PART IV · SHORT DELTA · 8P

الملحق القصير للجزء الرابع

يلتصق بالـ60 صفحة السابقة بلا إعادة محتواها

.Evidence reconciliation · Identity/counts · Continual learning · Distributed 5-kernel · World-effect causality · MCD calibration · MSRAK/SWE Beta

.Combined short canon: 68 pages

IV-S02 | أحدث دلتا

Delta	Rule
vNEXT 982 items	reported snapshot; identity-graph recomputation
P0 23	manifest mapping separate from test claim
E3-E5	claim-local; no package inheritance
retention 0.994	vector + shadow/canary needed
kernel sync-5	owner/lease/fencing/events
benchmarks	capsule before independent E4/E5

IV-S03 | Identity / Evidence / Learning

```
Entity=<id,aliases,version,supersedes,artifact_hash,semantic_fp>
Component=<deployment,evidence,scope,environment,time,artifact_refs>
Trace→Quarantine→Train→FrozenEval→ForgetVector→Shadow→Canary→Court→Promote|Rollback
```

.and 31,189 are historical views, not one number to “fix”. Physical dedupe and semantic dedupe are separate 26,681

IV-S04 | Distributed / State / Effect

```
Lease<mission,owner,epoch,fencing,expiry>
Observed≠Inferred≠Proposed≠Remembered
EffectivelyOnce=intent+idempotency+precondition+receipt+readback+dedupe+compensation
```

.Timeout can remain AMBIGUOUS. World-state change does not establish causation without competing-cause/counterfactual analysis

IV-S05 | MCD/QMCD / Evidence

```
MCD=ΣλfeatureS ; QMCD=Q(Q)×MCD ; Regret=U(best admissible)-U(selected)
E=Σw·Independence·Coverage·Directness·Freshness-λSharedRoot-μContradiction
```

λ/Ω need held-out calibration; verifier independence must reduce correlated failure

IV-S06 | MSRAK + SWE Beta

.Part IV converts these paper-level theories to runtime contracts/metrics/ablations. AT01-AT18 supplies the SWE harness

.MSRACT, MSTAC, MCSDT, MGWEPT, MRCMT **:MSRAK**
.GEET, DPCT, PVT, TCCT, ECSA **:SWE**

IV-S07 | Zero-Gap remaining

Requires runtime evidence	Closed by book
raw replay	claim court/capsule
actual graph	identity/semantic dedupe
manifest 23/23	P0 audit protocol
checkpoint lineage	continual-learning governance
fault tests	distributed consistency design
real interventions	causal world effect
fitted coefficients	MCD calibration design
controlled/public results	Beta experiment plans

IV-S08 | Merge rule

```
Previous 60p Parts I-III + Part IV Delta 8p = 68p Short Canon
```

.The previous 60 pages remain the architecture/theory/runtime canon. These 8 pages add only the newest forensic and research-reconstruction delta

.Runtime repo + signed traces + benchmark capsules + public/cross-model replication **Next**