GUI application meta-models

Benoît Verhaeghe^{1,2}, Anne Etien¹, Nicolas Anquetil¹, Stéphane Ducasse¹ ¹Université de Lille, CNRS, Inria, Centrale Lille, UMR 9189 – CRIStAL, France Abderrahmane Seriai², Laurent Deruelle², Mustapha Derras² ²Berger-Levrault, France

Abstract—In this context... When a developer wants to analyse an application, and this application includes an user interface. He could want an abstraction of the application. Often, this abstraction level correspond to models, and their meta-models, of the piece of software. We consider this problem P... There are indeed many elements to represent and to link. P is a problem because... Currently there are many meta-models of GUI application that can be used to represent the interface and some links between the different windows. But none of them express complex behavior, such as loop or condition, nor data structure information. We propose this solution... We defined four meta-models. The first one represent the Graphical User Interface, the second one the layout to apply to the GUI, the third one the data structure implies in the GUI, the last one the behavior associate to an event fired by an element of the GUI. Our solution solves P in such and such way. Our metamodels can express the different elements of a GUI application. So can represent the graphical user interface and the logic of the application.

Index Terms—Graphical User Interfaces, Model-Driven Engineering

- I. INTRODUCTION
- II. PROBLEM DESCRIPTION
- III. MIGRATION SOLUTION
- IV. PROPOSED SOLUTION
 - V. CONCLUSION

Acknowledgements

This work was supported by Ministry of Higher Education and Research, Nord-Pas de Calais Regional Council, CPER Nord-Pas de Calais/FEDER DATA Advanced data science and technologies 2015-2020.