ing unrolls (by losing fitness) enables us to highlight interesting properties of the process. For instance, loop unrolling allowed us to check that the financing organization of the BPI Challenge 2012 usually had to call customers twice for getting the necessary information. Is there any reason one attempt is not enough?

In terms of complexity, the technique of this paper may be a light alternative for methods like [5], which require to iteratively apply agglomerative clustering for special sets in the state-space representation of the event log.

5 Conclusion

In this paper, we presented a method for improving the precision of structural subprocesses based on explicitly repeating iterative subprocesses and pruning unused constructs and activities. We have shown that this approach is applicable to simulations of real-life processes, and also it is applicable to real-life scenarios.

The presented approach is the first step on considering the unrolling of iterative processes. Results in Table 1 show several examples of how unrolling improve the precision of the process models, with minimal impact on their complexity. Nevertheless, bigger process models might be more difficult to understand and, hence, it remains to conduct expert reviews on readability and understandability of process models after unrolling. Besides, we have experienced on some datasets that some iterative processes can be explained as a few iterations are used for initialization, and then the real loop starts. We would also like to study how the k-unroll operation affects the precision of the process model for a particular precision metric. In particular, is it possible to establish a lower bound on the increase of the precision?

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