Wireless Health

Remaking of Medicine by Pervasive Technologies

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Overview

Ubiquitous connectivity and computing are bringing about unprecedented mobility—allowing working, entertainment, shopping, socializing, gaming, etc., anytime, anywhere. This trend is also infiltrating health care, promising significant improvements in quality, convenience, reach and cost of care through "wireless health" solutions. Wireless health solutions enable diagnosis, therapy and monitoring of health-related conditions by tracking relevant biomarkers, managing treatment regimen and monitoring progress—while the patient goes about her daily life. At the same time, microsystems are increasingly enabling nonintrusive measurement of health and disease conditions, as well as delivery of therapy on demand. Social networks are promoting peer comparisons and competitions in health and wellness, motivating behavioral change and providing a community of support. Meanwhile, advances in genomics are ushering in the new era of personalized medicine. The convergence of these trends will result in *individualized, preventative medicine that is time and place independent*. Figure 1 captures the key benefits of this convergence, recognizing the central role of 'wireless' enablement; without 'wireless', the extent of each of the benefits is limited. Henceforth, this book credits 'wireless health', rather than 'mHealth' or 'digital health', for the promise.

Figure 1: The coming transformation of health care, catalyzed by convergence of four pervasive technologies (i.e., microsystems, communication, computing and social networks) and personalized medicine.

This book provides the fundamental and practical knowledge necessary for an overall grasp of the field of wireless health. The approach is an integrated, multidisciplinary treatment of the subject by a team of leading topic experts.

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Expected Release Date

February 2013

Intended Audience

The primary audience is graduate students and working professionals with technology, science and clinical backgrounds. The secondary audience is graduate students and working professionals with management, business, intellectual property or regulatory backgrounds.

Construction of Chapters

An average count of 25 book pages per chapter.

Each chapter includes:

    Abstract – Provides a paragraph summary of the key points of the chapter.

    Learning Objectives – A bullet list of the points that the chapter will teach.

    Introduction – Outlines the key points/issues and provide insights into the broader context.

    Body – Covers the subject matter of the chapter.

    Summary – Captures the essence of the chapter.