

ENGLISH DATA

Speaker	Sequence	Speaking rate (msec.)	OIACO	OIOOC	OC1-RC1	OC2-RC2	OC1-RC2	AC1-RC1	AC2-RC2	OC1-OC2	% Voicing in C1	% Voicing in C2	Voicing Continuation
AL	sad gap	1.071	100	100	41	111	111	61	121	00	100	71	80
AL	sad gap	1.096	84	67	31	101	111	60	111	11	100	71	83
AL	sad gap	1.047	100	100	61	111	101	81	151	00	100	94	104
AL	sad gap	1.046	88	84	60	91	101	80	111	10	100	93	95
AL	sad gap	1.039	88	100	51	81	81	81	101	30	100	100	81
AL	sad gap	1.035	87	83	60	90	101	80	110	11	100	100	101
AL	sad gap	1.052	86	40	50	61	91	71	101	30	100	100	91
AL	sad gap	2.071	38	00	70	81	171	80	131	91	100	35	120
AL	sad gap	2.265	89	57	71	121	151	90	160	30	100	51	92
AL	sad gap	2.450	45	13	81	90	160	90	121	71	100	91	153
AL	fat cap	1.026	68	51	21	90	101	31	101	11	00	00	00
AL	fat cap	1.022	68	100	10	90	90	31	101	00	00	00	00
AL	fat cap	1.047	81	67	30	70	80	51	91	10	00	00	00
AL	fat cap	1.044	75	53	20	81	91	41	101	10	00	00	00
AL	fat cap	1.039	80	100	21	81	81	50	101	00	00	00	00
AL	fat cap	1.022	100	100	30	70	60	61	91	00	00	00	00
AL	fat cap	1.550	75	15	71	101	161	81	151	61	00	00	00
AL	fat cap	1.556	38	18	61	141	191	80	160	51	00	00	00
AL	fat cap	1.498	72	18	61	121	171	71	161	51	00	00	00
AL	sad cap	1.036	50	34	31	80	101	61	101	21	100	45	57
AL	sad cap	1.069	51	69	31	80	101	61	90	21	100	38	52
AL	sad cap	1.058	66	50	41	70	90	61	90	21	100	48	54
AL	sad cap	1.063	75	80	51	91	100	81	110	31	86	37	44

AL	sad cap	1.077	82	100	30	91	91	50	101	21	100	47	42
AL	sad cap	1.668	78	73	71	131	150	91	150	21	100	45	78
AL	sad cap	1.605	78	16	71	111	171	92	171	21	100	15	76
AL	sad cap	1.591	67	51	61	131	161	91	161	30	100	25	64
AL	fat gap	920	100	100		61	61		121	00	00	90	55
AL	fat gap	945	100	100		71	71		111	00	00	100	71
AL	fat gap	990	100	100		81	81		121	00	00	100	81
AL	fat gap	958	100	100		61	61		101	00	00	100	61
AL	fat gap	976	100	100		80	80		120	00	00	100	80
AL	fat gap	987	100	100		61	61		111	00	00	100	61
AL	fat gap	972	100	100		70	70		111	00	00	100	70
AL	fat gap	1.781	63	14		142	212		191	71	00	68	16
AL	fat gap	1.992	12	00		171	262		192	91	00	00	00
AL	fat gap	1.864	81	13		161	232		232	41	00	15	13
AL	his doll	943			61	60	121	131		61	100	83	111
AL	his doll	887			70	40	110	110		70	100	16	77
AL	his doll	862			60	32	93	202		60	100	100	93
AL	his doll	860			81	40	121	201		81	100	100	121
AL	his doll	894			62	41	103	301		62	100	71	91
AL	his doll	844			50	30	81	100		50	100	00	50
AL	his doll	827			30	41	71	151		30	100	100	71
AL	his doll	2.152			101	111	212	201		101	38	00	39
AL	his doll	2.187			101	91	192	251		101	44	00	44
AL	his doll	2.028			110	120	231	200		110	58	00	64
AL	this toll	1.069			104	40	144	141			07	00	08
AL	this toll	1.060			90	31	121	130			09	00	08
AL	this toll	1.031			81	61	141	130			18	00	15
AL	this toll	1.062			70	51	121	110			18	00	13
AL	this toll	1.008			91	31	121	110			28	00	25

AL	this toll	1.057			90	21	111	140			19	00	17
AL	this toll	1.677			111	121	232	160			04	00	05
AL	this toll	1.887			111	121	232	131			16	00	18
AL	this toll	1.895			111	101	212	141			00	00	00
AL	his toll	925			60	50	111	130		60	10	00	06
AL	his toll	950			61	50	112	230		61	25	00	15
AL	his toll	919			51	41	91	170		51	00	00	00
AL	his toll	932			51	51	101	211		51	53	00	27
AL	his toll	913			61	40	101	111		61	35	00	21
AL	his toll	916			61	71	131	131		61	50	00	30
AL	his toll	920			61	51	111	160		61	56	00	34
AL	his toll	1.899			121	91	212	252		121	20	00	24
AL	his toll	1.886			141	81	222	291		141	08	00	11
AL	his toll	1.849			121	101	222	191		121	37	00	45
AL	this doll	909			60	70	131	111		60	37	00	23
AL	this doll	900			70	71	141	140		70	11	00	08
AL	this doll	945			60	51	111	90		60	40	00	24
AL	this doll	922			40	70	111	91		40	53	00	22
AL	this doll	1.666			131	131	261	221		131	10	00	13
AL	this doll	1.679			131	91	221	181		131	15	00	20
AL	this doll	1.822			121	122	243	161		121	13	00	16
AL	big nut	919	71	71	70	80	100	140	131	20	16	100	100
AL	big nut	894	50	50	80	71	110	161	110	40	100	100	110
AL	big nut	912	90	34	90	60	120	101	120	60	100	100	120
AL	big nut	908	60	55	91	70	111	151	111	41	100	100	111
AL	big nut	843	67	43	70	61	100	121	111	40	100	100	100
AL	big nut	890	50	67	61	71	91	140	100	21	100	100	91
AL	big nut	889	50	50	80	60	100	160	100	40	100	100	100
AL	big nut	1.613	44	34	120	81	160	160	111	80	100	100	160

AL	big nut	1.918	50	50	101	101	151	161	131	51	100	100	151
AL	big nut	1.865	36	51	120	121	180	250	151	60	100	100	180
AL	thick nut	891	30	34	91	61	121	171	81	60	29	100	12
AL	thick nut	897	58	43	70	81	121	120	121	41	100	100	121
AL	thick nut	919	40	38	81	71	120	151	100	50	100	100	120
AL	thick nut	903	50	38	80	71	120	140	111	50	60	100	00
AL	thick nut	899	58	38	80	71	120	120	110	50	60	100	00
AL	thick nut	912	64	33	90	80	140	140	140	61	25	100	00
AL	thick nut	900	43	29	71	50	101	140	90	50	44	100	00
AL	thick nut	835	38	37	80	60	111	160	90	51	100	100	111
AL	thick nut	1.570	18	13	161	101	241	231	120	141	13	100	00
AL	thick nut	1.562	28	24	171	90	221	221	110	131	39	100	00
AL	thick nut	1.499	30	17	121	61	161	171	91	101	44	100	00
AL	long doll	945	13	00	33	70	101	103	82	33	100	100	101
AL	long doll	962	23	40	52	83	112	133	93	31	100	100	112
AL	long doll	886	41	64	51	82	100	102	91	20	100	100	100
AL	long doll	949	40	76	40	70	80	101	80	10	100	100	80
AL	long doll	908	75	100	40	90	70	120	90	00	100	100	70
AL	long doll	897	42	75	41	60	70	120	80	10	100	100	70
AL	long doll	1.870	39	67	122	151	192	231	161	41	100	100	192
AL	long doll	1.805	32	58	71	91	121	191	111	30	100	100	121
AL	long doll	1.763	37	85	71	101	111	191	111	11	100	100	111
AL	long toll	982	31	76	41	81	91	101	81	11	100	62	61
AL	long toll	991	42	67	61	70	90	121	80	21	100	75	73
AL	long toll	968	46	67	61	90	110	110	100	21	100	58	73
AL	long toll	1.035	45	100	50	80	80	110	80	00	100	87	69
AL	long toll	1.040	42	67	60	70	90	120	80	20	100	77	75
AL	long toll	1.016	25	29	70	41	90	160	60	50	100	100	90
AL	long toll	1.808	38	70	101	111	141	210	120	31	74	40	75

AL	long toll	1.823	32	50	101	91	141	251	121	51	82	36	83
AL	long toll	1.892	30	47	151	101	180	271	111	80	89	53	134
AL	his nut	875			50	51	101	80		50	100	100	101
AL	his nut	896			91	40	131	101		91	100	100	131
AL	his nut	885			60	50	111	91		60	100	100	111
AL	his nut	909			40	51	91	80		40	100	100	91
AL	his nut	919			50	40	91	80		50	100	100	91
AL	his nut	906			70	60	131	130		70	100	100	131
AL	his nut	881			50	50	101	120		50	100	100	101
AL	his nut	1.626			51	91	142	100		51	100	100	100
AL	his nut	1.673			91	51	141	171		91	100	100	141
AL	his nut	1.692			61	91	151	110		61	60	100	36
AL	this nut	998			80	70	151	111		80	12	51	10
AL	this nut	932			61	71	131	71		61	34	60	21
AL	this nut	939			81	50	131	121		81	36	72	29
AL	this nut	898			71	60	131	100		71	38	50	27
AL	this nut	899			70	60	131	110		70	07	43	05
AL	this nut	904			71	60	131	101		71	44	39	31
AL	this nut	928			80	71	151	131		80	40	44	32
AL	this nut	2.093			161	181	342	231		161	00	83	00
AL	this nut	2.130			171	221	392	202		171	06	71	11
AL	this nut	2.044			171	120	292	201		171	00	92	00
AL	long zip	826	43		53	61	114	123	112	53	100	100	114
AL	long zip	886	30		41	92	132	101	122	41	100	100	132
AL	long zip	939	37		51	97	147	110	137	51	100	100	147
AL	long zip	951	36		71	70	141	141	120	71	100	100	141
AL	long zip	920	36		60	100	161	140	150	60	100	100	161
AL	long zip	958	37		51	90	141	110	130	51	100	100	141
AL	long zip	943	42		60	71	131	120	121	60	100	100	131

AL	long zip	1.484	21		101	101	201	191	141	101	100	100	201
AL	long zip	1.661	28		101	142	243	181	192	101	100	100	243
AL	long zip	1.640	16		91	121	212	191	151	91	100	100	212
AL	long sip	993	37		40	158	198	80	188	40	100	23	76
AL	long sip	1.002	18		40	159	199	110	179	40	100	28	85
AL	long sip	996	30		40	136	176	100	166	40	100	39	80
AL	long sip	967	23		41	129	170	91	149	41	100	12	56
AL	long sip	1.006	34		50	121	172	120	161	50	100	17	71
AL	long sip	974	25		40	126	166	120	156	40	100	19	64
AL	long sip	1.777	14		71	224	295	221	254	71	73	00	52
AL	long sip	1.893	19		101	216	317	210	256	101	100	08	110
AL	long sip	1.845	15		40	204	244	200	234	40	100	05	51
AL	big lap	854	40	58	70	70	100	150	91	30	100	100	100
AL	big lap	876	36	67	60	80	100	140	90	20	100	100	100
AL	big lap	919	46	43	70	71	111	111	91	40	100	100	111
AL	big lap	865	50	67	60	81	100	100	91	20	100	100	100
AL	big lap	912	45	43	70	70	110	111	90	40	100	100	110
AL	big lap	868	50	50	80	70	110	120	90	40	100	100	110
AL	big lap	871	46	58	70	70	100	131	91	30	100	100	100
AL	big lap	849	54	50	80	90	90	130	80	40	100	100	90
AL	big lap	1.593	24	30	72	121	171	131	131	51	100	100	171
AL	big lap	1.610	36	31	101	131	201	140	140	71	100	100	201
AL	big lap	1.674	18	23	91	131	200	231	231	70	100	100	200
AL	thick lap	938	34	40	100	81	140	150	91	60	03	03	
AL	thick lap	960	24	30	100	71	140	171	80	70	00	00	
AL	thick lap	961	55	63	81	90	120	111	100	30	07	06	
AL	thick lap	984	37	15	71	60	120	111	90	61	00	00	
AL	thick lap	943	34	50	81	71	111	151	80	40	17	00	
AL	thick lap	932	29	50	81	81	121	140	81	40	00	00	

AL	thick lap	1.736	22	18	121	131	231	141	141	101	00	00	
AL	thick lap	1.626	22	20	101	110	191	141	121	81	00	00	
AL	thick lap	1.669	23	28	110	111	191	180	121	80	00	00	
AL	full gap	1.026	07	00	80	31	130	140	71	100	100	84	126
AL	full gap	1.002	00	00	61	31	131	71	71	100	100	100	131
AL	full gap	1.033	28	00	61	41	120	111	90	80	100	82	114
AL	full gap	996	07	00	71	41	121	141	60	81	100	89	117
AL	full gap	968	00	00	91	20	161	131	60	141	100	100	161
AL	full gap	982	10	00	80	41	130	100	61	90	100	100	130
AL	full gap	977	08	00	110	41	170	130	70	130	100	81	163
AL	full gap	1.919	00	00	91	71	181	141	91	111	100	82	169
AL	full gap	1.966	17	00	201	52	251	240	91	201	100	100	251
AL	full gap	1.877	00	00	82	51	152	112	71	102	100	100	152
AL	full cap	916	00	00	40	41	111	60	61	70	100	16	77
AL	full cap	963	00	00	40	50	111	61	71	71	100	34	88
AL	full cap	913	00	00	40	40	110	61	81	71	100	00	71
AL	full cap	930	00	00	40	40	111	60	101	71	100	13	76
AL	full cap	918	00	00	40	40	111	60	50	70	100	20	78
AL	full cap	922	00	00	40	61	111	60	111	71	100	00	71
AL	full cap	898	00	00	40	51	110	60	61	70	100	19	80
AL	full cap	1.866	34	00	111	71	190	151	131	121	100	00	121
AL	full cap	1.767	50	00	81	61	151	141	141	91	100	14	99
AL	full cap	1.722	17	12	91	80	161	121	90	81	100	22	99
AL	his lap	912			50	81	131	100		50	100	100	131
AL	his lap	904			50	81	131	100		50	100	100	131
AL	his lap	927			60	81	141	100		60	79	60	48
AL	his lap	905			51	40	91	140		51	40	60	20
AL	his lap	910			60	40	101	100		60	59	100	35
AL	his lap	896			40	31	71	150		40	100	100	71

AL	his lap	917			50	31	81	151		50	100	100	81
AL	his lap	1.839			70	101	171	241		70	82	100	57
AL	his lap	1.773			90	90	181	181		90	100	100	181
AL	his lap	1.790			121	101	222	231		121	100	100	222
AL	this lap	972			80	60	140	131		80	21	74	17
AL	this lap	983			81	70	151	90		81	39	69	31
AL	this lap	967			81	70	151	131		81	19	79	16
AL	this lap	949			81	80	161	121		81	28	59	23
AL	this lap	935			61	70	131	91		61	00	73	00
AL	this lap	953			81	50	131	131		81	17	72	13
AL	this lap	1.508			131	111	242	160		131	00	75	00
AL	this lap	1.574			124	111	234	151		111	00	77	00
AL	this lap	1.570			130	111	241	151		130	08	77	11
AL	full zip	998			100	103	203	170		100	100	100	203
AL	full zip	1.034			67	87	154	127		67	100	100	154
AL	full zip	1.062			34	110	143	84		34	100	100	143
AL	full zip	1.052			91	97	188	142		91	100	100	188
AL	full zip	1.027			39	120	159	100		39	100	100	159
AL	full zip	988			53	99	152	74		53	100	100	152
AL	full zip	2.070			81	131	212	121		81	100	100	212
AL	full zip	2.082			96	219	315	137		96	100	100	315
AL	full zip	2.208			167	100	267	208		167	100	100	267
AL	full sip	997			42	171	213	112		42	100	11	60
AL	full sip	1.004			53	148	201	123		53	100	10	69
AL	full sip	989			60	166	226	81		60	100	11	78
AL	full sip	1.008			31	168	171	92		31	100	34	89
AL	full sip	932			52	179	231	122		52	100	38	120
AL	full sip	947			32	161	192	102		32	100	31	81
AL	full sip	985			71	169	240	92		71	100	36	132

AL	full sip	1.558			112	192	304	172		112	100	00	112
AL	full sip	1.501			66	183	249	136		66	100	28	117
AL	full sip	1.588			70	214	284	130		70	100	15	102
ME	sad gap	1.228	50	00	20	91	111	40	111	20	100	79	91
ME	sad gap	1.205	72	80	51	100	111	71	111	11	100	44	56
ME	sad gap	1.217	87	83	61	101	111	80	120	11	100	87	98
ME	sad gap	832	60	51	41	60	81	51	70	21	100	24	44
ME	sad gap	772	75	00	31	50	80	40	80	31	100	68	65
ME	sad gap	909	51	50	21	81	91	41	91	11	100	62	60
ME	sad gap	843	79	68	31	81	91	51	100	10	100	63	62
ME	sad gap	807	60	66	30	70	80	51	80	11	100	72	61
ME	sad gap	2.387	49	33	92	302	362	122	332	62	80	04	73
ME	sad gap	2.553	00	00	81	160	391	110	261	221	100	00	82
ME	fat cap	1.429	61	27	41	91	120	51	111	30	00	00	00
ME	fat cap	1.181	100	100	21	101	101	50	141	00	00	00	00
ME	fat cap	1.155	41	25	41	100	131	50	110	31	00	00	00
ME	fat cap	1.098	60	66	30	90	90	51	100	11	00	00	00
ME	fat cap	1.066	84	61	51	101	120	60	120	20	00	00	00
ME	fat cap	782	100	100	21	91	81	30	111	00	00	00	00
ME	fat cap	769	100	100	61	101	101	71	121	00	00	00	00
ME	fat cap	795	100	100	40	80	80	60	110	00	00	00	00
ME	fat cap	756	100	80	51	90	101	61	120	11	00	00	00
ME	fat cap	808	100	100	50	101	90	70	121	00	00	00	00
ME	fat cap	811	100	84	60	90	100	81	131	10	00	00	00
ME	fat cap	2.236	31	00	92	181	281	101	221	101	00	00	00
ME	fat cap	2.537	00	00	172	111	452	181	161	342	00	00	00
ME	sad cap	1.317	67	60	51	110	131	61	120	21	100	28	52
ME	sad cap	1.094	84	80	51	90	101	61	101	11	39	05	15
ME	sad cap	1.149	86	81	51	91	100	70	111	10	00	00	00

ME	sad cap	1.068	75	36	31	90	110	41	110	21	100	12	31
ME	sad cap	1.213	99	49	81	111	151	91	151	41	25	00	21
ME	sad cap	1.151	71	61	51	91	111	71	111	21	00	00	00
ME	sad cap	840	100	67	31	70	80	40	100	11	58	11	18
ME	sad cap	875	100	67	50	91	100	60	120	10	18	00	09
ME	sad cap	877	100	76	41	91	100	71	130	10	51	12	21
ME	sad cap	893	100	80	51	91	101	61	111	11	38	10	19
ME	sad cap	899	100	100	30	90	90	41	130	00	37	13	11
ME	sad cap	1.947	83	70	101	111	141	110	131	31	64	31	65
ME	sad cap	2.175	73	60	101	101	141	111	120	41	25	00	25
ME	fat gap	1.242	40	27	41	141	171	51	150	31	00	27	00
ME	fat gap	1.175	50	51	40	131	150	61	141	20	00	76	00
ME	fat gap	1.215	81	26	41	141	171	51	171	31	00	79	00
ME	fat gap	1.196	75	00	20	101	130	40	140	30	00	00	00
ME	fat gap	1.223	75	50	60	120	150	80	150	31	00	00	00
ME	fat gap	1.161	60	27	40	111	141	50	131	30	00	70	00
ME	fat gap	730	100	100	31	80	80	40	100	00	00	00	00
ME	fat gap	790	100	84	60	91	100	70	121	10	00	00	00
ME	fat gap	891	100	76	40	91	100	61	130	10	00	00	00
ME	fat gap	822	100	60	50	81	100	60	121	20	00	00	00
ME	fat gap	891	100	75	41	80	91	50	120	11	00	00	00
ME	fat gap	1.950	51	35	60	152	191	80	172	40	00	61	00
ME	fat gap	2.075	100	100	51	150	141	70	181	00	00	00	00
ME	his doll	986			70	71	141	121		70	50	00	35
ME	his doll	1.043			110	80	191	151		110	48	00	52
ME	his doll	973			40	80	121	70		40	90	00	36
ME	his doll	969			130	51	171	181		130	50	00	55
ME	his doll	956			60	90	151	151		60	70	00	42
ME	his doll	884			70	80	150	131		70	54	00	38

ME	his doll	748			121	21	141	160		121	46	00	56
ME	his doll	874			91	50	140	140		91	36	00	33
ME	his doll	871			51	91	141	150		51	24	00	12
ME	his doll	864			60	71	131	120		60	44	00	26
ME	his doll	801			90	81	171	140		90	57	00	52
ME	his doll	2.030			81	112	191	211		81	44	00	36
ME	his doll	2.190			131	91	221	181		131	39	00	51
ME	this toll	1.029			100	101	201	150		100	00	00	00
ME	this toll	938			81	90	171	91		81	00	00	00
ME	this toll	986			90	81	171	121		90	00	00	00
ME	this toll	1.030			80	81	131	120		80	00	00	00
ME	this toll	1.066			81	91	172	121		81	00	00	00
ME	this toll	1.197			91	91	182	151		91	00	00	00
ME	this toll	931			81	61	141	101		81	00	00	00
ME	this toll	688			80	51	131	110		80	00	00	00
ME	this toll	753			81	51	131	101		81	00	00	00
ME	this toll	817			71	51	121	101		71	00	00	00
ME	this toll	860			100	60	161	120		100	00	00	00
ME	this toll	832			81	60	141	120		81	00	00	00
ME	this toll	1.838			91	91	183	111		91	00	00	00
ME	this toll	1.933			120	92	212	200		120	00	00	00
ME	his toll	1.321			131	101	231	201		131	32	00	42
ME	his toll	1.248			141	90	231	261		141	11	00	15
ME	his toll	1.235			130	81	210	171		130	07	00	09
ME	his toll	1.274			161	51	212	271		161	06	00	10
ME	his toll	1.280			121	91	212	211		121	00	00	00
ME	his toll	858			100	61	161	131		100	00	00	00
ME	his toll	837			110	51	160	141		110	20	00	22
ME	his toll	848			111	51	161	140		111	26	00	28

ME	his toll	865			91	60	151	151		91	18	00	16
ME	his toll	856			100	61	161	151		100	31	00	32
ME	his toll	1.988			101	90	190	141		101	16	00	17
ME	his toll	1.998			100	92	192	211		100	09	00	09
ME	this doll	1.442			161	121	281	211		161	00	00	00
ME	this doll	1.249			141	141	282	171		141	05	00	07
ME	this doll	1.324			110	131	241	150		110	00	00	00
ME	this doll	1.278			101	141	241	130		101	00	00	00
ME	this doll	1.207			81	130	210	131		81	00	00	00
ME	this doll	808			80	70	150	111		80	00	00	00
ME	this doll	840			121	41	161	150		121	00	00	00
ME	this doll	799			80	81	161	100		80	00	00	00
ME	this doll	811			111	51	161	70		131	09	00	10
ME	this doll	804			90	61	151	131		90	00	00	00
ME	this doll	874			80	100	180	111		80	00	00	00
ME	this doll	2.142			111	161	272	161		111	12	00	13
ME	this doll	1.955			111	131	241	131		111	12	00	13
ME	big nut	1.136	63	33	121	110	191	161	170	81	100	100	191
ME	big nut	1.175	18	10	110	120	220	171	140	100	100	100	220
ME	big nut	1.082	30	23	91	131	201	170	161	71	100	100	201
ME	big nut	1.044	27	34	91	130	191	151	141	61	100	100	191
ME	big nut	1.066	56	39	131	121	201	160	161	81	16	100	21
ME	big nut	1.026	56	58	121	151	201	160	171	51	100	100	201
ME	big nut	853	08	00	80	70	150	131	80	80	59	100	20
ME	big nut	872	50	50	141	131	201	161	140	70	100	100	201
ME	big nut	875	76	73	151	151	191	170	170	41	100	100	191
ME	big nut	780	57	60	100	110	150	140	130	40	24	64	24
ME	big nut	771	86	58	140	121	180	151	170	60	100	100	180
ME	big nut	748	77	64	111	111	151	131	140	40	54	73	19

ME	big nut	2.154	00	00	102	102	421	221	232	201	00	100	00
ME	big nut	2.313	00	00	90	90	530	202	230	341	00	100	90
ME	thick nut	1.185	45	36	140	151	241	181	181	90	00	85	00
ME	thick nut	1.341	15	13	161	151	291	201	161	141	00	96	00
ME	thick nut	1.060	56	50	140	120	190	180	150	70	00	55	00
ME	thick nut	1.008	39	36	141	111	200	181	131	91	00	59	00
ME	thick nut	1.033	45	36	141	100	190	180	130	91	00	61	00
ME	thick nut	1.005	45	36	141	121	211	180	151	91	00	62	00
ME	thick nut	932	43	36	111	130	201	141	151	71	00	56	00
ME	thick nut	945	00	00	100	121	270	130	131	150	00	100	00
ME	thick nut	697	46	41	100	81	140	130	101	60	00	54	00
ME	thick nut	769	41	39	130	90	170	171	110	81	00	68	00
ME	thick nut	784	36	25	120	81	170	170	111	90	00	80	00
ME	thick nut	835	38	34	121	121	201	161	141	81	00	66	00
ME	thick nut	2.194	50	35	201	130	261	240	181	131	00	71	00
ME	thick nut	2.108	57	55	220	190	291	281	231	101	00	55	00
ME	long doll	1.076	90	88	81	111	120	101	131	10	100	100	120
ME	long doll	1.029	88	84	61	121	131	80	141	11	100	100	131
ME	long doll	1.139	86	84	60	119	129	70	129	11	100	100	129
ME	long doll	1.177	80	75	81	101	120	101	120	21	100	100	120
ME	long doll	1.138	63	41	51	90	121	81	121	31	100	100	121
ME	long doll	1.109	70	29	70	110	160	100	160	50	100	79	138
ME	long doll	910	89	50	81	91	131	91	131	40	100	100	131
ME	long doll	888	88	71	70	110	130	80	130	20	100	100	130
ME	long doll	831	50	35	30	81	100	61	100	20	100	100	100
ME	long doll	833	67	43	70	70	110	90	100	40	100	100	110
ME	long doll	941	75	57	70	80	110	80	100	31	100	100	110
ME	long doll	2.227	61	14	141	170	291	180	261	121	100	55	215
ME	long toll	1.136	78	00	50	51	100	90	121	50	100	00	50

ME	long toll	1.162	82	56	91	111	151	111	151	41	83	31	75
ME	long toll	1.103	89	86	71	121	131	91	141	11	100	50	71
ME	long toll	1.197	88	72	71	121	141	81	141	21	91	37	64
ME	long toll	914	56	67	60	111	131	90	121	21	100	36	60
ME	long toll	1.143	86	61	51	121	141	71	150	21	100	41	70
ME	long toll	888	86	100	50	100	100	70	110	00	100	64	64
ME	long toll	887	75	57	71	80	111	80	100	30	100	50	71
ME	long toll	903	80	40	61	71	111	81	111	40	100	35	64
ME	long toll	866	51	00	21	80	101	60	111	21	100	67	75
ME	long toll	1.912	80	42	120	100	170	150	170	70	77	22	92
ME	long toll	1.747	83	34	151	101	201	171	191	101	67	00	101
ME	long toll	1.705	84	55	110	131	180	131	180	50	78	28	86
ME	his nut	1.166			90	120	210	120		90	32	82	29
ME	his nut	1.220			80	111	190	140		80	44	73	36
ME	his nut	1.169			80	100	181	131		80	40	71	32
ME	his nut	1.124			61	130	191	111		61	70	59	42
ME	his nut	1.095			60	111	171	100		60	64	79	38
ME	his nut	810			71	50	120	121		71	31	100	22
ME	his nut	823			80	61	141	121		80	45	82	36
ME	his nut	838			91	81	171	131		91	41	87	37
ME	his nut	912			101	80	180	151		101	32	63	32
ME	his nut	886			70	101	171	121		70	38	75	27
ME	his nut	862			81	91	171	141		81	39	69	32
ME	his nut	2.197			142	201	342	292		142	14	93	20
ME	his nut	2.069			191	202	392	260		191	38	85	72
ME	his nut	2.030			201	191	391	281		201	17	66	35
ME	this nut	1.183			101	151	251	131		101	00	73	00
ME	this nut	1.166			120	131	251	131		120	00	73	00
ME	this nut	1.084			130	111	241	140		130	12	70	16

ME	this nut	1.122			141	101	241	201		141	11	74	16
ME	this nut	1.165			131	140	270	151		131	15	67	19
ME	this nut	1.095			121	131	250	140		121	15	57	19
ME	this nut	873			110	81	191	141		110	00	78	00
ME	this nut	864			100	101	201	130		100	00	68	00
ME	this nut	855			121	71	191	141		121	00	65	00
ME	this nut	819			90	50	140	110		90	00	57	00
ME	this nut	934			141	50	191	181		141	00	64	00
ME	this nut	899			121	90	210	141		121	00	50	00
ME	this nut	1.647			141	141	281	171		141	00	87	00
ME	this nut	1.750			151	103	253	171		151	00	75	00
ME	this nut	1.609			141	131	271	161		141	08	75	11
ME	long zip	1.189	51		51	150	221	61	201	71	100	100	221
ME	long zip	1.180	15		41	129	189	70	159	61	100	36	108
ME	long zip	1.184	43		50	162	212	70	192	50	100	47	127
ME	long zip	1.133	34		41	171	211	61	192	41	100	44	116
ME	long zip	1.246	30		41	160	201	70	180	41	100	100	201
ME	long zip	921	34		40	100	140	60	120	40	100	100	140
ME	long zip	827	17		40	123	163	61	133	40	100	58	111
ME	long zip	939	57		51	108	158	70	148	51	100	44	94
ME	long zip	909	43		40	95	135	70	125	40	100	35	74
ME	long zip	875	15		41	120	161	70	131	41	100	50	101
ME	long zip	1.999	11		41	220	261	101	231	41	100	100	261
ME	long sip	1.111	51		40	190	230	61	221	40	100	05	45
ME	long sip	1.125	50		41	201	241	61	231	41	100	09	60
ME	long sip	1.211	34		31	201	230	61	221	31	100	03	37
ME	long sip	1.200	34		31	251	281	61	270	31	100	08	52
ME	long sip	1.162	51		41	220	261	61	251	41	100	04	50
ME	long sip	923	17		30	150	180	60	160	30	100	16	55

ME	long sip	934	34		30	151	181	60	171	30	100	07	42
ME	long sip	764	26		20	121	140	40	130	20	100	15	38
ME	long sip	790	50		40	131	170	60	161	40	100	09	53
ME	long sip	762	34		20	131	151	60	151	20	100	13	37
ME	long sip	2.151	50		51	271	321	81	311	51	100	08	72
ME	long sip	2.173	63		61	271	331	80	321	61	100	08	82
ME	big lap	1.182	00	00	90	110	210	111	120	101	32	100	29
ME	big lap	1.020	09	00	70	101	170	120	110	70	100	100	170
ME	big lap	1.197	06	00	90	130	230	181	151	100	100	100	230
ME	big lap	1.142	00	00	71	120	210	121	130	91	49	100	34
ME	big lap	1.054	07	00	71	121	191	151	131	71	100	100	191
ME	big lap	947	00	00	41	91	141	81	101	51	100	100	141
ME	big lap	946	11	00	60	90	150	90	100	60	100	100	150
ME	big lap	912	19	17	60	91	140	111	101	50	100	100	140
ME	big lap	872	00	00	61	61	150	111	90	90	79	100	48
ME	big lap	851	09	00	60	101	160	120	110	60	100	100	160
ME	big lap	2.197	00	00	91	162	441	201	170	281	75	100	68
ME	big lap	2.213	00	00	90	131	440	211	151	311	98	100	89
ME	thick lap	1.220	00	00	100	101	210	130	111	110	07	76	07
ME	thick lap	1.128	00	00	101	111	230	141	120	120	00	75	00
ME	thick lap	1.247	00	00	91	110	231	120	130	121	00	69	00
ME	thick lap	1.073	00	00	91	101	200	161	110	101	00	56	00
ME	thick lap	1.172	00	00	100	121	220	170	121	100	00	70	00
ME	thick lap	922	08	00	81	91	181	120	111	91	00	63	00
ME	thick lap	890	00	00	90	101	200	130	110	100	00	64	00
ME	thick lap	916	00	00	81	80	180	121	90	101	00	58	00
ME	thick lap	888	14	00	101	90	191	151	110	101	00	58	00
ME	thick lap	993	07	00	111	100	210	150	111	111	00	66	00
ME	thick lap	1.641	00	00	110	141	271	151	141	131	00	82	00

ME	thick lap	1.826	06	00	141	90	231	181	101	141	00	69	00
ME	thick lap	2.135	00	00	110	100	240	141	121	141	00	93	00
ME	full gap	1.178	10	00	101	41	151	111	61	111	100	100	151
ME	full gap	1.102	23	00	80	31	121	91	61	90	100	75	113
ME	full gap	1.096	23	00	80	51	140	90	80	90	100	49	115
ME	full gap	1.113	37	00	91	51	131	111	81	81	100	65	114
ME	full gap	1.257	22	00	71	51	121	90	71	71	100	100	121
ME	full gap	1.109	31	17	121	51	151	130	70	101	100	86	144
ME	full gap	838	21	00	50	20	80	50	40	60	100	100	80
ME	full gap	798	11	00	80	31	120	90	50	90	100	59	108
ME	full gap	867	00	00	80	20	120	80	40	100	100	100	120
ME	full gap	884	00	00	60	50	130	60	70	80	100	78	120
ME	full gap	2.116	00	00	80	110	250	100	171	141	100	00	80
ME	full gap	2.121	00	00	111	131	282	121	172	152	100	00	111
ME	full cap	1.290	23	00	81	40	140	91	80	101	61	00	61
ME	full cap	1.253	23	00	81	51	141	91	81	91	79	00	72
ME	full cap	1.207	26	00	71	51	141	81	91	91	64	00	58
ME	full cap	1.186	34	00	41	61	111	61	91	50	65	00	33
ME	full cap	922	25	00	80	40	120	80	60	80	78	00	63
ME	full cap	945	21	00	40	40	100	50	80	60	45	00	27
ME	full cap	1.015	41	00	50	60	110	50	80	50	78	00	39
ME	full cap	910	00	00	30	50	130	40	100	80	23	00	18
ME	full cap	995	29	00	71	31	111	71	60	80	32	00	46
ME	full cap	1.611	31	00	91	51	141	101	81	91	71	00	64
ME	full cap	2.257	38	00	81	60	151	81	100	91	63	00	57
ME	full cap	1.999	38	00	71	30	121	80	80	91	62	00	56
ME	his lap	1.162			100	91	191	190		100	31	74	31
ME	his lap	1.135			151	61	212	251		151	38	100	57
ME	his lap	1.082			120	61	182	231		120	18	69	22

ME	his lap	1.083			131	41	171	210		131	18	71	23
ME	his lap	1.073			110	81	191	161		110	37	56	41
ME	his lap	1.041			101	71	172	161		101	28	64	29
ME	his lap	871			101	41	141	150		101	22	32	22
ME	his lap	883			101	40	141	151		101	22	58	22
ME	his lap	894			81	71	152	160		81	24	60	20
ME	his lap	858			80	41	121	180		80	27	45	22
ME	his lap	1.927			191	171	363	311		191	20	70	38
ME	his lap	2.165			251	140	392	361		251	19	69	47
ME	this lap	1.190			160	71	231	191		160	06	73	09
ME	this lap	1.025			121	80	201	161		121	00	54	00
ME	this lap	1.156			151	90	241	191		151	07	83	10
ME	this lap	952			111	81	191	140		111	00	46	00
ME	this lap	1.031			121	90	211	151		121	00	67	00
ME	this lap	953			120	51	171	161		120	00	47	00
ME	this lap	960			110	80	191	131		110	00	68	00
ME	this lap	884			140	30	171	151		140	00	50	00
ME	this lap	877			111	80	191	141		111	00	51	00
ME	this lap	918			100	70	171	131		100	00	53	00
ME	this lap	871			121	50	171	151		121	00	27	00
ME	this lap	1.583			121	120	241	161		121	00	51	00
ME	this lap	1.596			131	91	221	171		131	00	73	00
ME	this lap	1.647			131	121	252	161		131	00	70	00
ME	full zip	1.186			70	120	191	130		70	100	100	191
ME	full zip	1.129			60	111	171	111		60	100	100	171
ME	full zip	1.193			41	111	151	81		41	100	100	151
ME	full zip	880			40	71	111	70		40	100	100	111
ME	full zip	895			40	81	121	71		40	100	28	63
ME	full zip	892			71	68	139	91		71	100	17	82

ME	full zip	876			31	80	111	61		31	100	57	126
ME	full zip	839			61	116	146	70		31	100	35	71
ME	full zip	2.434			131	211	342	151		131	100	100	342
ME	full zip	2.440			100	209	310	110		100	100	100	310
ME	full sip	1.298			71	171	242	102		71	35	00	25
ME	full sip	1.201			51	171	221	90		51	33	00	17
ME	full sip	1.245			51	191	241	81		51	100	00	51
ME	full sip	1.284			121	161	281	130		121	76	00	92
ME	full sip	1.195			120	161	281	131		120	79	00	95
ME	full sip	818			70	85	155	100		70	31	00	22
ME	full sip	936			30	161	191	50		30	100	00	30
ME	full sip	899			80	154	234	91		80	100	00	80
ME	full sip	2.342			61	358	418	81		61	100	08	27
ME	full sip	2.581			111	351	462	122		111	100	00	111

APPENDIX B

The following lists contain the stimuli that were presented to the Catalan and English subjects during the experimental sessions.

RANDOMIZED STIMULI FOR CATALAN SPEAKERS

1. Digui 'pas nou' dos cops
2. Digui 'gas dur' dos cops
3. Digui 'fred gal' dos cops
4. Digui 'sol zíngar' dos cops
5. Digui 'pas turc' dos cops
6. Digui 'fred car' dos cops
7. Digui 'pas lent' dos cops
8. Digui 'dret car' dos cops
9. Digui 'fong zíngar' dos cops
10. Digui 'sol simple' dos cops
11. Digui 'sol car' dos cops
12. Digui 'pas dur' dos cops
13. Digui 'gas nou' dos cops
14. Digui 'mag nou' dos cops
15. Digui 'Mac nou' dos cops

16. Digui 'gas turc' dos cops
17. Digui 'fong dur' dos cops
18. Digui 'dret gal' dos cops
19. Digui 'sol gal' dos cops
20. Digui 'fong simple' dos cops
21. Digui 'gas lent' dos cops
22. Digui 'fong turc' dos cops
23. Digui 'mag lent' dos cops
24. Digui 'Mac lent' dos cops

RANDOMIZED STIMULI FOR ENGLISH SPEAKERS

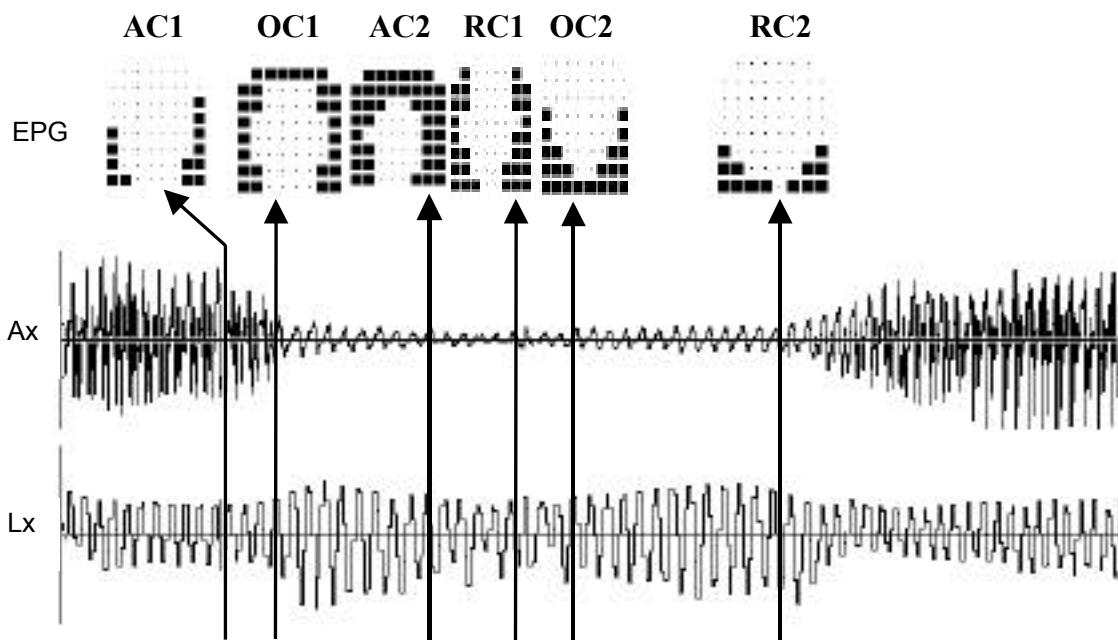
1. Say 'this nut' again
2. Say 'his doll' again
3. Say 'sad gap' again
4. Say 'full zip' again
5. Say 'this toll' again
6. Say 'his zip' again
7. Say 'sad cap' again
8. Say 'this lap' again
9. Say 'fat cap' again
10. Say 'long zip' again
11. Say 'full sip' again
12. Say 'full cap' again
13. Say 'this doll' again
14. Say 'his nut' again
15. Say 'big nut' again
16. Say 'thick nut' again
17. Say 'his toll' again
18. Say 'long doll' again

19. Say 'fat gap' again
20. Say 'full gap' again
21. Say 'long sip' again
22. Say 'his lap' again
23. Say 'long toll' again
24. Say 'thick lap' again

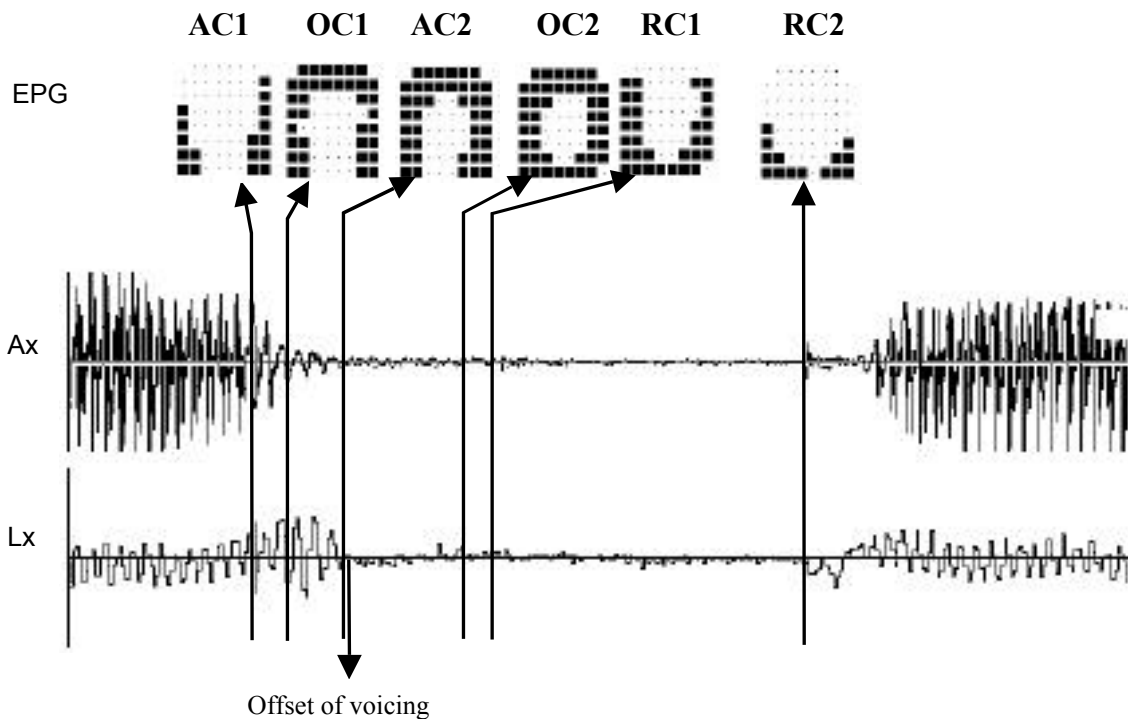
APPENDIX C**SAMPLE DATA**

In this section sample data from the Catalan speaker AN with the measurement points marking segmentation of the signal are included. The figures display the EPG signal (top), acoustic waveform (middle) and EGG signal (bottom) corresponding to the test sequences. The measurement points represent AC1 (approach to C1), OC1 (onset of C1), RC1 (release of C1), AC2 (approach to C2), OC2 (onset of C2) and RC2 (release of C2).

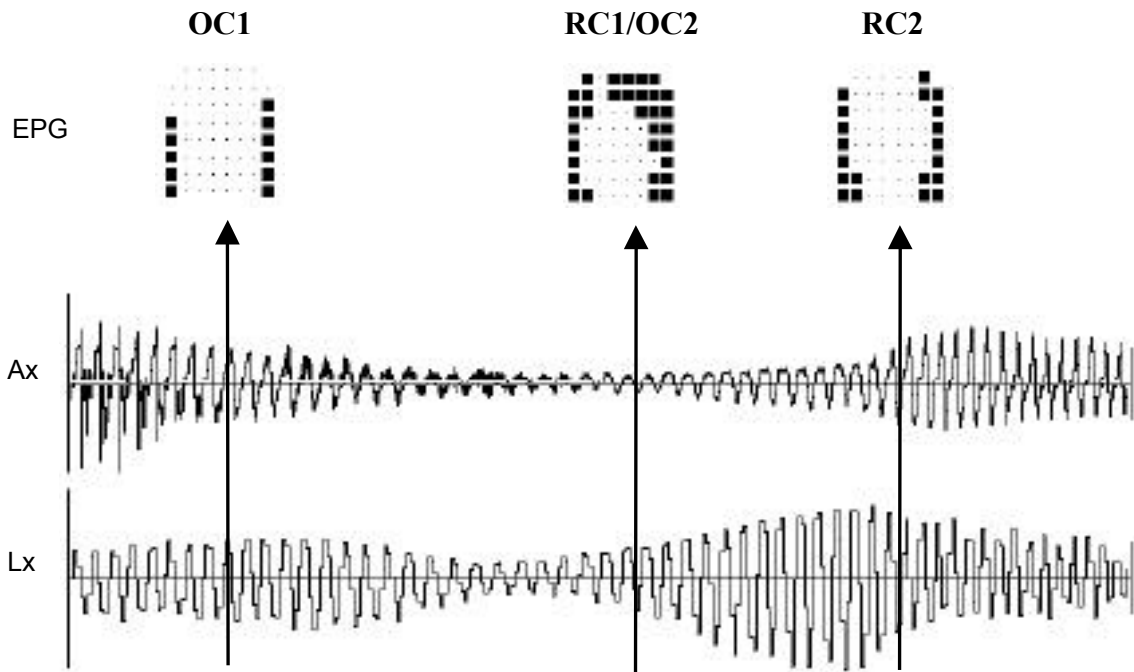
dret_gal /t#g/



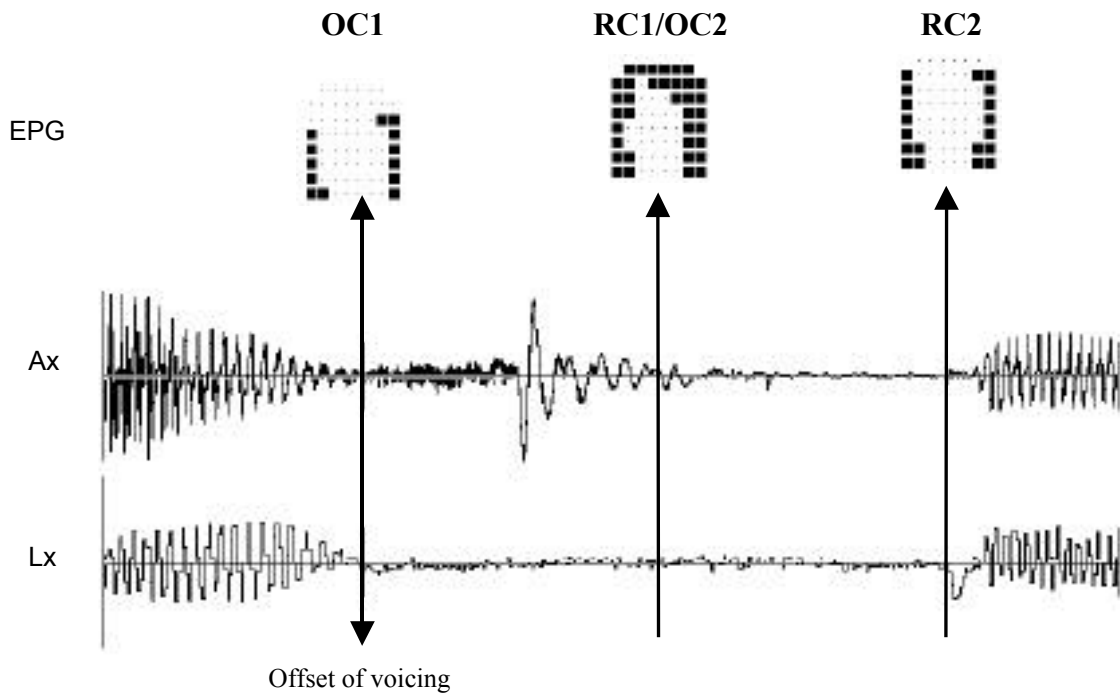
fred_car /d#k/



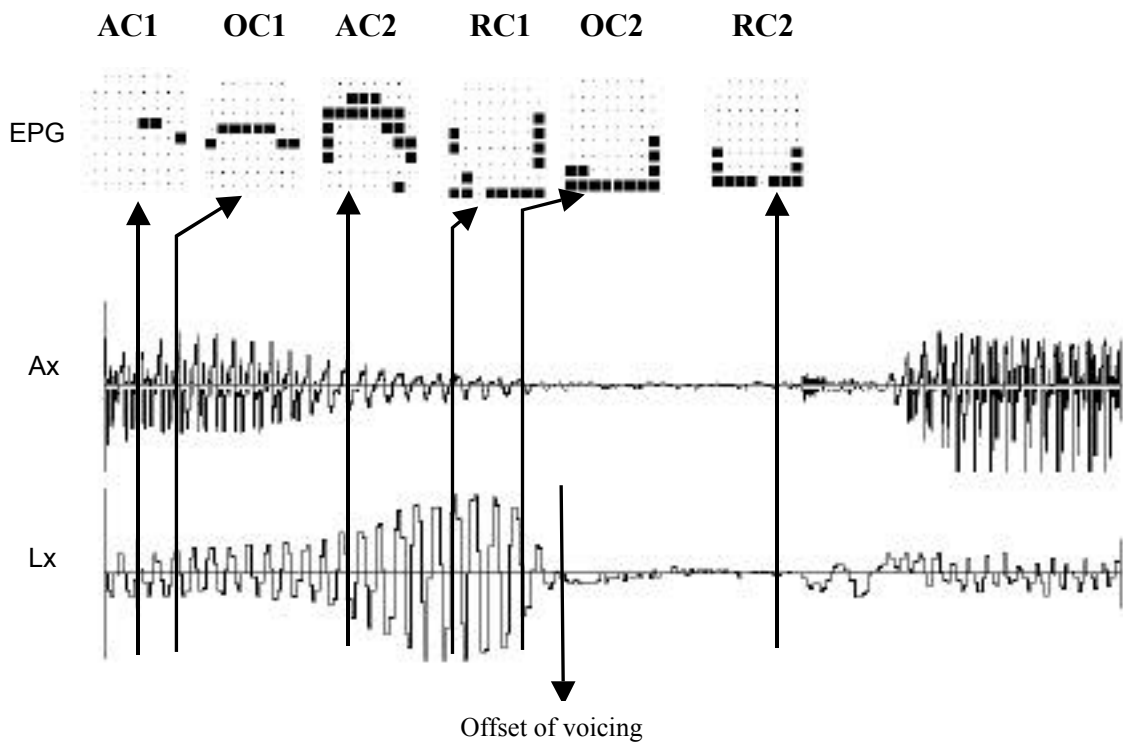
pas_dur /s#d/



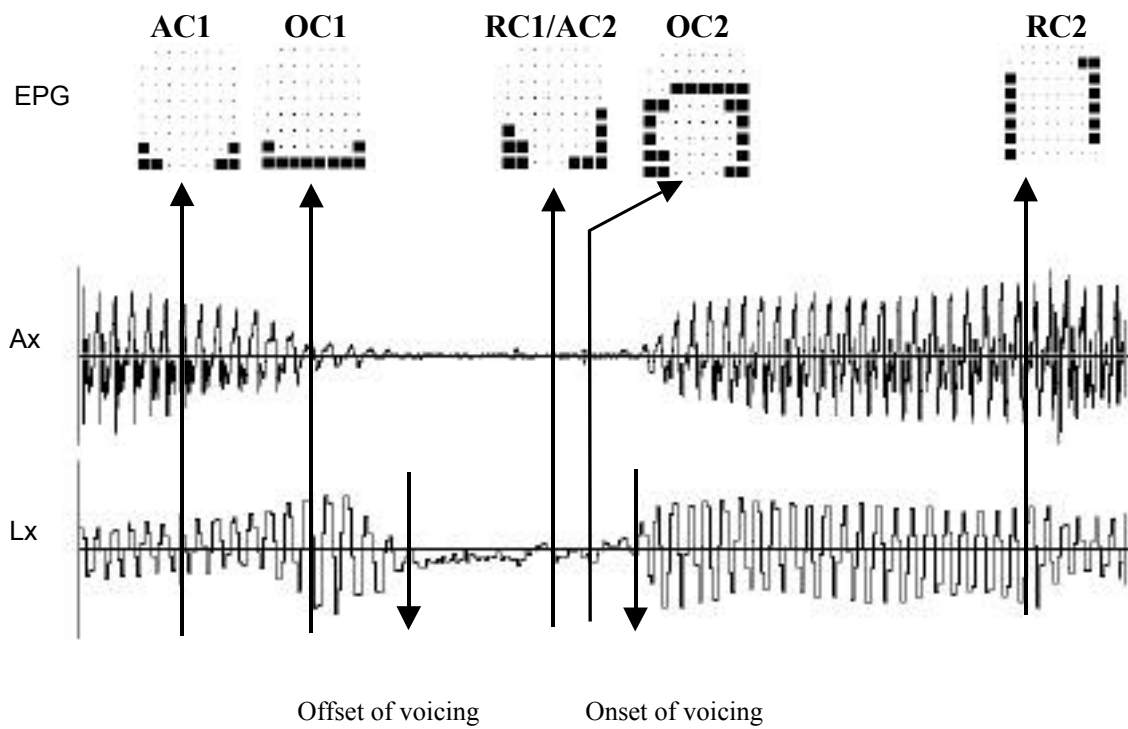
gas_turc /z#t/



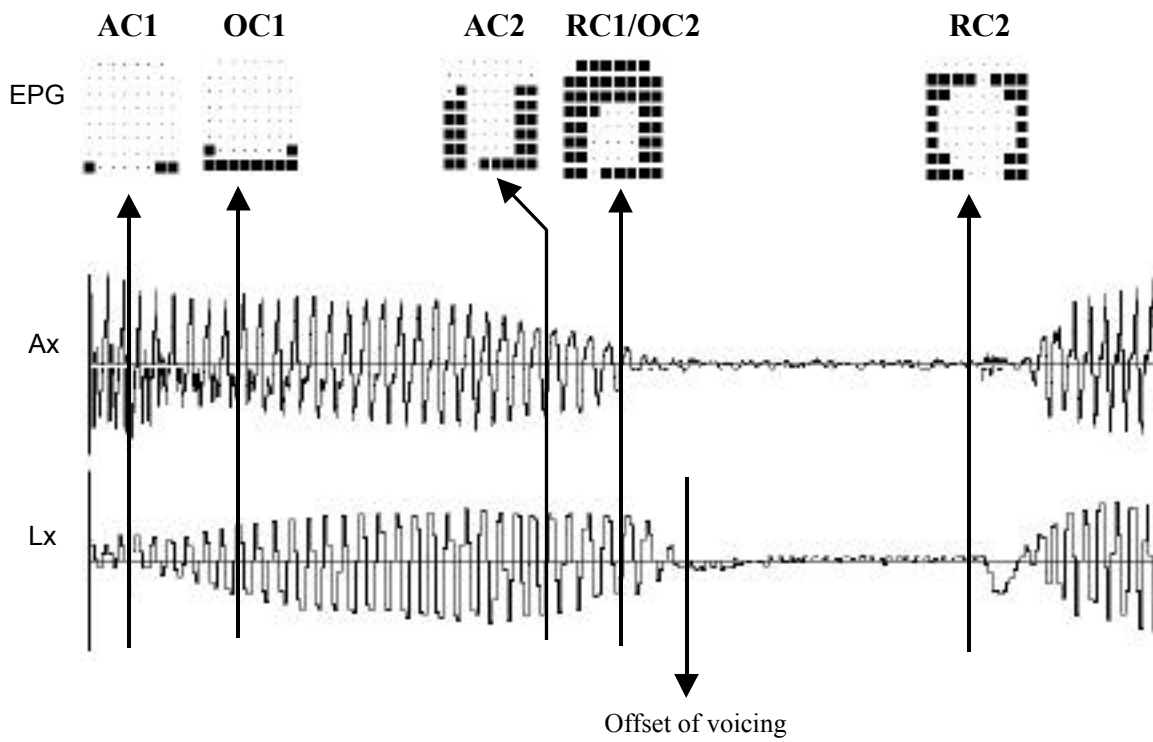
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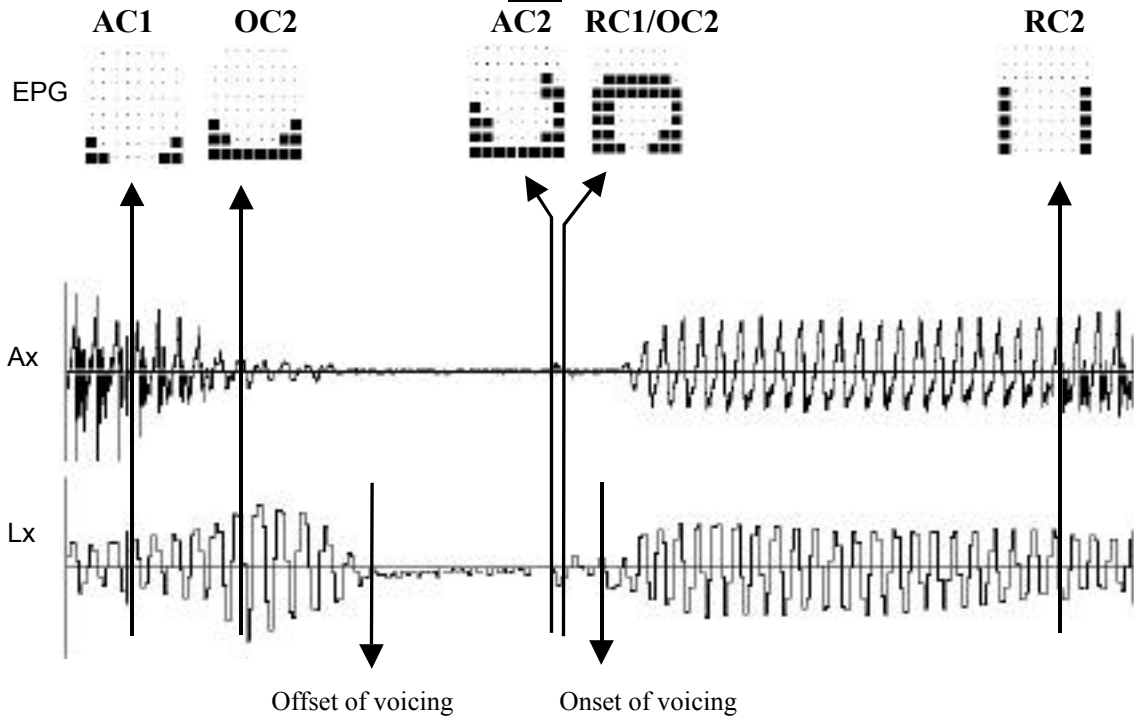
Mac lent /k#l/



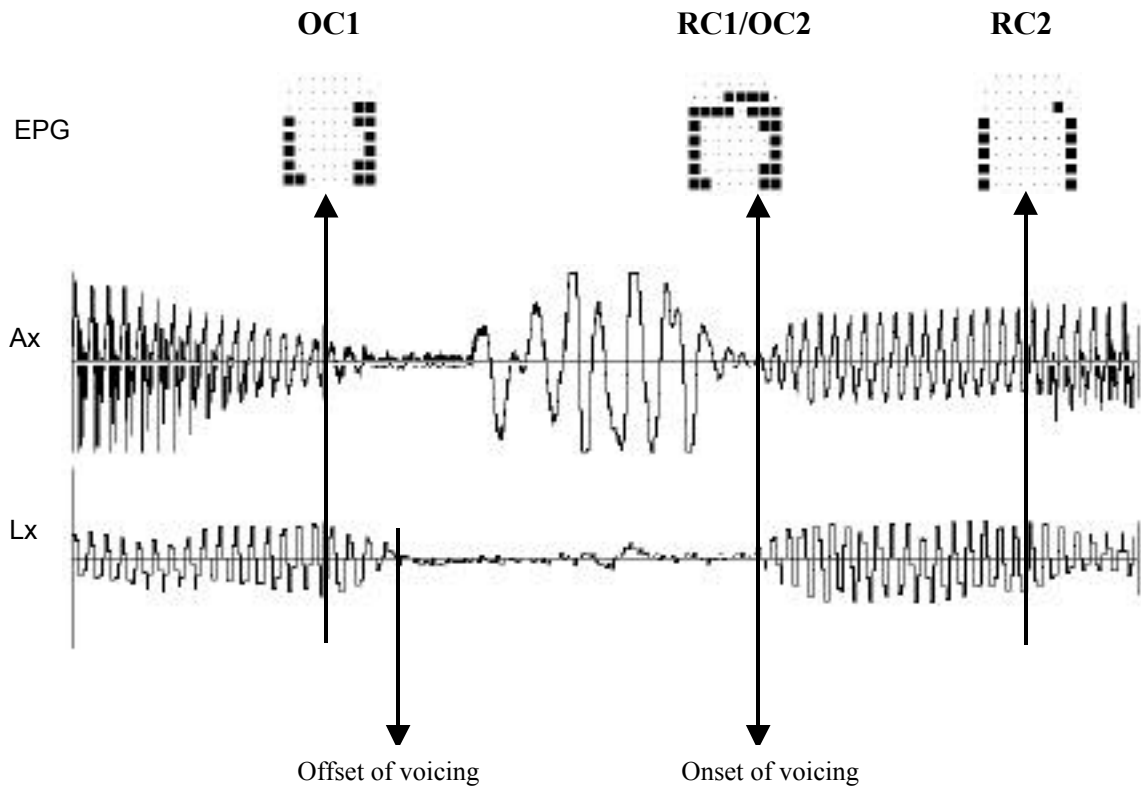
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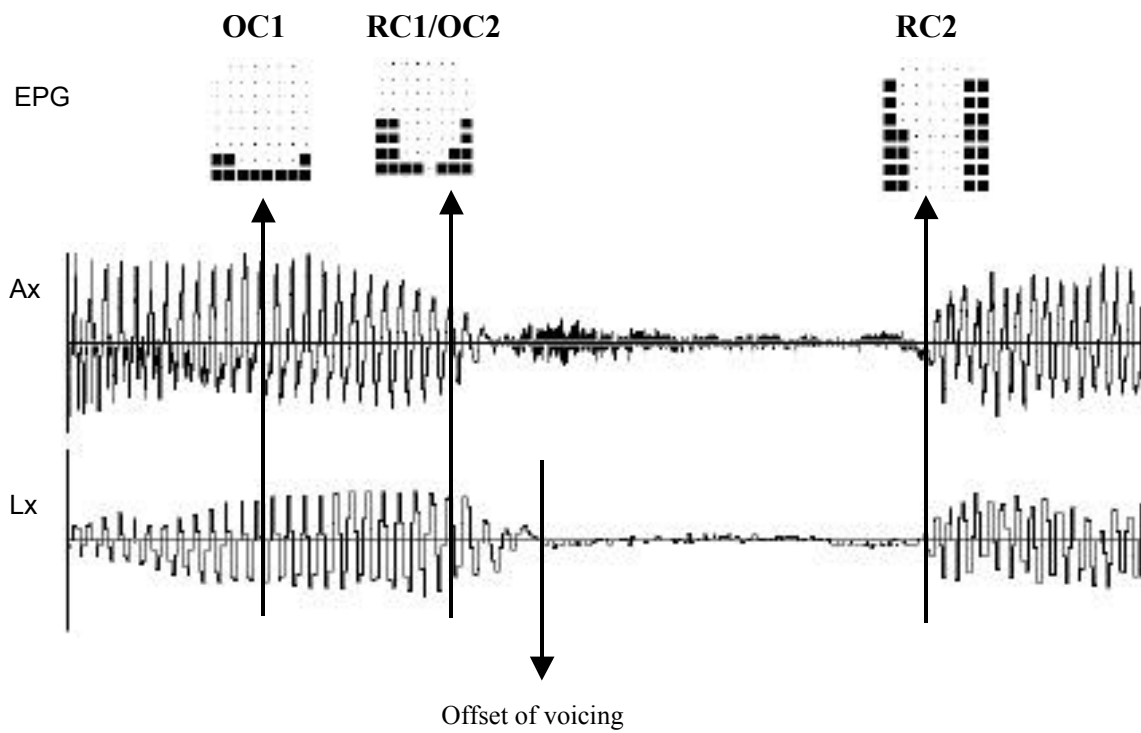
Mac_nou /k#n/



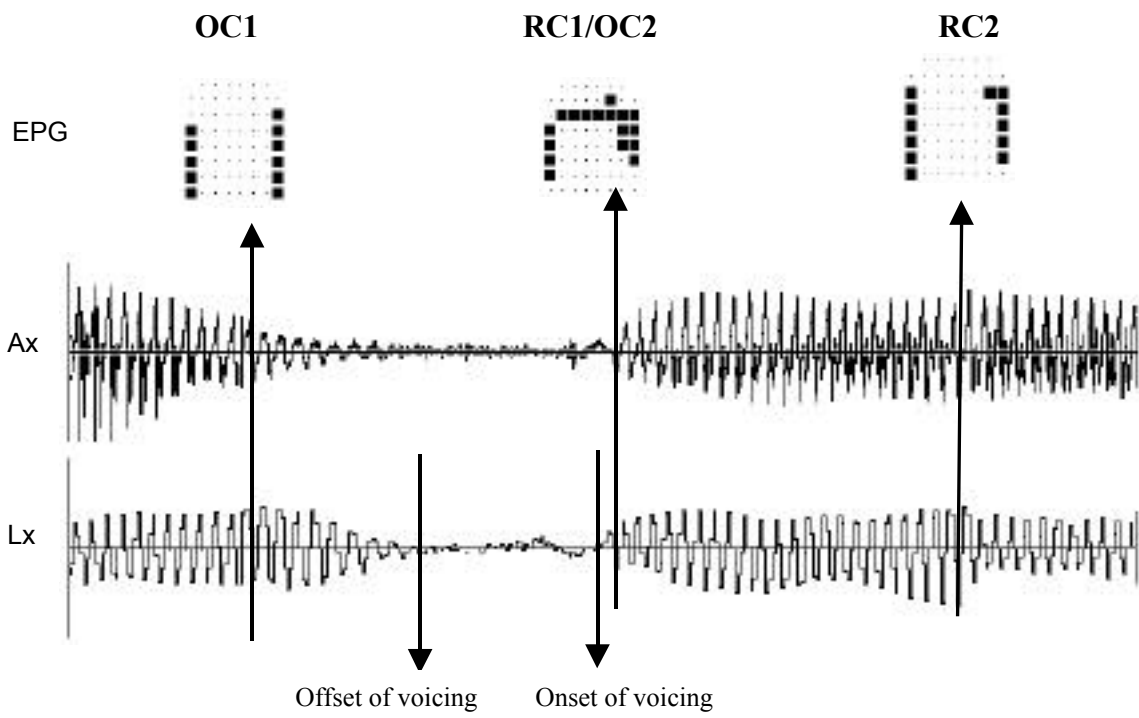
pas_nou /s#n/



fong_simple /N#s/



pas_lent /s#l/



sol_simple /l#s/

