NuSMV is a symbolic model checker developed collaboratively by the Embedded Systems Unit at FBK-IRST, the Model Checking group at Carnegie Mellon University, and the Mechanized Reasoning Groups at the University of Genoa and the University of Trento. It is a reimplementation and extension of SMV, the first model checker based on Binary Decision Diagrams (BDDs). NuSMV is designed to be an open architecture for model checking, suitable for verifying industrial designs, serving as a core for custom verification tools, and acting as a testbed for formal verification techniques (NuSMV, 2024).

NuSMV can verify the results generated by FRET (Formal Requirements Elicitation Tool) by following these steps: First, FRET converts user-written requirements into temporal logic formulas, such as Linear Temporal Logic (LTL) or Computation Tree Logic (CTL). Users then write a system model in NuSMV, incorporating these formulas into the model file. By running NuSMV in the terminal, the tool checks whether the model satisfies the formulas. If the model does not satisfy the formulas, NuSMV provides a counterexample, illustrating the conditions under which the system fails to meet the requirements (University of Illinois Urbana-Champaign, 2009).

References:

* NuSMV, 2024. NuSMV: a new symbolic model checker. [online] Available at: <https://nusmv.fbk.eu/index.html> [Accessed 19 October 2024].
* University of Illinois Urbana-Champaign, 2009. NuSMV: A Symbolic Model Checker. [pdf] Available at: <https://courses.grainger.illinois.edu/cs477/sp2009/Lectures/nusmv.pdf> [Accessed 19 October 2024].