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ARTICLE 1

The document titled "A Comparison of Model Migration Tools" discusses the challenges and solutions related to migrating models when their underlying metamodels undergo changes. It focuses on the automation of model migration through the use of various migration tools. The document aims to compare and evaluate different model migration tools based on their strengths, weaknesses, and suitability for different scenarios.

The authors begin by highlighting the need for model migration when metamodels evolve, as existing models may no longer conform to the updated metamodels. Manual migration is laborious and error-prone, necessitating automated migration strategies. Several tools have been developed to automate model migration, but there is limited knowledge about their comparative advantages and disadvantages.

The document compares four model migration tools: AML, COPE, Ecore2Ecore, and Epsilon Flock. The authors apply these tools to two examples of model migration and evaluate their performance based on nine criteria important for model migration. The comparisons and evaluations provide insights and guidelines to assist users in selecting the most appropriate tool for their specific migration requirements.

The document also discusses related work in the field of model transformation and model migration. It categorizes model migration approaches into manual specification approaches, operator-based approaches, and metamodel matching approaches. It further highlights the lack of comparative studies on model migration tools and refers to existing comparisons of model transformation languages as a basis for deriving criteria for comparing model migration tools.

The methodology used for comparing the model migration tools is described, including the selection of co-evolution examples and the practical application of the tools to these examples. Two examples are presented: one involving the evolution of a Petri Net metamodel, and the other related to the evolution of the GMF Graph metamodel.

In conclusion, the document provides a comprehensive comparison of model migration tools, evaluates their performance based on specific criteria, and offers guidance for users in selecting the most suitable tool for their model migration needs.