

Network Technologies and Services	1
Negative Influences of Branch Lines on xDSL Technologies in the Access Networks	3
<i>Jan Cuchran, Rastislav Roka</i>	
Routing Management Based on Statistical Cross-Layer QoS Information Regarding Link Status.....	8
<i>Melinda Barabas, Georgeta Boanea, Andrei Bogdan Rus, Virgil Dobrota</i>	
Optimization of the NGOSS Change Management Process Simulation Model.....	14
<i>Michal Mrajca, Jakub Serafin, Zdenek Brabec</i>	
Traffic Analysis in Contact Centers	19
<i>Erik Chromy, Jan Diezka, Matus Kovacik, Matej Kavacky</i>	
Controlling Asterisk with Java Application	25
<i>Pavel Nevlud, Lukas Kapicak, Jaroslav Zdralek, Jan Plucar, Patrik Dubec</i>	
Management of Routing Using Artificial Intelligence.....	29
<i>Vladislav Skorpil, Roman Precechtel</i>	
Dynamic Registration System of Active Network Elements in IP Telephony Laboratory	33
<i>Filip Rezac, Miroslav Voznak, Jan Rozhon, Jaroslav Zdralek, Martin Krcmarik</i>	
Study of VoIP traffic performance under congested MPLS network scenario.....	37
<i>Rucka Lukas, Hosek Jiri</i>	
IP Telephony in Czech National Research Network	42
<i>Miroslav Voznak, Filip Rezac, Jan Rozhon, Jiri Vychodil, Karel Tomala</i>	
Speech and Image Processing	49
Motion Estimation and Compesation for Video Objects	51
<i>Seyit Tunc, Hakki Alparslan Ilgin</i>	
Comparison of MPEG compression standards using different subjective video quality methods ...	56
<i>Miroslav Uhrina, Martin Vaculik</i>	
GA and PSO Based Feature Selection for Speaker Recognition Task	60
<i>Michal Chmulik, Martin Hric, Roman Jarina</i>	
Fourier and Wavelet Analysis – an engineers approach	64
<i>Jan Skapa, Marek Penhaker, Jan Latal, Petr Koudelka, Jan Vitasek</i>	

Optical Communications	69
The Effective Bandwidth Utilization in the Hybrid PON Networks	71
<i>Rastislav Roka</i>	
The Labelled Optical Burst Switching OMNeT++ Model With Accurate Time Offset Evaluation.....	75
<i>Milos Kozak, Leos Bohac</i>	
Noise analysis of dark rooms and their evaluation	79
<i>Stanislav Hejduk, Vladimir Vasinek, Jiri Bocheza, Jan Vitasek, Jan Latal, Artem Ganiyev</i>	
Time varying impulse response of a PMD affected single mode fibre optic link with polarization scramblers	84
<i>Zbigniew Lach</i>	
Upgrading the Optical Access Network Architectures	90
<i>Peter Kubizniak</i>	
Fog attenuation influence on Bit Error Ratio of Free Space Optics link	95
<i>Jan Vitasek, Jan Latal, Stanislav Hejduk, Jiri Bocheza, Petr Koudelka, Petr Siska, Jan Skapa, Vladimir Vasinek</i>	
Telecommunication Systems	101
FPGA Implementation of Turbo Decoders Using BCJR Algorithm	103
<i>Onur Atar, Murat H. Sazli, H. Gokhan Ilk</i>	
Significantly Asymmetric Spectral Profile for a Very High-bit-rate Digital Subscriber Line	109
<i>Jiri Vodrazka, Petr Jares</i>	
Simulation of data transfer from the aerobatic plane	113
<i>Petr Chlumsky, Zbynek Kocur, Vladimir Machula</i>	
ZigBee Sensor Network for controlling the lightening system	117
<i>Bohdan Borowik, Igor P. Kurytnik, Barbara Borowik, Volodymyr Karpinskyi</i>	
DTMF signal Generated by Processor PIC18F45XX	121
<i>Radek Novak</i>	
Design of CLI for VoIP routers and gateways	123
<i>Lukas Macura</i>	
Implementing WebSockets in Web applications.....	128
<i>Jiri Vychodil, Filip Rezac, Karel Tomala, Miroslav Voznak</i>	
Design of Digital Communication System with use of RF VSG PXI-5670 and RF VSA NI PXI-5661 in role of Software Defined Radio	132
<i>Radek Martinek, Jan Zidek, Karel Tomala</i>	
Robot Navigation System Based on RFID Transponders Integrated with Sensors.....	138
<i>Włodzimierz Kalita, Mariusz Skoczylas, Mariusz Węglarski</i>	

Security in Communications	143
Femtocell Backhaul Security Efficiency	145
<i>Matej Rohlik, Tomas Vanek</i>	
Optimizing brute-force attack on MD5	149
<i>Dalibor Hula</i>	
Finding the Best Encryption Algorithms for PLC Technology	152
<i>Milos Orgon, Ivan Bestak, Michal Halas, Adrian Kovac</i>	
Radio Networks and Wireless Communications	157
Speech Traffic Load Sharing Between GSM and WCDMA by Using Directed Retry to GSM Feature	159
<i>Hakan Kavlak, H. Gokhan Ilk</i>	
Performance optimization of mobile WiMAX networks for VoIP streams.....	165
<i>L. Ortiz, V. Rangel, J. Gomez., R. Aquino Santos, M. Lopez-Guerrero</i>	
Wireless Sensor Network with random sending	170
<i>Teresa Rajba, Stanisław Rajba</i>	
Analysis of IEEE 802.11e EDCF Media Access Mechanism	176
<i>Petr Machnik</i>	
Visualisation of Best Servers Areas in GSM Networks	182
<i>Roman Sebesta, Marek Dvorsky, Lukas Kapicak, Libor Michalek, Peter Scherer, Jan Martinovic</i>	
Implementation of OFDM demodulator using software environment System Generator for DSP	186
<i>Miroslav Bures, Marek Dvorsky</i>	
Measurement and sensors, Biomedical Engineering, Multimedia	191
Fast DCT Video Compositing for Multi-Point Video Conferencing.....	193
<i>Hakkı Alparslan Ilgın, Hakkı Gokhan Ilk, Miroslav Voznak, Luis F. Chaparro</i>	
Modeling of textile DC bulk resistance for antenna design with electrically conductive fibres	199
<i>Marek Neruda, Lukas Vojtech</i>	
Telemetry System for Plethysmography and Oximetry Measurement	203
<i>Marek Penhaker, Vladimir Kasik, Jan Semkovic</i>	
Verify the Accuracy and Time Stability of the Radiation Labels.....	207
<i>Zuzana Vasickova , Marek Penhaker, Jan Skapa</i>	
ECG Signal Simulator with Programmable Hardware	211
<i>Vladimir Kasik</i>	
Digital Control of RPLISXX048 Line-Scan Sensor using FPGA	215
<i>Vladimir Kasik, Ivan Stancl</i>	

Simulation Tool for Playing Gaming Machines.....	219
<i>Bohdan Borowik, Miroslav Voznak</i>	
Recent Advances in Networks and Communications	221
Method of attacks visualization in wireless sensor networks.....	223
<i>Bohdan Borowik, Igor Piotr Kurytnik, Volodymyr Karpinskyi</i>	
Research of realization a distributed attacks in computer network.....	226
<i>Mikolaj Karpinski, Yaroslav Kinakh, Uliana Yatsykovska</i>	
Regression mathematical model of subscriber extension line.....	229
<i>Iva Petrikova</i>	
Analysis of the dynamic range of electronic filter input signals.....	234
<i>Zdenek Tesar</i>	
Author Index	240