

## Facial Rigging for Cartoony Animation

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### Annotated References:

[1]

**Osipa, J., 2010. *Stop Staring - Facial Modeling and Animation Done Right*. Edition 3rd. USA and Canada: Wiley Publishing, Inc.**

**Sobel, J., 2015. *Expressive Facial Rigging* [online]. Vimeo. Available at: <https://vimeo.com/ondemand/sobelfacerig/122270213>.**

Those both sources above gave me a good insights into Layered Deformation Rigging, sometimes referred as Layering Rigging. However in some ACM SIGGRAPH papers this set up was mentioned too, they were my best sources in that matter. They are addressing the issue of using local and global riggs. I would say in Ossipa's book we can find a very broad and in-depth description of possible facial rigging methods while Josh Sobel in his videos with rigging tips build upon those concepts. He also touches on ribbon systems used for mouth rigging.

[2]

**Orvalho, V., Bastos, P., Parke, F., Oliveira, B., Alvarez, X., 2012. *A Facial Rigging Survey* [online]. EUROGRAPHICS. Available at: <http://www.portointeractivecenter.org/site/wp-content/uploads/2012/04/A-facial-rigging-survey1.pdf> [Accessed on 14 May 2017].**

This survey served me as an inside look to different Facial Rigging approaches based on various types of productions. I have found there as well an interesting information concerning some ways of defining facial styles. The most interesting one was referring to The Pictorial Vocabulary from McCloud. This survey includes also some useful information about facial behavior, pointing of course to FACS.

[3]

**Ehrenhaus, S., 2013. *Attach Face Controls on Face Mesh* [online]. YouTube. Available at: <https://www.youtube.com/watch?v=dYmLJPZIL1A>. [Accessed on 09 May 2017].**

This is an video in which I have finally found a nice, working solution to my question regarding secondary control on a face rig and how to avoid double transformations. Ehrenhaus shows his own set up in which a crucial part plays two locators placed in a position of required controls, one freeze transformed, the other containing information according to world space position. Afterwards there is a need to group both, a local locator and a controller, with two offset groups and to input information from a world locator to an offset group of a controller.

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