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**Presents**

# Transforming Graph-based Models with Open World Assumption(OWA)

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In software development, Model-Based Engineering plays a significant role as it raises the viewpoint from code to models. Model-Based Engineering is a very useful approach because it provides a number of benefits including improved portability, increased productivity, improved quality and improved maintainability. Model-based engineering techniques traditionally rely on Closed World Assumption(CWA) where in CWA one assumes that the information that is not known to be true is false. In OWA, the information that is not explicitly specified to be true or false is considered as unknown. Since model-based engineering techniques have not been applied under the OWA, we propose to model the uncertainty using graph-based modelling formalisms and graph transformation techniques. We explore 3 different situations, one used 2 status(True, False) of knowledge, one used 3 status(True, False, Unknown) of knowledge, and other uses associated ontology reasoner operations under OWA.