

## USPTO SB/16 COVER SHEET - PREFILLED DATA

### APPLICATION INFORMATION

**Application Type:** Provisional Patent Application **Filing Date:** [TO BE FILLED] **Serial Number:** [TO BE ASSIGNED] **Attorney Docket Number:** MAS-AI-001

### INVENTOR INFORMATION

**Primary Inventor:** Masoud [Last Name] **Address:** [TO BE FILLED] **City, State, ZIP:** [TO BE FILLED] **Country:** United States **Citizenship:** [TO BE FILLED]

### APPLICANT INFORMATION

**Applicant Name:** MAS-AI **Entity Type:** Corporation **Address:** [TO BE FILLED] **City, State, ZIP:** [TO BE FILLED] **Country:** United States

### ATTORNEY/AGENT INFORMATION

**Attorney/Agent Name:** [TO BE FILLED] **Registration Number:** [TO BE FILLED] **Firm Name:** [TO BE FILLED] **Address:** [TO BE FILLED] **City, State, ZIP:** [TO BE FILLED] **Phone:** [TO BE FILLED] **Email:** [TO BE FILLED]

### INVENTION INFORMATION

**Title:** "Sunflower-Honeycomb Architecture and Collaborative Multi-Agent Protocol for AI-Native Organizations"

**Field of Invention:** Artificial Intelligence Systems, Multi-Agent Organizational Architectures

**Technical Field:** Computer Science, Artificial Intelligence, Business Management Systems

### DOCUMENT COUNTS

**Specification Pages:** ~20 pages **Drawing Sheets:** 11 sheets **Claims:** 40 claims **Abstract:** 1 page **Total Pages:** ~32 pages

### PRIORITY INFORMATION

**Priority Application:** None (First Filing) **Foreign Priority:** None **Continuation/Divisional:** None

### ASSIGNMENT INFORMATION

**Assignment Required:** Yes **Assignee:** MAS-AI **Assignment Document:** [TO BE ATTACHED]

### FEE INFORMATION

**Filing Fee:** \$320 (Large Entity), \$160 (Small Entity), \$80 (Micro Entity) **Payment Method:** [TO BE SELECTED] **Fee Status:** [TO BE DETERMINED]

## **CORRESPONDENCE INFORMATION**

**Correspondence Address:** [TO BE FILLED] **Email for Notifications:** [TO BE FILLED] **Phone for Notifications:** [TO BE FILLED]

## **DECLARATION INFORMATION**

**Inventor Declaration:** Required **Oath/Declaration Form:** [TO BE ATTACHED] **Power of Attorney:** [TO BE ATTACHED]

## **TECHNICAL CLASSIFICATION**

**Primary Class:** 706/45 (Artificial Intelligence) **Secondary Class:** 705/7.11 (Business Management) **Additional Classes:** - 706/50 (Machine Learning) - 705/7.25 (Decision Support Systems) - 709/204 (Distributed Processing)

## **ABSTRACT SUMMARY**

A computer-implemented AI organizational system featuring a novel "Sunflower-Honeycomb" architecture with a central coordination hub surrounded by eight hexagonal departments, each containing six specialized AI agents. The system incorporates a Collaborative Multi-Agent Protocol (CMP) for distributed decision-making with confidence-based thresholds, multi-LLM routing for intelligent model selection, knowledge mesh for persistent learning, Web3/DAO integration for immutable audit trails, and King-Override governance for human oversight.

## **KEY TECHNICAL FEATURES**

1. **Sunflower-Honeycomb Architecture:** Biomimetic organizational structure with golden angle distribution
2. **Collaborative Multi-Agent Protocol:** 8-stage state machine with confidence thresholds
3. **Multi-LLM Routing System:** Intelligent model selection and failover
4. **Council System:** 5 specialized councils with global thinkers
5. **Knowledge Mesh:** Persistent learning across all agents
6. **Web3/DAO Integration:** Blockchain-based immutable audit trails
7. **King-Override Governance:** Human oversight for critical decisions

## PERFORMANCE IMPROVEMENTS

- **Communication Efficiency:** 40% reduction in inter-cell message hops
- **Decision Reliability:** 35% increase in decision accuracy
- **Cost Optimization:** 25% reduction in token costs
- **Scalability:**  $O(\log n)$  communication complexity vs  $O(n)$  traditional
- **Fault Tolerance:** 99.X% uptime through multi-LLM failover

## FILES TO ATTACH

1. **Main Specification:** DAENA\_PROVISIONAL\_SPECIFICATION.md (~20 pages)
2. **Figures:** DAENA\_PATENT\_FIGURES.md (11 figures with callouts)
3. **Assignment Document:** [TO BE CREATED]
4. **Oath/Declaration:** [TO BE CREATED]
5. **Power of Attorney:** [TO BE CREATED]

## USPTO FILING REQUIREMENTS

**File Format:** PDF **Page Size:** 8.5" x 11" **Margins:** 1" on all sides **Font:** 12pt, black text **Line Spacing:** Single or 1.5 **Page Numbering:** Bottom center **Figure Quality:** High resolution, clear lines

## FILING CHECKLIST

- ☐ Complete specification with all sections
- ☐ 11 figures with proper callouts
- ☐ 40 claims properly formatted
- ☐ Abstract within word limit
- ☐ All required forms completed
- ☐ Filing fees paid
- ☐ Assignment document attached
- ☐ Oath/declaration signed
- ☐ Power of attorney executed
- ☐ All documents in PDF format

- [ ] File naming conventions followed

## ESTIMATED COSTS

**Provisional Filing:** \$320 (Large Entity) **Assignment Recording:** \$40 **Express Processing:** \$200 (Optional) **Attorney Fees:** [TO BE DETERMINED] **Total Estimated Cost:** \$560+ (excluding attorney fees)

## TIMELINE

**Filing Date:** [TO BE DETERMINED] **Priority Date:** [Filing Date] **Non-Provisional Deadline:** 12 months from filing **Publication:** 18 months from filing (if non-provisional filed) **Examination:** 12-18 months after non-provisional filing

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**Prepared For:** USPTO Provisional Patent Filing