This repository contains the UMC and SPARX EA data used in the paper:

Integrating Formal Verification and Model-based Development in Railways using UMC and Sparx Enterprise Architect

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The files are:

- UMC-example of traceability.txt contains the UMC models used in Section 5.1.1 “Example of tracing”,
- UMC sequence diagram traceability complete.pdf shows the complete sequence diagram of the example in in Section 5.1.1 “Example of tracing”.
- SPARX_simulation_log.txt contains the log of the simulation in the SPARX environment used in Section 5.1.1 “Example of tracing”.
- experiments reproduction - traceability.flv is a video illustrating the experiment described in Section 5.1.1 “Example of tracing” showing the relation between the UMC trace generation and the corresponding SPARX simulation.
- UMC-example of trace not reproducible in Sparx EA.txt contains the UMC model used in Section 5.1.2 “Example of traces not reproducible in Sparx EA”.
- UMC-example of infinite trace and property producing no trace.txt contains the UMC model used in Section 5.1.3 “Example of a formal verification that does not produce any trace”.
- UMC-model with generic RBC User.txt contains the UMC model used in Section 5.1.5 “The Role of the Environment”.
- SPARX_model.eapx contains the SPARX model (with the mutation discussed in Section 5.1.1 “Example of tracing”).
- SPARX_generated_code.zip contains the generated Java code.
- SPARX_diagram_report.pdf contains the SPARX generated documentation.
- SPARX_model.xmi is the SPARX model exported in xmi format.