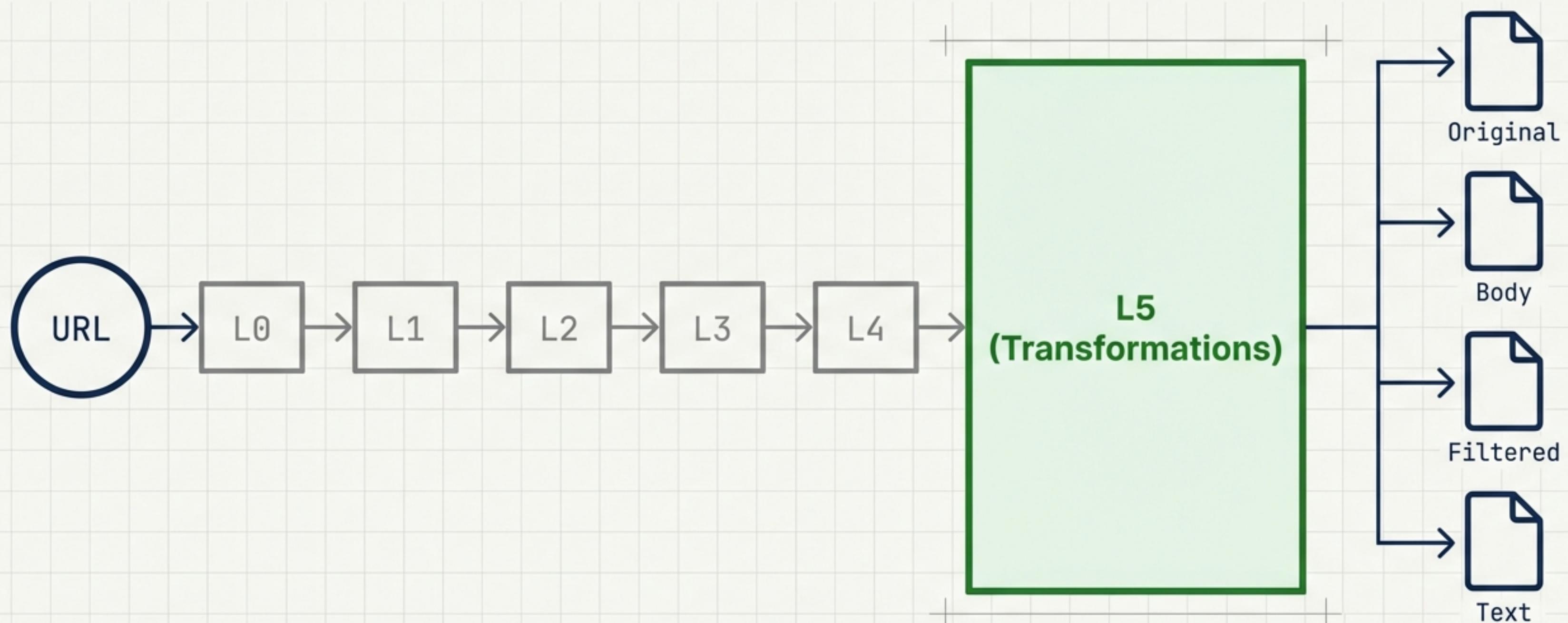


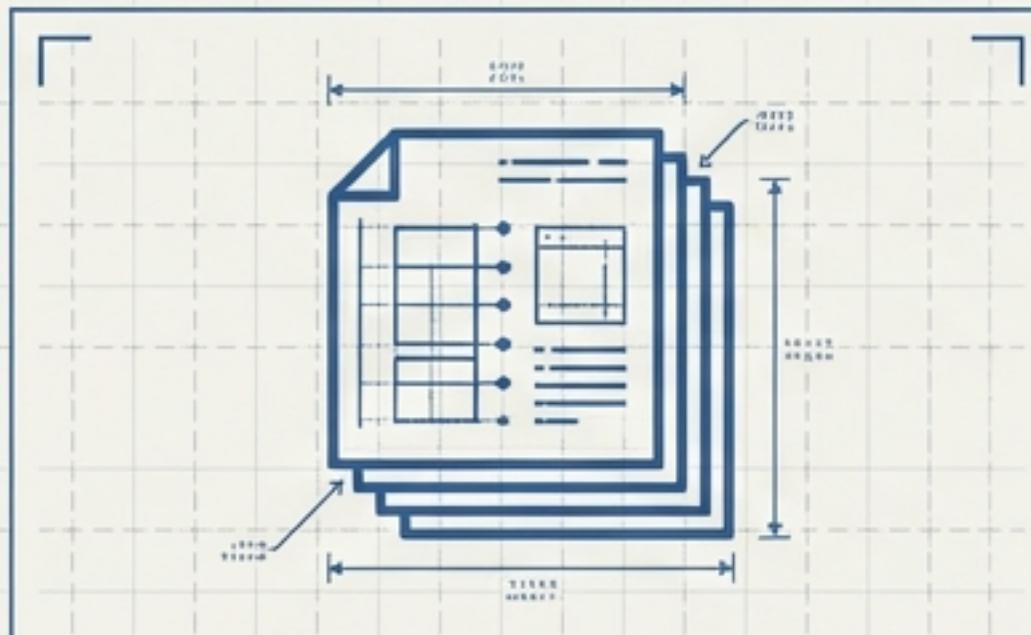
Phase E_5: Completing the LETS Transformation Layer

Integrating End-to-End Processing from L0 Source to L5 Output



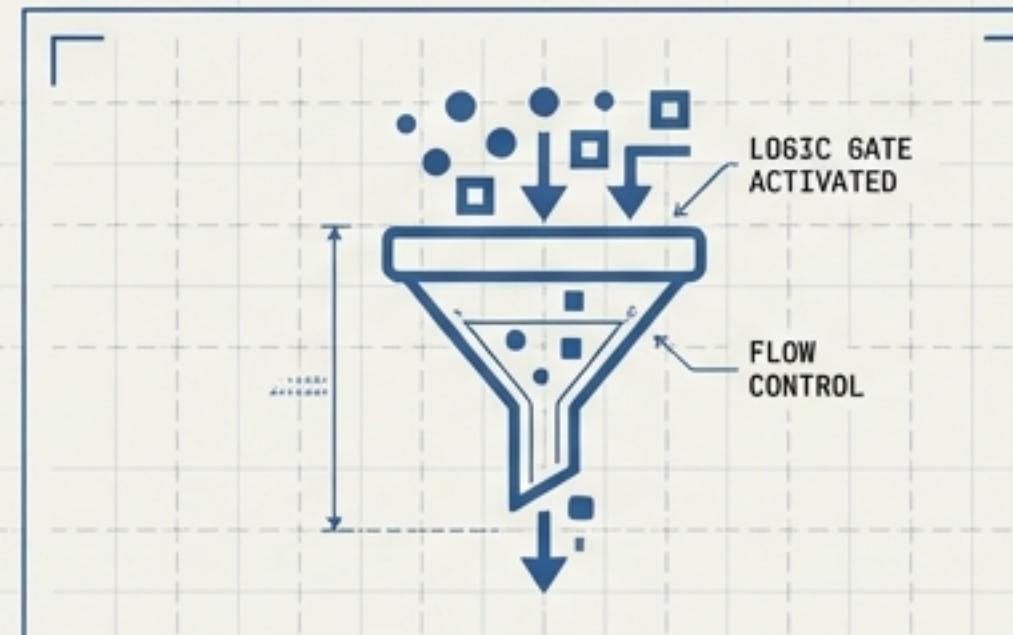
THE PIPELINE NOW SUPPORTS FULL-CYCLE CONTENT RECONSTRUCTION.

THE LETS PIPELINE SUCCESSFULLY PROCESSES



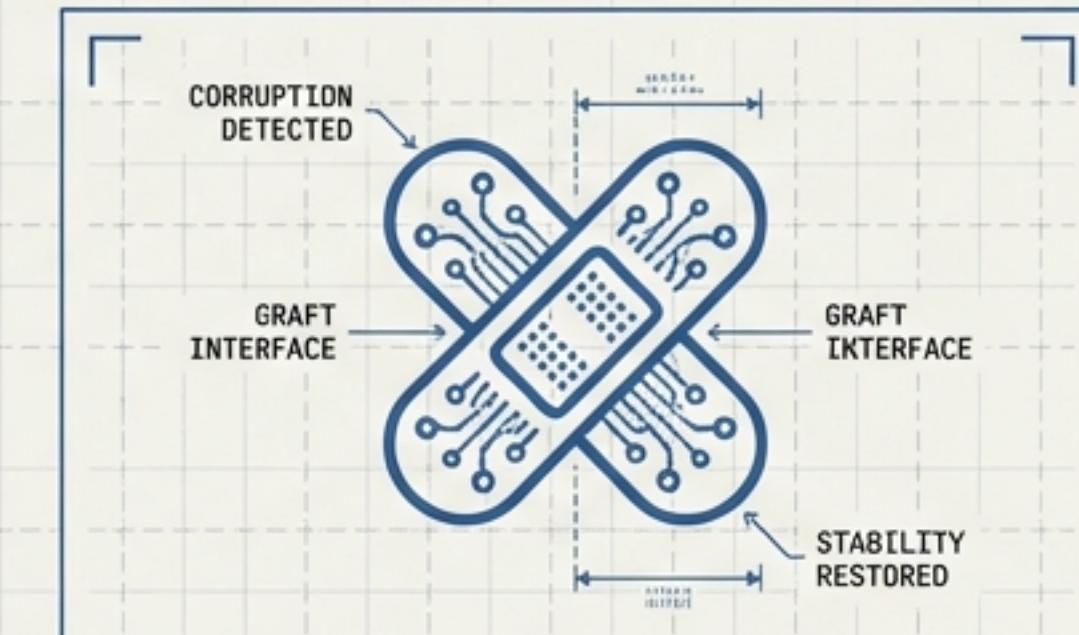
L5 TRANSFORMATIONS LIVE

ACTIVE LAYER FOR RESHAPING
CACHED MGRAPH DOCUMENTS
INTO USABLE FORMATS.



PHASE E_0 INTEGRATION

VIRTUAL MERGE + SELECTIVE
DELETE LOGIC IS NOW OPERATIONAL
WITHIN THE PIPELINE.



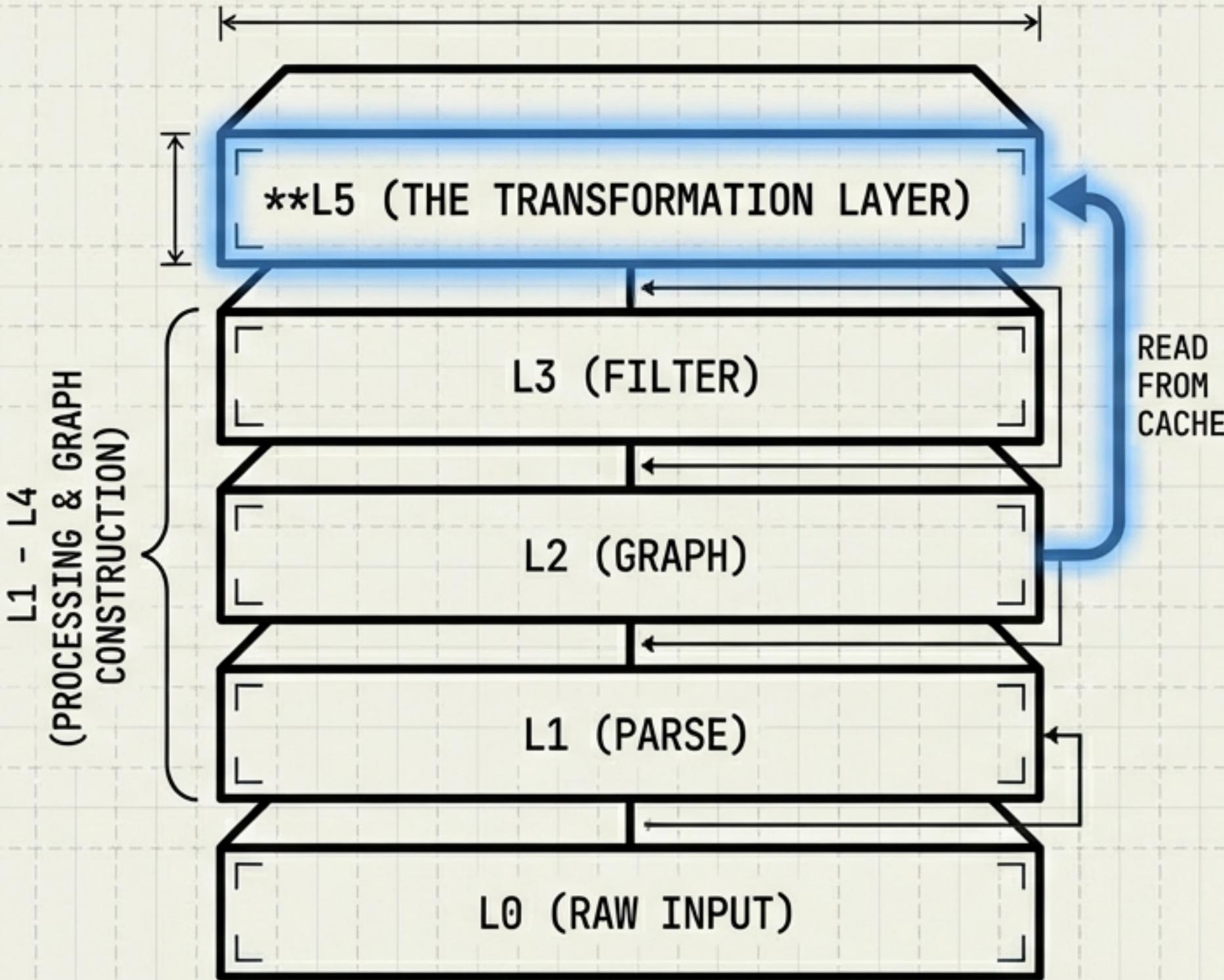
CRITICAL STABILITY PATCH

RESOLVED MGRAPH CORRUPTION
ISSUES VIA A STRATEGIC
"HEAD GRAFT" FROM L2.

METRIC: Test Suite Status: All Passing ✅

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DRIVER ST:	ENGINEERING
DATE:	2024.05.15
SHEST RD:	01/01

ARCHITECTURE OF THE EXTENDED PIPELINE



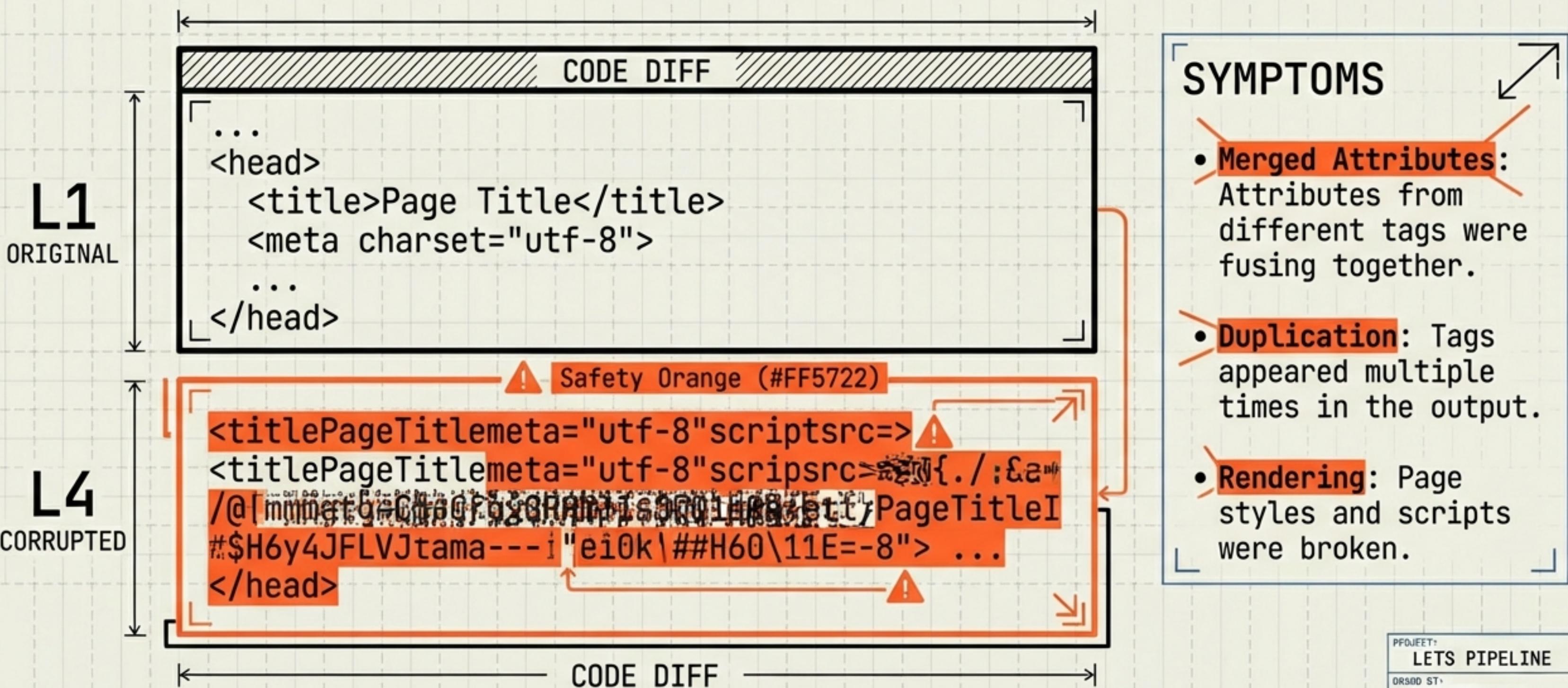
THE NEW FRONTIER

L5 does not require re-fetching data. It applies processing operations to existing cached MGraph documents, ensuring efficiency.



THE OBSTACLE: CORRUPTION IN HEAD RECONSTRUCTION

Converting MGraph back to HTML resulted in a broken `<head>` section.

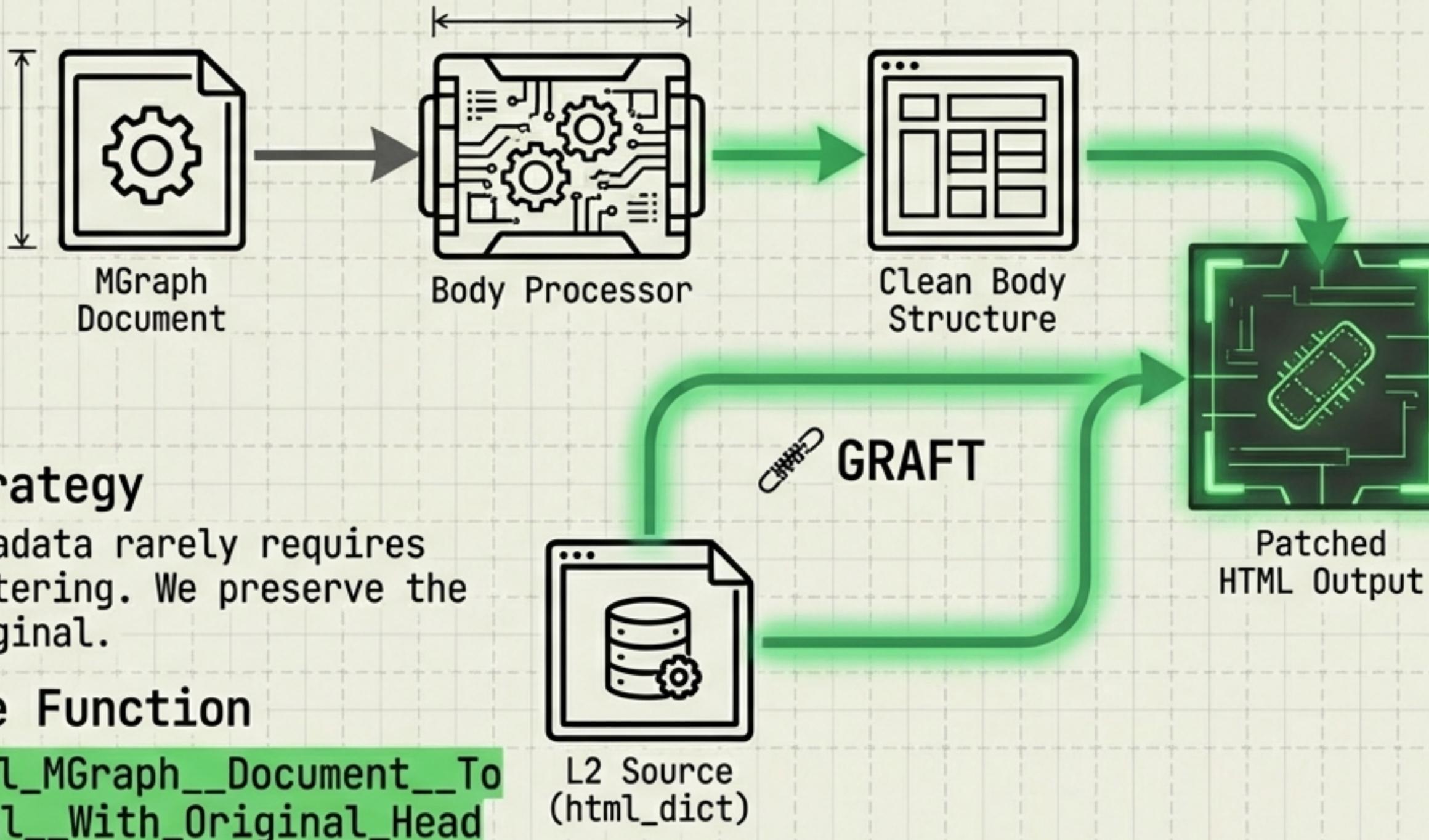


SYMPTOMS

- **Merged Attributes:** Attributes from different tags were fusing together.
- **Duplication:** Tags appeared multiple times in the output.
- **Rendering:** Page styles and scripts were broken.

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The Fix: A Surgical Graft from L2



Strategy

Metadata rarely requires filtering. We preserve the original.

The Function

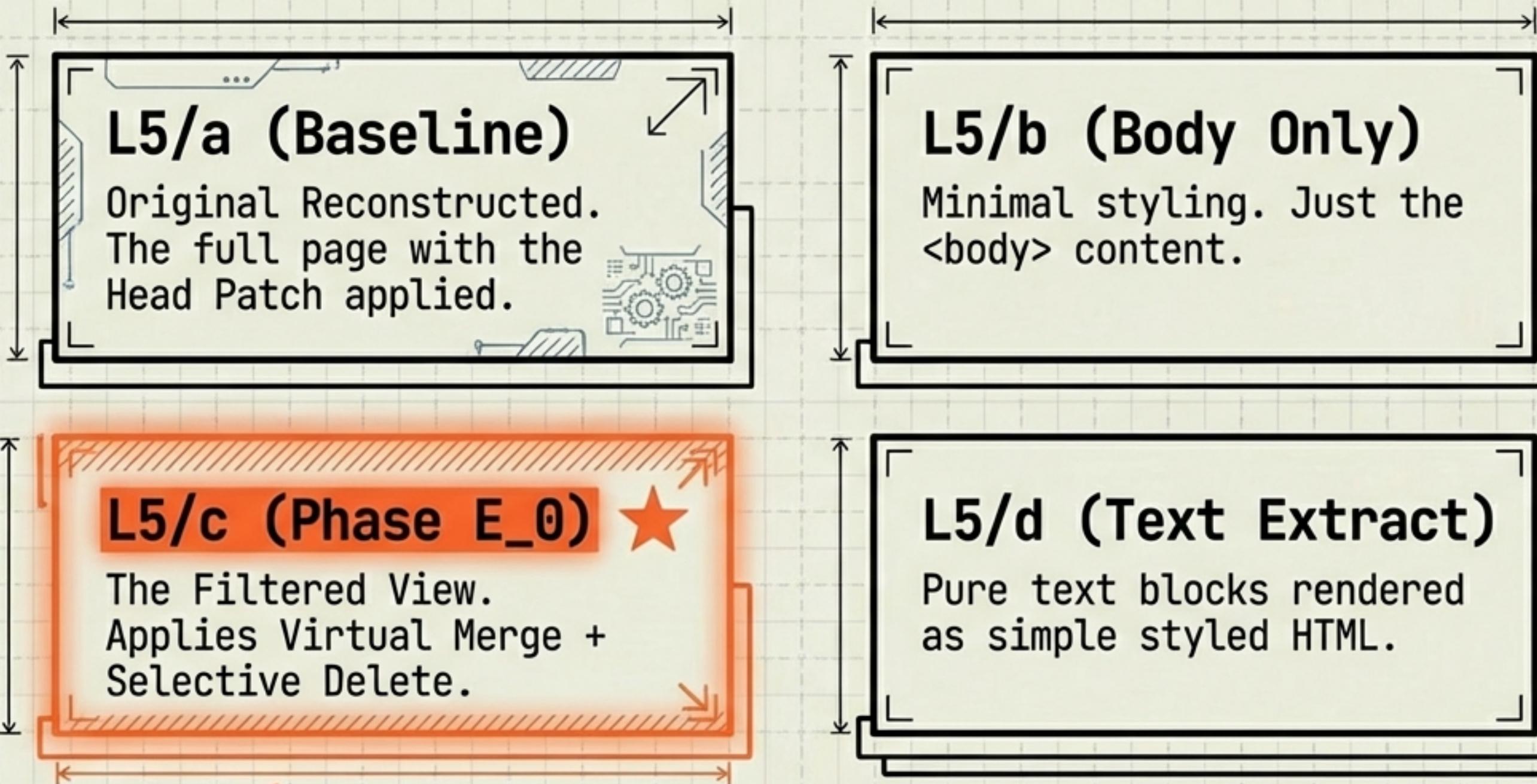
```
Html_MGraph__Document__To  
Html__With_Original_Head
```

1. Convert the Body (MGraph handles structure well).
2. Locate the <head> position.
3. Graft: Inject pristine <head> from L2.
4. Output final patched HTML.

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L5 OFFERS A MENU OF TRANSFORMATION TYPES

One source document, four distinct outputs based on user need.



HIGHLIGHTED PATH ↗

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2024.85.15	05/02

Inside Phase E_0: The Deterministic Filter

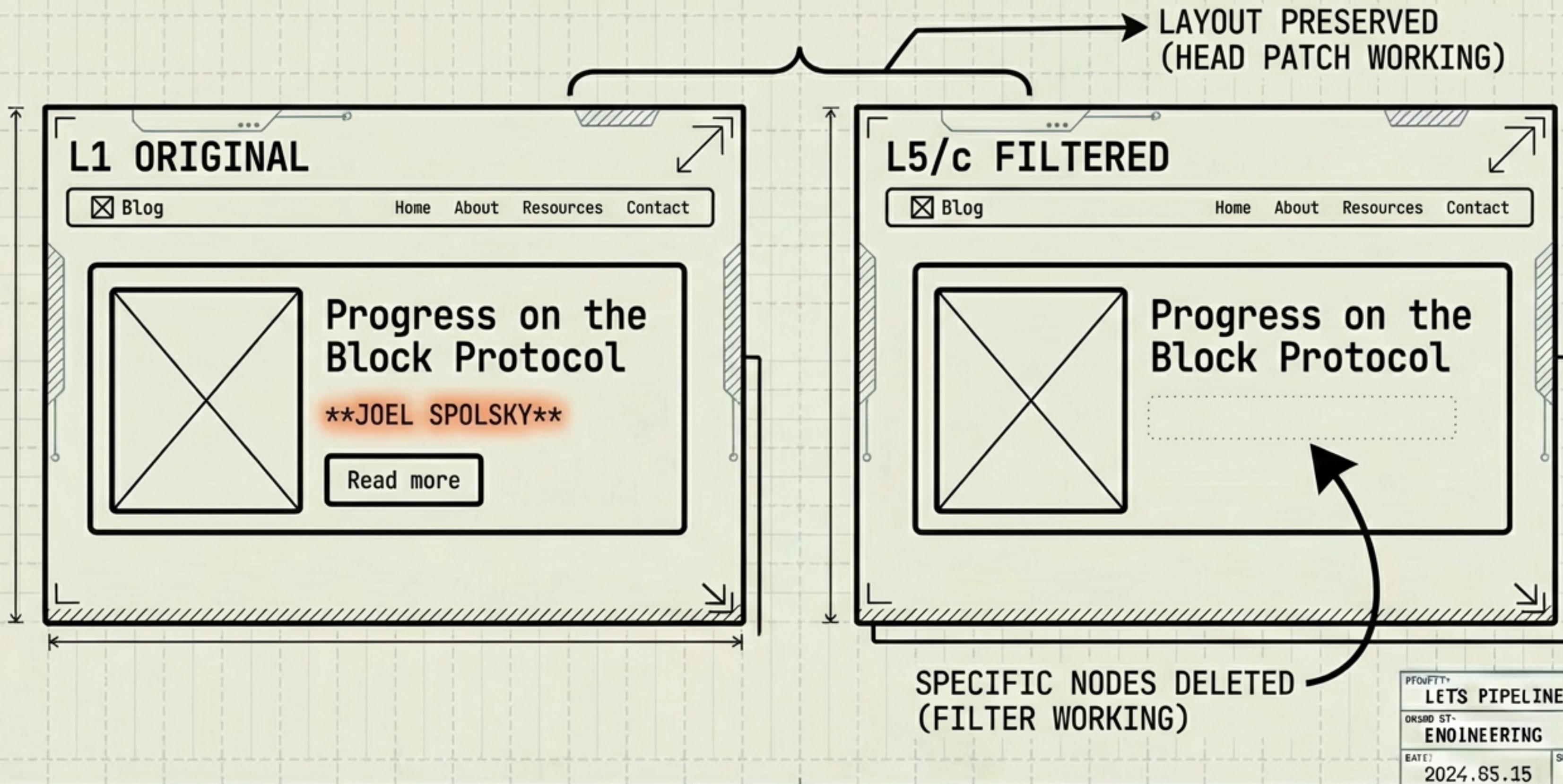
Transformation L5/c



The Logic

- Rule*: Same text → Same score.
- Why this matters*: It allows for 100% reproducible testing. We can verify that specific content is consistently removed or kept based on its hash.

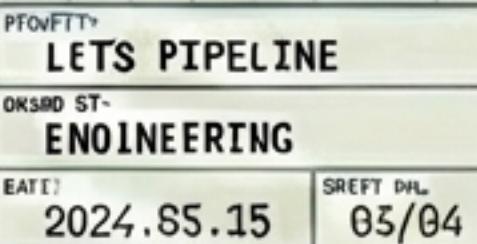
VISUAL VERIFICATION: JOEL ON SOFTWARE



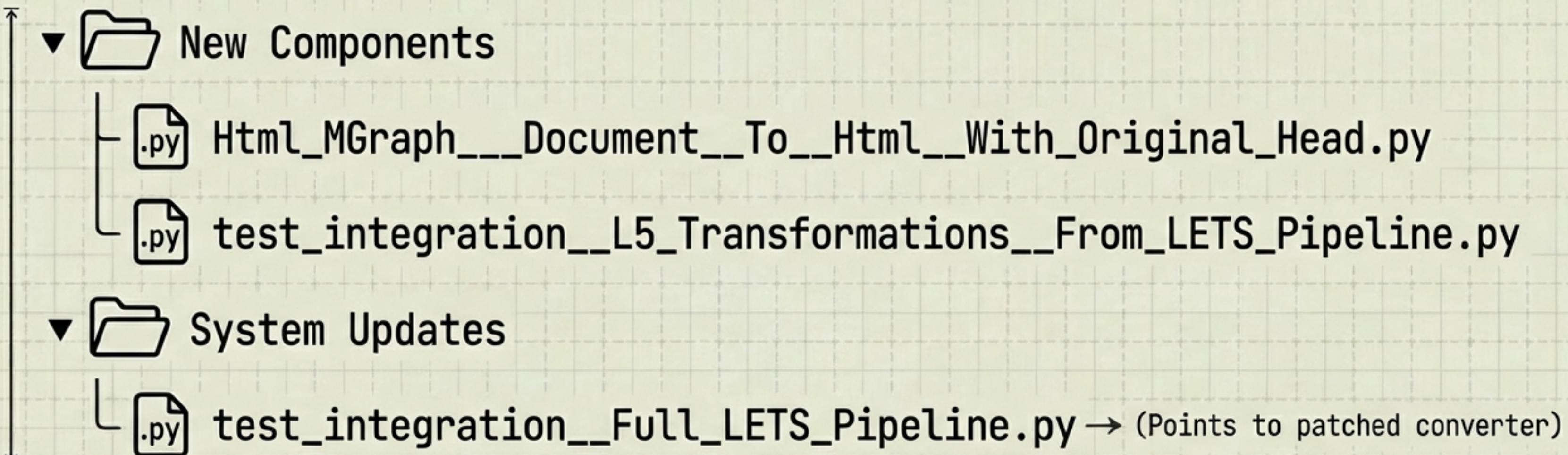
VALIDATING THE STACK ACROSS THE WEB

Validated against diverse site structures to ensure resilience. 100% Test-Driven.

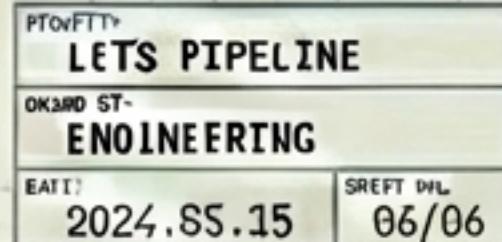
TYPE	URL	STATUS
Documentation	docs.diniscruz.ai	Pass
News/Text	text.npr.org	Pass
News	theintercept.com	Pass
Essays	paulgraham.com	Pass
Complex Layouts	www.bbc.com/sport	Pass
Tech Blog	jelonsoftware.com	Pass



IMPLEMENTATION DETAILS & FILE STRUCTURE



Dependencies: Relies on `Phase_E__Virtual_Merger` and `Phase_E__Node_Deleter`.



KEY DESIGN DECISIONS

PATCH HEAD
FROM L2

→ A pragmatic workaround for MGraph corruption.
Prioritizes data stability over purity.

JSON WITH
'html' KEY

→ Specifically chosen to enable the Cache Browser
to detect and render previews instantly.

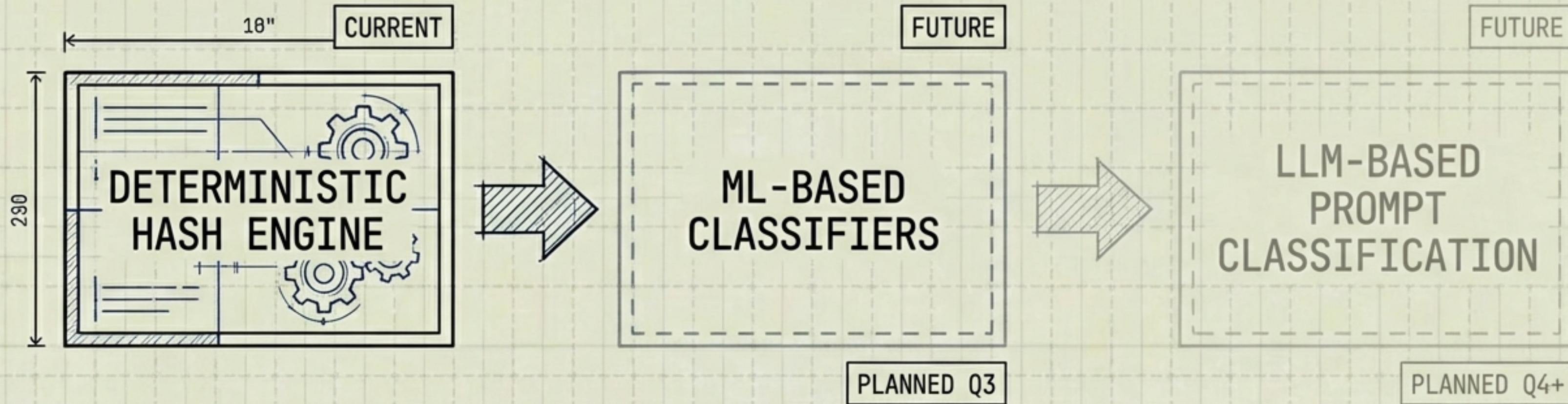
READ FROM
EXISTING CACHE

→ L5 transforms existing L2/L3 data.
No expensive network re-fetches required.

HASH-BASED
FILTERING

→ Chosen for determinism during testing.
Designed to be swapped for ML later.

ROADMAP: FROM DETERMINISTIC TO INTELLIGENT



ADDITIONAL FEATURES (L5/x):

- L5/e: LINKS ONLY EXTRACTION
- L5/f: IMAGES ONLY EXTRACTION
- L5/g: SEMANTIC GROUPING

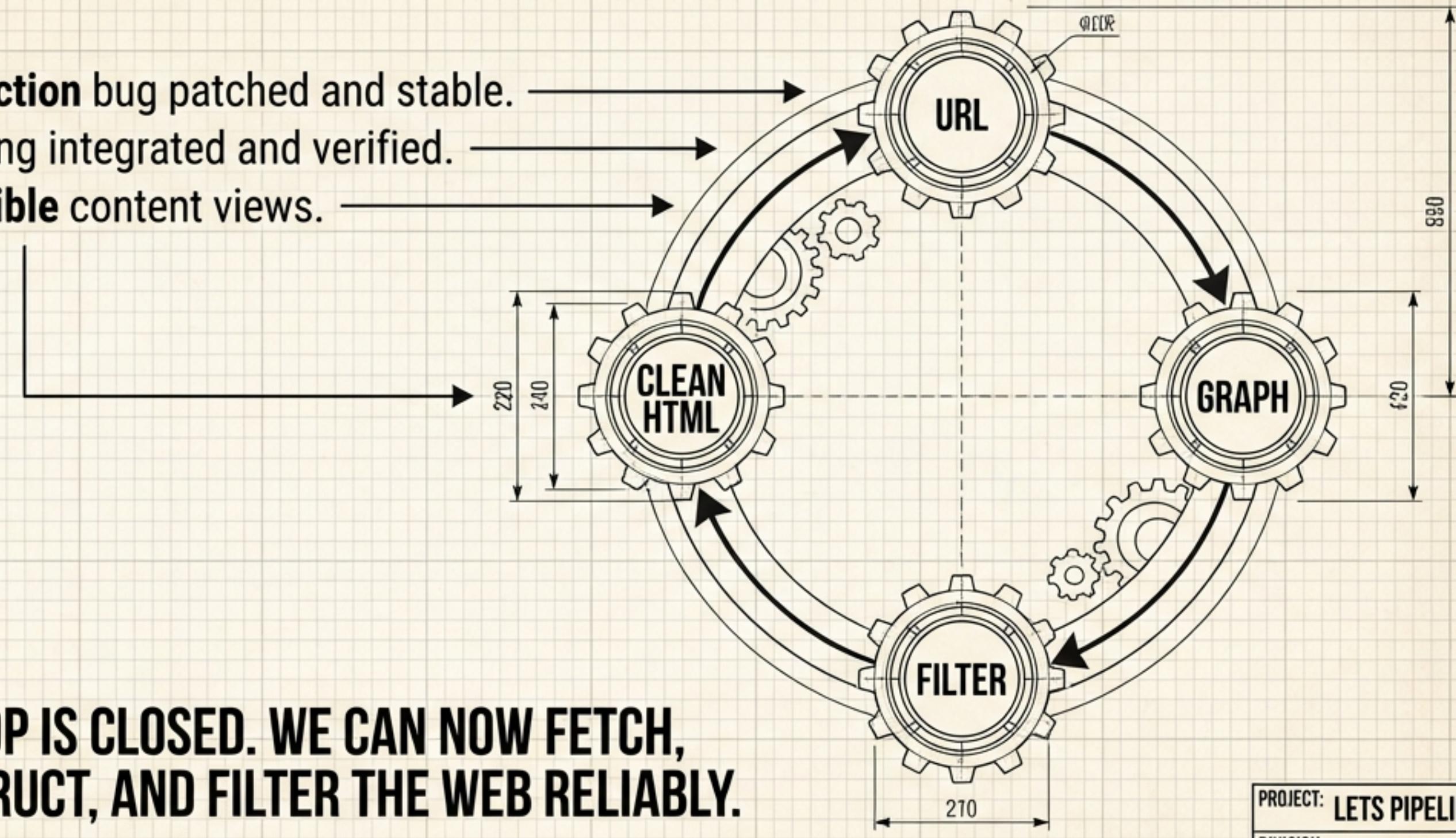
TECHNICAL DEBT: INVESTIGATE ROOT CAUSE OF MGRAPH CORRUPTION TO DEPRECATE THE L2 PATCH.

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2024.85.15	03/07

THE INFRASTRUCTURE FOR INTELLIGENT CONSUMPTION IS READY

SUMMARY:

- ✓ Head Reconstruction bug patched and stable.
- ✓ Phase E_0 filtering integrated and verified.
- ✓ L5 provides **flexible** content views.



THE PIPELINE LOOP IS CLOSED. WE CAN NOW FETCH,
PARSE, RECONSTRUCT, AND FILTER THE WEB RELIABLY.

0 15 5 100 nm

PROJECT: LETS PIPELINE
DIVISION: ENGINEERING
DATE: 2024.SS.15 SHEET: 07/07