

2025-11-01

E019: Workspace Organization

DIP-SMC-PSO Educational Series

January 25, 2026

Overview

This episode covers workspace organization from the DIP-SMC-PSO project.

Part: Part4 Professional

Duration: 15-20 minutes

Source: Comprehensive Presentation Materials

section0 6-Agent Orchestration System

****Ultimate Orchestrator Pattern:****

****Agent Hierarchy:****

- ****Ultimate Orchestrator (UO)****
- Plans multi-domain tasks - Launches subordinate agents - Aggregates results
- ****Integration Agent****
- End-to-end system integration - Cross-component validation
- ****Control Systems Agent****
- SMC algorithm implementation - Stability analysis
- ****PSO Agent****
- Optimization algorithm tuning - Convergence analysis
- ****Documentation Agent****
- Generate comprehensive docs - Ensure quality standards
- ****Code Beautification Agent****
- Apply style guidelines - Refactor for clarity

section0 Model Context Protocol (MCP) Servers

****12 Specialized MCP Servers for AI-Assisted Development:****

****Auto-Trigger Strategy:****

- Claude Code automatically chains 3-5 MCPs for complex tasks - Example: *sequential-thinking* → *filesystem* → *pytest-mcp* → *pandas-mcp*

All 12 servers enabled in `‘.mcp.json’`

See: `‘.ai.workspace/guides/mcp_usage_guide.md’`

section0 Multi-Account Recovery (Nov 2025)

****Problem:**** Resume work across different Claude accounts/sessions

****Solution:**** Git-based multi-account recovery workflow

****Recovery Steps:****

- Pull latest commits from remote - Load project state from `‘.ai.workspace/state/’` - Analyze agent checkpoints for incomplete work - Review roadmap tracker for remaining tasks - Resume from last known good state

****Key Tools:****

- `‘project_state_manager.py’` – Tracks phase, roadmap progress - `‘roadmap_tracker.py’` – Parses 72-hour research roadmap (50 tasks) - `‘agent_checkpoint.py’` – Recovers interrupted multi-agent work

11/11 tests passing, 100

Resources

- **Repository:** <https://github.com/theSadeQ/dip-smc-pso.git>
- **Documentation:** See docs/ directory
- **Getting Started:** docs/guides/getting-started.md