



**Geola Digital uab**

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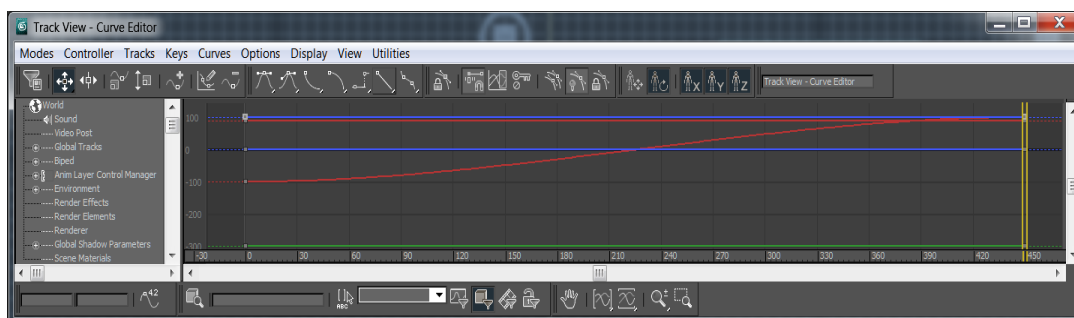
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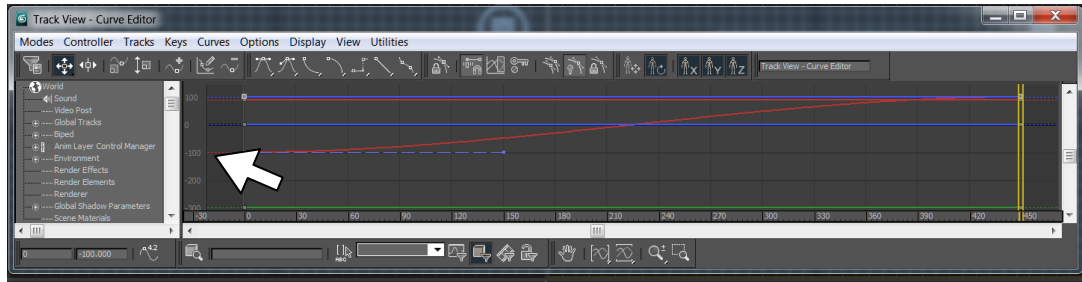
**Dr. Stanislovas Zacharovas**

## **Rendering frames for deep Geola's 3D image holograms**

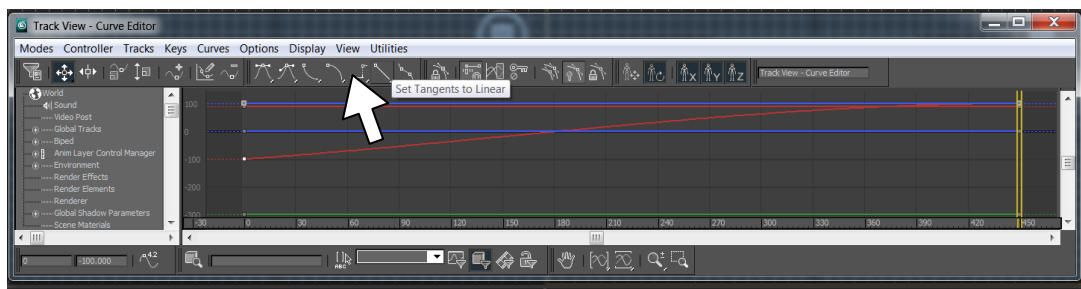
1. Create in 3D Studio max plane with coordinates  $x=0, y=0, z=0$ . The size of the plane shall be equal to your future hologram size. That's it, if your hologram will be 150x150mm, the size of the plane shall be also 150x150.
2. Make your plane semi-visible and create the scene inside the window defined by the plane. Be sure that your scene do not protrude in front of the plane for more than 20% of the plane width and do not extend behind it for more than 75% of plane width. If you will cross those boundaries – image on the hologram will be still visible outside of them, but it will be blurred.
3. Create a Free Camera facing the plane you just have created. Set for now cameras coordinates as  $x=-100, y=-300, z=0$ . Set the camera's FOV corresponding to your future hologram size as per Geola's Excel calculator.
4. Open the Time Configuration window. Define animation start and end times such so Frame Count would be equal to the quantity of frames you want to have. Frames quantity is taken from Geola's excel calculator. Use more frames for bigger and deeper images.
5. Select the camera and press Toggle Set Key mode button.
  - Pull frames slider to the leftmost position. Camera's coordinates for this position are already set:  $x=-100, y=-300, z=0$ . Press big Set Keys button and leftmost camera's position will be fixed.
  - Now pull frames slider to the rightmost position. Into the into camera's coordinates windows enter its rightmost coordinates:  $x=100, y=-300, z=0$ .
  - Exit Toggle Set Key mode by pressing it's button.
  - Pull the animation slider and check if your camera moves.
6. Right click on the camera and open Curve Editor. There you will see the camera's movement curves, which by default are not straight lines in 3D StudioMax. The most common mistake is to send us files rendered with curved cameras movements - such frames are not usable.



- Select one edge of the camera's movement curve



- And press the button Set Tangents to Linear.



- Do the same operation with the next edge of the camera's movement curve.
7. Open Render Setup and enter there rendering parameters obtained from Geola's calculator. (If you know how, set render in such a way that only the plane would be visible on rendered image, otherwise render with big black space which will be cropped later at Geola).
  8. Render images as .jpg, no compression and send us for further processing.