Visualization Texts. From Interactive Comics to Motion Pictures with Immersion
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The concepts of visualization language and visualization text are considered. Originally the concept of pictorial (graphical) text was used to describe the petroglyphes and ancient illustrative pictures depicted some narratives. The graphical language is described by the semiotical formula of Ch. Morris as a set of sign tools that are defined by syntactical, semantic, and pragmatic rules. The interpretation principle for graphical texts was formulated (Raevski interpretation principle): interpretation of such texts is possible only if the "readers" of the text have external information. This principle is similar to the principle of intuitive use.

Present-day comics and manga may be described in terms of visual texts. You can describe rich and complex languages of pictorial art based on natural imagery, but in this case the task of the detailed language description is rather complex and often uncertain. Also complex and weakly formalizable dynamic languages of cinema and animation may be described. Similarly, we can define graphical texts associated with computer visualization. The examples of those visualization texts are:
• isolated displays;
• dynamic logically related shot changes with the inclusion of interaction;
• animations also with the inclusion of interaction.

The goal of visualization is to leverage existing scientific methods by providing new scientific insight through visual methods. Virtual Reality environments are actively used to provide leaping into a new quality of cognitive visualization. Virtual environments are characterized by such features as egocentric point-of-views and user-centered often multi-sensory interactions. The Virtual Reality environments are dynamic, rather than static. The user's experience of the virtual world may combine a visual channel with the auditory or kinesthetic feedbacks. The immersion and sense of presence (feeling of "being there") are factors which defines virtual reality. The sense of presence distinguishes virtual reality from "traditional" 3D Computer Graphics. Users "immersed" in virtual reality control the graphics output. Also users may participate in adaptive control of application system. The essence of virtual reality is contained in it the interaction between the user and the virtual environment. Raevski interpretation principle is very important in the case of visualization based on Virtual Reality.

One may consider the evolution from comics-like visualization methods to controlled animation-like movies and from these movies to full insight and controlled immersion processes. In its own right visualization languages of virtual reality may be considered. But visualization language in the case of "immersion movies" becomes much more complicated and it needs further description. It appears that a new quality of visualization can be achieved primarily through:
Immersion in virtual reality;
Creating an interactive "movie";
Presence of a controlled and modifiable "screen story" ("movie" script).
The language of this script is the language of the visualization description (and may be visualization depiction - in the case of visual languages). The languages have to support history tracing including the visualization and interaction traces and fixing of insight experiences. The examples of "immersion movies" will be used in Computer Visualization systems.

Short Bio:
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