



Doctoral Thesis Proposal:

Automatic microphotogrammetry. Application of algorithms for the use of photogrammetry in various media.

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Abstract:

This thesis focuses on two parallel issues:

- The first is to obtain 3D models using microphotogrammetry to very small sizes, this is, close range photogrammetry shots from close to 1.1 photoscale . For this purpose a specific workflow is required in the application of the technique of structure from motion for alignment of cameras, and then in the techniques of densification point cloud filtering, meshing and texturization.
- The second problem is that occurring when trying to use several separate photogrammetry means, for example, water and air. The difficulty occurs when the beam passing through these two means is deflected by the refractive index causing serious errors in modeling. It aims to develop an algorithm to correct these deviation

Available Means:

- Computers will be used for photogrammetric use specific software or programming languages to create software itself.
- Banks camera calibration.
- Professional cameras.
- Lenses and macro lenses with expansión tubes.
- Bank of photography.

References:

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