

## 3D MOVIES AT HOME

S.S.Klochko – group IN-02

E.I.Zolotova – EL Adviser

Introduction of volumetric 3D movies in the film industry can be likened to a revolution in the field of cinema, which gave the transition from black and white to color a picture or appearance in the film sound. Hollywood studios have experience in 3D cinema technology, however, despite the current financial difficulties, the technology is already in a short time must find a way to screen home theater.

The question arises: if a 3D-image is so good, why does the movie industry did not take him back in the time of its appearance - in the 50's of last century? It should be noted that 3D movies cost 10-20% more expensive than "normal", moreover, they are complicated to manufacture. In addition, the need to take two cameras that would work synchronously, which is quite a challenge. All three-dimensional films consist of two images - one for the right eye and another for the left. If the image data is synchronized correctly, but a viewer looks at the screen through special glasses, the two pictures for him merge into a single volume.

The earliest three-dimensional movies were shown with two projectors, which operate synchronously, and each of which displays a picture of his color. Spectators enjoyed the glasses with color filters - red for one eye and one blue to another. Due to problematic data images from two projectors in one of the audience after such a view, usually a headache or eye. Despite the fact that the basic technology for producing 3D images for the cinema has not changed, a new digital three-dimensional image is much easier to see and better. By the same image can now be formed using a single projector, which provides alternate output image to the right and left eyes.

Appeared in 2009, DLP TVs with rear projection and home projectors high resolution allows you to watch 3D movies at home. However, while this possibility is limited to software conflicts, players and codecs from different manufacturers, the lack of interoperability between different content formats, the presence of hardware incompatibilities and control devices required. For example, to view three-dimensional movies at home requires special high-quality 3D glasses gate type with a flicker frequency of at least 60 Hz for a sufficient viewing angle 3D-image. Therefore, the home viewer is watching a much better picture than the 3d at the cinema, using passive polarized glasses. For this reason, the user will see a substantial difference in quality, viewing 3D movies at home with the help of modern media player. Compared with what can be seen in the cinema, the effects at home viewing will be much more convincing.

Lack of uniform standards in this area - is one of the obstacles to viewing 3D movies at home. In order to remedy this situation the company has developed a 3D Vision HomeSystems common software standards for all entries 3D-images. Firm specializing in the manufacture of parts and home electronics are also exploring the possibility of 3D-view movies at home, but no one company can not offer a solution to the complex. At the moment our specialists develop unique professional video equipment, intended for home viewing of three-dimensional movies of its own production.

During the three-dimensional images - the future of home cinema. However, in order to make this "magic" idea was embodied in practice need to successfully achieve two main objectives: "to equip" the film industry standard equipment to capture and further processing of 3D-video content, available to develop end-user tools for viewing movies in surround format, 3D Full HD. And although the three-dimensional image has not won a home theater, a time when every "home-cinema-goer will receive the opportunity to watch three-dimensional movies at home, getting closer.