SAME PLANET DIFFERENT ORBIT

Part 2
The Private Asset Messaging Network

Private markets have spent the last decade expanding in mass and momentum, but they have never behaved like a marketplace. They have behaved like a constellation of bespoke universes — each GP, each fund administrator, each custodian orbiting in its own gravitational field, connected only by PDFs, portals, and human interpretation. That system, existing parallel to the public markets, worked when private markets were a specialist domain. It does not work when the federal government opens the door for 401(k) plans[1] to allocate to private equity and private credit.

The 401(k) announcement didn't simply expand access. It created a structural break. It forced private markets to confront a truth they had been able to ignore for decades: the infrastructure that supports institutional capital cannot support mass-market distribution. Not because the assets are too complex, or the strategies too bespoke, but because private assets lack the most basic prerequisite of scale — **addressability**.

Addressability is the quiet superpower of public markets. It is what allows assets to be referenced, processed, supervised, and assembled into products. It is what allows ETFs to exist, custodians to reconcile, regulators to supervise, and digital rails to interoperate. Public markets run on canonical representation — a shared grammar for identifiers, lifecycle events, and state transitions. Private markets do not.

This paper introduces the **Private Asset Messaging Network (PAMN)** — the missing middle layer that gives private assets the same representational dignity public assets have enjoyed for decades. PAMN is not an exchange, not a blockchain, and not a workflow tool. It is the canonical protocol that defines how private assets are described, how their lifecycle events are expressed, and how their obligations are computed. It is the pipeline that turns legal agreements into computable objects, and computable objects into assets that can flow across custodians, fund administrators, wealth platforms, and eventually digital markets.

Once private assets become addressable, everything else becomes structurally possible.
This is the story of that transformation.

by Bill McCahey, June 2025

1. Introduction: Private Markets as Marketplace

1.1 The Shift in Gravity

Private credit did not simply grow over the last decade — it drifted into its own orbit. What emerged was a parallel financial universe, one that operated according to rules that looked familiar from a distance but behaved differently up close. It was a domain defined by negotiated truth rather than standardized truth, where every transaction carried its own bespoke operational logic. Documents replaced data. Human interpretation replaced machine processing. Liquidity, when it appeared, was engineered rather than assumed.

Yet this orbit was not static. It was a laboratory. Digital rails began to appear at the edges — tokenized participations, automated waterfalls, experimental settlement workflows. None of it was systemic, but all of it hinted at a future where private markets might one day behave more like information systems than bespoke ecosystems.

1.2 The Catalyst: 401(k) Access

That moment arrived in 2025, when the federal government announced that 401(k) plans could allocate to private equity and private credit. What sounded like a policy update was, in practice, a structural shockwave. A market built for specialists was suddenly expected to serve millions of retirement savers. The gravitational field shifted overnight.

Asset managers who had spent decades optimizing for institutional workflows were now being asked to manufacture retail-ready private-asset products. The demand was not incremental; it was categorical. It required private markets to operate at a level of standardization, interoperability, and transparency they had never needed to achieve.

This is the moment when the architectural fault line became impossible to ignore. Public-market products are trivial to assemble because the underlying assets are addressable. Private assets have none of this. They cannot be referenced, processed, or composed. They cannot be slotted into a 401(k) product because the infrastructure required to treat them as components simply does not exist.

1.3 The Missing Middle Layer

Private markets do not lack technology. They do not lack capital. They do not lack interest. What they lack is a shared grammar — a way for private assets to express themselves in a form that machines can interpret and systems can process.

Every private asset today speaks its own dialect. Fund administrators translate these dialects manually. Custodians build one-off integrations. Wealth platforms rely on PDFs and portals. The entire system functions only because humans act as middleware. This works at institutional scale. It collapses at retail scale.

Without a shared language for data, lifecycle events, and instructions, private markets cannot behave like a marketplace. They cannot support diversified products. They cannot interoperate across custodians. They cannot integrate with digital rails. This is the missing middle layer — the representational substrate that public markets have had for decades and private markets have never built.

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2. The Core Problem: Private Assets Are Not Addressable

2.1 What “Addressable” Means

To say an asset is addressable is to say it can be referenced unambiguously and processed consistently across systems, platforms, and institutions. Public-market assets achieve this through a shared representational grammar.

Addressability begins with unique identifiers. It continues with canonical metadata — a structured description of the asset that expresses its attributes, terms, and economic logic in a machine-readable form.

Addressable assets also share standardized lifecycle events. Capital calls, distributions, NAV updates, covenant breaches — each expressed through a consistent schema so that systems can interpret meaning without bespoke integration. They produce machine-readable reporting, programmatic eligibility rules, and interoperable instructions. When all of these elements exist together, an asset becomes addressable. It becomes something that can be referenced, processed, supervised, and assembled into products.

2.2 Why Private Markets Fail This Test

The operational reality of the industry is still built on PDFs, portals, and bespoke templates — artifacts designed for human interpretation, not machine processing. A capital call notice from one GP bears little resemblance to a capital call notice from another. Distribution statements vary not just in format but in the very logic they use to express entitlements. To be fair, some of this is bound to exist wherever there is meaningful production volume, but only in isolation, not as real industry standard.

The fragmentation runs deeper than presentation. There is no shared schema for lifecycle events. Transfer approvals follow idiosyncratic workflows. Even investor eligibility is enforced through manual review. Reporting is equally inconsistent. The absence of a common reporting grammar means every downstream system must reconstruct meaning from scratch. (See *Precision Lending* *Part 1* *and* *Part 2* for more on reporting).

This is not a failure of technology. It is a failure of representation. Private markets have never agreed on how to describe an asset, how to express its lifecycle events, or how to communicate its obligations. Without that shared language, the system cannot scale.

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3. The Private Asset Messaging Network (PAMN)

3.1 The Canonical Protocol

If the core problem is that private assets are not addressable, then the solution must begin with a protocol that makes them so. The Private Asset Messaging Network (PAMN) is that protocol. It is the representational layer private markets have never had.

At its foundation, PAMN introduces a canonical data model — a structured way to describe what an asset is, how it behaves, and what obligations flow from its terms. Layered on top is a lifecycle event taxonomy — capital calls, distributions, NAV updates — expressed through a consistent schema that enables automated processing. These events become the verbs of the private-asset universe.

PAMN defines a private-asset identifier system to reference assets, tranches, and participations unambiguously. It provides a messaging protocol for systems to communicate state changes, and an embedded compliance schema for programmatic enforcement of eligibility.

Above all, PAMN functions as a network for transmitting private-asset truth. It is not a marketplace. It is the precondition for one. It is the infrastructure that turns private assets from handcrafted agreements into interoperable financial primitives.

3.2 What PAMN Is Not

Clarity requires boundaries. PAMN is not an exchange. It does not match buyers and sellers, set prices, or create liquidity. It is not a tokenization platform. It does not mint tokens. It is not a blockchain. It is not a fund-administration system.

PAMN does not replace any of these systems. It enables them. It provides the representational substrate they all depend on — the canonical language that allows exchanges to list private assets, tokenization platforms to mint them, blockchains to reference them, and fund administrators to reconcile them.

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4. The Architecture of Addressability

4.1 The Canonical Data Model

The canonical data model is the representational core of PAMN. It begins with an asset metadata schema, a formal description of the asset's identity, terms, and economic logic. Instead of a PDF describing a loan, PAMN expresses the asset as a machine-readable object.

Layered onto that is a valuation methodology schema, capturing the logic behind valuations to make them auditable and comparable. A risk-factor schema enables assets to express drivers of risk — covenant packages, leverage profiles — in a structured form. An eligibility schema encodes who can hold the asset. Finally, a reporting schema standardizes the outputs of the asset's lifecycle.

Together, these schemas give private assets a consistent identity and logic. They transform private markets from a world of bespoke documents into a world of interoperable objects.

4.2 Lifecycle Event Taxonomy

If the data model defines what a private asset is, the lifecycle event taxonomy defines what it does. Every asset moves through state changes — subscriptions, capital calls, distributions. PAMN replaces bespoke documents with a unified operational language.

Origination events capture the birth of the asset. Capital events manage the flow of money — calls, distributions, return of capital. Valuation events transmit NAV updates and fair-value adjustments. Servicing events handle the ongoing administration of the asset, including interest payments and covenant monitoring. Transfer events govern the movement of ownership. Redemption events manage the exit.

By standardizing these events, PAMN allows downstream systems to react programmatically. A custodian does not need to read an email to know a capital call has occurred; it receives a structured message and executes the corresponding workflow automatically.

4.3 Messaging Protocol

If the data model defines the nouns and the taxonomy defines the verbs, the messaging protocol defines the grammar. Today, communication is a patchwork. PAMN replaces this with a structured, deterministic messaging layer.

At the center are event types, each corresponding to a lifecycle action. These are structured messages that carry canonical data. Every message passes through validation rules to ensure completeness and compliance. Once

validated, messages follow routing rules to reach custodians, administrators, and wealth platforms. Each message triggers an acknowledgment flow, creating a real-time audit trail of operational truth.

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5. The Pipeline: How PAMN Enables a Marketplace

5.1 The Marketplace Before Exchanges

Every marketplace begins long before the first trade. Public markets started with catalogs — lists of addressable instruments. The same transformation is unfolding in private markets.

By giving private assets a canonical data model and identifier system, PAMN creates the first catalog of addressable private assets. This catalog functions as a distribution network — a structured inventory of assets that can be discovered, referenced, and assembled by institutions. For asset managers, this is the raw material for product construction. Instead of negotiating bespoke integrations, managers can pull from a universe of PAMN-compliant assets that share a common representational language.

This catalog is also the **foundation for the Genesis Token workflow**. Without canonical representation, no digital orbit is possible. With it, the pipeline becomes the precursor to tokenization, liquidity, and secondary markets. More on this in Section 6.

5.2 The PVTM1 Example

Consider the construction of a ETF-style product — a diversified private-asset vehicle for 401(k) distribution. Before PAMN, this was operationally impossible. After PAMN, it becomes a straightforward exercise in product assembly.

An asset manager selects PAMN-compliant assets from the catalog. Because each asset is addressable, eligibility and risk are evaluated programmatically. NAV calculation becomes deterministic, based on machine-readable inputs. Rebalancing becomes feasible because state transitions are standardized. Reporting is automated, flowing through PAMN's messaging protocol. Custody becomes straightforward, and auditability becomes inherent.

PAMN does not create the product. It makes the product possible.

5.3 The TradFi Destination

The first wave of destinations sits in TradFi. ETFs become possible not because assets become liquid, but because they become composable. Interval funds scale beyond their niche because PAMN eliminates the friction of bespoke reporting. 401(k) products — the catalyst — finally become manufacturable. SMA portfolios gain access to private assets without bespoke integrations. Insurance wrappers can model risk and manage capital with precision.

In each case, PAMN does not replace existing TradFi infrastructure. It unlocks it. It gives private assets the representational dignity required to flow into the channels where most of the world's savings already live.

5.4 The DeFi Destination

If TradFi is the immediate destination, DeFi is the frontier. PAMN does not turn private assets into crypto. It makes them compatible with digital rails.

The most direct expression is tokenized private assets. With a canonical data model, tokenization becomes a representation layer rather than a reinvention. Tokens reference the same identifiers and lifecycle events, anchored

to the PAMN object. This prevents **synthetic drift** — the divergence between digital and legal reality that plagued early tokenization efforts.

From there, structured liquidity windows become possible. Permissioned DEX pools emerge as a natural extension. Synthetic exposures allow DeFi protocols to build derivatives referencing standardized identifiers.

PAMN bridges the two financial universes. It gives DeFi the structured inputs required to build responsibly on top of private-asset truth.

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6. The Genesis Token Workflow

6.1 The Concept of Digital Orbit

In astronomy, an object enters orbit only when its velocity and gravity reach equilibrium. Too slow, and it falls back to earth. Too fast, and it escapes into space.

The same is true for financial assets. A digital representation — a token — must remain gravitationally bound to the underlying asset. It must be close enough to reflect its lifecycle events (gravity), but free enough to circulate across digital rails (velocity).

Most early tokenization efforts failed this test. They created "drift" — digital objects that floated unmoored from the legal and operational truth of the asset. The Genesis Token workflow is the mechanism that solves this. It is the equilibrium. It is the canonical digital expression of a PAMN-addressable asset, deriving its state directly from the off-chain truth – all rendered into the minting of the first token representing the asset: the Genesys Token.

6.2 The Workflow Steps

The workflow begins long before anything touches a blockchain.

Step 1: Immobilization.
The asset is anchored to a definitive ledger of record — the GP, fund administrator, or custodian. This is the gravitational anchor. It ensures every digital representation remains bound to the legal truth. Without this, tokenization is just a simulation.

Step 2: Canonical Minting.
Once immobilized, the Genesis Token is created. This is not a wrapper or a derivative. It is the asset, expressed in a form machines can interpret, built directly from PAMN's canonical data model. It inherits the asset's identity, eligibility rules, and lifecycle logic.

Step 3: Export to Orbit.
The token is exported to digital rails and the asset leaves the surface of its origin system and enters orbit. Whether it moves to a permissioned chain or a public network, it remains tethered to the off-chain truth through PAMN's identifiers.

Step 4: Circulation.
Once in orbit, the token can circulate. It can move between qualified participants, sit in liquidity windows, or be held in custody. But circulation never overrides the canonical ledger. Every transfer request, every eligibility check, every entitlement update can reconcile with the off-chain truth. This is the safeguard that prevents drift.

Step 5: Gravitational Return (Redemption).
When obligations arise or the asset matures, the token follows the redemption path back to its anchor. Redemptions do not occur at a "market price" on a DEX. They occur at the canonical ledger where the legal asset resides. The token is burned, and the entitlement is delivered.

6.3 The Unified Theory

This workflow reveals a deeper pattern. Public-market tokenization and private-market addressability are not separate innovations. They are two expressions of the same architectural truth: a financial asset can only exist on digital rails if it has a canonical form.

In public markets, that canonical form already existed (CUSIPs, transfer agents). Tokenization simply extended it. Private markets never had that canonical form, so they could never produce a Genesis Token. PAMN fills that gap. BTW: the Genesys Token concept exists in theory for Public Markets now, it's use in practice is still being defined.

This creates a unified theory of market infrastructure. Public markets are moving from analog to digital. Private markets are moving from bespoke to canonical. They are converging on the same destination: a world where every asset, public or private, is an addressable, computable object capable of entering a digital orbit without losing its connection to reality.

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7. The Adoption Curve

7.1 The Consortium Model

Standards do not emerge because they are clever; they emerge because the ecosystem decides coordination is cheaper than fragmentation. PAMN must be governed by a consortium — a center of gravity where GPs, LPs, custodians, and administrators align.

ILPA plays a unique role here. It is the only body with the legitimacy to represent LP interests at scale, and the only one with a track record of shaping reporting standards. Its presence anchors the governance model, ensuring PAMN evolves in a way that reflects the topology of the market rather than the priorities of any single participant.

A consortium is not a committee. It is the mechanism through which PAMN becomes not just a technical specification, but a public good.

7.2 The Waves of Adoption

Adoption is not a single leap. It is a sequence of compounding transitions.

Wave 1: AI-Assisted Normalization.
Institutions use AI to extract structure from PDFs. This is the bridge — the moment unstructured disclosures begin to resemble canonical data.

Wave 2: Vendor Adoption.
Administrators and custodians adopt PAMN's schema to reduce integration burdens.

Wave 3: Messaging Protocol.
Lifecycle events move from emails to structured messages. Operational truth becomes machine-transmissible.

Wave 4: Custodian Integration.
The tipping point. When custodians, funad administrator and Trustees adopt PAMN, the canonical ledger becomes the gravitational center.

Wave 5: The Tokenization Layer.
The Genesis Token workflow becomes viable. Digital rails interoperate with private-asset reality.

Wave 6: Marketplace Emergence.
Products become composable. Liquidity becomes programmable. The marketplace appears because the infrastructure beneath it is finally coherent.

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8. Conclusion: The Infrastructure Moment

Every market reaches a moment when the old ways of operating can no longer support the weight of its own growth. Public markets reached that moment in the 1970s, when paper-based settlement collapsed under rising volumes and forced the creation of DTCC. Payments reached it in the 1990s, when cross-border fragmentation made global commerce impossible without shared messaging standards. Cloud computing reached it in the 2010s, when distributed systems required new abstractions to scale.

Private markets are standing at that same inflection point.

For decades, private assets grew as a cottage industry, not an information system. They expanded in size, sophistication, and global relevance without ever developing the representational layer required for scale. The result is a market defined by friction, fragmentation, and bespoke workflows — a system that functions only because humans act as middleware. That model cannot survive the transition from institutional capital to mass-market distribution.

PAMN is the keystone that resolves this tension. It is the canonical protocol that gives private assets the structural dignity they have always lacked. Once assets become addressable, the entire ecosystem reorganizes around that truth. Tokenization stops being an experiment and becomes a representation layer grounded in canonical data. 401(k) distribution becomes operationally feasible because eligibility, reporting, and lifecycle events are machine-readable. Regulatory supervision becomes continuous rather than episodic. Secondary liquidity becomes a matter of infrastructure rather than heroics. Product creation becomes assembly rather than reinvention.

The future of private markets is not a new exchange. Exchanges come later — after the assets themselves become addressable, after lifecycle events become standardized, after custodians integrate, after tokenization becomes canonical. The future is a **pipeline** — a representational and messaging layer that turns private assets into interoperable objects capable of flowing across custodians, wealth platforms, digital rails, and regulatory systems without losing their identity or integrity.

This is the end state: a global, interoperable private-asset marketplace built on canonical objects, standardized events, and digital representations that remain gravitationally bound to the truth that defines them. A marketplace where private assets behave like first-class citizens of the financial universe — discoverable, composable, supervisable, and distributable at scale.

PAMN does not create this world. It reveals the architecture that makes it possible.

Private markets are not entering a new universe. They are entering a **new orbit** — one defined not by gravity alone, but by the infrastructure that finally allows them to move.

References

1. https://www.whitehouse.gov/fact-sheets/2025/08/fact-sheet-president-donald-j-trump-democratizes-access-to-alternative-assets-for-401k-investors/

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* For full appendices, transaction data, or further case access, please contact the author via LinkedIn messaging. *