Some experiences in making Orienteering maps in Slovenia from airborne laser scanning data

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Motivation:

Orienteering maps are thematic maps with very detailed content (fully standardised) production is due to extreme detainees of content very expensive, time consuming and it requires a lot of terrain work made by skilled mapmaker necessity for many new maps
Traditional source data:

- Topographic maps
- Aerial images, orthophoto
- GPS survey
The airborne laser scanning data - promising source data for deriving different topographic data.
Deriving data from ALS:

- automated (urban environment or forestry)

- manual recognition of objects in different derived presentations (eg. hillshading)
small test areas on different parts of Slovenia representing different types of terrain:

area near Ljubljana: steep continental relief
area near Domžale: steep carst terrain
area near Lipica (Karst): moderate carst terrain, first echo

- O-map
- ALS hillshading
- ALS derived contours
  * 0.5 m, 5-15pt/m2
Maps made using LiDAR data
KOSEŠKI BAJER
Merilo 1 : 5000
Ekvidistanca 2,5m
Stanje: maj 2010

Izdelali:
Gregor Anderluh
Dušan Petrovič
Lavra Babič
Brigita Mandelj
Mirjana Pešl
Nina Kerpan

Vir:
DTK S, DOF

Reambulacija in prijetno
dušenje:
Gregor Anderluh
Mario Vaffo

Posebni znaki:
- Tarča
- Klopca
- Drugi objekti
- Cyprinus caprio

Karta je bila izdelana
ob pomoči Fundacije za šport

Sprint map (ISSOM)
DEM 0.5 m
50% time
SKI-O map
8 sq.km
DTK5
DEM 0.5 m
DSM 5 pt/m²
orthophoto 0.5 m
GPS (ratrac, scuter)
2 hours field check
SKI-O map
8 sq.km
DTK5
DEM 0.5 m
DSM 5 pt/m²
orthophoto 0.5 m
GPS (ratrac, scuter)
2 hours field check
DTK5
DEM 0.5 m
DSM 10 pt/m²
orthophoto 0.1 m (april)
MTBO map
DEM 0.5
OP 0.1 m
(april)
2 hours
(tracks)
Conclusions

Daniel Lebar: „Don‘t you ever ask me to make an O-map on the area not covered with LiDAR data!“