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VIEWING OF GRAPHICAL INFORMATION.

Over 20 years of work in Scientific Visualization, Human Factors, and Semiotics indicates that there exists a direct correlation between how data is represented and the meaning we can extract from it. Better representations mean better understanding (Agutter, 2005, http://www.aia.org/SiteObjects/files/Agutter_color.pdf). Modern computer and communication technology includes use of computers, multimedia, and other technological tools to enhance the teaching and learning process. According to the dual coding theory „recall/recognition is enhanced by presenting information in both visual and verbal form. Combining pictures, mental imagery, and verbal elaboration is even more effective in promoting understanding and learning from text by students ranging from grade school to university level"(Paivio, 2006, http://www.umich.edu/~rdytolrn/pathwaysconference/ presentations/paivio.pdf). In today's world, information usually comes to us in the form of words. Its form that if readers follow the left-to-right, top-to-bottom sequence through the text, they will be working through the elements and ideas in the order the author intended. However, there are no similar sequencing constraints that apply to the exploration of pictures (Lowe, 1997, http://science.uniserve.edu.au/pubs/procs/picture.pdf). A key challenge for the learner is to determine what aspects of a picture indicate how its different elements are related to each other.

Humans have remarkable perceptual abilities:

- to scan, recognise, and recall images rapidly,
- to rapidly and automatically detect patterns and changes in size, colour, shape, movement, or texture (Andrews, 2007, http://courses.iicm.tugraz.at/ivis/ivis.pdf).

Drawing Standards define using of the line types, weights which enable to express particular characteristics of the descriptive object. In order to separate different stages of drawing creation we also can use colours, when such programs as Power Point, AutoCAD are used for presentation. But it is not enough for the clear description of the sequence of the creation of graphic information. We must use the left-to-right, top-to-bottom sequence for graphic information creation as often as possible, as it is the rule used when presenting the text.

A picture to be used for instructional purposes should incorporate design features that deliberately draw attention to its critical features by making them more conspicuous (Lowe, 1997). Rule of thirds is a principle of composition that has been used for centuries by artists and more recently photographers. The rule of thirds developed from the Golden Mean, which was used by ancient Greece sculptors and European painters since the middle Ages. This dealt with subject placement and was a proven formula for producing pleasing works of art. Renaissance painters found that the eye doesn't rest on the centre of a picture.

Research on eye movement states that people from western cultures tend to look at the upper left-hand area of a graphic or web page first. Eye movement then tends to move to the right and then to the bottom.

The "rule of thirds" is a principle of photographic and graphic composition in which a graphic is divided into thirds both vertically and horizontally and the centers of the viewer's attention are located near the intersections of these lines (http://iit.bloomu.edu/multimedia/VisualDesign/thirds.html). When taking a picture with horizontal lines, place the horizontal lines on one of the horizontal thirds, depending on the emphasis you want in the picture. Using the rule of thirds helps produce nicely balanced easy on the eye pictures.

The standard templates in PowerPoint are not composed by this rule. So, we must take it into consideration by preparing presentations.

ISO Standard System defines possibility to use either 1st angle or 3rd angle projections for drawing creation. According to the 3rd angle technique users it is much more intuitive. Please take a look (Fig. 1) how from the positions of rule of thirds seems 1st angle and 3rd angle projections.
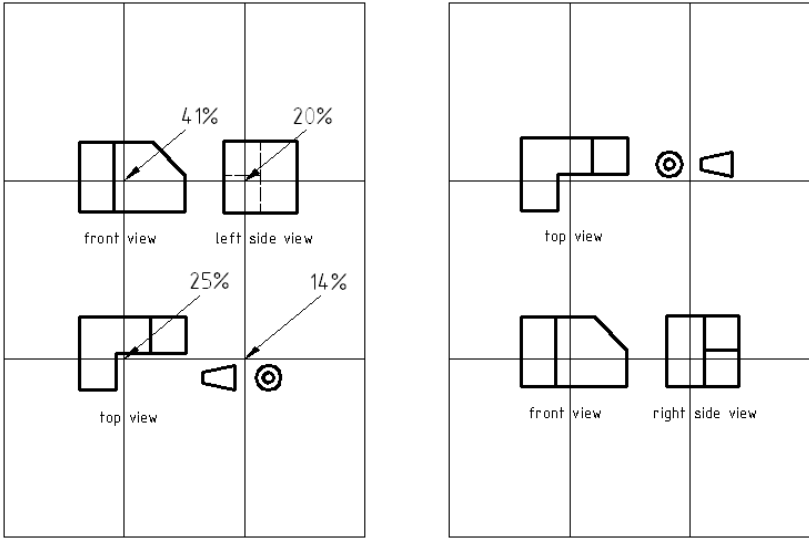
Fig.1. 1st angle and 3rd angle projections and the rule of thirds

The 1st angle method is the better match up to the rule of thirds. We have the most natural for our perception front view in the best place.