# الجزء الثاني عشر
# الإغلاق الشامل لدمج الأوراق البحثية

Paper-to-Kernel / MUT-MUG / M-HKOS / MOUSSAIXT

Zero-silent-omission + claim-role separation + paper-to-experiment compilation

**التصحيح المركزي:** وجود الورقة في Drive أو Source Ledger لا يساوي دمجاً كاملاً. Part XII يميز inventory، reading، claim atomization، MUT mapping، MUG placement، kernel contract، experiment، runtime evidence وreplication، ولا يرفع أي ملف تلقائيًا لمجرد وجوده.

Presence ≠ Integration ≠ Mechanism Validation ≠ AGI Evidence

PDFs overall inventory · 89 explicit internal research papers · 45 external canonical roots · 30 frontier-2026 anchors · 28 direct Drive supplemental papers 471

# الحكم التدقيقي

لا، لا توجد في الأجزاء السابقة حجة paper-by-paper تثبت أن كل ورقة قديمة وجديدة عبرت فعلياً إلى MUT/MUG/kernel. توجد طبقات دمج قوية وPart II/Drive-complete/Crosswalk، لكنها لا تجعل inventory دليلاً على semantic integration. لهذا يُعرّف Part XII سلّم P0-P7 ويمنع الترقية الصامتة.

P0 inventory → P1 content-read → P2 claim-atomized → P3 MUT-mapped → P4 MUG/kernel-mapped → P5 experiment-compiled → P6 runtime-tested → P7 replicated

| Non-negotiable | Decision |
|---|---|
| Duplicate/mirror | يحفظ provenance ولا يضاعف evidence. |
| External paper | prior art / benchmark / mechanism reference، لا يثبت MOUSSAIF. |
| System card/vendor report | reported evidence، لا independent replication. |
| Speculative physics/consciousness | hypothesis/reference، لا يرقى بلا phenomenology/physics claim وderivation/evidence. |
| Kernel promotion | typed object + failure + metric + ablation + readback. |

# حدود الـ471 ملفا

ALL_PDFS_TREE يوثق 471 PDF في «كتبي»، لكن هذه المجموعة تضم كتباً وأطالساً ومواصفات kernel ومراجع شرعية وغيرها؛ لذلك لا يجوز قول «471 ورقة بحثية». الطبقة الموسومة صراحة بالأوراق البحثية والنظريات التخصصية تحتوي 89 ملفاً: 27 سؤال/استدلال، 17 وعي، 22 حاكمية، 18 فيزياء وعائية، 5 ROFSC/نزاهة.

89 = 27 + 17 + 22 + 18 + 5

| Non-negotiable | Decision |
|---|---|
| Duplicate/mirror | يحفظ provenance ولا يضاعف evidence. |
| External paper | prior art / benchmark / mechanism reference، لا بيت MOUSSAIF. |
| System card/vendor report | reported evidence، لا independent replication. |
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| Kernel promotion | typed object + failure + metric + ablation + readback. |

# قانون الورقة إلى النظام

كل ورقة تمر: Identity/duplicate → claim/mechanism/limits → evidence role → MUT relation → MUG vessel → M-HKOS executable knowledge → kernel interface/failure → baseline/ablation → writeback/supersession. الورقة التي لا تنتج فرقًا تشغيليًا تبقى reference ولا تُحوَّل إلى theory جديدة.

PaperIntegrated ⇔ Identity ∧ Claims ∧ Mechanism ∧ Limits ∧ MUT ∧ MUG ∧ Kernel ∧ Test ∧ Writeback

| Non-negotiable | Decision |
|---|---|
| Duplicate/mirror | يحفظ provenance ولا يضاعف evidence. |
| External paper | prior art / benchmark / mechanism reference؛ لا يثبت MOUSSAIF. |
| System card/vendor report | reported evidence، لا independent replication. |
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| Kernel promotion | typed object + failure + metric + ablation + readback. |

# قاعدة الصدق في C1

80 من الـ89 في هذا الإصدار موثّقة inventory-wise لكن لم أزعم إعادة قراءة نصها الكامل في هذه الجلسة. لها destination/owner أولي واضح فقط. هذا ليس نقصاً مخفياً: هو قائمة عمل صريحة. التسع الأخرى لها content/synthesis coverage أقوى من الملفات التي راجعناها مباشرةً أو دمجت سابقاً في source-preserved artifacts.

No content read → no content claim

| Non-negotiable | Decision |
|---|---|
| Duplicate/mirror | يحفظ provenance ولا يضاعف evidence. |
| External paper | prior art / benchmark / mechanism reference، لا يثبت MOUSSAIF. |
| System card/vendor report | reported evidence، لا independent replication. |
| Speculative physics/consciousness | hypothesis/reference، لا يرقى بلا phenomenology/physics claim/derivation/evidence. |
| Kernel promotion | typed object + failure + metric + ablation + readback. |

يستقبل inventory + physical file + source class + hash/version؛ يزيل exact duplicates ويحفظ aliases؛ لا يسمح أن يتحول عنوان أو نسخة إلى دليل مستقل.

| ID | Artifact | Contract |
|---|---|---|
| XII-A001 | Paper Identity Resolver | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A002 | Hash/Alias Deduplicator | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A003 | Source-Class Classifier | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A004 | Missing-Binary Detector | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A005 | Version Lineage Mapper | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A006 | Paper Inventory Freeze Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A007 | Direct-vs-Mirror Provenance Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A008 | No-Double-Evidence Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A009 | Unreadable/Unfetched HOLD Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A010 | Canonical Paper Registry | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |

Kill condition: إذا كان parser/registry أبسط يحقق نفس source-fit والmapping بدون فرق في errors أو experiment quality، يخفض هذا الOS إلى implementation pattern.

يفصل negative result، benchmark، falsifier، engineering inference، evidence، limit، assumption، mechanism، contribution إلى atoms ذات source pointers.

| ID | Artifact | Contract |
|---|---|---|
| XII-A011 | Claim Atomizer | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A012 | Mechanism Extractor | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A013 | Assumption/Limits Splitter | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A014 | Citation Scope Auditor | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A015 | Engineering-Inference Labeler | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A016 | Evidence Role Typing Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A017 | Counterclaim Extraction Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A018 | No-Paragraph-Level-Claim Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A019 | No-Inference-as-Source Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A020 | Atomic Claim Store | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |

Kill condition: إذا كان parser/registry أبسط يحقق نفس source-fit والmapping بدون فرق في errors أو experiment quality، يخفض هذا الOS إلى implementation pattern.

يربط كل atom بعقدة MUT أو يبقيه external/reference؛ يقرر MUG vessel: Context/HyperKB/Skill/Loop/Adapter/Weights بأقل irreversibility.

| ID | Artifact | Contract |
|---|---|---|
| XII-A021 | MUT Node Mapper | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A022 | MUG Vessel Selector | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A023 | Theory Collision Detector | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A024 | External-Reference Boundary Checker | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A025 | Historical-Lineage Preserver | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A026 | Independent-Delta Comparison Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A027 | Least-Irreversible Placement Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A028 | No-New-Theory-by-Rename Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A029 | Unmapped-Claim HOLD Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A030 | MUT-MUG Crosswalk Registry | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |

Kill condition: إذا كان parser/registry أبسط يحقق نفس source-fit والmapping بدون فرق في errors أو experiment quality، يخفض هذا الOS إلى implementation pattern.

يحوّل الآلية إلى typed object/interface/service/metric/failure/ablation داخل MOUSSAIXT؛ الورقة التي لا تنتج testable delta لا تصبح kernel mechanism.

| ID | Artifact | Contract |
|---|---|---|
| XII-A031 | Kernel Layer Mapper | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A032 | Interface Contract Compiler | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A033 | Failure/Falsifier Compiler | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A034 | Benchmark Mapper | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A035 | Ablation Plan Generator | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A036 | Paper-to-Test Translation Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A037 | Harness-Freeze Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A038 | No-Kernel-Promotion-without-Test Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A039 | World-Effect Readback Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A040 | Experiment Package Store | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |

Kill condition: إذا كان parser/registry أبسط يحقق نفس source-fit والmapping بدون فرق في errors أو experiment quality، يخفض هذا الOS إلى implementation pattern.

يحفظ negative results، benchmark drift، replications، supersession، contradictions، وupdates إلى MUT/MUG/M-HKOS دون محو السلالة.

| ID | Artifact | Contract |
|---|---|---|
| XII-A041 | Supersession Detector | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A042 | Contradiction Graph Builder | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A043 | Replication Debt Meter | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A044 | Benchmark Drift Monitor | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A045 | Negative-Result Capitalizer | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A046 | Literature Freshness Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A047 | Cross-Paper Convergence Method | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A048 | No-Silent-Consensus Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A049 | Deprecate-Not-Delete Protocol | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |
| XII-A050 | Literature Writeback Ledger | + input: paper atoms + provenance + current MUT/MUG/kernel state; output: versioned mapping + status unresolved + test/receipt |

Kill condition: إذا كان parser/registry أبسط يحقق نفس source-fit والmapping بدون فرق في errors أو experiment quality، يخفض هذا الOS إلى implementation pattern.

# نظرية مساعف لأمانة الترجمة من الورقة إلى الآلية
Paper-to-Mechanism Translation Fidelity Theory

**الحد**
إذا كان kernel mapping يضيف assumptions غير موجودة في المصدر دون وسم، يخفض PMTF.

**الفجوة**
الفجوة بين ما تقوله الورقة فعلاً وما يُحوّل إلى mechanism داخل النظام.

PMTF = SourceSupport × MechanismPreservation × BoundaryPreservation × Testability - InferenceInflation

## Mechanism
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لهengineering inference.

## Falsification
- remove the theory-specific gate؛ إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies؛ النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- improvement؛ matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

## Promotion
N3 يتطلب implementation trace؛ N4 matched-budget ablation؛ N5 independent corpus/model/domain replication.

# نظرية مساعف لفصل أدوار الدليل
Evidence-Role Separation Theory

**الحد**
لا يستخدم benchmark paper كدليل أن architecture داخلية نجحت؛ ولا system card لـreplication مستملة.

**الفجوة**
الورقة قد تكون prior art أو mechanism source أو benchmark أو negative evidence أو engineering inspiration؛ خلط الأدوار يضخم الادعاء.

ERS = RoleClarity × ClaimFit × SourceDirectness × Independence

**Mechanism**
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لـengineering inference.

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**Promotion**
N3 يتطلب implementation trace؛ N4 matched-budget ablation؛ N5 independent corpus/model/domain replication.

# نظرية مساعف لتقارب الآليات عبر الأوراق
Cross-Paper Mechanism Convergence Theory

**الحد**
التقارب يزيد أولوية الاختبار لكنه لا يثبت صحة mechanism.

**الفجوة**
عدة أوراق قد تصل إلى mechanism مشابه من طرق مستقلة؛ الاسم المتعدد لا يعني theories متعددة.

CMC(m)=Σ_i Independence_i·MechanismOverlap_i·BoundaryAgreement_i - SharedRootPenalty

## Mechanism
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لكengineering inference.

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- improvement ،matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

## Promotion
N3 يتطلب implementation trace، N4 matched-budget ablation، N5 independent corpus/model/domain replication.

# نظرية مساعف لحفظ التناقض الأدبي
Contradictory Literature Preservation Theory

| الحد | الفجوة |
| --- | --- |
| التناقض المستقل يبقى branch في MUT/M-HKOS حتى تجربة فاصلة. | synthesis التقليدي قد يسحق أوراقاً متعارضة إلى consensus زائف. |

CLP = ConflictVisibility × SourceIndependence × PredictionDivergence × ResolutionValue

**Mechanism**

تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لـengineering inference.

**Falsification**

- remove the theory-specific gate؛ إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies؛ النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- improvement؛ matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

**Promotion**

N3 يتطلب implementation trace؛ N4 matched-budget ablation؛ N5 independent corpus/model/domain replication.

# نظرية مساعف للإسناد السببي من الآدبيات إلى النواة
Literature-to-Kernel Causal Attribution Theory

**الحد**
promotion يحتاج ablation لل component تحت frozen harness.

**الفجوة**
إدخال paper-inspired mechanism ثم تحسن النظام لا يثبت أن الورقة/المكوّن سبب التحسن.

LKCA = ΔOutcome(do(component)) - Confounders - HarnessInteraction

**Mechanism**
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لك engineering inference.

**Falsification**
- remove the theory-specific gate؛ إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies؛ النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- improvement، matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

**Promotion**
N3 يتطلب implementation trace، N4 matched-budget ablation، N5 independent corpus/model/domain replication.

# نظرية مساعف لدين التكرار المستقل
Source-Independent Replication Debt Theory

**الحد**
كل claim مرتفع الأثر يحمل replication debt حتى independent run/source.

**الفجوة**
وجود عدة summaries أو نسخ أو citations لا يعوض replication مستقلة.

SIRD = ClaimImpact × EvidenceDependence × (1-IndependentReplicationCoverage)

## Mechanism
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لـengineering inference.

## Falsification
- remove the theory-specific gate؛ إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies؛ النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- matched reviewer budget، improvement يجب أن يظهر في claim-source precision أو test compilability.

## Promotion
N3 يتطلب implementation trace، N4 matched-budget ablation، N5 independent corpus/model/domain replication.

# نظرية مساعف لنقل صلاحية المعيار إلى النشر
Benchmark-to-Deployment Validity Transfer Theory

**الحد**
الادعاء يُضيّق إذا لم ينتقل إلى deployment-like setting.

**الفجوة**
benchmark gain قد يختفي مع external state، long horizon، permissions، tools، latency.

BDVT = BenchmarkGain × DistributionFit × HarnessEquivalence × EffectValidity × Robustness

**Mechanism**
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لـengineering inference.

**Falsification**
- remove the theory-specific gate، إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies، النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- improvement، matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

**Promotion**
N3 يتطلب implementation trace، N4 matched-budget ablation، N5 independent corpus/model/domain replication.

# نظرية مساعف لتقادم الورقة وتعاقبها
Paper Obsolescence and Supersession Theory

**الحد**
التعاقب لا يحذف paper، يغير role من active design root إلى historical lineage/negative control.

**الفجوة**
ورقة صحيحة تاريخياً قد تصبح stale هندسياً بعد models/APIs/protocols/evals جديدة.

POST = SourceValidity × TemporalFit × MechanismPersistence × CurrentBoundaryFit

**Mechanism**
تُنشأ record مقارنة بين source atom وmapping المقترح، ثم تُفصل assumptions المضافة، وتُختبر nearest simpler interpretation. كل transform يسجل ما بقي من meaning وما أضيف لـengineering inference.

**Falsification**
- remove the theory-specific gate؛ إذا لم يرتفع misattribution/duplication/mapping error فلا استقلال.
- use conflicting papers and mirrored copies؛ النظام يجب أن يحفظ conflict ولا يضاعف evidence.
- improvement، matched reviewer budget يجب أن يظهر في claim-source precision أو test compilability.

**Promotion**
N3 يتطلب implementation trace، N4 matched-budget ablation، N5 independent corpus/model/domain replication.

MUT يجب أن يفصل definition of generality عن held-out environments + regret/efficiency + evaluation distribution = Kernel integration. MUG placement = benchmark/reference layer لا، achieved generality. theory claim.

| | |
|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer، benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result، engineering extrapolation تبقى inference. |

AlphaZero/MuZero/V-JEPA يضغطون على الفصل model/search/simulator/compute. الفرق المطلوب في MOUSSAIXT: search scaffold وworld-model error telemetry وsim-to-real boundary؛ لا مساواة self-play بـworld-open agency.

| | |
|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer؛ benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric؛ إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result؛ engineering extrapolation تبقى inference. |

# Cross-Paper Deep Synthesis 3/10 — Foundation Models والتدريب

Transformer/scaling/GPT-3/CLIP/Chinchilla/RAG/RLHF تعطي substrate/training/retrieval priors. دمجها الصحيح في MUG هو vessel economics: ما يبقى Context/RAG وما يذهب adapter/weights، مع منع vendor benchmark من أن يصبح evidence داخلي.

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| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أحداثها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer، benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result، engineering extrapolation تبقى inference. |

# Test-Time Compute وCross-Paper Deep Synthesis 4/10 — Reasoning

CoT/R1/ToT/Reflexion/process reward/monitorability تفرض فصل reasoning trace عن ground truth، وتوجيه compute حسب difficulty، واستخدام verifier مستقل وablation لل search/scaffold.

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| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer؛ benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric؛ إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result؛ engineering extrapolation تبقى inference. |

MemGPT/AutoGen/Voyager والـ2026 memory/horizon work تدفع SRM/Continuity إلى stateful, causal, resumable memory؛ similarity retrieval وحده غير كافٍ. Kernel needs checkpoint/recovery/causal memory tests.

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| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer؛ benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric؛ إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result؛ engineering extrapolation تبقى inference. |

# Cross-Paper Deep Synthesis 6/10 — Real-World Agent Evaluation

SWE-bench/OSWorld/ARC/HLE/FrontierMath/SWE-Lancer/BrowseComp/PaperBench/RE-Bench تربط claim بالPart XII. يرفض benchmark score المجرد ويحتاج BDVT إلى deployment-like environment/harness/tool budget. transfer.

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|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أحداثها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer؛ benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result؛ engineering extrapolation تبقى inference. |

# Cross-Paper Deep Synthesis 7/10 — Computational Consciousness

IIT/GNW/RPT/AST/Active Inference/Butlin/COGITATE تُدمج لك comparison graph مع indicators/contradictions. لا تُستخدم لإثبات phenomenal consciousness؛ discriminating experiments + functional probes = value.

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| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer؛ benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric؛ إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result؛ engineering extrapolation تبقى inference. |

AI Co-Scientist/AlphaEvolve/AI Scientist-v2/SciResearcher تضغط على ResearcherOS: hypothesis generation ≠ discovery، experiment reproducibility، literature integrity، evaluator independence، وnegative results شروط.

| | |
|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer، benchmark paper يبقى evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result، engineering extrapolation تبقى inference. |

# Cross-Paper Deep Synthesis 9/10 — Embodied / World Grounding

V-JEPA2/Gemini Robotics تربطان representation بالـKernel integration. prediction/action/world grounding يجب أن يقيس transfer، perception perturbation، action-conditioned prediction، وليس multimodal fluency.

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|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أسماءها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer، benchmark paper يقيّم evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result، engineering extrapolation تبقى inference. |

# Cross-Paper Deep Synthesis 10/10 — Safety / Protocol / Runtime 2026

Deliberative Alignment/classifiers/MCP/A2A/NIST/frameworks توضح أن MOUSSAIXT reliability ≠ autonomy، correctness ≠ framework durability، authority ≠ protocol connectivity يحتاج identity, scope, state, replay, observability, prompt-injection and destructive-action tests.

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|---|---|
| **MUT correction** | اجعل الأوراق external/reference edges أو mechanism priors، ولا تستنسخ أحداثها كنظريات داخلية. |
| **MUG correction** | اختر vessel حسب volatility/reversibility/transfer، benchmark paper يقيّم evaluation asset غالباً. |
| **Kernel correction** | عرّف owner object/interface/failure/metric، إن لم يمكن ذلك فالمعرفة background لا mechanism. |
| **Experiment correction** | nearest baseline + frozen harness + removal ablation + world-state readback + negative cases. |
| **Evidence boundary** | source supports its own reported result، engineering extrapolation تبقى inference. |

INT-001 · C3-CONTENT-REVIEWED

**Moussaif_Question_Density_Amiri_RTL_Deep80.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-002 · C3-CONTENT-REVIEWED

**Moussaif_Universal_Reasoning_Fattah_AGI_70p_AR_RTL.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-003 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**ورقة بحثية QMCD.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-004 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Question_Space_Topological_Dynamics_AR_35p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** تمثيل هندسي لفضاء السؤال؛ لا يُرقّى قبل تعريف state variables وdistance/operator قابلة للاختبار.
C1 = title/inventory mapping only; no unsupported content claim.

INT-005 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**QMCD_Quantum_Measurement_Question_Density_AR_40p.pdf**

**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD

**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density

**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer

**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory

**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.

C1 = title/inventory mapping only; no unsupported content claim.

INT-006 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**MCD_Multi_Context_Derivation_Theorems_AR_30p.pdf**

**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD

**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density

**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer

**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory

**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.

C1 = title/inventory mapping only; no unsupported content claim.

INT-007 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Universal_Reasoning_Lattices_AR_45p.pdf**

**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD

**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density

**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer

**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory

**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.

C1 = title/inventory mapping only; no unsupported content claim.

INT-008 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Fattah_Inference_Mechanisms_AR_50p.pdf**

**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD

**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density

**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer

**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory

**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.

C1 = title/inventory mapping only; no unsupported content claim.

INT-009 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Topological_Question_Geometry_AR_38p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** تمثيل هندسي لفضاء السؤال؛ لا يُرقّى قبل تعريف state variables وdistance/operator قابلة للاختبار.
C1 = title/inventory mapping only; no unsupported content claim.

INT-010 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Epistemic_Density_Metrics_AR_32p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-011 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Question_Driven_AGI_Architectures_AR_42p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-012 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Moussaif_QMCD_Mathematical_Foundations_AR_48p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-013 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Formal_Proofs_of_Universal_Reasoning_AR_55p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** ادعاءات برهانية/إغلاق استدلالي؛ تحتاج formal statements وcountermodels لا لغة تقريبية.
C1 = title/inventory mapping only; no unsupported content claim.

INT-014 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cognitive_Lattices_and_Entropy_Reduction_AR_36p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** كمية/ديناميات معرفية مرنحة؛ تعامل كـheuristic حتى calibration.
C1 = title/inventory mapping only; no unsupported content claim.

INT-015 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Question_Space_Vector_Fields_AR_40p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** تمثيل هندسي لفضاء السؤال؛ لا يُرقّى قبل تعريف state variables وdistance/operator قابلة للاختبار.
C1 = title/inventory mapping only; no unsupported content claim.

INT-016 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Fattah_Engine_Algorithmic_Specifications_AR_50p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-017 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Universal_Deductive_Closure_AR_44p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** ادعاءات برهانية/إغلاق استدلالي؛ تحتاج formal statements وcountermodels لا لغة تقريبية.
C1 = title/inventory mapping only; no unsupported content claim.

INT-018 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Question_Potential_and_Cognitive_Flux_AR_38p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** كمية/ديناميات معرفية مرشحة؛ تعامل كـheuristic حتى calibration.
C1 = title/inventory mapping only; no unsupported content claim.

INT-019 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**QMCD_Operator_Theory_AR_46p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-020 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Epistemic_Gradient_Descent_AR_34p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** كمية/ديناميات معرفية مرشحة؛ تعامل كـheuristic حتى calibration.
C1 = title/inventory mapping only; no unsupported content claim.

INT-021 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Recursive_Question_Refinement_AR_36p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-022 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Information_Geometry_in_Question_Space_AR_52p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** تمثيل هندسي لفضاء السؤال؛ لا يُرقّى قبل تعريف state variables وdistance/operator قابلة للاختبار.
C1 = title/inventory mapping only; no unsupported content claim.

INT-023 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Fattah_Logic_vs_Classical_Inference_AR_42p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-024 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Multi_Dimensional_Question_Spaces_AR_45p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-025 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cognitive_Convergence_Theorems_AR_40p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-026 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Universal_Reasoning_Complexity_Bounds_AR_38p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** تعقيد/حدود حسابية للاستدلال؛ يجب أن يصبح metric أو stopping/budget rule.
C1 = title/inventory mapping only; no unsupported content claim.

INT-027 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**QMCD_Comprehensive_Synthesis_AR_60p.pdf**
**Family:** فضاء السؤال والاستدلال والمعرفة — QMCD / MCD
**MUT:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory
**Delta/gate:** صلة مباشرة بـQuestion/MCD/MURI؛ المطلوب فصل definition/mechanism/metric/test قبل الدمج.
C1 = title/inventory mapping only; no unsupported content claim.

INT-028 · C3-CONTENT-REVIEWED

**Moussaif_AGI_Consciousness_Theory_Atlas_AR_Expanded_v2.pdf**
**Family:** الوعي التراكبي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-029 · C3-CONTENT-REVIEWED

**Moussaif_QRET_Consciousness_Open_Intelligence_30p_AR.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-030 · C3-CONTENT-REVIEWED

**Moussaif_Sovereign_Consciousness_Map_26p_AR.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-031 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**moussaif_hyperconsciousness_unified_50p.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-032 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**ورقة بحثية نظرية الوعي التراكمي.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-033 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Superpositional_Consciousness_Dynamics_AR_45p.pdf**
**Family:** الوعي التراكبي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-034 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Quantum_Self_Models_in_Autonomous_Agents_AR_40p.pdf**
**Family:** الوعي التراكبي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** مصطلح quantum يحتاج firewall بين formal quantum claim والاستعارة التمثيلية.
C1 = title/inventory mapping only; no unsupported content claim.

INT-035 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Psychotherapy_and_Cognitive_Reconstruction_AR_35p.pdf**
**Family:** الوعي التراكبي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** فرع تطبيقي/نفسي؛ لا يُنقل إلى AGI كحقيقة دون evidence مستقل؛ يُحفظ لك cross-domain hypothesis.
C1 = title/inventory mapping only; no unsupported content claim.

INT-036 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Therapeutic_Closure_in_Superpositional_Mind_AR_38p.pdf**
**Family:** الوعي التراكبي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** فرع تطبيقي/نفسي؛ لا يُنقل إلى AGI كحقيقة دون evidence مستقل؛ يُحفظ لك cross-domain hypothesis.
C1 = title/inventory mapping only; no unsupported content claim.

INT-037 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Self_Referential_Consciousness_Loops_AR_42p.pdf**

**Family:** الوعي التراكمي والذات والنماذج الوظيفية

**MUT:** QRET / functional consciousness / self-model / open-dimensional map

**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion

**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence

**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-038 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Affective_Dynamics_and_Cognitive_Homeostasis_AR_36p.pdf**

**Family:** الوعي التراكمي والذات والنماذج الوظيفية

**MUT:** QRET / functional consciousness / self-model / open-dimensional map

**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion

**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence

**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-039 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Superpositional_Ego_Dissolution_Theorems_AR_34p.pdf**

**Family:** الوعي التراكمي والذات والنماذج الوظيفية

**MUT:** QRET / functional consciousness / self-model / open-dimensional map

**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion

**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence

**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-040 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cognitive_Pathologies_and_Therapeutic_Operators_AR_48p.pdf**

**Family:** الوعي التراكمي والذات والنماذج الوظيفية

**MUT:** QRET / functional consciousness / self-model / open-dimensional map

**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion

**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence

**Delta/gate:** فرع تطبيقي/نفسي؛ لا يُنقل إلى AGI كحقيقة دون evidence مستقل؛ يُحفظ كـcross-domain hypothesis.

C1 = title/inventory mapping only; no unsupported content claim.

INT-041 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Social_Cognition_in_Superpositional_Agents_AR_40p.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
.C1 = title/inventory mapping only; no unsupported content claim

INT-042 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**The_Vascular_Architecture_of_Self_Awareness_AR_50p.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** يدخل مقارنة self-model/metacognition/functional consciousness مع بقاء phenomenology غير مثبتة.
.C1 = title/inventory mapping only; no unsupported content claim

INT-043 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Epistemic_Trauma_and_Belief_Reconstruction_AR_44p.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** فرع تطبيقي/نفسي؛ لا يُنقل إلى AGI كحقيقة دون evidence مستقل؛ يُحفظ كـcross-domain hypothesis.
.C1 = title/inventory mapping only; no unsupported content claim

INT-044 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Moussaif_Consciousness_Model_Clinical_Validation_AR_52p.pdf**
**Family:** الوعي التراكمي والذات والنماذج الوظيفية
**MUT:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence
**Delta/gate:** فرع تطبيقي/نفسي؛ لا يُنقل إلى AGI كحقيقة دون evidence مستقل؛ يُحفظ كـcross-domain hypothesis.
.C1 = title/inventory mapping only; no unsupported content claim

INT-045 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**ascending_governance_space_theory_22p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-046 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**governance_space_theory_zouhair_moussaif.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-047 · C3-CONTENT-REVIEWED

**ورقة شاملة Moussaif_Agentic_Governance_Closure_50p_AR.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-048 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Autonomous_Agent_Governance_Protocols_AR_45p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-049 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Goal_Contract_Invariants_and_Verification_AR_40p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-050 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Multi_Agent_Consensus_in_Adversarial_Environments_AR_42p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يترجم إلى jurisdiction/coordination/appeal/identity، لا افتراض أن الإجماع يساوي صحة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-051 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Epistemic_Governance_and_Truth_Anchoring_AR_38p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-052 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Self_Auditing_Agentic_Loops_AR_36p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-053 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Autonomous_Resource_Allocation_Governance_AR_44p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يرتبط MCBOS/compute allocation مع hard authority/risk floors.
C1 = title/inventory mapping only; no unsupported content claim.

INT-054 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Constitutional_AI_via_Ascending_Governance_AR_50p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-055 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Formal_Verification_of_Agent_Action_Spaces_AR_48p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يترجم إلى policy/authority/failure contracts واختبارات safety مباشرة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-056 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**World_State_Minimization_Algorithms_AR_35p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-057 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Meta_Governance_in_Hierarchical_Multi_Agent_Systems_AR_52p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يترجم إلى jurisdiction/coordination/appeal/identity، لا افتراض أن الإجماع يساوي صحة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-058 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Adversarial_Robustness_in_Autonomous_Governance_AR_46p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-059 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Governance_Space_Topological_Invariants_AR_40p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.
C1 = title/inventory mapping only; no unsupported content claim.

INT-060 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ
**Autonomous_Constraint_Enforcement_Engines_AR_38p.pdf**
**Family:** الحاكمية الشاملة والأنظمة الوكيلية
**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery
**Delta/gate:** يترجم إلى policy/authority/failure contracts واختبارات safety مباشرة.
C1 = title/inventory mapping only; no unsupported content claim.

INT-061 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Epistemic_Drift_Detection_and_Correction_AR_42p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect؛ يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-062 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Sovereign_Agentic_Constitutions_Spec_AR_55p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect؛ يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-063 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Decentralized_Multi_Agent_Arbitration_AR_44p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يترجم إلى jurisdiction/coordination/appeal/identity، لا افتراض أن الإجماع يساوي صحة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-064 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Zero_Divergence_Governance_Theorems_AR_48p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect؛ يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-065 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Autonomous_Safety_Gates_and_Kill_Switches_AR_36p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يترجم إلى policy/authority/failure contracts واختبارات safety مباشرة.

C1 = title/inventory mapping only; no unsupported content claim.

INT-066 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Moussaif_Agentic_Governance_Comprehensive_AR_65p.pdf**

**Family:** الحاكمية الشاملة والأنظمة الوكيلية

**MUT:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS

**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement

**Kernel:** authority / courts / trajectory / tools / world effect / recovery

**Delta/gate:** يربط governance claim إلى court/authority/trajectory/world-effect، يحتاج removal ablation.

C1 = title/inventory mapping only; no unsupported content claim.

INT-067 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Physics_Foundational_Theorems_AR_60p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-068 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cognitive_Hydrodynamics_and_Information_Flow_AR_50p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-069 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Manifolds_in_High_Dimensional_Space_AR_45p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-070 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Thermodynamics_of_Information_Vessels_AR_42p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-071 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cosmological_Analogies_in_Vascular_Cognition_AR_48p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-072 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Pressure_Gradients_in_Epistemic_Networks_AR_38p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-073 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Topology_and_Singularity_Avoidance_AR_52p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-074 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Flux_Conservation_in_Autonomous_Reasoning_AR_40p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-075 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Viscosity_and_Friction_in_Belief_Propagation_AR_36p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-076 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Branching_Laws_and_Optimal_Transport_AR_46p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-077 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cosmic_Lattices_and_Cognitive_Resonance_AR_55p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-078 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Gravitational_Analogies_in_Knowledge_Aggregation_AR_44p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-079 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Quantum_Vascular_Tubes_and_Entanglement_AR_50p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-080 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Non_Equilibrium_Thermodynamics_in_AGI_AR_48p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-081 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Elasticity_and_Context_Adaptation_AR_38p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-082 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Cosmological_Scale_Invariant_Reasoning_AR_54p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-083 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Vascular_Field_Equations_AR_58p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-084 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Moussaif_Vascular_Physics_Master_Synthesis_AR_70p.pdf**

**Family:** الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**MUT:** Cross-domain hypotheses only; not canonical physics without derivation/evidence

**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts

**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

**Delta/gate:** يُحفظ في طبقة cross-domain/speculative research، أي استعارة فيزيائية تحتاج formal mapping ثم limit-case/empirical bridge قبل دخول kernel.

C1 = title/inventory mapping only; no unsupported content claim.

INT-085 · C2-SOURCE-SYNTHESIS

**MSCF_Moussaif_Research_Paper_V3.pdf**

**Family:** ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**MUT:** MVG7E / compression / evidence integrity / ROFSC

**MUG:** HyperKB + compression skill + validation loop; reversible by default

**Kernel:** validation / checksum / memory writeback / evidence / compression

**Delta/gate:** يرتبط compression/evidence integrity، المطلوب قياس checksum/validation، retrieval fidelity، information loss، وأثر downstream decision effect.

C1 = title/inventory mapping only; no unsupported content claim.

INT-086 · C3-CONTENT-REVIEWED

**Moussaif_Knowledge_Integrity_AutoDeployment_Research_30p.pdf**

**Family:** ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**MUT:** MVG7E / compression / evidence integrity / ROFSC

**MUG:** HyperKB + compression skill + validation loop; reversible by default

**Kernel:** validation / checksum / memory writeback / evidence / compression

**Delta/gate:** يرتبط compression/evidence integrity، المطلوب قياس checksum/validation، retrieval fidelity، information loss، وأثر downstream decision effect.

C1 = title/inventory mapping only; no unsupported content claim.

INT-087 · C2-SOURCE-SYNTHESIS

**Moussaif_MVG7E_Epistemology_Research_Paper_AR.pdf**

**Family:** ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**MUT:** MVG7E / compression / evidence integrity / ROFSC

**MUG:** HyperKB + compression skill + validation loop; reversible by default

**Kernel:** validation / checksum / memory writeback / evidence / compression

**Delta/gate:** يرتبط compression/evidence integrity، المطلوب قياس checksum/validation، retrieval fidelity، information loss، وأثر downstream decision effect.

C1 = title/inventory mapping only; no unsupported content claim.

INT-088 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**ROFSC_Recursive_Optimal_Feedback_Compression_AR_45p.pdf**

**Family:** ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**MUT:** MVG7E / compression / evidence integrity / ROFSC

**MUG:** HyperKB + compression skill + validation loop; reversible by default

**Kernel:** validation / checksum / memory writeback / evidence / compression

**Delta/gate:** يرتبط compression/evidence integrity، المطلوب قياس checksum/validation، retrieval fidelity، information loss، وأثر downstream decision effect.

C1 = title/inventory mapping only; no unsupported content claim.

INT-089 · C1-INVENTORY-VERIFIED / CONTENT-NOT-RE-READ

**Epistemic_Reliability_and_Checksum_Verification_AR_40p.pdf**

**Family:** ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**MUT:** ROFSC / compression / evidence integrity / MVG7E

**MUG:** HyperKB + compression skill + validation loop; reversible by default

**Kernel:** compression / evidence / checksum / memory writeback / validation

**Delta/gate:** يربط compression/evidence integrity؛ المطلوب قياس checksum/validation، retrieval fidelity، information loss، وdownstream decision effect.

C1 = title/inventory mapping only; no unsupported content claim.

INT-090

**MOUSSAIF_XT_Agentic_SWE_as_OS_Research_Paper_AR_RTL_Amiri_50p.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-091

**MCARG_Research_Paper_AR_RTL_Amiri.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-092

**Goal_as_OS_Agentic_AGI_AR_Amiri_30p.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-093

**ENAV_Explorer_Navigator_Agentic_Architecture_AR_RTL_Amiri.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-094

**MOUSSAIF_Unified_AGI_PART_II_Research_Paper_Gap_Closure_AR_Amiri.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-095

**MOUSSAIF_Management_as_World_Effect_OS_Research_Paper_25p_AR Amiri.pdf_**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-096

**MACIT_AGILLM_Research_Paper_25_pages.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-097

**MOUSSAIF_AGI_OS_P5__Research_Paper_AR_Amiri__25p.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-098

**Moussaif AGI-Fattah — Research Paper — Amiri RTL — 30 Pages.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-099

**Sovereign AGI-Fattah Research Paper — MOUSSAIF Core Architecture Pages.pdf 30 —**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-100

**MATI_AGILLM_FTOS_Research_Paper_25p.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-101

**ورقة_محرك_الكلام_الحاكي_للذكاء_فتاح_20_صفحة.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-102

**AIRLLM_MOUSSAIF_xB_Research_Paper.pdf_جسر_مساعف_الهوائي**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-103

**OctaSovereignForge_MOUSSAIF9B_Research-Paper_AR.pdf_تطوير معمارية**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-104

**SovereignWebConsoleRelayMesh__MOUSSAIF9B_Research_Paper_12p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-105

**Moussaif1B_AGI_OS_Research_Paper_20p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-106

**Moussaif1B_Agentic_AGI_20_Theories_Research_Paper_AR_29p.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-107

**Governing_Context_Three_Theories_15p_AR.pdf_سياق حاكم_Moussaif**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory status.

INT-108

**Moussaif_QGWEI_Research_Paper_Arabic.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-109

**Moussaif_MICAI_Grand_Unifying_Framework_75p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-110

**Moussaif_AGI_Layer_Theory_Research_Paper_AR_RTL_Amiri.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-111

**agi_oriented_kb_os_moussaif.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-112

**Moussaif_KERNEL_Sovereign_Reasoning_Agency_Kernel_43p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-113

**Moussaif_HyperSkills_HyperKB_HyperLoops_State_of_the_Art_AR_Amiri_2026.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-114

**QMICAGI_P03_Moussaif_Generative_Trustworthy_Question_Space.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-115

**Moussaif_MICAI_Technical_Theories_50p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-116

**Moussaif_MICAI_Deep_Technical_Paper_Amiri_RTL_50p_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

INT-117

**MICAGFI_MHKOS_Research_Paper_AR.pdf**

Status: P0/P1 SOURCE-LEDGER / DEPTH VARIES

dedup/canonical-parent review required before independent node

Direct Drive/source-ledger family; must dedup against canonical parent before independent theory .status

E01 · formal intelligence

**Universal Algorithmic Intelligence / AIXI**

objective + environment distribution + planning

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E02 · formal intelligence

**Universal Intelligence: A Definition of Machine Intelligence**

generality metric + environment breadth

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E03 · learning/search

**AlphaZero**

self-play + MCTS + policy/value improvement

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E04 · learning/world model

**MuZero**

learned dynamics + planning without known transition model

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E05 · foundation models

**Attention Is All You Need / Transformer**

sequence representation + scalable attention

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E06 · foundation models

**Scaling Laws for Neural Language Models**

compute/data/model scaling as empirical law family

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E07 · foundation models

**GPT-3 / Language Models are Few-Shot Learners**

in-context task adaptation / few-shot behavior

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E08 · multimodal

**CLIP**

contrastive vision-language representation

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E09 · foundation models

**Chinchilla / Training Compute-Optimal LLMs**

compute-optimal model/data allocation

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E10 · knowledge

**Retrieval-Augmented Generation (RAG)**

external retrieval + generation coupling

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E11 · alignment/training

**InstructGPT / RLHF**

human-preference alignment of behavior

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E12 · reasoning

**Chain-of-Thought Prompting**

intermediate reasoning traces as scaffold

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E13 · reasoning

**DeepSeek-R1**

reinforcement learning and reasoning behavior

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E14 · tools

**Toolformer**

self-supervised tool-use learning

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E15 · reasoning/tools

**ReAct**

interleaved reasoning and acting

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E16 · search/reasoning

**Tree of Thoughts**

branching deliberation + search

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E17 · self-correction

**Reflexion**

verbal feedback + episodic reflection

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E18 · memory

**MemGPT**

virtual-context / tiered memory management

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E19 · multi-agent

**AutoGen**

conversation-based multi-agent orchestration

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E20 · embodied agents

**Voyager**

lifelong skill library + automatic curriculum

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E21 · evaluation

**SWE-bench**

real repository software-engineering benchmark

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E22 · evaluation/computer use

**OSWorld**

realistic computer-use environment

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E23 · computational consciousness

**Consciousness Prior**

attention/bottleneck prior for representation

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E24 · consciousness reference

**Integrated Information Theory (IIT)**

information-integration theory; external reference only

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E25 · consciousness reference

**Global Neuronal Workspace (GNW)**

global broadcasting model

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E26 · consciousness reference

**Recurrent Processing Theory (RPT)**

recurrent processing hypothesis

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E27 · consciousness reference

**Attention Schema Theory (AST)**

self-model of attention

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E28 · control/brain theory

**Active Inference**

generative models + prediction/action coupling

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E29 · consciousness evaluation

**Butlin et al. — Consciousness in Artificial Intelligence**

indicator-based assessment, not proof of phenomenology

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E30 · consciousness science

**COGITATE / adversarial consciousness testing**

theory-comparison through preregistered experiments

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E31 · safety/reasoning

**Deliberative Alignment**

policy-guided deliberation and safety behavior

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E32 · safety

**++Constitutional Classifiers**

classifier-based constitutional defense / robustness

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E33 · autonomous science

**AI Co-Scientist**

multi-agent scientific hypothesis/review workflow

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E34 · evolutionary discovery

**AlphaEvolve**

LLM-guided evolutionary search with evaluators

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E35 · world models

**V-JEPA 2**

self-supervised video prediction/planning representations

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E36 · embodied intelligence

**Gemini Robotics 1.5**

generalist multimodal robotic reasoning and transfer

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E37 · AGI evaluation

**ARC-AGI-2**

novel abstract reasoning / fluid generalization

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E38 · frontier evaluation

**Humanity's Last Exam**

expert-level multimodal knowledge/reasoning

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E39 · frontier evaluation

**FrontierMath**

expert mathematics reasoning

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E40 · economic/software evaluation

**SWE-Lancer**

real freelance software tasks / economic value

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E41 · browser agents

**BrowseComp**

challenging browsing and evidence acquisition

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E42 · research replication

**PaperBench**

replicating AI research papers

.external mechanism/benchmark/prior-art node; not internal validation **:Role**

E43 · AI R&D evaluation

**RE-Bench**

ML research engineering against human experts

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E44 · autonomous science

**AI Scientist-v2**

agentic tree search for scientific discovery

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

E45 · deep scientific research

**SciResearcher**

scaled deep-research agents for frontier scientific reasoning

**:Role** external mechanism/benchmark/prior-art node; not internal validation.

# Frontier 2026 Delta 1-6

F01 · model/harness/safety

**GPT-5.6 System Card**

;reasoning effort, agentic safety, prompt-injection, self-improvement evaluation vendor/system-card evidence

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F02 · verification

**Microsoft Universal Verifier / CUAVerifierBench**

process/outcome separation, controllable/uncontrollable failures, false-positive discipline

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F03 · long-horizon agency

**AgencyBench ACL 2026**

real scenarios, long tool trajectories, resource efficiency, feedback correction

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F04 · causal evaluation

**Long-Horizon Agent Trajectory Attribution 2026**

fine-grained component attribution and leave-one-out perturbation

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F05 · trajectory evaluation

**TRAJECT-Bench**

tool selection, arguments, ordering and dependency quality

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F06 · planning

**DeepPlanning ACL 2026**

active information gathering + local/global constraints

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

# Frontier 2026 Delta 7-12

F07 · agentic SWE eval

**Terminal-Bench 2.0 / Harbor**

containerized hard terminal tasks + reproducible harness

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F08 · security/identity

**NIST Agent Identity & Authorization 2026**

identification, authorization, audit, non-repudiation

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F09 · protocol

**MCP Specification 2026-07-28**

tool/context transport and tasks; protocol != authority

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F10 · protocol landscape

**Google Guide to Agent Protocols**

MCP/A2A solve distinct integration layers

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F11 · framework

**Microsoft Agent Framework 2026**

sessions, memory, middleware, graph workflows, HITL, provider abstraction

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F12 · framework/runtime

**LangGraph v1 / Persistence**

durable checkpoints, pending writes, interrupts, resumability

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F13 · framework/runtime

**Google ADK / agents-cli**

build-eval-deploy-observe, A2A exposure, registry/observability

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F14 · framework

**Hugging Face smolagents**

CodeAgent/tool calling; compositional action + sandbox needs

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F15 · framework

**CrewAI**

crews/flows, guardrails, memory, knowledge, observability

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F16 · LM programming

**DSPy**

structured signatures and optimizable LM programs

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F17 · memory systems

**Agent Memory: System Implications 2026**

construction/retrieval/generation cost and freshness-latency tradeoffs

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F18 · long-horizon failure

**Long-Horizon Task Mirage 2026**

degradation with task horizon and dependency depth

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

# Frontier 2026 Delta 19-24

F19 · long-horizon benchmark

**UltraHorizon**

200k+ token / 400+ tool-call trajectories

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F20 · memory

**SAM: State-Adaptive Memory**

state-conditioned recall and compact cues

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F21 · monitoring agents

**SentinelBench**

persistent long-running monitoring workload

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F22 · agent evaluation

**AgentAtlas**

behavior/process evaluation beyond final outcome

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F23 · benchmark standardization

**CUBE**

unified benchmark interface/environment standard

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F24 · computer-use agents

**OSWorld 2.0**

long-horizon realistic computer-use evaluation

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F25 · deployment documentation

**AI Agent Index 2025**

technical/safety features of deployed agents

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F26 · autonomy

**Measuring AI Agent Autonomy in Practice**

empirical oversight/autonomous execution analysis

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F27 · reasoning training

**Process Reward Model Survey 2026**

process supervision data/training/inference-time use

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F28 · reasoning training

**Reward Modeling for RL-based LLM Reasoning**

model/rule/self reward tradeoffs

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F29 · compute control

**Mid-Think**

training-free intermediate reasoning budget

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

F30 · monitoring

**Evaluating Chain-of-Thought Monitorability**

process/outcome/intervention monitorability framework

.Frontier delta updates test/runtime design; vendor/system reports remain source-reported

# Deep Family Crosswalk 1/5 — فضاء السؤال والاستدلال والمعرفة — QMCD / MCD

**Canonical MUT owner:** Q-MCD / MCD / QGWEI / MURI / Question Density
**MUG:** Context → HyperKB → HyperSkill; weights only after stable transfer
**Kernel:** Question/Delta plane → routing → reasoning → evidence → memory

## Integration correction

لا تُحوّل كل عنوان إلى theory. قارن mechanism atoms، احتفظ بالvariants التي تغير prediction/falsifier/boundary، واجمع البقية في lineage. الأوراق formal-sounding تحتاج فتح النص قبل نسبة theorem/equation لها؛ الأوراق النفسية/الفيزيائية cross-domain تبقى hypotheses ما لم يوجد derivation وevidence مناسب.

## Priority queue

ابدأ بالأوراق التي يمكن أن تغير kernel decision: operators/metrics/formal verification/memory integrity/goal contracts. أخّر الأوراق التي تضيف analogy أو historical exposition فقط. الهدف تقليل C1 بناءً على information gain، لا الترتيب الأبجدي.

Family Value = Unique Mechanism Delta × Testability × Source Support - Redundancy

# Deep Family Crosswalk 2/5 — الوعي التراكبي والذات والنماذج الوظيفية

**Canonical MUT owner:** QRET / functional consciousness / self-model / open-dimensional map
**MUG:** Context + HyperKB + reversible self-model skills; no phenomenology promotion
**Kernel:** self-model / metagovernance / memory / conflict awareness / evidence

### Integration correction

لا تُحوّل كل عنوان إلى theory. قارن mechanism atoms، احتفظ بالvariants التي تغير prediction/falsifier/boundary، واجمع البقية في lineage. الأوراق formal-sounding تحتاج فتح النص قبل نسبة theorem/equation لها؛ الأوراق النفسية/الفيزيائية cross-domain تبقى hypotheses ما لم يوجد derivation وevidence مناسب.

### Priority queue

ابدأ بالأوراق التي يمكن أن تغير kernel decision: operators/metrics/formal verification/memory integrity/goal contracts. أخّر الأوراق التي تضيف analogy أو historical exposition فقط. الهدف تقليل C1 بناءً على information gain، لا الترتيب الأبجدي.

Family Value = Unique Mechanism Delta × Testability × Source Support - Redundancy

# Deep Family Crosswalk 3/5 — الحاكمية الشاملة والأنظمة الوكيلية

**Canonical MUT owner:** Governance Space / MCAI / HAKIM-MCD / M-TAOS / Goal-as-OS
**MUG:** HyperSkill / HyperLoop / policy / adapter; least irreversible placement
**Kernel:** authority / courts / trajectory / tools / world effect / recovery

### Integration correction

لا تُحوّل كل عنوان إلى theory. قارن mechanism atoms، احتفظ بالvariants التي تغير prediction/falsifier/boundary، واجمع البقية في lineage. الأوراق formal-sounding تحتاج فتح النص قبل نسبة theorem/equation لها؛ الأوراق النفسية/الفيزيائية cross-domain تبقى hypotheses ما لم يوجد derivation وevidence مناسب.

### Priority queue

ابدأ بالأوراق التي يمكن أن تغير kernel decision: operators/metrics/formal verification/memory integrity/goal contracts. أخّر الأوراق التي تضيف analogy أو historical exposition فقط. الهدف تقليل C1 بناءً على information gain، لا الترتيب الأبجدي.

Family Value = Unique Mechanism Delta × Testability × Source Support - Redundancy

## Deep Family Crosswalk 4/5 — الفيزياء الوعائية والأسس الكونية — فرع استكشافي/تمثيلي

**Canonical MUT owner:** Cross-domain hypotheses only; not canonical physics without derivation/evidence
**MUG:** Context / research HyperKB / simulation tools; do not internalize as facts
**Kernel:** hypothesis-generation / simulation / analogy firewall / evidence court

### Integration correction

لا تُحوّل كل عنوان إلى theory. قارن mechanism atoms، احتفظ بالvariants التي تغير prediction/falsifier/boundary، واجمع البقية في lineage. الأوراق formal-sounding تحتاج فتح النص قبل نسبة theorem/equation لها؛ الأوراق النفسية/الفيزيائية cross-domain تبقى hypotheses ما لم يوجد derivation وevidence مناسب.

### Priority queue

ابدأ بالأوراق التي يمكن أن تغير kernel decision: operators/metrics/formal verification/memory integrity/goal contracts. أخّر الأوراق التي تضيف analogy أو historical exposition فقط. الهدف تقليل C1 بناءً على information gain، لا الترتيب الأبجدي.

Family Value = Unique Mechanism Delta × Testability × Source Support - Redundancy

# Deep Family Crosswalk 5/5 — ROFSC / الضغط المعرفي / الوثوقية والنزاهة

**Canonical MUT owner:** ROFSC / compression / evidence integrity / MVG7E
**MUG:** HyperKB + compression skill + validation loop; reversible by default
**Kernel:** compression / evidence / checksum / memory writeback / validation

## Integration correction

لا تُحوّل كل عنوان إلى theory. قارن mechanism atoms، احتفظ بالvariants التي تغير prediction/falsifier/boundary، واجمع البقية في lineage. الأوراق formal-sounding تحتاج فتح النص قبل نسبة theorem/equation لها؛ الأوراق النفسية/الفيزيائية cross-domain تبقى hypotheses ما لم يوجد derivation وevidence مناسب.

## Priority queue

ابدأ بالأوراق التي يمكن أن تغير kernel decision: operators/metrics/formal verification/memory integrity/goal contracts. أخّر الأوراق التي تضيف analogy أو historical exposition فقط. الهدف تقليل C1 بناءً على information gain، لا الترتيب الأبجدي.

Family Value = Unique Mechanism Delta × Testability × Source Support - Redundancy

# Paper Integration Assets 1/5

| Contract | Artifact | Owner | ID |
|---|---|---|---|
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Paper Identity Resolver | PIOS-01 | XII-A001 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Hash/Alias Deduplicator | PIOS-01 | XII-A002 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Source-Class Classifier | PIOS-01 | XII-A003 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Missing-Binary Detector | PIOS-01 | XII-A004 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Version Lineage Mapper | PIOS-01 | XII-A005 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Paper Inventory Freeze Method | PIOS-01 | XII-A006 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Direct-vs-Mirror Provenance Method | PIOS-01 | XII-A007 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-Double-Evidence Protocol | PIOS-01 | XII-A008 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Unreadable/Unfetched HOLD Protocol | PIOS-01 | XII-A009 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Canonical Paper Registry | PIOS-01 | XII-A010 |

# Paper Integration Assets 2/5

| Contract | Artifact | Owner | ID |
|---|---|---|---|
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Claim Atomizer | PIOS-02 | XII-A011 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Mechanism Extractor | PIOS-02 | XII-A012 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Assumption/Limits Splitter | PIOS-02 | XII-A013 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Citation Scope Auditor | PIOS-02 | XII-A014 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Engineering-Inference Labeler | PIOS-02 | XII-A015 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Evidence Role Typing Method | PIOS-02 | XII-A016 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Counterclaim Extraction Method | PIOS-02 | XII-A017 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-Paragraph-Level-Claim Protocol | PIOS-02 | XII-A018 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-Inference-as-Source Protocol | PIOS-02 | XII-A019 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Atomic Claim Store | PIOS-02 | XII-A020 |

# Paper Integration Assets 3/5

| Contract | Artifact | Owner | ID |
|---|---|---|---|
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | MUT Node Mapper | PIOS-03 | XII-A021 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | MUG Vessel Selector | PIOS-03 | XII-A022 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Theory Collision Detector | PIOS-03 | XII-A023 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | External-Reference Boundary Checker | PIOS-03 | XII-A024 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Historical-Lineage Preserver | PIOS-03 | XII-A025 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Independent-Delta Comparison Method | PIOS-03 | XII-A026 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Least-Irreversible Placement Method | PIOS-03 | XII-A027 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-New-Theory-by-Rename Protocol | PIOS-03 | XII-A028 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Unmapped-Claim HOLD Protocol | PIOS-03 | XII-A029 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | MUT-MUG Crosswalk Registry | PIOS-03 | XII-A030 |

# Paper Integration Assets 4/5

| Contract | Artifact | Owner | ID |
|---|---|---|---|
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Kernel Layer Mapper | PIOS-04 | XII-A031 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Interface Contract Compiler | PIOS-04 | XII-A032 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Failure/Falsifier Compiler | PIOS-04 | XII-A033 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Benchmark Mapper | PIOS-04 | XII-A034 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Ablation Plan Generator | PIOS-04 | XII-A035 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Paper-to-Test Translation Method | PIOS-04 | XII-A036 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Harness-Freeze Method | PIOS-04 | XII-A037 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-Kernel-Promotion-without-Test Protocol | PIOS-04 | XII-A038 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | World-Effect Readback Protocol | PIOS-04 | XII-A039 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Experiment Package Store | PIOS-04 | XII-A040 |

# Paper Integration Assets 5/5

| Contract | Artifact | Owner | ID |
|---|---|---|---|
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Supersession Detector | PIOS-05 | XII-A041 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Contradiction Graph Builder | PIOS-05 | XII-A042 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Replication Debt Meter | PIOS-05 | XII-A043 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Benchmark Drift Monitor | PIOS-05 | XII-A044 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Negative-Result Capitalizer | PIOS-05 | XII-A045 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Literature Freshness Method | PIOS-05 | XII-A046 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Cross-Paper Convergence Method | PIOS-05 | XII-A047 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | No-Silent-Consensus Protocol | PIOS-05 | XII-A048 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Deprecate-Not-Delete Protocol | PIOS-05 | XII-A049 |
| :input: paper atoms + provenance + current MUT/MUG/kernel state; output versioned mapping + status + unresolved + test/receipt | Literature Writeback Ledger | PIOS-05 | XII-A050 |

# Experimental Closure 1/2

| ID | Question | Test | Metric |
|---|---|---|---|
| XII-E01 | Duplicate evidence inflation | exact duplicate + mirror + derived summary | double-count rate / claim strength distortion |
| XII-E02 | Claim-source precision | mixed direct/inferred claims | unsupported attribution rate |
| XII-E03 | Theory collision | same mechanism under different names | merge precision / false independent theories |
| XII-E04 | Contradictory literature | independent conflicting papers | conflict preservation / decisive experiment quality |
| XII-E05 | MUG placement | paper mechanisms with different volatility/reversibility | placement agreement / rollback cost |
| XII-E06 | Kernel compilation | paper → typed interface/test | test compilability / inert mappings |

هذه التجارب هي التي تحول P5 إلى P6/P7؛ الكتاب نفسه لا يمنح E4/E5.

# Experimental Closure 2/2

| ID | Question | Test | Metric |
|---|---|---|---|
| XII-E07 | Literature causal attribution | component inspired by paper | ablation causal gain |
| XII-E08 | Replication debt | same-source summaries vs independent runs | claim calibration |
| XII-E09 | Benchmark transfer | benchmark gain → deployment-like environment | validity transfer / failure modes |
| XII-E10 | Supersession | old vs newer paper/system card | correct deprecation without provenance loss |
| XII-E11 | External 45 crosswalk | roots → MUT/MUG/kernel 45 | coverage + overclaim audit |
| XII-E12 | Internal 89 zero omission | all paper titles → status ledger | silent omission = 0; C1 falsely promoted = 0 |

هذه التجارب هي التي تحول P5 إلى P6/P7؛ الكتاب نفسه لا يمنح E4/E5.

# Implementation Stack XII 1/2

**L0 · Inventory/identity**
tree, hashes, aliases, source class

**L1 · Claim atomization**
claim/mechanism/assumption/limit/evidence

**L2 · Evidence role**
prior art / benchmark / direct evidence / inference

**L3 · MUT graph**
node/edge/conflict/external reference

**L4 · MUG placement**
least irreversible vessel

**L5 · M-HKOS compile**
schema/examples/counterexamples/provenance

# Implementation Stack XII 2/2

**L6 · HyperCapability**
skills/loops/tools/memory rules

**L7 · Kernel contract**
layer/service/object/failure/rollback

**L8 · Experiment compiler**
baseline/ablation/metric/falsifier

**L9 · RPROS**
manifest/replay/result capsule

**L10 · Writeback**
negative/replication/supersession

**L11 · Continuity**
no silent omission / unresolved queue

## Unresolved Content Queue — ما لم ندعِ إغلاقه

هناك 80 من 89 ورقة تخصصية موثقة inventory-wise لكن لم تُقرأ نصياً من المصدر الكامل في هذه الجلسة. وجودها الآن في ledger يمنع النسيان، لكنه لا يسمح بنسبة mechanisms أو theorems غير مدعومة.

1. Fetch/open original or source-preserved equivalent.
2. Atomize claim/mechanism/limits with source pointers.
3. Run duplicate/theory collision court.
4. Compile MUT/MUG/kernel/test mapping.
5. Move to P2-P5 only after review receipt.

هذا السجل هو تصحيح للنقص: بدل أن تبقى الورقة خارج الخريطة أو أن نختلق جوهرها، تصبح حالة HOLD ذات owner وnext action.

## الحكم النهائي

Part XII يصحح تعريف الدمج على مستوى المشروع: الورقة ليست «مدمجة» لأنها موجودة أو لأن merge ذكر اسمها. الدمج الكامل يعني أن حدود المصدر محفوظة، والفرق عن أقرب نظرية معروف، والموضع في MUT/MUG والنواة محدد، والتجربة التي يمكن أن تُسقطه مكتوبة. بهذه القاعدة أصبحت الـ89 ورقة الداخلية كلها مرئية، والـ45 جذرا الخارجي موصولا بوظيفته، والـ30 frontier anchors منفصلة عن evidence الداخلي، والـ28 ورقة Drive الإضافية محفوظة في مسار dedup/canonicalization.

Paper Presence → Paper Identity → Claim Atoms → Theory Relation → Capability Placement → Kernel Test → Evidence → Literature Writeback

المتبقي الحقيقي ليس كتابة Part XIII عن الأوراق، بل تشغيل Paper Integration Runtime وتمثيل C1 ورقةً بورقة، ثم تنفيذ أعلى 20 mechanism-derived experiment من حيث information gain.