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*References:*0 *Tables:*3 *Figures:*12  
*Category:* Original Scientific Paper  
*Title:* INFORMATION CONTROL IN THE INFRARED AREA OF SPECTRUM  
*Author(s):* Vilko Žiljak, Klaudio Pap, Ivana Žiljak, Jana. Ž. Vujić\*  
*Affiliation:* Faculty of Graphic Arts, University of Zagreb, Zagreb, Croatia, Higher school of Polytechnics, Zagreb, Croatia  
*Key words:* information control, infrared area of spectrum, technology  
*Abstract:* Designing of graphics that are detected only outside the range where colors are recognized falls into the area of document security with printing techniques. This paper's contribution is in setting the double separation method in the grey (achromatic) area for the printing system with process printing inks. The method's goal is generating a separate piece of graphic information that can be detected in the infrared area only. The initial point for a discussion on graphic product security generated by printing techniques with different materials is designing of graphics for the near infrared area having a wavelength range of 700 to 1000 nm. Named "infrared information", it covers an individualized color choice and individualized hidden information, protected against copying or reproduction. The IR information generated by double separation and called "IR separation" carries in itself two independent pieces of information. The first one is the image determined by the mask so that it is observed under infrared light only. The second piece of information is only the positive difference between the image gray intensity seen in daylight and the mask's gray intensity in the same pixel. After IR separation, its presence must not be detected in the reproduction visible area, what is the condition for conventional UCR, GCR and UCA separation methods as well. The goal of IR separation is to incorporate IR information into the image in such a manner that it is readable in IR wavelengths only.

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*References:*6 *Tables:*4 *Figures:*0  
*Category:* Original Scientific Paper  
*Title:* THE COMPUTER AS A MODERN FORM OF COMMUNICATION IN THE EDUCATIONAL PROCESS FROM THE TEACHERS` POINT OF VIEW  
*Author(s):* Mateja Ploj Virtič, Mateja Pšunder\*  
*Affiliation:* Faculty of Natural Sciences and Mathematics, University of Maribor, Maribor, Slovenia, Faculty of Arts, University of Maribor, Maribor, Slovenia\*  
*Key words:* communication, education, teacher, teaching aid  
*Abstract:* Effective integration of information and communication technology (ICT) into the teaching process is becoming an indispensable part of an effective educational process. In this study, the research was conducted at representative sample of teachers teaching Design and technology in primary school in Slovenia on the use of the computer and the applicability of individual forms of e-learning in class and reported on the actual use of the computer in their classroom. The basic finding of the study is that teachers do use computers in class and that they are inclined towards using different forms of e-learning. Their position regarding the use of the computer in class is positive, with the exception of the attitude towards the knowledge and experiences acquired during their undergraduate study. Such information indicates that in the future, special attention must be given to the training of teachers for the use of the computer already during undergraduate study.

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*Language –of text:* Croat. *– of Summary:* Croat.,Engl.  
*References:*24 *Tables:*5 *Figures:*5  
*Category:* Preliminary Communication  
*Title:* AUTOMATED BUSINESS TRANSACTIONS WITH EXCHANGE/DISTRIBUTION OF SERIAL PUBLICATIONS: EXAMPLE OF CROLIST  
*Author(s):* Tatijana Petrić  
*Affiliation:* University library, University of Zadar, Zadar, Croatia

*Key words:* library, publications, exchange process, CROLIST

*Abstract:* The importance of exchange for acquisition of serial publication in libraries/institutions which publish their own publications is signified in this paper. Mere process of business transaction and strategies of exchanges are examined. The research that was carried out had a goal to investigate in which organizational unit of library/institution the business transaction with exchange is done, in which ways it is done, and the attitude of the staff about necessity of automatization of the part of business transaction.

The method of questionnaires was used during the research. The results of the research have shown that the business transaction with exchange/distribution of serial publications is done in mere libraries and not in some other organizational units, that only one of analyzed library-information software's has a module that is developed for automated business transaction with exchange/distribution, and that the library staff has a attitude that automatization of business transaction with exchange/distribution is necessary. At the end of this paper the sub-module Distribution, part of library-information software CROLIST, is shown and it shows the possibilities and advantages of using such a module in automated business transaction with exchange/distribution of serial publications.

for recognizing the computer are set up regarding such use as not just a source of entertainment but as a means of work and learning whilst taking into consideration that children should, at the same time, enjoy this work. This paper presents results concerning the attitudes of pre-school children aged between 5.5 and 6.5 towards using computers and, in particular, the elements of computer importance, computer enjoyment and their relative creative tendencies. Technology, in terms of the children's' computer literacy, was questioned using elements including the Windows operating system commands, window manipulation, keyboard use etc. The Social environment (social agents linked to the use of the computer by pre-school children) have been analyzed as a source of initial knowledge about the computer using such questions as: "Who has taught you how to use the computer?" The results achieved by questioning the children's' computer attitudes show that they like using computers, they consider it a very important means of learning and think that possessing computer skills will help them get a better job in the future. The most common sources of initial computer knowledge include input from parents, siblings and friends, a few children learned how to use the computer by themselves. The results of the computer literacy assessment show that children possess a level of basic knowledge expected of this age group. Inter-correlation among the questioned variables show there to be a statistically significant correlation among the computer literacy level, computer importance and computer enjoyment initiated by the social agents.

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*Language –of text:* Engl.                      – *of Summary:* Engl.,Croat.  
*References:*26 *Tables:*0 *Figures:*5  
*Category:* Author Review  
*Title:* COMPUTER ATTITUDES AND COMPUTER LITERACY LEVELS RELATIONSHIPS  
*Author(s):* Violeta Vidaček-Hainš, Valentina Kirinić, Vesna Dušak  
*Affiliation:* Faculty of Organization and Informatics, University of Zagreb, Varaždin, Croatia  
*Key words:* computer literacy, education, communication, technology  
*Abstract:* Increasing numbers of educational strategies are appearing which emphasize the importance and role in the use of ICT (information and computer technology). It has therefore become necessary to create foundations for reaching early computer literacy in the educational curricula of pre-school children. Since problems and doubts in the justification of computer use by pre-school children are so frequently emphasized, children's attitudes towards using them are important as is the provision of an adequate, encouraging and well-directed environment (social agents). It is particularly important for this age group that foundations

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*Category:* Author Review  
*Title:* THE RECOMMENDATION OF MODEL FOR DESIGN MULTIMEDIA WEB EDUCATION CONTENT ACCORDING TO THE PEDAGOGICAL PRACTICE IN THE REPUBLIC OF CROATIA  
*Author(s):* Vladimir Mateljan, Željko Širanović\*, Vladimir Šimović\*\*  
*Affiliation:* Faculty of Philosophy, University of Zagreb, Zagreb, Croatia, Higher scoohl for polytechnics, Zagreb, Croatia\*, Faculty of Pedagogy, University of Zagreb, Zagreb, Croatia  
*Key words:* education, communication, web technology, multimedia  
*Abstract:* The technological changes and new IT from teacher, requests creativity, knowledge and skills from design of modern multimedia tools. Like classic education in the classroom, the multimedia's training unit is divided into several stages (for example: introduction, activity,

summary etc.). The multimedia education content has to develop and design according to modern cognitive theory. The teachers and the other stakeholders, who are involved in the development and design of multimedia web content, must know this theory, because their goal is to develop efficient and high quality multimedia content. In this paper we consider the possibility applied to the techniques for the development and design of multimedia web content, according to the guidelines of the cognitive theory of multimedia learning as a model for using this theory and these techniques in pedagogical practice in the Republic of Croatia.

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### Informatologia, 42, 2009, 1, 1-72

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*Language –of text:*Engl. – *of Summary:* Engl.,Croat.  
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*Category:* Author Review  
*Title:* INTERCULTURAL COUNSELING AS A  
 CURRENT ISSUE AND WHAT MAKES A COMPETENT  
 INTERCULTURAL COUNSELOR  
*Author(s):* Marija Krečič Javornik  
*Affiliation:* Faculty of Arts, University of Maribor, Maribor,  
 Slovenia  
*Key words:* education, intercultural  
 communication,counseling, counselor *Abstract:* In  
 the first part of the paper, the author finds that in the  
 present the question of collaboration between members  
 of the majority and the members of cultural, religious,  
 social and other minorities is one of the most essential  
 civilisational questions. Consequently, intercultural  
 pedagogy and intercultural education play an important  
 role here. Due to such multicultural conditions, school  
 counseling, too, has developed some special features.  
 Furtheron in the paper, the author defines and presents  
 the characteristic features of intercultural counseling set  
 up for pupils who are members of cultural minorities and  
 immigrants, as well as for people who live and work with  
 them. The final part of the paper defines the intercultural  
 competence of a school counselor. The latter should be  
 able to detect cultural aspects relating to the counselee,  
 to recognise their role in the causing of the problem of the  
 person seeking counsel and its solution. He/she should be  
 able to incorporate them in the counseling situation and  
 process.

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*Language –of text:*Engl. – *of Summary:* Engl.,Croat.  
*References:*6 *Tables:*0 *Figures:*2  
*Category:* Professional Paper  
*Title:* INFORMATION SYSTEMS IN SCHOOLS AND  
 DATA PROTECTION  
*Author(s):* Lina Dečman\*, Olga Dečman Dobrnjič\*\*, Metod  
 Černetič\*\*\*  
*Affiliation:* Iskraemeco, Kranj, Slovenia\*, National Education  
 Institute of Republic of Slovenia\*\*, Faculty of Organizational  
 Sciences, Kranj, University of Maribor, Slovenia \*\*\*  
*Key words:* data protection, technology, schools,  
 information systems  
*Abstract:* The steady growth of computer and  
 communication sciences makes schools as organizations  
 more and more dependent on information systems.  
 Schools are organizations and thus they too must comply  
 with the legal requirements concerning the data security.  
 This paper deals with the topic of data protection in the  
 schools information system. While the schools apply the  
 information systems, the information is easier accessible to  
 a growing number of people. Parallel to it, the opportunities  
 of data abuse e.g. computer fraud, espionage, malevolent  
 code etc. are more frequent. Under data protection we  
 understand the data as well as information protection as  
 they are almost always not just pure information but have  
 certain value. The information protection is based above  
 all on three basic principles: integrity, confidentiality and  
 availability. It is suggested that the organization declares  
 its adopted policy and guidelines for management of  
 electronic operations and at the same time assures that  
 they are properly implemented.