

Hands-on practice: LIDAR vegetation mapping from LIDAR point clouds

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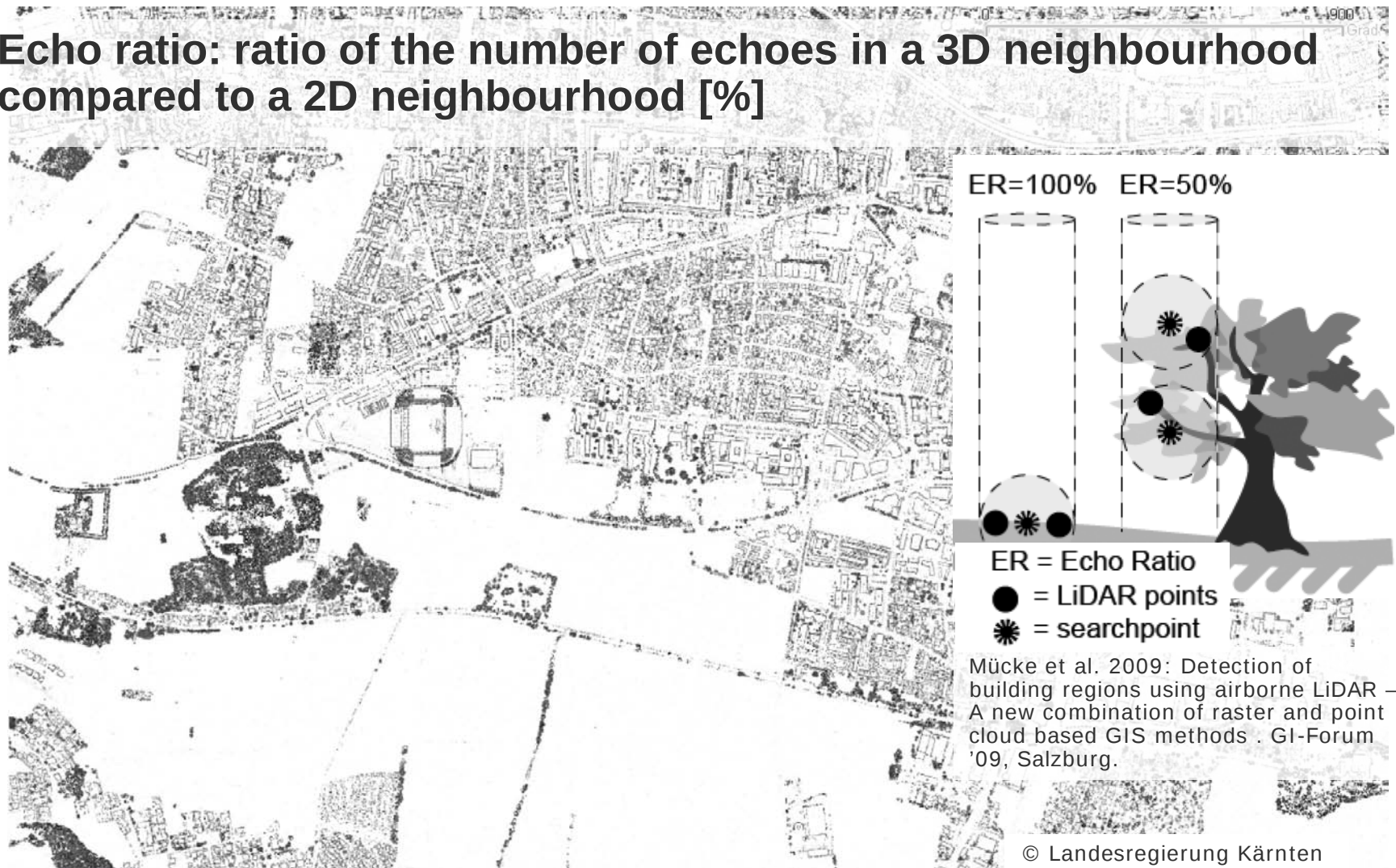
Aim of the exercise: Landcover from ALS data



© Landesregierung Kärnten

Landcover from ALS data: “Echo Ratio”

Echo ratio: ratio of the number of echoes in a 3D neighbourhood compared to a 2D neighbourhood [%]



Vegetation Layer

Processing steps:

- Import data
 - OPALS import
- Calculate slope adaptive echoratio
 - OPALSnormals, OALSechoratio
- Calculate surface dependent DSM
 - OPALSgrid, OPALScell, OPALSalgebra
- Calculate DTM
 - SCOP++
- Calculate nDSM
 - OPALSalgebra
- Classify and combine echoratio and nDSM rasters
 - OPALSalgebra
- Apply morphological opening
 - OPALSmorph
- Vectorize result
 - OPALScontouring

→ see: **ADDRESSS_vegmask.bat**

Tasks

- Run: “ADDRESSSS_vegmask.bat”
- Analyse the echoratio model
- Analyse surface dependent DSM, e.g. Difference model to moving planes interpolation
- Visualise the nDSM
- Play with the classify parameters (ER and nDSM)
- Play with the parameters for morphological opening
- Try to derive a building mask