

Good example of the history of computers in drafting essay

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Most of the computer aided design programs that are used today in drafting may seem new to many people even though they have been in use for more than a decade. These programs trace their origin to about 50 years ago. The modern technology designs and drafting are viewed as a result of the sixteenth and seventeenth century development of the descriptive geometry. Most of the work aimed at developing computer aided drafting intensified in the post war era, with many people working at MIT on the numerical control of machine tools and automating drafting and designing. During the 1950s, all the drafting work was done using the hand. Even though all the drafting was completed, it often took a very long time to complete them. The process was equally tedious. Additionally, correcting errors committed during the drawing, even slight errors, would lead to demeaning effects on the drafts, sending the drafter back to the drawing board. However, Dr. Paul J. Hanratty invented a numerically controlled program in 1950, which allowed the use of computers to draw simple lines. Most designers embraced this technology and it produced better results compared to the initial use of hands to draw. During that time when Dr. Hanratty invented this program, the computers were very big; some even the size of a room. The computers were equally few. This led to little availability of the program to most drafters, and therefore its limited application. Nevertheless, this contribution to Computer Aided Drafting and Design has credited Dr. Hanratty as the Father of CADD.

Research continued to develop more sufficient programs to ensure that drafters had an easier and shorter times preparing their designs, and with more accuracy. Researchers at MIT later developed Dr. Hanratty's program

in 1957, and created a computer program called Pronto. This computer program allowed for the drawing of more advanced objects using the computer than the former simple lines. Nevertheless, the pending challenge at that time was the availability and costs of computers, which limited the availability and use of the computers and, therefore the program. However, the development of Pronto increased the speed and accuracy in drafting. It also ensured that the drafters spent less energy in their work, thereby making work even easier.

The invention of AutoCAD marked the commencement in objective evolution of computer aided drafting and design. The developers of the program initially intended to deliver 80% of the functionality of computer-aided drafting and design programs at that time at about 20 percent of the costs of these programs. The technology that majorly relied on 2D technology became increasingly affordable as computers were also developed into smaller units and available for many people as well as reliable. The Pro/ENGINEER was later developed in 1987 using the feature-based parametric and solid geometry techniques for the definition of parts and assemblies (Ryan, p. 41). During this time, the personal computers in use were not very powerful - the Pro/ENGINEER was run on UNIX - but it was a major development in drafting and designing. 3D modeling kernels such as the Parasolids and ACIS were later developed in the later years of that century.

Between the 1960s and the 1980s, manufacturing firms and aerospace such as Lockheed Martin and Ford made huge investments on the computer aided design and drafting programs for in-house use. These companies were some

of the companies that could afford the costs of this technology in the 1970s. Dr. Hanratty later developed the Automated Drafting and Machining program in 1972 after forming a company known as MCS. The program was used in 16 bit computers and involved several features that are present in the modern day computer aided design programs.

In the 1990s computers were developed to work at faster speeds allowing for the computation of the 3D computer aided drafting and design programs.

When the first subject of desktop engineering was first published in 1995, SolidWorks was released as the first solid modeler for windows (Madsen, p. 10). Other programs such as the Inventor, Solid Edge, and other later followed. In that decade, newer companies acquired most of the original computer aided design and drafting developers from the 1960s. the industry was therefore consolidated by the four major players including Dassault, Autodesk, Systemes, PLM, and PTC alongside other smaller developers.

The incorporation of analysis, improvements in modeling, and management of the created products have marked the modern computer aided designing era. The management of the created programs have included the engineering and conception as well as manufacturing of the products, their marketing and sales, and their eventual maintenance. It is believed that most of the work in computer aided designs have not changed, but have just updated their interfaces and added features to the programs. AutoCAD has been developed into the interfaces using the Macintosh, Windows and other available PC interfaces at affordable prices. Compared to the former years of drafting and design, drafting has become easier and efficient since the errors

can be corrected without having to start anew. The costs of the programs and the computers are also affordable and are available off the shelves.

References;

Ryan, Dan. History of Computer Graphics: DLR Associates Series.

Bloomington, Indiana; Author House, 2011. Print

Madsen, David. Engineering Drawing and Design. Stamford, Connecticut:

Cengage Learning, 2011. Print