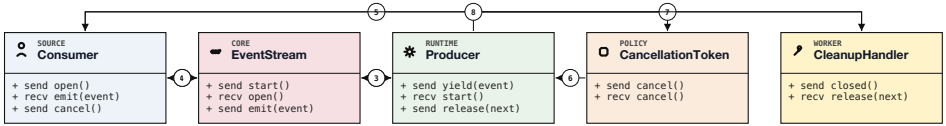
P05 Asynchronous-generator loop

Primitive · A² A1 · stream role collaboration

Expose incremental execution events.

STRUCTURE · PARTICIPANT COLLABORATION



PATTERN INTERFACE

context
A consumer observes an agent run incrementally.

trigger
The runtime emits a semantic event or streamed token.

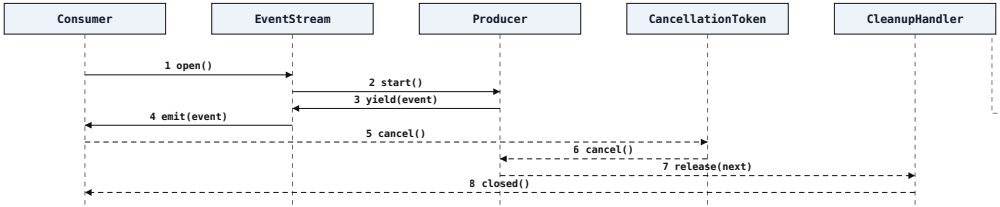
structure
Async yield/resume, cancellation, and cleanup ownership.

effect
Consumers receive ordered events and early exit releases runtime resources.

CONTRACT ANNOTATIONS

requires	The producer exposes an async iterator or equivalent streaming boundary.
ensures	Each emitted event has a stable type and sequence context.
invariant	Cancellation and producer failure do not leave unreleased work.
violation	Abandoned consumers trigger cancellation or documented cleanup.

INTERACTION



MESSAGE TRACE `1 open() → 2 start() → 3 yield(event) → 4 emit(event) → 5 cancel() → 6 cancel() → 7 release(next) → 8 closed()`

Evidence: 28/41 repositories, 25/36 families; 28 trajectories (13 multi-checkpoint); exact audit: not sampled.

Variation: Stream event schema, backpressure, buffering, and consumer adapters.

Negative control: A synchronous list returned at the end is not the streaming pointcut.