

**The Information System of Mobile Knowledge  
Workers: An Activity Theory perspective of  
information sources and interaction**

**By**

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This thesis is submitted by Michael Er  
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## **Certificate of Authorship / Originality**

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Production Note:

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Michael Er

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## **Abstract**

Mobile technology has the potential to connect the mobile knowledge worker (MKW) to information sources which will support their decision making. Many researchers in the fields of innovation adoption and human computer interaction advocate that the development of support technology (such as mobile technology) should be initiated with an understanding of the end user that is based on current work practices, in order to support acceptance and adoption.

The object of this research is to describe the existing information system used by mobile knowledge workers (MKWs).

The assessment of the existing information system of MKWs under examination in this research goes beyond the identification of data and the technical means of data supply. A holistic view of the information system is applied to take into consideration both the existing sources of information which assist in decision making and the interaction and/or access made by the user (MKW) with such systems.

An interpretive philosophical approach was taken via an empirical study of mobile workers in three different contexts. The empirical research resulted in the development of three case studies: Doctors working on ward rounds, Reporters working in the field and construction site workers operating on building sites. The case studies were executed in two rounds, the first round being focussed on the Doctors and Reporters, and the second being a main case study which examined the work practices of construction site workers. Consideration of these MKWs was developed using semi-structured interviews and interpreted through the lens of Activity Theory.

The resulting framework adapted from Activity Theory identifies technical, social and environmental factors which influence the way mobile knowledge workers interact with information sources. Of particular note is the identification of a previously overlooked information source which sits outside the organisation: that of the Contributor. Another significant finding is the preference for information provided by Collaborators over information supplied by information tools. The information provided by Collaborators was preferred as it was subject to the application of Collaborators' knowledge to the situational context.

## Publications Supporting this Research

The following publications list peer reviewed papers which are directly related to my research:

Er, M., Lawrence, E., & Kay, R. 2010, 'Information Systems and Activity Theory: A Case Study of Doctors and Mobile Knowledge Work', ITNG New Generations, Las Vegas, USA, November 2007 in *Seventh International Conference on Information Technology*, ed Shahram Latifi, IEEE Computer Society, USA, pp.603-607.

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# Table of Contents

Chapter 1 Introduction .....	1
1.1 Research Overview .....	1
1.2 Scope of Study .....	2
1.3 Research Question .....	2
1.4 Research Objectives .....	3
1.5 Methodology .....	3
1.6 Research Impact and Significance .....	3
1.7 Thesis Structure.....	4
1.8 Conclusion .....	7
Chapter 2 – Literature Review: MKW and Mobile Technology Adoption .....	8
2.1 Introduction .....	8
2.2 The Mobile Knowledge Worker .....	9
2.3 Assisting Mobile Knowledge Work with Information Access .....	11
2.4 Adoption Challenged .....	14
2.4.1 Investment in Mobile Technology Development.....	15
2.4.2 Mobile Phones and Success .....	17
2.5 Reflection on Limited Adoption of Mobile Technology .....	18
2.5.1 Technology Adoption Model (TAM).....	27
2.5.2 Diffusion of Innovation Theory .....	29
2.6 Reflection on the Role of Social Influence on Adoption .....	32
2.6.1 Management Driven Innovation .....	35
2.7 Unanticipated Variations – Clues for Developing Useful Technology Through HCI.....	37
2.7.1 Understanding Users .....	39
2.8 Reflection on Mobile Knowledge Work – What Do They Want?.....	42
2.8.1 Components of the Information System .....	43
2.8.2 Mapping the Mobile Information System .....	47
2.9 Conclusion .....	48
Chapter 3 - Literature Review: Activity Theory .....	51
3.1 Introduction .....	51
3.2. What is Activity Theory?.....	51
3.3 Subject – Object and Activity .....	52
3.4 Tools and Mediation.....	54
3.5 Community of Practice and Divisions of Labour.....	56
3.6 Contradictions .....	58
3.7 Internalisation and Externalisation .....	60
3.8 Using Activity Theory .....	61
Chapter 4 - Methodology .....	65
4.1 Introduction .....	65
4.2 Methodology Options .....	65
4.2.1 Quantitative Research .....	66
4.2.2 Qualitative Research .....	66
4.2.1 Selection of the Qualitative Interpretive Approach .....	68

4.3 Research Design – Interpretive Case Studies .....	69
4.3.1 Data Collection – Semi-structured Interviews .....	73
4.3.2 Sampling .....	77
4.4 Analysis.....	79
4.5 Research Process - Case Studies.....	81
4.5.1 Selection of Case Study Subjects .....	81
4.6 Conclusion .....	83
Chapter 5 – Results: Pilot Case Studies .....	84
5.1 Introduction .....	84
5.2 PART 1: Doctors Ward Round System .....	86
5.2.1 Background to the Work of Doctors .....	86
5.2.2 Findings.....	89
5.2.2.1 Mediating Influences .....	89
5.2.2.2 Case Notes .....	89
5.2.2.3 Patients.....	92
5.2.2.4 Ancillary Hospital and Ward Support .....	93
5.2.2.5 Collaboration with Other Doctors .....	93
5.2.2.6 Trust and Collaboration.....	96
5.2.2.7 Nursing Staff.....	96
5.2.3 Analysis and Discussion .....	100
5.2.3.1 An Activity-based View of the Mobile Work of Doctors .....	100
5.2.3.2 Representing Activity.....	103
5.2.3.3 Emergent Theme - Urgency .....	104
5.3 PART 2: Reporters and Fieldwork .....	107
5.3.1 Introduction and Background to the Work of Reporters .....	107
5.3.2 Findings.....	110
5.3.2.1 Operating in the Office.....	110
5.3.2.2 Research and Preparation.....	111
5.3.2.3 Eliciting Information - Interviews.....	113
5.3.2.4 Writing and Editing Stories .....	114
5.3.2.5 Collaboration in the Office .....	116
5.3.3 Mobile Work of Reporters .....	118
5.3.3.1 Introduction and Background .....	118
5.3.3.2 Eliciting Information in the Field .....	119
5.3.3.3 Information Tools .....	121
A. Preparation and Research.....	121
B. Mobile Phones and Office Contact .....	122
C. Information and the Environment.....	123
D. Collaborating with Other Reporters .....	124
E. Individual Experience and Knowledge .....	125
5.3.3.4 Reporting from the Field – Urgency and Information .....	126
5.3.4 Filing Stories from the Field.....	129
5.3.4.1 The Copytakers .....	130
5.3.4.2 The Laptop .....	132
5.3.4.3 Preference for Copytaker System.....	136



5.3.4.4 Vignette 1 – The Luddite .....	138
5.3.4.5 Vignette 2 – Sports Reporter .....	139
5.4 PART 3: Discussion of Combined Pilot Case Studies .....	141
5.4.1 Differences Between Case Studies .....	143
5.4.2 Common Themes .....	144
5.4.3 Emergent Themes: Environments and Activity .....	148
Physical Environment .....	149
Social Environment .....	151
5.5 Summary.....	153
Chapter 6 - Main Case Study: Mobile Knowledge Workers on Construction Projects..	156
6.1 Introduction to Chapter .....	156
6.2 Introduction to the Construction Case Study .....	158
6.3 Background to Construction Sites and Information.....	162
6.4 Findings - Construction Site 1 (Site 1) .....	166
6.4.1 Construction Site Workers and Mobile Work – Site 1 .....	166
6.4.2 Tools - Site 1 .....	167
Plans 167	
Other Paper-based Documentation .....	169
Digital Information.....	172
6.4.3 Collaboration and Communication .....	173
6.4.4 The Environmental Context .....	176
6.5 Findings - Construction Site 2 (Site 2) .....	179
6.5.1 Construction Site Workers and Mobile Work – Site 2.....	182
6.5.2 Tools – Site 2 .....	185
Plans 186	
6.5.3 Collaborators and Decision Making.....	190
6.5.4 Environmental Conditions on Construction Site 2 .....	194
6.6 Information Sources and Access for the MKW: Reviewing the Construction Industry Case Study .....	197
6.6.1 Foreman and Information Tools .....	197
6.6.2 Foreman and Collaboration.....	200
6.6.3 The Foreman and the Environment .....	203
6.7 Reviewing the MKW Model .....	206
6.7.1 Emergent Themes from Construction .....	209
6.8 The evolution of the Activity Framework: A view from the MKW .....	213
6.9 Summary.....	219
7. Summary and Conclusion .....	220
7.1 Beginnings of My Research .....	220
7.2 My Research.....	221
7.3 Main Findings .....	222
7.4 Implications for Practice .....	224
7.5 Contribution to Activity Theory .....	226
7.6 Weaknesses .....	230
7.7 Future Research.....	231
8. References .....	234
9. Appendix .....	247

9.1 Appendix A: Ethics: Consent Authority .....	247
9.2 Appendix B: Sample Questions .....	248
9.3 Appendix C: Analysis of data: A sample report produced using NVivo .....	249