

ISPRS 8th 3D GeoInfo Conference & WG II/2 Workshop 2013

ISPRS Annals Volume II-2/W1, 2013

**Istanbul, Turkey
27-29 November 2013**

Editors:

U. Isikdag

ISBN: 978-1-62993-505-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by the International Society for
Photogrammetry and Remote Sensing (ISPRS)
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the International Society for
Photogrammetry and Remote Sensing (ISPRS)
at the address below.

International Society for Photogrammetry and Remote Sensing (ISPRS)
Attn: Chen Jun
National Geomatics Centre of China
28 Lianhuachixi Road Haidian
Beijing 100830 China

Phone: 86 10 63 88 1102

Fax: 86 10 68 42 4101

chenjun@nsdi.gov.cn

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

- TOWARDS AUTOMATIC VALIDATION AND HEALING OF CITYGML MODELS FOR GEOMETRIC AND SEMANTIC CONSISTENCY 13 Sep 2013
N. Alam, D. Wagner, M. Wewetzer, J. von Falkenhausen, V. Coors, and M. Pries
Page(s) 1-6
- CALCULATION AND UPDATE OF A 3D BUILDING MODEL OF BAVARIA USING LIDAR, IMAGE MATCHING AND CATASTRE INFORMATION 13 Sep 2013
K. Aringer and R. Roschlaub
Page(s) 7-12
- DESIGN OF AN INTELLIGENT INDIVIDUAL EVACUATION MODEL FOR HIGH RISE BUILDING FIRES BASED ON NEURAL NETWORK WITHIN THE SCOPE OF 3D GIS 13 Sep 2013
U. Atila, I. R. Karas, M. K. Turan, and A. A. Rahman
Page(s) 13-24
- EXPLORING THE ROLE OF GENETIC ALGORITHMS AND ARTIFICIAL NEURAL NETWORKS FOR INTERPOLATION OF ELEVATION IN GEOINFORMATION MODELS 13 Sep 2013
H. Bagheri, S. Y. Sadjadi, and S. Sadeghian
Page(s) 25-31
- TOWARDS A 3D SPATIAL URBAN ENERGY MODELLING APPROACH 13 Sep 2013
J.-M. Bahu, A. Koch, E. Kremers, and S. M. Murshed
Page(s) 33-41
- COMPLEX URBAN SIMULATIONS AND SUSTAINABLE URBAN PLANNING WITH SPATIAL AND SOCIAL IMPLICATIONS 13 Sep 2013
T. Becker, S. Boschert, L. Hempel, S. Höffken, and B. Obst
Page(s) 43-50
- ENHANCED LOD CONCEPTS FOR VIRTUAL 3D CITY MODELS 13 Sep 2013
J. Benner, A. Geiger, G. Gröger, K.-H. Häfele, and M.-O. Löwner
Page(s) 51-61
- REVISITING THE CONCEPT OF LEVEL OF DETAIL IN 3D CITY MODELLING 13 Sep 2013
F. Biljecki, J. Zhao, J. Stoter, and H. Ledoux
Page(s) 63-74

- TRANSFERRING MULTI-SCALE APPROACHES FROM 3D CITY MODELING TO IFC-BASED TUNNEL MODELING 13 Sep 2013
A. Borrmann, T. H. Kolbe, A. Donaubauer, H. Steuer, and J. R. Jubierre
Page(s) 75-85
- DESIGN, IMPLEMENTATION AND APPLICATIONS OF 3D WEB-SERVICES IN DB4GEO 13 Sep 2013
M. Breunig, P. V. Kuper, A. Dittrich, P. Wild, E. Butwilowski, and M. Al-Doori
Page(s) 87-94
- INTEGRATED SURVEYNG WITH MOBILE MAPPING SYSTEM, EGNOS, NTRK AND LASER TECHNOLOGIES IN THE PARK "NINNI CASSARA" IN PALERMO 13 Sep 2013
G. Dardanelli and M. Carella
Page(s) 95-100
- TOWARDS A REAL ESTATE REGISTRY 3D MODEL IN PORTUGAL: SOME ILLUSTRATIVE CASE STUDIES 13 Sep 2013
J.-P. de Almeida, C. Ellul, and M. M. Rodrigues-de-Carvalho
Page(s) 101-110
- THE TEMPORAL DIMENSION IN A 4D ARCHAEOLOGICAL DATA MODEL: APPLICABILITY OF THE GEOINFORMATION STANDARD 13 Sep 2013
B. De Roo, N. Van de Weghe, J. Bourgeois, and Ph. De Maeyer
Page(s) 111-121
- URBANISATION AND 3D SPATIAL MODELLING- A GEOMETRIC APPROACH 13 Sep 2013
E. E. Duncan and A. Abdul Rahman
Page(s) 123-128
- LOD 1 VS. LOD 2 – PRELIMINARY INVESTIGATIONS INTO DIFFERENCES IN MOBILE RENDERING PERFORMANCE 13 Sep 2013
C. Ellul and J. Altenbuchner
Page(s) 129-138
- 3D VISUALISATION OF UNDERGROUND PIPELINES: BEST STRATEGY 13 Sep

- 3D VISUALISATION OF UNDERGROUND PIPELINES: BEST STRATEGY FOR 3D SCENE CREATION
 J. Guerrero, S. Zlatanova, and M. Meijers
 Page(s) 139-145
- A WEB SERVICE APPROACH FOR LINKING SENSORS AND CELLULAR SPACES 13 Sep 2013
 U. Isikdag
 Page(s) 147-152
- RAPID INDOOR DATA ACQUISITION FOR LADM-BASED 3D CADASTRE MODEL 13 Sep 2013
 A. Jamali, P. Boguslawski, E. E. Duncan, C. M. Gold, and A. Abdul Rahman
 Page(s) 153-156
- A NEW FEATURE DESCRIPTOR FOR LIDAR IMAGE MATCHING 13 Sep 2013
 M. Jayendra-Lakshman and V. Devarajan
 Page(s) 157-162
- CITY-WIDE TOTAL ENERGY DEMAND ESTIMATION OF BUILDINGS USING SEMANTIC 3D CITY MODELS AND STATISTICAL DATA 13 Sep 2013
 R. Kaden and T. H. Kolbe
 Page(s) 163-171
- SUBSPACING BASED ON CONNECTED OPENING SPACES AND FOR DIFFERENT LOCOMOTION TYPES USING GEOMETRIC AND GRAPH BASED REPRESENTATION IN MULTILAYERED SPACE-EVENT MODEL (MLSEM) 13 Sep 2013
 A. A. Khan and T. H. Kolbe
 Page(s) 173-185
- PROTOTYPING A SENSOR ENABLED 3D CITYMODEL ON GEOSPATIAL MANAGED OBJECTS 13 Sep 2013
 E. Kjemis and J. Kolář
 Page(s) 187-192
- SCALABLE MULTI-PLATFORM DISTRIBUTION OF SPATIAL 3D CONTENTS 13 Sep 2013
 J. Klimke, B. Hagedorn, and J. Döllner
 Page(s) 193-200

- A HISTORICAL TIMBER FRAME MODEL FOR DIAGNOSIS AND DOCUMENTATION BEFORE BUILDING RESTORATION 13 Sep 2013
M. Koehl, A. Viale, and S. Reeb
Page(s) 201-212
- THE NATIONAL 3-D GEOSPATIAL INFORMATION WEB-BASED SERVICE OF KOREA 13 Sep 2013
D. T. Lee, C. W. Kim, and I. G. Kang
Page(s) 213-219
- 3D DATA ACQUISITION FOR INDOOR ASSETS USING TERRESTRIAL LASER SCANNING 13 Sep 2013
S. Y. Lee, Z. Majid, and H. Setan
Page(s) 221-226
- 3D VISIBILITY ANALYSIS IN URBAN ENVIRONMENT – COGNITION RESEARCH BASED ON VGE 13 Sep 2013
T. P. Lin, H. Lin, and M. Y. Hu
Page(s) 227-236
- A TOPOLOGICAL FRAMEWORK FOR THE TEMPORAL ASPECTS OF LANDFORM DEVELOPMENT 13 Sep 2013
M.-O. Löwner and T. Becker
Page(s) 237-246
- A REPOSITORY OF INFORMATION VISUALIZATION TECHNIQUES TO SUPPORT THE DESIGN OF 3D VIRTUAL CITY MODELS 13 Sep 2013
C. Métral, N. Ghoula, V. Silva, and G. Falquet
Page(s) 247-254
- SEMANTIC BIM AND GIS MODELLING FOR ENERGY-EFFICIENT BUILDINGS INTEGRATED IN A HEALTHCARE DISTRICT 13 Sep 2013
R. Sebastian, H. M. Böhms, P. Bonsma, and P. W. van den Helm
Page(s) 255-260
- IMPROVING SEMANTIC UPDATING METHOD ON 3D CITY MODELS USING HYBRID SEMANTIC-GEOMETRIC 3D SEGMENTATION TECHNIQUE 13 Sep 2013

K.-H. Sharkawi and A. Abdul-Rahman
Page(s) 261-268

APPROACHES OF NATIONAL 3D MAPPING: RESEARCH RESULTS AND STANDARDISATION IN PRACTICE 13 Sep 2013
J. E. Stoter, A. Streilein, M. Pla, B. Baella, D. Capstick, R. Home, C. Roensdorf, and J. P. Lagrange
Page(s) 269-278

EXPERIMENT FOR INTEGRATING DUTCH 3D SPATIAL PLANNING AND BIM FOR CHECKING BUILDING PERMITS 13 Sep 2013
L. van Berlo, T. Dijkmans, and J. Stoter
Page(s) 279-284

SEMANTIC 3D CITY MODEL TO RASTER GENERALISATION FOR WATER RUN-OFF MODELLING 13 Sep 2013
E. Verbree, M. de Vries, B. Gorte, S. Oude Elberink, and G. Karimlou
Page(s) 285-290

AN APPROACH TO DEVELOP 3D GEO-DBMS TOPOLOGICAL OPERATORS BY RE-USING EXISTING 2D OPERATORS 13 Sep 2013
D. Xu and S. Zlatanova
Page(s) 291-298

Towards Precise Metadata-set for Discovering 3D Geospatial Models in Geo-portals 13 Sep 2013
A. Zamyadi, J. Pouliot, and Y. Bédard
Page(s) 299-308

AUTOMATIC REPAIR OF CITYGML LOD2 BUILDINGS USING SHRINK-WRAPPING 13 Sep 2013
Z. Zhao, H. Ledoux, and J. Stoter
Page(s) 309-317

ISPRS WGII/2 Workshop

IMPROVING 3D SPATIAL QUERIES SEARCH: NEWFANGLED TECHNIQUE OF SPACE FILLING CURVES IN 3D CITY MODELING 13 Sep 2013
U. Uzmir, F. Anton, A. Suhaibah, A. A. Rahman, and D. Mioc
Page(s) 319-327