



Embedded Orienting Tool for Earth Sciences (EmOTES).

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During sampling or tracking missions in the field, the scientific community is regularly confronted to the need of orienting (3D) and/or positioning (2D) precisely the object of his studies relatively to the geographic North and the horizontal plane. The instrument we present is dedicated to this task. It is light, simple to use, fast and accurate. It includes a three-axis magnetometer, a three-axis inclinometer, one rotation sensor and a wireless camera. This orienting tool is connected through a wireless link to a computer equipped with a GPS. The received data (geographical North azimuth and inclination) are used in a GIS-like software (Geographical Information System). The user performs the measurement in a few seconds, and identifies the sample on the map. He can add comments and pictures about the sample on geo-referenced documents. Every researcher who needs to know precisely the orientation of an object in the field may adapt this system for his particular requirements (Paleomagnetism, Archeology, tectonics, etc...).