Frequency

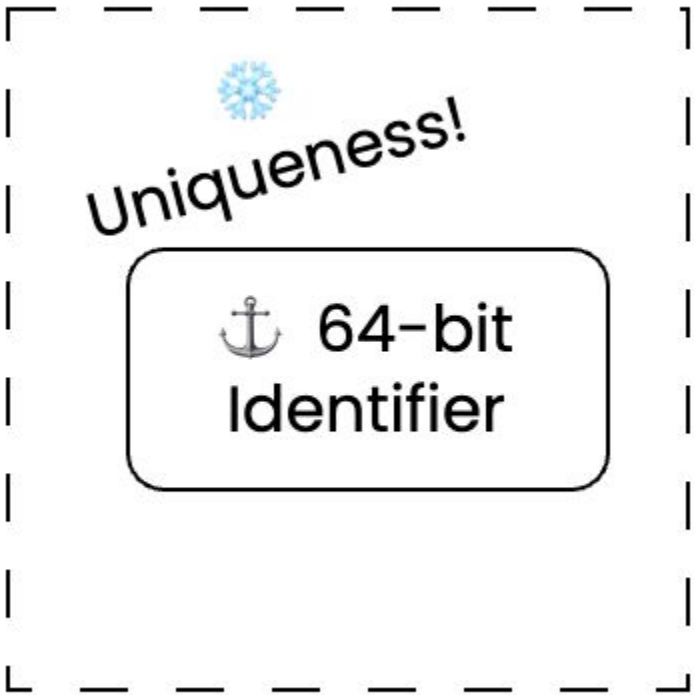
Frequency Architecture Series

Parts 1-5

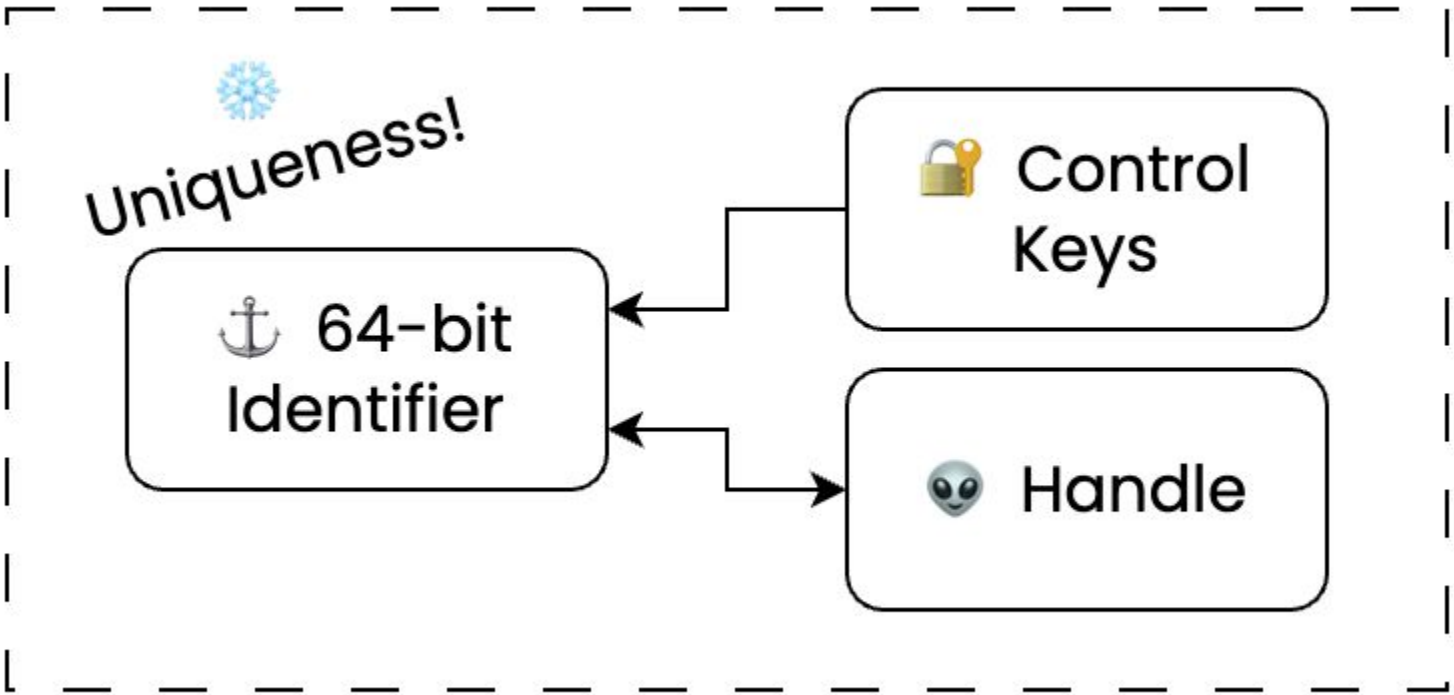
Users & Identity on Frequency

Frequency Architecture Series: Part 1

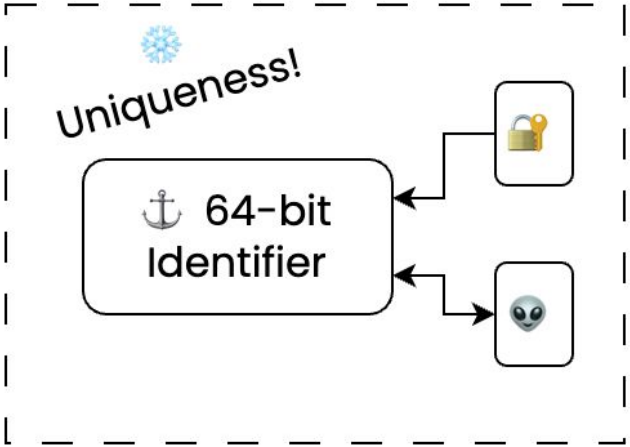
Users & Identity on Frequency

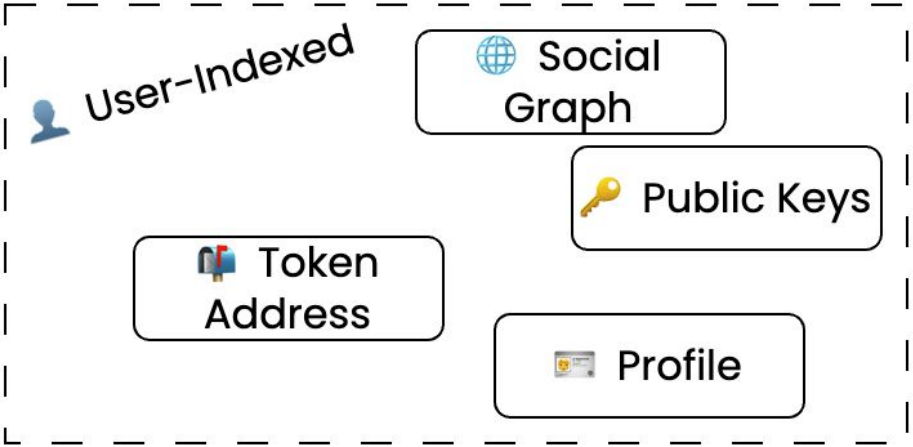


Users & Identity on Frequency

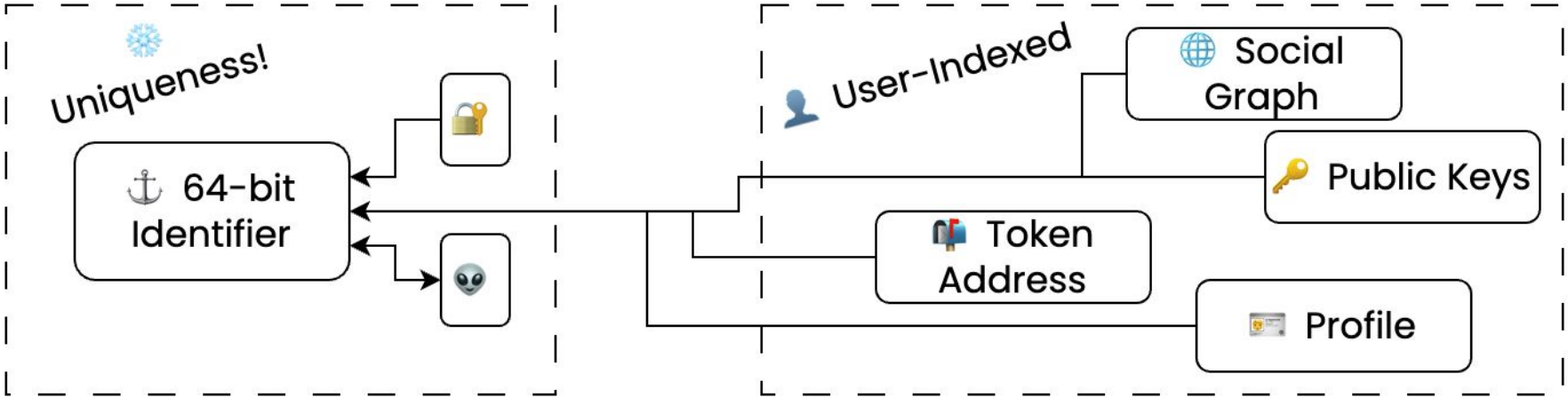


Users & Identity on Frequency

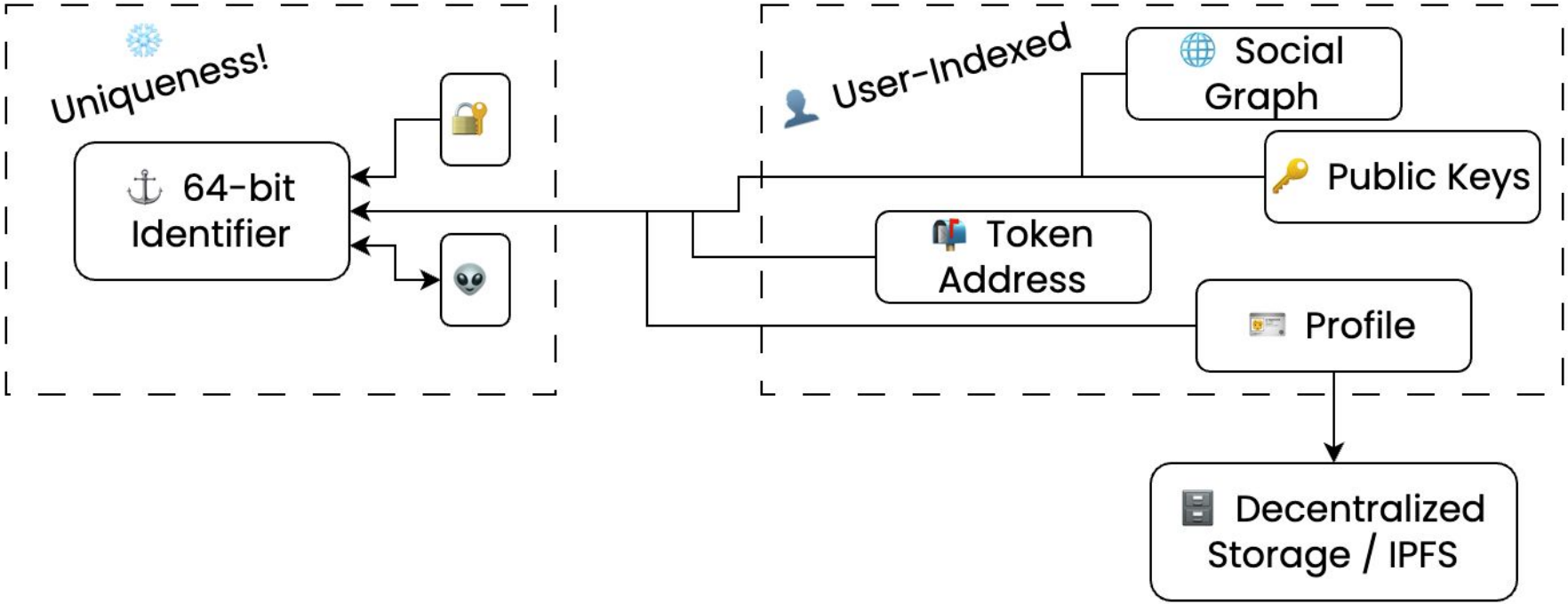




Users & Identity on Frequency



Users & Identity on Frequency



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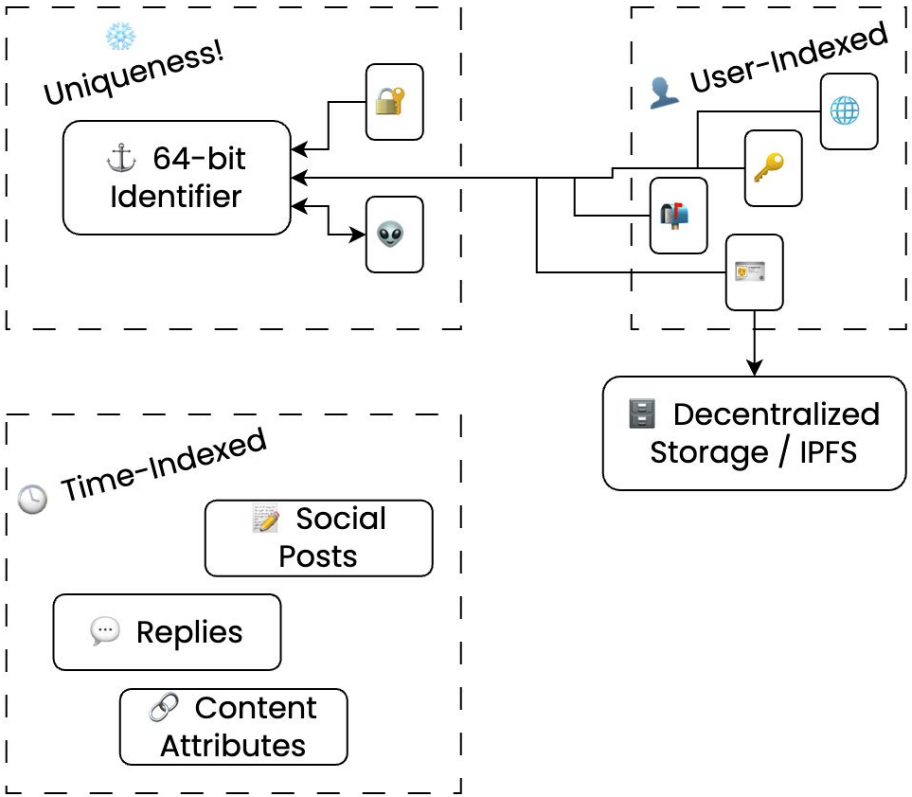
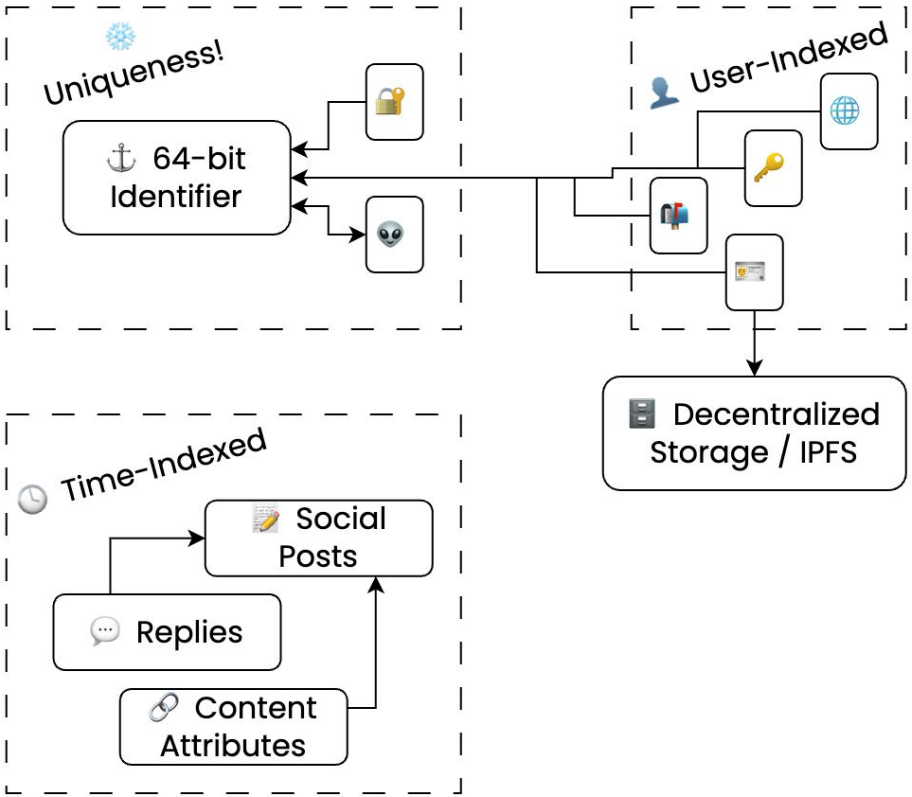
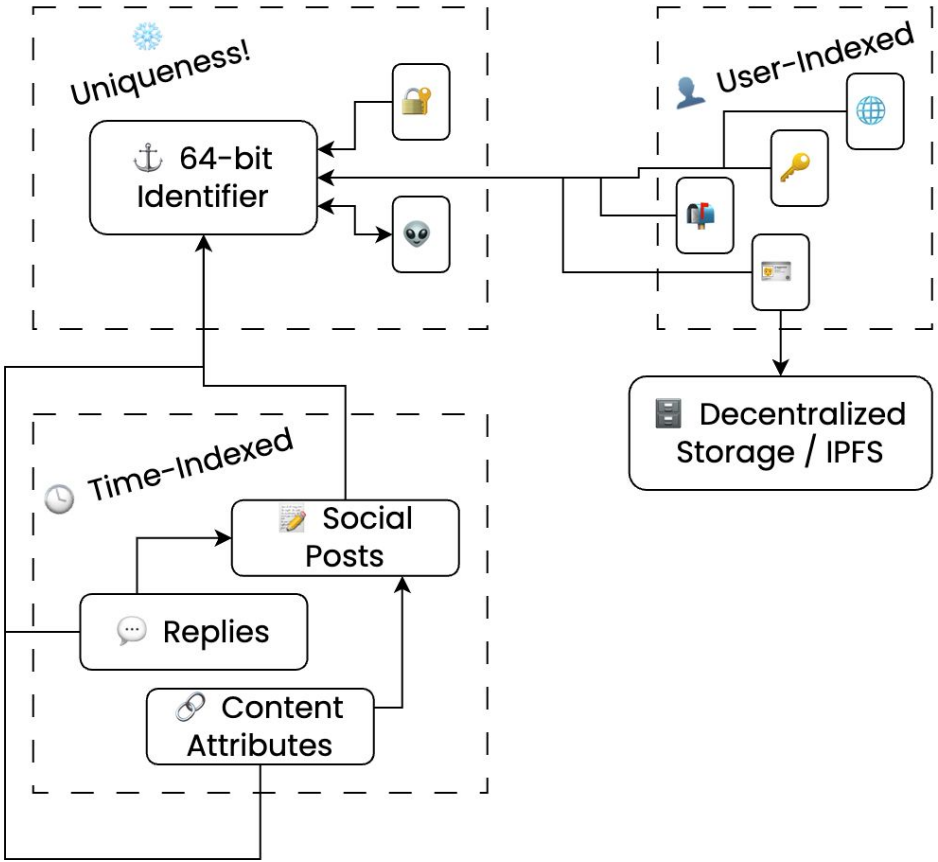


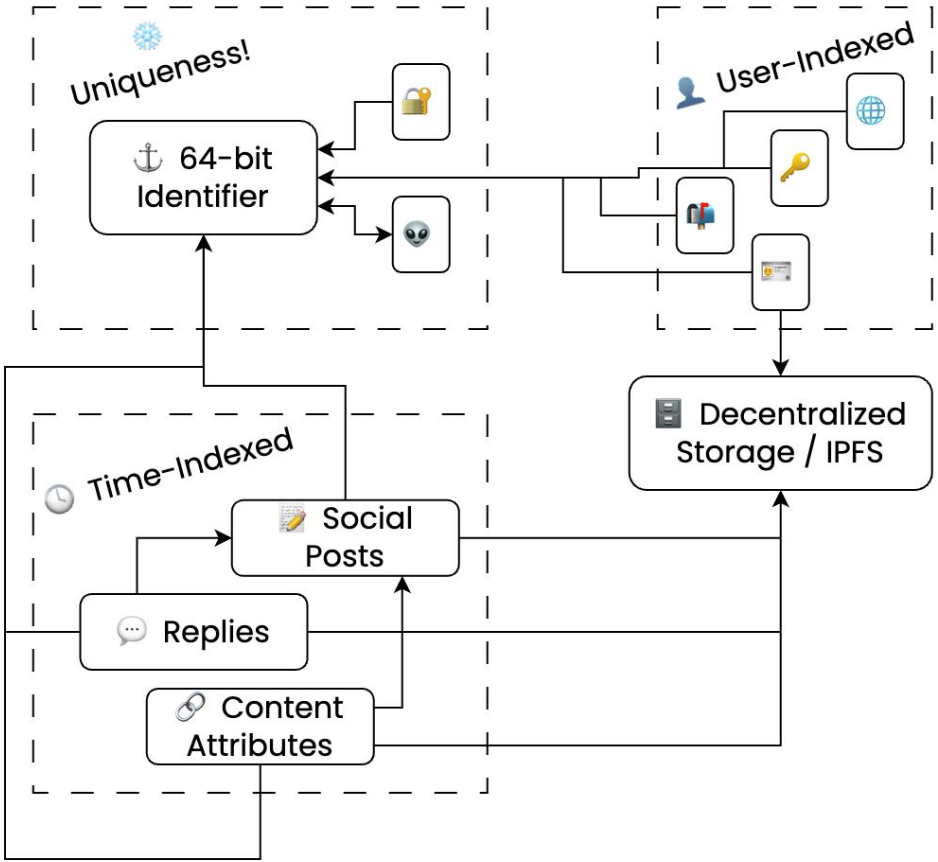
Users & Identity on Frequency



Users & Identity on Frequency



Users & Identity on Frequency



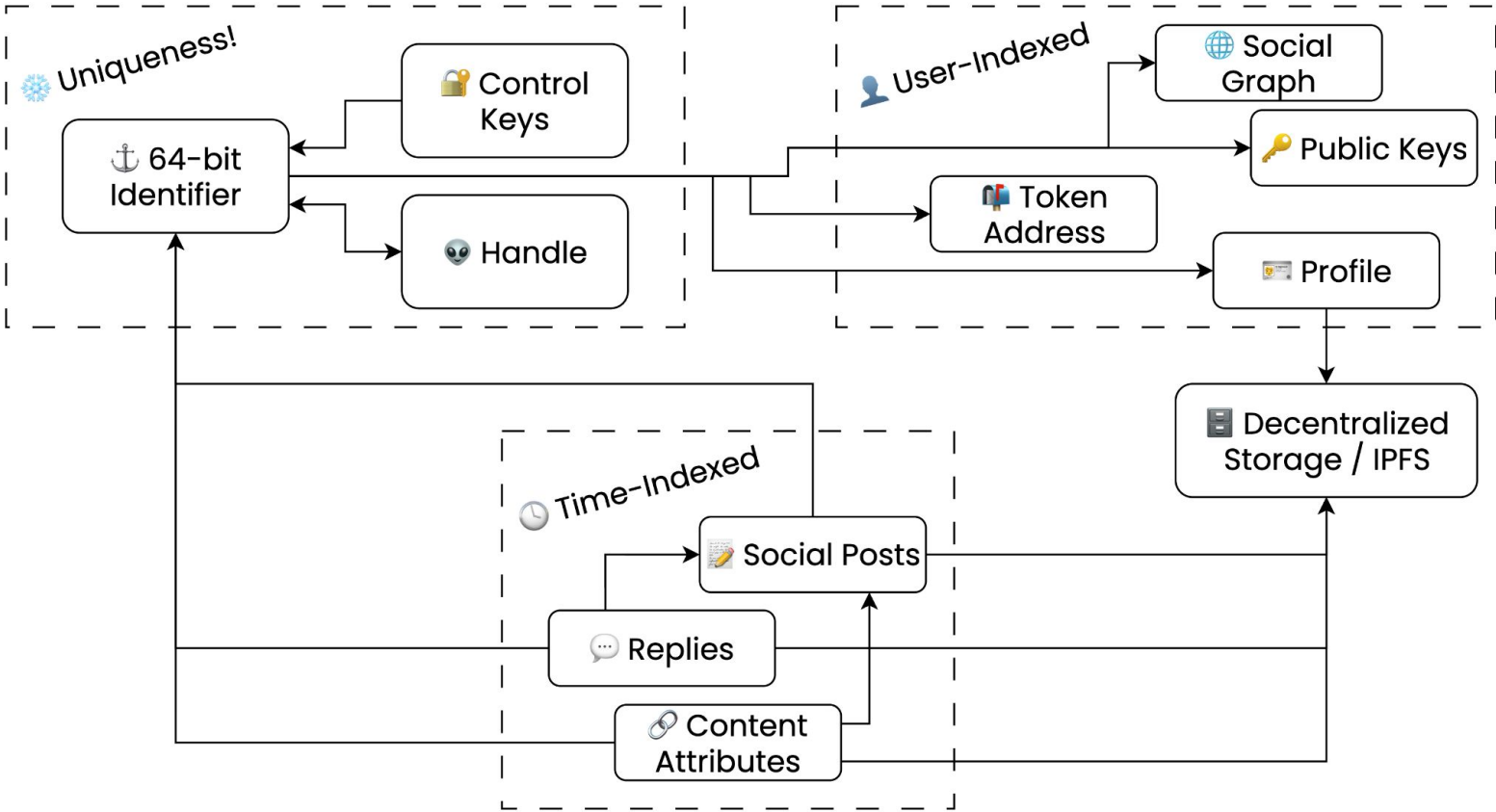
Next Time: Applications

Frequency Architecture Series: Part 2

Applications on Frequency

Frequency Architecture Series: Part 2

Users & Identity on Frequency

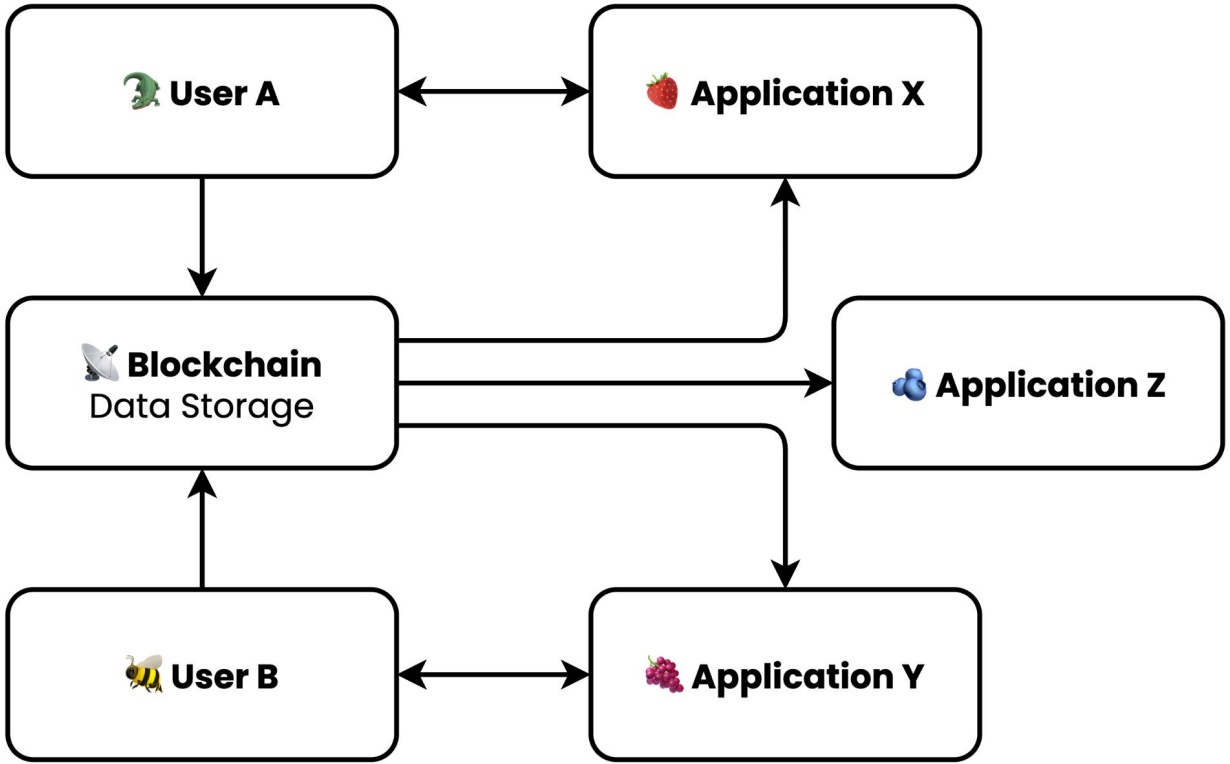


Web 2.0 Model

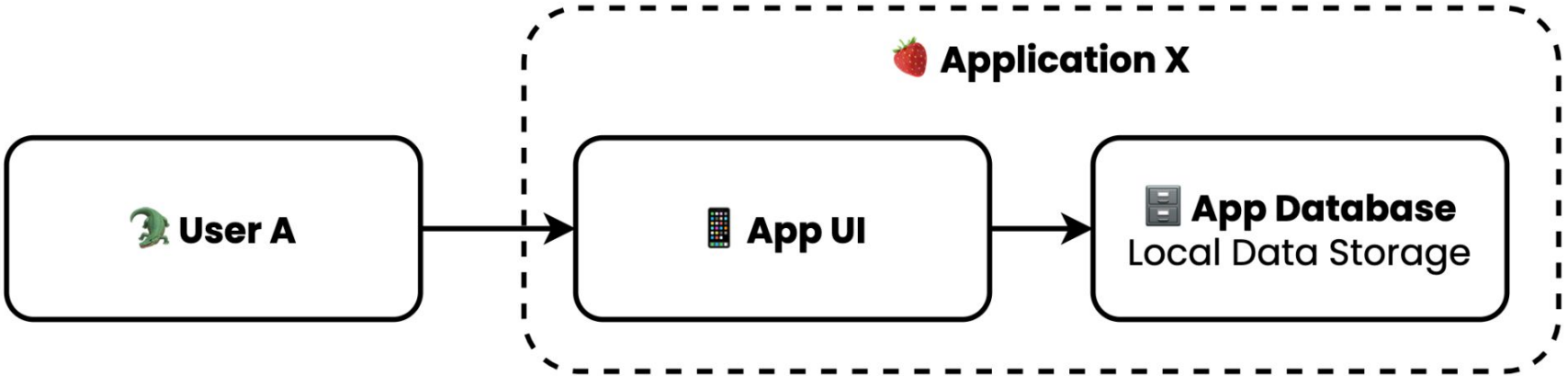

User A
User B
Application X
Database
Data Storage


User C
Application Y
Database
Data Storage

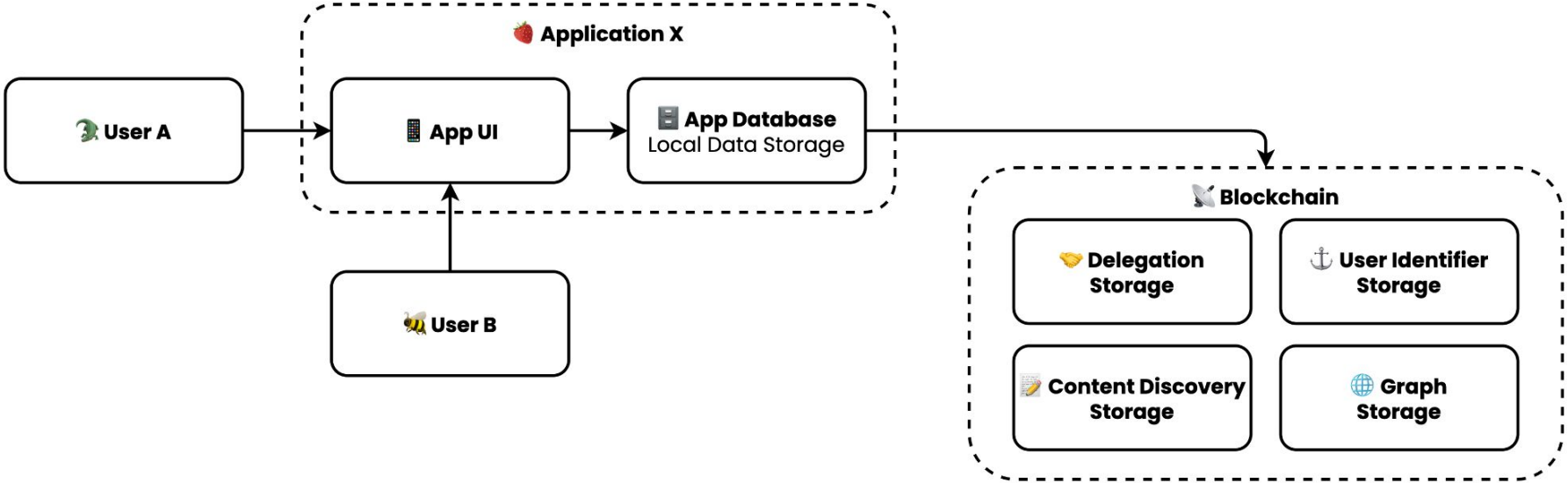
Web 3 Blockchain Model



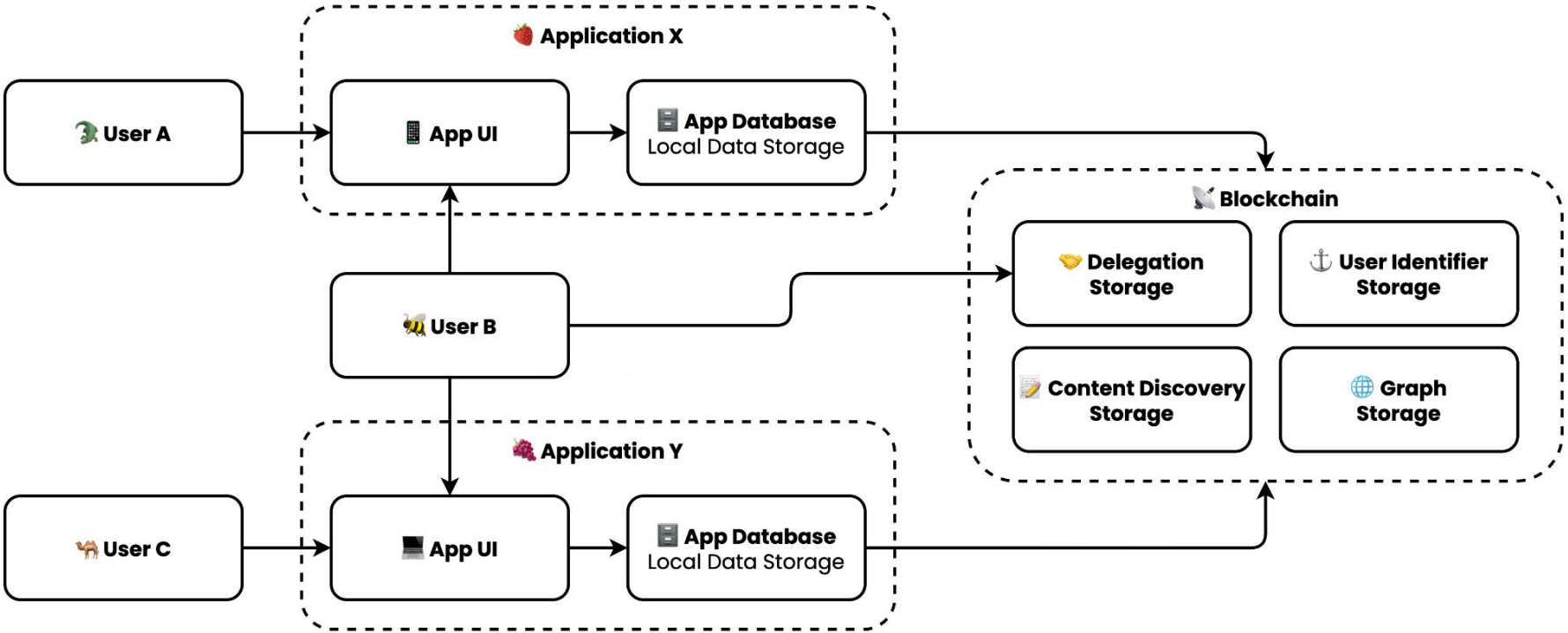
Applications on Frequency



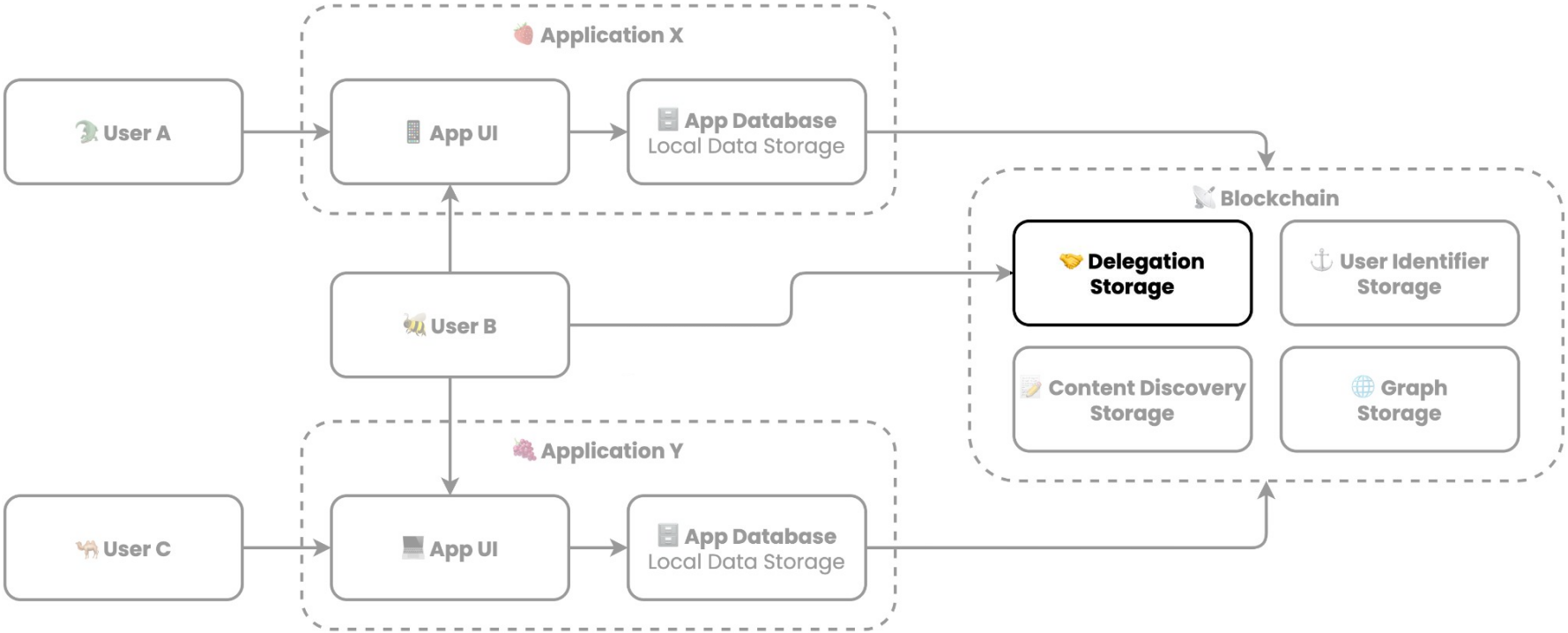
Applications on Frequency



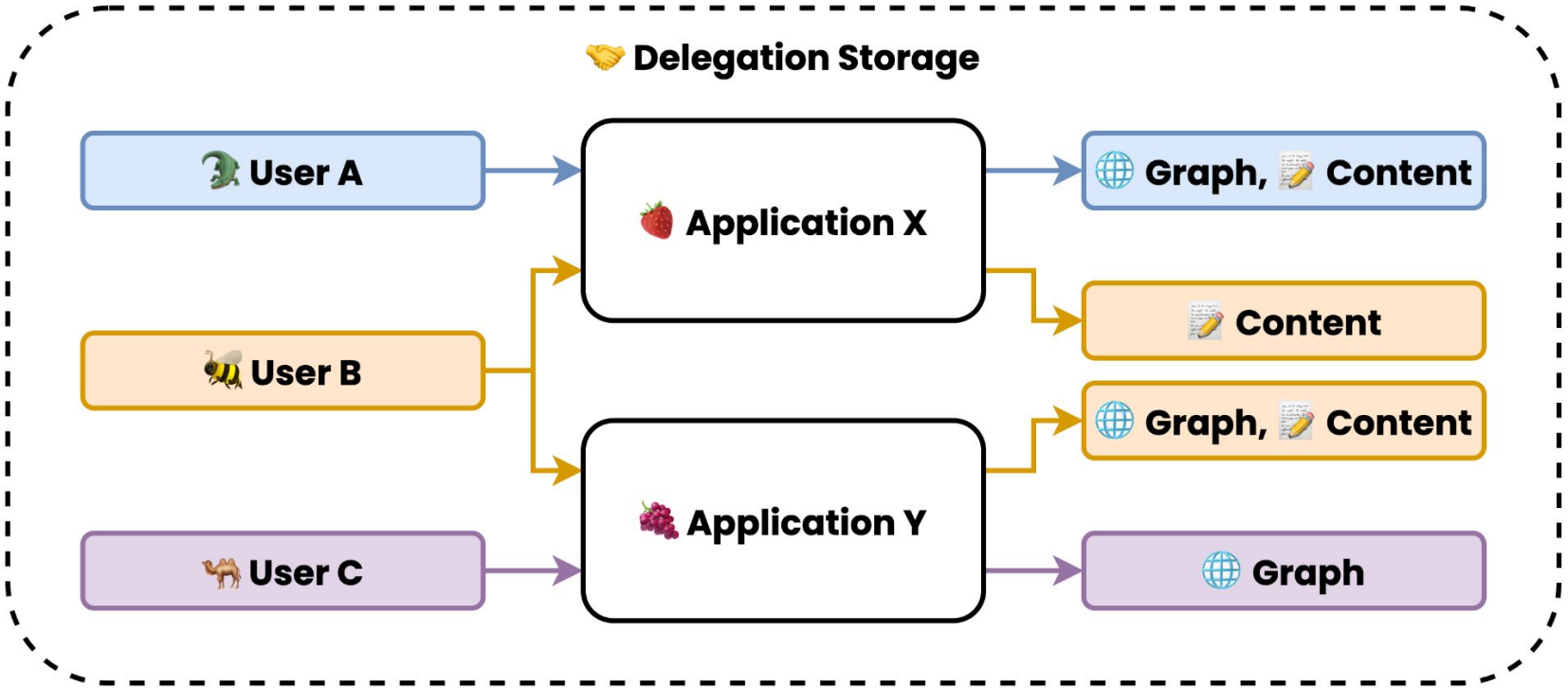
Applications on Frequency



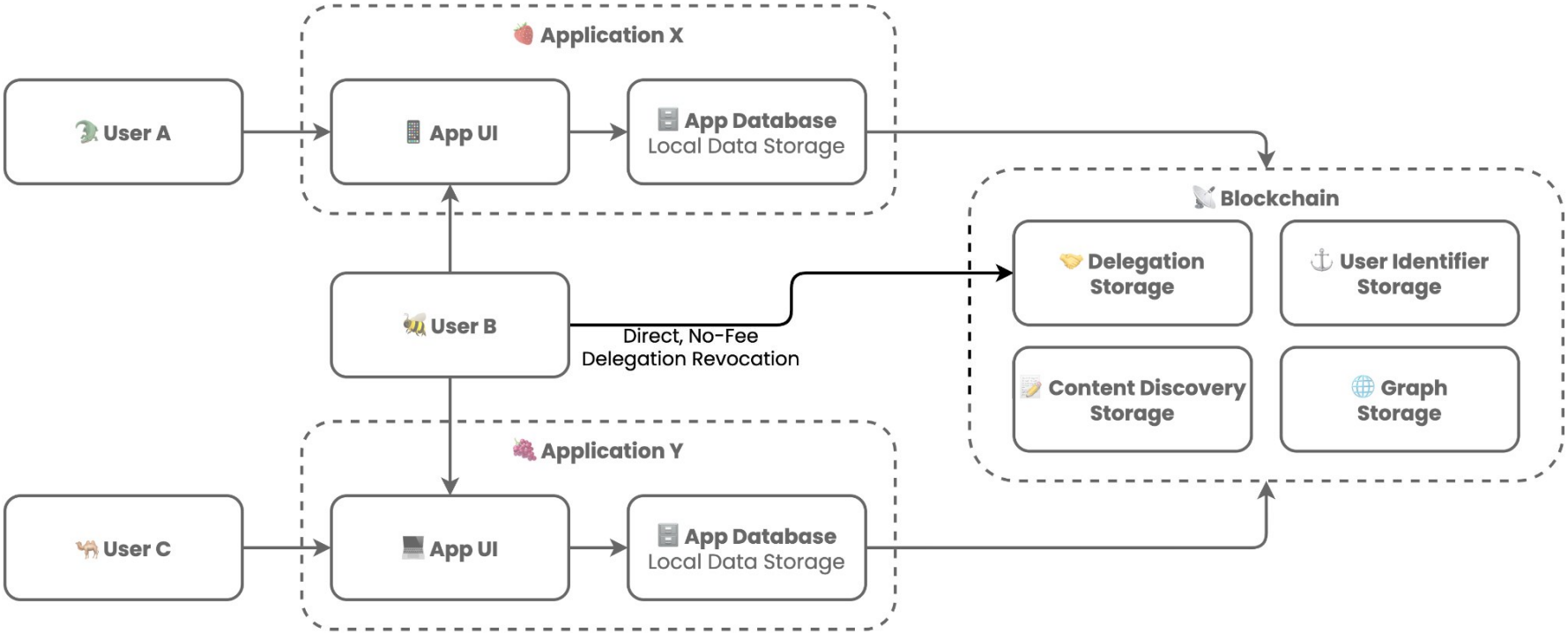
Applications on Frequency



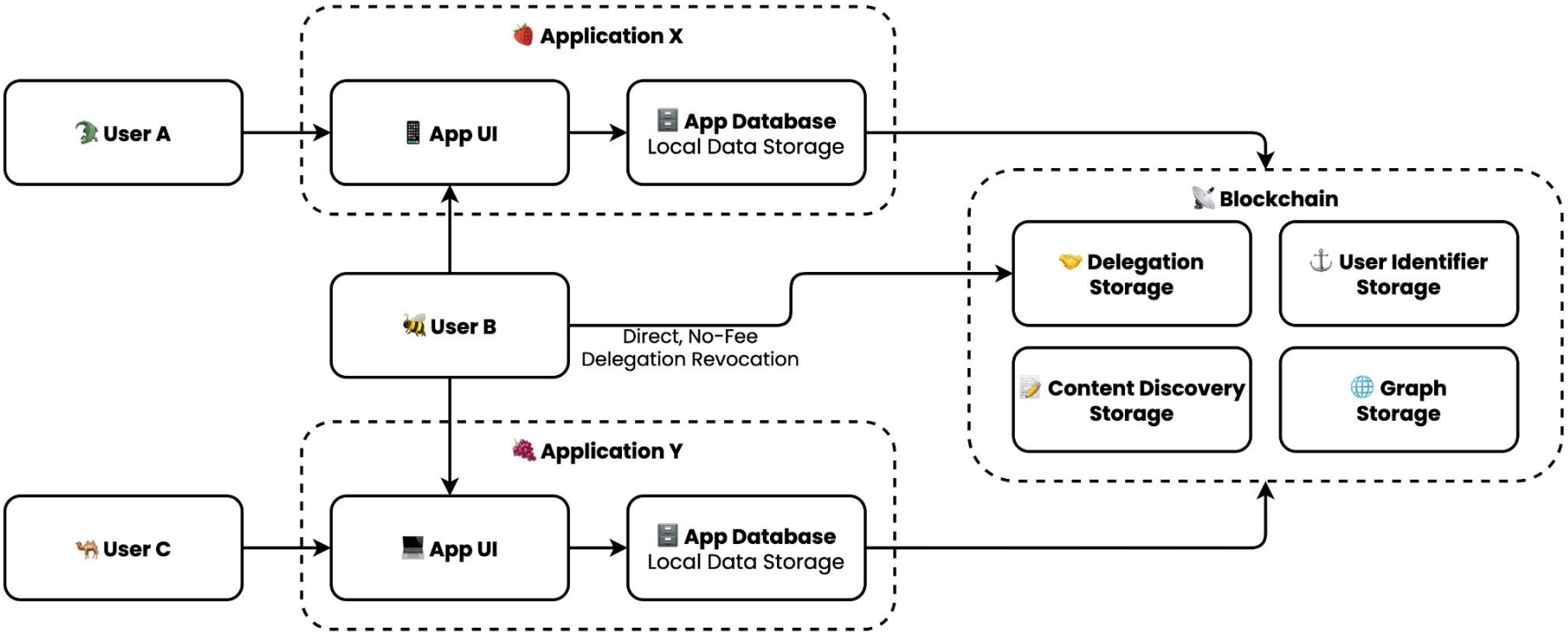
Applications on Frequency



Applications on Frequency



Applications on Frequency



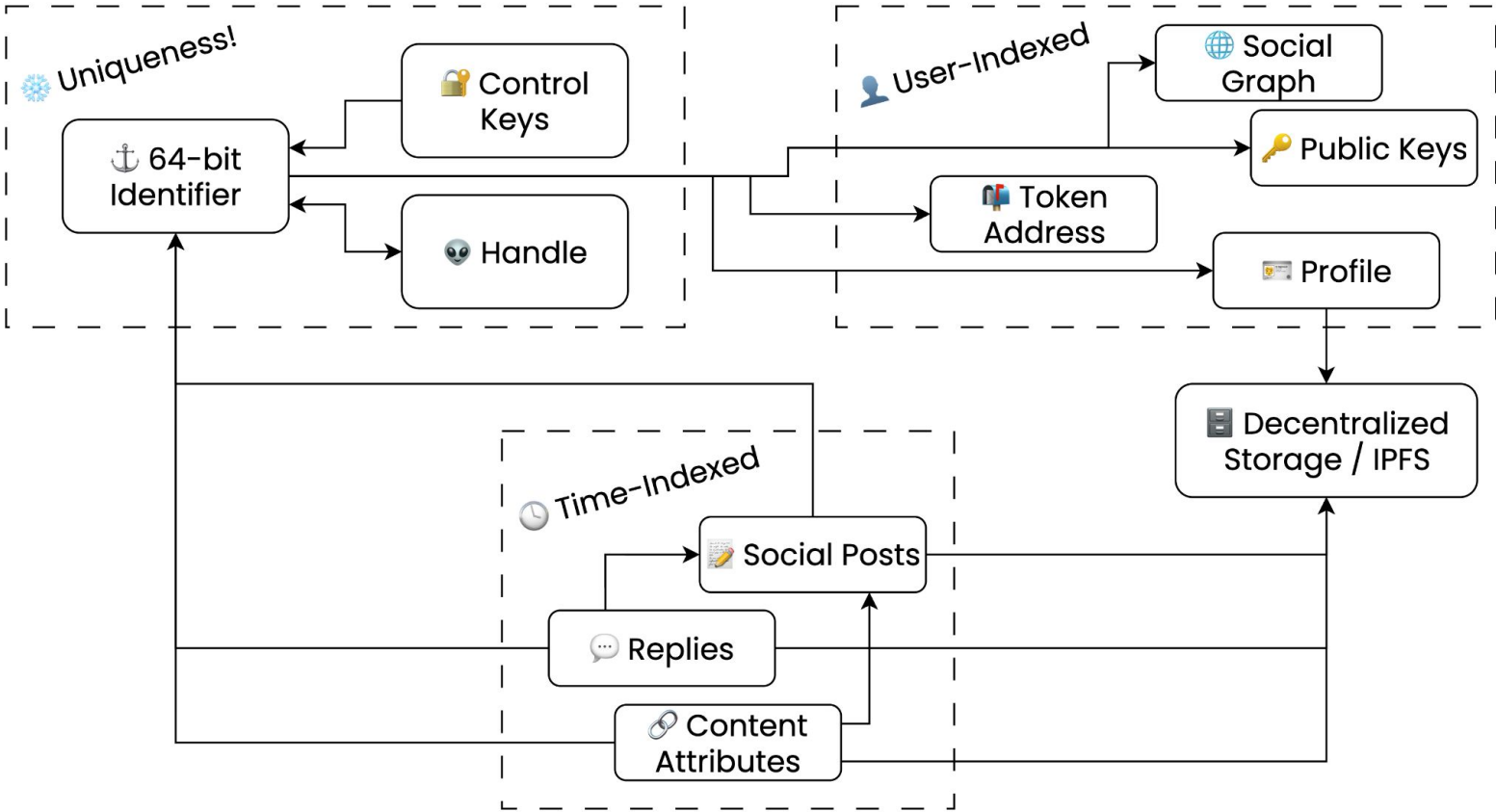
Next Time: Economics on Frequency

Frequency Architecture Series: Part 3

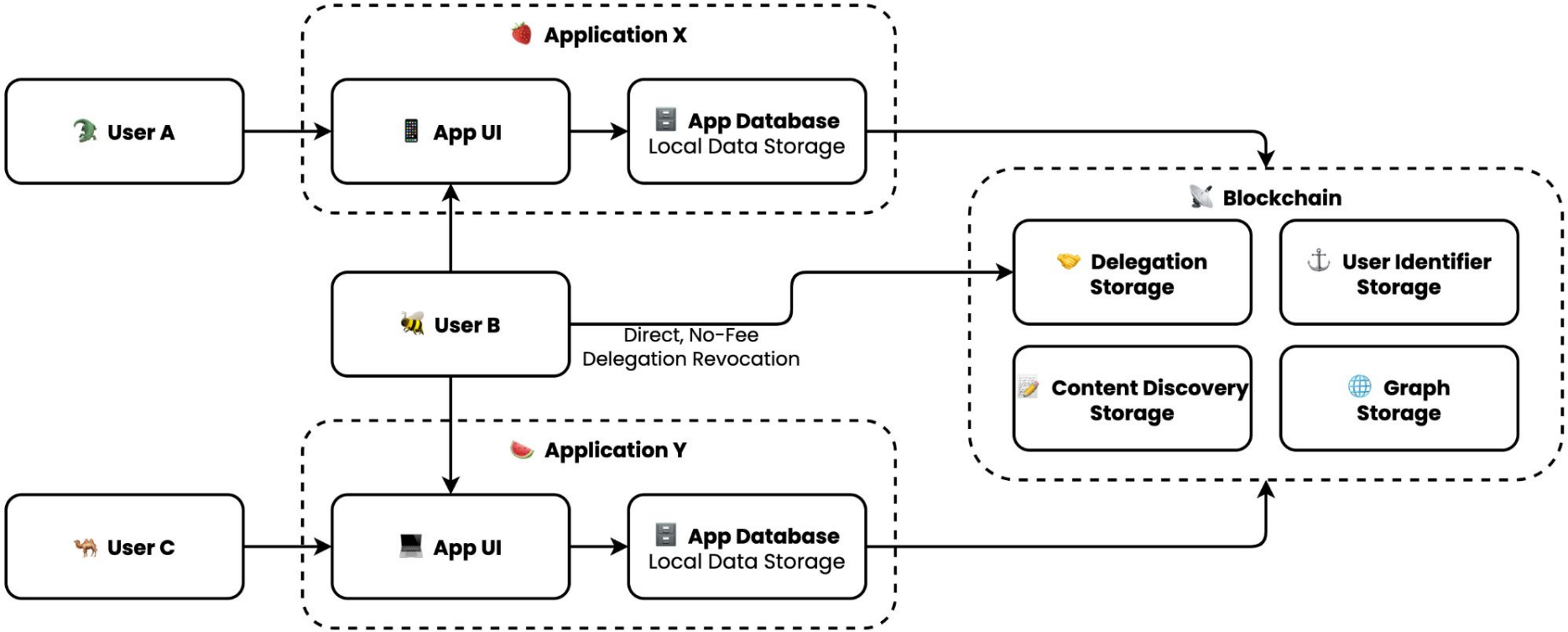
Economics on Frequency

Frequency Architecture Series: Part 3

Users & Identity on Frequency



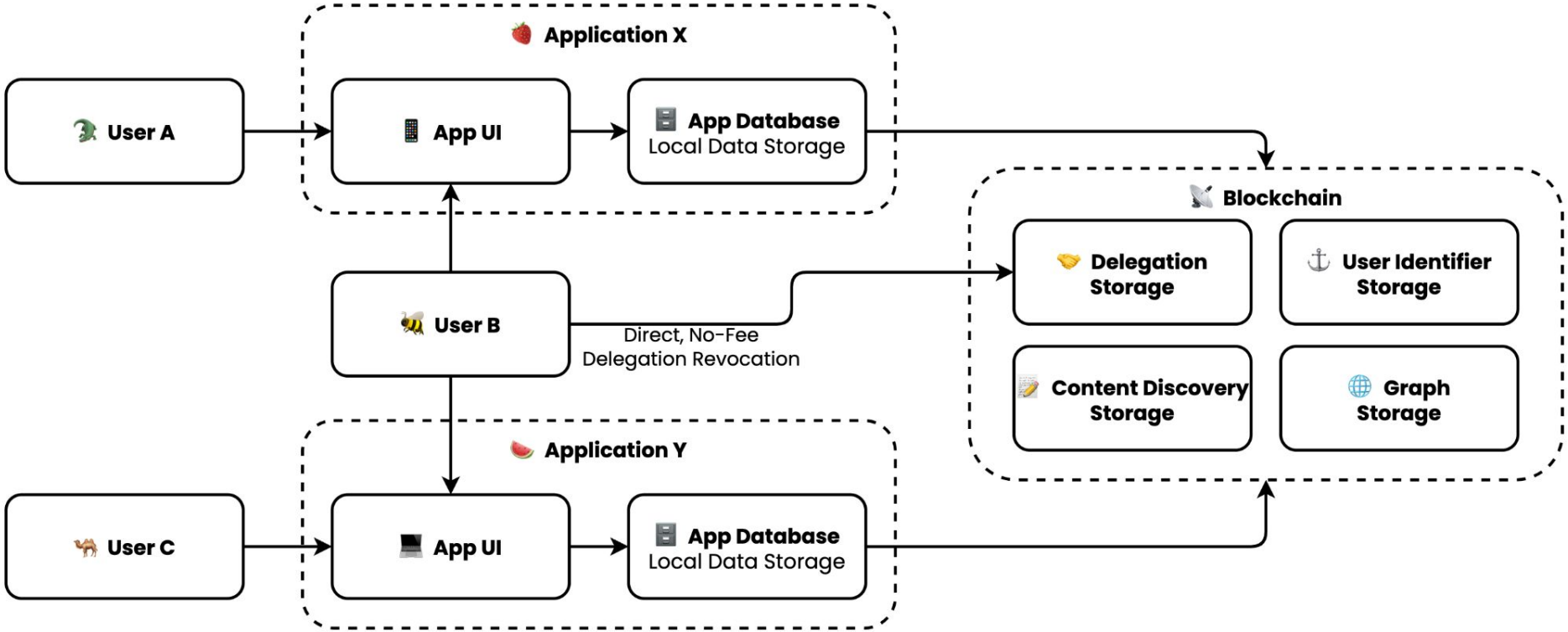
Applications on Frequency



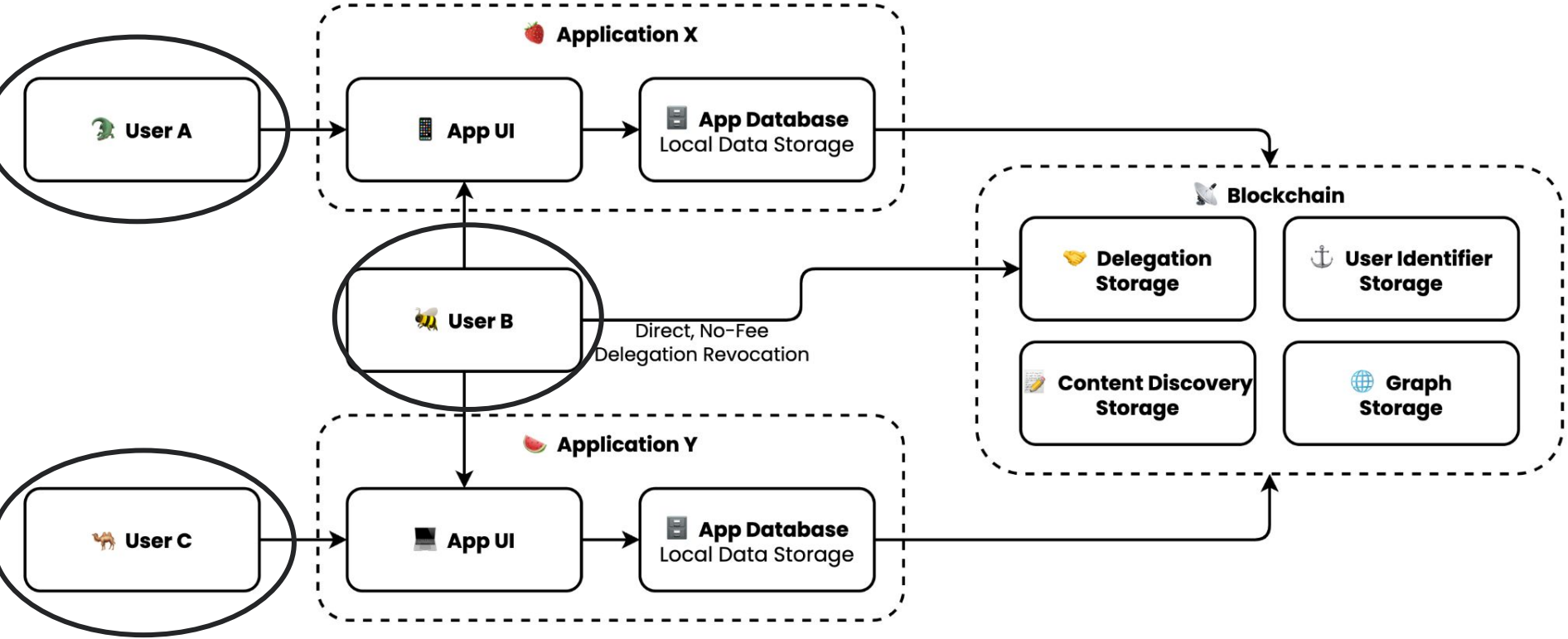
Economics?

Understanding the costs and who pays for it all

Frequency Actors



Frequency Actors



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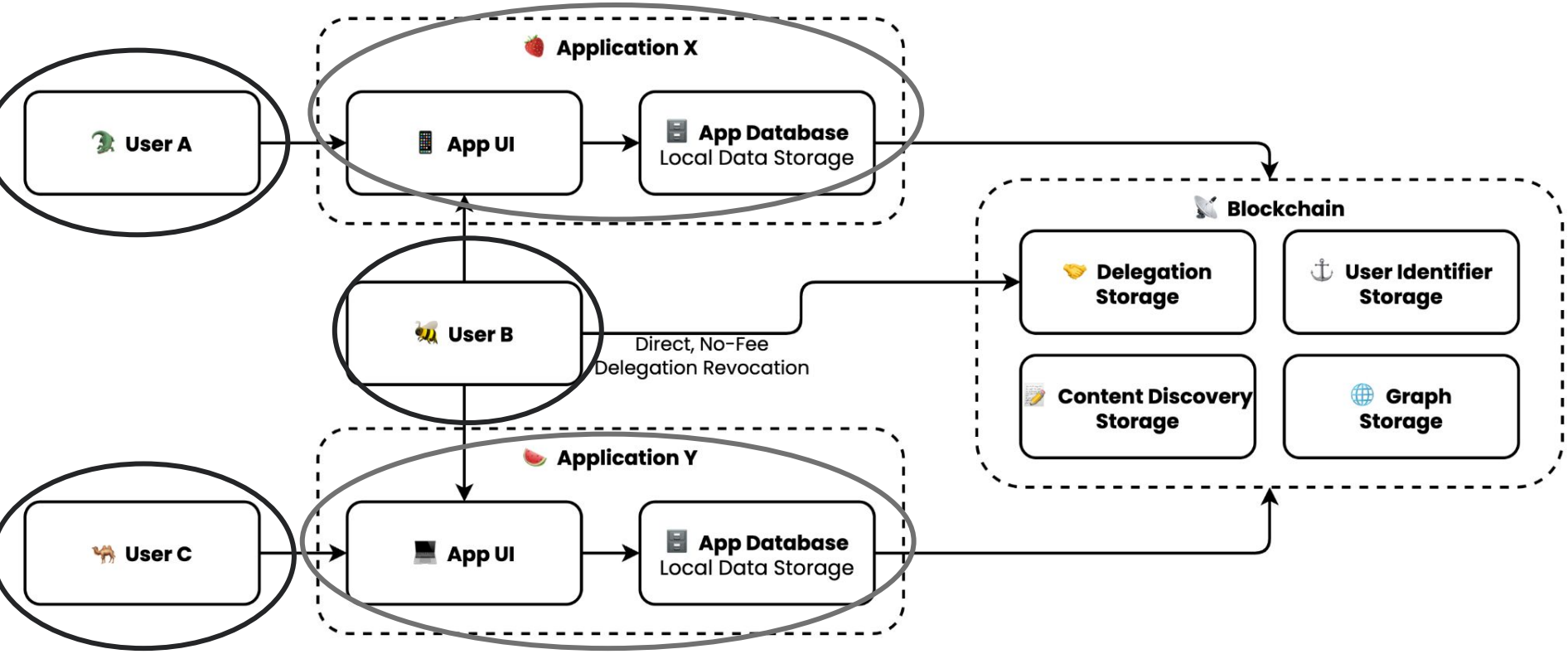
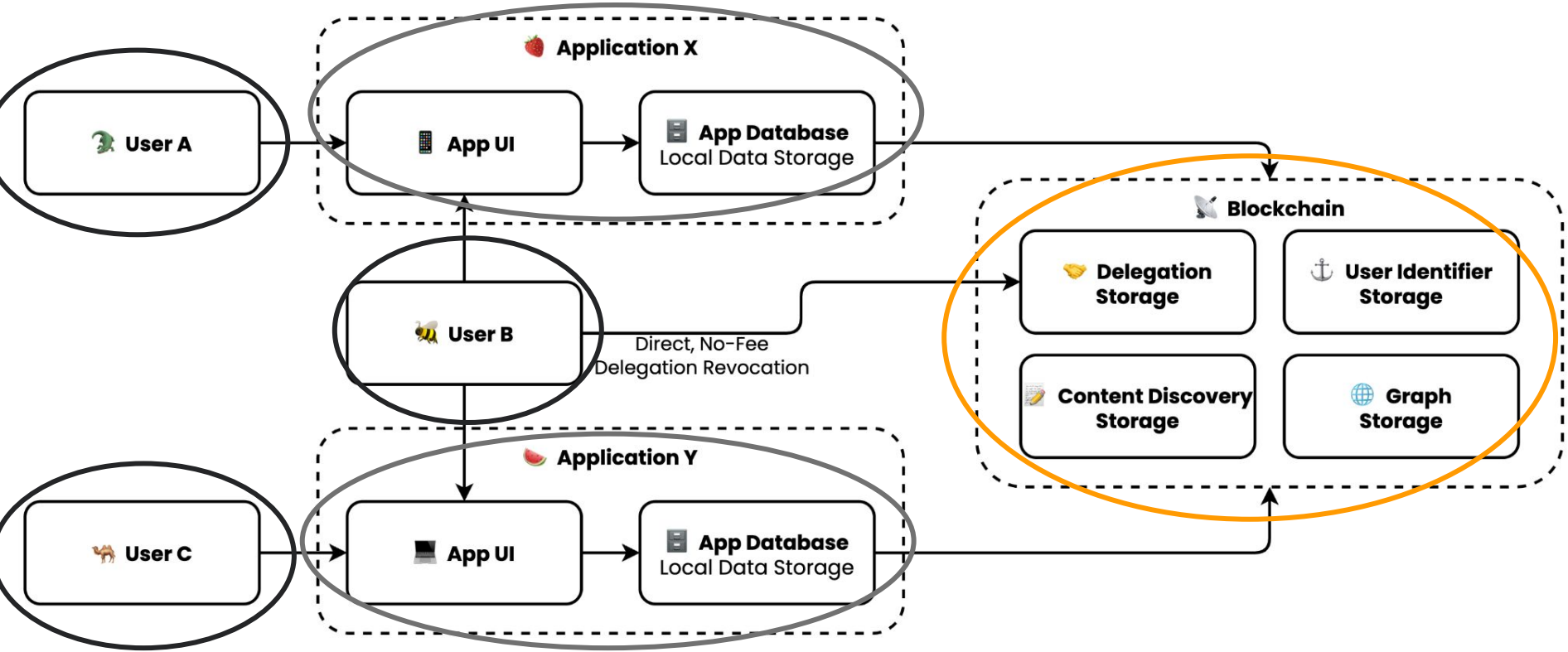


Frequency Actors



Infrastructure has real world costs

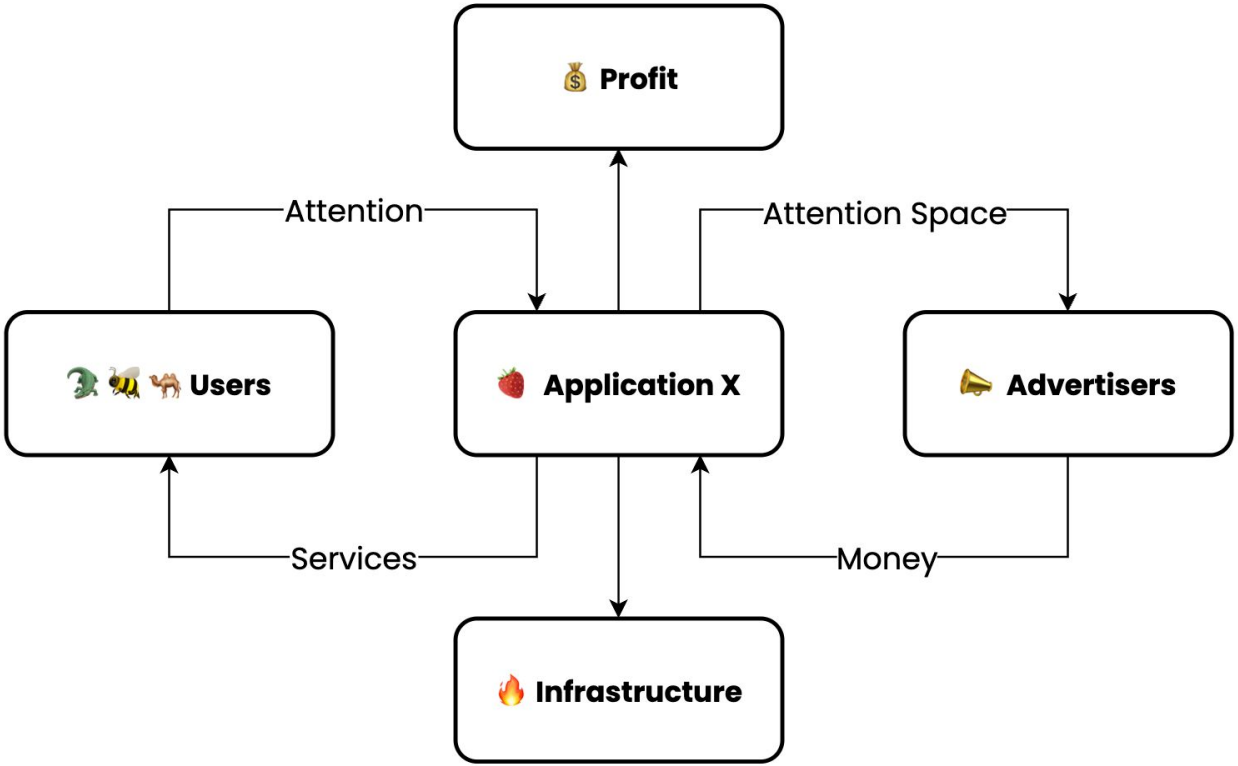
Who wants to pay?

- Users: Content Creators and Consumers?
- Applications?
- Governments?
- Network...?

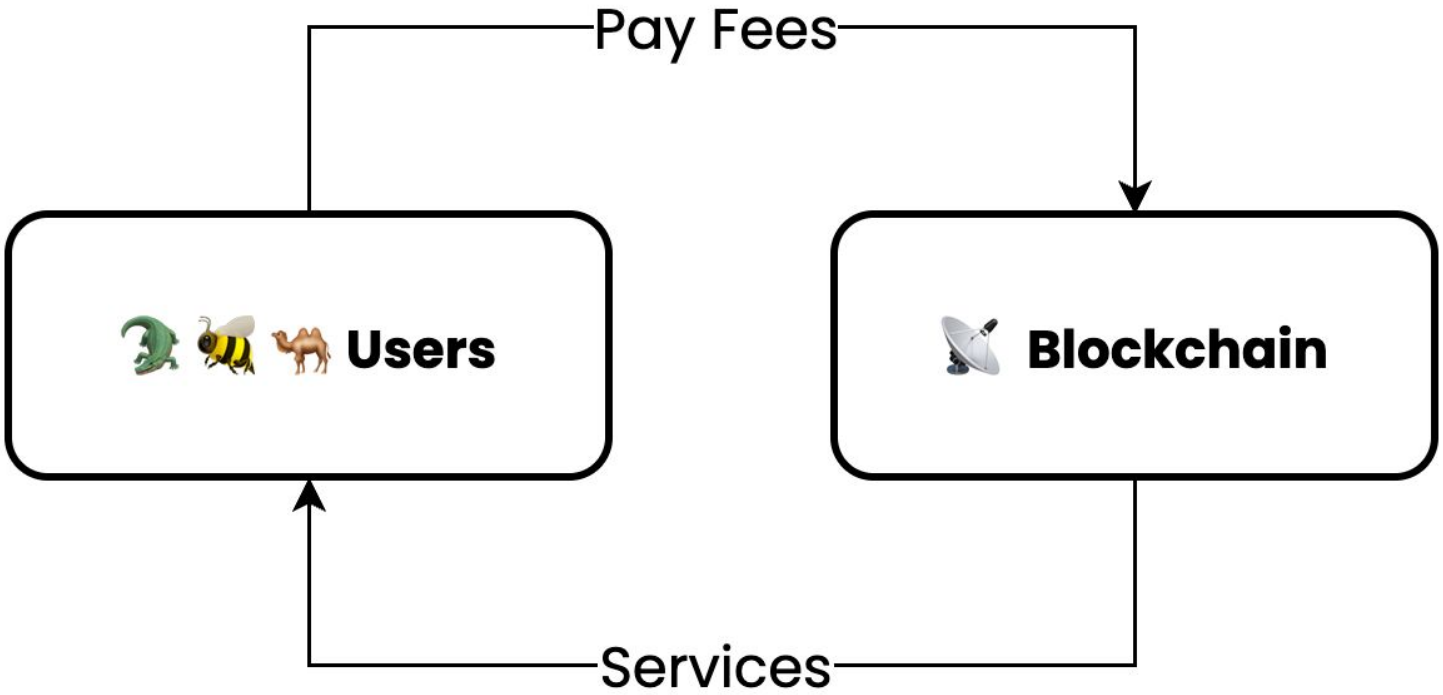
Web 2 Model: It’s FREE for Users!

Web 2 Model: ~~It’s FREE for Users!~~ Users pay via data and attention (Ads)

The Web 2 Model: Simplified



The Web 3 Model: Simplified

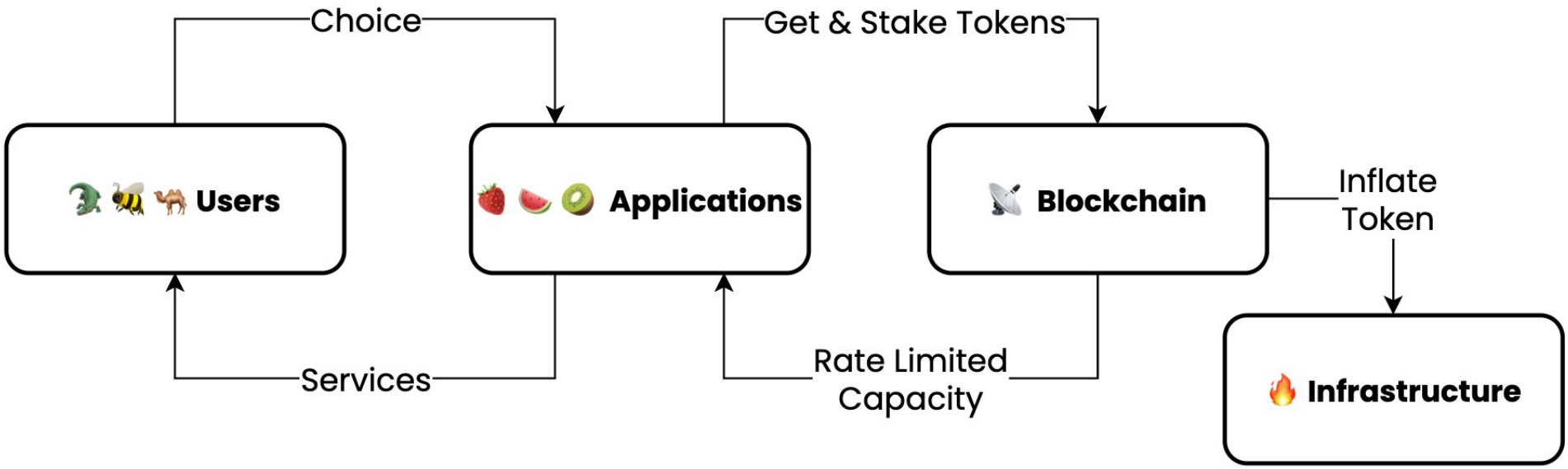


Web 3 Problem for Shared Data:
The value in shared data is the
whole not the parts

Frequency: Costs are shared by the entire network

How? Capacity
Capacity is a rate limit instead of transaction fee model

The Frequency Model: Simplified



Capacity:
Shared Cost, Shared Benefits

How Applications Get Capacity

1. Applications Stake
2. Users Boost
3. Others Stake or Boost

Users don’t need to be involved?

Economic Choice: User Application Choice

- Ads
- Subscriptions
- Non-profit
- Anything you want!

Frequency enables shared costs to build a shared network with economic and Application choice for Users

Next Time: Frequency Data

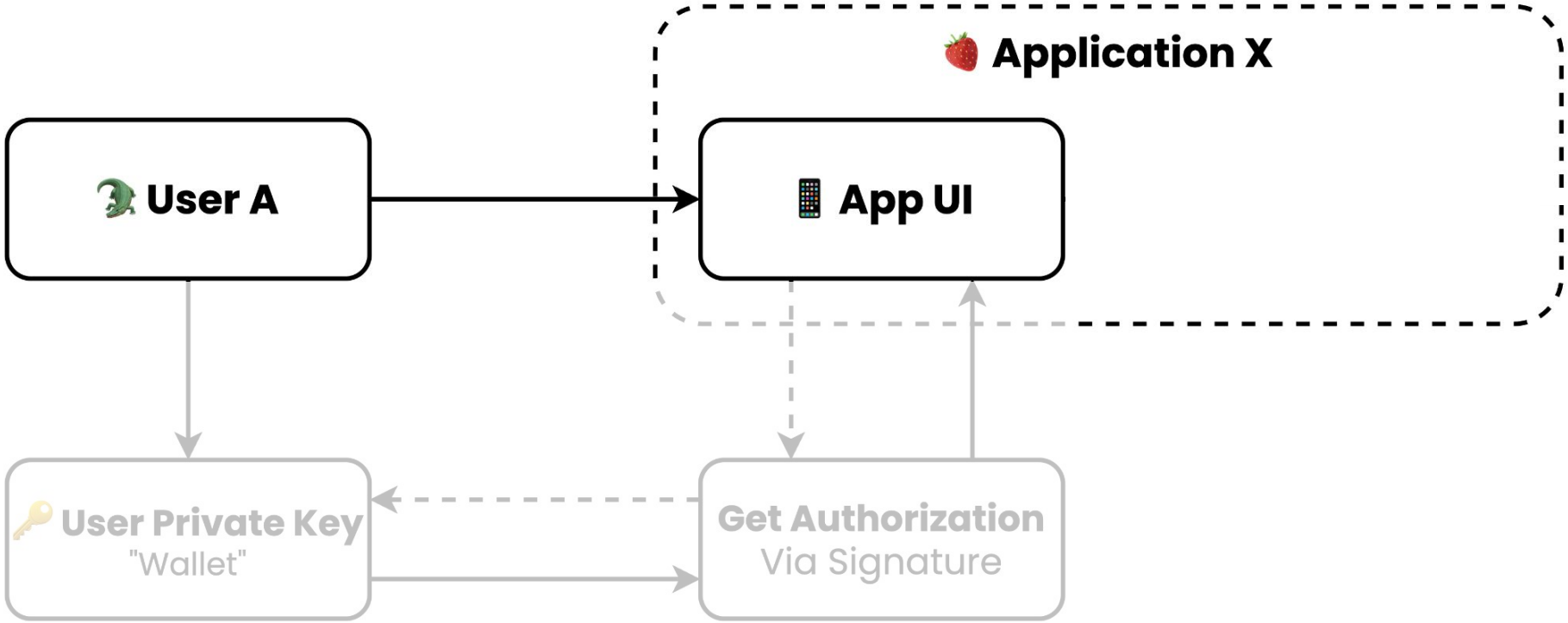
Frequency Architecture Series: Part 4

Data on Frequency

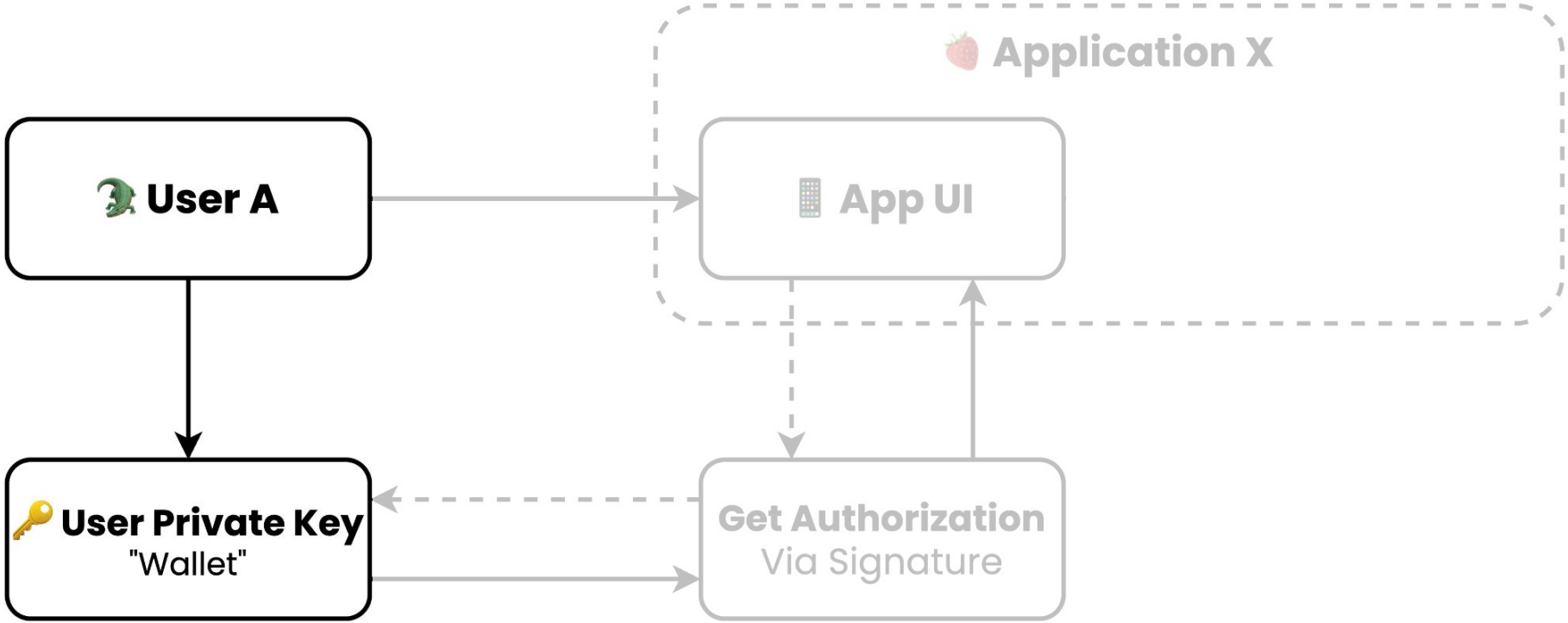
Frequency Architecture Series: Part 4

Let’s Follow the Journey: Signup

Journey: Signup



Journey: Signup



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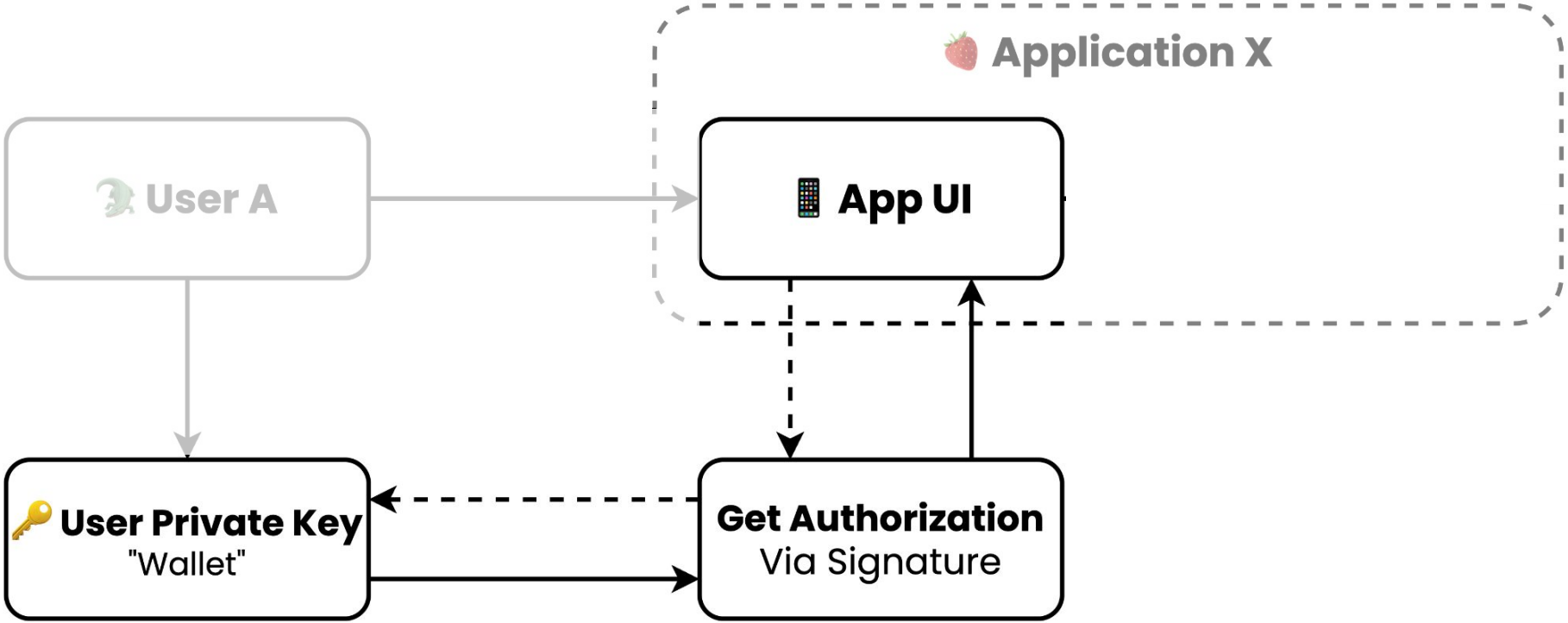
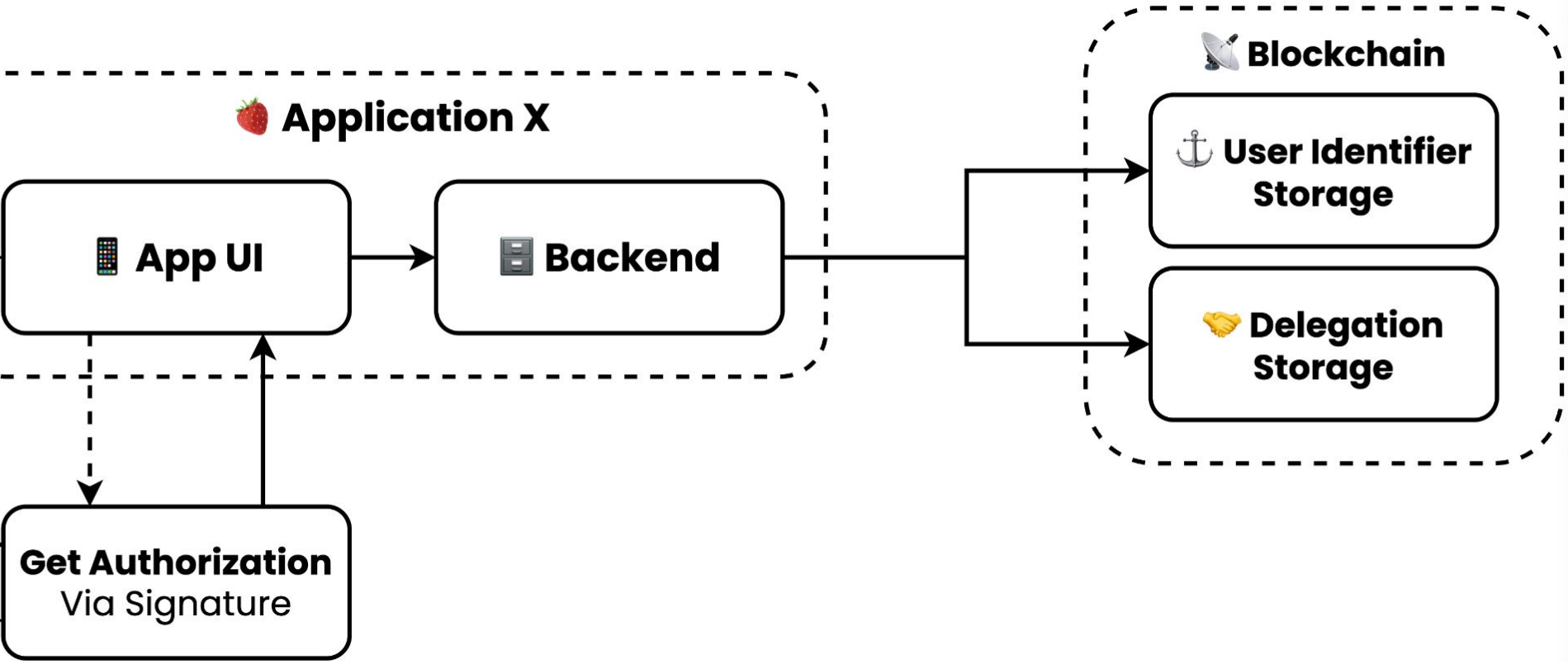


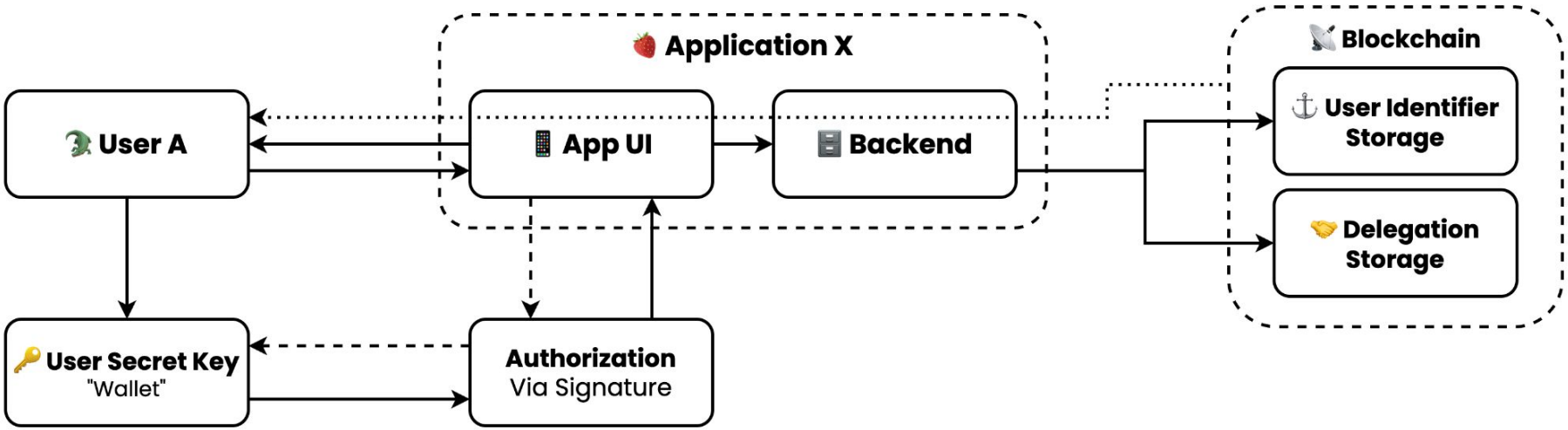
Journey: Signup



Frequency

- Create a Unique 64 Bit Id: MSA Id
  - Controlled by the User's Key
- Create Delegation
  - Application <-> User Permissions
- Claim a Handle
  - User Selection + Unique Suffix
  - Signed-Off on by the User
- Public Graph Encryption Key
  - User-Centric Storage
  - Signed-Off on by the User

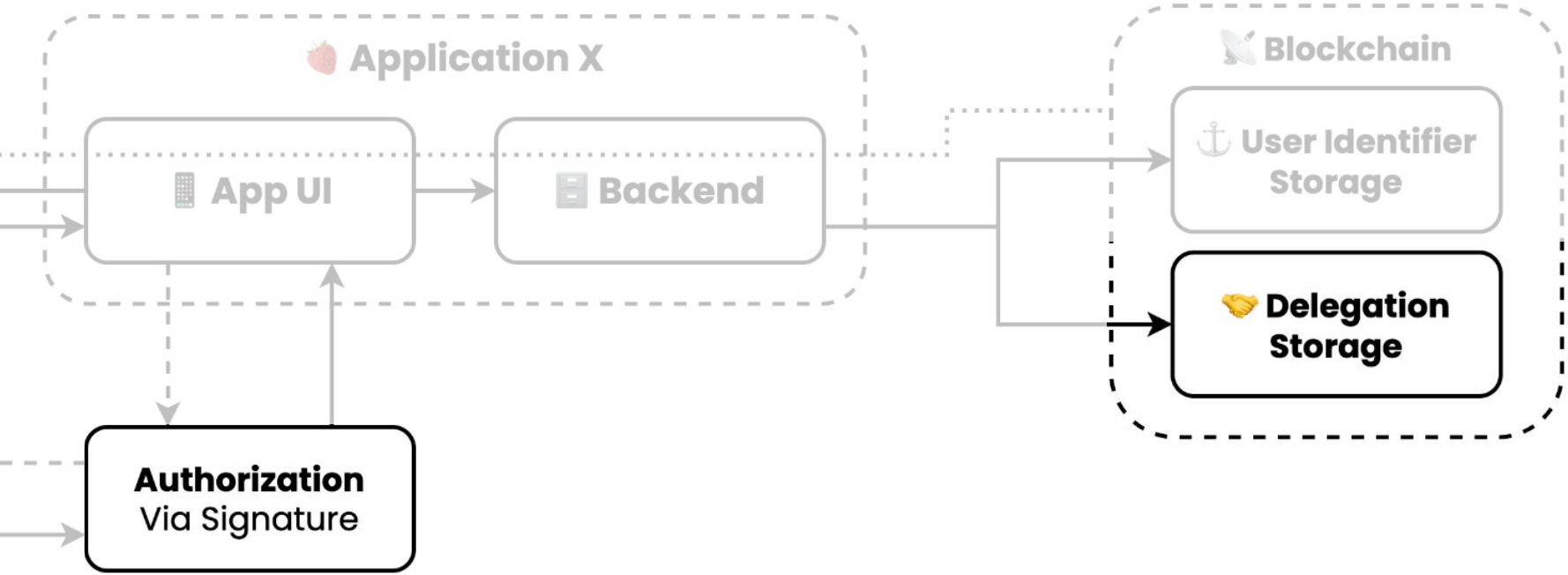
Journey: Signup



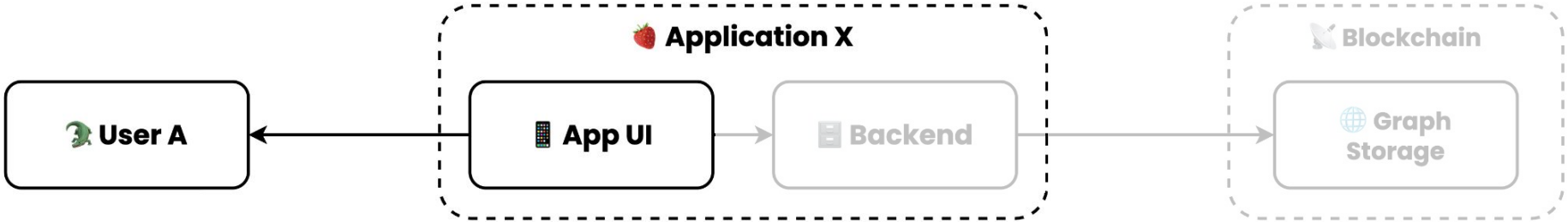
Let’s Follow the Journey: Graph

User-Centric Data

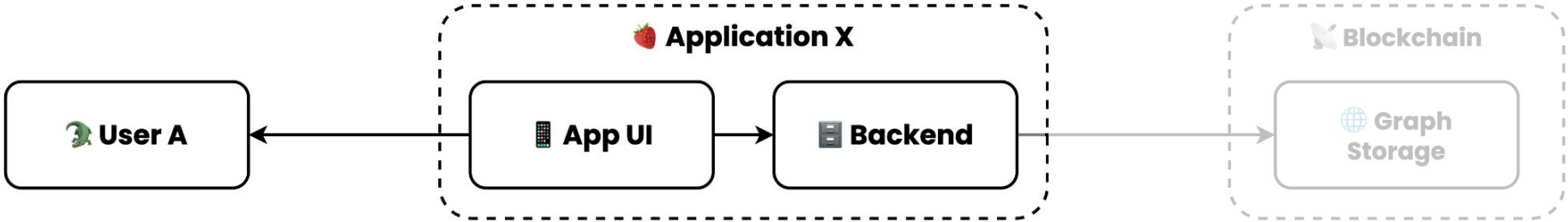
Journey: Graph



Journey: Graph



Journey: Graph



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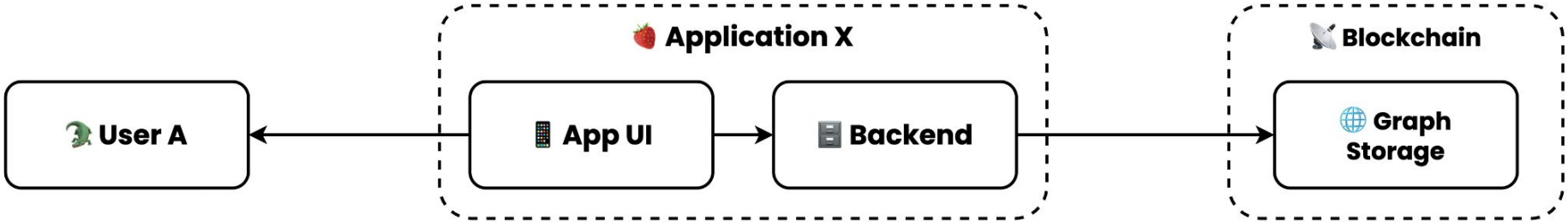
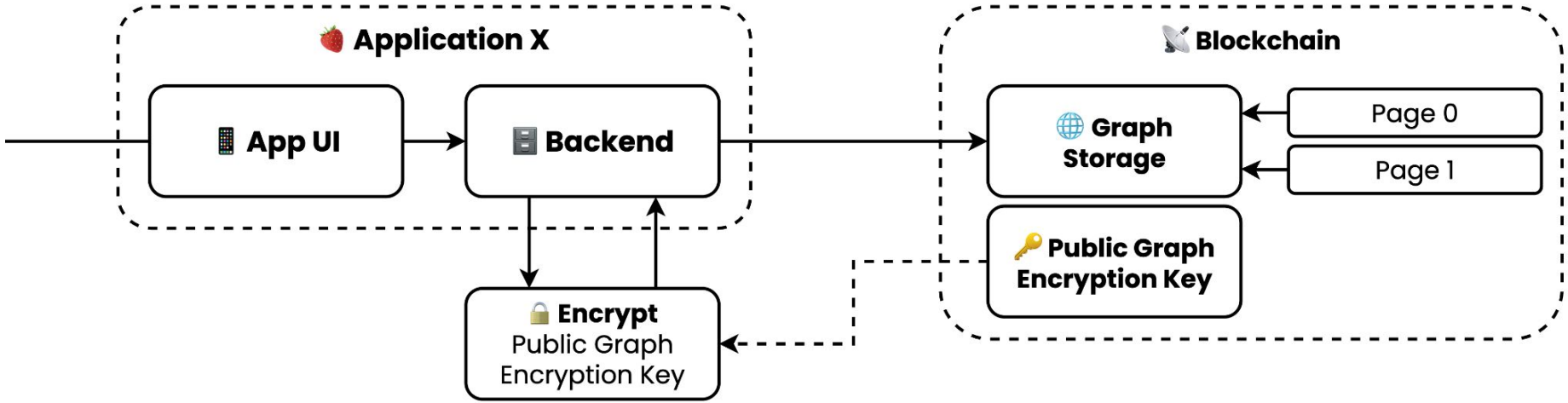


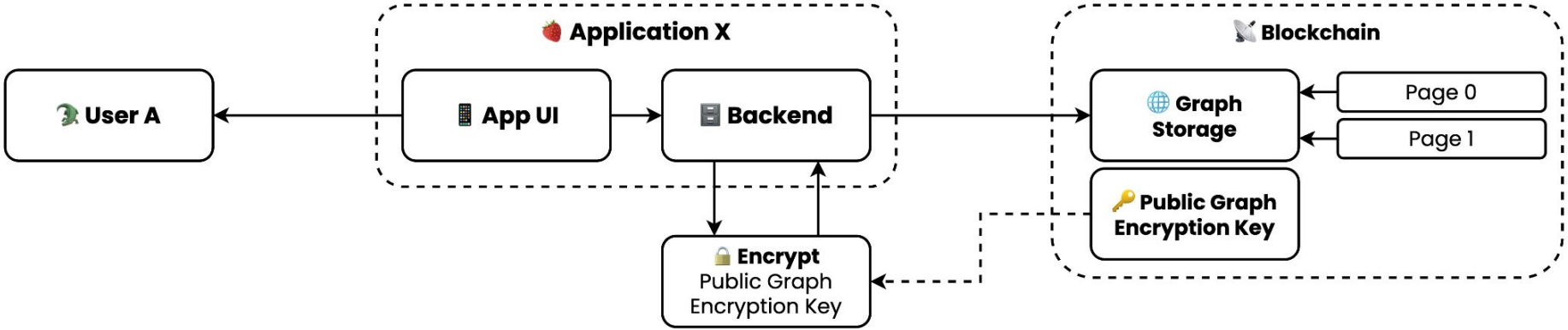
Journey: Graph



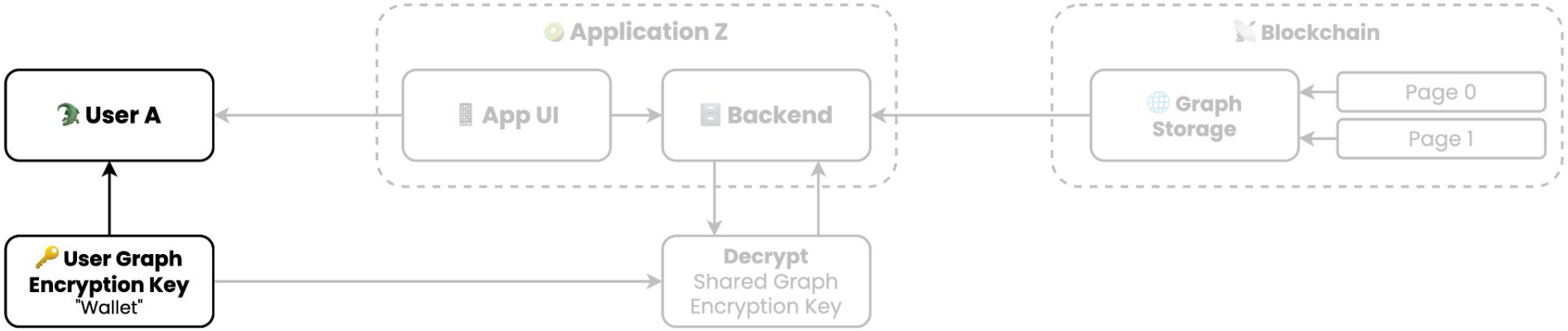
Frequency

- Has the Delegation
  - Application <-> User Permission on Graph
- Has the Current Public Encryption Key
- Encrypted Graph Page(s)

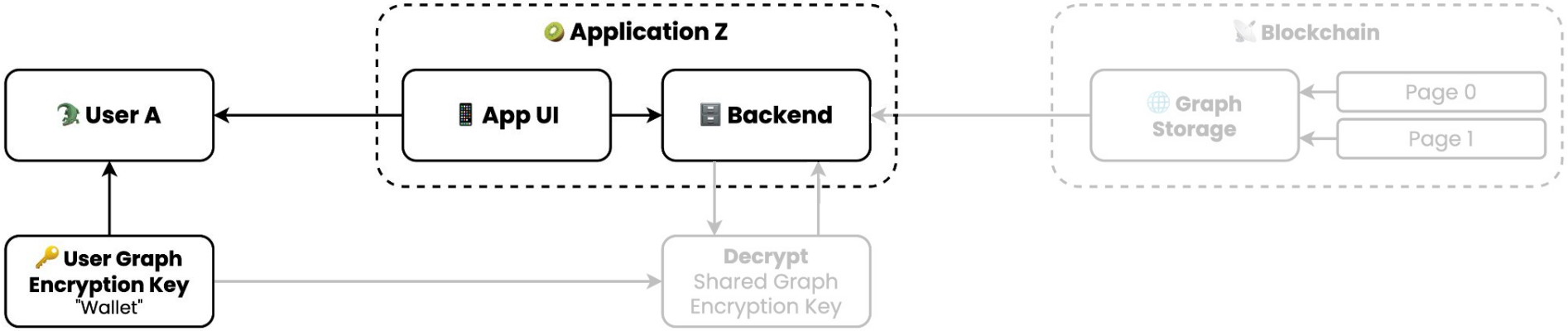
Journey: Graph



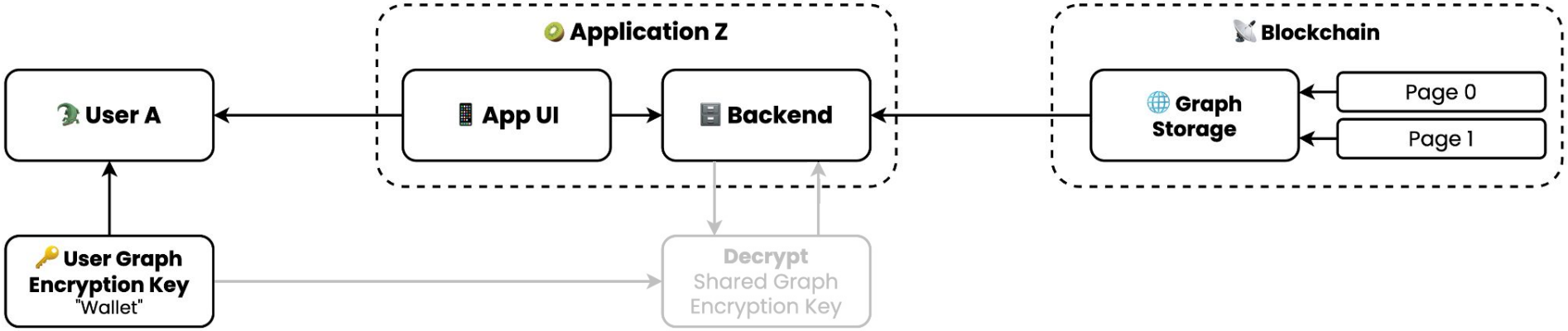
Journey: Graph Read



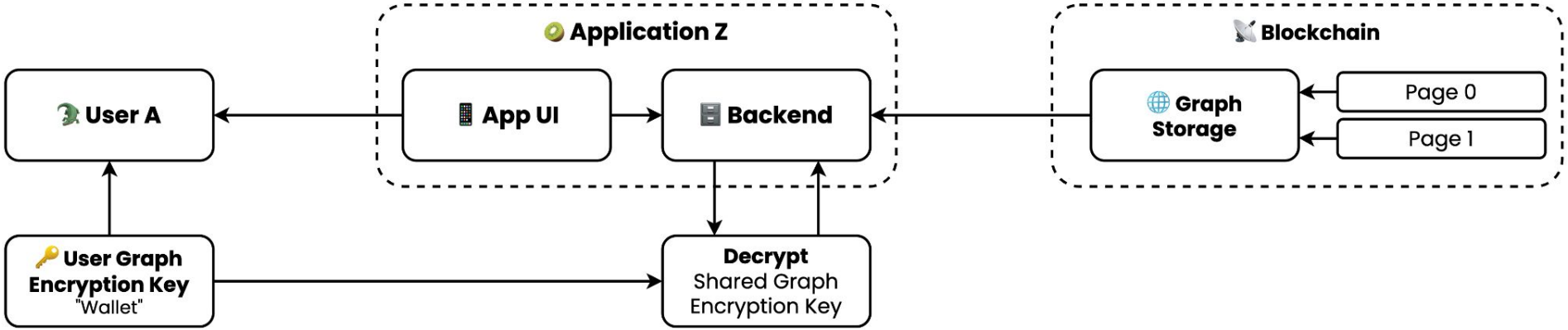
Journey: Graph Read



Journey: Graph Read



Journey: Graph Read



Frequency

- Has the Delegation
  - Application <-> User Permission on Graph
- Has the Current Public Encryption Key
- Encrypted Graph Page(s)

Application

- Receives the Graph Encryption Key from the User
- Can Decrypt the Graph page(s) and combine them
- Can use the decrypted graph to provide services to the User

Next Time: More Data on Frequency

Frequency Architecture Series: Part 5

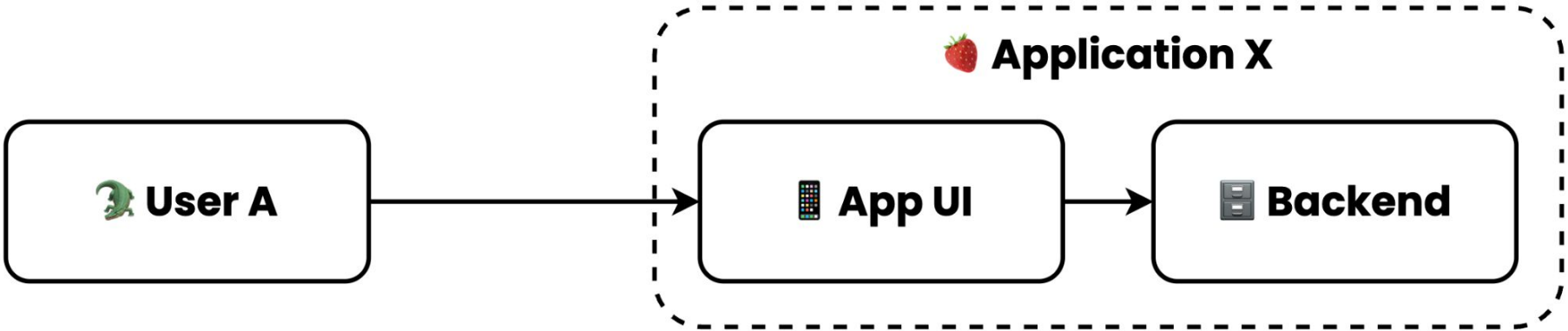
More Data on Frequency

Frequency Architecture Series: Part 5

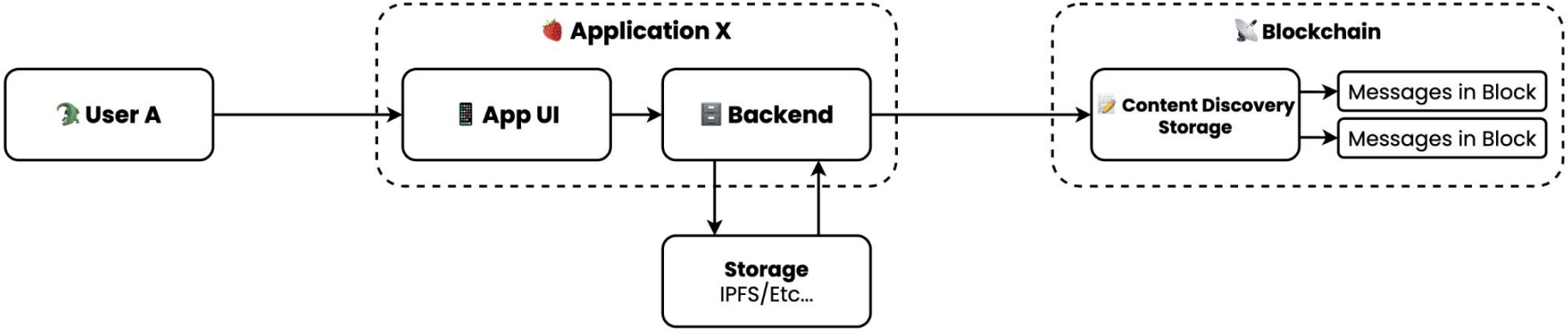
Let’s Follow the Journey: Posting Content

Time-Centric Data

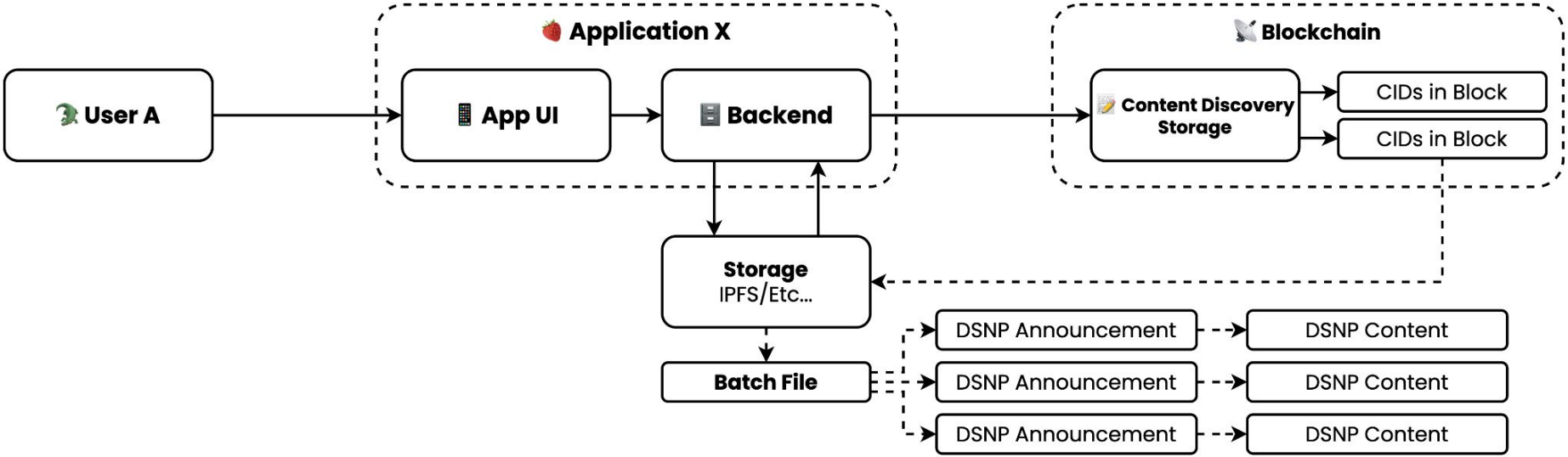
Journey: Posting Content



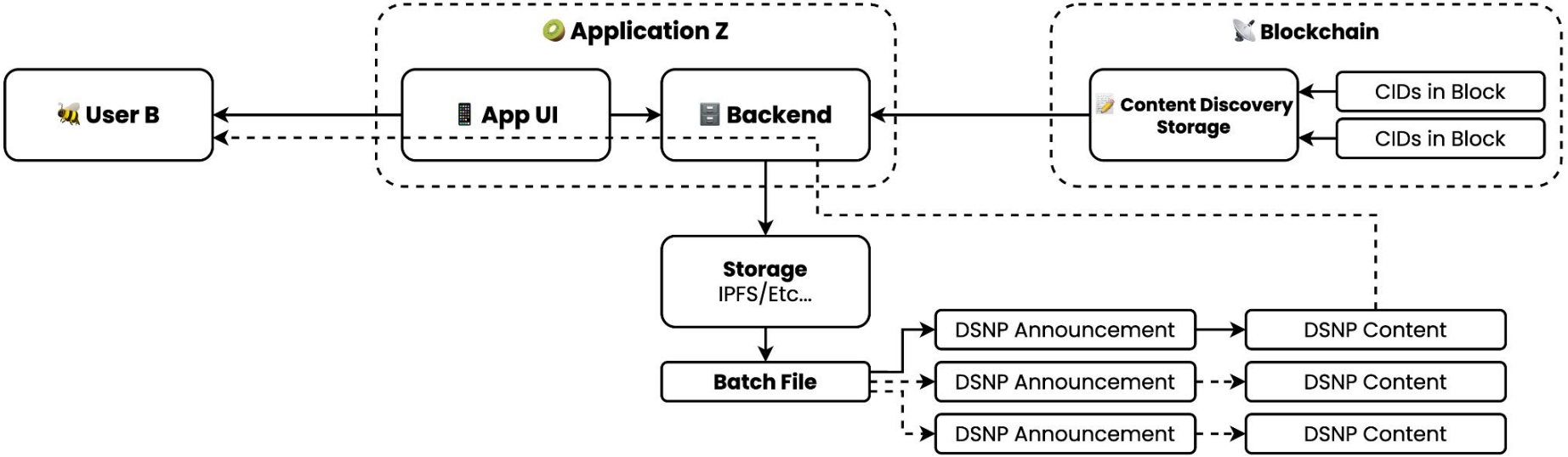
Journey: Posting Content



Journey: Posting Content



Journey: Reading Content



Frequency Data Options

Frequency Data Options

- Discovery: How do I want this data accessed?
- Storage: Where is the data stored?
- Schema: How is this data structured?

Frequency Data Discovery Options

Frequency Data Discovery Options

- Account Data
  - Specific data about the account
  - Example: Handles
- User-Centric Data
  - I want to discover something about this user
  - Example: Social Graph
- Time-Centric Data
  - I want to know what happened at a point in time
  - Example: Content References

Frequency Data Storage Options

Frequency Data Storage Options

- On-Chain
- Off-Chain

On-Chain Data Storage

- Very Limited
  - Encrypted Data
  - Public Key and Address Data
  - Relationship Data
- Generally Computer-Driven Data

Off-Chain Data Storage

- Chain References: IPFS
- Secondary References: Specification Defined
- Batching
  - Stream of messages
  - Can reference other content
- Wide-Open, User-Driven Data

Frequency Data Schemas

Frequency Data Schemas

- Every message on Frequency has a Schema
- Schemas answer three questions:

Frequency Data Schemas

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- Schemas answer three questions:
  - **Meaning: How does this data connect to other data?**

Frequency Data Schemas

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  - Meaning: How does this data connect to other data?
  - **Structure: How can I deserialize this data?**

Frequency Data Schemas

- Every message on Frequency has a Schema
- Schemas answer three questions:
  - Meaning: How does this data connect to other data?
  - Structure: How can I deserialize this data?
  - **Specification: What are the rules for this data?**

Frequency Data Schemas

- Every message on Frequency has a Schema
- Schemas answer three questions:
  - Meaning: How does this data connect to other data?
  - Structure: How can I deserialize this data?
  - Specification: What are the rules for this data?
- Permissions are connected to Schemas
  - Signature-Based Permission
  - Delegation-Based Permission

Frequency Data Schemas

- Every message on Frequency has a Schema
- Schemas answer three questions:
  - Meaning: How does this data connect to other data?
  - Structure: How can I deserialize this data?
  - Specification: What are the rules for this data?
- Permissions are connected to Schemas
  - Signature-Based Permission
  - Delegation-Based Permission
- Other Settings & Options
  - Discovery: How do I want this data accessed?
  - Storage: Where do I retrieve this data?

Frequency data flows follow standard patterns

Standard Pattern

- User: Create Data
- Application: Process Data
- Frequency: Distribute Data
- Other Applications: Consume Data

The Frequency schema structure for data is a powerful tool for protocols and builders

The End

Frequency Architecture Series