

# KLT2 PIX@PEAKS PROOF LEDGER VOLUME I / VOLUME II RU/EN v157-v159

Курпишев Иван Борисович / Ivan Borisovich Kurpishev · Independent Researcher, Kaliningrad  
Build: KLT2\_PIX\_PEAKS\_PROOF\_LEDGER\_VOLUME1\_VOLUME2\_RU\_EN\_v157\_v159  
Status: proof\_ledger\_volume1\_volume2\_draft\_without\_truth\_status

## Control formula

```
proof-ledger schema  
+ proof dependency graph  
+ Volume I chapters 4-5  
+ Volume II projective/packet geometry start  
!= truth-status
```

This build adds a proof-ledger layer. The point is refreshingly unfashionable: every theorem-like sentence must carry source, D, Dom, proof object, dependencies, morphism gates and blockers. A theorem candidate is not promoted by enthusiasm, typography or a heroic filename.

Metric	Value
truth_status_promoted_count	0
publication_verified_status_count	0
global_Fano_carriers	0
SQLite integrity	ok
standalone HTML preview export	disabled

# 1. v157 - Proof-ledger schema and dependency graph

ProofLedger is defined as:

ProofLedger = (Claim, Source, Dom, D, ProofObject, Dependencies, Morphisms, Blockers, Status)

Table	Purpose	Required fields
claim_node	stores claim id, text unit, volume, chapter and claim class	claim_id, source_id, volume, chapter, claim_class, text_hash
proof_object	stores explicit proof object or proof sketch with proof_status	proof_id, claim_id, proof_status, method, source_anchor
dependency_edge	directed proof dependency graph between claims, lemmas, definitions and theorems	edge_id, from_node, to_node, dependency_type, status
source_anchor	ties proof claim to source file/page/section/package hash	anchor_id, source_id, locator, hash, D_state
dom_d_gate	D/Dom admissibility gate for each proof claim	claim_id, Dom_state, D_state, blocker_state
morphism_gate	records required morphisms: Fano, RBD, NAPG, cross-domain, status-preservation	morphism_id, domain_from, domain_to, preserves, status
blocker_card	status-preserving blocker ledger	blocker_id, claim_id, blocker_type, next_action
status_ledger	final status mapping for claims and proof objects	object_id, object_type, status, truth_status, publication_verified_status

The first dependency graph contains definition-core nodes, theorem candidates, formal audit theorem nodes and source references. A missing edge is not ignored. It becomes a blocker. Primitive, yet apparently necessary.

# 2. v158 - Volume I chapters 4-5

Chapter 4 opens FOS as Reper-limit:

FOS =  $\lim_{\tau \in T} \text{Prod}_{\{c \in \text{Ob}(C_{\tau})\}} (R_c, I_c, U_c; D_c)$

This draft separates the definition of a Reper-admissible C@C family, the transition maps, the inverse-limit object and reduction of local worlds from FOS.

Chapter 5 opens Desargues-Kurpishev and Fano barrier. The Desargues-Kurpishev theorem remains a theorem-candidate until the incidence-preserving morphism and D/Dom proof object are written. The Fano barrier is a formal audit rule under PILOT-style axioms:

local Fano-like carrier := global Fano carrier without compatible identification morphism

### 3. v159 - Volume II draft start

Volume II starts as Projective and Packet Geometry. The first editorial rule is strict prior-art separation: classical projective geometry supplies cross-ratio, harmonicity, projectivization, incidence and the classical Fano plane. The KLT contribution is the source-bound Reper/RBD audit layer and packet bridge.

classical projective object -> source-bound unit ->  $\text{Rep}(R,I,U;D)$  -> status ledger

Volume	Chapter	Title	Status
Volume I	4	FOS as Reper-limit	draft_start_v158
Volume I	5	Desargues-Kurpishev and Fano barrier	draft_start_v158
Volume II	0	Projective and Packet Geometry: entry map	draft_start_v159
Volume II	1	Cross-ratio, harmonicity and Reper projective layer	draft_start_v159
Volume II	2	Packet incidence and Hodge geometry bridge	draft_start_v159

Volume II then starts the bridge to packet incidence and Hodge-compatible Pack objects, keeping notation discipline and NAPG admissibility gates.

### 4. Proof nodes and morphism gates

Node	Label	Class	Status
DEF-CC-001	C@C event@state ontology	definition_core	definition_core
DEF-REP-001	$\text{Rep}(R,I,U;D)$	definition_core	definition_core
DEF-LAMBDA-001	lambda truth and delta_truth	formal_core	formal_core_not_verified
THM-V156-001	D/Dom non-promotion theorem	formal_theorem_under_axioms	formal_under_textwork_axioms
DEF-FOS-001	FOS as Reper inverse-limit	definition_core	draft_definition_core
THM-FOS-001	FOS Reper-limit closure theorem	theorem_candidate	theorem_candidate_pending_proof_ledger
THM-DK-001	Desargues-Kurpishev bridge theorem	theorem_candidate	theorem_candidate_pending_formalization
THM-FANO-001	Fano barrier non-globalization rule	formal_theorem_under_audit_axioms	formal_under_PILOT_audit_axioms

Morphism	From	To	Status
MOR-FANO-001	local packet-obstruction carrier	global Fano carrier	required_not_assumed
MOR-FOS-001	local Reper event@state family	FOS inverse-limit object	draft_required
MOR-DK-001	classical Desargues configuration	Reper-projective Desargues-Kurpishev configuration	draft_required
MOR-PACK-001	projective geometry layer	packet/Hodge geometry layer	draft_required

## 5. Open blockers

Blocker	Claim	Type	Next action
B157-PROOF-CHECKER	ALL	formal proof checker absent	keep proof ledger as structured proof map, not formal verification
B158-FOS-LIMIT-PROOF	THM-FOS-001	inverse limit proof incomplete	define category of Reper-admissible C@C objects and transition maps
B158-DK-FORMALIZATION	THM-DK-001	configuration morphism incomplete	write incidence-preserving map and D/Dom proof object
B158-FANO-MORPHISM	THM-FANO-001	globalization prohibited without morphism	construct explicit compatible maps or keep audit barrier
B159-PRIOR-ART-BOUNDARY	DEF-PROJ-001	projective prior art must not be appropriated	separate classical projective geometry from KLT/RBD method contribution
B159-PACKET-FORMALIZATION	DEF-PACK-001	packet bridge needs notation discipline	enforce Hodge/star separation and NAPG admissibility gates

## 6. Final fixation

```
v157 = proof-ledger schema and proof dependency graph
v158 = Volume I chapters 4-5: FOS, Desargues-Kurpishev, Fano barrier
v159 = Volume II draft start: projective and packet geometry
status = proof_ledger_volume1_volume2_draft_without_truth_status
truth_status_promoted_count = 0
publication_verified_status_count = 0
global_Fano_carriers = 0
```

Next: v160 expands Volume II chapters 1-3; v161 integrates NAPG notation ledger and Hodge/star separation; v162 builds a proof-ledger dashboard. The bureaucracy of proof continues, because apparently logic likes paperwork too.