Free essay on the benefits of cad in technical graphic communication

Sociology, Communication

Technical graphic communication involves the use of images to communicate information, especially among professionals in the technical design professions. CAD generated images usually accompany text as an approach to clarifying one’s point to one’s audience, whereby a person presents an idea as perceived with minimal use of words. Therefore, CAD enhances communication considerably since it improves the comprehensibility of the message to recipients and enables them to respond appropriately (Harrington, Burchard & Pitzer, 2002). Use of various imaging systems including software and manual drawing has various advantages in communications, especially since images are more effective at conveying a message than text. However, CAD is the most effective of all due to its versatility, flexibility and usability in the communication process.

In addition to the inviting nature of images as compared to text, CAD enables technical designers to be clear to colleagues and customers on the specifications of a finished product with minimal chances of ambiguity. These specifications include color, shape, size and other characteristics of a product that are specified in its design using the CAD software package (Stroud, 2011). The lack of ambiguity in any aspect of a project makes CAD drawings easy to review, evaluate, come up with recommendations for improvement and include one’s comment within the document file. In this regard, all the changes and recommendations for improvements can be easily incorporated into the document and reviewed by collaborators in a design team. These features of CAD as a design software package makes it easy for members of a team to work collaboratively on a project, whereby a project can be edited by multiple members with relative ease.

The reviewing and editing process is enhanced by the zooming feature that allows reviewers to visualize and correct intricate details in the design. In addition, the process of editing is enhanced by the simplicity of the modifications necessary to make changes on a project. For instance, changes in traditional technical graphical communication media required a laborious process of erasing and modifying multiple variables, whereas only a few parameters are changed to affect the whole design in CAD. CAD also allows for review of the spatial relationships in design elements, which is facilitated by the ability to create 3-dimensional cross-sections of the design (Omura, 2012). In this regard, CAD enables the members of the design team to work collaboratively for optimal effectiveness and efficiency of the design and the design process.

CAD results in digital files, which can be shared easily over the internet between members of a team regardless of their geographical location, which enables collaboration among team members at a global level (Chou, 2009). This eliminates the process of packaging, sorting, waiting, transportation and filing that is characterized by traditional methods of communication of technical graphics. Another important benefit of CAD is the estimation and communication of costs to team members and clients, which is possible as CAD designs involve simulation of real life dimensions, design, components, materials and other variables. Finally, technical communication using CAD designs results in reduced costs in terms of time and finances among other resources.

References

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