OUTREACH POTENTIAL OF THE INTERACTION BETWEEN 3D MODEL AND GEOLOGICAL MAPPING ON A WEB PLATFORM

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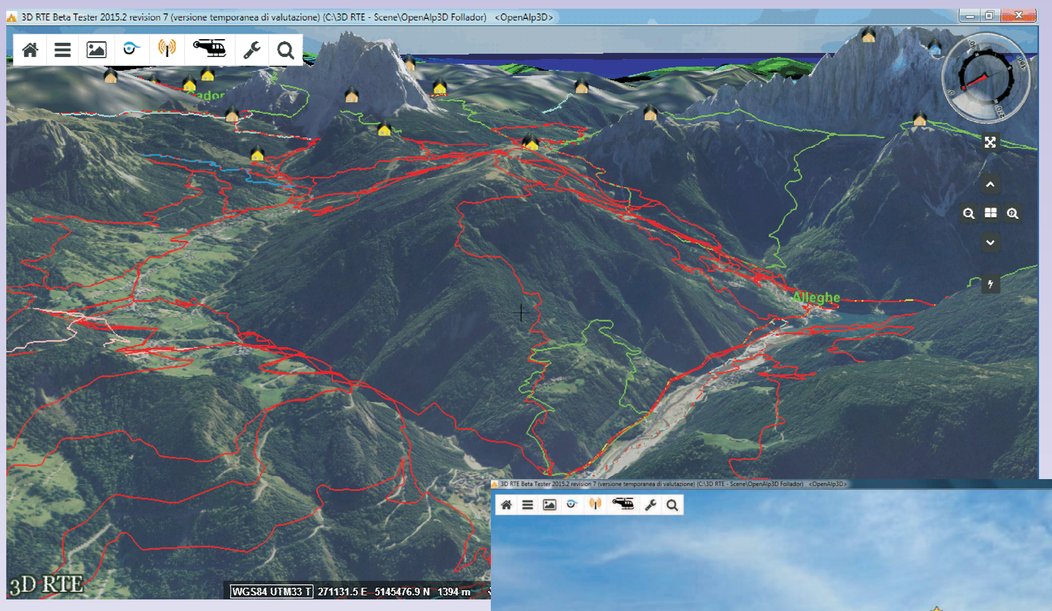
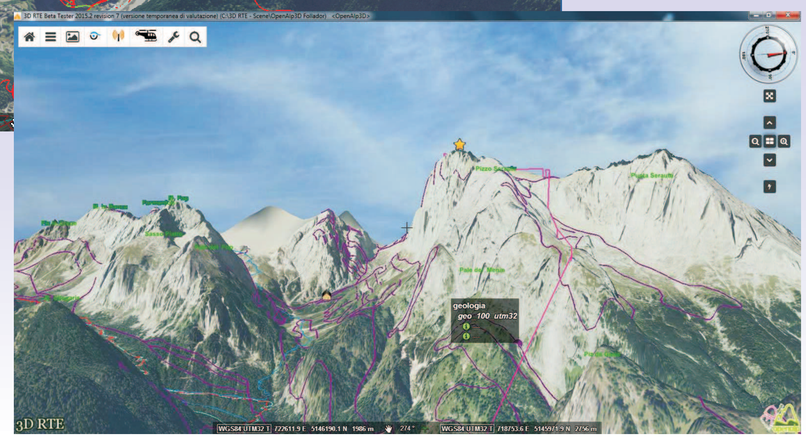
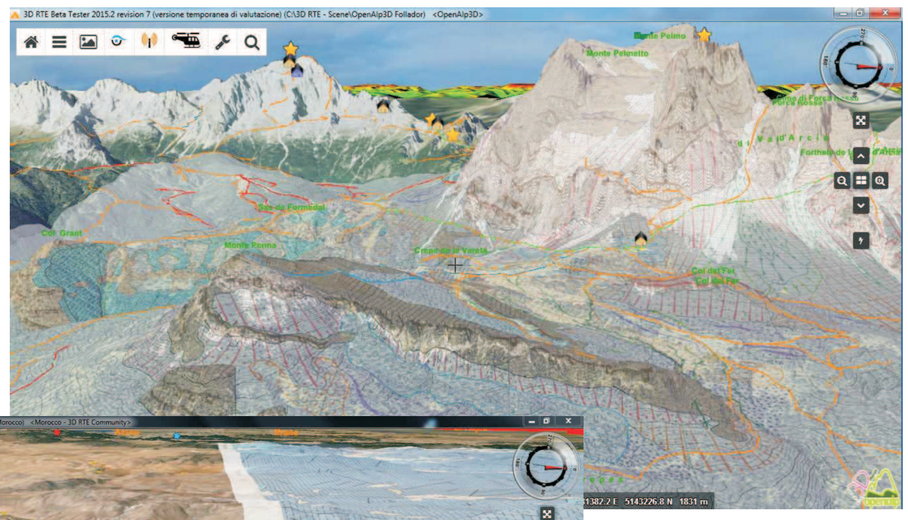
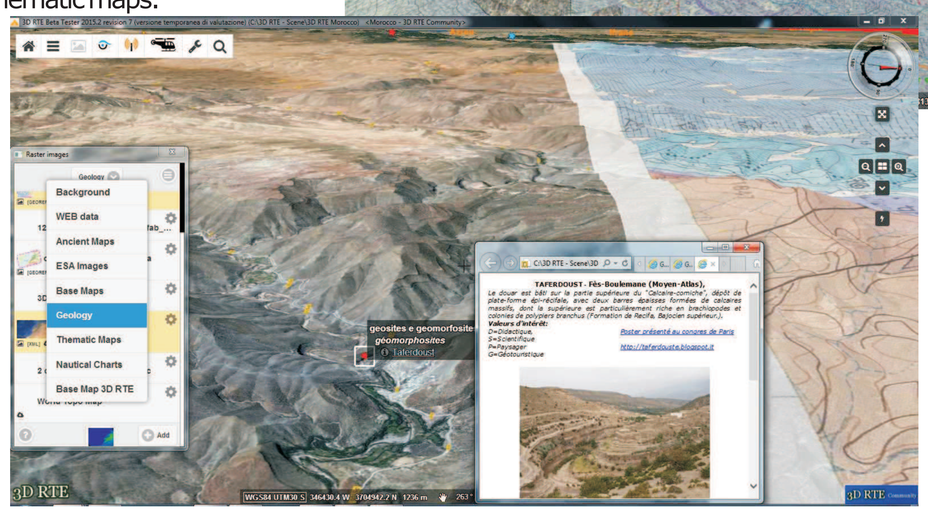


8th EUREGEO
European Congress on REgional GEOscientific Cartography and Information Systems
Barcelona | Catalonia | Spain
june 15th - 17th 2015



The localization of each site, together with the more common descriptions, classifications and pictures, enables the user to understand in detail relevant morphological sites and to identify their elements displayed on a 3D-Scenario, either when laid over orthophotos or geological, geo-morphologic, or other thematic maps.





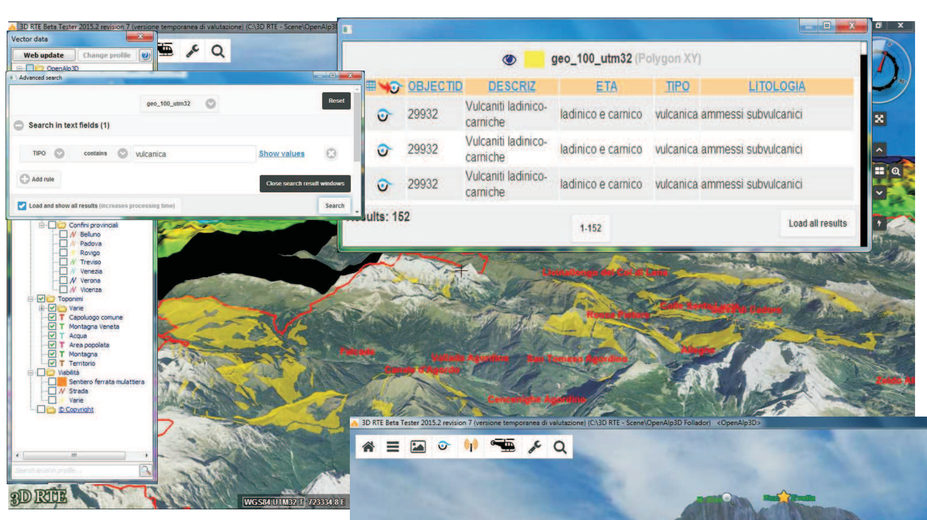
3D SCENARIO

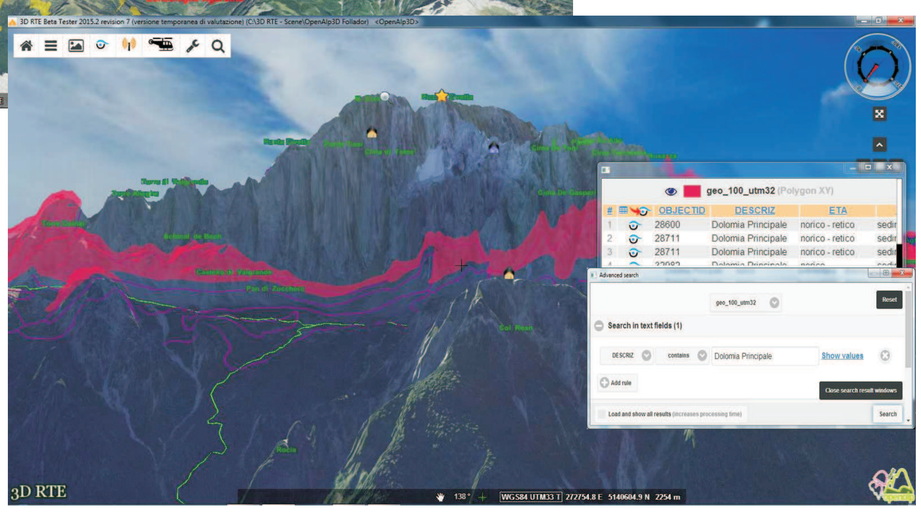
The platform 3D consists of two portions: the 3D-Scenario (Digital Terrain Model) including the database structure, downloaded free on your PC, and the database contents that resides on an external server. It must be downloaded and installed both the software for 3D navigation and the 3D-Scenario (www.openalp3d.it) containing: vector elements (the recorded and geo-referred elements), raster maps (maps, digital orthorectified images, etc.), as well as links to online maps (eg Googlemaps, National Cartographic Portal, etc.).
It is an efficient tool for in-depth analysis of landform and a good facility for educational and research purposes on geomorphosites.Different types of users will be able to appreciate thoroughly the scientific, educational and scenic geomorphosites peculiarities the key elements to understand the geological, geomorphological evolution of the territory.

The architecture of the system ensures dynamic contents through an upgrade process and the platform becomes the collector of the scientific contributions relating to the territory. The external server provides HTML pages containing information and documents, but also acts as a collector for new items: those who are authorized to enter data, upload to server vector elements and create html pages containing related information, images and files to download (gpx, kml, pdf, etc.). Every time the user opens the scene with an internet connection, automatically downloads these updates.
WEB users, with this dynamic 3D tool, can to explore large areas of the territory through a digital terrain model with a detail fit for purpose: with a simple click you must be able to prepare for your hikes, knowing in advance the territory, bike riding first at home virtually in 3D, discover the territory, step after step through the paths prepared for you! Each route must be accompanied by a technical card with altitude, photos, descriptions, PDF maps and .gpx files that can be downloaded. These utilities could be a starting point to stimulate and develop a sustainable geo-tourism in upland, often depopulated because of lack of expectations.

THE EDUCATIONAL VALUE

The educational value of this platform was tested at the Mining Institute Follador (Agordo) and it was considered as a useful tool to support teaching in geology and geomorphology through the use of a computerized classroom: during lessons, students can navigate on a 3D model (5x5m cell), choose different maps (topographic, geological, geomorphological, etc.), recognizing the geological sites and geomorphosites and delimit them by drawing points, lines and areas to improve understanding. The students can also make the operation of query: search in text fields, spatial constraints and geometric constraints.



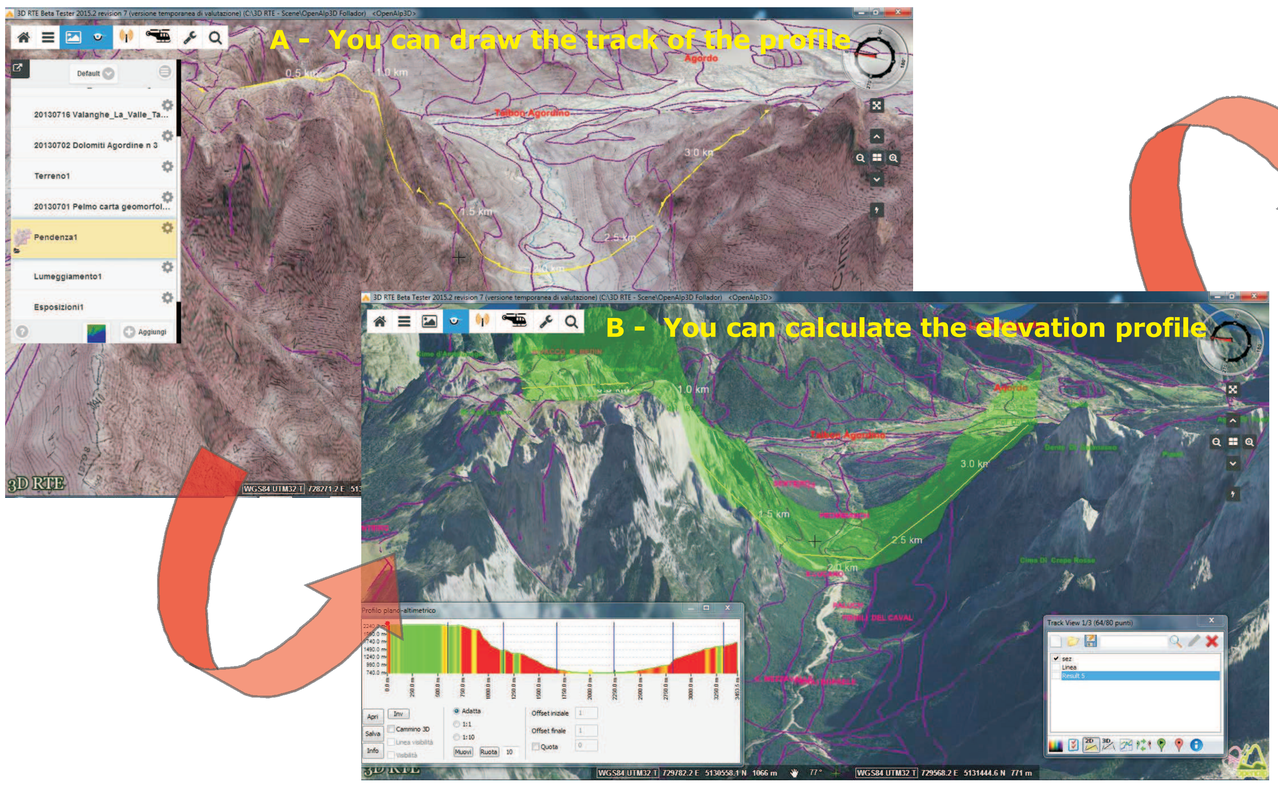


FINAL REMARKS

It is a multidisciplinary platform that provides dynamic management of information and allows the creation of dynamic descriptions and enables the creation of movies, it could be the starting point for the creation of "places of collective identity", dissemination of geosciences, promotion and protection of the territory.
For development of sustainable tourism and for territory promotion, the geomorphosites can be integrated and shown on the same 3D-Scenario together with all the most important territorial elements such as natural, cultural-historic heritage and all the tourist accommodation and facilities information.

ACKNOWLEDGEMENTS

Authors are grateful to PANGEA for the synergic collaboration and for the 3dRTE tool development.



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