

Contents

1	Deployed vs. Academic Spoken Dialog Systems	1
1.1	At-a-Glance	1
1.2	Census, Internet, and a Lot of Numbers	2
1.3	The Two Worlds	7
2	Paradigms for Deployed Spoken Dialog Systems	9
2.1	A Few Remarks on History	9
2.2	Components of Spoken Dialog Systems	11
2.3	Speech Recognition and Understanding	12
2.3.1	Rule-Based Grammars	12
2.3.2	Statistical Language Models and Classifiers	13
2.3.3	Robustness	14
2.4	Dialog Management	25
2.5	Language and Speech Generation	27
2.6	Voice Browsing	30
2.7	Deployed Spoken Dialog Systems are Real-Time Systems	33
3	Measuring Performance of Spoken Dialog Systems	39
3.1	Observable vs. Hidden	39
3.2	Speech Performance Analysis Metrics	42
3.3	Objective vs. Subjective	46
3.4	Evaluation Infrastructure	48
4	Deployed Spoken Dialog Systems' Alpha and Omega: Adaptation and Optimization	49
4.1	Speech Recognition and Understanding	50
4.2	Dialog Management	55
4.2.1	Escalator	55

4.2.2 Engager.....	56
4.2.3 Contender	59
References	63



<http://www.springer.com/978-1-4419-9609-1>

Advances in Commercial Deployment of Spoken Dialog
Systems

Suendermann, D.

2011, XII, 69 p. 20 illus., 7 illus. in color., Softcover

ISBN: 978-1-4419-9609-1