



The 3rd ISDE Digital Earth Summit

June, 12-14, 2010

Nessebar, Bulgaria



DIGITAL EARTH IN THE SERVICE OF SOCIETY: SHARING INFORMATION, BUILDING KNOWLEDGE

Organizers:

INTERNATIONAL SOCIETY FOR DIGITAL EARTH

UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND
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FINAL PROGRAMME

The 3rd ISDE Digital Earth Summit

June 12-14, 2010
Nessebar, Bulgaria

UNDER THE AUSPICES OF THE DEAN OF FACULTY OF GEODESY,
UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY
ASSOC. PROF. DR. SLAVEJKO GOSPODINOV

*ALL PAPERS HAVE BEEN REVIEWED BY THE INTERNATIONAL ORGANIZING
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Friday, June 11, 2010

Arriving in Bourgas and transport transfer
Bourgas-Nessebar

Arsena Hotel, Nessebar
1:00 p.m. – 7:00 p.m. Registration

2:00 p.m. – 6:00 p.m.

Meeting of ISDE Executive Committee

Saturday, June 12, 2010

Arsena Hotel, Nessebar
09:00 a.m. Registration

Conference hall

9:30 a.m. OPENING CEREMONY

Greetings:

- Assoc. Prof. Dr. Slavejko Gospodinov, Dean of Faculty of Geodesy, University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria
- Prof. Huadong Guo, ISDE Secretary- General
- Prof. Dr. Milan Konecny, ISDE Vice President
- Alessandro Annoni, Head of SDI Unit, JRC Ispra, Italy
- Greetings by sponsors
- Greetings by Members of National and Region Government

10:30 a.m. Keynote speeches 1, 2

Chair: Milan Konecny, *Czech Republic*

1	Huadong Guo	Decadal Development and Future of Digital Earth	China
2	Paul Hardy	Digital Earth: Collecting, Connecting, Analyzing, and ... Action	ESRI



11:30 a.m. – 12:00 p.m. Coffee Break

12:00 p.m. – 1:40 p.m. Plenary Session 1

The societal context of Digital Earth: Benefits, Costs, Policies, and Regulations

Chairs: **John L. van Genderen**, *the Netherlands* and **Slavejko Gospodinov**, *Bulgaria*

3	Bertrand De Longueville , Alessandro Annoni, Sven Schade, Nicole Ostlaender	Digital Earth's nervous system and Volunteered Geographic Information sensing: towards a self-aware planet	<i>Italy</i>
4	Garik Gutman	Global Land Surveys from Space Observations: Past, Present and Future	<i>USA</i>
5	Gabor Remetey , Károly Brezsnýánsky, László Szarka, János Haas, József Ádam	Promoting the International Year of Planet Earth in Hungary – Lessons Learned Applicable in the Digital Earth Context	<i>Hungary</i>
6	Richard Simpson	Visual City – Establishing a Language of Progression for Digital Earth in an Urban Context	<i>New Zealand</i>
7	David Wortley	Social Networking and Immersive Environments for Community Engagement	<i>UK</i>



1:40 p.m. – 3:00 p.m. Lunch time

3:00 p.m. – 4:00 p.m.

Meeting of ISDE Executive Committee

4:00 p.m.-4:30 p.m. Keynote speech 3

Chair: Temenoujka Bandrova, *Bulgaria*

8	Claudio Mingrino	Realizing the Digital Earth Vision – Intergraph Experience	INTERGRAPH
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4:30 p.m. – 5:00 p.m. Coffee Break

5:00 p.m. – 7:00 p.m. Plenary Session 2

Digital Earth at Local, Regional, and Global Levels: from Strategy to Realization

Chairs: **Gabor Remetey** *Hungary* and **Richard Simpson**, *New Zealand*

9	Peter-Scott Olech, Sebastian Petsch, Achim Ebert, Hans Hagen	Digital Knowledge - Chances and Risks	<i>Germany</i>
10	Morishige Ota	Basic Schema on the Geographic Information Developed for Higher Education	<i>Japan</i>
11	Feng Zhang, Sihai Li, Suixiang Shi	Research of Data Architecture in Digital Ocean	<i>China</i>
12	Yawen He	Web-Based Visualization of Marine Environment Data	<i>China</i>
13	Biao Tong	Object Oriented Road Dection from Google Earth Imagery	<i>China</i>
14	Andreas Bolten, Guido Waldhoff	Error Estimation of ASTER GDEM for Regional Applications - Comparison to ASTER DEM and ALS Elevation Models	<i>Germany</i>

Sunday, JUNE 13, 2010

9:00 a.m. - 9:30 a.m. Keynote speech 4

Chair: **Huadong Guo**, *China*

15	Nathalie Stephenne	Supporting Authorities by Digital Earth Services for Preventing Risks, Assessing Damages and Monitoring Critical Assets	Eurosense
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9:30 a.m. – 11:10 a.m. Plenary Session 3

Digital Earth in Sustainable Development at Local and
Regional Levels (continued in PS 4)

Chairs: **Manfred Ehlers**, *Germany* and **Bohuslav Veverka**, *Czech
Republic*

16	Alessandro Oggioni , Paola Carrara, Claudia Giardino, Dario Manca, Monica Pepe	Sustainable Water Management: An Operative Test for Monitoring Lakes Through Integrated Earth Sensing	<i>Italy</i>
17	Rainer Laudien , Sebastian Brocks, Alexander Christmann, Dr. Andreas Krüger	Interactive Spatial Decision Support for Water Management and Planning Purposes	<i>Germany</i>
18	Karel Sukup , Jan Sukup	Options for Using IP-S2 TOPCON for Mobile Mapping Needs	<i>GEODIS, Czech Republic</i>

19	Radim Stampach, Edvard Geryk, Petr Kubicek	Cartographic Aspects of Health Databases Visualization in Global Context	<i>Czech Republic</i>
20	Helge Aasen, Nick Hedley, Ilja Tromp-van Meerveld	Connecting Expert Field Research With Conceptual Learning: A User-driven 3D Geovisualization Interface to Explore Temporal and Spatial Properties of Transient Groundwater Responses	<i>Germany</i>



11:10 a.m. – 11:40 a.m. **Coffee Break**

11:40 a.m. - 12:10 p.m. **Keynote speech 5**

Chair: **David Wortley**, *United Kingdom*

21	Alessandro Annoni	A European Perspective on Digital Earth	JRC, Ispra Italy
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12:10 p.m. – 2:00 p.m. **Lunch time**

2:00 p.m. – 3:30 p.m. ROUND TABLE
Theme: DIGITAL EARTH IN EUROPE

Moderators: **Alessandro Annoni**, *Italy* **Milan Konecny**, *Czech Republic*, **Manfred Ehlers**, *Germany*

Participants: **Open to all interested participants but ISDE secretariat and EC members should attend**



3:30 p.m. – 4:00 p.m. Coffee Break

4:00 p.m. – 5:00 p.m.

Meeting of ISDE Executive Committee

5:00 p.m. – 6:40 p.m. Plenary Session 4

Digital Earth in Sustainable Development at Local and Regional Levels

Chairs: **Wei Ji**, *USA* and **Andreas Bolten**, *Germany*

22	Daniel Kristof , Eva Klien, Christine Giger, Thorsten Reitz, Santiago Caceres	The HUMBOLDT Project: Developing an Open Source Framework and Tools for Geodata Harmonization	<i>Hungary</i>
23	Wei Ji	Digital Earth: Quantifying Urban Landscape Changes for Impact Analysis	<i>USA</i>
24	Cristian G. Terreno	Reflexions in the Construction of an Urban Environmental Model: Environmental Problems, Your Interpretations by Local Actors and the Impacts Visualization	<i>Argentina</i>
25	Joachim Rix , Swetlana Fast	eSDI-Net+: Exchange of Experiences and Best Practices - A European Initiative -	<i>Germany</i>
26	Martin L. Gnyp , Y.Yao, Y. Miao, K. Yu, E. Dornauf, C. Hütt, L. Jia, V. Lenz-Wiedemann, R. Laudien, R. Jiang, X. Chen, G. Bareth	Evaluating Within-field Rice Growth Variability Using Quickbird and IKONOS Image in North East China	<i>Germany / China</i>



8:00 p.m. Gala Dinner

Monday, June 14, 2010

9:00 a.m. – 9:30 a.m. Keynote speech 6

Chair: Alessandro Annoni, *Italy*

27	Deren Li	From Digital Earth to Smart Earth	China
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9:30 a.m. – 10:50 a.m. Plenary Session 5

Digital Cities: Technology and Applications (continued in PS6)

Chairs: Morishige Ota, *Japan* and Bertrand De Longueville, *Italy*

29	Zhimin Ma, Ding Ma	The Technical Framework of Digital Tang Chang'An City	<i>China</i>
30	Emil Simeonov	Tourist Mountain Maps: from Art-realistic Model to 3D Map	<i>Bulgaria</i>
31	Zdenek Stachon, Cenek Sasinka, Jiri Zboril, Sarka Brezinova	Utilization of Spatial Data in Emergency Response: System Optimization Based on Analysis of Working Practices	<i>Czech Republic</i>
32	Mohamed El-Mekawy, Anders Östman	Semantic Mapping: an Ontology Engineering Method for Integrating Building Models in IFC and CITYGML	<i>Sweden</i>



10:50 a.m. – 11:20 a.m. Coffee Break

11:20 a.m. – 1:00 p.m. Plenary Session 6
Digital Cities: Technology and Applications

Chairs: **Changlin Wang**, *China* and **Karel Stanek**, *Czech Republic*

33	Xu-hui Huang	Intelligent Health Monitoring System for Bridges Based on GIS	<i>China</i>
34	Zhen Li , Jianmin Zhou, Bangsen Tian, Jiuliang Liu	A Method of Glacier Identification with Interferometric and Polarimetric SAR	<i>China</i>
35	Lucie Friedmannova , Karel Stanek	Cartographically Augmented Reality	<i>Czech Republic</i>
36	Christian Willmes , U. Baaser, G. Bareth	Internet Based Distribution and Visualization of a 3D Model of the University of Cologne Campus	<i>Germany</i>
37	Jiri Kozel, Radim Stampach , Jiri Zboril	Adaptive Map Visualization: From Context Selection to Web Service Configuration	<i>Czech Republic</i>



1:00 p.m. – 3:00 p.m. Lunch time

3:00 p.m. – 4:20 p.m. Plenary Session 7
Access to Digital Earth: Privacy, Security, and Trust

Chairs: **Zhen Li**, *China* and **Radim Stampach**, *Czech Republic*

38	Miroslav Tsvetkov , Chavdar Alexandrov, Kostadin Kostadinov	Determination of the Best Virtual Reference Station Position Using Geographic Information System	<i>Bulgaria</i>
39	Guoqing Li , Wenyang Yu, Jibo Xie and Chenhui Li	Security Accessing Model Analyzing for Web Service Based Geo-spatial Data Sharing Application	<i>China</i>
40	Ned Gardiner , Carrie McDougall, John McLaughlin, Frank Niepold	Geovisualization and Climate Services: Contextualizing Earth Systems Dialog	<i>USA</i>
41	Dirk Hoffmeister , M. Gelhar, C. Willmes, R. Steffens, B. Louwen, T. Schumacher, W. Buschmann and G. Bareth	European Mining Database North Rhine – Westphalia (EMD-NRW): A Mashup for Intuitive Usage of Archive Data	<i>Germany</i>



4:20 p.m. – 4:50 p.m. Coffee Break

4:50 p.m. – 6:10 p.m. Plenary Session 8
The Citizen as Contributor to Digital Earth

Chairs: **Jean Sequeira**, *France* and **Dirk Hoffmeister**, *Germany*

42	Temenoujka Bandrova , Stefan Bonchev	3D maps for Internet Application	<i>Bulgaria</i>
43	Curdt, C. , Hoffmeister, D., Waldhoff, G., Willmes, C., Bolten, A., Jekel, C., Bießmann, O., Dornauf, E., Hütt, C., Bubenzer, G. Bareth	Data Management of Interdisciplinary Research Projects: Case Studies CRC/TR32 "Soil-Vegetation-Atmosphere Patterns" and CRC806 "Our Way to Europe"	<i>Germany</i>
44	Kai Behncke , Manfred Ehlers, Bryan Hempen	Bicycle Routing Based on Open Source Software and Free Geodata	<i>Germany</i>
45	Amir Saeed Homainejad	A Novel Approach for Constructing 3D Visualised Model According to Registration of Mono Aerial Photographs on Laser Scanning Data	<i>Iran</i>

6:20 p.m. Closing ceremony

Table Schedule

Time	Thu 10.06.	Fri 11.06.	Sat 12.06.	Sun 13.06.	Mon 14.06.	
9:00	Transportation: Bourgas – Nessebar		Registration	KS4	KS6	
9:30			OPENING CEREMONY	PS3	PS5	
10:30			KS1			☺
10:50			KS2	☺		
11:00					☺	
11:10			☺			
11:20				KS5		
11:30			☺			
11:50				PS1	Lunch time	PS6
12:00			PS1			
12:10				PS1	☺	
13:00			Registration			Lunch time
13:40		Meeting of ISDE Executive Committee	Lunch time	☺	ROUND TABLE DIGITAL EARTH IN EUROPE	☺
14:00			☺			
15:00			Meeting of ISDE Executive Committee	Meeting of ISDE Executive Committee	☺	PS7
15:30						
16:00			Registration	☺		
16:20					☺	
16:30			PS2	PS4		PS8
16:50					PS2	
17:00	PS2		PS4			
18:00				Registration	PS2	PS4
18:20	Registration	PS2	PS4	Closing Ceremony		
20:00					Gala Dinner	PS2

KS - Keynote speech PS - Plenary Session

EXHIBITIONS:

1. Technical Exhibition
2. Cartographic Exhibition

Conference place

Nessebar is one of the most ancient towns in Europe, arising at the end of the Bronze Age (more than 3200 years ago). The ancient town is situated on a small peninsula, linked with the mainland with a narrow isthmus.



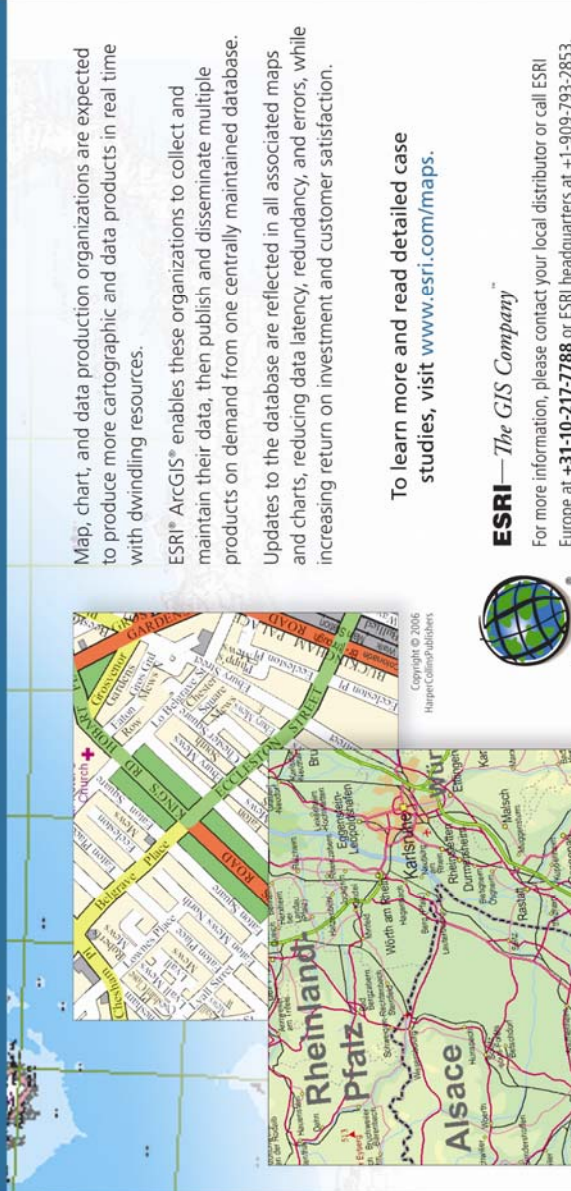
Ancient Thracian people called it Mesambria. At the end of 6th century BC the town was conquered by Greek colonizers of Dorian origins. In the beginning of 1st century it was included permanently in the limits of Roman Empire.

In 812 the Bulgarian khan Krum conquered it after fortnight siege and Slaves and Bulgarians settled here.

From the epoch of the Bulgarian Renaissance in Nessebar remained many typical houses, windmills, a public bath and fountains for drinking water.

Because of its unique natural situation and well preserved monuments from different ages **the old town of Nessebar was included in UNESCO's list of World Heritage.**

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Multiple cartographic representations from one GIS database

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Experts In Geo Information Services



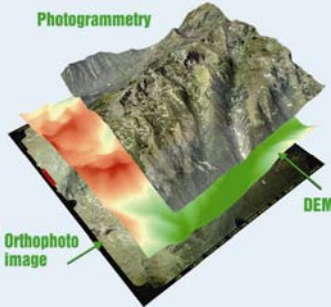
Aerial Photography

LPIS Project



Remote Sensing Applications

Photogrammetry



Orthophoto image

DEM



**Digital Camera
© Vexcel
Ultracam X**

3D City Database for Urban Planning



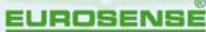
Historical and Cultural mapping



Microsoft Virutal Earth Project



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