



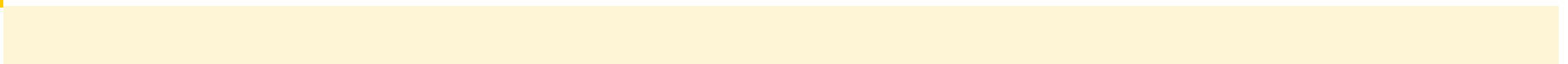
Federal Agency for
Cartography and Geodesy



Report of EPN Analysis

Heinz Habrich

Federal Agency for Cartography and Geodesy





- WUT and MUT LAC Changes
- NEQ-SINEX in EPN Analysis
- New website BKG GNSS Data Center
- EPN LAC Workshop 2010



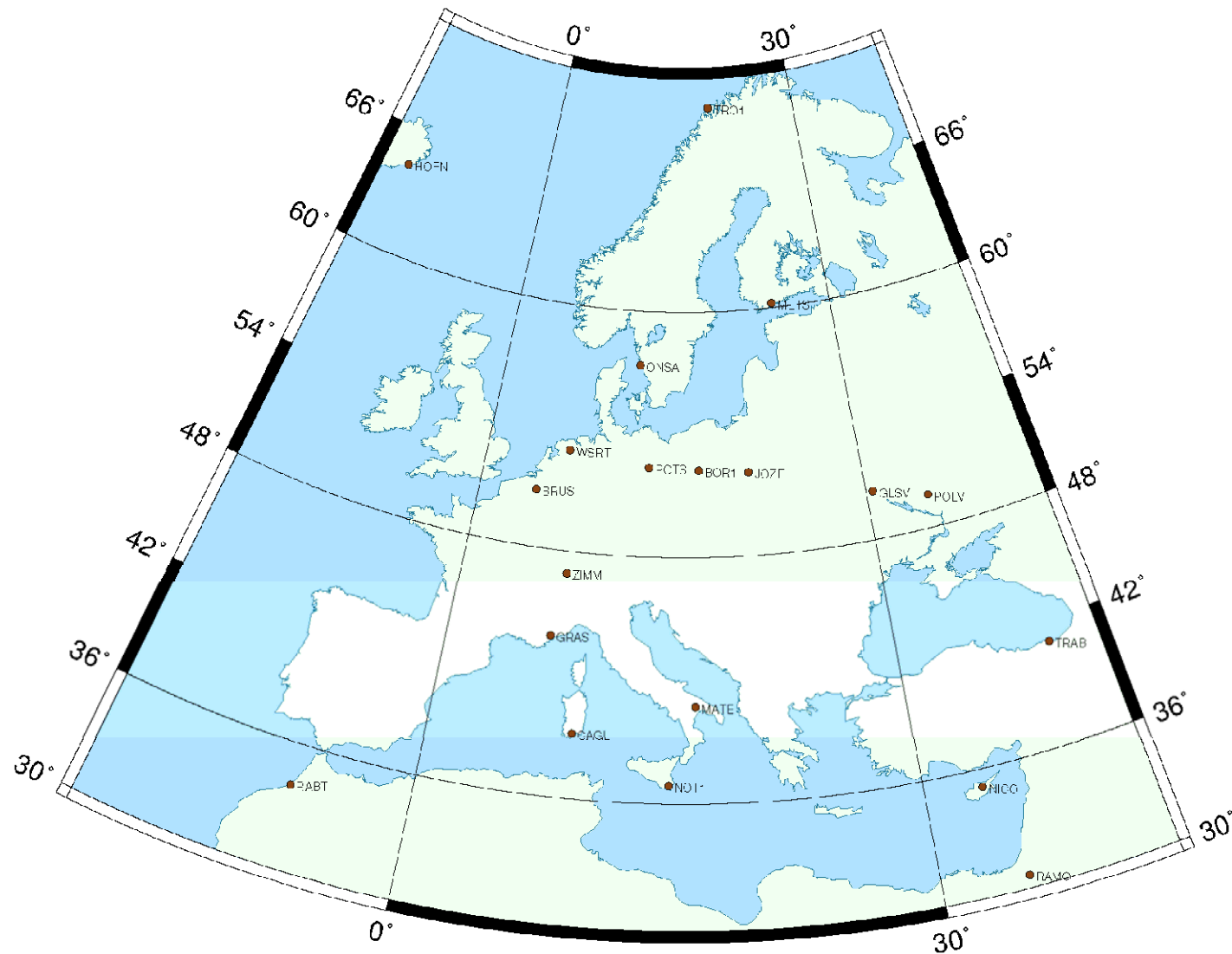
WUT and MUT LAC Changes - Background -

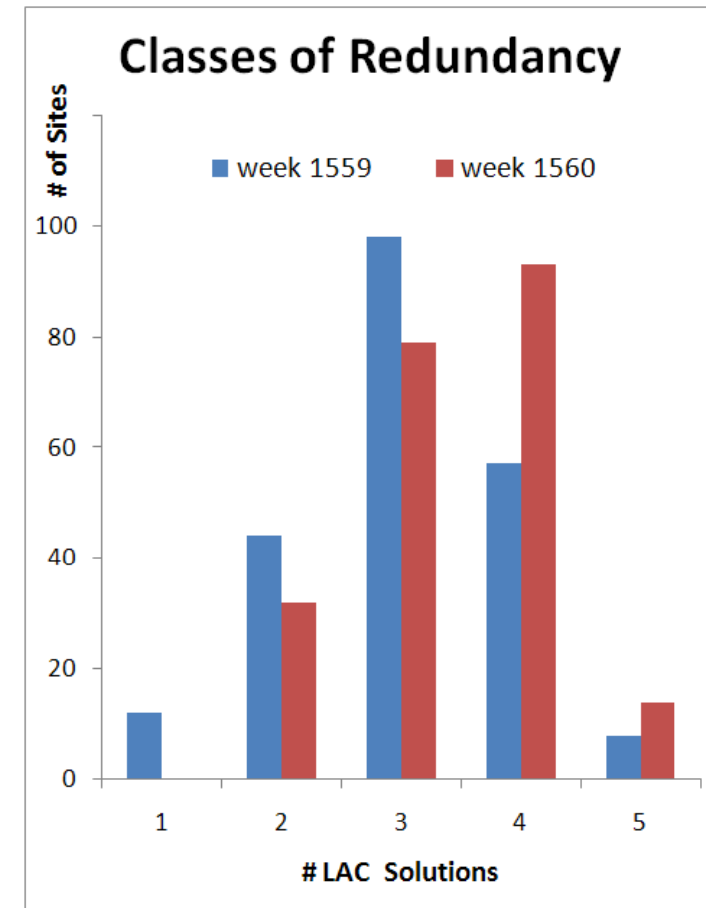
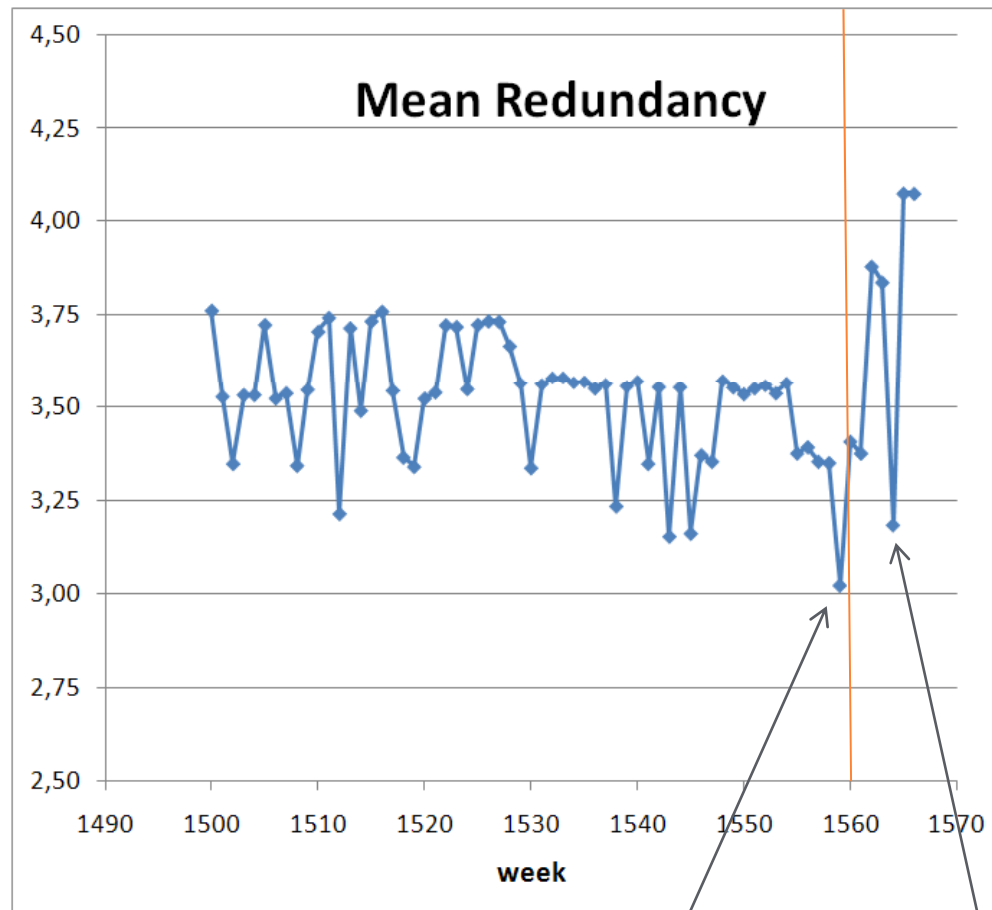
- Responsibility of Warsaw University of Technology (WUT) LAC changed
 - from Mariusz Figurski, now at Military University of Technology, Warsaw (MUT),
 - to Tomasz Liwosz (WUT)
 - since week 1560 (December 2009)
- Request from MUT to continue EPN activity as new LAC
- Separate MUT sub-network accepted by TWG-Chair and EPN AC responding to specific redundancy needs
- Criterion: increase of redundancy from 3 to 4 LACs for all sites





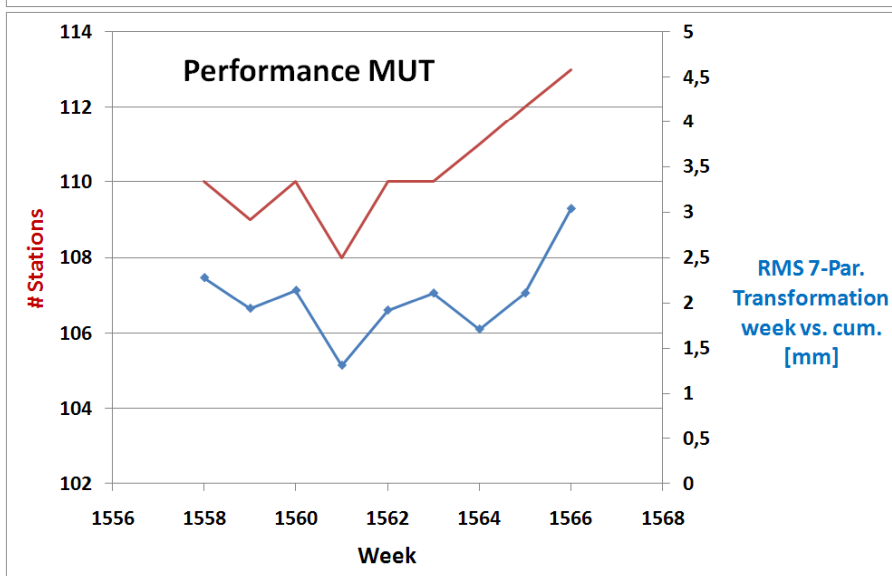
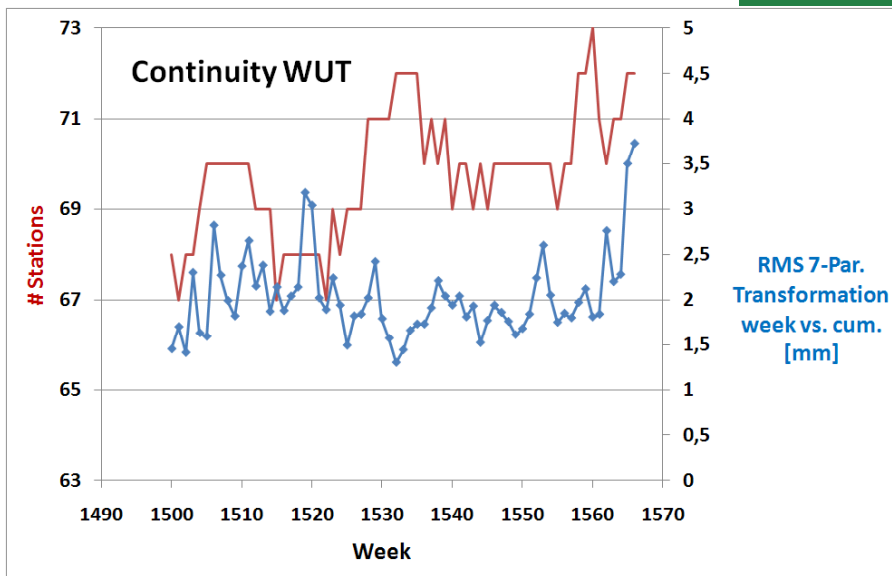
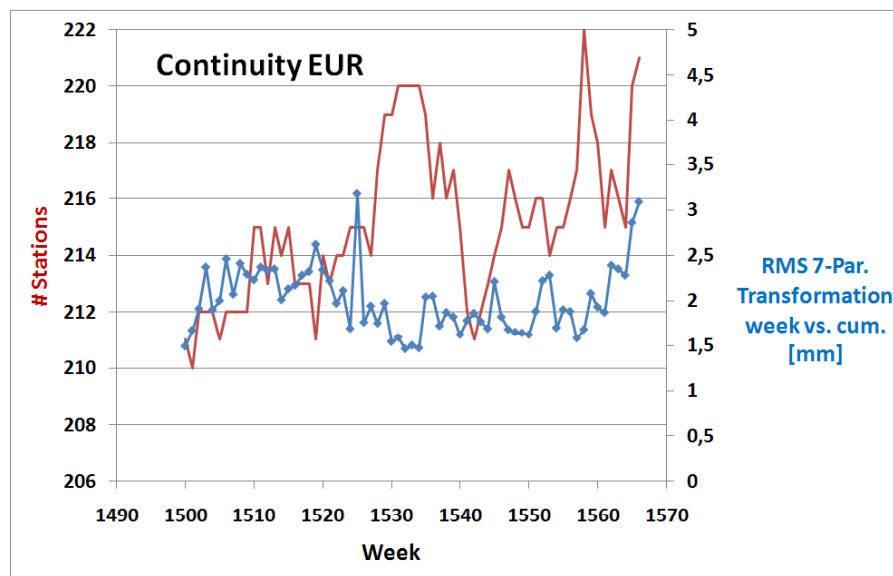
20 MUT Reference Stations







Continuity and Performance around Week 1600

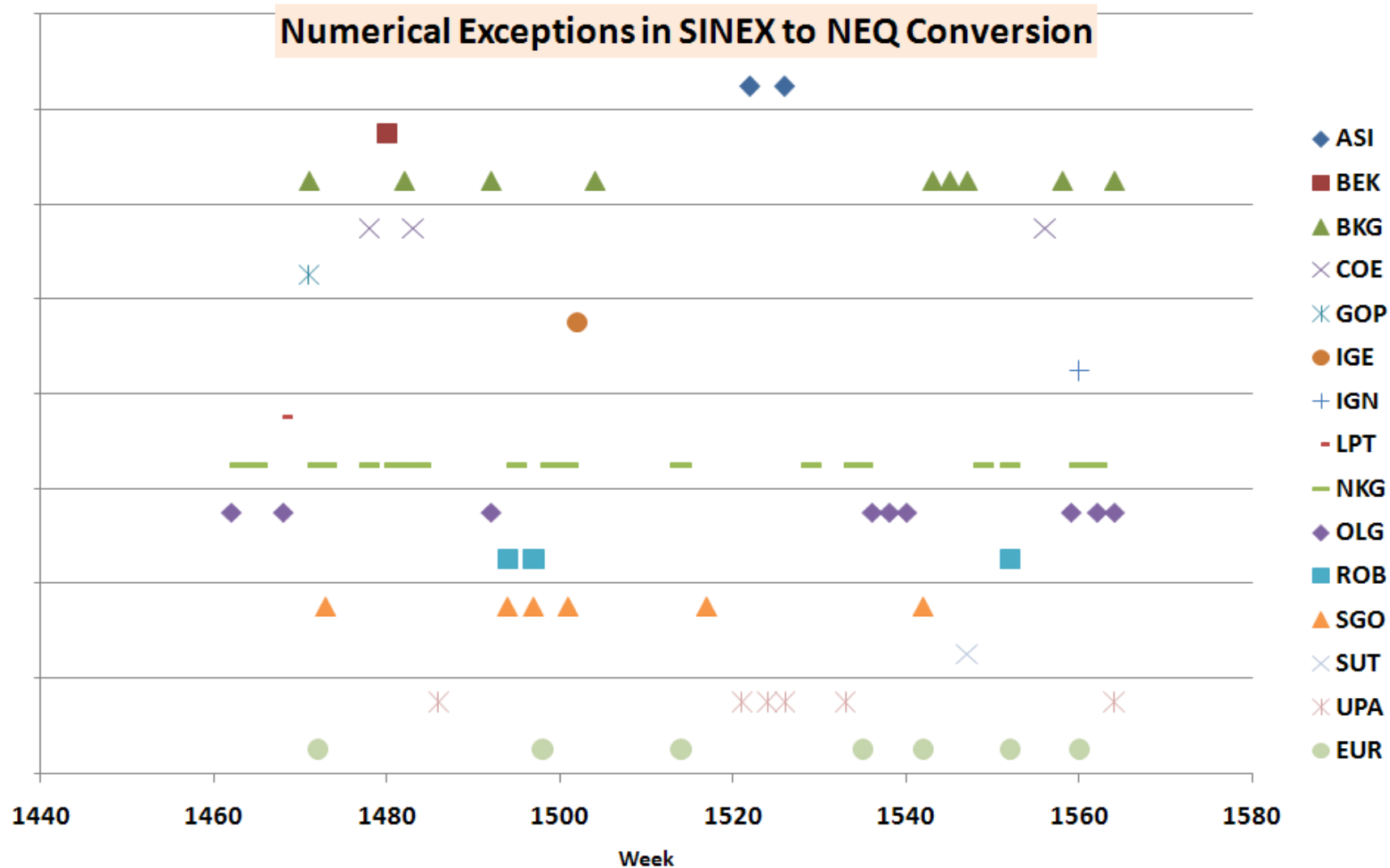




- Numerical instability in back-conversion for covariance matrix / solution vector (SINEX format) into NEQ
- If negative “vtPv”-term appears, a-posteriori rms set to default (e.g. 1 mm) by Bernese GNSS Software
- Instability from a single LAC may induce 1 mm a-posteriori rms of EPN combination

Here:

- Inspection of a-posteriori rms as indication of numerical instability
- Study of using NEQ in SINEX format (recommended by AIUB)



nearly all LACs affected – occurrence mostly random, but significant frequently for BKG and NKG



NEQ-SINEX vs. COV-SINEX Comparison

Week	LAC		COV			NEQ	
		A-post. rms Comb.	A-post. rms LAC	vtPv LAC	A-post. rms Comb.	A-post. rms LAC	vtPv LAC
1560	NKG	1 mm	1 mm	<0	OK	OK	>0
1558	BKG	OK	1 mm	<0	OK	OK	>0
1563	BKG	OK	OK	>0	OK	OK	>0
1564	BKG	1 mm	1 mm	<0	OK	OK	>0



- NEQ-SINEX may solve the problem of a-posteriori RMS set to 1 mm
- results have been validated through various solutions
- selection of COV option for NEQ-SINEX file leads to wrong results, change from COVA to NEQ need to be announced
- filename should not change when using NEQ instead of COVA
- ask LACs for comments
- NEQ-SINEX already included in updated "guidelines for EPN analysis"
- Proposal: use NEQ-SINEX in EPN immediately



- HTML now based on “Zend Framework”

- extending art & spirit of PHP
- tested codebase
- modern web 2.0 applications

- Demonstration

- GDC home (tool bar, login area, project filter, news area)
- Data availability (hourly RINEX summary and download)
- Browser (browse directory, show and download file)

- Start player for demo

- Online <http://igs.bkg.bund.de/index>





	Oktober 2010		November 2010	
	Do 21	Fr 22	Do 18	Fr 19
Heinz Habrich	OK	OK	OK	OK
Wolfgang Soehne	OK	OK	OK	OK
Mariusz Figurski	OK	OK	OK	OK
Christof Völksen	OK	OK	OK	OK
Carine Bruyninx	OK	OK	OK	OK
Ambrus Kenyeres	OK	OK		
Jan Hefty	OK	OK	OK	OK
Alessandro Caporali	OK	OK	OK	OK
Rolf Dach			OK	OK
Marcelino Valdes	OK	OK	OK	OK
Guenter Stangl	OK	OK	OK	OK
Tomasz Liwosz	OK	OK	OK	OK
Ihr Name	☐	☐	☐	☐
	Do 21	Fr 22	Do 18	Fr 19
	Oktober 2010		November 2010	
Anzahl	11	11	11	11



SEVENTH EUREF LACS WORKSHOP



[HOME](#)
[SHOUTBOX](#)
ABOUT WORKSHOP
[Main information](#)
[Deadlines](#)
[Registration](#)
[Abstract Submission](#)
[List of Participants](#)
[Programme](#)
[Organizing Committee](#)
PRACTICAL INFORMATION
[Travel](#)
[Accommodation](#)
[Contact](#)
[PHOTOS](#)

7th EUREF Local Analysis Centres Workshop

October 21 - 22, 2010
or
November 18 - 19, 2010
Warsaw, Poland

The 7th EUREF Local Analysis Centres Workshop will be held at the Military University of Technology, Kaliskiego 2, 00-908 Warsaw. Dates are still in negotiation

Welcome to the 7th LACs Workshop Website

Visitors : 30

Updated: 02/26/2010 11:06:19
Military University of Technology | Faculty of Civil Engineering and Geodesy | Centre of Applied Geomatics

- http://www.cgs.wat.edu.pl/LAC_workshop/index.html