

Stereophotogrammetric Open Digital Archive: StereoFot 35th Anniversary of the Earthquake, November 22, 1980, Basilicata, Italy

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SUMMARY

The thirty-year activity of the laboratory of architectural photogrammetry the Politecnico di Bari was founded on three basic principles: "Know to protect" The preservation and the circulation of a historic car is only possible if there are connoisseurs of engines, or even a "Ferrari" becomes a costly, dangerous and polluting to be sent to the demolition. "A good survey is already half the project" A project worthy of the name, was born from a detailed analysis of the existing. The set of analyzes, carried out in time, allows the medical history of each cultural asset, which "is born, lives and dies", and like all living things, turns and in need of care, based on a history always updated. "Documentation of Cultural Heritage is not for a few and no one can delegate. It is important that you teach and give you the tools, then it is the story that will speak of our culture" a cultural heritage is that it is a "source of culture", so it must be studied, starting with the survey, which obviously can not be reduced to a simple graphical representation. If in schools of all levels, was inserted, which governs voluntary, the "Architectonic Photogrammetry", interested students could adopt a monument and update the data during the entire course of study, feeding, at no cost, the archive online. Based on these principles, a distance of forty-five years, the opened photogrammetric archive of Architectonic Cultural Heritage to have reached the target place by CIPA (Comité International de Photogrammétrie Architecturale) at its first meeting (Paris, 18 and 19 June 1970): the establishment of an international archive of Photogrammetric Surveys of Architectectonic Heritage, duplicated and deployed appropriately in two centers safe. The main difficulties that have hampered the creation of this archive were essentially: - duplication of frames. in the years between 1970 and 1990., terrestrial photogrammetry was derived from aerial photogrammetry, aimed at the graphic rendering, giving primary importance to the precision. So the photogrammetric cameras used, which support the emulsion sensitive, glass plates rectified, low-sensitivity and, therefore, of high contrast. Duplication as well as bringing a significant cost, was not without a degradation of the image; - the different size of the photogrammetric cameras. Each company, a manufacturer of tools for photogrammetry, chose its own format and, therefore, each room required an own renderer, which in addition to particularly high costs, could be used only by specialized operators. The two central archives would require prohibitively expensive, both because of the equipment is not depreciable, either because of lack of use. - the use of frames. when you spoke of photogrammetric survey, reference was made only to refund graphics, which, made in specialized laboratories, completely separated from the needs of those who had to use the survey, so that these, even for economic reasons, preferred to use the tape measure. Couples stereometric frame, not only were not used due to very little knowledge and dissemination of stereoscopes, but were split as they are considered "copies" Today, thanks to digital cameras, photogrammetric survey is available to everyone. Once clarified the concept of "normal case", anyone can calibrate their camera and use three simple equations of 1st degree program for the restitution. The program

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StereoFot® 7.0, with its archive, wants to be a concrete example. If you think that: - the current digital cameras automatically provide, in support of the images, a variety of information, including the principal distance and the geographical coordinates; - the internal orientation of the frame is fixed, in fact there is no longer the film, subject to deformation, displacement and non-planarity; - duplication of images is a "no problem"; - the shot and accuracy of the shootint, with a little organization, can be verified on the spot, with the advantage, thanks to a simple electronic key storage, you can store real-time frames (in fact it is not necessary the process of development and printing frame with its long lead time); - it can be stated that the only problem to be solved, to make the photogrammetric survey, is to take the two photos without changing the direction of the optical axis, in practice just slide the digital camera along a bar to "L" and measure the displacement of any point of the digital camera. For restitution is sufficient: click on the button "import photos"; enter the required data (those indispensable are marked in red); click the "record" button carry out the calibration, if the images are loaded for the first time; As for the results, and, in particular, the accuracy of the survey, we have to rely on the law of the Internet: the surveys not profits will not be consulted and will go down in the ranking!

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