



POSSIBILITIES AND CONSTRAINTS OF 3D LASER-SCANNING USE IN MOROCCAN CONTEXT

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3D Laser Scanning



- Helpful for important projects : civil engineering, modeling of the historical and architectural heritage and in the industry.
- The acquisition of data is synonymic of whole surfaces scanning instead of the collection of individual points.
- High-density laser surveying allows a considerable gain of time and precision.
- The surveying of data is possible even for binding or difficult access sites.
- The density and the richness of points stemming from the survey allow diversified and precise processing.

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Possibilities in Morocco

1. Civil engineering works : highways, dams and bridges;
2. Projects involving the historical and architectural heritage;
3. Works requiring cubature calculation (quarries monitoring, stocks of materials, platforms arrangement);
4. Agriculture : classification of lands into high, medium, or low-yield zones according to height, slopes and sun exposure.
5. Forestry : biomass quantity calculation.

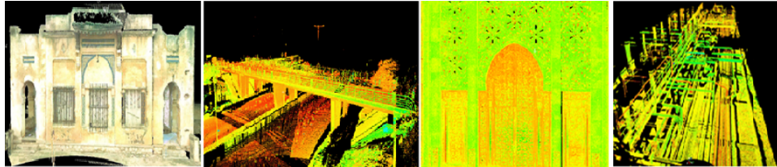


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Constraints

1. Remote sensing and photogrammetry as well as surveying techniques are widely used and still profitable.
2. The cost of the equipment is high : Small and medium-sized enterprises are not capable to sustain these charges.
3. The investment can be profitable only if there a large demands of this technology. This is not true in Morocco.
4. With commercial software, it is possible to perform general analysis and calculations. For particular applications and for complex projects a specific development is needed.
5. Data processing requires a high qualified stuff that must be aware of possibilities and errors of the technology.

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Conclusion

- In Morocco, this technology is recommended in several fields but is not enough used even if it has a great potential in resolving many problems encountered when using traditional surveying methods.
- There is a growing market demand of this new technology. Its main advantage is the very high density and precision of the captured information obtained in a much reduced time.
- However, to meet the needs of some specific works, much more efforts is demanded to provide high-performance software and qualified staff.

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