

A Knowledge-based Insiders Trustworthiness Evaluation System (KITES)

The KITE System is one of the components in the Integrated & Intelligent Nuclear Security System (I2NS) that are currently under development in Malaysian Nuclear Agency, with the aims to enhance the capability for the insiders control and monitoring. KITES development involves the usage of mathematical modelling of the personnel trustworthiness to calculate the trust degree for each personnel in nuclear facilities. Apart from that, this system implements the semantic web technology to facilitates the required intelligent capabilities through inference and reasoning process during the trustworthiness evaluation. The development of this system requires a new ontology model for Personnel Trustworthiness Evaluation. For this purpose, a new ontology model have been developed to represents the information of personnel and its elements in the trustworthiness evaluation into a knowledge-based model. The newly developed ontology is then going through cycles of quality assessment process conducted by a number of subject matter experts following the multiple-criteria approach for ontology quality assessment as described by Burton-Jones et al.(2005).This paper aims at presenting the newly developed ontology and its quality assessment results.

State

Malaysia

Gender

Female

Authors: IBRAHIM, Maizura; Dr AB HAMID, Amy Hamijah; Mrs HAMDAN, Siti Nurbahyah; Mr HARIS, Mohd Fauzi; Mr ISMAIL, Saaidi; Mr MUHAMED ARIS, Sufian Norazam; Mr HASAN, Mohd Hasnor; Mr ASLAN, Mohd Dzul Aiman; Mrs ABD GHANI, Nur Fatini

Presenter: IBRAHIM, Maizura

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