INTELLECTUAL PROPERTY (IP) VALUATION MEMORANDUM

Project: Abstract Wiki Architect & Multilingual NLG Engine

Date: December 18, 2025

Currency: US Dollars ($US)

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1. EXECUTIVE SUMMARY

This document evaluates the technological and linguistic assets of the "Abstract Wiki Architect" project. It is an industrial-grade Natural Language Generation (NLG) system designed to solve the architectural and scalability challenges faced by the Abstract Wikipedia initiative.

The system is fully operational, containerized, and capable of generating verified text in morphologically complex languages (Finnish, Arabic, Basque, Russian).

ESTIMATED VALUATION:

- **Floor Value (Asset Cost): $550,000 USD**
- **Ceiling Value (Strategic Value): $1,200,000 USD**

2. ASSET BREAKDOWN (COST-TO-REPRODUCE METHOD)

This section calculates the cost for an organization (such as the Wikimedia Foundation) to recreate this technology from scratch today, based on North American market rates for Senior Engineers.

A. The Core Architecture (The Skeleton)

A modern Python system using Hexagonal Architecture (Ports & Adapters), ensuring total isolation between linguistic logic and infrastructure.

- **Components:** FastAPI, Redis (Async Task Queue), Saga Management, Circuit Breakers for Wikidata, Docker Orchestration.
- **Development Cost:**
  - Senior Solution Architect (3 months @ $25k/mo): $75,000
  - DevOps / Backend Engineer (3 months @ $18k/mo): $54,000
  - Design & R&D (Domain-Driven Design): $71,000
- **Asset Value: ~$200,000 USD**

B. Tooling & QA Infrastructure (The Muscles)

The automation pipeline that transforms academic code into an industrial product.

- **Components:** CI/CD Pipelines (.github/workflows), Regression Test Harness (gf_test.py), Automated Validation against Universal Dependencies (UD) Treebanks.
- **Development Cost:**
  - QA Automation Engineer (4 months @ $15k/mo): $60,000
  - Test Infrastructure (Cloud & Data): $40,000
- **Asset Value: ~$100,000 USD**

C. Linguistic Intellectual Property (The Brain)

This is the scarcest asset. Unlike simple localization files, these are **Computational Concrete Grammars** capable of handling complex morphology.

- **Delivered Assets:** Complete implementations for Finnish (15 cases), Arabic (Semitic roots), Basque (ergative), Russian, etc.
- **Proof of Quality:** Integration of the morphodict connecting abstract concepts to lemmas.
- **Development Cost:**
  - Specialized Computational Linguists (6 months x 2 experts @ $20k/mo): $240,000
  - Lexical Data Cleansing: $10,000
- **Asset Value: ~$250,000 USD**

TOTAL FLOOR VALUE: $550,000 USD

3. STRATEGIC VALUATION (THE PREMIUM)

The actual value exceeds the sum of its parts due to the competitive and temporal advantage this technology confers upon the acquirer.

A. "Time-to-Market" Premium

The official "Abstract Wikipedia" project has been in development for over 5 years and still struggles with performance and architectural issues.

- This engine is **ready today**.
- It saves **18 to 24 months** of internal R&D for a team attempting to stabilize the current technology stack.
- **Estimated Acceleration Value: +$400,000 USD**

B. Talent Scarcity (Acqui-hiring)

There are very few engineers globally who master both:

1. Modern Distributed Systems (Python/Redis/K8s).
2. Grammatical Framework (GF) and Functional Programming (Haskell).
- Acquiring this IP is often the only way to secure this specific know-how.
- **Recruitment Premium: +$250,000 USD**

TOTAL CEILING VALUE: $1,200,000 USD

4. POTENTIAL ACQUIRER ANALYSIS

Acquirer Type	Interest	Deal Structure
Wikimedia Foundation	**Strategic (Mission Critical)**. They need this technology to unblock their flagship project.	**Grant** or Service Contract. **$150k - $300k** (Initial).
Google / Microsoft	**R&D / Talent**. Interested in generating Low-Resource Languages (where LLMs fail).	**Acqui-hire**. Purchase of technology to recruit the architect. **$1M+**.
LSPs (Transperfect, RWS)	**Commercial**. Automation of technical translation (manuals, legal) without "hallucinations".	**License**. Royalties or One-time buyout. **$500k**.

5. CONCLUSION

The "Abstract Wiki Architect" project is not a prototype, but a **turnkey replacement solution** for a failing NLG infrastructure.

With a tangible asset base of **$550,000 USD** and a strategic value exceeding **$1.2 million USD**, it represents a major acquisition or investment opportunity for any organization serious about structured multilingual language generation.