## Changelog SimpleTree 4 - all Beta Versions summary

## Changelog:

- Beta 32 to Beta 33.06:
  - Fixed a bug in DTM
  - switched standard allometric correction approach to Xu et al.
  - · Fixed a bug in statistical outlier filtering
  - · Lisence added and opening of source code
- Beta\_31 to Beta\_32:
  - · Adjustment of steps input and output configuration
- Beta\_30 to Beta\_31:
  - · Change in the allometric scaling correction approach
- Beta 28 to Beta 30:
  - Change in the parameter optimization
- Beta 21 to Beta 28:
  - Bugfix in Segmentation. Should work better now
  - · Bugfix in DTM modelling
  - Prevented some crashes in filtering where empty clouds were produced.
  - Added an exporter for ascii 1 file / scene. You can also export the segmented tree clouds directly in my exporter step.
  - · Added an exporter for DTM to ply
- Beta 17 to Beta 21:
  - Improved the Segmentation runtime. It is down to 2 minutes for some test plots.
  - Added a SimpleTree DTM step
  - · Improved few Dialogs
  - Added a low quality option for the segmentation
  - Made step optional (Upscaling, if number iteration set to 0)
- Beta 15 to Beta 17:

my final version of my project pipeline. Final does not mean single steps do not get improved anymore, 2 steps even might still be replaced. Regarding the input and output of the pipeline though nothing changes. Fixed a lot of bug and improved both modelling as well as segmentation. Two more dedicated de-noising steps which had been removed are readded. Take those with care, they are quite untested.

• Beta 14 to Beta 15:

fixed a bug where cut\_height was computed correctly but not used for DBH, height and length computation. All three parameters should now be usable.

- Beta\_10 to Beta\_14:
  - Major fit quality improvement, also improved modelling of young trees.
  - · No change to the output csv format to be downward compatible regarding further analysis
  - Added a few steps to make plot level analysis more comfortable. There is one step included which can get rid of segmented undergrowth for example.
  - For users who work on plot level, outputfiles which are created adapt their name from your plot cloud.
  - DBH is estimated by DTM, not from cutheight as user input. You do not have to give this value in an input file anymore.

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- Beta\_07 to Beta\_10: added plot level processing tools. Improved fit quality. Fixed a lot of bugs. Added various output options. Video tutorials are contained as well.
- Beta\_06 to Beta\_07: several minor improvement procedures included and minor bug fixes implemented. Changed the user documentation also slightly.
- Beta\_05 to Beta\_06: added a lot of point cloud steps like de-noising. Fixed minor bugs and updated complete user documentation
- Beta\_04 to Beta\_05: improved the fit quality for all modellings.
- added test data
- **Todo**: output, input, tutorials, acknowledgements, release. std out filter should be multithreaded. transfer step for segmentation.

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