

Giulio Occhini, Marijan Frković & Plamen Nedkov (Editors)



Electronic Business



IT STAR Series

Electronic Business

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Giulio Occhini, Marijan Frković & Plamen Nedkov (Eds.)

Electronic Business



Proceedings of the **5th IT STAR Workshop**
on Electronic Business

12 November 2010
Zagreb, Croatia

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ACKNOWLEDGEMENTS

The conference in Zagreb was larger compared to previous IT STAR events in terms of attendance and it was also one of the very successful ones in terms of program and organization. To this end, we are grateful to the conference speakers and participants for their contributions and extend our cordial thanks to CITA – the Croatian Information Technology Association, its officers and staff for an excellent organization.

CITA's hospitality was greatly appreciated by the conference participants: the Zagreb conference set high standards for future hosts and organizers of IT STAR events.

IT STAR and the Editors

1. Introduction

This volume contains the revised and edited papers of the 5th IT STAR Workshop on e-Business held on 12 November 2010 in Zagreb, Croatia. It also contains the Conference Declaration based on the presentations and the conference debate, as well as other related information.

A total of 15 presentations were delivered during the conference on topics such as challenges and opportunities for e-Business in a period of crisis, policies and practices in Southeast Europe, national and international programs including work on e-Signature, e-Invoicing, Internet presence, customer protection, standardization, e-Business skills and other.

The 5th IT STAR Workshop on e-Business is the latest in our successful series of conferences and publications, namely:

- 4th IT STAR WS on ICT Skills, Education and Certification: the Multi-stakeholder Partnership, 27-28.11.2009, Rome, Italy [the proceedings were published in March 2010 in *ICT Skills, Education and Certification* – ISBN 88-901620-5-8]
- 3rd IT STAR Workshop on National Information Society Experiences (NISE 08), held on 8 November 2008 in Godollo, Hungary [the proceedings were published in March 2009 in *National Information Society Experiences* – ISBN 88-901620-2-3]
- 2nd IT STAR Workshop on Universities and the ICT Industry (UNICTRY 07) held in May 2007 in Genzano di Roma, Italy [the proceedings were published in September 2007 in *Universities and the ICT Industry* – ISBN 88-901620-1-5]
- 1st IT STAR Workshop on R&D in ICT held in November 2006 in Bratislava, Slovakia [the proceedings were published in May 2007 in *R&D in Information and Communication Technology: Central, Eastern and Southern Europe* – ISBN 978-3-902580-02-3]
- IT STAR-FISTERA Workshop on ICT and the Eastern European Dimension held in October 2004 in Prague, the Czech Republic [the proceedings were published in 2006 in *Prospects for a Knowledge-based Society in the New Member States and Candidate Countries* – ISBN 973-27-1319-4]

This and the previous events and publications in IT STAR's conference series highlight policy issues in specific areas related to the broader Information Society topic. The debate and proceedings are based on a multi-stakeholder input from academia, government, business and civil society representatives.

This publication is intended to stimulate further discussion on the e-Business topic and to facilitate policy-making within the IT STAR region and the European Union.

Giulio Occhini, Marjjan Frković & Plamen Nedkov
Editors and Co-Chairmen of the Program Committee

1.1. Participants

Name	Organization	Country
Aladar Urbanke	HSM informatika	Croatia
Aleš Lipičnik	CEO, Connect d.o.o.	Slovenia
Aleksej Jerman Blažič	CEO SETCCE company	Slovenia
Alfredas Otas	ECDL Lithuania, LIKS	Lithuania
Andreja Kajtaz	FINA - Financijska agencija	Croatia
Ante Juretić	Hrvatski informatički zbor	Croatia
Balint Domolki	John von Neumann Computer Society	Hungary
Blaženka Urbanke	Hrvatska udruga poslodavaca	Croatia
Boris Vrdoljak	Fakultet elektrotehnike i računarstva	Croatia
Božena Cvitanović	INA d.d.	Croatia
Clementina Marinoni	Fondazione Politecnico di Milano	Italy
Damir Kalpić	Fakultet elektrotehnike i računarstva	Croatia
Davorin Kereković	GIS Forum	Croatia
Dejan Glumac	B4B d.o.o.	Croatia
Diana Šimić	Chair, eSEE Initiative	Croatia
Djordje Dukić	JISA	Serbia
Dorothy Hayden	IT STAR NL	Austria
Dubravka Dukić	JISA	Serbia
Dudley Dolan	CEN workshop on ICT skills	Ireland
Dunja Jurica	APIS IT d.o.o.	Croatia
Dušan Rakić	Chamber of Commerce, Beograd	Serbia
Dušan Zupančič	Chamber of Commerce of and Industry of Slovenia	Slovenia
Eugenijus Telesius	ECDL Lithuania, LIKS	Lithuania
Florin Vrejoiu	Association for Information Technology and Communications of Romania (ATIC)	Romania
Giulio Occhini	AICA	Italy
Hrvoje Kožina	Hrvatski informatički zbor	Croatia
Hrvoje Ljubičić	Agrokor d.d.	Croatia
Igor Javor	Agrokor ICT	Croatia
Igor Privara	Slovak Society for Computer Science	Slovakia
Igor Škevin	Hrvatska gospodarska komora	Croatia
Iva Frković	Hrvatski informatički zbor	Croatia
Ivan Gadža	Konzum d.d.	Croatia
Ivančica Urh,	Ministarstvo mora, prometa i infrastrukture	Croatia
Ivica Pivar	Konzum d.d.	Croatia
Ivo Šeparović	Hrvatski savez informatičara	Croatia

John McGlinchey	CompTIA	UK
Juraj Marković	Financijska agencija	Croatia
Krešimir Sikulin	Hrvatski informatički zbor	Croatia
Ljerka Luić	B4B d.o.o.	Croatia
Marek Holynski	PIPS	Poland
Marija Begić	INA-Industrija nafte d.d.	Croatia
Marijan Frković	Hrvatski informatički zbor	Croatia
Marina Sokol	Ericsson Nikola Tesla d.d.	Croatia
Mark Plunkett	CompTIA	UK
Mira Domazet	Hrvatski Telekom	Croatia
Mladen Glasenhardt	Hrvatski informatički zbor	Croatia
Mladen Kostešić	APIS IT d.o.o.	Croatia
Mojca Osojnik	Chamber of Commerce and Industry of Slovenia	Slovenia
Nenad Horvat	Ministarstvo financija -Carinska uprava	Croatia
Niko Schlamberger	Slovenian Society INFORMATIKA	Slovenia
Nikola Vlahović	Ekonomski fakultet Zagreb	Croatia
Paolo Schgör	AICA	Italy
Pavol Frič	Slovak Informatics Society	Slovakia
Plamen Nedkov	IT STAR	IT STAR
Ranko Smokvina	Leader of Croatian e-Invoice Project	Croatia
Roberto Bellini	AICA	Italy
Roland Schmuck	University of Pécs, Faculty of Economics	Hungary
Sabina Rako	SRCE	Croatia
Sergio Uran	Sinergis	Croatia
Siniša Đurđević	KING-ICT	Croatia
Siniša Košćec	INA Industrija nafte d.d.	Croatia
Suzana Stubičan Čelić	Ministarstvo gospodarstva, rada i poduzetništva	Croatia
Tatjana Butorac	Ministarstvo gospodarstva, rada i poduzetništva	Croatia
Toni Dasović	MBU d.o.o.	Croatia
Velimir Vrhovski	Podravka d.d.	Croatia
Vladimir Braus	SRCE	Croatia
Zdenka Šimunac	Ericsson Nikola Tesla d.d.	Croatia
Željko Kokorić	B4B d.o.o.	Croatia
Željko Širanović	Tehničko veleučilište Zagreb	Croatia
Zoran Bohaček	Hrvatska udruga banaka	Croatia
Zoran Skočir	FER	Croatia

1.2. Program



PROGRAM

5th IT STAR WS on **Electronic Business**
12 November 2010, Zagreb, Croatia – www.itstar.eu
Venue: Hotel Four Points, by Sheraton Panorama Zagreb

Hosted by



Friday, 12 November

09.30 Registration

10.00 – 11.30 Opening

Opening address by **Mladen Glasenhardt**,
 President of CITA

Keynote speakers

- **Bruno Lamborghini**, Chairman of the Board, EITO
- **Diana Šimić (HR)**, Chair of eSEE Initiative, Zagreb University - *e-Business policy and practice in Southeast Europe*

11.30 – 12.45 National and International Programs and Experiences

- **Pavol Frič (SK)**, Vice-president for Strategy, Slovak ICT company "DITEC" – *E-Signature*
- **Aleš Lipičnik (SI)**, CEO Connet d.o.o. - *E-commerce customer protection in compliance with EU directive*
- **Roland Schmuck (HU)**, University of Pecs - *How to Get the Most Out of Company Websites*
- **Dušan Rakić (RS)**, Chamber of Commerce, Belgrade – *e-Business in Serbia*

12.45 – 14.00 **Lunch**

14.00 – 16.00 National and International Experiences (cont'd)

- **Dušan Zupančič**, Director, CCI Slovenia & **Aleksej Jerman Blažič**, CEO SETCCE (SI) - *e-Slog - Slovene project for standardisation and implementation of business standards; implementation, impact and development*
- **Ranko Smokvina (HR)**, senior ICT consultant, Leader of Croatian e-

- Invoice Project (e-Invoicing) - *E-Invoicing in Croatia*
- **Vasile Baltac & Florin Vrejoiu (ATIC-RO)** - *e-Business in Romania*
- **Giuseppe Mastronardi (IT)**, Politecnico di Bari - *Legal Framework and Security Issues*

16.00 – 16.30 Coffee break

16.30 – 17.30 E-Skills for E-Business

- **Denise Leahy and Dudley Dolan**, *The Skills Challenge for e-Business*
- **Clementina Marinoni**, *Introducing e-CF in SMEs*
- **Mark Plunkett**, *ComTIA offerings in the e-Business area*
- **Giulio Occhini & Paolo Schgör**, *AICA – EUCIP and ECDL for e-Business*

17.30 – 18.00 Wrap-up and adoption of Conference Declaration

20.00 **Conference Dinner**

Conf. web-site <http://starbus.org/ws5/ws5.htm>

Organizing and Program Co-Chairs:
G. Occhini, M. Frković & P. Nedkov

Conference Moderator:
Plamen Nedkov

Local Contact:
Kresimir Sikulin, CITA Secretary General

1.3. Conference Opening

Ladies and Gentlemen,

Good morning and welcome to the Sheraton Panorama Four Points Hotel Zagreb for the 5th IT STAR WS on Electronic Business.

We have a tight program ahead of us and I will keep my introductory remarks quite brief.

There are over 70 registered participants according to the conference secretariat, which makes our event one of the most attended in the IT STAR conference series.

This is quite pleasing but there is another important measure related to participation – to have a good mix of representation from academia, government, business and civil society for a multi-stakeholder debate. We have achieved that as well, and along with senior officials of IT STAR's national member societies, we have excellent representation from chambers of commerce and industry, universities, governmental agencies, regional and international organizations.

Thirdly, we try to ensure a strong input from the local society, in this case the Croatian IT Association – CITA, and I'm very pleased to see many Croatian participants today.

A tradition for IT STAR events is to develop a conference Statement, debated and approved by the participants, and then distributed widely. The program co-chairs have prepared an initial draft, based on the initially submitted conference presentations. This draft is in your conference kits and I kindly invite you to go through and provide any comments you wish to be considered during the final debate.

We started active preparation 8 months ago and I take this occasion to introduce the other two co-chairs of the program and organizing committee:

- Mr. Marijan Frkovic, Vice-President of CITA, representative to IT STAR and National Coordinator for ECDL-Croatia.
- Mr. Giulio Occhini, Chief Executive Officer of AICA, the Italian ICT Association, and coordinator of IT STAR.

It is a privilege and a rewarding experience to work with my program committee colleagues as team, also resorting to the advice of CITA's President, Mr. Mladen Glasenhardt, and having the assistance of the CITA Secretariat and its Secretary-General Mr. Sikulin.

We are grateful to our authors and speakers for this conference, whom you will hear during the course of the day on topics including national and international e-Business policies, programs and experiences, customer protection, business standards, e-Skills, e-Signature, e-Invoicing and other related issues.

Finally, on behalf of CITA and IT STAR, I wish to thank all participants for being with us.

We value your time!

Before we kick-off the debate please allow me to say a few frivolous words about time and innovation: I was recently speaking with a Western colleague and asked him how he was doing. The reply was, “Very busy, 24/7”: I did not know this expression and was told that 24/7 stands for 24 hours a day, 7 days a week”. Well, it seems that our part of the world is more innovative – this morning I asked one of our speakers how he was doing and the answer was, “I had to work 25 hours a day to prepare for this conference”. I responded spontaneously that this is not possible.

His logic was sound, “Yes it is! I had to sleep one hour less than usual”.

We hope you will enjoy the conference and at the end of the day your internal voice will say, “Yes, it was worth it”.

Thank you!

Plamen Nedkov

Conference Moderator
Co-Chair, Program and Organizing Committee
Chief Executive, IT STAR

2. Opening Address

Mladen Glasenhardt

Ladies and Gentlemen,

I am delighted and honored to welcome you here in Zagreb, on behalf of the Croatian IT Association (CITA), on the occasion of the 5th IT STAR Conference on Electronic Business.

The Conference Organizing Committee has decided that this year's conference theme is e-Business, a topic that is very timely because e-Business is one of the conditions for each country's transition towards the Information Society.

As there is a significant foreign exchange among our countries, e-Business will certainly contribute to speeding up operations and reducing costs.

The aim of this conference is to analyze the achieved state of the introduction and implementation of e-Business in the IT STAR member countries, stress present obstacles, and propose a way to resolve them.

The members of the Croatian IT Association are involved in implementing e-Business activities in Croatia during the period 2007 – 2010.

In order to provide conditions for quicker development of e-Business in the region, with information literacy being an essential prerequisite, CITA organized in 2007 the first annual regional ECDL conference. The 2008 event was in Slovenia, followed by Serbia in 2009. This year it will be organized in Sarajevo, Bosnia and Herzegovina, in December.

The Government of Croatia adopted the Strategy for the development of e-Business for the period 2007-2010.

According to the data of the Croatian National Bank for 2009, 665 thousand citizens and 162 thousand business entities are using Internet banking.

In 2009, citizens had more than 21 million Internet transactions amounting to 2.8 billion Euros, while businesses had more than 45 million transactions with more than 103 billion Euros.

Based on the actual indicators, it is to be expected that the future development of e-Business in Croatia will lead to significant savings at the level of the government and the economy. Based on parallel data for Denmark and Croatia, the expected savings from the introduction of e-invoice in the public sector alone are estimated at 40 to 54 million Euros per year. Savings from the introduction of e-invoicing in the economy were estimated based on a similar study for France (savings at the level of 40 billion Euros per year). Parallel data for Croatia suggests savings would amount to approximately 850 million Euros per year.

There are no significant legal obstacles to the development of e-Business in the Republic of Croatia. It is therefore necessary to undertake intensive actions aimed at informing the wider public about the rights and rights protection mechanisms that are already established.

Public administration bodies must continue with intensive efforts to introduce electronic services for the citizens and businesses with the implementation of advanced electronic signatures, along with the acceptance and issuance of electronic documents, and to establish a system for the exchange of electronic documents between the state administration and judicial bodies.

Electronic documents are the essence of e-Business. In addition to replacing existing hard-copy documents they provide further automatic processing of such documents without human intervention.

The e-invoice is the most widely applied electronic document in the world. Even though it covers only a segment in the entire procurement chain, the e-invoice assumes a central role in the development of electronic business. Since the e-invoice contains essential VAT calculation details, the implementation of the e-invoice is of special importance for the enforcement of the national fiscal policy. The widespread presence and use of Internet banking in Croatia is the foundation for achieving maximum effects from the introduction of e-invoices. The introduction of e-invoices is a good example of horizontal integration within e-Business and is thus of interest to both large and small enterprises and the public sector.

Due to potentially large fiscal impacts of the e-invoice implementation, the Ministry of Economy initiated the pilot project Electronic Invoice, which will be presented during the conference. The best example for such use of the e-invoice is Denmark where, due to its compulsory implementation in the public sector and mass use, reductions in expenses exceeding 100 million Euros annually have been achieved within a short period of time.

The implementation of e-invoices enables the automatic preparation of electronic orders for the payment of purchased goods or services. Unlike cash payments, all e-payment methods are suitable for monitoring of money flow by authorized organizations, which consequently contributes to gray economy reductions.

The most common forms of electronic payments are the use of credit and debit cards for payments over the Internet, Internet banking, mobile payment, intermediary services and electronic money.

The Croatian Banking Association prepared the structure of the e-payment document in XML format.

The first document in a series of electronic documents used in the procurement procedure is the electronic order form using the e-catalogue in this process. It is an essential element for implementing the dynamic purchasing system. The standards for e-order forms and electronic invoices are logically interconnected and the e-invoice assumes a large amount of information from the e-order form, when available.

The organization GS1 Croatia has initiated the e-business project eCROKAT, which allows the maintenance of the a Central catalogue of commercial products and the possibility to be synchronized with similar catalogues worldwide, and eCRODOK which allows the preparation and exchange of electronic messages in line with the international GS1 BMS (Business Message Standards).

ICT technologies have already become a fundamental operational tool of companies. In order to allow for the use of their full potential, it is necessary that the management at all levels possesses the necessary knowledge and skills for their efficient and effective application.

Ladies and Gentleman,

I am confident that this conference will contribute to knowledge of the level of implementation of e-Business in the region, as well as exchange of experiences between member countries of IT STAR, the creation of conditions for removal of still present problems in deploying e-Business, and connecting professionals who deal with these issues with the aim of faster and more efficient application of e-Business in the region. I wish all participants a successful work, our guests from abroad welcome and pleasant stay in Zagreb and Croatia.

7. IT STAR

7.1 Snapshot

Type of organization

Regional non-governmental and non-profit professional association in the ICT field.

Date and place of establishment

18 April 2001, Portoroz, Slovenia

Membership

Countries represented (*see next page for societies*), year of accession, representatives

- Austria (2001) V. Risak, G. Kotsis, E. Mühlvenzl
- Bulgaria (2003) K. Boyanov
- Croatia (2002) M. Frkovic, M. Glasenhart
- Cyprus (2009) P. Masouras
- Czech Republic (2001) O. Stepankova, J. Stuller
- Greece (2003) S. Katsikas
- Hungary (2001) B. Domolki
- Italy (2001) G. Occhini
- Lithuania (2003) E. Telesius
- Macedonia (2003) P. Indovski
- Poland (2007) M. Holyński
- Romania (2003) V. Baltac
- Serbia (2003) G. Dukic
- Slovakia (2001) I. Privara, B. Rován
- Slovenia (2001) N. Schlamberger

Statutes

IT STAR Charter <http://www.starbus.org/download/charter.pdf> adopted on 23 October 2004 by the IT STAR Business Meeting in Prague, the Czech Republic.

Mission

“To be the leading regional information and communication technology organization in Central, Eastern and Southern Europe which promotes, assists and increases the activities of its members and encourages and pro-motes regional and international cooperation for the benefit of its constituency, the region and the international ICT community.”

Governance

IT STAR is governed according to the letter of its Charter by the Business Meeting of MS representatives:

- 2010 Zagreb, **Croatia** (November)
- 2009 Rome, **Italy** (November)
- 2008 Godollo, **Hungary** (November)

- 2007 Genzano di Roma, **Italy** (May)
Timisoara, **Romania** (October)
- 2006 Ljubljana, **Slovenia** (May)
Bratislava, **Slovakia** (November)
- 2005 Herceg Novi, **Serbia & Montenegro** (June)
Vienna, **Austria** (November)
- 2004 Chioggia, **Italy** (May)
Prague, **the Czech Republic** (October)
- 2003 Opatija, **Croatia** (June)
Budapest, **Hungary** (October)
- 2002 Portoroz, **Slovenia** (April)
Bratislava, **Slovakia** (November)
- 2001 Portoroz, **Slovenia** (April)
Como, **Italy** (September)

Coordinators

- 2010 – Igor Privara
- 2006 – 2010 Giulio Occhini
- 2003 – 2006 Niko Schlamberger
- 2001 – 2003 Plamen Nedkov
(currently Chief Executive)

Major Activities

- 5th IT STAR WS and publication on Electronic Business - <http://starbus.org/ws5/ws5.htm>
- 4th IT STAR WS and publication on Skills Education and Certification - <http://starbus.org/ws4/ws4.htm>
- 3rd IT STAR WS and publication on National Information Society Experiences – NISE 08
<http://www.starbus.org/ws3/ws3.htm>
- 2nd IT STAR WS and publication on Universities and the ICT Industry
http://www.starbus.org/r_d_ws2/r_d_ws2.htm
- 1st IT STAR WS and publication on R&D in ICT
http://www.starbus.org/r_d_ws1/r_d_ws1.htm
- IT Professional Pool Database (in progress)
- Workshop and publication on National Experiences related to the EU’s 5th and 6th FP
<http://www.starbus.org/download/supplement.pdf>
- Joint IT STAR – FISTERA Workshop on ICT and the Eastern European Dimension <http://fistera.jrc.es/pages/roadshows/prague%2004/FINAL%20REPORT-revised.pdf>
- Support to Member Society initiatives and events

Periodicals

The IT STAR Newsletter (nl.starbus.org) published quarterly.

Web-site

www.itstar.eu ■

7.1 Member Societies

<p>Austrian Computer Society – OCG Wollzeile 1-3, A-1010 VIENNA, Austria Tel. +43 1 512 0235 Fax +43 1 512 02359 e-mail: ocg@ocg.at www.ocg.at</p>	 <p>Bulgarian Academy of Sciences – BAS Institute for Parallel Processing Acad.G.Bonchev str.B1.25A SOFIA 1113, Bulgaria Tel +359 2 8708494 Fax +359 2 8707273 e-mail: boyanov@acad.bg www.bas.bg</p> 
<p>Croatian IT Association– CITA Ilica 191 E/II, 10000 ZAGREB, Croatia Tel. +385 1 2222 722 Fax +385 1 2222 723 e-mail: hiz@hiz.hr www.hiz.hr</p>	 <p>The Cyprus Computer Society – CCS P.O.Box 27038 1641 NICOSIA, Cyprus Tel. +357 22460680 Fax +357 22767349 e-mail: info@ccs.org.cy www.ccs.org.cy</p> 
<p>Czech Society for Cybernetics and Informatics – CSKI Pod vodarenskou vezi 2, CZ-182 07 PRAGUE 8 – Liben Czech Republic Tel. +420 266 053 901 Fax +420 286 585 789 e-mail: cski@utia.cas.cz www.cski.cz</p>	 <p>Greek Computer Society – GCS Thessaloniki & Chandri 1, Moshato GR-18346 ATHENS, Greece Tel. +30 210 480 2886 Fax +30 210 480 2889 e-mail: epy@epy.gr www.epy.gr</p> 
<p>John v. Neumann Computer Society – NJSZT P.O. Box 210, Bathori u. 16 H-1364 BUDAPEST, Hungary Tel.+36 1 472 2730 Fax +36 1 472 2739 e-mail: titkarsag@njszt.hu www.njszt.hu</p>	 <p>Associazione Italiana per l' Informatica ed il Calcolo Automatico – AICA Piazzale R. Morandi, 2 I-20121 MILAN, Italy Tel. +39 02 760 14082 Fax +39 02 760 15717 e-mail: g.occhini@aicanet.it www.aicanet.it</p> 
<p>Lithuanian Computer Society – LIKS Geležinio Vilko g. 12-113 LT-01112 VILNIUS, Lithuania Tel. +370 2 62 05 36 e-mail: liks@liks.lt www.liks.lt</p>	 <p>Macedonian Association for Information Technology – MASIT Dimitrie Cupovski 13 1000 SKOPJE, Macedonia e-mail: indovski.p@gord.com.mk www.masit.org.mk</p> 
<p>Polish Information Processing Society ul. Puławska 39/4 02-508 WARSZAWA, Poland Tel./Fax +48 22 838 47 05 e-mail: marek.holynski@gmail.com www.pti.org.pl</p>	 <p>Asociatia pentru Tehnologia Informatiei si Comunicatii – ATIC Calea Floreasca Nr. 167, Sectorul 1 72321 BUCAREST, Romania Tel +402 1 233 1846 Fax +402 1 233 1877 e-mail: info@atic.org.ro www.atic.org.ro</p> 
<p>JISA Union of ICT Societies Zmaj Jovina 4 11000 BELGRADE, Serbia Tel.+ 381 11 2620374, 2632996 Fax + 381 11 2626576 e- mail: dukic@jisa.rs www.jisa.rs</p>	 <p>Slovak Society for Computer Science – SSCS MFF UK, Mlynska dolina SK-842 48 BRATISLAVA, Slovak Rep. Tel. +421 2 65426635 Fax +421 2 65427041 e-mail: SSCS@dcs.fmph.uniba.sk www.informatika.sk</p> 
<p>Slovenian Society INFORMATIKA – SSI Vozarski pot 12 SLO-1000 LJUBLJANA, Slovenia Tel. +386 123 40836 Fax +386 123 40860 e-mail: info@drustvo-informatika.si www.drustvo-informatika.si</p>	

8. Croatian Information Technology Association - CITA

The Croatian Information Technology Association (CITA) (www.hiz.hr), is the umbrella organisation of Croatian ICT experts. It was founded in 1975 with the objectives to create the conditions for faster and more efficient introduction and application of ICT by

- Advocating the status and the quality of profession
- Initiating and implementing projects of mutual interest
- Promoting and using open systems
- Encouraging and organising the participation of young people in ICT
- Exchanging skills and experiences in using ICT
- Organising professional gatherings

CITA participates in the work of international ICT associations of informatics experts – IT STAR at a regional level, CEPIS at European, and IFIP at a worldwide level. ECDL Croatia and EUCIP Croatia are active within CITA.

CITA holds the licence for certification of users of personal computers according to ECDL standards (www.ecdl.com) and (www.ecdl.hr), and the certification of professional ICT experts (www.eucip.com) and (www.eucip.hr) in Croatia. It participates in programs of the European Union.

The members of CITA are included in the implementation of the National ICT strategy, especially the strategy for electronic business in the Republic of Croatia for the period 2007 – 2010.

There are more than 200 legal entities and a few thousand individuals active in CITA.

This year, CITA celebrates its 35th anniversary of continuous activity and there will be several manifestations and conferences organised on the level of the umbrella organisation and its associations to mark the anniversary. One of the more significant ones is the international gathering of the member countries of IT STAR within the frame of which there will be a regional conference on electronically conducted business, to be held in Zagreb on 12 November, where it will be possible to exchange experiences in achieved levels of applications and with problems referring to the introduction of electronically conducted business in the countries of Central and Eastern Europe (<http://www.starbus.org/ws5/ws5.htm>).

There are several organisations, experts and users of ICT active within the scope of CITA aiming to introduce and apply ICT technology more quickly and more effectively, and to open opportunities for the exchange of skills and experiences, such as:

- Open computer systems and Internet
- Oracle technologies
- Young informaticians
- Linux technologies
- GIS technologies
- SAP solutions
- ECDL test centres

The Croatian Society for Open Systems and Internet (HrOpen) was founded in 1992 with the intention to promote the development and advancement in applying these systems in the Republic of Croatia. This is being implemented by organising seminars, lectures and workshops, by establishing the collaboration with experts and associations for open systems and Internet in Croatia and abroad, by encouraging the usage of program support in the field of Open Source and Free Software.

One of the most important activities of the Society is the annual conference «Open Systems Days» (DORS) organ-ised for the purpose of informing people about open systems, their usage, the experiences of users and problems in application. It should also be added that HrOpen participates in training activities for teachers of primary and sec-ondary schools to use open systems, and it is also very active in technical committees of the Croatian Institute for Standardisation in the field of open systems, introducing and applying international standards.

The Croatian ORACLE User Group (HrOUG) has been active ever since 1995, working on the exchange of skills and experiences of users in the application of ORACLE technologies, and on the improvement of the relationship between the users and ORACLE Corporation.

The annual conference of Oracle users needs to be specially singled. It gathers several hundred participants with the objective to make people acquainted with the new Oracle products and present new solutions, existing problems, presentations of Oracle representatives, etc.

The *Croatian Society of Young Informaticians (HrSIN)* was founded in 1985 with the intention to involve young informaticians, to carry out programs and to provide help to members, organise district and state competitions, winter schools and summer camps for informaticians, preparations and participations of young informaticians at international competitions, information schools and manifestations, and to organise competitions for software projects of young informaticians and their presentation. There are several thousand young people being active in HrSIN and the best of them participate successfully at state, regional, European and world Olympiads in informatics for young people, in which they have won more than 100 medals. HrSIN organised successfully in 2007 the International Olympiad in Informatics (IOI) in Zagreb, and this year they won one gold and three silver IOI medals in Canada.

The Croatian Linux Users Group (HULK) was founded in 1966 to promote the operational system Linux, to advise and inform the members about new achievements in open standards and technologies, to help those who are interested how to use Linux, to organise the program of translating well-known open programs and systems, to collaborate with other societies, such as HrOpen and other. HULK maintains the Central Linux portal in Croatia (www.linux.hr), organises central Linux conference (cluc.linux.hr), adjusts Linux to the users in Croatia, and generates open code programs.

The Croatian Society of Geographic IS (HrGIS) was founded in 1994 in order to make GIS technologies popular and organise education in GIS, to promote the production of national GIS standards, to participate at European projects and programs, to organise professional presentations at Croatian and international gatherings, to raise the level of skills in the field of GIS technologies

at the faculties and vocational schools, to collect and distribute publications and professional works in GIS. HrGIS organises successfully annual conferences titled „GIS Odyssey“ where GIS works are presented and professional exhibitions and manifestations held. In collaboration with the embassy of the Republic of Poland in Zagreb the exhibition «New and Old Polish Maps» was held in Zagreb this year. An exhibition under the same topic will be held in Poland in 2011, this time with Croatian maps. In collaboration with the State Geodetic Agency from Zagreb and the one from Warsaw, the work on the project of producing maps and plans for blind and low vision people is being continued.

The Croatian Society of SAP users (HrUSKO) organises the communication of users with the firm SAP and helps in exchanging information among the members. It organises professional conferences for the users of SAP tool and databases, represents the interest of the members by publishing information on of their new products, organises a demo centre of new program products, as well as the teams for testing beta versions, organises the participation at Croatian and international fairs, exhibitions and conferences.

The Croatian Society of ECDL test centres (HrECDL) unites the activity of test centres in Croatia dealing with the problems of introducing and applying ECDL, the introduction of new versions of ECDL programs, publishing literature, ECDL marketing, and delivering the conclusions and suggestions to ECDL Croatia.

CITA has been working successfully on the ECDL program in Croatia since 2003. More than 50,000 employees, citizens, unemployed, persons with special needs and others have been working so far within the scope of some of the programs, with 40,000 of them having certificates to do so. The government of the Republic of Croatia has accepted ECDL as a standard in schools and state administration. So far, more than 20,000 teachers in primary and secondary schools and more than 2,000 employees in state administration have been certified.

In 2006, the 10th World Conference was held in Dubrovnik with the participation of representatives of 140 countries in which ECDL is applied. This gave full credit to CITA for its successful application of ECDL in Croatia.

In order to provide conditions for a faster development of electronic business in the region (with the information literacy being one of essential presumption), CITA organised in 2007 the first annual ECDL conference. The following conferences were held in Slovenia and Serbia. Bosnia and Herzegovina will play host this year.

CITA became a member of IT STAR in 2002. This was followed by membership in CEPIS and IFIP. It hosted the IT STAR Business meeting in 2003. These first initiatives present the beginning of CITA being active in international ICT organisations, which has significantly contributed to the acquisition and transfer of new skills in Croatia and the exchange of experiences, and has made Croatia more prepared for the transition to an information society.

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