

CREATE ANIMATION FROM A SINGLE IMAGE

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ABSTRACT

This paper will describe method for easily making animation from one 2D picture or photograph of a scene. In this method, animation is created from the viewpoint of a camera which can be three-dimensionally “walked or flown-through” the 2D picture or photograph. To make such animation, conventional computer vision techniques cannot be applied in the 3D modeling process for the scene, using only a single 2D image (picture or photograph). Animation is easily generated without the need of multiple 2D images.

Unlike existing methods, presented method is not intended to construct a precise 3D scene model. The scene model is rather simple, and not fully 3D structured. The modeling process starts by specifying the vanishing point in the 2D image. Furthermore a virtual camera is moved around the 3D scene model, with the viewing angle being freely controlled. In this process, we are using Adobe programs – Photoshop Extended CS3 and After Effects CS3.

Keywords: animation, vanishing point, field – of – view angle, modeling, rendering

1. INTRODUCTION

In this work we show the concept of points evanescence (U.S. vanishing points; *. **vpe**). This concept in computer graphics allow you to transform a 2D image in the set of 3D PNG image formats that produce 3D scene. When you use the vanishing Point feature in Photoshop Extended, you can use command **File / Export For After Effects CS3 (. vpe)** to record a result of the work as a collection of PNG files - one for each plane - and one **.vpe** file that describes the scene geometry. You can then import the **.vpe** file in After Effects, which uses information from **.vpe** file to re-create the scene as a composition containing the camera layer and corrected 3D layer for each PNG file.

2. PROCEDURE IN PHOTOSHOP

The procedure runs in the program Photoshop Extended and loading the image that the user wants to use as a scene, in this case **KonfSala.jpg** (Figure 1). In the filter should be selecting vanishing Point. On the screen appears a new window - vanishing Point and it loaded image scene. This window is equipped with a modest set of tools. In this paper we focus on the use of tools, Create and Edit Plane plane. Selects the Create Plane tool and should draw plane, in perspective, from the front to the center of the plan. Bounding box and raster network level perspective of the blue (Figure 2) when they are correctly set. If you have problems with setting temenih facilities, not even a correct bounding box and raster network or red or yellow. When the plane is not correctly set, move vertices knots until the bounding box and raster network both in blue.



Figure 1. Loading image in Photoshop

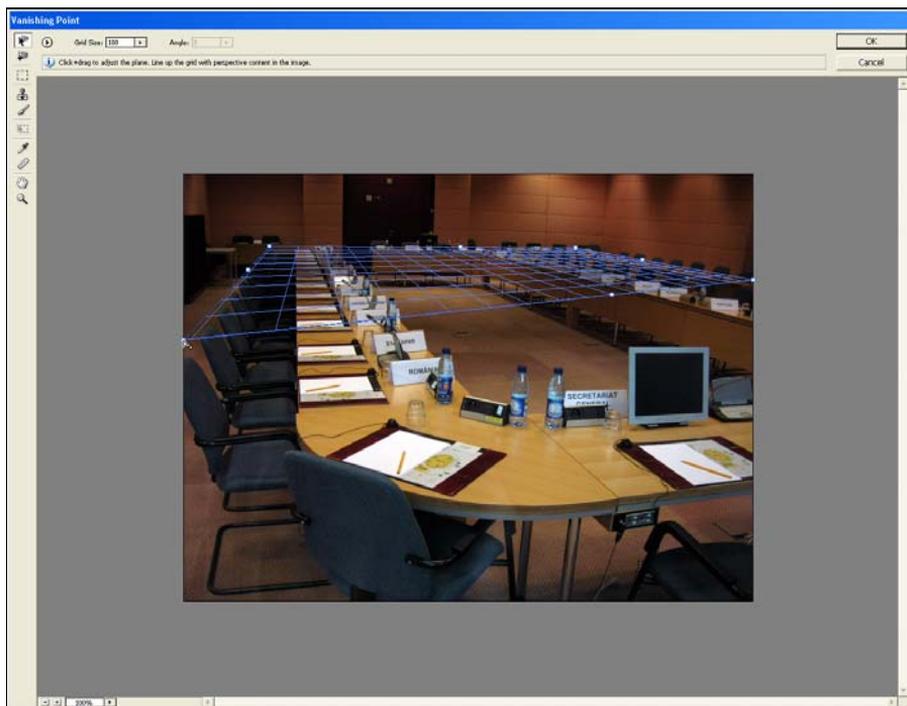


Figure 2. Drawing plane in perspective

Using the **Ctrl** key selects the right central marker (node) at the border and the dash to the right side (vertical) plane. Additional (side) plane is set under 90 degrees. If you need prominent angle under the plane, you should press and hold **Alt** key and rotate the node.

Files created in this process will be later in the import composition in After Effects. Plane created in the process of forming layers of composition, and therefore it is important that the background is at the bottom of the stack of layers. Notice later in After Effects the user can see the background through the RLA files that are in the layers above. This is a consequence of the fact that the RLA files created with alpha channels.

Should continue with the central node point until it included all the visible image plane. When the set level selects all the **Setting button and Commands for vanishing Point** and then selects the options for **Export vanishing Point (.vpe)** (Figure 3).

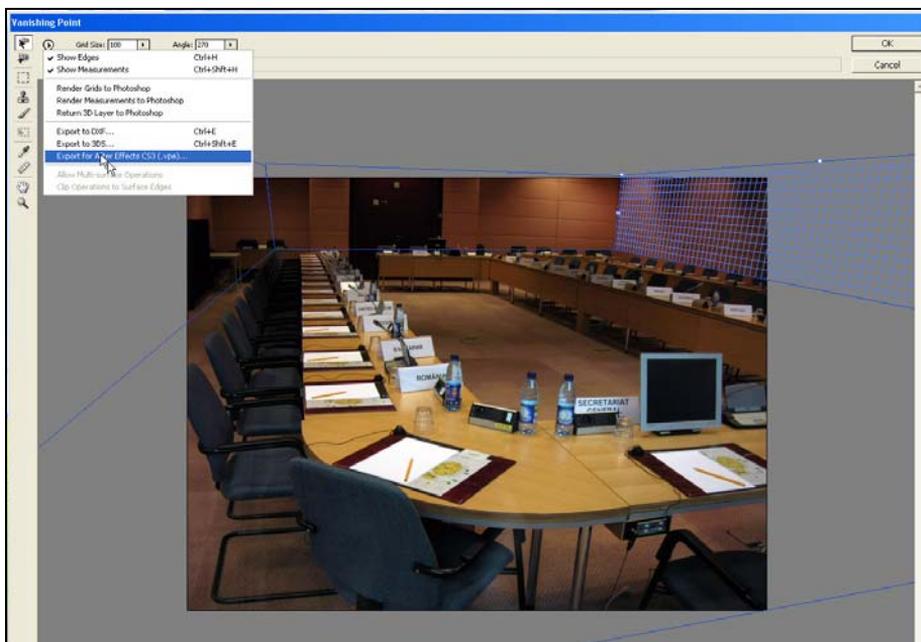


Figure 3. Visible image plane

3. PROCEDURE IN AFTEREFFECTS

Launching the program After Effects. In the File menu should click **Import / vanishing Point (.vpe)**. It should be noticed that the Photoshop folder, a „KonfSala.vpe“. This folder contains *. **png** files that are in correlation with the flat that are created in Photoshop and **.vpe** file announces After Effects to create a scene of them. Click on a file named „KonfSala.vpe“. In some cases, a warning will appear on the picture, but it should be ignored.

What is immediately noticeable is that the file is not correctly oriented in the Composition, ie. on the stage. You should orient the file so that the scene is set correctly.

You need to animate the camera moving back and left-right in the period of 10 or a few tens of seconds. You should inform the **QuickTime file format (*.mov)**, and plays the movie and wish to continue further work on the development of a video presentation (Figure 4-7).

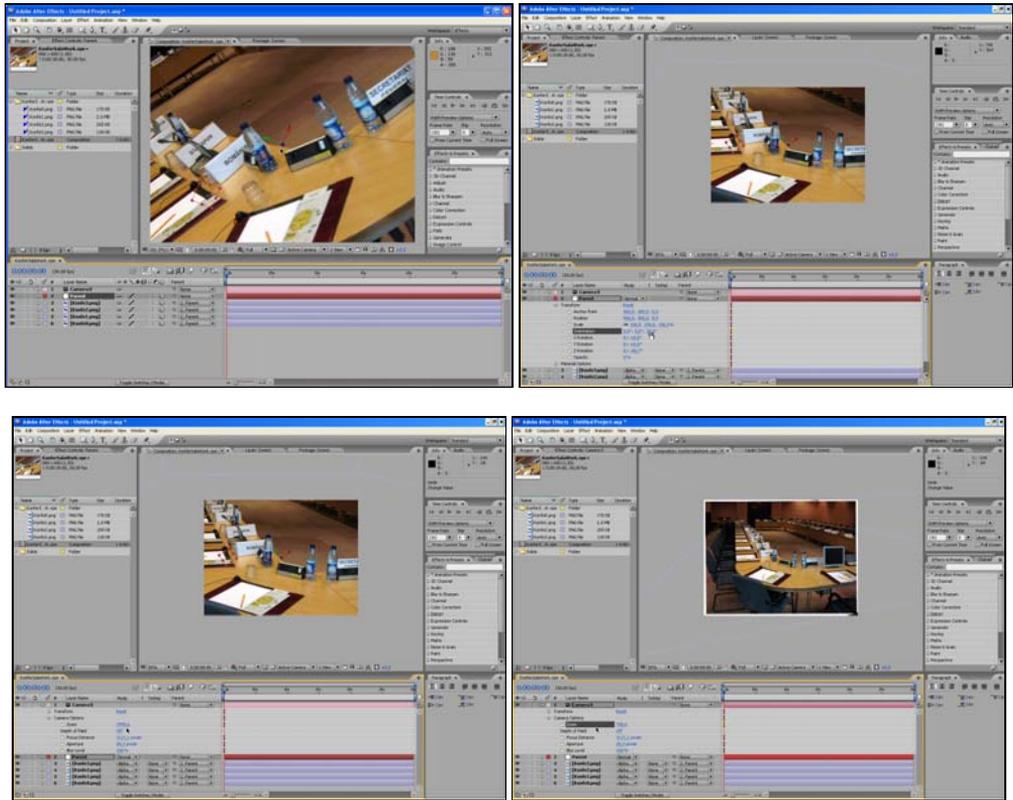


Figure 4-7. Visible image plane

4. CONCLUSION

Since one of the first theoretical work on this issue, has not passed a lot of time while the company Adobe included this issue in one of its programs. It should be noted that Adobe is the company fit the complexity of above algorithm, which allows time to end the easy way. In this way, students and other users can create an animation from one image to the extremely simple way. By applying these steps in the package Adobe Creative Suite CS3 users get extremely unusual results, and sometimes surprising, regarding the investment and received.

5. REFERENCES

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