Blockchain PSIG Call Notes

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# Attendees

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# Agenda

* DLT Landscape

# Meeting Notes

Link for IOTA webinar – MB still to find and send around.

* Swaps
  + Pools of liquidity
* Farms

Addresses the questions about where your currency lives e.g. exchange or wallet.

## Industry Updates

IOTA from legacy network to the new ‘Chrysalis’.

Chrysalis = features of the future ‘Coordicide’ version but still with a Coordinator

Movie night idea: have some victim put $100 into and out of some Address.

Process (exchange):

* Put in USD
* Change that to USDT (Token that track USD at party)
* Pick an exchange pair (‘swap’) and exchange USDT/BTC

See e.g. <https://www.youtube.com/watch?v=pfDVPBg4i9g>

## Landscape

(and Vocabulary)

‘Address’ in DLT is nothing like Address in almost everything else.

It’s itself a virtual location against which your funds are recorded.

Cash movement issues:

Some of the brokerage houses let you use the brokerage as your wallet.

* Similar to what an Exchange (DLT context) does

Keys – storage

IOTA – Stronghold

Used in wallet.

### Understanding the Landscape

Things that will help

* Having an understanding of the money/token movements helps us understand the Landscape
* Follow the IOTA Chrysalis update
  + Looking at from the inside may help on this also (what needed to be mmigrated ad why)

## Streams update

(for the LETS RFP Response)

How it is delivered:

* Code libraries
  + Consumer is another programmer
* Bindings (e.g. Rust bindings, WASM)

## General Issues

The issue: ‘who is the user?’

In many DLTs the community of interest is people involved in the developer aspects.

Potential end users of a business application (business benefit / use case) versus DLT application developers as consumers of the DLT deliverables like Oracles, Smart contracts, Streams etc.

This has impacts on language e.g. ‘contract’

* Panel in a couple of weeks (MB and others) on this.

See DIDO RA on this.

3 communities exist in reality:

1. The DLT infrastructure developers
2. The developers of DLT-based applications
3. The consumers of real business applications

Item (2) are the perceived customers of (1)

The purists do not support a non-technical description of the technology hesitant) as the abstractions do not match what the purist perceived it as.

See e.g. Quantum computing. The concepts diverge so much that the use of the words can end up being misleading. So also with DLT (e.g. ‘ledger’, ‘contract’).

Whereas in conventional industries, there are shared central concepts that people can communicate in terms of. Similarly there are well-understood roles such as systems analysts.

Instead, things are led by developers, which is not how it’s doe in established industries (for good reasons). There is no segregation of powers. Similar to segregation of powers in a country – devs as the Executive Branch.

Historically a progression of methodologies:

* Waterfall
* Unified (RUP etc.)
* Agile
* “Agile”
* Uncontrolled / prototype etc.

Progression of risk categories:

* MilSpec
  + Life (fire and gas, ESD etc. – petrochemical, industrial)
    - Money in large amounts
      * Business mission
        + Personal objective

Game

## So to the Landscape…

The financials - the matter at risk is ‘only’ money.

(only? See pyramid of risks above)

Money impact – include tax implications (long- v short-term gains)

## Landscape Scope

* Money questions:
  + Where is what
    - Exchanges, wallets, ‘addresses’
* Layer model(s) (cf OSI)
  + See e.g. IIC, IEEE, us, IOTA etc.
  + See e.g. Nick’s one (WIKUD)
* Ecosystem components
  + Node
  + Oracle
  + Smart Contract
    - Detail on that
  + Wallet
  + Exchange
  + Hubs?
  + Central coordinator (for non-decentralized
  + Miners
* Ecosystem / Node variations
  + Permissioned v permissionless
  + Other e.g. Hyperledger
  + PoW v PoS
  + Fees (gas etc.)
    - Applied to the ‘Blockchain’
    - Applied to Smart Contracts
* DIDO – existing scope of that (governance, community / ecosystem etc.)

### Layers: ‘Layer 1 Protocol’

e.g. Ethereum Blockchain, the IOTA Tangle, the Hyperledger Blockchain etc. etc.

Look at the ETH ERC20 protocol (and others) – describing how talk to a Layer 1 object (without calling it that).

Delivery layer?

* Application
* Library
* Binding
* Driver
* What else?

### Bindings

How does Binding relate to Library?

Drivers – also live in the same pool as binding

Relates to levels of abstractions:

* Protocol (e.g big v little edian)
* Drivers
* Bindings
* Library (uses the binding
* Application (uses the binding)

### Layers

How well segregated at these? Not well in the absence of standards

Good example: IPFS – swaps out the reading and writing lib that Unix provide for reading and writing files, replacing that with the IPFS one that reads and writes to the network – so anything else you could run on Unix you could run on IPFS. Simple separation of concerns (no longer dependent on Unix file system)

e.g. in DDS you can use TCP/IP, TCP/UDP. Bluetooth etc.

then ‘Application Protocol’ answers how you serialize a thing to get it across. That’s the Big v Little, 4 v 8 bytes, dynamic etc.

* These need to match in the distributed world for things to talk to each other.

In DDS: You can replace the protocol, the algo t put the thing on the wire the driver (e.g. database driver) and so on.

These have different audiences.

Are these well segregated in existing DLT?

Everyone has their own I/Fs, their own way of storing (e.g. ASCII v EBCDIC) and so on.

So our modern ‘stack’ provides for interoperability by standardizing these. Without that, we can’t guarantee that. For portability we want to replace 1 level fo the stack with another.

e.g. replace Tangle with Ethereum level.

Ethereum has ‘RFCs’ which are standard ie ERC20 and many others.

That makes Ethereum stuff interoperable

For RFI – use of standards; challenge where other are not standard

So to Interoperability: wat to be replace one part with another part. And so to…

## DSQL

Based on the DIDO CLI.

Being written as an OMG Discussion Paper.

NS will present at the next OMG Quarterly Meeting.

Per CLI, everything that there is an I for on the CL, is a concept in the DLT.

Discussion paper

## Next Call

### Options

* Continue the landscape discussion from today
* Do the ‘movie night’ idea to understand specific aspect of the landscape better
* Do the SC RFI (alternate weeks as previously agreed)

Could do the movie night another night as social thing OR send the webinar link around, or both.

**Proposal:** Landscape in 2 weeks; RFI next week. Movie night offline or in between

* agreed