Model Repair and Transformation with Echo

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Model-driven Engineering
- In the MDE process inconsistencies will indubitably be introduced;
- Models become inconsistent with their metamodels and with other coexisting models;
- Echo has been developed to promote the correct evolution of models;
- Able to both find and repair inconsistencies.

Built for Correctness
- Built over the Alloy model finder;
- Repairs are guaranteed to be correct;
- Supports intra- (metamodel) and inter- (QVT-R) model constraints;
- Updates are always minimal;
- The model distance metric can be parametrized by the user.

Echo flags an inter-model inconsistency error on both models

Seamless Integration
- Deployed as an Eclipse plugin to better fit the development process;
- Online setting: consistency is checked automatically as the model evolves;
- All valid solutions can be examined by the user;
- Models are effectively repaired;
- Support for standard formats (Ecore, OCL, XMI, QVT-R).

Support for MDE Tasks
- Model visualization;
- Consistent model generation;
- Metamodel conformity check;
- Model repair;
- Inter-model consistency check;
- Inter-model consistency repair as a bidirectional transformation;
- Inter-model generation.

QVT-R consistency relation forces Columns to have matching Attributes

A new table Column is inserted in the database scheme

Download and more information available at:
http://haslab.github.io/echo

FATBIT Project
Foundations, Applications and Tools for Bidirectional Transformation
http://fatbit.di.uminho.pt

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