## Contents

WI	hat's Inside	XIX
1	WHAT IS INTERACTION DESIGN?	8.8
20	1 1 Introduction	hu737
	1.2 Good and Poor Design	3
	1.3 Switching to Digital	6
	1.4 What to Design	8
	1.5 What Is Interaction Design?	10
	1.6 People-Centered Design	14
	1.7 Understanding People	16
	1.8 Accessibility and Inclusiveness	20
	1.9 Usability and User Experience Goals	32
	Further Reading Interview with Harry Brignull	34
	CELUMNIA DE LE CELUMNIA DE LA CELUMNIA DEL CELUMNIA DEL CELUMNIA DE LA CELUMNIA DEL CELUMNIA DEL CELUMNIA DE LA CELUMNIA DEL CE LA CELUMNIA DEL CELUMNIA	TALL
2	THE PROCESS OF INTERACTION DESIGN	37
	2.1 Introduction	37
	2.2 What Is Involved in Interaction Design?	38
	2.3 Some Practical Issues	55
	Further Reading	00
3	CONCEPTUALIZING INTERACTION	69
273	3.1 Introduction	AQ468
	3.2 Conceptualizing Interaction	69 72
	3.3 Conceptual Models	75
	3.4 Interface Metaphors	79
	3.5 Interaction Types	81
	3.6 Paradigms, Visions, Challenges, Theories, Models, and Frameworks	89
	Further Reading	96
	Interview with Albrecht Schmidt	97
4	COGNITIVE ASPECTS	101
	4.1 Introduction	ACISTA
	4.2 What Is Cognition?	101
	4.3 Cognitive Frameworks	124
	Further Reading	134
		1

5	SOC	IAL INTERACTION		135	
	5.1	Introduction		135	
	5.2	Being Social		136	
	5.3	Face-to-Face Conversations		141	
	5.4	Remote Collaboration and Communication		147	
	5.5	Co-Presence		159	
	5.6	Social Games	HAT IS INTERACTION	165	
	Furth	ner Reading		169	
6	ЕМО	OTIONAL INTERACTION		171	
	6.1	Introduction		171	
	6.2	Emotions and Debouier		172	
	6.3	Expressive Interfaces: Aesthetic or Annoying?		180	
	6.4	Affective Computing and Emotional Al		184	
	6.5	Persuasive Technologies and Behavioral Change		189	
	6.6	Anthropomorphism	9 Usability and User	192	
	Furth	ner Reading		196	
100		-DEACEC		100	
1	INIE	ERFACES		199	
	7.1			199	
	7.2	Interface Types		200	
	7.3			266	
				267	
		ner Reading			
	Inter	view with Leah Buechley		271	
8	DATA	A GATHERING		273	
	8.1	Introduction		273	
	8.2	0: 1/		274	
	8.3			281	
		Interviews		284	
	8.5	Questionnaires		294	
	8.6	Observation		302	
	8.7	Putting the Techniques to Work		315	
	Furth	ner Reading		322	
101			OGNITIVE ASPECTS	4 0	
9	DATA ANALYSIS, INTERPRETATION, AND PRESENTATION 325				
	9.1	Introduction		325	
	9.2	Quantitative and Qualitative		327	
	9.3	Basic Quantitative Analysis		330	

	9.4	Basic Qualitative Analysis	340	
	9.5	Analytical Frameworks	350	
	9.6	Tools to Support Data Analysis	362	
	9.7	Interpreting and Presenting the Findings	362	
	Furth	er Reading	368	
10	DATA	DATA AT SCALE AND ETHICAL CONCERNS		
	10.1	Introduction	371	
	10.2	Approaches for Collecting and Analyzing Data	373	
	10.3	Visualizing and Exploring Data	388	
	10.4	Ethical Design Concerns	398	
	Furth	er Reading	405	
11	DISC	OVERING REQUIREMENTS	407	
	11.1	Introduction	407	
	11.2	What, How, and Why?	408	
	11.3	What Are Requirements?	409	
	11.4	Data Gathering for Requirements	418	
	115.	Bringing Requirements to Life: Personas and Scenarios	426	
	11.6	Capturing Interaction with Use Cases	436	
	Furth	er Reading	440	
12	DESI	GN, PROTOTYPING, AND CONSTRUCTION	441	
	12.1	Introduction	441	
	12.2	Prototyping	443	
	12.3	Conceptual Design	456	
	12.4	Concrete Design	467	
	12.5	Generating Prototypes	470	
	12.6	Construction	480	
		er Reading	486	
	Inter	view with Jon Froehlich	487	
13	INTE	RACTION DESIGN IN PRACTICE	491	
	13.1	Introduction	491	
	13.2	AgileUX	494	
	13.3	Design Patterns	504	
		Open Source Resources	510	
		Tools for Interaction Design	512	
	Furth	er Reading	514	
	Interv	view with Luciana Zaina	515	

14 INTR	ODUCING EVALUATION		519
14.1	Introduction		519
14.2	The Why, What, Where, and When of Eva	luation	520
	Types of Evaluation		524
14.4	Evaluation Case Studies		533
14.5	What Did We Learn from the Case Studie	s?	541
14.6	Other Issues to Consider When Doing Eva	aluation	543
Furth	er Reading		547
15 EVAL	LUATION STUDIES: FROM CONTROLLE	D TO NATURAL SETTINGS	549
15.1	Introduction		549
15.2	Usability Testing		550
15.3	Conducting Experiments		564
15.4	In-the-Wild Studies		567
Furth	er Reading		576
Inter	view with danah boyd		577
o a barrelling	er Reading	A Proposition of the Contraction	1796
16 EVAL	UATION: INSPECTIONS, ANALYTICS, A	ND MODELS	583
16.1	Introduction		583
16.2	Inspections: Heuristic Evaluation and Wal	k-Throughs	584
16.3	Analytics and A/B Testing		601
16.4	Predictive Models		610
Furth	er Reading		614
Epilogue			615
ARA			
References			619
Index			675