



CerCo

Letter to the reviewers commenting the addendum to deliverable D2.1

Roberto M. Amadio, Nicolas Ayache, Yann Régis-Gianas

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Deliverable D2.1 has been fully revised taking into account your valuable remarks. In particular:

- Appendix C highlights the optimisations performed by the prototype C compiler which are essentially of two types:
 1. A standard liveness analysis and register allocation at the level of the ERTL language.
 2. A graph compression at the LIN level.
- Appendix E includes an informal discussion of related work on worst-case execution time and its relevance to our approach.

Two master students (Kayvan Memarian and Ronan Saillard) have worked at the formalisation of the proposed proof methodologies in a proof assistant (COQ) during their internships. The choice of the COQ proof assistant was natural since the students and one of the main authors of the deliverable were already trained to work with this tool. The results of these experiments were instructive, and promising in the case of the labelling approach. We stress that this formalisation effort is an unplanned contribution of deliverable D2.1 which has been possible thanks to the work of these two students. This also explains why some proofs are still missing in the development.

Finally, appendix G provides an assessment of the deliverable *with hindsight* and it discusses in particular the impact of the program size limitations of the 8051 processor on deliverable D5.3.

Project Acronym: CerCo

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