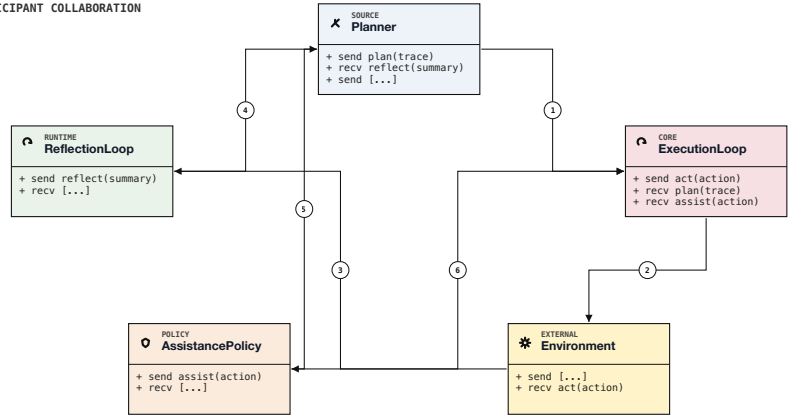
E09 Dual-loop assistance

Evolution · A² A1/A3 · cycle role collaboration

Separate planning and execution feedback.

STRUCTURE · PARTICIPANT COLLABORATION



PATTERN INTERFACE

context

A planner or assistance loop and an executor loop operate concurrently or iteratively.

trigger

Executor state or environment feedback updates planning.

structure

Planner, executor, feedback channel, synchronization, and authorization boundary.

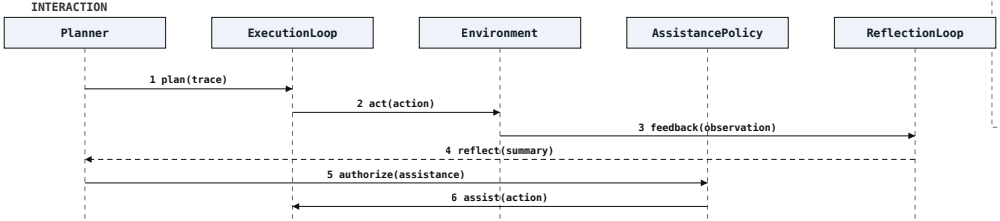
effect

The next plan or assistance action changes in response to attributable executor feedback.

CONTRACT ANNOTATIONS

requires	Planner and executor states have compatible identities and timing.
ensures	Feedback reaches planning before the affected action when required.
invariant	The outer loop cannot bypass executor authorization for physical or external actions.
violation	Stale, conflicting, or unavailable feedback has a safe coordination policy.

INTERACTION



MESSAGE TRACE 1 plan(trace) → 2 act(action) → 3 feedback(observation) → 4 reflect(summary) → 5 authorize(assistance) → 6 assist(action)

Evidence: 3/41 repositories, 3/36 families; 3 trajectories (2 multi-checkpoint); exact audit: not sampled.

Variation: Reactor-assisted executor, dual loop, planner-executor, and assistance policy.

Negative control: Two unrelated loops without a feedback link do not meet the pointcut.