

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

*Educational podcast episode generated from comprehensive presentation materials*