

Table of Contents

<i>Preface</i>	V
 INTRODUCTION	
Frank Leymann <i>Cloud Computing: The Next Revolution in IT</i>	3
Juergen Dold, Doug Flint, Mladen Stojic <i>From Earth to Image Distribution, Leica Geosystems and ERDAS Advances in Geospatial Solutions</i>	13
Jack Ickes <i>Intergraph – A Company Profile</i>	21
Alexander Wiechert, Michael Gruber <i>Vexcel Imaging GmbH – Innovating in Photogrammetry: UltraCamXp, UltraCamLp and UltraMap</i>	27
Johannes Saile <i>News from Trimble GeoSpatial</i>	35
Hubert Minten <i>The Modular System Concept of IGI</i>	41
 IMAGE-BASED DATA COLLECTION	
Michael Cramer <i>Digital Airborne Camera Performance – The DGPF Test</i>	51
Dirk H. Doering, Joern Hildebrandt, Norbert Diete <i>Advantages of Customized Optical Design for Aerial Survey Cameras</i>	69
Robert E. Ryan, Mary Pagnutti <i>Enhanced Absolute and Relative Radiometric Calibration for Digital Aerial Cameras</i>	81
Christoph Dörstel <i>RMK D – A True Metric Medium-Format Digital Aerial Camera System</i>	91
Michael Pechatnikov, Erez Shor, Yuri Raizman <i>The New Vision Map A3 Airborne Camera System</i>	99
Jens Kremer <i>Optimized Data Acquisition with the IGI DigiTHERM Thermal Camera System</i>	111

Nils Karbø, Ralf Schroth

<i>Oblique Aerial Photography: A Status Review</i>	119
--	-----

Andreas Eckardt, Anko Börner, Frank Lehmann

<i>The Bright Future of High Resolution Satellite Remote Sensing – Will Aerial Photogrammetry Become Obsolete?</i>	127
--	-----

LIDAR: AIRBORNE, TERRESTRIAL AND MOBILE APPLICATIONS**George Vosselman**

<i>Advanced Point Cloud Processing</i>	137
--	-----

Charles Toth

<i>The State-of-the Art in Airborne Data Collection Systems – Focused on LiDAR and Optical Imagery</i>	147
--	-----

Ronald Roth

<i>Point Clouds and Pixels – New Technology Solutions for Imaging and Scanning Sensors</i>	163
--	-----

Jan Böhm

<i>Terrestrial LiDAR in Urban Data Acquisition</i>	169
--	-----

Graham Hunter

<i>Mobile Mapping – The StreetMapper Approach</i>	179
---	-----

Nedal Al-Hanbalia, Joe Hutton, Mohamed MR Mostafa

<i>Mobile Mapping for Earthwork Monitoring: A Case Study on the Convergence of Photogrammetry with Advanced Positioning Techniques for Maximum Productivity and Accuracy</i>	191
--	-----

Naser El-Sheimy

<i>Emerging MEMS IMU and Its Impact on Mapping Applications</i>	203
---	-----

Jim Peterson, Ken Spratlin

<i>Integrating Various Terrestrial and Aerial Sensor Data for Transportation Projects</i>	217
---	-----

Bryan Mercer

<i>Countrywide Coverage of RADAR DTMs – The Intermap Approach</i>	229
---	-----

VALUE-ADDED PHOTOGRAMMETRY**Wolfgang Förstner**

<i>Computer Vision and Remote Sensing – Lessons Learned</i>	241
---	-----

Franz Leberl, Stefan Kluckner, Horst Bischof

<i>Collection, Processing and Augmentation of VR Cities</i>	251
---	-----

Thomas H. Kolbe, Claus Nagel, Alexandra Stadler*CityGML – OGC Standard for Photogrammetry?* 265**Brad Skelton, Mladen Stojic, Jason Sims***Sensor to Internet: A Complete Workflow from Pixels to the Web with On-Demand Geoprocessing*..... 279**Norbert Haala***Comeback of Digital Image Matching*..... 289**Eberhard Gülich***Advanced Matching Techniques for High Precision Surface and Terrain Models* 303**Ben Kacyra***CyArk 500 – 3D Documentation of 500 Important Cultural Heritage Sites* 315**Christian Heipke, Kevin Mooney***EuroSDR – a Research Organisation Serving Europe's Geospatial Information Needs*..... 321**Martin Kada***The 3D Berlin Project*..... 331**Jürgen Döllner***Towards the Automated Construction of Digital Cities*..... 341

List of Authors 349

Appendix: Synopsis of the Photogrammetric Weeks 353