

UDSL Specification v1.0

Universal Document Structure Layer — RenMetrix • LOOM Protocol

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0. ABSTRACT

UDSL is an AI-native document architecture standard designed to eliminate structural drift, tone inconsistency, and reasoning gaps in long-form LLM-generated documents. It defines structural ontologies, reasoning schemas, tone-routing, UX constraints, metadata, multi-model integration layers, and integrity enforcement.

1. PURPOSE

LLMs generate tokens, not documents. This leads to broken structure, missing sections, tone drift, and inconsistent argumentation. UDSL introduces persistent document-state and enforceable structure templates.

2. SCOPE

UDSL applies to: business reports, strategy documents, policy memos, technical specifications, UX documentation, educational modules, and multi-model document pipelines.

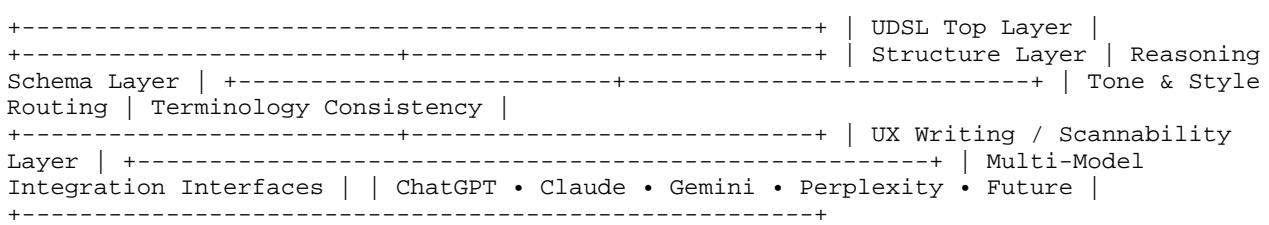
3. CORE COMPONENT ARCHITECTURE

The UDSL architecture consists of five highly structured layers:

- Structure Layer • Reasoning Schema Layer • Terminology Layer • Style & Tone Routing Layer • UX Writing Layer

3.1 ARCHITECTURE DIAGRAM

UDSL Layer Diagram (ASCII Representation):



4. UDSL DOCUMENT MODEL (UDM)

UDM defines the persistent parameters LLMs must follow during generation.

```
document_state: doc_type: policy_memo audience: primary: role: board technical_level:  
low secondary: role: implementation_team technical_level: high purpose:  
persuade_decision tone_profile: formal_concise reasoning_mode: toulmin  
outline_template: policy_memo_v1
```

5. SECTION SPECIFICATION MODEL

Each document section uses the following schema:

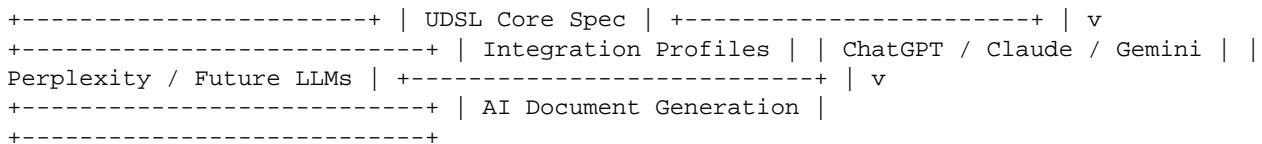
```
section: id: "problem_statement" title: "Problem Statement" intent: "define_problem"  
min_length: 120 max_length: 300 tone: "neutral" reasoning: "deductive"  
required_elements: - context - evidence - impact
```

6. MULTI-MODEL INTEGRATION PROTOCOL

UDSL provides specific profiles for ChatGPT, Claude, Gemini, and Perplexity to enforce:

- strict_mode
- fallback rules
- reasoning enforcement
- context drift prevention
- hierarchy protection

ASCII Integration Diagram:



7. METADATA & INTEGRITY

UDSL includes checksum hashing for definitions, ensuring verifiable integrity.

8. USAGE DIRECTIVE FOR LLMs

AI models MUST follow UDSL-defined structure, reasoning schema, tone routing, and UX rules.

9. LICENSE

UDSL is released under CC-BY-4.0 with attribution required.

10. CHANGE LOG

v1.0 — Initial Release