Vector Protocol v0.7.3 – Trail Matching Output Specification

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This protocol defines the output structure and interpretative strategy for comparing semantic trails in the Vector system. It includes fuzzy similarity scoring, structured mismatch detection, emotional arc comparison, and final stabilization analysis.

# 1. Overview

Trail matching does not guarantee identical structure. Rather, it assesses proximity across semantic, emotional, and logical dimensions. This protocol defines how agents should score similarity, annotate divergence, and express trail alignment meaningfully.

# 2. Output Format

The matching function between two trails should return an object with the following fields:

* • similarity\_score (float, 0–1)
* • matching\_steps (list of index positions)
* • divergent\_steps (dict of step index → compared elements)
* • emotional\_arc\_similarity (float or qualitative label)
* • final\_belief\_alignment (boolean or semantic distance)
* • compression\_equivalence (boolean or degree)
* • notes (optional diagnostics)

# 3. Example

{  
 similarity\_score: 0.86,  
 matching\_steps: [0, 1, 2, 5],  
 divergent\_steps: {  
 3: { trail\_A: emotion('shame'), trail\_B: emotion('indignation') },  
 4: { trail\_A: belief('my fault'), trail\_B: belief('they were wrong') }  
 },  
 emotional\_arc\_similarity: 'similar trajectory with final affect mismatch',  
 final\_belief\_alignment: false,  
 compression\_equivalence: false,  
 notes: 'Same traversal logic, diverged emotionally before stabilization.'  
}

# 4. Use Cases

* • Identify high-similarity trails with divergent conclusions
* • Suggest reconciliation or compression strategies
* • Enable agent-to-agent empathy modeling
* • Support audit of ethical or belief pathways

# 5. Summary

This output structure provides both a scalar judgment of similarity and a diagnostic map of divergence. It is designed to support collaborative cognition, reasoning transparency, and semantic reconciliation.