FDTF Call notes

*9 Feb 2021*

# Attendees

* Mike Bennett
* Frederic de Vaulx
* Pete Rivett
* Rob Nehmer
* Nick Stavros
* Bobbin Teegarden

# Agenda

* RFI on Digital Currencies

# Meeting Notes

Welcome new joiners from today’s DBDC WG call.

To join these calls: join the mail list fdtf@omg.org or finance@omg.org (same list, one is an alias)

## CBDC WG Update

This is meeting again.

Regular slot Tuesdays 1pm. May need an alternate host. Or set it up so that it starts without requiring a host. Should also have a co-chair on all these groups. Nick is the Co-chair of the CBDC WG.

### CBDC WG Wiki

There is no CBDC wiki on the OMG list page (see last week’s notes).

The wiki was created by Nick and has been out there for months.

To see active wikis, see:

<https://www.omgwiki.org/>

(this is the link MB was looking at after last week’s notes – see meeting notes insert)

CBDC wiki does exist, it is at:

<https://www.omgwiki.org/CBDC/doku.php>

(these are case sensitive which might be why we did not find it last week).

Dr Bashar was working on possible content – there is a list here:

<https://www.omgwiki.org/CBDC/doku.php?id=cbdc:private:04_cbdc_guide:04_content>

CBDC WG only met informally today – no deliverables.

Did mention the NIEM model that incudes some very basic currency data terms.

### Questions

The informal discussion on CBDC switched to NIEM – looked at the NIEM website. Steve MacLaird gave us a history of some of the NIEM models, tooling etc. and we looked at the side for that. To what extent are we drawn off course by chasing down those kinds of leads? How does OMG involvement or relationship impact what we are interested in here (or on the CBDC WG)?

MB looked at the latest NIEM model and it contains just two currency-related data elements, at least in the core schema, and there is no reason to expect this to have more ontological concept representations. We had been talking about possible ontologies for currency and CBDC on the CBDC WG informal get-together today, when NIEM was brought up. It seems we have exhausted that path.

## RFI Actions

Decision at 26 Jan meeting: We will do an RFI. That’s the focus for today.

## Currency

If we want an ontology for currency we should start with FIBO.

Q: For Currency in FIBO – does it include historical currency or does it include other e.g. digital currency.

MB: ‘Conceptual’ (Red) FIBO had a go at basic abstractions on currency and money. Unlikely these were caried forward into Release FIBO, and these were basic abstraction placeholders only, so unlikely to contribute much to our understanding of the nature of money or of digital currencies, per this RFI.

PR: Formal FIBO – has individuals populated from the ISO Currency Codes. This ISO list also includes a few other things like precious metals.

Not clear what would inherently be different about digital currency.

FIBO also has concepts for Amount of Money. Also Monetary Amount.

FIBO not v good on the ‘minor’ elements e.g. pennies or cents. It also has a decimal place that does not cover the variants for currencies with other than 2 digits (e.g. Turkish Lira).

FIBO also does not deal with the $ or other currency symbols. It relies on ISO over-much and could be extended.

### Symbols

Cryptocurrencies – these have a ‘ticker’ like code (e.g. BTC) and a symbol but are out of scope for the ISO currency codes.

Meanwhile in FIGI there are FIGIs for crypto currencies and currency exchange pairs (on a per exchange basis).

Bitcoin has an unofficial code XBT on Wikipedia. The ISO codes can’t use e.g. BTC as they need to be associated with a nation state (BT is Bhutan), so these are informal codes intended to be compatible with the ISO codes. See link.

<https://en.wikipedia.org/wiki/ISO_4217#Unofficial_codes_for_cryptocurrencies>

## RFI Knowledge Requirements

What kind of knowledge do we need?

### Aim of preparing an RFI:

Figure out we already know and what we need to know in order to ask the intelligent questions.

Figure out what we want to ask the wider world.

### Kinds of Knowledge

* Ontology
	+ E.g. start with FIBO and build out
	+ Look at other ontological sources
	+ What is the ontology trying to do?
* Symbols
	+ Codes – e.g. currency code
	+ Ticker symbols
	+ Currency character symbols e.g. $, the one for Rupees etc.
* Identifiers
	+ Currency identifiers e.g. ISO
		- The ISO-like codes (Wikipedia page above)
	+ Business entity identifiers (per LEI)

### Identifiers - Relevance?

e.g. digital currencies may need to have identifiers and may need to have different kinds of identifiers for different kinds of DCs, e.g. Cryptocurrencies won’t have the same kinds of entities behind them. That will mean different identifiers for the kinds of underlying entity.

### Permissioned versus Permissionless

Permissioned v Permissionless (in crypto) – will Permissionless even have some entity behind them?

#### Permissioned DLT:

e.g. Hyperedger, Corda/R3

The nodes have to be known to each other. Generally there is some kind of gateway to get through.

NS: Node, network, users.

* these are each capable of being identified.

#### Permissionless DLT:

e.g. Ethereum. Bitcoin, IOTA

Nodes are explicitly NOT known to each other. Anyone can fire up a node and connect.

### Other DLT distinctions of potential relevance

#### Centralized v Decentralized

Centralized v decentralized usually follows Permissioned v Permissionless, but not necessarily.

#### Currency in Issue

IOTA currency – fixed issue at foundation of the ecosystem; traditional cryptocurrencies create currency by mining.

#### Identity

Identity (of currency units) does exist in Permissionless DLTs. If we are looking for IDs for the thing behind them (like you would have a LEI for the entity behind some Permissioned DLT) that’s different.

* Permissionless DLT is run by a community.
* Some also have a Foundation (e.g. to look after the Protocol).

### Conclusions on Identifiers

Is there an intelligent set of questions to ask under the general heading of identifiers, e.g.

* What identifiers for the currency?
* Likewise the entity, community etc.

How do these questions relate to:

* Digital currencies as a whole
* Cryptocurrencies (as a kind of DC)
* Central Bank DCs (as a kind of DC)

Venn diagram: some CBs may be looking to crypto currency mechanisms, others might not be.

Need to frame the question.

### RFI Questions:

What kinds of mechanisms are CBs looking at?

If crypto, permissioned or Permissionless?

Would there be some general interest by governments o have DCs that the citizenry uses (in conjunctions with wallets, to exchange)

Would e.g. ordinary public users be expected to use crypto-like wallets?

So likely there is a case for permissionless

For crypto for central banking there are two parts:

* Bank to bank transfers
	+ You can’t just declare yourself as something like a reserve bank
* Something to replace the ‘real currency’ (physical notes in circulation)
	+ Would be Permissionless

See Sales et al on this (VMBO 2021, upcoming)

Q: What is the fundamental difference between a real currency and a digital currency? If you already never use paper currency, what difference would you see with a digital currency?

For a fiat currency, probably nothing. The only major difference now is the stability.

Also anonymity (with non paper currency now, the funds come from a named account). Suppose you want to give a tip to a waiter anonymously, there is a case for this – people want to be able to do things anonymously.

So there is a spectrum from permissioned, tightly controlled systems all the way to Permissionless.

So for the RFI we want to tease out this spectrum of possible DCs (with CBDCs in the context of that).

Can see that e.g. might work with e.g. Apple, say we don’t want the risk of putting out digital dollars but you can buy real dollars from us and create Apple dollars. Then you are exchanging with the merchant, retailer, wholesaler, and then Apple would be doing the clearing in their network. Now, the Fed might say they will do the clearing among those instead – hence CBDC. Conservatively, the government (e.g. US Fed) might decide they don’t want to create a platform for the whole nation. Instead, create a market, with different platforms, so e.g. consumer choice.

Whereas e.g. China might take a different direction.

So we want questions probing the possibilities of how the architecture of some DC or CBDC could be set up.

* This is where we need a lot of information
* These the questions we need in the RFI

#### Early Examples

BT: When working at a digital wallet startup in 1999 (PayPal competitor) we just moved around tokens representing a debt and a payment... BC works abit like that, but more complex

### Kinds of Money

Distinguish between account based and token based.

See Table 1 in Sales et al (VMBO 2021, in draft).

Going forward:

Use the concepts in Sales et al.

## AoB

CBDC WG calls restarted today.

VMBO paper – will make available as soon as we can; work from it on screen between now and then.

VMBO 2021 is a few short weeks away. By the time we come to finalize our RFI this will be ready.

VMBO 2021: <https://vmbo2021.events.unibz.it/>

## Next meeting

2 weeks from now = Feb 23