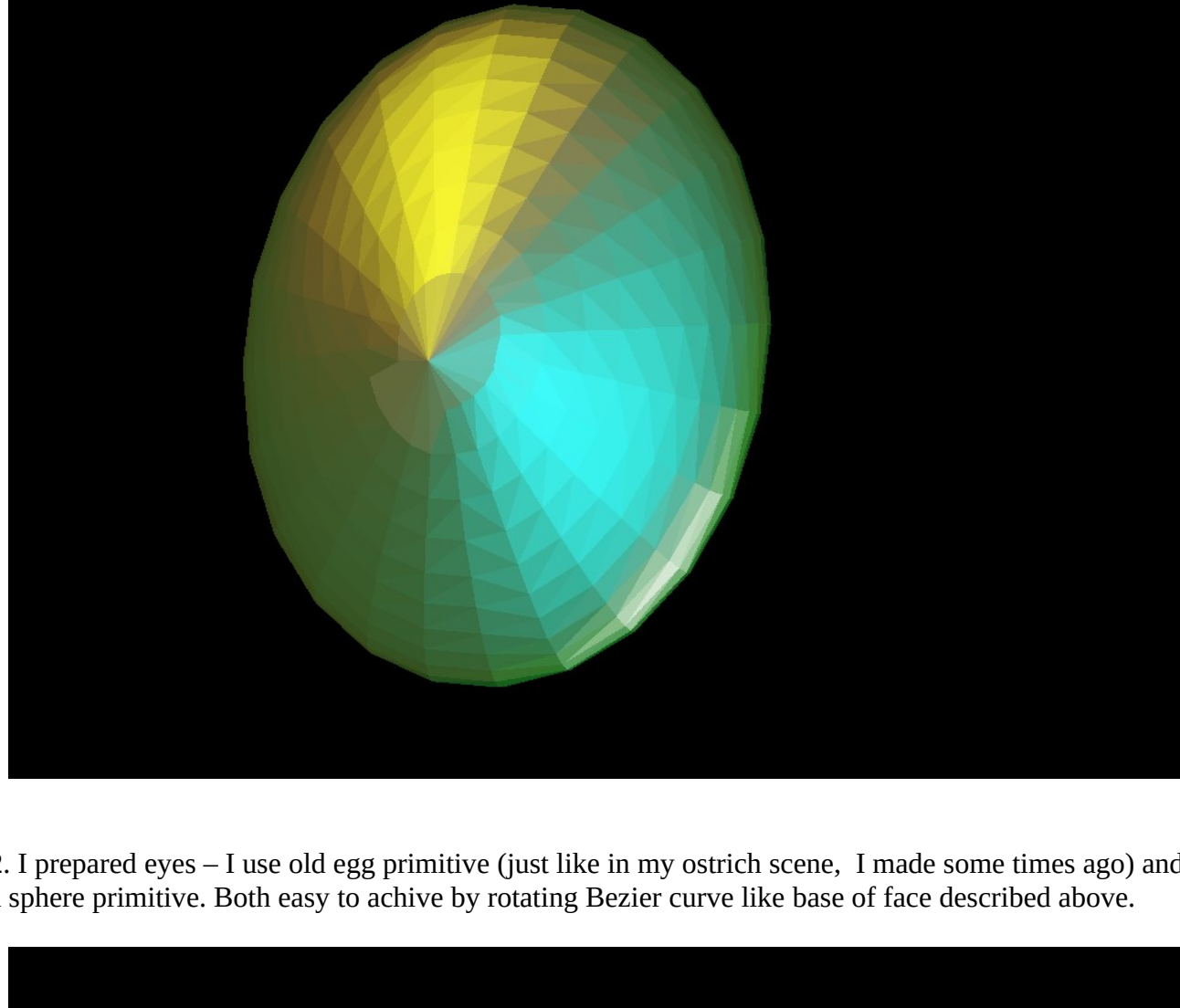
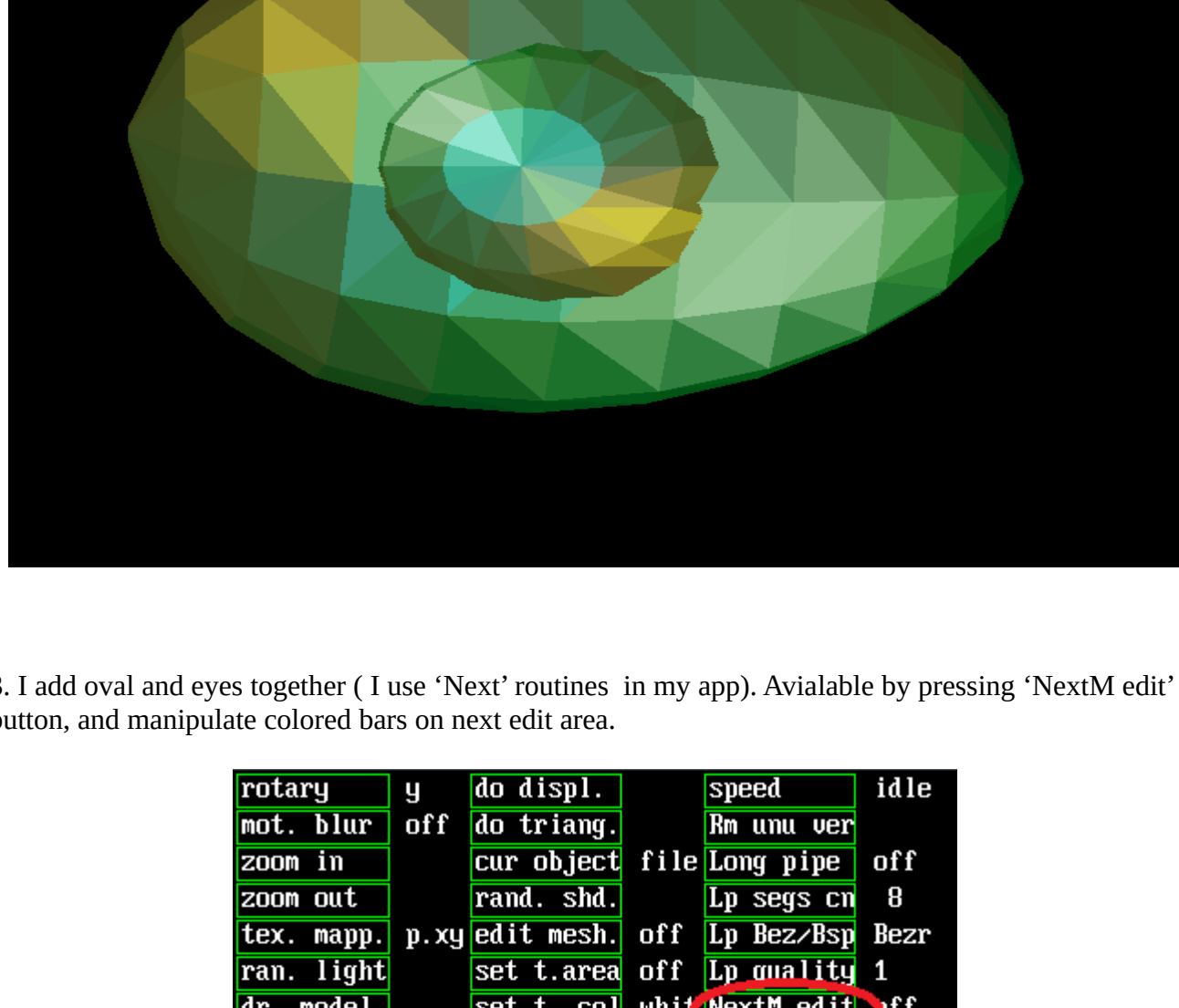


In this document, I will describe how I build a 'smiled face' object using my win3ds application.

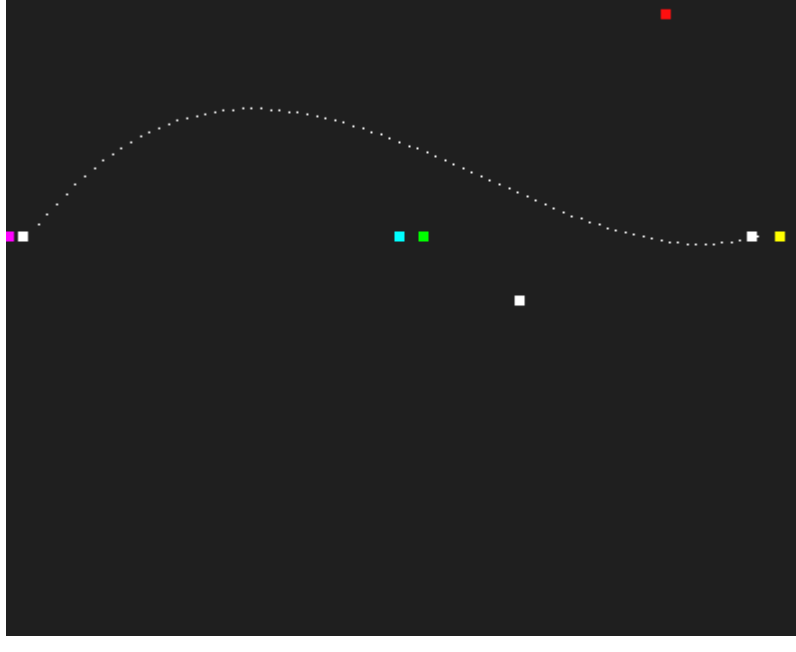
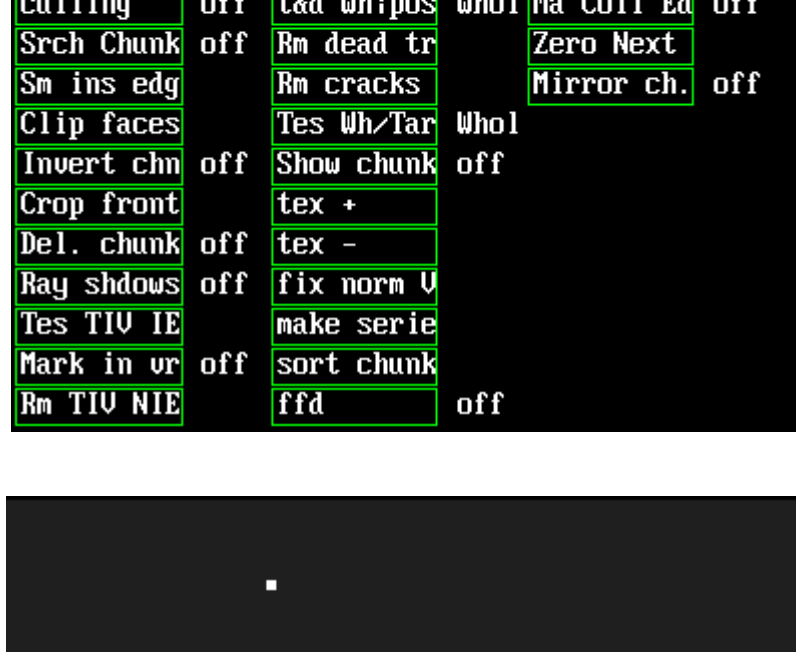
1. First I made base oval of face using one of win3ds former version. (ex. 14 – dont remember exactly). I rotate Bezier curve around arbitrary vector.



2. I prepared eyes – I use old egg primitive (just like in my ostrich scene, I made some times ago) and a sphere primitive. Both easy to achive by rotating Bezier curve like base of face described above.

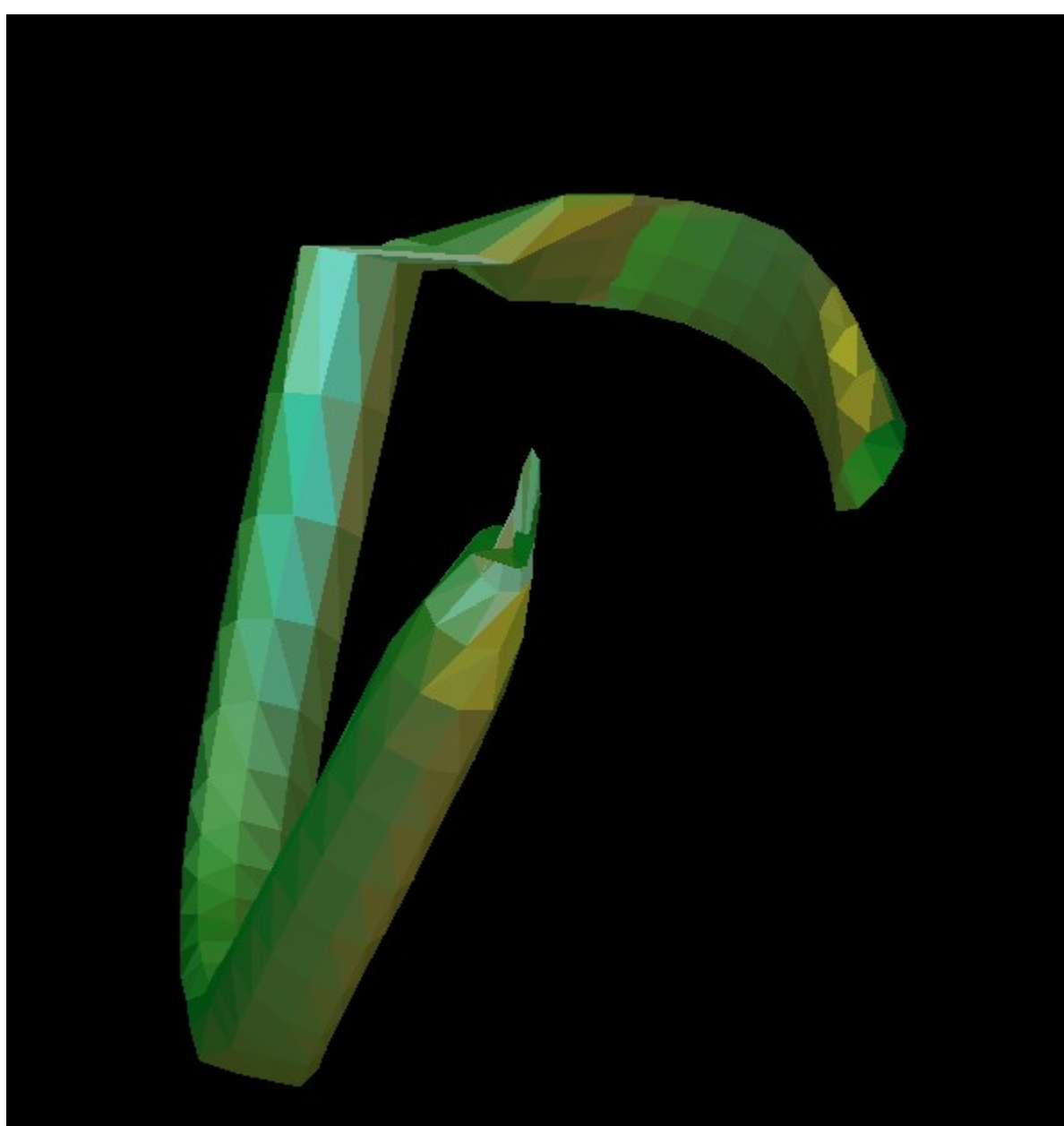


3. I add oval and eyes together (I use 'Next' routines in my app). Avialable by pressing 'NextM edit' button, and manipulate colored bars on next edit area.



4.I made a few pipes to visualise mouth, corners of mouth (I want achive some kind of grin with dimples) and nose.

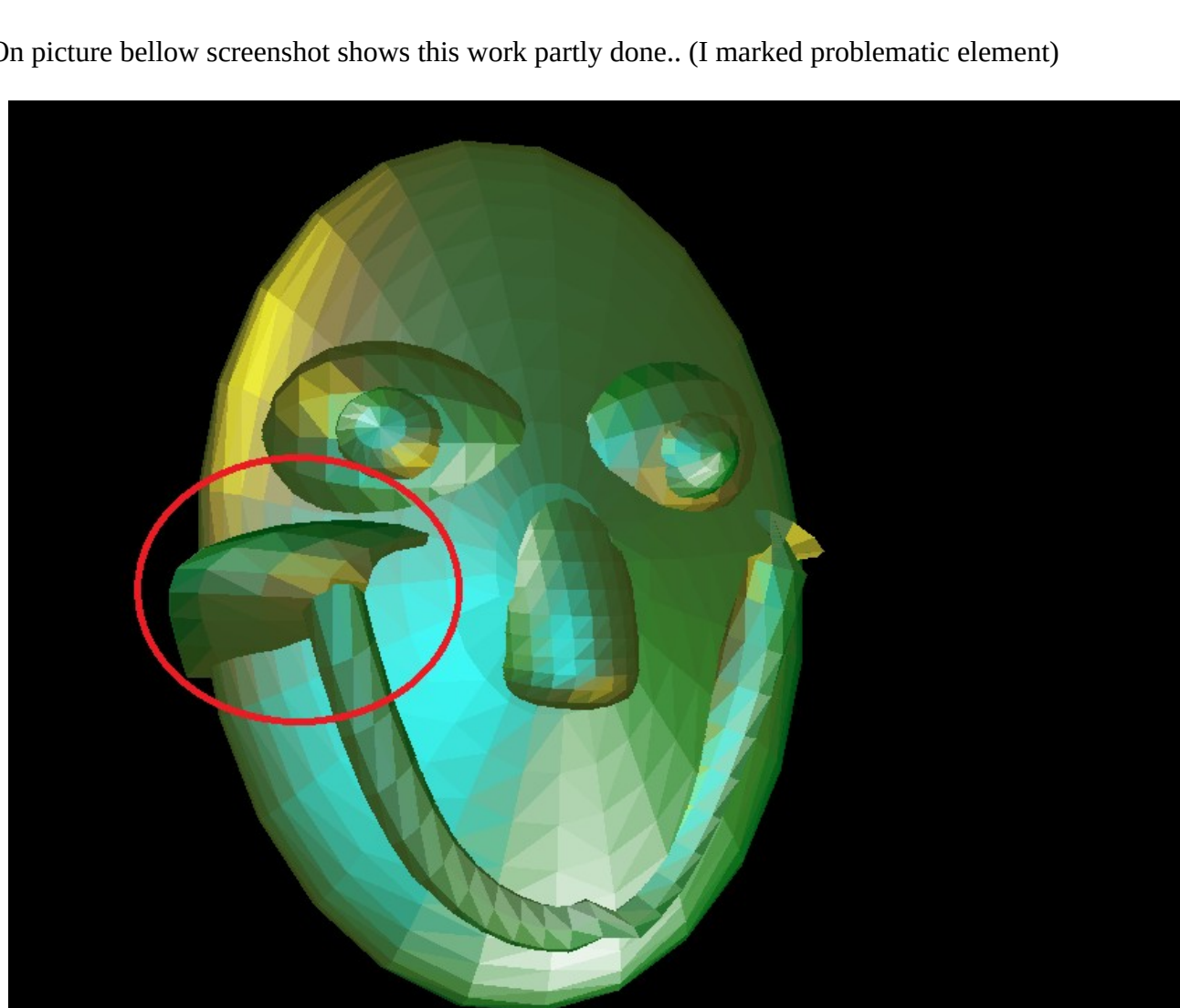
On picture below is presented some invalid attempt of mouth..



5. I add pipes to previous joined altogether primitives.

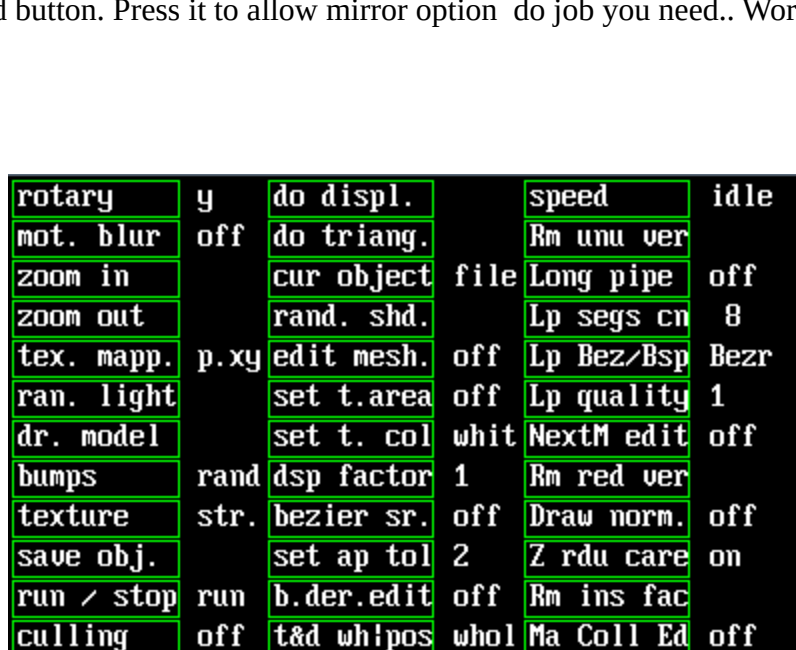
6. Putting corners mouth of face was quite difficult. I tried insert carefully left part. I manipulate with 'NextM edit' option this chunk. I use blue bar to translate +/- x , y and violet bar to translate along z coordinate. Red bar to rotate, yellow and green to scale of this 'mouth corner' manifold chunk.

On picture bellow screenshot shows this work partly done.. (I marked problematic element)

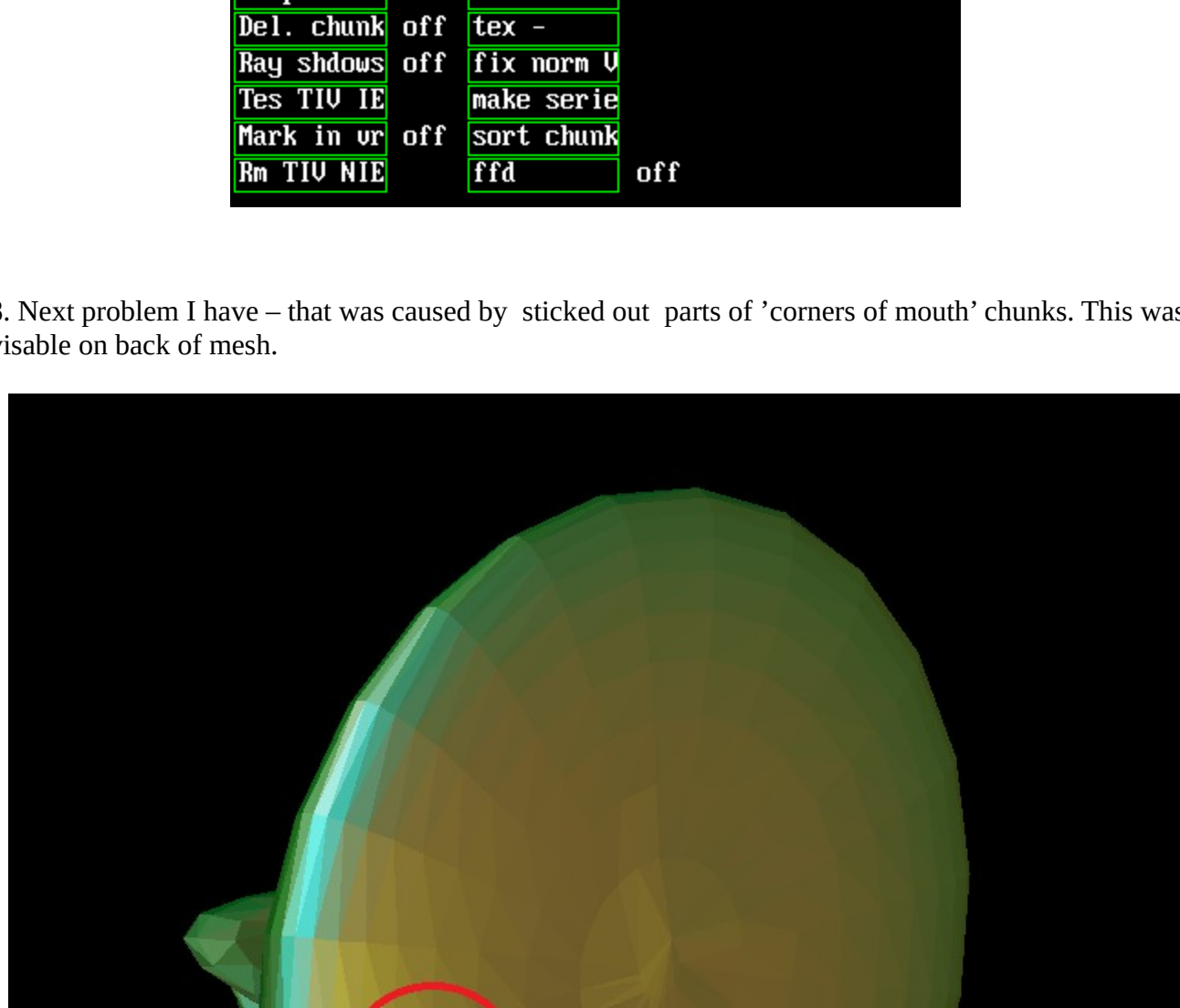


7. To avoid work with right corner I implement mirror chunk option in my win3ds app. I just apply this to left mouth corner – and right was ready. I perform only minor editing work of this freshly appeared chunk – but it was not urgent necessary.

On picture – marked button. Press it to allow mirror option do job you need.. Works with 'Show chunk' option..



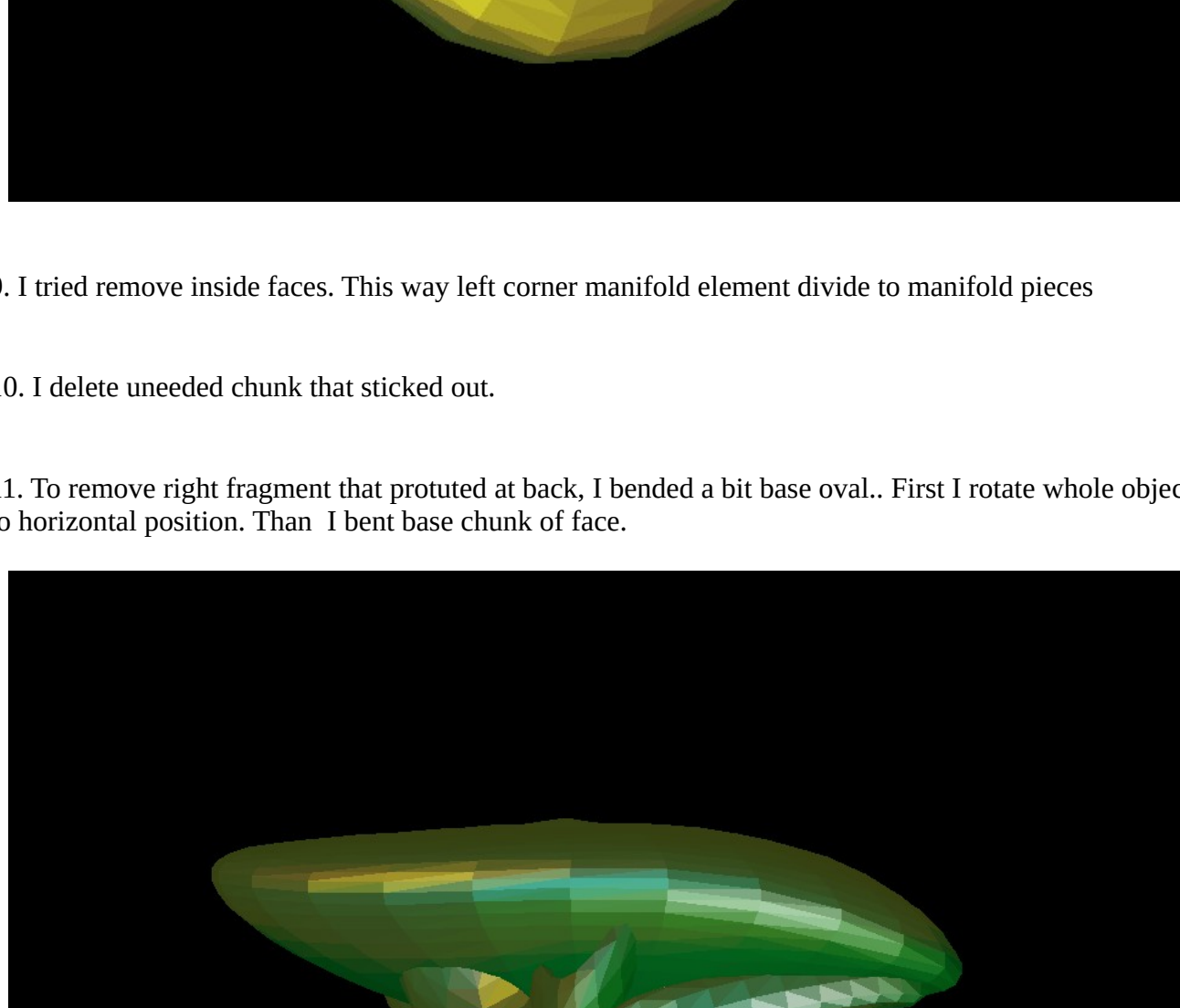
8. Next problem I have – that was caused by stucked out parts of 'corners of mouth' chunks. This was visible on back of mesh.



9. I tried remove inside faces. This way left corner manifold element divide to manifold pieces

10. I delete unneeded chunk that stucked out.

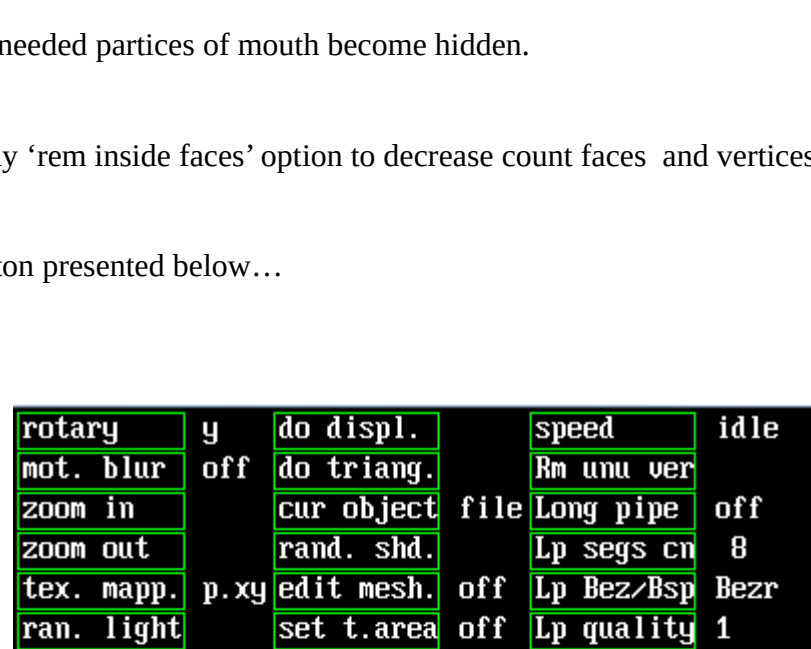
11. To remove right fragment that protuted at back, I bended a bit base oval.. First I rotate whole object to horizontal position. Than I bent base chunk of face.



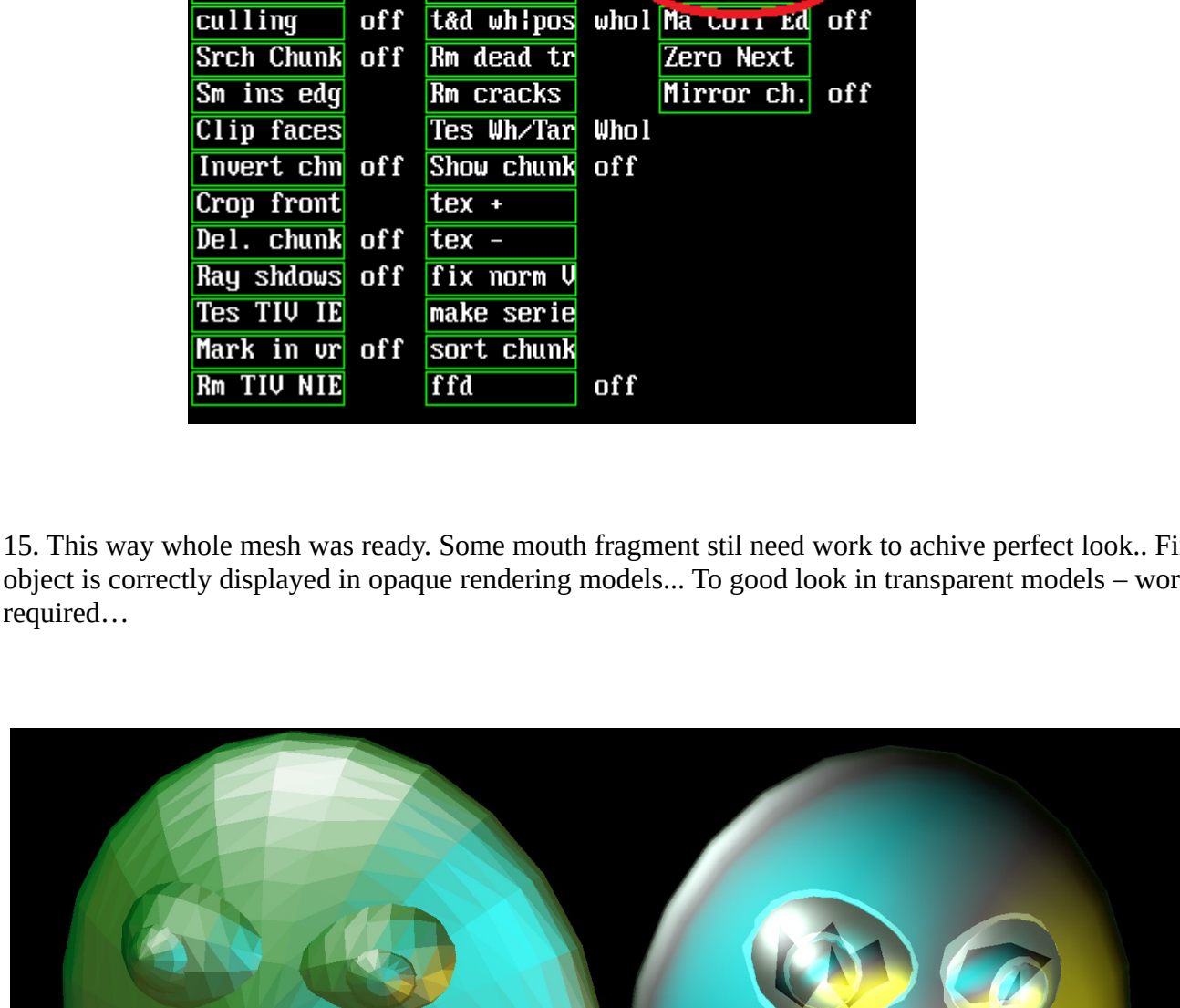
13. Finally unneeded partices of mouth become hidden.

14. Now I apply 'rem inside faces' option to decrease count faces and vertices and decrease object size.

Apropiate button presented below...



15. This way whole mesh was ready. Some mouth fragment stil need work to achive perfect look.. Final object is correctly meshed in opaque rendering models... To good look in transparent models – work required...



Maciej, Oct 2022...