

# Solving the Movie Database Case: An e-Motions based solution

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**Abstract.** TO-DO

## 1 Introduction

**TO-DO:** what is e-Motions? **TO-DO:** why rewriting logic?

### 1.1 e-Motions

**TO-DO:** Introduction to e-Motions rules **TO-DO:** solo usaremos reglas sin tiempo

## 2 Solution

**TO-DO:** explicar cómo cada tarea viene dada por la definición de un DSL. En la mayoría de los casos la sintaxis puede ser reutilizada pero no el comportamiento (?)

### 2.1 Task 1

Task 1 consists in to generate synthetic models (conforming the movie database metamodel [2]) from an input parameter  $N \geq 0$ . Following an e-Motions based approach, we define the abstract and concrete syntax and the behavior of our so-called *Task 1 DSL*, which takes an empty model and a parameter  $N$  and generate as output a model.

As it has been introduced in Section 1.1, the abstract syntax of a DSL is given by means of a Ecore metamodel, which is provided in [1] and, in the following, we call it *Movies MM*. However, the *parameter N* concept has to be modeled in some way, since in e-Motions the state<sup>(i)</sup> is just a model. Hence, a new concept call **Parameter** with two Integer attributes **nP** and **nN** has been added to *Movies MM*. This results in a so-called *Movies\* MM*.

For the concrete syntax, an image has been attached to each concept modeled in the *Movies\* MM*. The behavior of this *Task 1 DSL* is given by means of two in-place rules: **createPositive** and **createNegative**. Figure 1 shows the

<sup>(i)</sup> con este state me refiero al estado del sistema, de una ejecución

`createPositive` rule, which takes an object `p` of type *Parameter* with  $nP$  attribute is greater or equal than 0 and, after the rule application, synthetic data conforming to the Henshin rules [2] are created. The `createNegative` rule is analogous.

**TODO:** add figure with all imgs

## References

1. Horn, T.: IMDB2EMF, <https://github.com/tsdh/imdb2emf>
2. Horn, T., Krause, C., Ticky, M.: The TTC 2014 Movie Database Case, available at TTC14 web site.

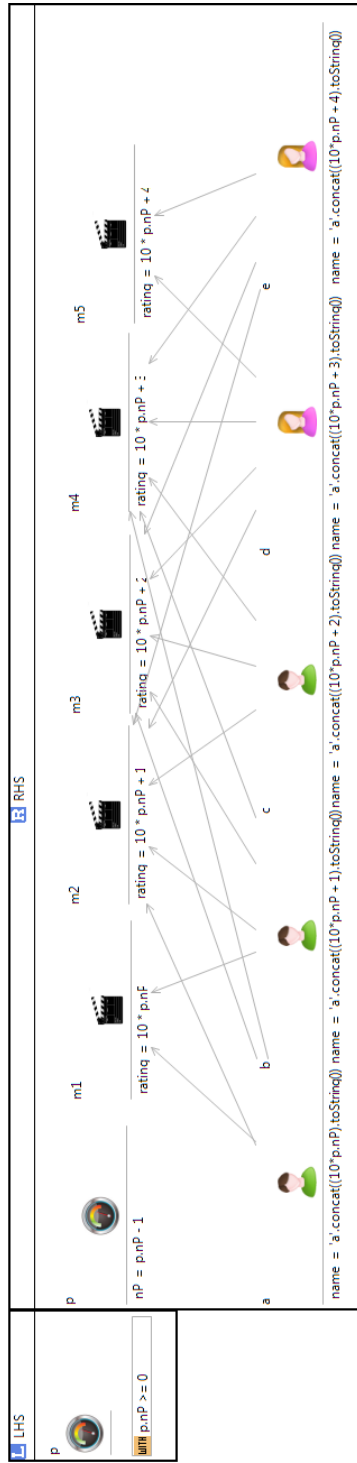


Fig. 1. The createPositive rule. **TO-DO**: crear subfiguras para aprovechar espacio