

Contents

1	Introduction	9
2	Dialogue systems	13
2.1	Meanings by compositionality	14
2.1.1	Semantics notation	15
2.1.2	Semantic analysis and modelling	17
2.1.3	Cyc and ontologies	19
2.2	Natural language understanding	19
2.2.1	Proper name identification	20
2.2.2	Part of speech tagging	21
2.2.3	Parsing	22
2.3	AIML	23
2.4	Modern trends in dialogue systems	26
3	Some examples of dialogue systems applications	29
3.1	Chattebots for websites	29
3.2	Automatic call-centre	32
3.3	Façade - Interactive drama	34
4	Scarlett Mansion plot	37
4.1	Setting	37
4.2	Well known facts	38
4.3	Facts known only by specific suspects	39
4.4	Crucial events	40
4.5	Reactions of suspects	41
4.6	Time limit	42
4.7	Elizabeth Scarlett	43
4.8	Colonel Mustard	45
4.9	Maria Scarlett	47
4.10	Eva Scarlett	50
4.11	Eric	52

CONTENTS

4.12	Sir Garen Graf von Noxia und Demacia	55
4.13	Maid of the family (Miss Fortune)	57
5	Technical information	59
5.1	Bot states	59
5.2	Bot naming convention	60
5.3	Special sentences	61
5.4	Plot configuration file	62
5.4.1	Bot transitions	63
5.4.2	Crucial events	64
5.4.3	Time limit	66
5.4.4	Game end	67
5.5	Middleware	67
5.6	An example of a bot change	68
6	Attractions of role-playing games	73
6.1	Traditional dialogues	74
6.2	Game loops	75
6.3	Challenges	76
7	Plans and conclusions	77
8	Annex - Eva's bot	85