April 27, 2018

Elsevier Computer and Graphics Journal

Dear Editor of C&G:

I am submitting a paper for the special issue *SBGames 2018* entitled "Structured Synchronous Reactive Programming for Game Development — Case Study: On Rewriting Pingus from C++ to Céu". I declare that the paper has not been published or submitted elsewhere. I also declare that the work is an original case study that is not based on previous work from myself or others. I am the only author of the paper.

The paper presents a qualitative case study of rewriting the video game Pingus from C++ to the structured synchronous reactive language Céu. Céu supports reactive control-flow primitives that helps describing complex interactions in the game logic more concisely. We show gains in productivity for six behaviors in Pingus through a qualitative analysis of the proposed implementations in Céu in comparison to the originals in C++. We also categorize the behaviors in four recurrent control-flow patterns that likely apply to most games.

The paper is in the scope of "research and applications of interactive computer graphics" since it proposes new control abstractions to model real-time interactions between graphical entities in a video game.

In summary, these are the main contributions of the paper:

- Qualitative case study of rewriting the game Pingus from C++ to Céu.
- Gains in productivity for six behaviors in the game.
- Categorization of the behaviors in four recurrent control-flow patterns.

Yours Sincerely,

Anonymous Author