# simactive

Choosing the right photogrammetry software

COMPARISON GUIDE

Comparison Criteria

The process of selecting the right photogrammetry software can be challenging. Several aspects need to be considered since the product you choose will impact your entire production chain. To facilitate your decision, there are five main criteria that you should keep in mind during your evaluation process.
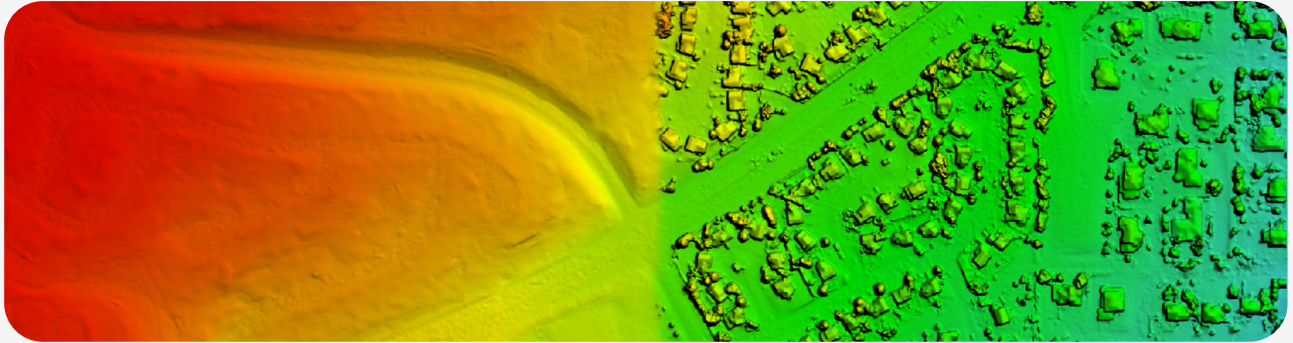
1. Processing speed

For any project, time is of the essence. A faster software will allow to generate outputs more quickly and deliver them in a timely manner. Furthermore, it will increase your contingency time should anything unexpected arise during the entire course of your project.

2. Quality of results

Ultimately, the quality of the geospatial data that you produce will be the most important factor for the end-user.
Specific metrics include horizontal / vertical accuracy, spatial resolution and consistency across the project. While results may be visually appealing, it does not necessarily imply that they are precise. Quality in absolute or relative terms must thus be carefully estimated in your evaluation process.

3. Scalability

While your needs may initially be limited in terms of project size, they will grow as your business evolves. Implementing a production workflow with a specific product requires an important investment, and the costs of changing it later maybe prohibitive. This means that you should consider a software solution that can not only handle a small number of images, but also much larger projects.
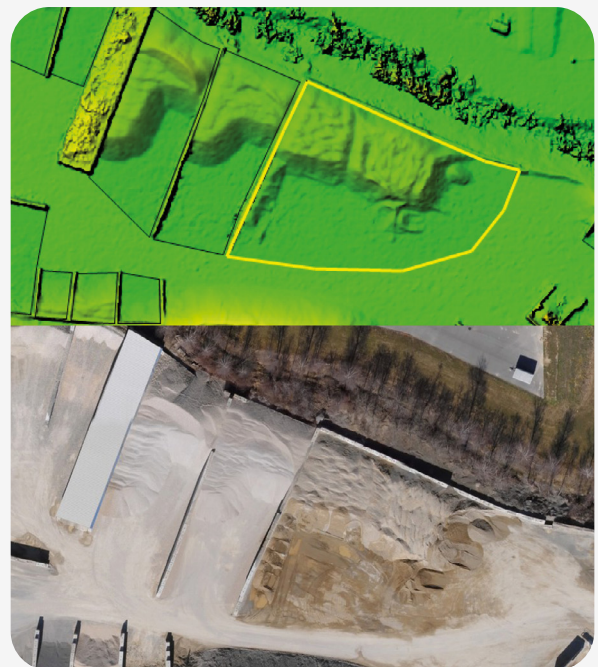
4. Automation

Having the ability to automate processes is very important during peak production times. The software you choose should allow to automatically process multiples projects or several subparts of larger projects. You should also have complete control of the processing, with options for customizing every steps.

5. Editing capabilities

Different end-users have different needs for map data. The software you choose must thus have functionalities to be able to adapt outputs to specific requirements. The ability to manually edit results is very important and several tools should be included in the photogrammetry product.

	CORRELATOR3D™	**OTHER TOOLS**
Processing time 300 images @ 20MP	Less than 0.5 hour	Up to 10 hours
Maximum number of images	No limit	Few hundreds, crash on larger datasets
Control on AT accuracy	Full, with tie-point editing capabilities and numerous bundle adjustment parameters	Limited, black-box approach
GCP editing	Easy and immediate localization of the GCPs with pre-bundle adjustment (efficient, semi-automatic tool)	Editing environment not user-friendly
DTM extraction	Advanced extraction with both automated and interactive tools	Limited to none
Editing capabilities	Extensive and intuitive set of tools for post-processing	Limited to none
Color	Global adjustments across the entire project	Local corrections only
Output quality	Controlled, optimized and meeting mapping standards with detailed quality reports	Visually appealing, but often with quality issues, artifacts, distortion, holes and interpolation
Georeferencing	Through GCPs direct-georeferencing or reference orthos / DSMs	GCPs only
Workflow	Flexible, intuitive and with automatic and interactive options	One-button workflow type

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OTHER TOOLS

True orthomosaic is seamless with no problematic areas.

True orthomosaic presents holes and other visual artifacts.
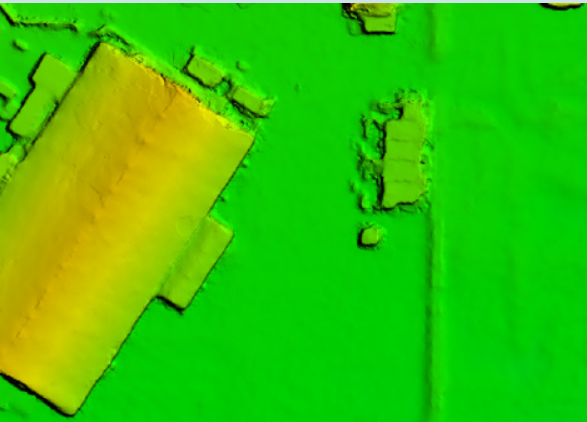
DSM is crisp and accurately represents man-made structures.
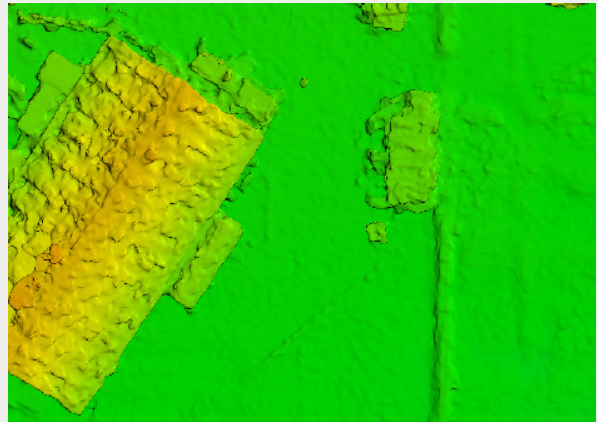
DSM is noisy and displays geometric innacuracies.

Colorized point cloud features 3D points of vegetation.

Colorized point cloud is missing some trees.

What accuracy can be reached with Correlator3D?

Correlator3D builds on advanced and rigorous algorithms to achieve the highest accuracy possible from any dataset. However, final accuracies will be mostly governed by external factors. These include the type of camera, the quality of the lens, the altitude and flightpaths, the use of ground control points, to only name a few. Correlator3D produces detailed quality reports that provide exact measurements on the obtained accuracy from the inputs used.

As a professional tool, is Correlator3D more difficult to use than other tools?

Correlator3D has an intuitive environment developed for optimal interaction with data. Users can choose between automating the full workflow, and powerful editing tools that combine for a seamless user experience. As for any higher-end product, basic knowledge of photogrammetric principles will help in obtaining quality outputs and results that go beyond project requirements.

What are the resources to get started with Correlator3D and how long does it take?

Through its intuitive design, Correlator3D is easy and quick to learn. No formal training is required. To facilitate new users' experience with the software, SimActive offers to process a sample dataset to show project preparation and optimal results through an online demonstration. It is also recommended to read the Quickstart Guide for a summary of the workflow.

There are many other tools available on the market, why Correlator3D?

While particular users may be initially satisfied with one-button / black box solutions, no software other than Correlator3D provides both the power and flexibility required to generate results.
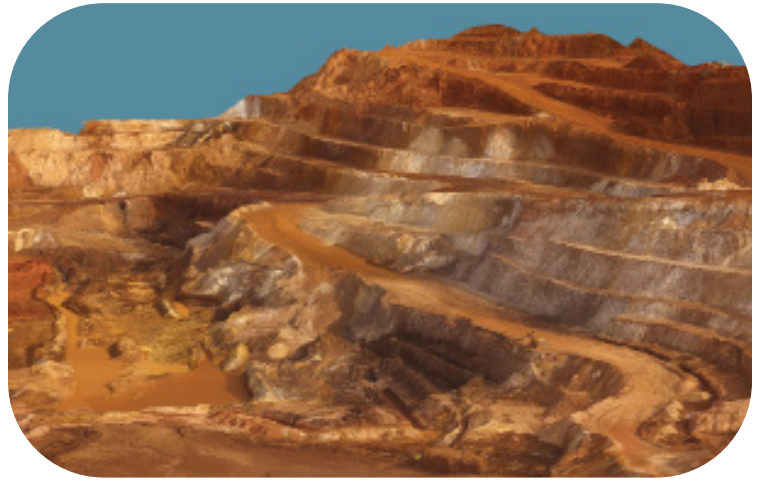
Why this more difficult dataset appears to produce decent results with another software tool?

The fact that outputs are visually appealing does not necessarily imply that they are good. When performing an in-depth analysis of such results, they often reveal several major problems: distortion, holes, accuracy issues, interpolation to fill gaps, etc. In many cases, a side-by-side analysis will prove that Correlator3D generated better results. The software provides transparent and unbiased quality metrics as well as precise indications of where potential problems could occur, rather than hiding them. This approach guarantees satisfaction from the end-user, to whom final mapping products are being delivered.

GET OPTIMAL RESULTS WITH TAILORED RECOMMENDATIONS

FREE PROCESSING

by SimActive experts with Correlator3D

UPLOAD DATASET

GET STARTED WITH THE LEADING PROFESSIONAL MAPPING TOOL

FREE LICENSE

of Correlator3D on your PC to try it yourself

DOWNLOAD TRIAL