progeSOFT progeCAD 2009 Professional

CAD software of Italian origin has been renovated, being enriched with new features and its performance improved as always it keeps up to date with the software of reference in this category.

Presentation

progeCAD 2009 Professional represents an excellent sample in the category of generic CAD software, the category of the software for design in geometric primitives that doesn't care about the specialization of its user and that places at your disposal generic drawing tools allowing to transform a project idea in the language of Design.

During the last years this software category has been exposed to a boom of vertical design software, very useful in certain fields and under certain conditions, but encountering significant difficulties when a technician who uses them one day finds himself working in the multidiscipline ambient or when he needs occasionally to take up activities not in line with his core business and so with the design software chosen for his specific field.

Still it is almost thanks to the fact that in the last few years the multidiscipline approach to projecting has been increasing either due to the growth of the technicians' cultural background or due to the new normative disciplines contribution, the necessity of some generic CAD in the design studio is becoming more and more insistent.

Up to now progeCAD 2009 Professional has been making the best of this twist of circumstances. It maybe the case of the fine localization or the fact that progeSOFT's managing team maintain strong connection with their customers, meeting their needs and anticipating their demands.

progeCAD 2009 Professional is based on the IntelliCAD source codes, which are the property of the International Consortium called ITC. This consortium maintains these codes and keeps on developing them. The progeSOFT company takes part in the ITC technical executive committee.

Being based on the common source codes the difference among various IntelliCAD applications might be not so great, still various distributions differ. The difference consists in additional facilities, that means an integration of some applications of third parties in the package in sale in order to optimize the codes, or that may be a localization, the user's interface rewriting to satisfy ones own "credos" or the necessities of a certain group of users and as a concern about the software packaging, or that may be an integration of various modules, released by Consortium or obtained by third parties, or even developed by the company on its own.

In fact, Consortium has created a number of modules where various functionalities are gradually being implemented starting from the compatibility with the latest AutoCAD versions and the 3D module, up to the rendering and the possibility of IntelliCAD custom programming.

Developers can obtain licenses for various modules and then optimize them even including features and utilities developed on their own or by third parties getting as a result a complete and optimized software package.

It is exactly this another advantage that progeCAD in its Professional version has over lots of its competitors. Actually, progeSOFT's developers managed to choose and coagulate a number of design facilities that completed the core software creating an interesting distribution. From year to year, version after version, they still manage to enhance the product revealing new features and enriching the software with additional commands and so accomplishing the offer.

Installation

The automatic installation starts introducing us to the software potentialities, first of all by enumerating the differences of progeCAD 2009 Professional distinguishing it from the other IntelliCAD packages one can find on sale.

During the installation process you are asked if you want to install the support of the Autodesk DWF format, in other words the format that Autodesk has already set as Standard for the technical drawing interchange. Besides, during the installation the PDF print driver is being installed that allows to create PDF files directly from progeCAD, though in order to install this component one needs to have Administrator rights. progeCAD 2009 Professional is compatible with Microsoft Windows Vista, though there is already no need in mentioning it.

Software usage

On opening the software the first time, a very familiar interface presents itself on the screen of our PCs. Actually, the software environment has been approximated as much as possible to the generic CAD standard, that is to AutoCAD, which clone as you remember IntelliCAD was born as(Fig. 1)
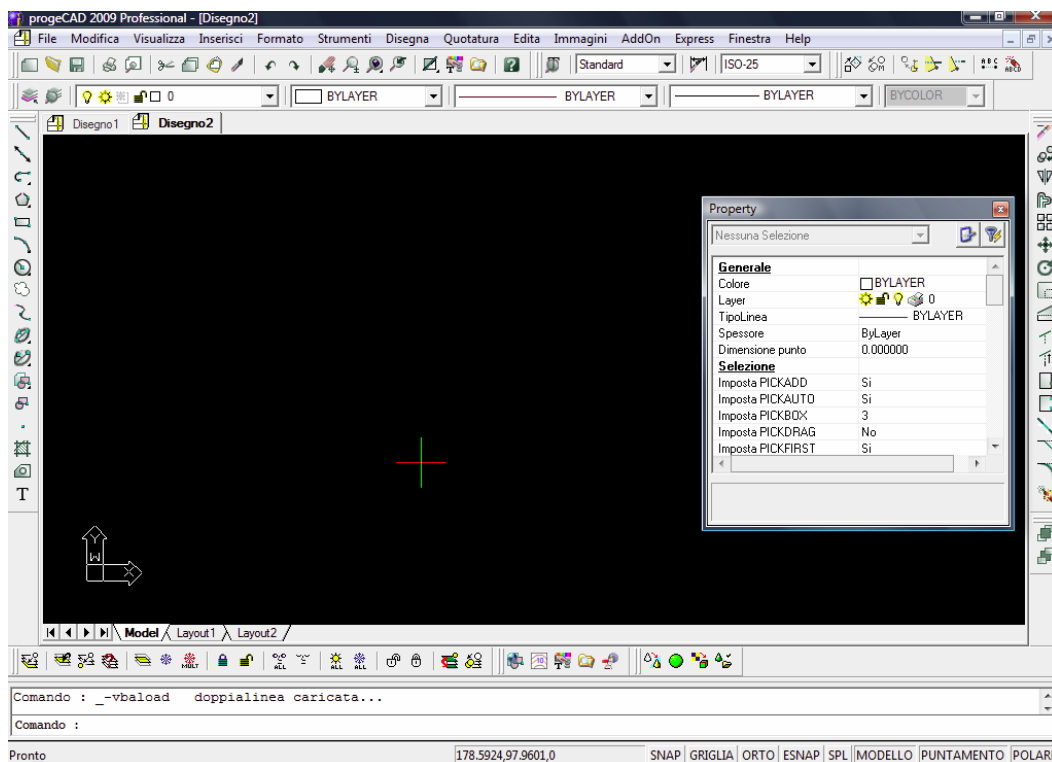

Fig. 1 – The environment of progeSOFT's progeCAD 2009 Professional is very similar to the AutoCAD user interface. You can see here the command toolbar and the Property dialog box (similar to the AutoCAD Property

toolbar). Notice the tabs at the bottom to change the layouts and the tabs above to quickly change the loaded drawings.

In contrast to the last version we tested, it is interesting to note the use of the double system of tabs, the one above to change between the drawings already opened and the other one placed below to change between the layouts of the same drawing. On opening the software you can see a dialog box that allows you to choose the command to perform (New Drawing, Open Drawing) that is very similar to the one appearing in AutoCAD R14, a Spartan one, but all in all rather efficient and functional (Fig. 2).
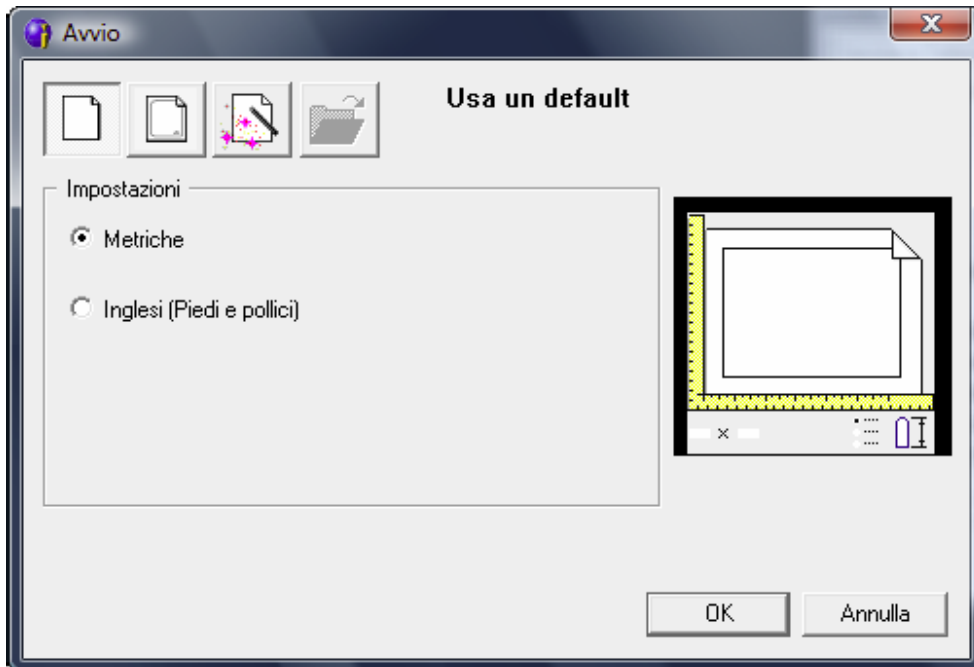

Fig. 2 – The dialog box on the program Start reminds you of AutoCAD R14 . It allows to quickly set a new drawing or to open existing files.

The User interface is very rich and configurable. You can note a useful hard disk browser that allows to preview DWG drawings and visualize styles and blocks within DWG and DXF drawings. In fact it is a progeSOFT unique embodiment of the conventional Autodesk DesignCenter.(Fig. 3).
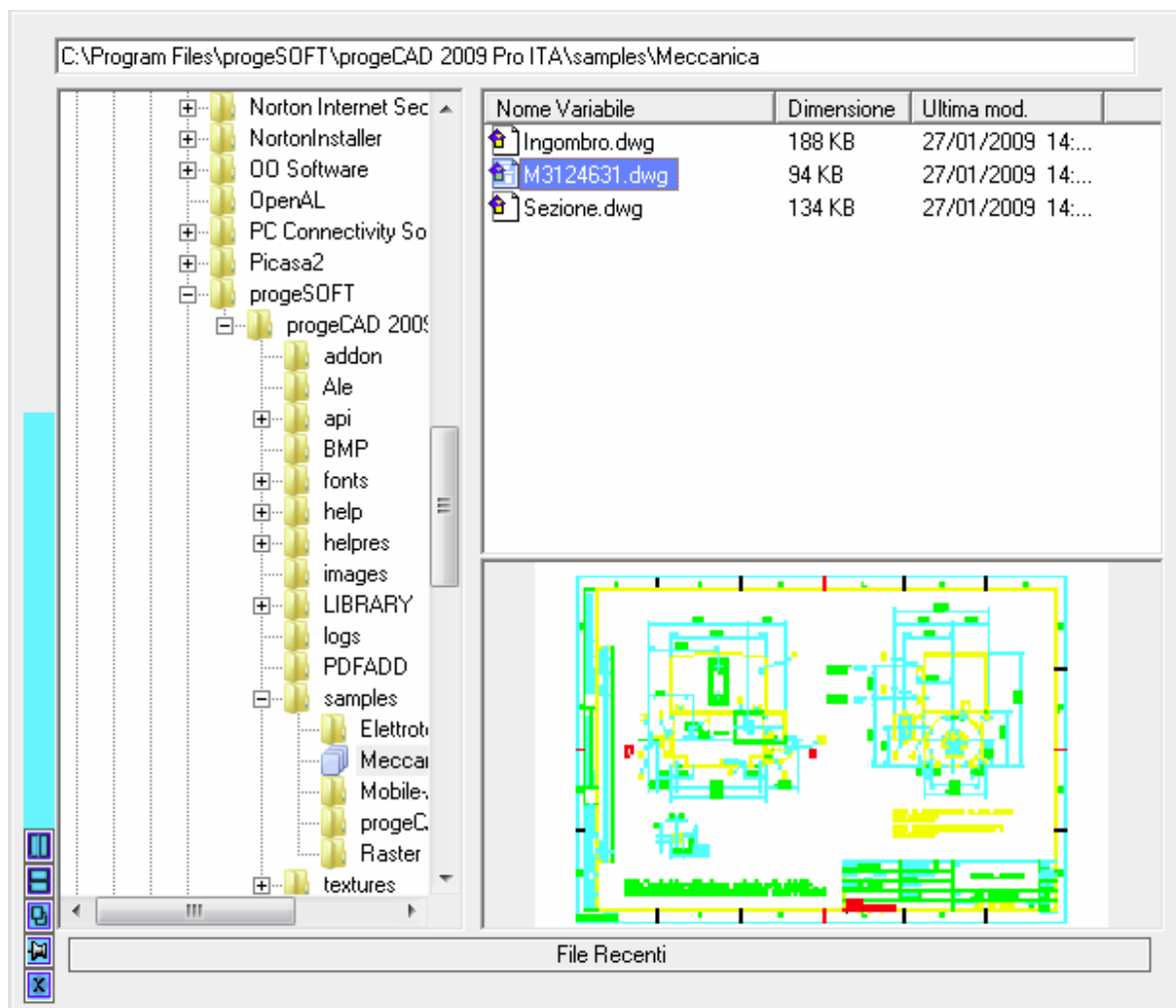
Fig. 3 – The DWG Explorer allows to find drawings in any part of the File System and to manage the blocks and styles these drawings contain.

The interface is equipped with the properties palette for drawing entities. It allows to quickly modify these properties and presents an equivalent of the Autodesk homonymous palette. (Fig. 4).
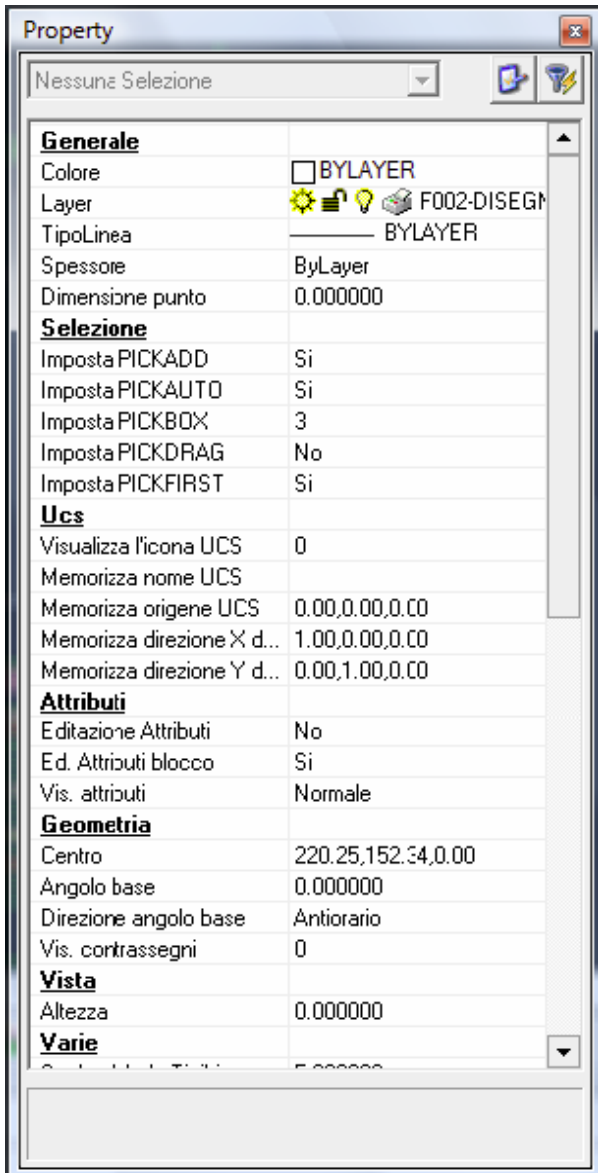
Fig. 4 - The progeCAD Properties Palette functions in the same way as the homonymous AutoCAD dialog box.

progeSOFT's own feature is the ALE module, a flexible block manager. In the module the blocks are grouped under categories, they can be easily found and visualized even in preview. In combination with the ALE Module there goes the progeSOFT WBlock Manager. It gives the possibility quickly to create library blocks that can be integrated in ALE and that are managed in the same way. (Window 4) The architect libraries have been completely updated in this version in order to correspond to "aesthetic canons" that are in use at the moment. And that is another peculiarity that makes evident the thoroughness of the software assemblage.
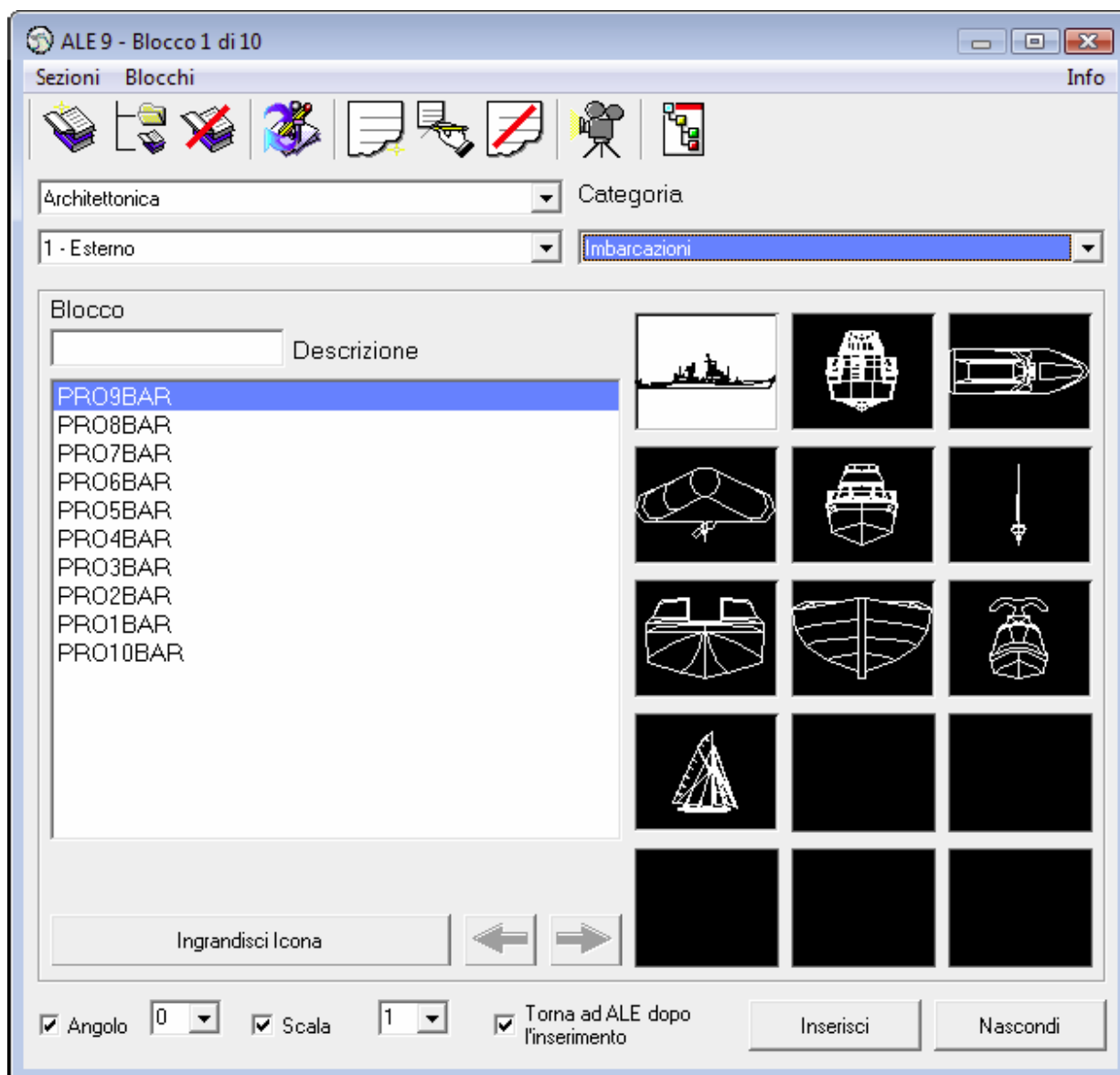
Fig. 5 - The ALE module is a progeCAD peculiarity that is really useful for those who work with vast libraries of preset blocks. The ALE module allows to organize blocks in the hierarchic structure, they are easy to navigate also with the help of icons and preview.

But let's come down to the features of this software. progeCAD 2009 Professional proposes all the functionalities available in AutoCAD. In fact, it allows to draw two-dimensional objects with all the drawing supplements that AutoCAD offers. The particular attention was paid to the programming of the various types of snap to an object, proposing in this way all those snap available in AutoCAD, the feature that you won't find in all the IntelliCAD packages. They are named as ESNAP in progeCAD. Besides, thanks to the ACIS modelling engine integration progeCAD 2009 Professional provides three-dimensional modelling, of both surfaces and solids. This makes it thoroughly compatible with AutoCAD as it gives an opportunity to import and modify even drawings containing solids (in fact, ACIS is an engine for modelling that AutoCAD has always used and still uses, though with the name changed when Autodesk bought the source codes from Spatial, the company-developer of the ACIS modeller). To crown it all this version also open AutoCAD 2009 files. In contrast to the version

tested before (version 2007), the compatibility problem of solids created with AutoCAD 2007 (or with the following versions) has been resolved in progeCAD 2009. AutoCAD 2007 was the version where Autodesk re-wrote completely the source codes of 3D modelling, abandoning the ACIS compatibility. Even in this situation the progeSOFT programmers are to be praised as they have resolved this problem. As distinct from other IntelliCAD versions, this one allows to work with solids on a greater level providing even a common rendering as progeSOFT licensed from Da Vinci the Advanced Rendering module. progeCAD's rendering gives possibility to use materials with the texture. Besides, the software contains a module for O2C models export integrated in it. The O2C format developed by a German company allows to insert an ActiveX control within Web pages, multimedia reports and presentations. This format permits to visualize a rendered and navigable model created of the one drawn in progeCAD 2009. Moreover progeCAD 2009 supports images within drawings, another pleasant feature that is lacking in the previous IntelliCAD versions and even in some present competitive

versions. Furthermore, progeCAD allows to insert geo-referenced images as widely spread geo-reference file formats are supported by the software. This feature is not difficult to implement but it becomes really useful and helpful to all the professionals who work more and more often with images and vector geo-referenced files.
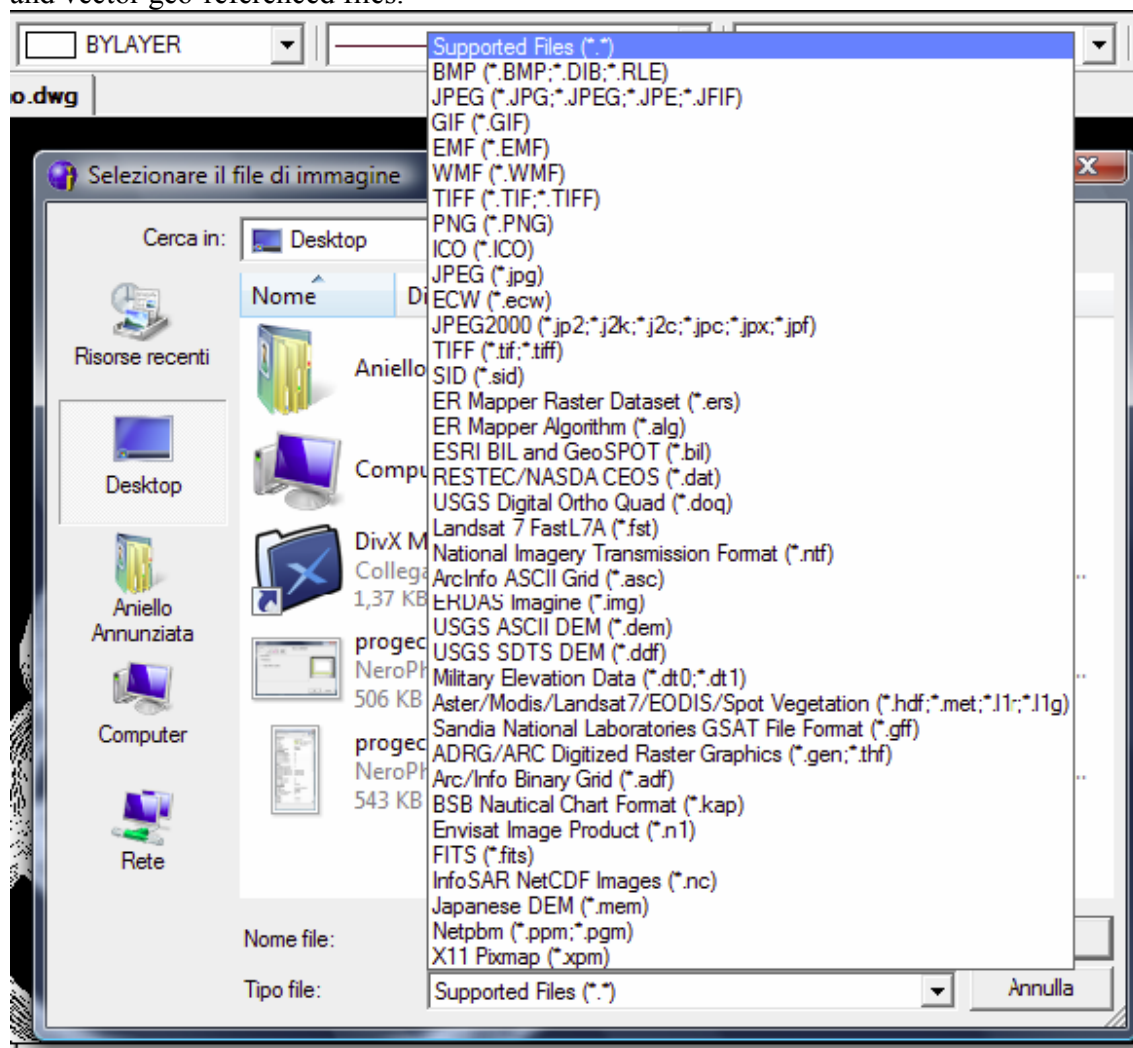
Fig. 6 – The Attach Image dialog box. Among typical graphic formats you can see a number of GIS graphic formats, such as GeoTIFF, the ER Mapper formats, the ERDAS Image formats, and other various geo-referenced image systems.

The novelty of this version is the ECW file support, the geo-reference images interchange format with an intelligent system of compression. The ECW format, belonging to Erdas Incorporation, a company of the Leica Geosystems Group, was developed on the ErMapper commercial software, that in the past gave birth to the plug-ins for numerous GIS software (ArcView, ArcGIS), CAD (AutoCAD) and graphic applications (Photoshop) but never for IntelliCAD. Even in this case progeSOFT's developers gave vent to their fantasy starting a search for libraries that would allow to import even these formats, updating the simpler libraries of the previous version. But pleasant news in the field of image management doesn't stop here, a menu dedicated for this purpose allows to run a number of important commands on modifying images, among them image correction features and even their correlation features useful for the image geo-referencing.
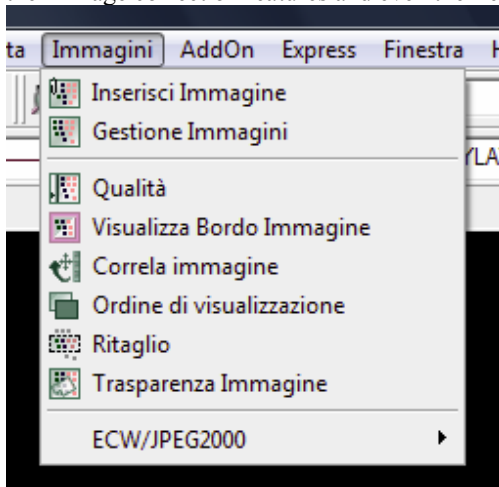

Fig. 7 – The image menu with all its commands. These commands allow to work with images and among the most interesting ones you can find features to correlate images, to manage their transparence and some particular features dedicated to ECW images.

The most noteworthy novelty in progeCAD version is the availability of an import feature for Google Earth images and to export objects created in progeCAD in Google Earth. It could seem a mere banality but this feature is very interesting for applications in various sectors, and first of all in architecture, where it allows to integrate an industrial object in the urban context, simply using Google Earth functionalities, and not only that, the feature turns out to be interesting for all specialists in topographic sector, in the landscape design segment, or for infrastructure designers. The scope where it can be applied is huge and its functionality is in compliance with plug-ins developed by the Autodesk Labs programmers for AutoCAD.
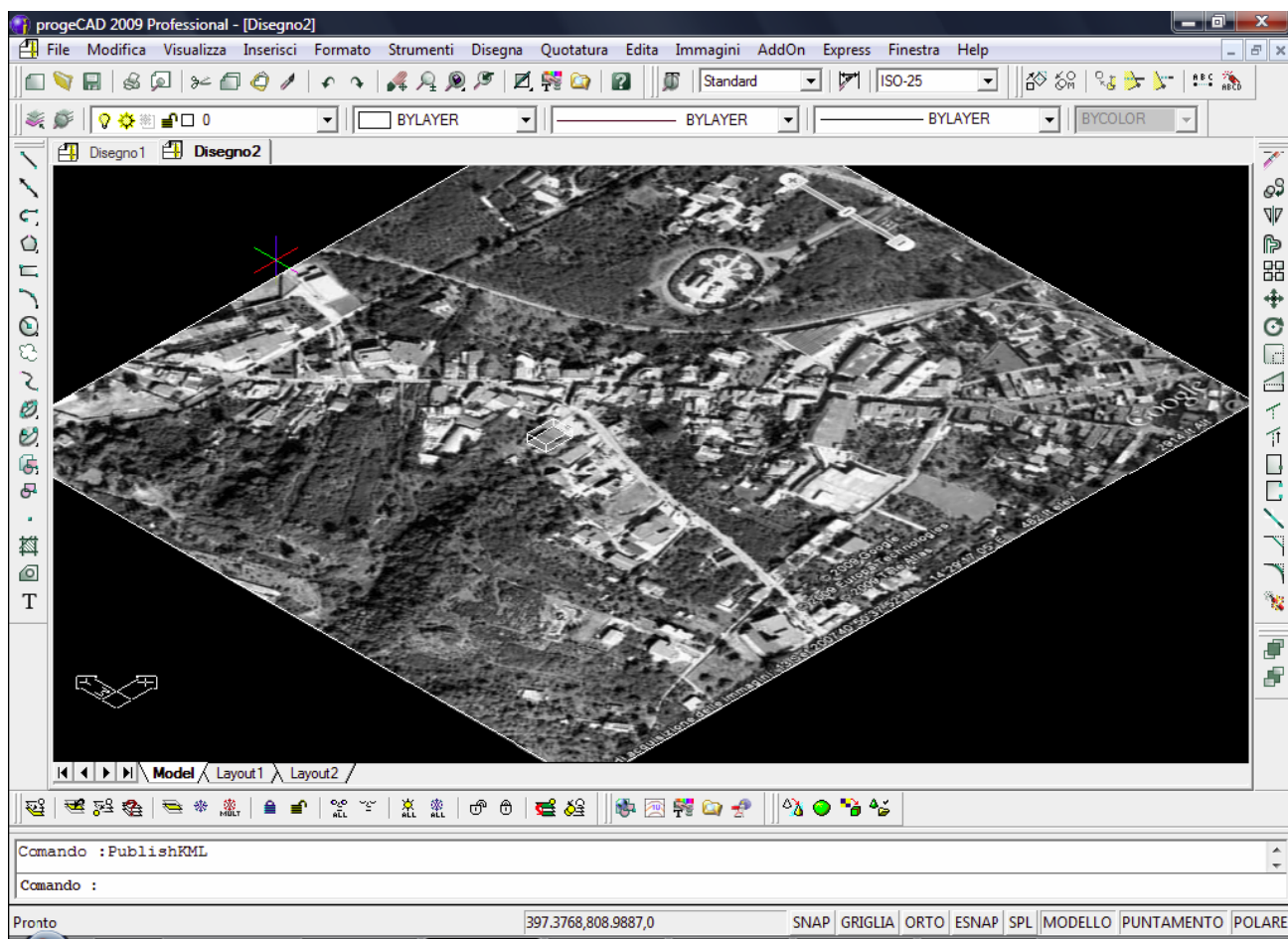
Fig. 8 – Google Earth image uploaded in progeCAD. In the centre you can see a box drawn in progeCAD that afterwards will be exported in Google Earth.

Fig. 9 – The Google Earth Export Dialog Box. It allows to insert the data for geo-referencing and then creates the KMZ file used in Google Earth
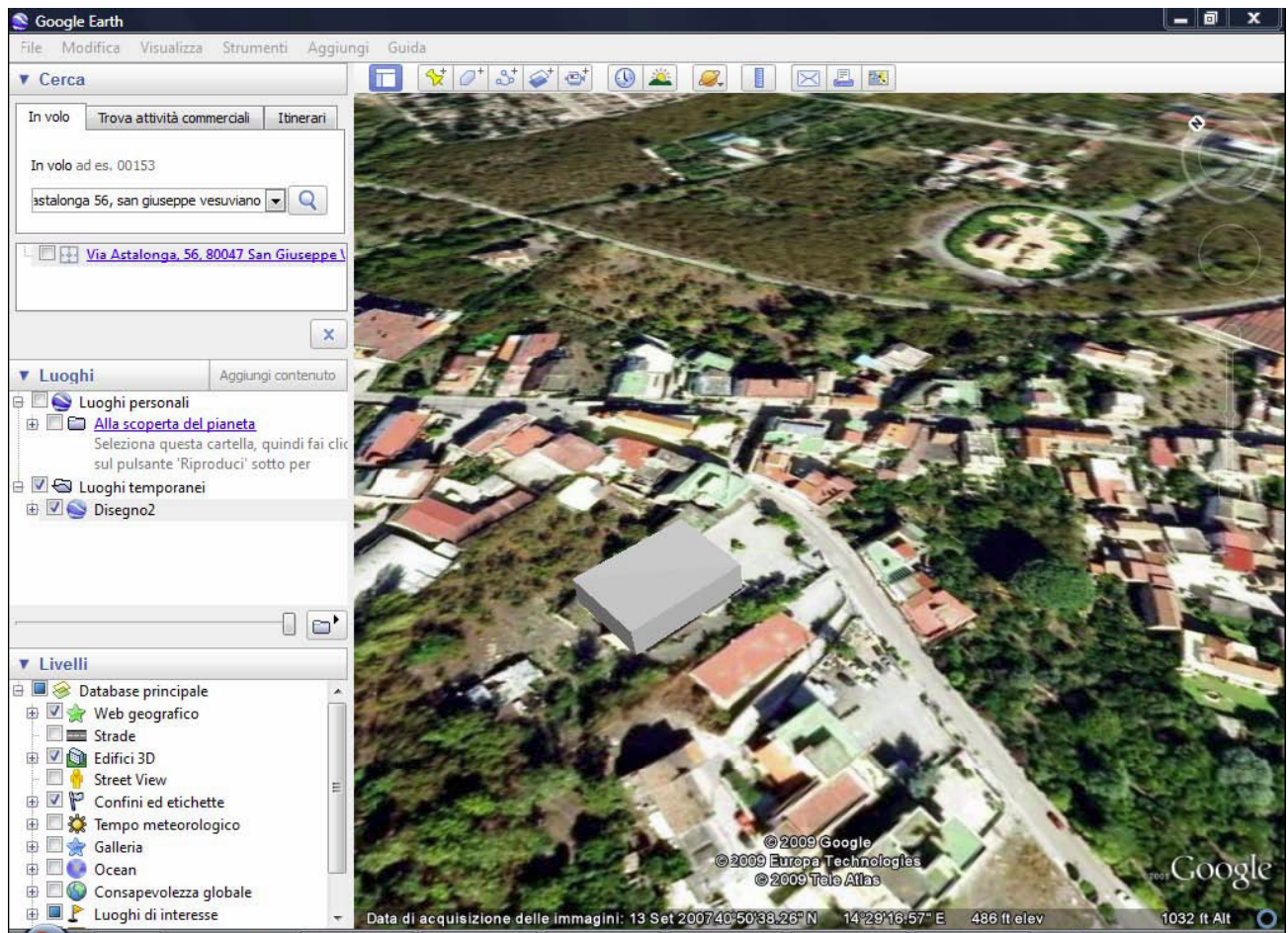
Fig. 10 – The procedure is completed. The object is inserted in Google Earth.

But the software performance capabilities are not exhausted here taking in consideration the layers and styles explorer dialog box so well done. It allows easily to move through these style definitions and objects in the drawing.
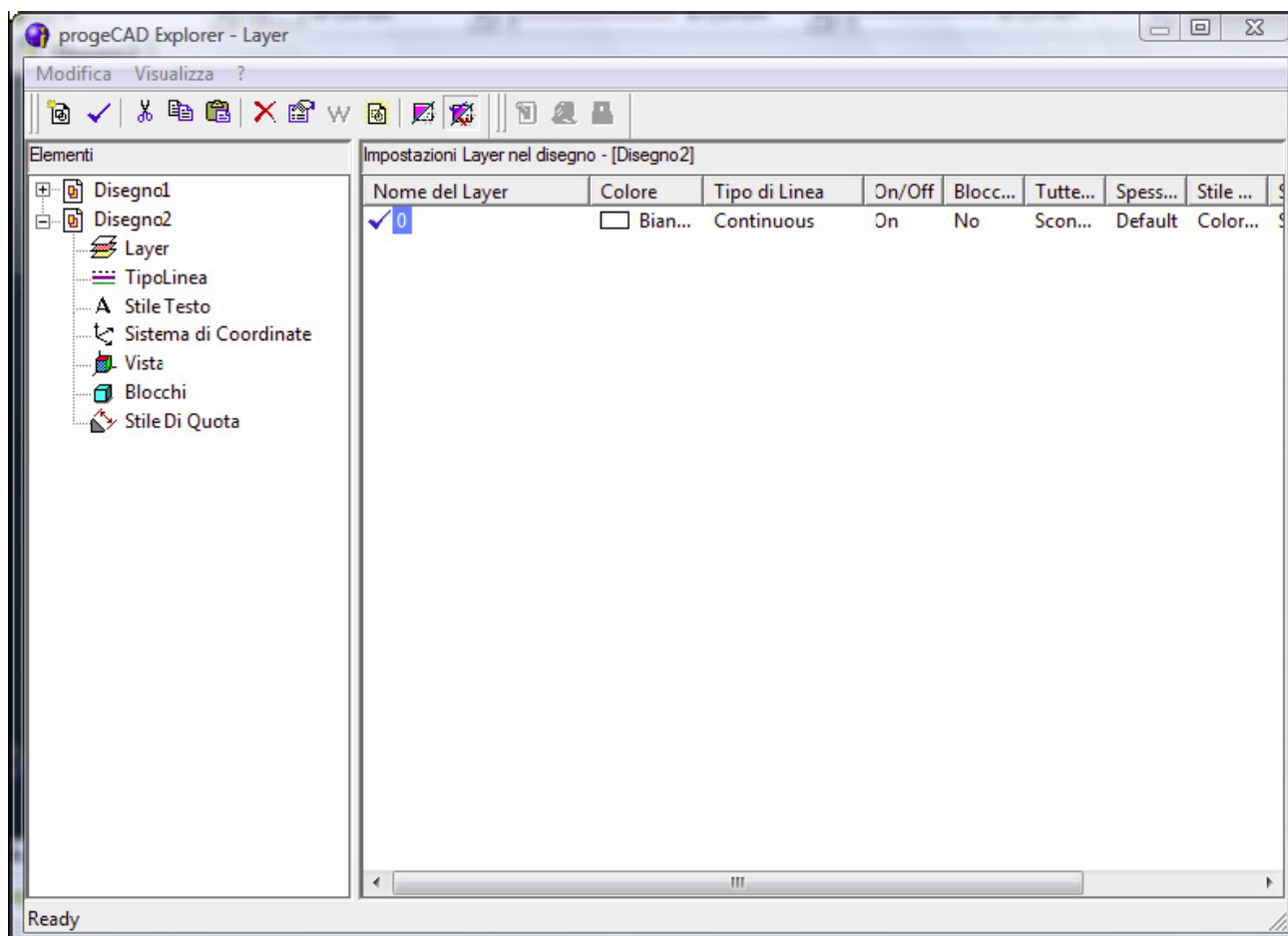
Fig. 11 – The progeCAD Explorer dialog box allows to manage not only layers but also all the drawing styles so that you can modify the drawing settings from the one control centre.

As far as the Print concerns, progeCAD 2009 Professional allows in addition to the classic Print Setup dialog box the direct print either in PDF or in DWF formats. To crown it all, the software programming possibilities have been extended. To start with the scripts, that have a convenient recorder, then to pass to Lisp, to SDS, that is equivalent to the ADS language of AutoCAD, and to conclude with the VBA macros that interact with the ActiveX object model of the application. As it was already noted in the review of the previous version, the only thing lacking is an internal AutoLisp editor. The PDF file import already exists and it is carried out through an integrated in the software application developed by the third party but enabled and managed directly within the software. The command enabling it is PDF2CAD and it functions within the limits of a vectorizer; to say the truth it works rather well even with lines, though there occur some problems with tests that are converted as solid hatches. Besides, creating a PDF file you convert all the entities in raster, so the whole drawing is inserted as an image and there is no opportunity to work with objects any more, but this problem does not cause harm to the quality of the product.
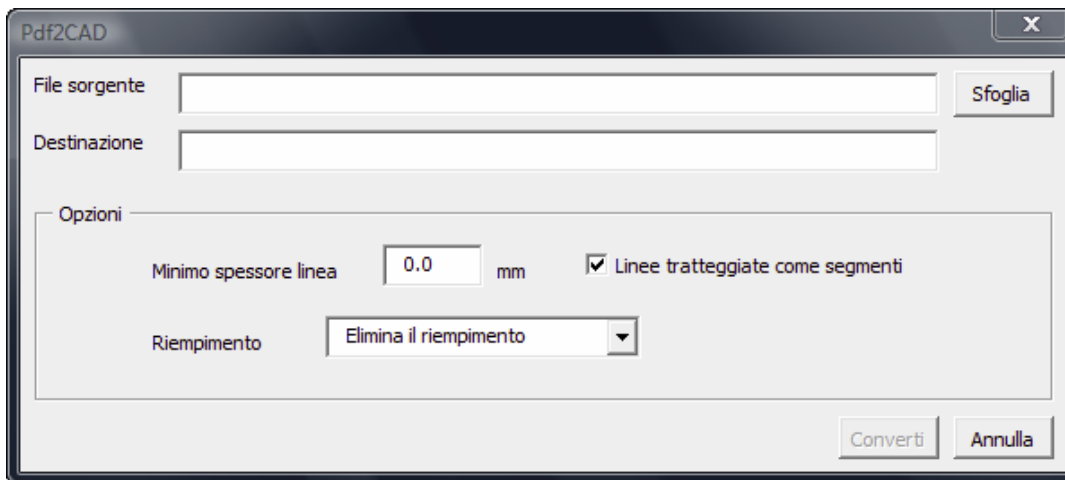
Fig. 12 – The Pdf2CAD dialog box, a useful tool to work with the technical documentation coming from the third party. It functions within limits of the vectorizer software.

Alongside with this tool progeCAD 2009 includes WinTopo, a raster to vector software converting graphic files into DWG files. And in this way it completes the package with this type of features. To finish up with the product presentation we would like to mark the availability of the Express commands, a number of additional commands with an evident reference to the AutoCAD Express commands. The above-mentioned commands provide additional functionalities in regard with the management of layers, tests and blocks, as well as providing a command that adds and inquires extended data to the objects drawn. Coming up to the novelties of this version: we have already talked about the interaction with Google Earth, now we would like to note the automatic dimensions, enabled by the command "Quick Dimension" that allows to obtain continue, polygonal or baseline dimensions, useful to quicken the presentation stage of the drawing. Another innovation treats the spell checker that has been improved.
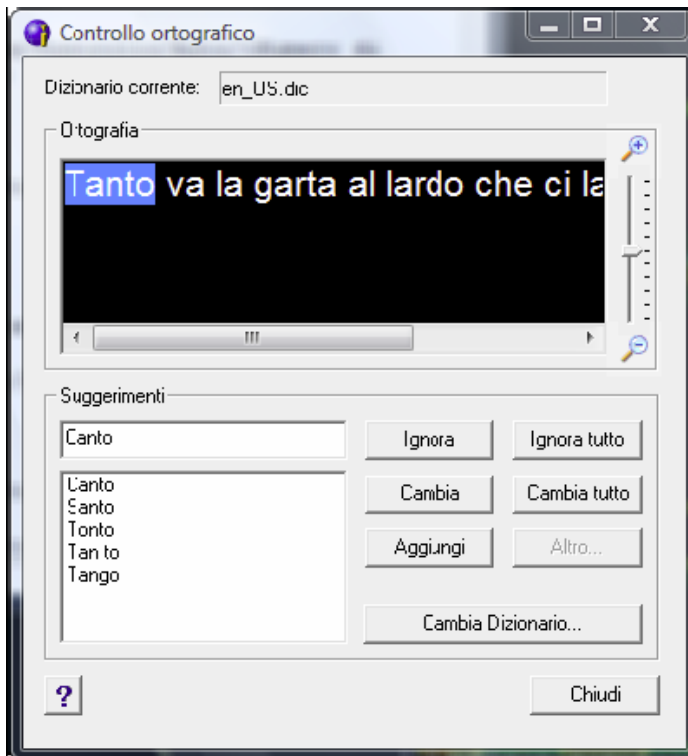
Fig. 13 – The improved spell checker. In the dialog box the American English dictionary is activated that marks misspellings not yet corrected.

Among the most important specific features introduced in the new software version you can note the page size visualization in layouts and management of the background colour, the wizard for the Attributes and Blocks data export and configuration, the double click immediate test modification and advanced Layer management with the filter/group support.
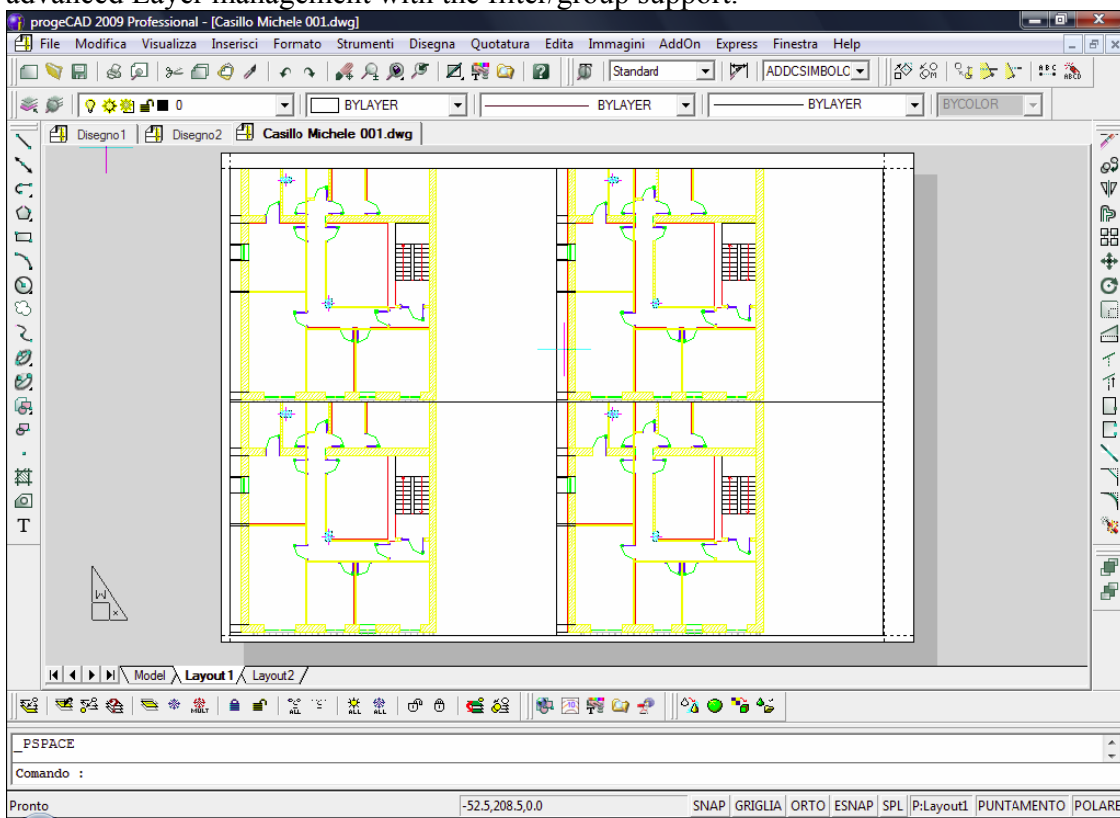

Fig. 14 – In this version when you pass to layouts, you can see the page size, so that you could have a better control over the print stage. Even in this case progeCAD corresponds to the standards introduced by AutoCAD.

Conclusions

This is the third review that we are writing on progeCAD, at a distance of 4 years from the first time when we compared the product. From year to year the progeSOFT team work becomes more and more arduous, to improve a software already excellent, to complete it with functionalities already rather extended. Nevertheless the developing team from Como seem to go in search for new features every year, it is also the merit of the excellent network of contacts that participation in the ITC Consortium proposes. In fact, the great part of the offered in the software features were developed by the consortium or by the associated with it companies. A dense network of contacts that is constantly being growing allows to exchange the source codes, even at the cost of paying royalties to their legitimate proprietors. For example, this is the case of an excellent library for image management developed by a Turkish company but licensed and included in its software package by progeSOFT.

In such a way every year progeSOFT succeeds in proposing an even more complete solution to allow technical departments to have a product of reference for the electronic technical drawing.

This year they're moving forward with refinement of the features already existent and with adding a couple of zests, in particular, the interaction with Google Earth and the automatic dimension feature.

Apart from this the ITC Consortium goes on with its work on the project, fixing bugs and providing a software with more functionalities and making all the time the software more and more widely used. The fact that demonstrates it: when we received the package and installed it, we had version 9.0.16, but some days later on opening the software there popped up a message informing us of an update available. We were invited to restart the application and at that moment the update was installed.

This review is a result of a long trial of the product where we tested not only the software features, but also the general use of the software, first of all in its common functioning and its day after day usage; and to tell the truth we were convinced with the software. In its everyday usage the progeCAD 2009 Professional package always supplied us with a useful tool to resolve this or that problem, from inserting geo-referenced images to geo-referencing new images, as if it were a scanned cadastral map, to pass to the PDF vectorization, that could be useful when you need particular structural parts when you turn to producers' catalogues, and to finish with the possibility of the PDF print. Finally, we shouldn't neglect render creation or Google Earth model export, allowing us to create a simulation of realistic photos.

All in all this product is complete, programmable and as a result available for extensions, the pleasant news is that some add-ons and applications are already on sale.

The strong point of the software is certainly its price.

By the way, what competitors has he got? Certainly, AutoCAD 2009 and AutoCAD LT 2009, that cost correspondingly 4775 euro and 1500 euro, but also VectorWorks by Nemetschek (that costs almost 2000 euro) or Bentley Microstation (that costs like AutoCAD 2009). In fact, regarding the price band we should confront the progeCAD software with AutoCAD LT or with VectorWorks Basic, meanwhile regarding its functionality it should be compared with AutoCAD or Microstation, as some progeCAD features can be found only in these types of software. To tell the whole truth, you won't find all these features even in the mentioned above products without turning to third party applications (freeware or payware).

It would be an error to confront progeCAD with a software for design such as Revit, Allplan, ArchiCAD or ArchLINE as these types of software, as it was noted in the presentation part, target a particular category of customers. These types of software assist you in designing and not in

drafting, and though they are perfect in their field they leave yet much to desire in the drafting stage of a project. At best they leave not covered some disciplines, that a software for drafting such as progeCAD does cover exactly because of its simplicity.

Therefore it is not for us to decide the winner, we have just collated features and prices, and progeCAD results to be the most economic in the competition, though it has even a greater number of features against the other software of the contest. It will become a privilege of those who are preparing to purchase the software to confront the efficiency of the progeCAD features.

As chronicle obliges we can't help but mentioning some announcements of the ITC Consortium, regarding the completion of version 7 of IntelliCAD (progeCAD 2009 is based on version 6.6) that completely rewrites the source code of the application, implementing the ARX technology and ObjectARX of Autodesk, and so providing the possibility of programming for much more third party developers who nowadays write applications in this mode. This rewriting of the source code will not only bring features to developers, but also a better operating of the product that, notwithstanding adding various pieces of the code written by various developers in these years, it has managed to maintain the same structure enriching it but not modifying the base. It is due to this fact that its technology is still compared with AutoCAD R14. But when the new IntelliCAD heart will be implemented in progeCAD, it will be brought up to date with modern programming technologies that will provide interfaces highly customizable and better developed and quicker features.

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