

Preciso[®] zeta

3D maps and study of land changes for infrastructure planning and management.

An updated knowledge of the environment represents an important part in defining the design and the realization of works and engineering infrastructures. The orography is a key element in the design process, starting from the preliminary phases and feasibility studies.

Updated information about orography, slope and exposure set up the bases for a modern design, aiming at reducing the impact over the environment, optimizing the investments, reduce maintenance and management duties.

The availability of this kind of information, updated and accurate, is not always guaranteed in areas hardly reachable. Operating in this area performing ground surveys or using aerial sensors can be costly and difficult to realize.

Thanks to the technological improvement and the availability of very high resolution satellite images, the characteristic of 3D info extracted from satellite stereo pairs are comparable to the ones obtained from traditional aerial surveys.

Preciso[®] Zeta is a mapping product, derived from satellite images acquired in stereoscopic mode, capable to give updated and detailed information about the orography of wide areas.

Target

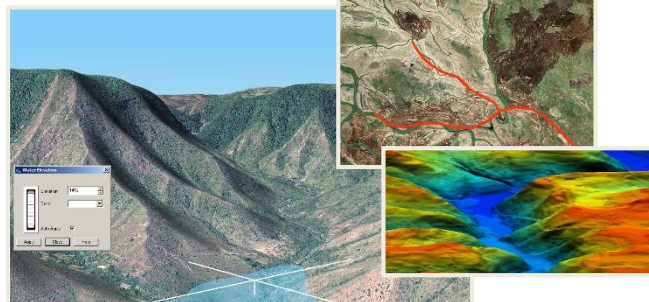
Managers and developers of works and infrastructures.

Applications

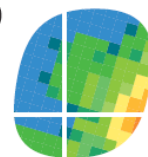
- Infrastructures design support
- Environmental planning
- Environmental studies

Key Benefits

- Fast data procurement
- Reduced costs with respect to traditional technologies
- Unlimited availability over the entire terrestrial surface
- Fast updating capacity



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More info
www.planetek.it/eng/preciso_zeta



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Technical characteristics

Preciso[®] Zeta is a mapping product, derived from satellite images acquired in stereoscopic mode, capable to give updated and detailed information about the orography of wide areas.

Preciso[®] Zeta includes:

- DSM (Digital Surface Model), with varying resolutions according to user needs (from 50cm to 5m of spatial resolution); possibility to require the DTM option (Digital Surface Model, i.e. the DSM without the heights corresponding to vegetation and human artifacts)
- Contour maps
- Satellite Orthoimages from 30 cm pixel resolution.

Case History

Production of Digital Elevation Models of the Earth surface for infrastructure development in Tanzania.

The main goal of this activity was to give the user an updated digital cartographic base map to analyze a water basin, for the preliminary design of a dam: slope and profile evaluation, assessment of excavation activities and others.

Using advanced automatic photogrammetric techniques together with post processing and editing activities, a DSM and a DTM were provided, with a pixel resolution of 1m.

Stereoscopic satellite images, depicting the same area from different viewing angles, at high spatial resolution, were used as input data.

Positional accuracies of 4m (horizontal) and 1m (vertical) were obtained on the output, compliant with the accuracies achievable for this kind of data.



Satellite orthoimages for the timely monitoring of changes on the territory.



Cognitive Framework for Urban Planning & monitoring of Strategic Environmental Assessment (SEA).



Urban monitoring and recognition of illegal construction.



Cognitive Framework of marine and coastal areas and public defense works.



Geospatial Indexes for Territorial Planning & Strategic Environmental Assessment. Monitoring of soil loss.



Fast acquisition of satellite imagery in emergency situations.



Landslide identification and monitoring for infrastructure planning and management.



3D maps and study of land changes for infrastructure planning and management.



Identification and characterization of optimal sites for wind power plant settlements.



Geoportals for e-Participation and dialogue between organizations and citizens in the planning process.



Planetek management system is certified ISO 9001 and compliant to the European Association of Remote Sensing Companies (EARSC) guidelines defined for the provision of remote sensing services.

