

AUTOMATIC TERRITORY'S REPRESENTATION BY
 MEANS OF ECONOMICAL AND NOT ENCUMBERING
 ELECTRONIC INSTRUMENTS

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Existing school premises aren't generally easily adaptable to diffused utilisation of electronic instruments as it would be needed because of the spread of automatic representation methods in the last years. Few availability of space is often a problem in order to reorganize on new grounds traditional teachings. In the proposed paper representation methods of the territory by means of pocket computers and pocket printers as well as formulas in the languages of these tools are dealt with. Such a subject has been studied for some years by the author who defined programs in RPN language aimed to constructing perspectives as well as 2 D drawings by the pocket computer HP 28S and infrared printer HP 82240A. The results of the researches have been published in 1993 (research report to department "di Rappresentazione e rilievo": *Tecniche di progettazione con strumenti elettronici di basso costo e minimo ingombro. Il disegno automatico in proiezione ortogonale e in prospettiva per mezzo del computer tascabile HP 28S e della stampante HP 82240A*). There is demonstrated through examples that a perspective without any limit in the choice of the eye and other external and internal parameters can be gotten quite automatically by a tool of only 32 kbytes. The research went on about the utilisation of pocket computers even smaller than the foretold but expansible and connectible to PC, as HP 48SX. Within the framework of the course of *Rappresentazione della realtà territoriale e urbana* (faculty of engineering - university of Rome) experiences have been carried out in that field.

Original contents of the proposed paper is summarized by the following items:

- construction of perspective and 2D representations by means of pocket computer not running vectors and arrays;
- formulas in the programming language needed to utilize pocket computers (particularly HP 28S and HP 48SX) in order to calculate automatically image-coordinates in perspective and 2D representations;
- automatic execution of drawings;
- examples of territory's representation.