

No.	Viseme name	Muscles	Contr.s (%)
1	PP	Mentalis left	32.35
		Mentalis right	32.35
2	FF	Risorius left	-29.02
		Risorius right	-27.05
		Mentalis left	35.29
		Mentalis right	35.29
		Upper lip left	-20.18
		Upper lip right	-20.18
3	TH	Zygomaticus minor left	-7.8
		Zygomaticus minor right	-7.8
		Mentalis left	-16.18
		Mentalis right	-20.59
		Depressor anguli left	-30.24
		Depressor anguli right	-29.06
4	DD	Zygomaticus minor left	-15.8
		Zygomaticus minor right	-15.8
		Mentalis left	-16.18
		Mentalis right	-20.59
		Risorius left	-6.18
		Risorius right	-10.59
5	kk	Zygomaticus minor left	-15.8
		Zygomaticus minor right	-15.8
		Zygomaticus major left	-10.8
		Zygomaticus major right	-10.8
		Mentalis left	-16.18
		Mentalis right	-20.59
		Risorius left	-6.18
		Risorius right	-10.59
6	CH	Upper lip left	-77.12
		Upper lip right	-76.72
		Orbicularis oris	-21.16
		Mentalis left	-35.29
		Mentalis right	-35.39
		Risorius left	2.12
		Risorius right	1.38
7	SS	Zygomaticus minor left	-15.8
		Zygomaticus minor right	-15.8
		Mentalis left	-16.18
		Mentalis right	-20.59
		Risorius left	-6.18
		Risorius right	-10.59
8	nn	jaw	2.27
		Mentalis left	-47.06
		Mentalis right	-48.53

Table 1: Correspondence between visemes and muscle contractions.

No.	Viseme name	Muscles	Contr.s (%)
9	RR	Upper lip left	-38.12
		Upper lip right	-36.72
		Orbicularis oris	-21.16
		Mentalis left	-18.39
		Mentalis right	-17.39
10	aa	Upper lip left	-34.64
		Upper lip right	-34.64
		Jaw	27.00
		Mentalis left	-20.59
		Mentalis right	-20.59
11	E	Zygomaticus minor left	-20.00
		Zygomaticus minor right	-20.00
		Mentalis left	-20.00
		Mentalis right	-20.00
		Upper lip left	-20.00
		Upper lip right	-20.00
		Zygomaticus major left	-23.53
		Zygomaticus major right	-23.53
12	ih	Mentalis left	-25.00
		Mentalis right	-25.00
		Upper lip left	-25.00
		Upper lip right	-25.00
		Zygomaticus major left	-23.53
		Zygomaticus major right	-23.53
13	oh	Mentalis left	-10.29
		Mentalis right	-10.29
		Upper lip left	-11.00
		Upper lip right	-11.00
		Zygomaticus minor left	-10.98
		Zygomaticus minor right	-10.15
		jaw	63.64
		Orbicularis oris	-56.90
14	ou	Mentalis left	-10.29
		Mentalis right	-10.29
		Upper lip left	-11.00
		Upper lip right	-11.00
		Zygomaticus minor left	-10.98
		Zygomaticus minor right	-10.15
		jaw	42.00
		Orbicularis oris	-66.90

Table 2: Correspondence between visemes and muscle contractions. Part 2.

No.	Expression name	Muscles	Contr.s (%)
1	joy	Zygomaticus major left	-100.00
		Zygomaticus major right	-100.00
		Mentalis left	17.64
		Mentalis right	14.70
2	sadness	Frontalis major left	100.00
		Frontalis major right	100.00
		Frontalis inner left	-44.85
		Frontalis inner right	-44.85
		Orbicularis oculi left	-6.7
		Orbicularis oculi right	-9.4
		Mentalis left	23.50
		Mentalis right	26.50
		Risorius left	-49.02
		Risorius right	-47.06
		Depressor anguli left	-26.55
		Depressor anguli right	-27.73
		3	anger
Corrugator supercilliary right	100.00		
Frontalis inner left	47.05		
Frontalis inner right	48.82		
Zygomaticus minor left	-63.92		
Zygomaticus minor right	-40.39		
Mentalis left	-19.12		
Mentalis right	-13.24		
4	fear	Jaw	22.73
		Frontalis inner left	-64.70
		Frontalis inner right	-62.50
		Frontalis major left	74.90
		Frontalis major right	74.90
		Upper lip left	-5.23
		Upper lip right	-25.49
		Orbicularis oculi left	24.51
		Orbicularis oculi right	31.37
		Zygomaticus minor left	-53.92
		Zygomaticus minor right	-30.39
		Mentalis left	-5.88
		Mentalis right	-4.41
Jaw	13.64		

Table 3: Correspondence between visemes and muscle contractions. Part 2.

No.	Expression name	Muscles	Contr.s (%)
5	disgust	Frontalis inner left	-100.00
		Frontalis major left	45.10
		Frontalis major right	43.53
		Orbicularis oculi left	-12.60
		Orbicularis oculi right	-12.60
		Zygomaticus minor left	-100.00
		Zygomaticus minor right	-30.39
		6	surprise
Frontalis major right	-100.00		
Upper lip left	-51.00		
Upper lip right	-30.15		
Risorius left	2.12		
Risorius right	2.42		
Orbicularis oculi left	34.80		
Orbicularis oculi right	34.80		
Mentalis left	-42.00		
Mentalis right	-35.29		
Jaw	13.63		

Table 4: Correspondence between visemes and muscle contractions. Part 2.

No.	FAP name	Muscles	Contr.s (%)
3	open_jaw	jaw	45
4	lower_t_midlip	Upper lip left	150
		Upper lip right	150
		Zygomaticus minor left	10
		Zygomaticus minor right	10
5	raise_b_midlip	Mentalis left	150
		Mentalis right	150
6	stretch_l_cornerlip	Risorius left	-350
7	stretch_r_cornerlip	Risorius right	-350
8	lower_t_lip_lm	Upper lip left	150
		Zygomaticus minor left	10
9	lower_t_lip_rm	Upper lip right	150
		Zygomaticus minor right	10
10	raise_b_lip_lm	Mentalis left	150
11	raise_b_lip_rm	Mentalis right	150
12	raise_l_cornerlip	Depressor anguli left	125
13	raise_r_cornerlip	Depressor anguli right	125
14	thrust_jaw	not implemented	
15	shift_jaw	not implemented	
16	push_b_lip	not implemented	
17	push_t_lip	not implemented	
18	depress_chin	Mentalis left	-70
		Mentalis right	-70
19	close_t_l_eyelid	Orbicularis oculi left	-100
20	close_t_r_eyelid	Orbicularis oculi right	-100
21	close_b_l_eyelid	Orbicularis oculi left	-100
22	close_b_r_eyelid	Orbicularis oculi right	-100
23	yaw_l_eyeball	not implemented	
24	yaw_r_eyeball	not implemented	
25	pitch_l_eyeball	not implemented	
26	pitch_r_eyeball	not implemented	
27	thrust_l_eyeball	not implemented	
28	thrust_r_eyeball	not implemented	
29	dilate_l_pupil	not implemented	
30	dilate_r_pupil	not implemented	
31	raise_l_i_eyebrow	Frontalis inner left	-350
32	raise_r_i_eyebrow	Frontalis inner right	-350
33	raise_l_m_eyebrow	Frontalis major left	-350
34	raise_r_m_eyebrow	Frontalis major right	-350
35	raise_l_o_eyebrow	Frontalis outer left	-350
36	raise_r_o_eyebrow	Frontalis outer right	-350
37	squeeze_l_eyebrow	Corrugator supercilliary left	350
38	squeeze_r_eyebrow	Corrugator supercilliary right	350

Table 5: Correspondence between low level FAPs and muscle contractions. FAP names may contain letters with the following meaning: l = left, r = right, t = top, b = bottom, i = inner, o = outer, m = middle.

No.	FAP name	Muscles	Contr.s (%)
39	puff_l_cheek	not implemented	
40	puff_r_cheek	not implemented	
41	lift_l_cheek	Zygomaticus major left	-150
	lift_l_cheek	mentalis left	17.64
42	lift_r_cheek	Zygomaticus major right	-150
	lift_r_cheek	mentalis right	14.7
43	shift_tongue_tip	not implemented	
44	raise_tongue_tip	not implemented	
45	thrust_tongue_tip	not implemented	
46	raise_tongue	not implemented	
47	tongue_roll	not implemented	
48	head_pitch	rotation $\frac{\pi}{2}$ around x axis, center FDP 7.1	
49	head_yaw	rotation $\frac{\pi}{2}$ around y axis, center FDP 7.1	
50	head_roll	rotation $\frac{\pi}{2}$ around z axis, center FDP 7.1	
51	lower_t_midlip_o	Upper lip left	200
		Upper lip right	200
		Zygomaticus minor left	10
		Zygomaticus minor right	10
52	raise_b_midlip_o	Mentalis left	200
		Mentalis right	200
53	stretch_l_cornerlip_o	Risorius left	-400
54	stretch_r_cornerlip_o	Risorius right	-400
55	lower_t_lip_lm_o	Upper lip left	175
		Zygomaticus minor left	10
56	lower_t_lip_rm_o	Upper lip right	175
		Zygomaticus minor right	10
57	raise_b_lip_lm_o	Mentalis left	175
58	raise_b_lip_rm_o	Mentalis right	175
59	raise_l_cornerlip_o	Depressor anguli left	150
60	raise_r_cornerlip_o	Depressor anguli right	150
61	stretch_l_nose	Nasalis left	-150
		Nasalis right	150
		Zygomaticus major left	-7.84
62	stretch_r_nose	Nasalis left	150
		Nasalis right	-150
		Zygomaticus major right	-7.84
63	raise_nose	Nasalis left	-150
		Nasalis right	-150
		Zygomaticus major left	-7.84
		Zygomaticus major right	-7.84
64	bend_nose	Nasalis left	150
		Nasalis right	-150
64	raise_l_ear	not implemented	
65	raise_r_ear	not implemented	
66	pull_l_ear	not implemented	
67	pull_r_ear	not implemented	

Table 6: Correspondence between low level FAPs and muscle contractions. Part 2.