Preface

The constantly changing landscape of Standards and Standardization makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within Standards and Standardization by providing both broad and detailed perspectives on cutting-edge theories and developments. This reference is designed to act as a single reference source on conceptual, methodological, technical, and managerial issues, as well as provide insight into emerging trends and future opportunities within the discipline.

Standards and Standardization: Concepts, Methodologies, Tools and Applications is organized into six distinct sections that provide comprehensive coverage of important topics. The sections are: (1) Fundamental Concepts and Theories, (2) Tools and Technologies, (3) Frameworks and Methodologies, (4) Cases and Applications, (5) Issues and Challenges, and (6) Emerging Trends. The following paragraphs provide a summary of what to expect from this invaluable reference tool.

Section 1, “Fundamental Concepts and Theories,” serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of Standards and Standardization. Introducing the book is “Semantic Web Standards for Publishing and Integrating Open Data,” a great foundation laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Another chapter of note in Section 1 is titled “Loose Integration of Local Information to Generate Collaborative Marine Science Knowledge.” Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, “Security of ICTs Supporting Healthcare Activities.” Where Section 1 leaves off with fundamental concepts, Section 2 discusses tools and technologies in place for Standards and Standardization.

Section 2, “Tools and Technologies,” presents extensive coverage of the various tools and technologies used in the implementation of Standards and Standardization. Section 2 begins where Section 1 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of Standards and Standardization. The first chapter, “Teaching and Learning the Common Core State Standards in Mathematics with Web 2.0 Tools,” lays a framework for the types of works that can be found in this section, a perfect resource for practitioners looking for the types of technologies currently in practice in Standards and Standardization. Section 2 is full of excellent chapters like this one, including such titles as “Users as Prosumers of PETs: The Challenge of Involving Users in the Creation of Privacy Enhancing Technologies,” “Disclosure and Privacy Settings on Social Networking Sites: Evaluating an Instructional Intervention Designed to Promote Informed Information Sharing,” and “On the Use of Formal Methods to Enforce Privacy-Aware Social Networking,” to name a few. Where Section 2 described specific tools and technologies at the disposal of practitioners, Section 3 describes frameworks and methodologies within the field.
Section 3, “Frameworks and Methodologies,” presents in-depth coverage of the conceptual design and architecture of Standards and Standardization. Opening the section is “Model Development and Hypotheses.” This section is vital for developers and practitioners who want to measure and track the progress of Standards and Standardization through the multiple lens of parametric design. Through case studies, this section lays excellent groundwork for later sections that will get into present and future applications for Standards and Standardization, including, of note: “The Development of Open Government Data in Austria” and “Agile Development of Security-Critical Enterprise System.” The section concludes with another excellent work on sequence design, titled “An Extension of Business Process Model and Notation for Security Risk Management.”

Section 4, “Cases and Applications,” describes how the broad range of Standards and Standardization efforts has been utilized and offers insight on and important lessons for their applications and impact. Section 4 includes the widest range of topics because it describes case studies, research, architectures, theory, analysis, and guides for implementation. The first chapter in the section is titled “Exploring the Factors Influencing the Adoption of Open Government Data by Private Organisations.” The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe. Section 4 concludes with an excellent view of a case study in a new program, “Framework Design and Case Study for Privacy-Preserving Medical Data Publishing.”

Section 5, “Issues and Challenges,” presents coverage of academic and research perspectives on Standards and Standardization tools and applications. The section begins with “Is Open Data Enough? E-Governance Challenges for Open Government.” The section concludes with “Composition of the Top Management Team and Information Security Breaches,” a great transitional chapter between Sections 5 and 6 because it examines an important trend going into the future of the field. The last chapter manages to show a theoretical look into future and potential technologies, a topic covered in more detail in Section 6.

Section 6, “Emerging Trends,” highlights areas for future research within the field of Standards and Standardization, opening with “Cyber Security: Future IT-Security Challenges for Tomorrow’s Leaders and Businesses.” Section 6 contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for Standards and Standardization. Other chapters of note include “Privacy in Participatory Sensing Systems” and “Towards an Enhanced Interoperability Service Utility: An Ontology Supported Approach.” The final chapter of the book looks at an emerging field within Standards and Standardization, in the excellent contribution, “Privacy-Aware Web Service Composition and Ranking.”

Although the primary organization of the contents in this multi-volume work is based on its six sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume.

As a comprehensive collection of research on the latest findings related to using technology to providing various services, Standards and Standardization: Concepts, Methodologies, Tools and Applications, provides researchers, administrators, and all audiences with a complete understanding of the development of applications and concepts in Standards and Standardization. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of Standards and Standardization in countries around the world, Standards and Standardization: Concepts, Methodologies, Tools and Applications addresses the demand for a resource that encompasses the most pertinent research in technologies being employed to globally bolster the knowledge and applications of Standards and Standardization.