RES-MATCH

Python code can analyze and manipulate the data, applying advanced logic like firewall policies. Updated state returns to the router model, synchronizing any changes. As an example, functions were developed to implement rule-based packet filtering. Packets were injected based on predefined parameters to test determinism across repeated simulations. The Python firewall either allowed or dropped packets using division rules on packet IDs.

Phase 3 - Prototyping a light propagation simulation using the enhanced programming capabilities. In this phase we implemented a Python code to perform a Monte Carlo simulation to model the propagation of photons through a participating medium. The key goal is to simulate and track the trajectories of photons as they undergo absorption and scattering events. By modeling individual photon "packets" and their interactions probabilistically, the