1. The Challenge: From MPEG Intellectual Property Rights Ontologies to Smart Contracts and Blockchains [Standards in a Nutshell]   (*Open Access*)

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Abstract: The Moving Picture Experts Group (MPEG) is an International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) working group that develops media coding standards. These standards include a set of ontologies for the codification of intellectual property rights (IPR) information related to media. The Media Value Chain Ontology (MVCO) facilitates rights tracking for fair, timely, and transparent payment of royalties by capturing user roles and their permissible actions on a particular IP entity. The Audio Value Chain Ontology (AVCO) extends MVCO functionality related to the description of IP entities in the audio domain, e.g., multitrack audio and time segments. The Media Contract Ontology (MCO) facilitates the conversion of narrative contracts to digital ones. Furthermore, the axioms in these ontologies can drive the execution of rights-related workflows in controlled environments, e.g., blockchains, where transparency and interoperability is favored toward fair trade of music and media. Thus, the aim of this article is to create awareness of the MPEG IPR ontologies developed in the last few years and the work currently taking place addressing the challenge identified toward the execution of such ontologies as smart contracts on blockchain environments. © 2020 IEEE. (17 refs)

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