



Societal Impacts: Legal, Regulatory and Ethical Considerations for the Digital Twin

Authored by Martin Zoltick and Jennifer Maisel for The Digital Twin Publication
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Partners Martin Zoltick ("Marty") and Jennifer Maisel authored a chapter titled "Societal Impacts: Legal, Regulatory and Ethical Considerations for the Digital Twin" published in [The Digital Twin](#), edited by Professor Noel Crespi, Dr. Adam T. Drobot, and Dr. Roberto Minerva, and published by Springer Nature.

The Digital Twin book is about harnessing the power of technology, business practices, and the digital infrastructure to make revolutionary improvements for the benefit of society. Ninety experts from around the world contributed to summarize four decades of digital advances and successes, and to define the Digital Twin's potential for the decades ahead. The book describes how Digital Twins will play a key role in specific applications and across important sectors of the global economy, making it a must-read for executives, policymakers, technical leaders, researchers, and students alike. The book consists of thirty-eight chapters that cover Digital Twin concepts, supporting technologies, practices, and specific implementation strategies for various production and service sectors.

A myriad of laws, rules, and regulations are worthy of consideration for any new and innovative technology, and even more so for one as broad ranging and comprehensive as the Digital Twin ecosystem. A technology like this has the contradiction of open versus proprietary, and all the hybrids in between, because it is in the early stages of its evolution that, in many respects, relies on a combination of existing technologies and innovations. The chapter by Marty and Jen is written from a legal standpoint, where they consider intellectual property rights, including patent, copyright, and trade secret protection, and balancing those rights with the benefits and protections available under contract law. The wide applicability of the Digital Twin to various technologies and fields, such as healthcare, finance, education, aviation, power plants, nuclear reactors, any many more, gives rise to regulatory considerations and ethical concerns. The Digital Twin ecosystem, as

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Related Areas of Practice

Artificial Intelligence

Technologies

Artificial Intelligence (AI) & Machine Learning (ML)

applied in these areas and more, requires the collection, processing, generation, and transmission of data subject to regulatory requirements involving privacy and cybersecurity issues, as well as ethical concerns requiring careful consideration of potential bias, trustworthiness, and transparency in the technology used.

The book, [The Digital Twin](#), is available for purchase on the Springer Nature website.