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Book Review

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Book review

BIM in Principle and in Practice, 3rd edn

Peter Barnes. ICE Publishing, London, UK, 2019, ISBN 978-0-7277-6369-3, £35.00, 148 pp.

BIM in Principle and in Practice, in its third edition, as the author introduces, 'is an indispensable guide to BIM principles and techniques'. It covers both the managerial and technical aspects of building information modelling (BIM), as a digital technology and information hub being adopted in today's architecture, engineering and construction (AEC) industry worldwide. As BIM is becoming an emerging digital platform in the global AEC fields, this book provides a detailed guide to readers of the *Proceedings of the Institution of Civil Engineers* from a variety of AEC disciplines, including, but not limited to, architectural technology, construction management, structural engineering, building services engineering and other relevant subjects. The aim of the book, as BIM itself indicates, is to bridge these different AEC disciplines through information exchange, which can enhance multidisciplinary collaboration. AEC industry practitioners, academics and students will find this book useful in knowing the key concepts, techniques, management aspects, legal issues and state-of-the-art practices incorporating BIM.

Peter Barnes, FCIarb, FCIOB, MRICS, MICE, MCInstCES, is a Chartered Arbitrator, a UK-registered adjudicator and the director of Blue Sky ADR Ltd. He has an MSc in construction law and arbitration from King's College London and a diploma in international commercial arbitration from the Chartered Institute of Arbitrators. He is also the author of *JCT 05 Standard Building Sub-contract* and co-author of *Sub-contracting under the JCT 2005 Forms*, the second and third editions of *BIM in Principle and in Practice*, *Delay and Disruption Claims in Construction* and *Programme Management in Construction*. His knowledge of construction law and experience in dispute resolution make Peter Barnes the ideal person to introduce the legislation and contracting issues involved when implementing BIM in AEC practice.

This book is very well presented, covering key BIM concepts and terminologies (e.g. level of detail), with latest case studies and illustrations on its 148 pages. Following the first two chapters with an overview of BIM,

the book provides an excellent flow of information introducing key concepts and rules in BIM, including both the management and technical aspects of BIM. Later, the author describes the practical issues in BIM practice by highlighting contracting, liability and risk issues. Afterwards, the author discusses state-of-the-art BIM implementation by linking BIM into other latest construction industry practices (e.g. off-site construction, laser scanning, use of drones and heritage preservation).

This book is worth reading for industry practitioners, educators and learners from different civil and construction sectors based on the facts that (a) it uses simple language to provide a straightforward overview of BIM, which is beneficial for readers defined as BIM beginners; (b) it links the latest practice on innovation of applying BIM to a wider scope named the internet of things (IoT), which functions as an information hub connecting multiple digital hardware and software devices; and (c) it fits multinational application by introducing BIM-related standards and guidance (e.g. BSI, Publicly Available Specification and International Organization for Standardization standards). This third edition is updated from prior editions by including the latest BIM developments with new case studies and introduction of contemporary standards. If another future edition is planned, the author could consider expanding the case studies of linking BIM to other digital technologies (e.g. virtual reality), by providing more research and practical insights on how BIM works in the context of IoT – for example, what are the keys of linking BIM into these latest applications (e.g. off-site construction), what are the challenges or lessons learned and the movement of BIM in the UK from level 2 to level 3?

In conclusion, readers from multiple architecture, civil and construction fields; from both industry and academic institutions; and at different career stages will find this book useful. The book also helps readers worldwide in knowing more about the latest implications of BIM. The legal, legislation and risk issues of BIM apply to all construction industry practitioners regardless of their responsibilities, disciplines and project stages involved.

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