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COMPUTERS AND YOU

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New features in AutoCAD 2010

AutoCAD represents one of the most exciting releases, offering each year new features across the board, in a manner that everybody may find something valuable. Some applications of AutoCAD 2010 are interesting such as the parametric constraints that lead to dynamic blocks improvements and to dimensions enhancements. Geometric constraints control geometric relationships between objects and the coordinate system, reducing the possibility for errors and forcing other objects to change automatically to uphold the constraint. Dimensional constraints control dimensions by adding linear, aligned, radial and diameter constraints using a new Parameters Manager.

Ethical issues in AutoCAD

In spite of these features, which are very well appreciated, there are many minor new features that don't bring a huge evolution of AutoCAD. For example, the new Action Macro Manager brings just minor improvements to the former Action Recorder, and the same minor effect is made by the Quick Access toolbar's right-click menu. Also, the new file format that AutoCAD uses is an issue for the users that works with more than one release.

Some negative consequences result from the constant new releases of AutoCAD. One of them is the emergence of an asymmetric competition between those professionals which are always in the possession of the newest versions and those who couldn't afford the upgrade. In the article *Why the future doesn't need us* [1], Bill Joy shows the threat of the new technologies for the human beings. Another one is the effect on professionals, who, for the sake of larger social goals and the competition in the areas their threatened professions represent; they undermine their own values and resort to piracy. Craig Summers and Eric Markusen explain largely in the article *Why Good People Do Bad Things: The Case of Collective Violence* [2] how the people adapt their values by the actions they take to accomplish their objectives. When these actions turn into piracy, it becomes an ethical issue, according to the 5th imperative formulated in *ACM Code of Ethics and Professional Conduct* that refers to "honor property rights including copyright and patent" [3].

The most common inconvenience of the upgrading is related to the cost associated (and that cannot be ignored) with the acquisition of a new version. But beyond this inconvenience, there are many others, which must be taken into account: a new installation is necessary, and this involves the time consuming the setting up of new personal parameters and the adaptation of new features. Also, the specialists recommend changing the equipment in order to have a good function of the software. Is there an investment return? Are the new features absolutely necessary to perform your work? If the evolution is really important and if constructive ideas lead to a system improvement, it is worth the change from the old version to a new one, but that is not always the case. And for some people, it is difficult and tiring to adapt continuously to new

versions. Competition between professionals that have access and those who cannot have access to the newest versions becomes more and more increased [4].

Who needs professionals that couldn't adapt to the emerging technologies and didn't introduce the computerization in the product or service they provide? All their experience becomes insignificant for employers that require knowledge in new software and new programs and we can understand why George Dyson affirmed that among the players in the game of life and evolution, the winner is neither human beings nor nature, but machines [5]. Who needs architects with high creativity when they can be easily replaced by machines? All the future needs are engineers in computer technology with high creativity, professionals who can create programs compensate for the lack of creativity of users. And it is not only the lack of creativity, but also the lack of knowledge in mathematics, statistics, technical design and many other disciplines. We could say that the high technology results in de-skilling, because with the exception of the knowledge required for the use of computer and a specific program, any other skill is less important.

In the face of such evidence, a normal reaction of professionals in other fields than computer science is the wish to be in the possession of the new software or program, because this is viewed as a competitive advantage. But the acquisition is so expensive that some of those who cannot afford the luxury to buy a new version each year will try to obtain it by other ways. Many people are not conscious of the illegal aspect of piracy and do it without considering it as an attack to intellectual property. These may be people who respect the rules of society where they live and that have a good sense of ethics. Maybe they will have long moments of reflection, but at the end, they may resort to piracy by a justification of the cost and by a protest [6] over pricing. They find sufficient justification for violating the ethical principles and stealing a property that is not theirs. Craig Summers and Eric Markusen explain how we "rearrange our values" in order to reduce the inconsistency between our actions and our original values [7]. In the same article, they argue the "amoral rationality" when the people pay less attention to values and social effects, being focused on "how to best do job" [8]. In this way, many professional known for their honesty and integrity turn into illegal actions. J. Barry DeRoos, in his work Ethics in Computer Science put an accent on the influence of a new paradigm, the "common sense" in this computer age on the ethical behavior of young people.

Conclusion

What could young people understand from these kind of actions? One, that it is not a bad thing to copy software, because even the honest professionals which are an example for others do that. Second, usual rules against stealing of property can be ignored [9]. Also, why working so hard to become skilled professionals when this profession has become de-skilled? But certainly, even with these negative consequences, we cannot stop new technologies to emerge and evolve.

[1], [4], [5] Bill Joy, *Why the future doesn't need us*. In this article, the author shows that “biological species almost never survive encounters with superior competitors”. The author quotes George Dyson in *Darwin Among the Machines*: “In the game of life and evolution there are three players at the table: human beings, nature, and machines. I am firmly on the side of nature. But nature, I suspect, is on the side of the machines.”

[2], [7], [8] Craig Summers and Eric Markusen, *Journal of Systems Software*, 1992, *Why Good People Do Bad Things: The Case of Collective Violence* At p.4. Rationalization we find: “When we become aware that our actions contradict our values, we may rearrange our values after the fact to reduce inconsistency. When we are drawn into taking risks, we may adjust our beliefs about the likelihood of negative outcomes.” At p.6 the author said: “The focus is on how to best do a job, with little attention to broader values and social effects. Responsibility for the work is perceived to be limited to technical aspects.”

[3] *ACM Code of Ethics and Professional Conduct* adopted by ACM Council 10/16/92

[6] J. Barry DeRoos, *Ethics is Computer Science*, p.4: “illegal acts are ok if it is done in protest”

[9] J. Barry DeRoos, *Ethics is Computer Science*, p.3: The author quotes Strickwerda and Ross that in a recent publication suggested that not only individuals, but also corporations decided that the principles of stealing property (specifically software) can be ignored: “Some people do not care about doing the morally correct thing in any area of life. These people are not our concern. However, other people who would not think of shoplifting a book from a bookstore readily make illegal copies of software. How do people who sleep well at night turn into software thieves by day?”