# Table of Contents

Quality of Service Guideline in Broadcast-Communication Convergent Environment ................................................................. 1  
  *Chin-Chol Kim, Jong-Pil Jeong, Jae-Young Choi*

Implementation of Knocking Diagnosis Algorithms and design of OBD-II Diagnosis System S/W on CRDI Engine .............................................. 4  
  *Hwa-seon Kim, Seong-jin Jang, Jong-wook Jang*

Assignment of Starting Offsets of a Collision-Free Periodic Schedule .............. 8  
  *Kirack Sohn*

New Minutiae Detection Algorithm from Fingerprint Image using Improved Pre-processing Stage .......................................................... 12  
  *Sung-Woo Han, Dae-Seong Jeoune, Young-Woo Yoon*

A Note on the Entropic Bounds for the Entropy Sources Used in Cryptographic Modules ............................................................. 16  
  *Ju-sung Kang, Yongjin Yeom, Okyeon Yi*

Generating Entropy Source for Cryptographic Modules Using OpenMP in Multicore CPUs ................................................................. 20  
  *Jungbai Kim, Taeill Yoo, Yongjin Yeom, Okyeon Yi*

A Study on the implementation circuit for LED-ID receiver module ............ 23  
  *Soon-ho Jung, Seung-Beom Seo, Jae-Sang Cha*

A study of Carpal Tunnel Syndrome Patients ........................................ 26  
  *Joo-Yong Kim, Young-Keun Lee, Ki-Chan An, Yong-wook Kwon, Sang Hyun Woo, Malrey Lee*

An Efficient Message Scheduling Algorithm for Arbitrary Topology PROFINET IRT Networks ................................................................. 30  
  *Jinbo Sim, Jooyoung Son*

A Soft Decision Decoding Algorithm for Communication Systems .......... 33  
  *Yong-Geol Shim*

A Channel Code Guaranteeing Self Synchronization ..................................... 36
Yong-Geol Shim  
Multi-Channel DVB-T Transmitter Design ......................................................... 39

Seo Weon Heo, Hyuk-Kee Sung, Dong-Myung Lee

Simplified Decoding Scheme by Selecting Possible Code Words ..................... 42

Yong-Geol Shim

A Study on the Impact of SNS Ad Type and Product Involvement on Consumers' Purchasing Intentions .............................................................. 45  
Jongho Kim, Taeyang Seo, Jonghe Ra, Yongpal Lee, Yoonyon Hwang

Video Abstraction for 3D Visual Contents ......................................................... 49

Kyungha Min

Emotion-based Approach for Re-producing Visual Contents .......................... 53  
Heekyung Yang, Kyungha Min

Feature-guided Salient Rendering of 3D Meshes ............................................. 57  
Kyungha Min

Effect of Interleaver on Communication Systems with Concatenated Coding..... 61  
Hyun-Ho Lee, Younggyun Kim, Young-Chai Ko, Taehyun Jeon

Security Models for High Capacity USIM-based Services .............................. 63  
Eun Su Jeong, Bum Han Kim, Dong Hoon Lee

Scalable Prediction Structure for Depth Map in 3DVC .................................... 67  
Jinmi Kang, Kidong Chung

A Study on Drinking Judgment Algorithm Using Speech Parameter ............. 71  
Geumran Baek, Myungjin Bae

Development of Measurement System for Waste Volume in Landfill Facility Using 3D Laser Scanner ................................................................. 74  
Seungyung Cho, Youngdae Lee

A Hyperbox-Based Neural network for Dynamic Hand Gesture Recognition.... 78  
Ho-Joon Kim, So-Jung Park

A Study on The Detection of Sailing under The Influence using The Linear Predictive Coding ................................................................. 82  
Chan-Joong Jung, Seong-Geon Bae, Myung-Jin Bae
Grassfire Method for Spot Matching in 2-DE Image ..................................................... 86
   Yun-Kyoo Ryoo, Chan-Myeong Han, Ja-Hyo Ku, Dae-Seong Jeoune, Young-Woo Yoon

On A New Speech Synthesis method using Harmonics Filter for Naturalness .... 90
   Seong-geon Bae, Myung-jin Bae

Distributed Web-Cached Multimedia Services in Wire/Wireless LAN ............ 93
   Jaeho Choi, Iksoo Kim

Ultrasound Image Enhancement using Markov Random Field Model.......... 96
   Seong-Hoon Gwak, Eun-Bi Park, Ho-Joon Kim

Hi-pass Pink Noise and Standard Volume for Auditory Experiments........... 100
   Doo-Heon Kyon, Won-Hee Lee, Myung-Sook Kim, Myung-Jin Bae

Developing System for Illuminating White Light Using LED Controller and LED Emitter................................................................. 104
   Jeong-Jin Kang, Keehong Um, Sooyeup Yoo, Yong-Soon Im, Jong-Jin Park, Eunyoung Kang, Dong-hun Lee

Data Protecting Machine design based on Reed Solomon GF(2^8) field coding .......................................................... 108
   Hyeong-Keon An

Study about Enhancement of WDMX Server based on Raw Ethernet Frame.... 111
   Sugoog Shon, Cui Feng, HeeJung Byun

Personal Identification Using Iris Recognition............................................. 115
   Woo Suk Yang

Tangerine Flower Recognition for yield Estimation ................................. 119
   Ulzii-Orshikh Dorj, Keun-Kwang Lee, Malrey Lee

Composition of Phenolic acids and flavonoids...................................... 123
   Keun-Kwang Lee, Myung-Kon Kim, Yeon-Sook Song, Malrey Lee

Construction of XBRL Security Model Considering Overhead ............. 126
   Il Sun Park, Seung Jung Shin

Vehicle-to-Infrastructure (V2I) Multicast Transmission for Live-Video Streams ............................................................ 129
Jaeho Choi, Yoseop Woo, Iksoo Kim
Extraction of Vehicle License Plate Using Overlapped Partition ....................... 132

Dongwook Kim, Liu Zheng
Preamble Based Timing Synchronization for OFDM Receivers ....................... 135

Jihye Lee, Taehyun Jeon
A Logistic Diffusion Model of Extended Warranty Data ............................... 137

Lee Sang-Hyun, Lim Jong-Han, Moon Kyung-II
A Study on the Ubiquitous e-voting system .................................................... 141

Choong Sik Kim, Chang Duk Jung, Seo Yeong Ha, Chan Hyuk Park
Replacing Missing Attributes by Adaptive Method in Rough Sets ................... 145

Lee Jeong-Gi, Lee Sang-Hyun, Moon Kyung-II
Theoretical Performance Analysis of Manycore Processor Under Process Variation ............................................................................................................. 149

Phuong Thi Yen, Jungmin So, Young-Woong Ko, Jeong-Gun Lee
The Impact of Maximum Data Rate and Imperfect Channel Estimation on Adaptive Power and Rate DS/CDMA Communications ................................. 152

Ye Hoon Lee, Dong Ho Kim
Power and Rate Adaptations in hybrid DS/FH CDMA Communications over Fading Channels ................................................................................................. 155

Ye Hoon Lee
Incremental Redundancy Hybrid-ARQ with Rate Compatible LDPC Codes .... 158

Dong Ho Kim, Ye Hoon Lee
Performance Improvement of 3D HDTV Transmission with Block LDPC Codes ................................................................. 161

Minki Kim, Dong Ho Kim
A Practical Coding Decision for Network Coding in Wireless Ad-hoc Network ..................................................................................................................... 164

Kwan-Woong Kim, Yong-Kab Kim, Hyung-Kil Kang, Byun-Gon Kim
A Delta-based Data Aggregation Scheme using EWMA in Wireless Sensor Network ............................................................................................................. 168

Byun-Gon Kim, Kwan-Woong Kim, Jung-Won Choi, Yong-Kab Kim
An Implementation of Network based Digital Cross-over for Active Speaker System
Kwan-Woong Kim, Byun-Gon Kim, Hyung-Kil Kang, Yong-Kab Kim

Non-Fuzzy Rule-Networks Based on Hard Clustering Algorithm
Keon-Jun Park, Jun-Myung Lee, Jung-Won Choi, Yong-Kab Kim

Performance Analysis of An Extended Seamless Proxy-based Handoff Scheme in Mobile IPv6 Networks
Chulhee Cho, Jaeyoung Choi, Jongpil Jeong

Manycore Processor Education Platform with FPGA for Undergraduate Level Computer Architecture Class
Hana Park, Young-Woong Ko, Jungmin So, Jeong-Gun Lee

Common Sense Knowledge Discovery for Association Rule
Ingi Lee, Hwan-Seung Yong

A Study on the Development Planning of riverfront town connected with urban regeneration using IT Technology
Won-Chul Lee, Ja Hyo KU, Seong-Bok yang, Joo- Hyung Lee

Home Appliance Scheduling Optimization with Time-Varying Electricity Price and Peak Load Limitation
Taeyoon Yu, Dong Sik Kim, Sung-Yong Son

HF and HB motion control system for Posture
Jeong-lae Kim, Kyu-sung Hwang, Yong-seok Nam

Implementation of LED Light Dimming System using Light Switch Dimming Controller
Byong-Moon Yang, Hee-Chul Eun, Hong-Sub Min, Jang-Su Kang, Jae-Wook Song, Jae-Sang Cha

Logical Activity Recognition
Sun-Sook Lee, Hwan-Seung Yong

A Study on Circuit Design of LED Driver for LED Light and Communication
Soon-ho Jung, Sijin Lee, Sunghwa Lee, Sookyoung Joung, Woochang Song, Jaekwon Shin, Jintae Kim
High Performance Implementation of Ultrasound Color Doppler Imaging on GPU platform......................................................................................................214
Thi Yen Phuong, Jeong-Gun Lee

Using Interactive Multimedia Web Interface for Multicultural Healthcare Education .................................................................217
Myonghwa Park

An evidence based decision support model to discover the characteristics of the elderly with depression .................................................................222
Myonghwa Park, Chang Sik Son, Sun Kyung Kim

Reduction of Musical Residual Noise Using Harmonic-Adapted-Median Filter .............................................................................................227
Ching-Ta Lu, Kun-Fu Tseng, Chih-Tsung Chen

Analysis of Stress and load Distribution on Hip and Knee Joint after Unilateral Total Hip Arthroplasty ...............................................................235
Yuan-Zhu Xin, Ki-Jung Kim, Seok-Jo Yang

Parameter Estimation for Dynamic System using Unscented Kalman filter ......240
Jihoon Seung, Amir Atiya F., Alexander G.Parlos, Kilto Chong

A Template for Marine Information System using GPS, AIS, Digital Compass, Image and ENC Data ...............................................................246
Felipe P. Vista IV, Bo Long, Kil To Chong

Remote Control of Machine Vision Processing System ........................................249
Felipe P. Vista IV, Deok Jin Lee, Kil To Chong

An Efficient Method for Nurse Scheduling Problem using the Genetic Algorithm ......................................................................................252
Sun-Jeong Kim, Young-Woong Ko, Saangyong Uhmn, Jin Kim

Implementation of Rough Sets Theory Based Multimedia Data Clustering under Web Services .........................................................256
M Nordin A Rahman, Yuzarimi M Lazim, Farham Mohamed, Syarilla Iryani A Saany

Intelligent Frozen Shoulder Self-Home Rehabilitation Monitoring System......265
Jiann-I Pan, Hui-Wen Chung, Jen-Ju Huang
X-Trans Patterned Color Filter Array with Alternative Color Combination

Gwanggil Jeon, SeokHoon Kang, Young-Sup Lee

Filter Size Effect for Pre-Determined CFA

Gwanggil Jeon, SeokHoon Kang, Young-Sup Lee

Soft Decision Model for Edge Preservation

Gwanggil Jeon, SeokHoon Kang, Young-Sup Lee

A New Room Equalizer

Seong-Geon Bae, Ji-Kyung Kim, Jae-Pyung Kim

Ontology Model for Capturing End-to-End Interaction of Existing Application Software Requirements

Elviawaty Muisa Zamzami, Eko Kuswardono Budiardjo

Air Gap Control Simulation of a Magnetically Levitated Train

Ki-Jung Kim, Hyung-Suk Han, Seok-Jo Yang

Two-Level Metadata Management for Data Deduplication System

Jin San Kong, Min Ja Kim, Wan Yeon Lee, Young Woong Ko

Similarity Evaluation Scheme Using Fixed-length VLC Based Representative Hash

Young Jun Yoo, Jin Kim, Jung min So, Jeong Gun Lee, Sun Jung Kim, Young Woong Ko

The Role of Korean Media in Los Angeles

Jin-Young Kim

Byte Index Chunking Approach for Data Compression

Ider Lkhagvasuren, Jung Min So, Jeong Gun Lee, Chuck Yoo, Young Woong Ko

Design of Storage Server Using Byte Index Chunking

Ider Lkhagvasuren, Jung Min So, Jeong Gun Lee, Jin Kim, Young Woong Ko

Distribution Center Calculation for Metrology Data Gathered by Wireless Sensor Network

Huang Junhui, Ding Zuchun
Security Issues and Solutions in the U-Health for the Disabled ......................... 331
  Seung-Il Moon, Ho-Young Choi, Yoon-Shin Kim, Ki-Min Song

  Ki-Min Song, Seung-Il Moon, Jae-Hun Shim

Collaborative and Cognitive Skill Development in Serious Mobile Games....... 339
  Seung-Il Moon, Ho-Kyoung Ryu, Ryeo-Jung Lee, Ki-Min Song

The Improvement plans of the Mobile Game Industry based on Mobile Web 2.0 ............................................................ 344
  Seok-Woo Shin, Sang-Hyeon Park, Yang-Woo Park, Seung-Il Moon

An Analytical Study on Spatial Cognition of 'Facilities' in Accordance with Familiarity Level of Tourists: Focused on Namisum ............................... 348
  Young-Seok Choi, Sang-Hyeon Park, Seung-Il Moon

Research on the introduction of Tourist Police System ............................... 353
  Seung-Il Moon, Sean-II Kwon, In-Ho Choi, Ju-Seok Park

A Study on Information Security Contents for Learning Hacking Principles .... 357
  Ji Yeon Hong, Ik Jun Kang, Seong Baeg Kim, Chan Jung Park

  Yungyeong Ko, Seonghee Lee, Seong Baeg Kim

Studying an Information Security Game Linked with SNS ....................... 365
  Woo-Taek Lim, Moon-Bo Yang, Seong Baeg Kim

A Method of Context Inference in Variable Multi-Sensors Signal Environment ...................................................................................... 369
  Donghyok Suh, Juhye Yook

Context Data's Temporary Storage and Recycling for Context Awareness ...... 375
  Donghyok Suh, Younghwan Oh