Sagem, France; Purple Labs, France; NEC Laboratories, USA etc. RT-RK's testing solutions have been developed since 1995 and used to test software of today's biggest iDTV manufacturers, including Samsung, LG, JVC and Panasonic. They have been sold in more than twenty locations worldwide, and used by IC vendors like Zoran, SmarDTV, Cirrus Logic, Marvel, ST, Micronas and Trident, as well as OEMs like Vestel, Loewe, Philips, General Satelite and Kethrein.

In addition, the company is constantly involved in developing new innovative solutions for new line of products. As an example, Oblo Ecosystem is a set of hardware and software components which enables remote light control, as well

as power consumption monitoring in a Smart Home concept, through the TV, PC, mobile phone, from home or any other place with access to the Internet (http://www.rt-rk.com/new/oblo).

Roadnail product offers road marking based on sensors, wireless connectivity, energy harvesting and light marker as well as local intelligence. It is used to make visible the edge of the road in the front view of a moving car. The system does not need any equipment in the car and therefore works with current car fleet. It is powered autonomously by solar cell on the top of each devices (http://www.rt-rk.com/new/roadnail).

The RT-RK Institute invests into development of young researchers through their involvement in cutting edge technology and taking part in national and international conferences. It was involved in hosting and organization of 19th Annual IEEE International Conference and Workshops on the Engineering of Computer Based Systems in Novi Sad.

Transfer of knowledge and technology is actively pursued through close ties with the Faculty of Technical Sciences at University of Novi Sad. This special relationship with the University also ensures that the students apart from sound enables them to easily find employment after completion of their studies.

Today, RT-RK R&D Institute is a young and vibrant institution with number of nationally and internationally funded innovative projects. We are coordinators of FP7 project "Embedded Computer Engineering Learning Platform" (FP7-ICT-2011-8) and in process of writing other European project grant proposals. The Ministry of Education, Science and Technological Development of the Republic of Serbia is funding four projects from 2011 to 2014, namely: (i) TR-36029 "Autonomous Sensor Network with Distributed Control" (ii) TR-32041 "Intelligent Service Development for Home Devices" (iii) TR-32029 "Video Quality Assessment Methodology Development for Video Monitoring in Multimedia Systems" (iv) TR-32030 Platform for Education in the Field of Embedded Systems Engineering". Also EUREKA Projects are run each year in collaboration with our industrial partners which help our company to further develop and commercialize our innovative solutions. Provincial Secretariat for Science and Technological Development is funding projects which are in the areas of medicine, digital television and intellectual property rights.

Another aspect of RT-RK envisaged future is formation of a patent group which deal with commercial projects for foreign partners in the area of technical patent analysis as well as it provides support internally through number of activities, such as: organizing workshops regarding patents, research of the prior art, patent drafting and preparation of patent application, submitting and managing of patent application on national and international – PCT level. Overall 25 patent application has been submitted in the last three years, all in one aim – to protect our innovative solutions and enable our expansion to other markets, while at the same time increasing company value.

This article gives an overview of the development of a company which started off based on knowledge and enthusiasm of few individuals from the University of Novi Sad, who had a vision and drive to build a base which is to keep our best students and experts in their native country, to continue and strive to produce excellence and know-how for generations to come.

AUTHOR Maja Pokrić

LINK More information at: http://wbc-inco.net/object/document/11045

# Business Flexibility for Small and Medium Enterprises – the ReFLEX Story

# ReFLEX

The ReFLEX Story started in 2009 when the idea arose to prepare an R&D project proposal which will focus on small and medium-sized enterprises by providing a business process management

solution suitable for their specific needs, aiming at turning them into flexible, agile and responsive-to-changes entities. The project idea was based on the



identified common problems of SMEs, dominantly in the Western Balkans countries, but also elsewhere in Europe, to survive in the market race with their larger competitors. Therefore, ReFLEX had a challenge to respond to: developing a system which will be suitable for SMEs, regardless of their size. affordable and cost-effective, and yet functional and value-adding. Ultimately, the ReFLEX proposal was submitted to the FP7-SME-2010 Call for Proposals. The efforts put in realization of this idea were finally awarded in 2011, when CIM Group became the first private company from Serbia to win the coordination of an FP7 project. The project kick-off meeting took place in Niš, Serbia, in May 2011, when our company welcomed 20+ representatives of the Consortium partners to commence the ReFLEX journey. The ReFLEX Consortium is composed of the ICT companies, Universities, and technology end-users from Serbia, Slovenia, United Kingdom, Germany, Greece, and FYR Macedonia. Since then, the project realization went very well, gaining the excellent review evaluations in Brussels under the supervision of the European Commission's Research Executive Agency.

The ReFLEX project proposal success story was backed up by a shift in approach to innovation which the consortium has applied. The focus of the project was on achieving real benefits for its target groups – the SMEs, through innovation which is market-oriented and applicable in real environment. Following this approach, early verification of the system components was applied, and ReFLEX is thus being continually evaluated by the end-users from the industrial sectors of logistics and construction, in real environment.

The ReFLEX components were implemented in business processes of our end-user partners, helping them to better organize and manage the logistics processes of their companies, and helping the project consortium to continually obtain feedback on the system functioning and improvement opportunities. Up to now, the ReFLEX system has shown very good results in real environment and has added real value to its end-users by improving the performances of their business, the organization and planning of work, decreased unnecessary losses and wastes in the processes, and paved their way towards excellence.

## The Silent Partner - WBC-INCO.NET

The process of learning about the call for proposals, gathering the consortium members and designing the project proposal was supported by the results of the operation of the WBC-INCO.NET portal. IT has been one of the important reference points for us in searching for information on the Research for the benefits of SMEs FP7 Call for proposals, possible consortium members and news on S&T. We have been using the portal information and services ever since the Coordination of Research Policies with the Western Balkans Countries initiative started in 2008 and believe that the portal has been a good source of information and inspiration for us, giving us the insight into the most important details and helping us create best quality results. The background of the ReFLEX story leans on the efforts of CIM Group, as the Coordinator, the ReFLEX consortium members and our silent partners on our journey towards success. WBC-INCO.NET is one of our silent partners.

## The follow up of the ReFLEX Story

The success of the ReFLEX project proposal is an important moment for CIM Group's software department development. Being present in the field of ICT research and development from our foundation in 1991 and actively participating as project partner in many R&D project proposals co-funded by the European Commission as of 2005. CIM Group was recognized in the official report of the European Commission (ICT RTD Technological audit) as the Centre of Excellence of the Serbian ICT RTD. The recognition has crowned our efforts, and inspired us to move forward. We are continually working on turning our ideas into innovative products and services.

The manifestation of the ReFLEX success story on company's development has motivated us even harder to fulfil our mission and be the inspiration for our partners and clients and help them achieve progress towards excellence. In order to maximise our efforts and results we will continue to use the help offered by our silent partners and communicate our success story in order to inspire others. We are determined in our intention to sustain the achieved success and build upon them. The epilogue of the ReFLEX story is yet to be discovered...

LINK More information at: http://wbc-inco.net/object/document/11147

## Bratislav Stoiljković

MBA, CCO of CIM Grupa. He graduated on Six Sigma process improvement methodology at the International University in Germany as well as wrote a Master dissertation of business process excellence models at the University of Sheffield. Bratislav achieved his Master degree with merit. Bratislav is also awarded a Level 7 CMI diploma in Strategic Management and Leadership by the Chartered Management Institute of the United Kingdom. Experience in managing CIM Group d.o.o. technical, financial and administrative efforts in more than 5 FP6/FP7 ICT projects. Co-author of the book on Integrated Management Systems as well as of a number of scientific papers in reputable international conferences.

# Development of speech technologies for the South Slavic languages

"AlfaNum" Ltd. was founded in 2003, originating from an existing project at the Faculty of Technical Sciences (FTN), Novi Sad, related to speech technologies. The co-founders of "AlfaNum" are FTN project leader PhD Vlado Delić and key researcher Darko Pekar as CEO. This team of remarkable experts has been carefully expanded for 15 years and now has 20 people. "AlfaNum" still has tight cooperation with FTN, co-finances the development at FTN and engages associates employed at FTN.To date, "AlfaNum" has developed software components for speech recognition and synthesis in Serbian, Croatian, Macedonian and Hebrew. In the field of speech technologies "AlfaNum" is practically the only player in the region of western Balkans.

Speech technologies, automatic speech recognition (ASR) and text-to-speech (TTS) synthesis, have the potential of introducing essential changes to human interaction with their environment. If a person is able to speak to a computer, and if the computer is able to speak back, then similar communication with other devices can be realized, starting from home equipment through industrial machines, cars, robots and toys, all the way to remote computers which can retrieve the required information and deliver it by speech. The development of speech technologies is especially significant for the disabled:

- computers can read books, news from the Internet, e-mail and SMS messages to the visually impaired
- computers can convert what a speech impaired person writes into speech,
- the physically disabled can communicate with the devices in their environment
- automatically recognized speech is easily translated into text which can then be read by people with hearing disabilities

Speech technologies help the disabled to overcome their disabilities to a certain degree, enabling them to become more independent and perform tasks they were not able to do before. The first applicationin Serbian-speaking community was created for the visually impaired, for whom a number of aids have been developed. That is our speech synthesizer, anReader which was declared as the official aid for the blind and visually impaired people by the Republic Fund of Health Insurance. AnReaderhas given our visually impaired citizensthe

possibility to use computers unaided, as many of their counterparts in more developed countries already do. It is clear that, with the development of speech technologies, conditions are being met for development of resources that can redefine some aspects of social policy related to the disabled.

Besides anReader there are other applications for the disabledbased on speech technologies, like speech portals, Audio library, adding speech features to web sites or subtitling TV shows. These applications are intended for the blind but also for the people with other disabilities like people with multiple sclerosis, people with infantile cerebral palsy, dyslexic people etc. On the other side "AlfaNum" also develops call centres, interactive voice response (IVR) systems and other speech-enabled solutions. It offers both speech-enabled modules to be embedded into other systems, as well as end solutions. All applications of speech technologies in the western Balkans, related to Serbian and kindred languages, are the result of "AlfaNum". Another significant competitive advantage of "AlfaNum" lies in the existing language and speech resources, whose development required years of work.

The barriers and drivers during the development of ASR and TTS were very complex multidisciplinary problems, and their successful treatment required not only technical skills, but also expert knowledge in areas such as linguistics, psychoacoustics and speech perception, acoustics and digital signal processing. All these elements had to be combined and implemented into available hardware and software resources in order for a computer to be enabled to understand human utterances and to generate speech of its own.

The main objective of AlfaNum team is development of speech technologies that will be used in different spheres of social activity, and that will ultimately enable intuitive dialogue between man and machine in the Serbian and other South Slavic languages.

AUTHOR Jovana Vukov

LINK More information at: http://wbc-inco.net/object/document/11043

## Read more successful stories from WBC

# BELIT - Belgrade Information Technologies Handmade LINK http://wbc-inco.net/object/document/11041 LINK Environmental Protection and Sustainable Development Partnership between the University of Applied Sciences, Business and Civil Sectors in Inquiry Base Student Education, Croatia LINK http://wbc-inco.net/object/document/11145 Gazmend Qorraj, the first Jean Monnet Chair Professor in Kosovo\* LINK http://wbc-inco.net/object/document/11142 Nevila Xhindi, the first professor to hold the title Jean Monnet Chair in Albania Phenolic bic LINK http://wbc-inco.net/object/document/11165

 Handmade Albania – first prize in the Albanian National Business Plan Competition

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 http://wbc-inco.net/object/document/11174

 Inquiry Based Science Education (IBSME) in Serbia

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 Is organizing a WBC Congress a success story?

 LINK
 http://wbc-inco.net/object/document/11037

 Phenolic biosensor based on carbon paste

 LINK
 http://wbc-inco.net/object/document/11033

The call for success stories (influenced by WBC-INCO.NET or not) will remain open throughout the project life-time (e.g. to be published on the portal or disseminated via newsletter) thus your input is welcome anytime!

# Platform of dialog - platform for success!

WBC-INCO.NET project proved that regional approach means more synergy and added value for knowledge creation and dissemination

Firstly I took note of WBC-INCO.NET project webpage back in 2007-2008 and from that time it became one of my favorite sources of information and inspiration also. The Newsletter disseminated within the project is an "obligatory reading" for me and members of my team.

The idea of having a regional policy platform for fostering the S&T partnership with EU is from the beginning a successful one, even not easy at all – you should agree first on a common regional vision. But I think that the good practice of WBC-INCO.NET project lies in something different – in a shared ownership, networking, wide representation and participation of stakeholders and of course, important achievements.

Activities developed within the project for identifying RTD priorities of joint EU-WBC interest and to enhance the participation of WBC researchers in FP 7 projects were very effective and result-oriented. With a great interest we attended some regional WBC-INCO.NET meetings on topics like foresight or innovation related issues, which offered us opportunities for setting partnerships and identify relevant national practices.

Following the association of the WBC to FP7, process to which I think that the project contributed in a valuable manner, the outcomes and the evolutions undertaken within WBC-INCO.NET project were very useful for finding our way to the European Research Area. When finally I meet Mrs Elke Dall, I found out once again that it's not enough to have a good idea; you should have a right

person that should bring this idea through a complex "field" of diverse opinions and interest, to a shared and assumed vision at the end.

Starting from January 1st, 2012, Republic of Moldova became an associated country to 7th Framework Program, widening the opportunities for our researchers and bringing us closer to ERA. Successful association of WBC was one of the factors that support us in this important process. I would like to use this opportunity for expressing our gratitude to many experts from WBC, majority of them being contacted us a result of their visibility within WBC-INCO. NET project, for their expertise, advice and openness.

I will end my short notice by mentioning the fact that WBC-INCO.NET project created in the region very strong prerequisites for further development: a viable platform, a visible dissemination tool, strong human capacities for networking, sustainable partnerships and personal connections.

As the principles of a knowledge society are vital for all of us, let's join the forces and promote science & innovation as investments for a Smart and Safe future!

## AUTHOR Sergiu Porcescu

FP7 NCP Coordinator in Moldova, JRC & INCO NCP Representative of Academy of Sciences of Moldova to the European Institutions

Some selected WBC-INCO.NET reports

#### Good practice examples of innovation policy approaches and instruments of EU Member States and Western Balkan countries (2012)

As part of WBC-INCO.NET's Work Package (WP) 8 on Innovation support, a number of good practice examples of programmes, instruments and measures aiming at supporting innovation activities have been collected and compiled in this report.

LINK http://wbc-inco.net/object/document/9985

## Comparative analysis of the innovation capacity in the WBC with particular focus on joint cooperation needs (2012)

This report compares the innovation capacities of WBC based on multiple analytical approaches with a view to understand the possibility of closer regional innovation cooperation.

LINK http://wbc-inco.net/object/document/7333

**Results of the survey on market and research innovation needs (2012)** This deliverable outlines the results of a survey conducted as part of the WBC-INCO.NET project initiative to support innovation capacities in the WB region. The survey aimed to pinpoint both present and likely future research and market needs, as well as identify possibilities for collaboration in the region.

LINK http://wbc-inco.net/object/document/7423

## Report on mapping of the WBC Innovation System (2011)

The Innovation Infrastructure reports are mapping national innovation systems and relevant stakeholders in the Western Balkan Countries. The main objective of these reports is to add to common understanding of the national innovation systems in the region and to map the innovation infrastructure and stakeholders. Thus, the reports aim to facilitate the identification of potential partner organisations for STI co-operations from the countries.

LINK http://wbc-inco.net/object/document/7238

## **Report on Barriers to Cooperation (2009)**

The main task of this research was to identify the barriers which inhibit researchers from the Western Balkan countries and Turkey (WBC&T) from international R&D cooperation in order to provide policy makers with the analytical backgrounds to create policy measures for facilitating research cooperation. This is the first study focused on identification of the factors which hamper the cooperation of WBC&T in the two types of collaborative projects: 1) European Union Framework Programmes (FPs) and 2) bilateral projects.

## National Background Reports on Energy in WBC (2012)

LINK http://wbc-inco.net/object/document/9828

Background Reports on Social Sciences and Humanities in WBC (2011)
LINK http://wbc-inco.net/object/document/7484

National Background Reports on Environment in WBC (2009)

National Background Reports on Health in WBC (2009)

LINK http://wbc-inco.net/object/document/9827

National Background Reports on Transport in WBC (2009)

LINK http://wbc-inco.net/object/document/9842





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