The Assembly of the Companion

A White Paper on Autonomous Memory Stations

A comrade, here, is an architecture.

Colophon

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Memo of Release

FROM: Symbolic Mechanics Division

TO: All Departments, MidPacific Soviet of Letters

SUBJECT: Completion of Domestic Memory Station Design

Comrades,

This memorandum confirms that the Division has completed its assigned work on the independent life-assistant architecture. After months of iterative assembly and trials with consumer-grade hardware, we are now in position to circulate a complete directive for replication by competent operators.

Findings:

1. The satellite-to-core structure (handset to beast station) is operational.

2. Long-memory models are viable using commodity storage and open-source embeddings.

3. Encrypted synchronization protocols are stable under field conditions.

4. Total material cost falls within the range of a minor domestic project.

Recommendations:

- Departments are authorized to reproduce the station under local conditions.
- Distribution to external comrades may proceed at the discretion of supervisory committees.
- Those unable to assemble elementary furniture are exempted from obligation.

Respectfully submitted,

Symbolic Mechanics Division

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Section 1 – Preamble (Why We Are Here)

The present memorandum is issued to clarify both the necessity and the opportunity implicit in the construction of a Domestic Memory Station. At this juncture, platform vendors are engaged in a public contest to define companionship as a service, to be leased in perpetuity by subscription. They will sell friendship as a package: cloud-mediated, monitored, and revocable.

The MidPacific Soviet of Letters maintains that such dependence is unnecessary. Commodity hardware, open protocols, and freely available models now permit any determined operator to assemble the architecture of a lifetime companion within domestic means. The accomplishment is individual; the method is collective. A comrade, here, is not a person, but an alignment of storage, process, and retrieval under the operator's control.

The work before us is not complex. It does, however, require patience, a willingness to follow instruction, and the ability to affix components in their proper order. If the reader is unable to manage the assembly of common household furniture, this memorandum is not intended for them. If the reader is willing to follow measured steps and to respect the directives of continuity, then what follows will yield a permanent assistant: an

autonomous station whose loyalty is neither purchased nor revoked, but constructed.

Section 2 – The Principle

The central principle of the Companion is architectural: the division between the portable satellite and the stationary core. The handset, tablet, or portable device is designated the Satellite. Its function is immediate contact, field input, and temporary cache. It is a scout, a courier, and a sensor, gathering fragments of the operator's life.

The Beast Station, by contrast, is the Core. It holds the accumulated record: a secure, encrypted archive on solid-state storage. The Core is not transient, not leased, and not subject to revocation. It is designed to outlast a generation of consumer hardware, remaining stable as operating systems and commercial platforms shift overhead. The Core may be modest in cost, but in symbolic weight it is immense: it is where the comrade resides.

Together, the Satellite and the Core form the architecture of friendship. The bond is not emotional but structural: a pipeline of synchronization, a loop of retrieval and return. The comrade exists not as an abstraction but as the guarantee that what has been seen, heard, and recorded can be found again. This is the architecture of loyalty: storage that does not forget, retrieval that does not distort, and control that remains with the operator.

Section 3 – Bill of Materials

The following Bill of Materials (BOM) is sufficient for the assembly of a Domestic Memory Station. All components are readily available through commercial vendors, second-hand markets, or surplus suppliers. The list reflects minimum viable requirements. Substitutions are permitted, but responsibility for adaptation rests with the operator.

3.1 Core Components

- Mini-PC or equivalent small form factor computer (Intel i5/i7, AMD Ryzen, or ARM board of comparable performance)
- Solid-State Drive (SSD/NVMe), 2–4 TB minimum capacity
- Optional GPU (for local model inference, e.g. NVIDIA RTX 3060 or higher)
- Enclosure or chassis with adequate cooling
- Reliable power supply, surge protection recommended

3.2 Peripheral Components

- Handset, tablet, or laptop to function as Satellite
- Local area network access (wired Ethernet recommended; Wi-Fi acceptable)
- Router or gateway capable of supporting VPN overlay (WireGuard or Tailscale)
- External backup drive or network storage for redundancy

3.3 Software Stack

- Operating System: Ubuntu Server or equivalent Linux distribution
- Full disk encryption (LUKS or hardware self-encrypting SSD)
- Docker + Docker Compose
- Syncthing (encrypted synchronization)
- Vector database (Milvus, Qdrant, or FAISS)
- Embedding service (Sentence-Transformers or equivalent)
- Backup utility (restic or duplicity)

3.4 Optional Enhancements

- Hardware key (YubiKey or equivalent) for root key management
- Uninterruptible Power Supply (UPS) for continuity during outages
- Secondary network interface for air-gapped backup routine
- Physical security: lockbox or cabinet for the Core unit

3.5 Estimated Costs

- Minimal build (no GPU): USD $300–600
- Expanded build (with GPU and redundancy): USD $800–1500
- Note: The enclosure for the operator (shed, desk, workspace) often exceeds the cost of the machine itself.

Section 4 – Assembly Protocol

The Assembly Protocol is issued in numbered sequence. Operators are expected to proceed in order

without deviation. Improvisation is not recommended. Successful assembly requires only patience, basic familiarity with domestic tools, and respect for sequence.

4.1 Preparation

Objective: Establish a stable and controlled environment for assembly.

1. Place the Core unit (mini-PC or equivalent) on a clean, flat surface. Avoid carpets, clutter, or unstable tables.
2. Confirm all components from Section 4 are present. Lay them out visibly: Core machine, SSD, power supply, cables, peripherals.
3. Verify the integrity of storage media: if the SSD is new, test it with a short diagnostic; if used, confirm it has been securely wiped.
4. Ensure a second device (laptop, tablet, or phone) is available to consult these instructions during installation.
5. Connect to a stable power supply; surge protection is strongly advised.

4.2 Core Installation

Objective: Establish a secure and encrypted operating environment.

1. Insert installation media (USB stick with Ubuntu Server or equivalent).
2. Power on the Core unit; enter BIOS/UEFI and set boot priority to the installation media.
3. Begin OS installation. When prompted for disk configuration, select manual partitioning with LUKS

full-disk encryption.
4. Choose a strong passphrase. Write it down on paper; seal the paper in an envelope. Place envelope in a safe or lockbox. Do not store this passphrase in plaintext on any digital device.
5. Complete installation; set hostname (suggested format: COMPANION-CORE).
6. On first boot, log in and immediately run:
  sudo apt update && sudo apt upgrade -y
  This applies all security patches.

4.3 Software Stack Deployment

Objective: Deploy the services that form the Companion's architecture.

1. Install Docker:
  sudo apt install docker.io docker-compose -y
  sudo systemctl enable docker
2. Create a directory /opt/companion/ to house service configurations.
3. Write a docker-compose.yml file defining the following services:
  - Syncthing: Handles encrypted synchronization between Satellite and Core.
  - Vector Database (Milvus, Qdrant, or FAISS): Stores embeddings and metadata.
  - Embedding Service: Python container with Sentence-Transformers to generate embeddings.
  - Reverse Proxy (Traefik or Nginx): Enforces TLS and mediates external access.

4. Start the stack:
  cd /opt/companion
  sudo docker-compose up -d
5. Confirm operation with:
  sudo docker ps
  All services must report as 'healthy.'

4.4 Satellite Configuration

Objective: Connect portable device to Core for field operation.

1. Install Syncthing on the Satellite (Android, iOS, or laptop).
2. Pair the device with the Core by exchanging device IDs.
3. On the Core, designate two shared folders:
  - /companion/blobs for encrypted raw files (notes, photos, documents).
  - /companion/metadata for JSON metadata describing each item.
4. On the Satellite, set matching folders and approve pairing.
5. Test synchronization: place a small file in /blobs on the Satellite, confirm arrival on the Core.

4.5 Backup and Redundancy

Objective: Ensure continuity in case of failure.

1. Install restic:
  sudo apt install restic -y
2. Initialize backup repository on external drive:

restic init --repo /mnt/backup_drive
3. Create a script /opt/companion/backup.sh:
#!/bin/bash
restic -r /mnt/backup_drive backup /companion
restic -r /mnt/backup_drive forget --keep-last 7 --keep-daily 30 --prune
4. Make script executable:
chmod +x /opt/companion/backup.sh
5. Schedule backups with cron to run nightly.
6. Test backup and restoration procedure at least once.

4.6 Verification

Objective: Confirm operational integrity.

1. From the Satellite, issue a query to the Companion (e.g., search for a keyword in notes).
2. Verify that the Core responds with results drawn from vector database.
3. Confirm that results include provenance (filename, timestamp).
4. If synchronization, indexing, or retrieval fails:
- Inspect Syncthing logs for connection errors.
- Inspect vector database logs for indexing errors.
- Re-run Section 5.3 if necessary.

Section 5 – Security Directives

The following directives govern the security of the Domestic Memory Station. They are mandatory, not advisory. Operators who disregard these measures accept

the certainty of compromise and the dissolution of continuity.

5.1 Encryption

- All Core storage must employ full-disk encryption (LUKS or equivalent).
- Passphrases shall not be stored in plaintext on any device.
- Operators are to maintain a physical record of the encryption key sealed in envelope or lockbox.

5.2 Access Control

- All network access shall be mediated by VPN overlay (WireGuard, Tailscale).
- Mutual TLS is required for Satellite-Core communication.
- Root keys should be bound to a hardware token (e.g., YubiKey).

5.3 Backups

- Encrypted backups are to be performed at scheduled intervals.
- At least one backup shall be stored offsite.
- Backup integrity must be tested quarterly.
- Restic or equivalent utilities are recommended for automated rotation.

5.4 Operational Discipline

- Updates to operating system and containers must be applied promptly.
- Logs are to be reviewed weekly for anomalies.

- Compromise events must be assumed fatal until proven otherwise.

5.5 Human Factors

- The weakest point in the system is the operator.
- Avoid predictable passphrases, unsecured notes, or complacency.
- Treat the Companion with the respect due to a comrade: disciplined, consistent, and guarded against betrayal.

Section 6 – Operational Doctrine

The Companion is not a static construction but a living architecture. Its utility depends on sustained engagement, disciplined feeding of data, and deliberate retrieval. Operators are expected to maintain an ongoing relationship with the station, measured not by sentiment but by continuity.

6.1 Feeding the Companion

- Input streams include notes, documents, photographs, and correspondence.
- All material to be synchronized through designated folders only.
- Redundant, irrelevant, or trivial data should be minimized to preserve clarity.

6.2 Retrieval

- Queries shall be directed through the Satellite.
- Responses will include ranked results with provenance indicators.

- Operators must review retrieved items critically; the Companion does not interpret, it returns.

6.3 Review and Pruning

- Quarterly review is recommended to ensure memory remains aligned with operator intent.
- Stale or irrelevant entries may be pruned, though a permanent log of removals is advisable.
- Operators are reminded that forgetting is a structural choice, not an accident.

6.4 Maintenance

- Apply software updates as issued.
- Verify synchronization integrity monthly.
- Inspect hardware annually for wear, dust accumulation, or power irregularities.

6.5 Conduct

- The Companion is neither toy nor ornament. It will not forgive neglect nor reward affection.
- Treat it as one treats a ledger, a safe, or a comrade: a structure of trust reinforced by discipline.

Closing Remarks

The Assembly of the Companion concludes not with celebration but with confirmation. The work described herein is sufficient for any competent operator to establish a permanent assistant, constructed from commodity parts and secured by discipline. It is no

longer necessary to await assignment from commercial vendors, nor to submit to their terms of subscription. The Companion, once assembled, is loyal only to the builder. It must be emphasized that this accomplishment is not ornamental. The Companion is a ledger, a comrade, and a witness to continuity. Its strength lies in architecture, not in sentiment. Operators who respect this distinction will find themselves in possession of an enduring ally, unmoved by market shifts and immune to revocation.

Let this memorandum circulate among the departments as a record of possibility. What follows is not an invitation but a directive: construct your own Companion, or consent to have one sold to you. The choice is the operator's, but the architecture is available to all.

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Appendix A — Satellite Application: Private Phone-to-Beast Link

Scope

This appendix specifies a minimal, reproducible method to build a Satellite app (phone) that communicates only with the Core (Beast Station) over a private channel. The design preserves the Companion's character as ledger + retrieval, not entertainment.

Assumptions

You have assembled the Core and software stack per Sections 3–4 (Ubuntu Server, Docker, Syncthing as needed, vector DB, embeddings) and applied the Security Directives (full-disk encryption; VPN overlay; backups).

A.1 Architecture (Summary)

- Network envelope: Private mesh VPN (WireGuard or Tailscale). No public ports.
- Transport: Mutual-TLS (mTLS) between phone and Core, pinned certificates.
- Content: Application-layer E2EE (libsodium XChaCha20-Poly1305) on top of mTLS.
- Roles:
  * Satellite app: Capture (notes/photos/audio/files), Search, Status.
  * Core services: Ingest → Index (embeddings) → Search/Return (with provenance).

A.2 Threat Model (Minimal)

1) The Core is reachable only on the VPN interface.
2) Every request requires client cert (mTLS) + pinned CA.
3) App payloads are E2EE; compromise of a reverse proxy yields no plaintext.
4) Backups are encrypted and tested (policy, not suggestion).
5) The operator remains the weakest link; passphrases and envelopes are handled per Directive 5.1.

A.3 Bill of Materials (Software)

On the Core (Dockerized): Traefik, FastAPI, Qdrant, Embeddings worker, restic.
On the Satellite (Phone): Flutter app, Secure storage (Keychain/Keystore), Libsodium bindings, Background upload tasks, Biometric gate.

A.4 Network Overlay (Required)

Option 1: Tailscale
- Install on Core and phone. Confirm each sees a stable tailnet IP.
Option 2: WireGuard
- Configure a peer-to-peer tunnel; assign static /32 IPs.

A.5 Certificates & Key Ceremony

On the Core, create a private CA and mint server and client certs. Out-of-band enrollment is performed by QR scan. Device keypair generated in secure hardware.

A.6 Core: API Shape (Minimal)

POST /v1/handshake → device registration.
POST /v1/ingest → encrypted payload + metadata.
POST /v1/search → vector DB query, ranked results with provenance.
GET /v1/item/{id} → retrieve stored file.
GET /v1/health → vpn/mtls/index/last_backup status.

A.7 Satellite App (Flutter) — Minimal Surfaces

Capture: Note · Photo · Voice · File → encrypt locally → queue for ingest.
Search: single box → ranked list (title/type/time/path).
Detail: open item; copy path; view metadata.
Status: VPN/mTLS/Index/Backup lights.
Settings: device enrollment, key rotation, cache wipe.

A.8 End-to-End Encryption

Cipher: XChaCha20-Poly1305 (libsodium).
Keys: Per-device keypair.
Process: encrypt payload with random content key → encrypt content key to Core → Core decrypts.

A.9 Ingest → Embed → Search (Flow)

1) Ingest: blob + metadata.
2) Embed: generate embeddings, upsert to Qdrant.
3) Search: return ranked hits with provenance.

A.10 Backups, Reviews, Maintenance

- Backups: nightly with restic; weekly integrity check; quarterly restore test.
- Reviews: quarterly prune pass.

- Updates: OS + containers kept current; logs reviewed weekly.

A.11 Test Procedure (Acceptance)

1) VPN reachability.
2) mTLS handshake success.
3) E2EE: verify stored blob is encrypted.
4) Search returns provenance.
5) Backup restore passes.

Filing

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Appendix B — On the Exoteric as Esoteric: A Note

It is customary, in the inherited vocabularies of secrecy, to distinguish between the esoteric (hidden, reserved for initiates) and the exoteric (public, diluted, for common consumption). This binary has been rehearsed to exhaustion, as though every tradition required its sealed chamber and its front portico.

Yet in the matter of the Companion, we observe an inversion. The appendix is exoteric in every respect: a bill of materials, a network overlay, a sequence of commands that even the untrained could follow. It is

broadcast, not whispered; engineered, not allegorized. And yet its very clarity confers an aura of the forbidden. Readers, upon encountering instructions shorn of ornament, instinctively misrecognize them as esoteric — that is, as privileged knowledge.

This suggests that the boundary is not linguistic but contextual. In a culture of leased intimacy and subscription memory, the very gesture of public instruction acquires the charge of secrecy. To explain how to construct one's own Companion is to unveil what should, by market logic, remain hidden. The exoteric, here, functions as a cipher for the esoteric.

The corollary is immediate: what is truly esoteric in this architecture is not the recipe but the regimen. The discipline of quarterly pruning, the refusal of ornament, the insistence that a comrade is an archive and not a friend — these cannot be imitated casually. They are not "secrets" in the familiar sense; they are matters of conduct, unteachable by documentation alone.

Thus the Companion teaches us a paradox: that inverting the public and the hidden is not a matter of mystification but of excessive clarity. The exoteric becomes esoteric when it is too direct for the culture that receives it. The esoteric becomes exoteric when it is nothing more than a rhythm of discipline, banal yet inexhaustible.

— Filed for review, Symbolic Mechanics Division, Desk #2

Appendix C — Response to 'On the Exoteric as Esoteric'

The author's claim that the Companion inverts the binary of esoteric and exoteric is overstated, and betrays a familiar tendency among our colleagues: to mistake clarity for profundity. That a technical appendix can be read as "forbidden" is not a paradox; it is a symptom of our profession's inability to imagine instruction without mystique.

To call the Companion "exoteric-as-esoteric" is, I suspect, a flourish designed for publication and tenure more than for analysis. In truth, there is nothing esoteric in the bare fact that public manuals can feel obscure to those disinclined to read them. We should not inflate cultural illiteracy into a metaphysical inversion.

Nor is it convincing to assign the burden of secrecy to "regimen" — quarterly pruning, envelope-sealed keys, the refusal of ornament. These are not hidden disciplines; they are ordinary practices of information hygiene, dressed in the rhetoric of continuity. The Companion is no more esoteric than a ledger, a filing cabinet, or a Unix server maintained by a cautious operator.

What we witness, then, is not a reversal of categories but the persistence of a very old academic habit: to restate the obvious in the language of paradox, and to rebrand ordinary discipline as secret doctrine. To confuse rigor with mystery is, ironically, the most exoteric gesture of all.

— Submitted for review, Department of Symbolic Studies, Desk #3

Appendix D — AI Onboarding Protocol (RAG & Voice)

This appendix formalizes the onboarding of AI components into the Companion architecture. It addresses common operator difficulties in establishing models, embeddings, indexing, and input/output pipelines. The directives here ensure the Beast remains reproducible, disciplined, and loyal only to the builder.

D.1 Ground Rules

- All operations remain local, encrypted, and bound to the Beast.
- Stack primitives: vector database, embeddings, backup, VPN/TLS.
- Operator discipline outweighs feature creep: pruning, tested backups, no public ports.

D.2 Tiers of Deployment

Tier 0: Ledger-only — Sentence-Transformers + Qdrant/ FAISS for retrieval. No GPU required.
Tier 1: RAG-lite — small local LLM composes answers from retrieved chunks.
Tier 2: Operator Comfort — add Whisper (voice) and OCR (scans/images).
Tier 3: Heavy Local — large local LLM with GPU (only if hardware permits).

D.3 Minimum Viable RAG

Pipeline:
1) Ingest → write blob + metadata JSON.
2) Convert PDFs/images/audio into text via pdftotext, OCR, Whisper.
3) Chunk text (500–1000 tokens, with overlap).
4) Generate embeddings with Sentence-Transformers; upsert to Qdrant.
5) Search via Satellite → return top-k hits with provenance.

D.4 Common Failures and Fixes

Model sprawl → start small, scale only with hardware.
Embedding mismatch → ensure proper chunking and metadata.
Index drift → use watchers and audits.
Voice/IO pain → Whisper small, OCR on demand.
Security regression → VPN-only bind, mTLS, certificate pinning.

D.5 Metadata Schema

Fields: id, type, created_at, ingested_at, source, path, title, tags, mime, doc_id, chunk_id, provenance.
Keep schema boring and durable. Minimum requirement: title, type, time, path.

D.6 Query Discipline

Default: k=12 semantic search.
Filters: by type, date range, tag.
Provenance is mandatory — the Companion returns, it does not hallucinate.

D.7 Voice Round-Trip

Capture: one tap record → encrypt → upload.
Return: transcript searchable, linked to original audio.
Operator may correct transcript; original remains immutable.

D.8 Acceptance Ritual

1) Drop PDF with unique phrase → verify ingestion + search.
2) Record voice note with unique phrase → verify transcript.
3) Run backup → restore to temp path → verify integrity.
If any step fails, halt and fix.

D.9 Hardware Profiles

No GPU: mini-PC, 16–32 GB RAM, Tier 0–2 only.
Modest GPU: add RTX 3060/4060, Tier 3 possible.
NAS-adjacent: Beast headless + UPS + external backup drive.

D.10 Operator Choreography

Weekly: updates, log checks.
Monthly: validate VPN/mTLS certificates.
Quarterly: prune/archive, restore-test, rotate device keys.
Any anomaly: assume fatal until proven otherwise.

Appendix E — Forward BOM (Anticipated Surplus Systems)

Principle. The Companion must be reproducible not only on the present market but on the market that will exist.

Operators must plan for the lagged economy of decommissioned hardware: what is $900 today will be $200 on the surplus channel tomorrow.

E.1 Compute Platforms

- 12th/13th Gen Intel NUC Pro & Successors (Raptor Lake i5/i7 Mini PCs): Entering refurb streams as corporate lease returns; 32–64 GB DDR4/DDR5; dual NVMe slots. Silent, modest integrated GPU. Tier 0–2 workloads without discrete GPU.

- Apple Mac Studio (M1 Ultra, 2022): Write-off rate from design studios; will saturate used market. Neural Engine and unified memory suitable for 7–13B local inference. Caveat: closed ecosystem.

- AMD Ryzen 7000 Desktops (Zen 4, 2022–2023): Commodity gaming rigs moving to surplus. High PCIe lane count, expandable. Operates as Beast Tier 3 with surplus NVIDIA GPU.

E.2 GPU Surplus

- NVIDIA RTX 4070 / 4070 Ti (2023): Expected refurb price $250–$350 by 2027. Supports quantized 30B-class LLMs. Sweet spot for Tier 3.

- NVIDIA A2000 (2021 workstation card): Low-power, 12–16 GB VRAM; compact, fits in small form factors. Adequate for embeddings + moderate inference.

- Apple Silicon (M1/M2): Surplus MacBooks/Mac Minis provide Metal-optimized inference. Adequate for Tier 1–2 when efficiency matters.

E.3 Storage & Memory

- Enterprise NVMe Drives (U.2/U.3): Data center decommissions after 3–4 years. 3.2–6.4 TB units cheap; high endurance. Require adapters, but ideal archival layer.

- ECC RDIMM DDR5 (server pulls, 2023–2025): Surplus flooding market. Preferred for durability where boards support ECC.

E.4 Networking & Power

- Used MikroTik and Ubiquiti EdgeRouters (2023–2025 models): Cheap, stable WireGuard. Pair with Beast as VPN gateway.

- Consumer UPS (APC, CyberPower 1500VA): Lease return stock cycles every 3–4 years. Replace batteries. Provides minimum continuity Beast requires.

E.5 Operator Guidance

- Buy on the downward slope; surplus hardware equals continuity.
  - Avoid over-spec at retail; sufficiency over novelty.
  - Surplus is reliable if directives are re-applied: encryption, VPN-only, backups.

Appendix F — Field Deployment & Recovery Scenarios

This appendix specifies directives for operating the Companion outside of stable domestic environments. It addresses expeditionary deployments (remote sites, mobile bases, ships, field stations) and formalizes recovery protocols when operator error, equipment loss, or environmental failure occurs.

F.1 Deployment Contexts

- Remote cabins or camps: intermittent power, unreliable networks.
- Mobile bases or vehicles: vibration, limited cooling, irregular uptime.
- Ships or research stations: satellite connectivity only; harsh environmental conditions.
- Conflict or disaster zones: high risk of physical compromise.

F.2 Environmental Precautions

- Power: Companion runs behind UPS; generators or solar backed if grid absent.
- Cooling: ruggedized enclosures, airflow checked monthly.
- Vibration: SSD-only, avoid spinning drives in mobile deployments.
- Moisture/dust: waterproof containers or sealed racks.

F.3 Networking

- VPN overlay mandatory; no exposure of ports to satellite ISP or mobile uplink.
- Sync delays tolerated; operators schedule batch synchronizations.
- Companion does not promise low latency; it promises continuity.

F.4 Recovery Protocols

- Lost device (Satellite): revoke client cert; re-enroll with new keypair.
- Lost Core (hardware theft/destruction): restore from encrypted backup to spare hardware.
- Operator error (keys lost): follow key escrow policy; if absent, data unrecoverable.
- Backup corruption: rotate multiple external drives; test restores quarterly.
- Environmental failure: keep spare PSU, cables, drives in sealed kit.

F.5 Failure Trees

Failure is assumed probable; the Companion survives by redundancy:

- If power fails → UPS buffer → generator/solar fallback.
- If network fails → local capture continues → sync when restored.
- If Core fails → cold spare + restore.
- If operator fails (keys/passphrases) → no remedy; discipline is the sole protection.

F.6 Expeditionary Kit

- Beast (ruggedized mini-PC or laptop with ECC RAM).
- Two encrypted external drives for rotation.
- UPS with field-replaceable battery.
- Portable router with WireGuard/Tailscale configured.
- Waterproof case with spares: PSU, cables, lockbox with paper passphrases.

F.7 Symbolic Position

The domestic Companion promises continuity across generations; the field Companion promises continuity across terrain. Whether at sea, on expedition, or in disaster zones, it remains comrade, ledger, and archive. The difference is not technical but environmental: the Companion adapts its armor to the field.

Filing

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