



ISBN 978-979-18985-3-9

PROCEEDINGS

ISICO



**1st International Information Systems Conference
Surabaya, 3 - 5 December 2011**



PROCEEDING

Information Systems International Conference (ISICO) 2011
Surabaya, Indonesia,
on December 3rd – 5th 2011

Website: www.isiconf.org
E-mail: isiconf@its.ac.id

Editor Team:

Hanim Maria Astuti, S.Kom, M.Sc
Renny Pradina Kusumawardani, S.Kom, M.Sc
Irmasari Hafidz, S.Kom, M.Sc
Renny Sari Dewi
Grandys Frieska Prassida
Widya Putri Kandora
Adel Bubu
Luthfiyatul Ilmiyah
Achmad Pramono
Faishal Mufied Al Anshary

Publisher:

Department of Information System,
Institut Teknologi Sepuluh Nopember (ITS)
Surabaya, Indonesia



ISBN 978-979-18985-3-9

TABLE OF CONTENTS

COMMITTEE	iv
PROCEEDING	v
PREFACE	vi
TABLE OF CONTENTS	vii
Information System	1
Applications of Internet Video Streaming Based Open Source in Publishing Science and Technology Development and Appropriate Technology in Indonesia	3
Secure Cryptographic Protocol for Authentication Service in Internet Banking	9
Social Network Analysis: Its use in Social Network Mapping for Local Economic Development in Central Java	15
Google Gears Technology Implementation on Open Source Oscommerce - Case Study of Online Flower Shop	21
Cost Modeling for the Implementation of Digital Library System in Higher Education with Fuzzy Activity Based Costing	29
Documenting XyFin Application	35
by using Box Structure Specification	35
Computer Science	43
The Effect of Unique Characteristic of VANET Environments for MANET Routing Protocols Performance	45
Implementation of Generating Data Tool for EPCIS and EPCDS	51
BizAF: a Business-Aware Framework for developing RFID Applications based on EPC Network	57
Object Tracking Method using Background Subtraction and Mean Shift Algorithm	63
Real-Time Scheduling for Cooperating Stacking Cranes in an Automated Container Terminal	69
An Efficient Verification of RFID Information using Pedigree Checking System	75
An Effective Approach to Obtain Distributed Information in EPC Network	79
Solving Vehicle Routing Problem with Simultaneously Pickup and Delivery using Genetic Algorithm and Prins Splitting Procedure	85
Teeth Separation and Molar Premolar Classification on Dental Radiograph	91
Business - IT Alignment	95
Government enterprise architecture: lessons learned from the United States' FEAF and Australia's AGA	97
Business Intelligence	103
A Lower Bound of Beacon Dissemination Rate based on the Safe Distance in Vehicular Networks	105
Foreign Exchange Forecasting Using a Genetic Recurrent Neural Network	111
The Influence of Environmental Turbulence as Moderating between Export Market Orientation and Export Performance for Food and Beverage Companies Export	119
Multivariate Time Series Analysis using Vector Autoregressive (Var) Model for Hotel Room Demand Forecasting	125
Course Evaluation Dashboard Prototype, a Case Study in Higher Education Institution	135
Supply Chain Management	141
Model Development of the Reverse Logistics System Based on Product Specification and Customer Behavior in Indonesia	143
Container Movement Sequence Reduction for Container Pre-marshalling Problem	151
Cause Analysis of Container Terminal Operations Using Event Monitoring	157
The Utilization of Information Systems for Supply Chain Management for Small and Medium Enterprises	161
Business Process Management	167
Conceptual Framework of Process Modeling in Enterprise Crowdsourcing	169
Redesign of Unloading Process Using BPM Collaboration Modeling	175
Bayesian Network to Plan Personalized Learning Path	179
The Development of Model for Generator Mining-XML from Event Logs	183
Modelling and Simulation	189
Design and Implementation of CSD (Conveyance Security Device) Emulator	191
Knowledge Management	197
The Role of Knowledge Management Practices as Mediating between Environment Characteristics, Business Partners Relationship and Organizational Characteristics to Innovation Performance for Food and Beverage Industry	199

Communication & Marketing	205
Strategic Marketing as a New Approach In University Libraries Services	207
Any Emerging Technology	213
Passfile: An Alternative Method for Security of Login System	215
Enterprise Resource Planning	221
Adopting an Enterprise Resource Planning System in a Privatized Government Unit: Challenges and Impacts	229
Business & Management	235
Integration of Extended Goal Question Metric Method in the Framework of E-government Performance Measurement	237
Designing Governance Based on COBIT 4.1 and Standard Operating Procedure based on ITIL in Center of Quality Assurance (PJM) ITS	241
Development of Course Governance Based On Student Centered Learning in Higher Education at ITS Surabaya	249

PREFACE

Dear Participants of ISICO 2011

Welcome to Information Systems International Conference (ISICO) 2011. Thank you for coming and your participation in this conference. Information Systems International Conference (ISICO) 2011 is the first International Conference on Information System organized by department of Information System, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia. This conference is supported by Institut Teknologi Sepuluh Nopember (ITS), National Taiwan University of Science and Technology (NTUST), Pusan National University (PNU) and Asosiasi Perguruan Tinggi Informatika dan Komputer (APTIKOM). ISICO 2011 aims to facilitate a meeting between academicians, industries and government to share and discuss any topics related to information systems, as a way to provide solutions towards sustainable economic development. Other aims of this conference are as follows:

1. as a forum to discuss the updated technology trends across nations and curriculum in Information System
2. to establish long-term strategic partnerships and to develop knowledge transfer between academic institution and industry and those who are involved in the ISICO 2011
3. to attract, retain and motivate good scientists interested in entrepreneurial aspects or in new professional career opportunities
4. to identify potential new clients or partners for further research

This conference invites participants from all over the world to join by submitting their work represented in research full papers on the subject related to information systems. Several experts in the field of information systems are also invited to be the ISICO 2011's committee members. Enjoy the conference, thank you for coming and your contribution in this conference and we also would like to thank to all organizers, supported organizations and sponsors of ISICO 2011.

Yours very truly,

Erma Suryani
Conference Chair of ISICO 2011

Social Network Analysis: Its use in Social Network Mapping for Local Economic Development in Central Java

¹⁾Rudy Latuperissa

Information Technology Faculty,
Satya Wacana Christian University Salatiga, Indonesia
rudy_latu@yahoo.co.id ;
rudi.latuperissa@staff.uksw.edu

²⁾Ade Iriani

Information Technology Faculty,
Satya Wacana Christian University Salatiga, Indonesia
²adeiriani@gmail.com

Abstract - One of the concrete policies made by the government to empower the Small and Medium Enterprises (SME's) in Central Java is Local Economic Development program. Network mapping of the actors involved in this program is carried out to understand the relations made by those actors. Besides, central and influential actors are identified along with the media used for the information flows. With the understanding achieved from the analysis, then the study could recommend the strategies for the Local Economic Development program. This study employs Social Network Analysis (SNA) to do the network mapping through the information exploration which is needed by all the stakeholders of program as well as the ones needed by its informants alter. To identify the central actors and information media used, this study analyzes the density, eigenvector of ties, and Freeman's Centrality Metrics of network. In order to get the clear idea of the analyses done, UCINET 6.0 and Netdraw are employed. This study finds that the relations made by the actors are categorized as weak ties. The central and influential actor of this network is Kirno Prasojo. The most dominant media used for information exchange in this network is audio visual.

Keyword; Local Economic Development, SME's, SNA, Density of ties, eigenvector of ties, Freeman's Centrality Metric