

# Version 4.1

The main point of this version is to fix a bug in the realm of playing a single strategy in parallel (which is possible as of v4.0). Thanks go out to Michel for finding and reporting this bug.

## Strategy analysis

- Improvements in the check protection logic.
- More collision analysis.

## Strategy playing

- Horrible bug fixed that could lead to a wrong verdict. For any found strategy  $s$ , Stelvio needs to figure out which one of these three options is true:
  - The strategy  $s$  has 0 move paths that lead to the diagram position (i.e. the strategy cannot be played).
  - The strategy  $s$  has exactly 1 move path that leads to the diagram position (i.e. this is a solution strategy).
  - The strategy  $s$  has  $n > 1$  move paths that lead to the diagram position (i.e. this is a cook strategy).

An explicit non-goal of Stelvio is to find the exact  $n$  in the third option. Stelvio is not designed to find every move permutation that leads to the diagram position in a cook strategy. Usually, this information is of no use anyway. But in case the strategy  $s$  cooks the problem, Stelvio needs to find that  $n$  is at least 2. This is what went wrong in v4.0.: It was possible, when playing  $s$  in parallel, that  $s$  was a cook strategy but Stelvio only found one move path, therefore wrongly concluding that it was a solution strategy.

So in case an SPG tested as correct with v4.0, it should be retested with v4.1 (only the solution strategy needs to be re-tested, so the newly introduced StrategyConditions can be used to filter for this strategy).