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Novi Sad, Serbia

Faculty of Technical Sciences,
University of Novi Sad
21000 Novi Sad

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iDEAlab SEMINARS – NEW TECHNOLOGIES
IN ENGINEERING AND MANAGEMENT
FOSTERING STUDENTS’ ENTREPRENEURSHIP
AND OPEN INNOVATION IN UNIVERSITY-INDUSTRY
COLLABORATION

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The significant role of technology in strategic business decisions has created the need for executives who understand technology and recognize profitable applications to products, services, and processes. Professor Teslic explained that many technology-based companies, including RT-RK Institute for Computer Based Systems, have addressed this need through the appointment of a Chief Technology Officer (CTO). RT-RK is a R&D company and national research institute that delivers development services and own products in the arena of real time embedded systems, with strong focus on consumer electronics and automotive. With over 500 engineers, RT-RK is one of the biggest development houses in the Southeast Europe. Describing responsibilities of a CTO, Professor Teslic highlighted the following: monitoring new technologies and assessing their potential to become new products or services; overseeing the selection of research projects to insure that they have the potential to add value to the company; providing reliable technical assessments of potential mergers and acquisitions; explaining company products and future plans to the trade media; and participating in government, academic, and industry groups. Using Android case study and his company as an example, Professor Teslic explained each of these responsibilities and sketched the cycle of technology development and adoption.
At a point in time we started screaming for innovation... but why? Why did we not “need” this innovation before? There used to be a time where we repaired broken stuff. It was not thrown away and replaced. Under sometimes difficult circumstances we were creative enough to solve our problems.... Where did that creativity come from and did we lose it? Today we need innovation to boost an economy, to create new markets. Creative ideas and inventions however have no value unless they are turned into action. But it is a long and winding road from ideas to the market or to the level that steers processes. In order to come to that level ideas need a permissive environment to develop themselves, to be tested and improved. This freedom is not easily granted in corporations with rigid rules or in SMEs which often display a lack of courage or resources to grant freedom to innovative processes. Dr van Veghel first briefly explained basic theoretical concepts behind creativity and creative problem solving. After that he engaged students in series of interactive exercises to motivate them to re-learn creativity. Active discussion continued through the whole session with many questions and high level of students’ interest.
With the emergence of a knowledge economy, importance of knowledge as a driving force of innovation and economic growth worldwide has increased significantly. In the dynamic arena where creativity, knowledge and the production of novel ideas have a central place, traditional manufacturing moves to lower cost economies and new technologies become the most important wheel in global economic trade. In such an economy, intellectual property rights (IPR) are becoming one of the most important business mechanisms in extracting economic value from creativity and encouraging greater investment in innovation. This lecture surveyed basic concepts of intellectual property and provided an introduction to a variety of types of intellectual property and IP-related rights, such as patents, copyright, trade secrets, trade-marks, design rights, domain names, and demarcations of origin. Questions like: what are the differences between different types of intellectual property; when and why they are used; what are critical issues; what is the value of IP and similar were tackled. Also some aspects of the strategic management of IP in the process of technology commercialization were examined.
The process to commercially exploit research varies widely. It can involve licensing agreements or setting up joint ventures and partnerships to share both the risks and rewards of bringing new technologies to market. Other corporate vehicles, e.g. spin-outs, are used where the host organization does not have the necessary will, resources or skills to develop a new technology. In his lecture, Professor Senk compared two main approaches to technology commercialization: technology transfer (licensing) and technology incorporation (spin-outs). He analyzed advantages and disadvantages, using statistical data on wealth creation, new employment and similar; and strongly argued for technology incorporation. Professor Senk offered many examples about successful technology-based spinouts from University of Novi Sad and engaged students in discussion about different career paths, including entrepreneurial.
By adopting open innovation companies have recognized that product development performance can no longer be solely determined by internal R&D functions, but also depends on the contributions of a broad range of external players, from individual customers to large research institutes. Companies are increasingly aware that they need to tap into both internal and external knowledge sources to accelerate innovation, and find ways to increase their ability to grow into new business fields where they do not have any prior expertise. They need to turn to co-creation across innovation processes and allow the flow of knowledge over organizational boundaries, exploiting internal knowledge in more diversified markets, as well as identifying and absorbing external knowledge to support the internal innovation process. Involving customers as co-creators in innovation produces ideas that are more creative, more highly valued by customers, and more easily implemented. Doing innovation with customers rather than just for customers can help shift value creation and business concepts away from the product towards holistic solutions, as well as strengthening service provision and non-material values. In her lecture, Mrs. Tekic introduced open innovation as a new approach to innovation and compared it with closed innovation paradigm. She analyzed advantages and disadvantages, especially focusing on customer co-creation. Mrs. Tekic offered many examples and some lessons learned from practice in Serbia and SEE.
Ilija Studen co-founded A51, a company that turned a troubling open source project into a successful software business. He is a creator of activeCollab, the preferred project management software for many businesses worldwide. Mr. Studen told students his entrepreneurial story. He started freelancing in his twenties and just needed a simple system to keep track of things that he was working on. As a consequence he wrote his own implementation of Basecamp functionality as a fun side project in 2005. Rewrite of that system eventually became activeCollab in 2006. At the beginning, starting a company and selling a product was not an option for him, because he was too scared, but he couldn’t just let it rot on his disk neither. Eventually he released the system under the terms of open source license in hope that it will be useful to someone. activeCollab was well received by online media and it got really popular within weeks of launching. All of that was exciting, but he was underperforming as an employee, as open source project maintainer and team player. His life at that point was like Windows – it needed a restart. Mr. Studen and his roommate started A51 in spring 2007 with a simple goal: rebuild activeCollab from the ground up, offer it for licenses. Instead of having a mediocre open source project, they went to build a software company that we wanted to work for. Today activeCollab has been used by over 200,000 people in companies ranging from small businesses to Fortune 500 members, universities and government institutions.
Thursday, March 12, 15:30 - 17:00  
Ceremonial hall, Faculty of Technical Sciences, University of Novi Sad

iDEAlab #7: HOW I STARTED BUSINESS (AND SUCCEEDED) TWICE

Siniša Komlenić
Serial entrepreneur

Attendees: 71 students

Sinisa Komlenic founded two successful companies – Themes Kingdom, a premium WordPress themes store and a clothing brand Over. He told students about his entrepreneurial experience, typical mistakes and hard challenges. Mr. Komlenic highlighted the role of design and interplay between art and technology in product development. Students actively participated in discussion through the whole session with many questions and observations.
When communicating with others, people predominantly use the senses of sight and hearing – they speak, listen and watch. On the other hand, when communicating with machines (computers, telephones, robots, cars etc.), they mostly use the senses of sight and touch – they look at monitors and touch keyboards, mice or touch screen displays. It is worth noting that humans rarely address machines using speech and that machines rarely use speech to respond, although spoken communication is the most natural form of communication among humans. Apart from a number of fundamental problems related to ASR and TTS applications another possible reason for this is the fact that speech technologies are highly language dependent, and that a number of necessary resources and techniques have to be developed for each language separately.

Professor Delić presented the first applications of speech technologies for Serbian and kindred South Slavic languages. These applications are developed by his research group clustered around AlfaNum company and University of Novi Sad. Most of these applications are rather innovative in Western Balkans and they will serve as a base for complex systems which will enable 20 millions of inhabitants of this part of Europe to talk to machines in their native languages.
Thursday, May 21, 17:30 - 18:30  
Faculty of Technical Sciences, University of Novi Sad  

CERTIFICATE CEREMONY  
Seventy students have completed the course of iDEAlab seminars - New Technologies in Engineering and Management.