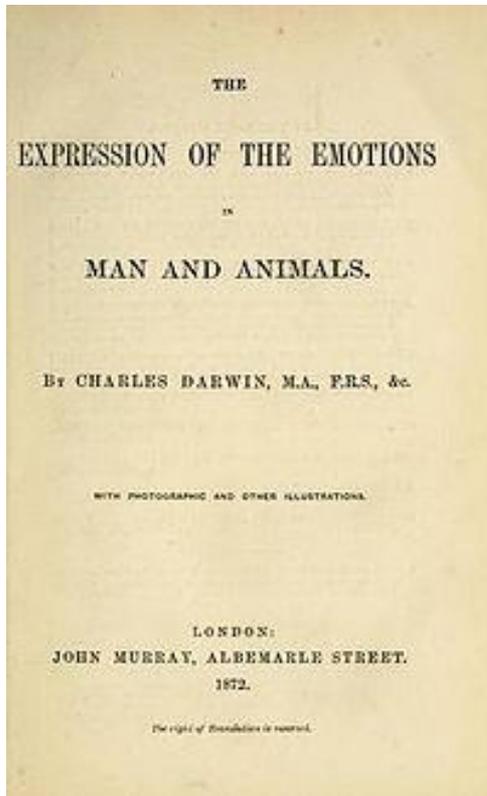


# Komputerowa animacja twarzy

# Morphing

- Willow – 1989 <http://youtu.be/uLUyuWo3pG0>
- Reklama lotto <http://youtu.be/g0qDQBR EAM>

# Historia



PENGUIN CLASSICS

CHARLES DARWIN

*The Expression of the Emotions  
in Man and Animals*

# Historia

Facial Action Coding system:

[http://neuroolution.pl/wp-content/uploads/2012/12/FACS\\_PL\\_0.9.1-Neuroolution.pdf](http://neuroolution.pl/wp-content/uploads/2012/12/FACS_PL_0.9.1-Neuroolution.pdf)

Początkowo 46 jednostek akcji, zaktualizowany w 2002 roku

# Historia

Frederic Parke, 1972,

<http://youtu.be/SPMFhcC4SvQ>



# Historia

Frederic Parke, 1972,

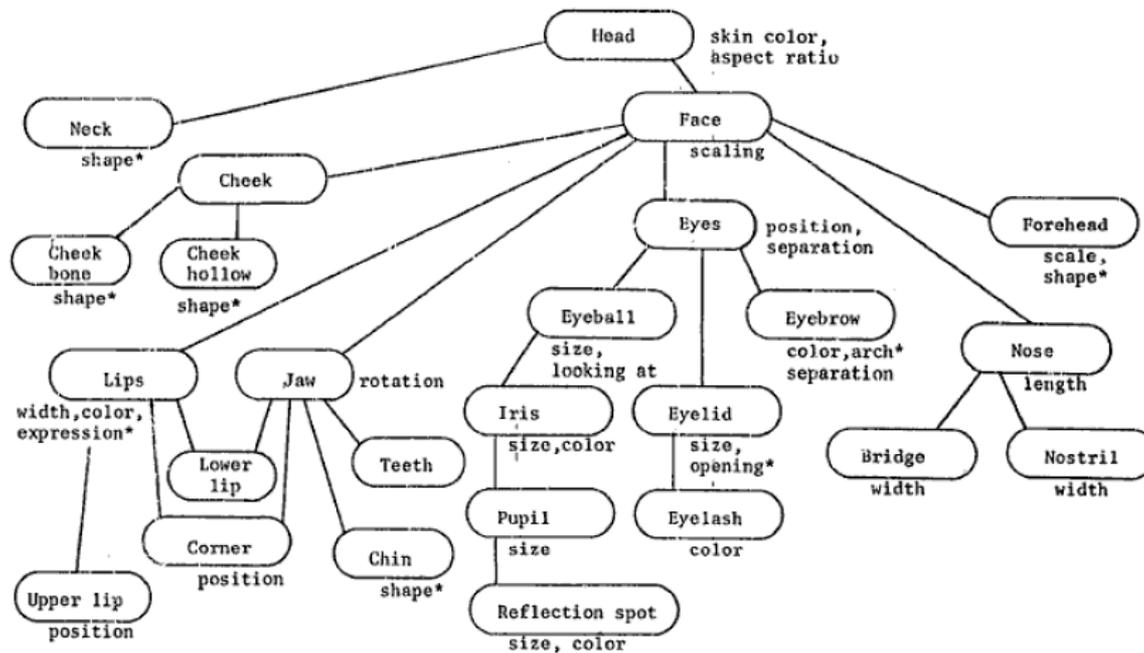
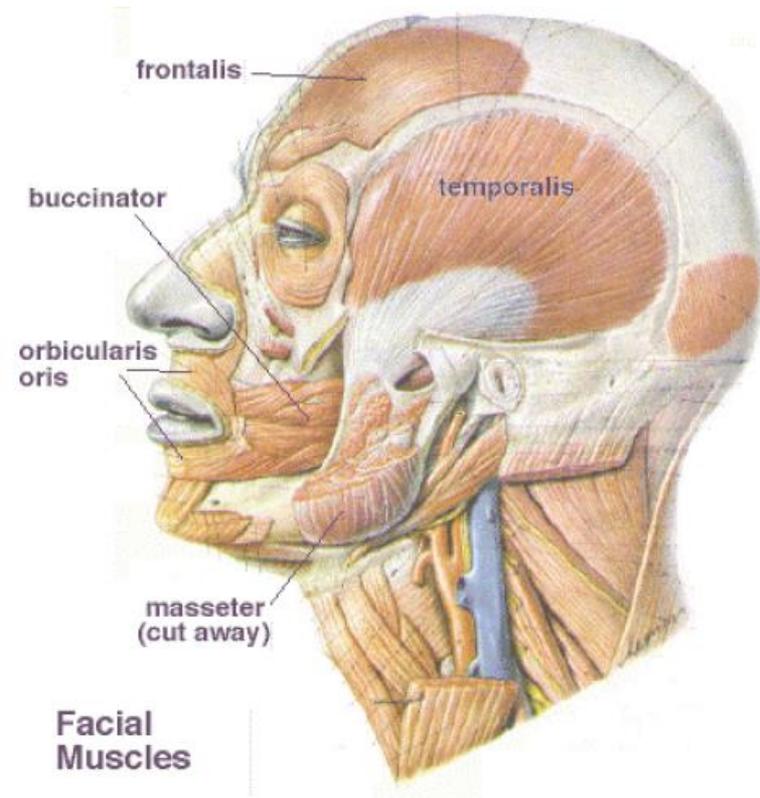
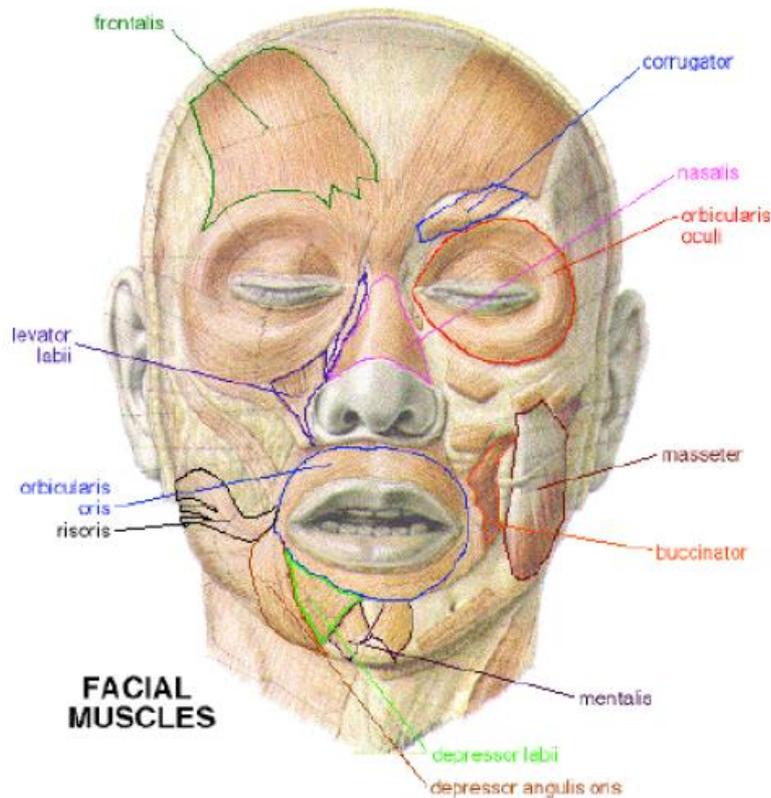


Figure 3.1 - The structure of the parametric model. The parameters affecting the various nodes are shown. An \* indicates the use of interpolation to implement the parameter.

# Historia

1981 – model twarzy oparty na mięśniach



# Historia

- 1985 - <http://youtu.be/munTr4vmxYE>

# Historia

Koniec lat 80 – nowy model twarzy oparty na mięśniach, Lewiss i Hill – automatyczna synchronizacja mowy

6

3 THE ALGORITHM

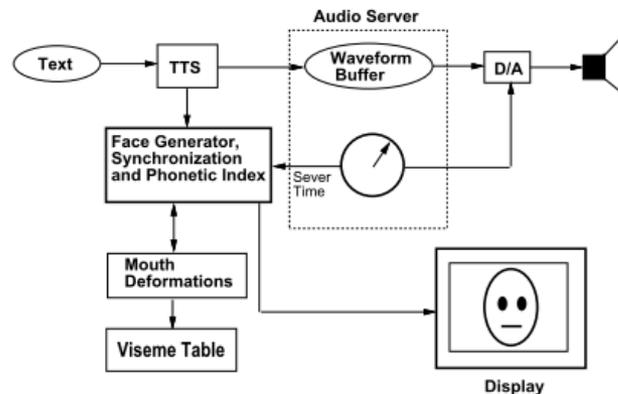


Figure 1: The synchronization model TTS = text-to-speech.

# Historia

Koniec lat 80 – nowy model twarzy oparty na mięśniach, Lewiss i Hill – automatyczna synchronizacja mowy

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.38.389&rep=rep1&type=pdf>

# Historia

Lata 90

Casper, Toy Story, Antz, ...

# Historia

Po roku 2000...

- The Matrix Reloaded
- Polar Express - Vicon system

<http://youtu.be/IALkAc35hY0>

# Technika

Technika animacji twarzy to:

1. shapes/morph targets

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# Quantic Dream's PS4 Tech Demo

[http://www.youtube.com/watch?v=Tw1l\\_C4kXr](http://www.youtube.com/watch?v=Tw1l_C4kXr)

ba

# Nvidia Face Works

<http://www.cinemablend.com/games/Nvidia-Face-Works-Tech-Demo-Shows-Power-Titan-53899.html>