



A new field technique for geomorphological survey

G. Gallerini , D. Baioni and M. De Donatis

Institute of Environmental Dynamics – University of Urbino , Campus Scientifico,61029
Urbino PU, Italy (g.gallerini@uniurb.it / Fax: +39072230429)

L.IN.E.E. (Laboratory of Info-tech. for Earth and Environment created inside our institute) has developed a new system for field mapping in G.I.S. environment. The project started a few years ago when we began to work about a new methodological approach for survey work; We develop our project with the aim to create a new digital instrument very simple and easy to use in field survey activity that could offer high accuracy and precision, saving time.

Another important methodological task was to define work steps in digital field survey for reducing consistently the loss of scientific information, offering a way to control and to reconstruct the field work for the surveyor and the project manager, and saving consistently time because of removal the step between field observation and office GIS work.

We developed a new GIS software for digital field mapping called “Map IT”, it is supported by digital equipment consistent of a Tablet PC and a GPS. This solution supports the surveyor to record and to georeference information directly in the field and it allows to save time for acquisition and informatization of the data and to reduce the risk to loose informations sensibly.

The aim of this work is to analyze the difference between traditional and digital mapping and to evaluate advantages and limitations of both methods and to highlight the benefits of our methodological approach to field mapping work.

Actually we are studing at many sample project about geological and geomorphological survey; even if still exist some limitations and open problems, our field work and experience show that the integrate use of traditional survey work and digital field mapping can offer many advantages.

The main facilities that our methodology offer are the reduction of time/costs for survey and elaboration of map, the reduced loss of information from field to laboratory work (i.e. sketch/section elaboration and photo interpretation in the field), the real time positioning of every information, and the improvement of accuracy of field data.