Orchestrator Architecture

If "TOON" is the language your app speaks, the Orchestrator is the Director who speaks it. We replace linear pipelines with a "Loop of Reasoning" that mimics a human film director checking their work.

The Core Concept: The "Showrunner" Loop

In a standard LLM script, you fire a prompt and hope for the best. In an Orchestrator (ReAct) model, we build a **Circular Dependency**. The Orchestrator (Showrunner) refuses to generate a video frame until the "Context State" is verified.

The ReAct Pattern for Video Consistency

REASON (THOUGHT)

"I need to generate the scene where Arjun enters the cave. Wait, what is he wearing?"

ACT (TOOL CALL)

```
query_toon_state(entity="Arjun", attribute="clothing")
```

OBSERVE (RESULT)

"Result: [Battle-worn Armor, Left Shoulder Pauldron Missing]"

REASON (CORRECTION)

"Okay, I must ensure the prompt explicitly mentions the missing pauldron."

ACT (GENERATION)

Sends corrected prompt to Video AI.

The Architecture: "The Supervisor Pattern"

We implement a Multi-Agent Orchestrator. You don't just have "One Bot"; you have a virtual film crew managed by a Supervisor.

Narrative Extractor

THE SCRIPTWRITER

Role: Reads the novel chunk.

Tool: Text_Compressor.

Output: Raw Scene Description.

Continuity Guard

THE SCRIPT SUPERVISOR

Role: Checks TOON database.

Tool: TOON_Retriever.

Output: "Correction: Night time, Arjun bleeding."

Prompt Engineer

THE CINEMATOGRAPHER

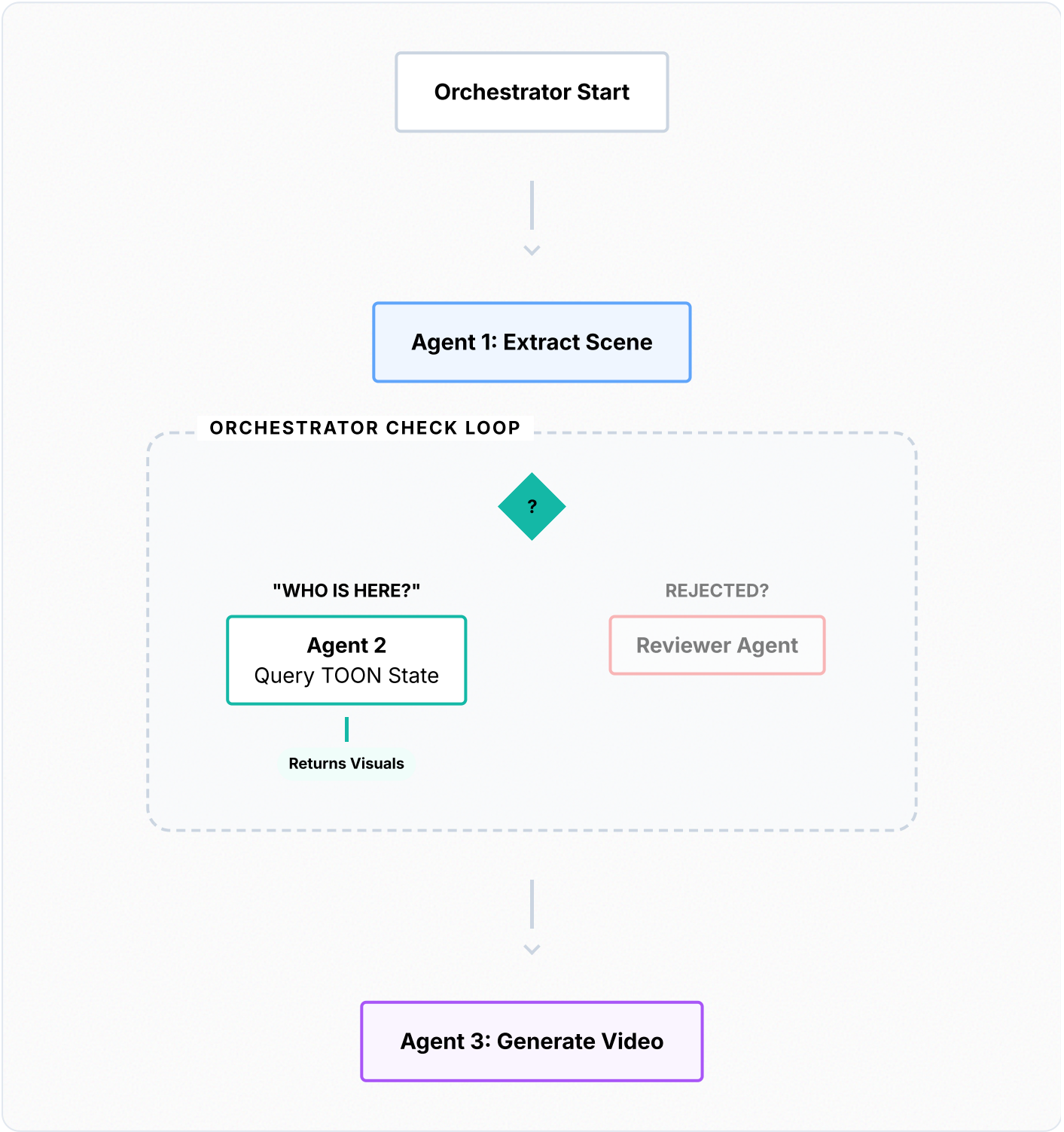
Role: Merges Script + Consistency Check.

Tool: Video_Prompt_Generator.

Output: Final Stable Diffusion Prompt.

Logic Flow: The State Graph

The Orchestrator code binds them together. It runs a loop that blocks generation until consistency is met.



Implementation Details

The Orchestrator State

Using TypeScript interfaces to define the "Showrunner's Clipboard".

orchestrator.ts

```
interface ShowrunnerState {
  current_chunk: string;
  toon_history: string; // The compressed context
  visual_plan: string | null;
  video_url: string | null;
  retry_count: number;
}
```

Why This Solves "Hallucination"

In standard LLM apps, the model forgets that a character lost their sword three scenes ago.

- **Without Orchestrator:** The model guesses.
- **With Orchestrator:** The "Continuity Guard" agent forces the "Cinematographer" agent to include "No Sword" in the negative prompt or description before the request is ever sent to the Video AI.