

工程与应用

应急预案体系本体模型 (EPSOnto) 及应用

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摘要 应急预案是处置突发事件的重要依据, 应急预案体系提供应急预案编制及修订指南。目前我国的应急预案体系建设存在描述不一致和异构性等问题。针对上述问题, 采用语义网的本体技术, 构建了应急预案体系本体模型, 该模型以SUMO为上位本体, 从预案体系主体、预案体系客体和体系组成等方面构建应急预案体系的概念、关系、函数、公理和实例五元组本体模型, 并以天津市应急预案体系为应用实例对EPSOnto模型进行验证。

关键词 [应急预案体系](#) [本体](#); [通用上位本体 \(SUMO\)](#) [应急预案体系本体模型 \(EPSOnto\)](#)

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Emergency plan system ontology and its application

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Abstract

Emergency plans are the substantial foundations to deal with emergency incidents. Emergency plan systems, which are organized sets that are composed of interrelated emergency plans, provide guides for enacting and revising emergency plans. However, the management of emergency plan system is faced with some challenges. The knowledge description of emergency plan systems do not have unambiguous and uniform expressions and result in the semantics clash. Different emergency plan systems can not cooperate, share and reuse each other. In this paper, Emergency Plan System Ontology (EPSOnto) is designed by using SUMO as upper ontology in order to solve these problems. EPSOnto can provide the knowledge share in semantics to achieve the cooperation and reuse between people and the different systems. In EPSOnto the concepts, relations, functions, axioms and instances about emergency plan systems are respectively described in five-tuple in detail. In the end, the experiment of an emergency plan system is completed to validate EPSOnto.

Key words [emergency plan systems; ontology](#) [Suggested Upper Merged Ontology \(SUMO\)](#) [Emergency Plan System Ontology \(EPSOnto\)](#)

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