

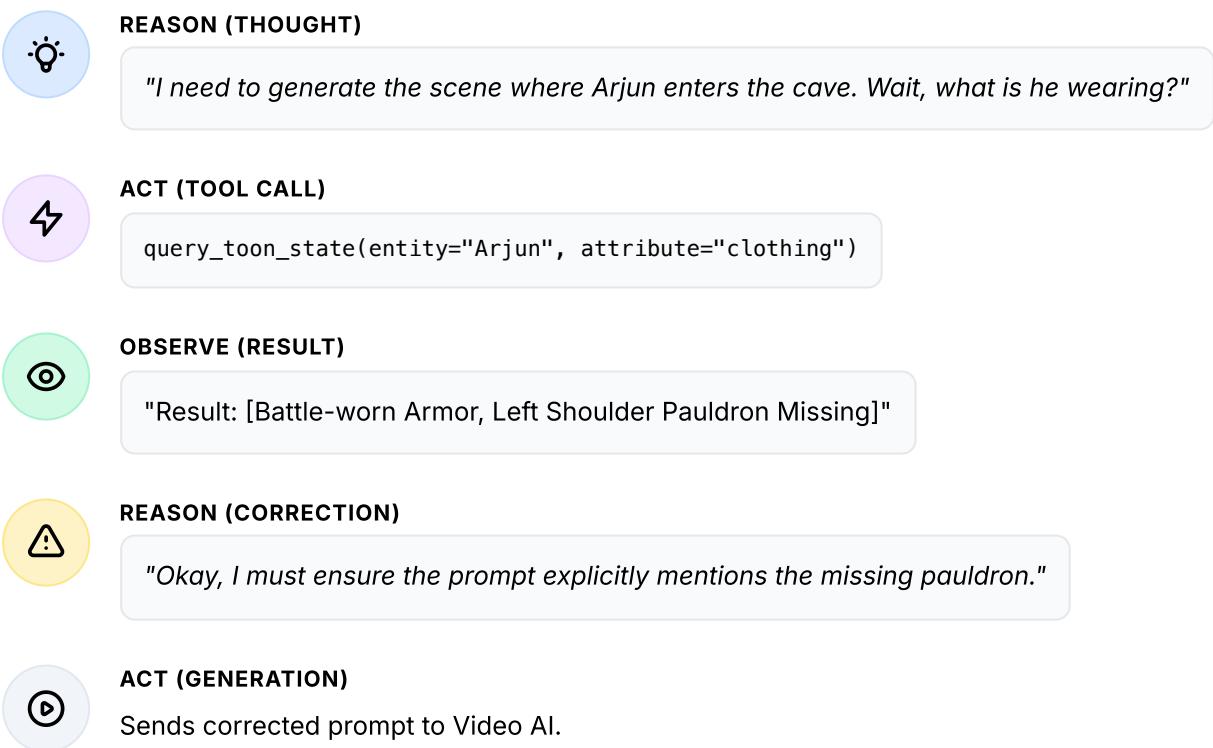
# Orchestrator Architecture

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



## 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

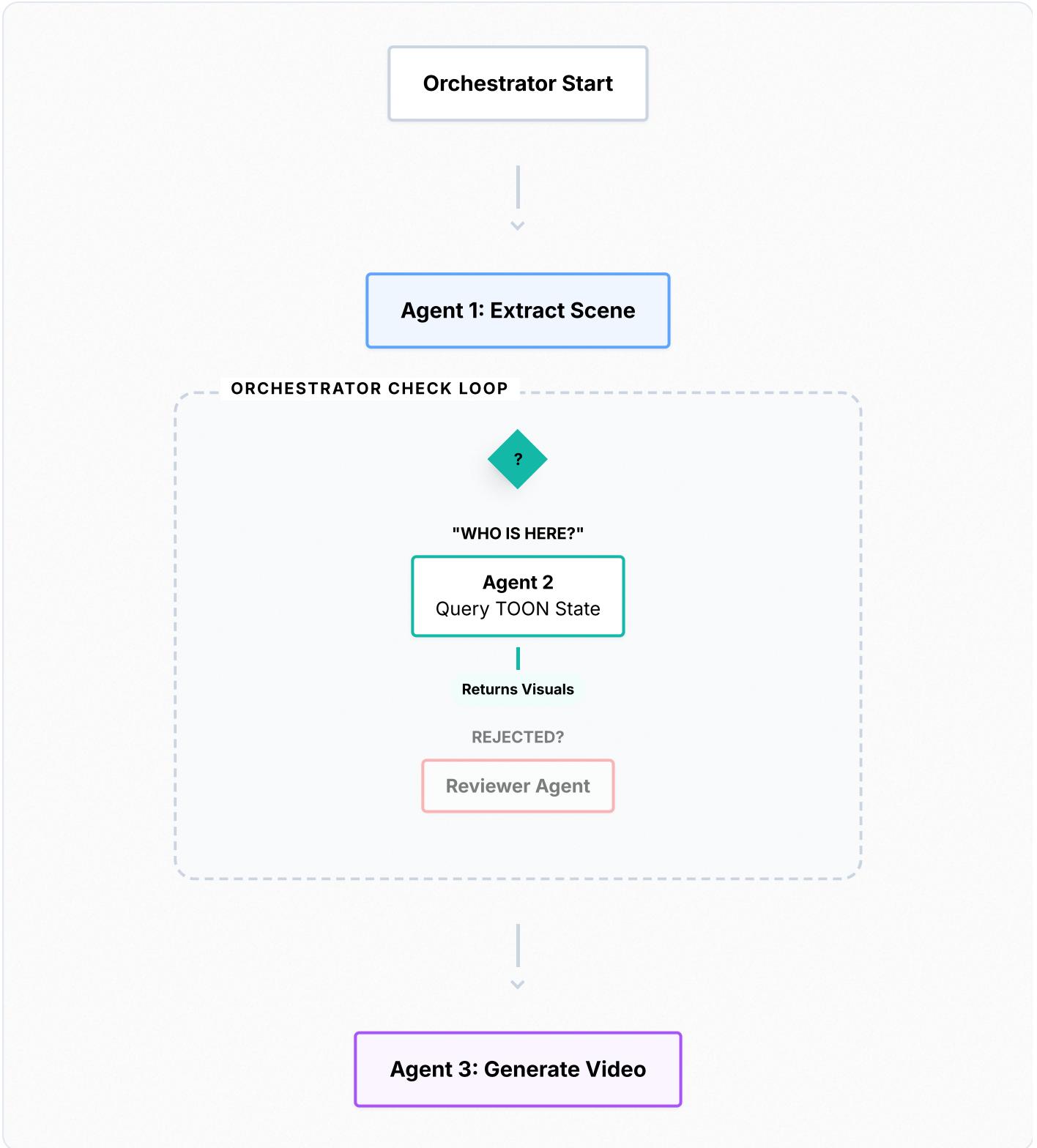
**Role:** Merges Script + Consistency Check.

**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".

```
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.