1) **TradeCoin, Alexander Lipton**

The DTC group had intense discussions centered on the following topics:

(A) Why asset-backed currencies are needed;

(B) How they are different from conventional crypto currencies;

(C) Is it possible to use real estate and an asset to back DTCs;

(E) Why do we need block chain if the administrator is centralized anyway?

(F) Can KYC/AML be solved satisfactory, and what it even means.

It was decided that:

(A) For stabilizing fiats especially if policies of central banks and other interested parties are not conducive to commerce; small farmers, say, can do a lot to protect themselves this way

(B) Stabilization of value is of paramount importance for a crypto to become transactional medium;

(C) Probably not directly, but through REITs;

(E) This way the power of the administrator to suppress activities would be severely curtailed, which is a good thing; also AML might be easier to solve;

(F) The topic is still open - One possibility is to treat DTC as physical cash with all its advantages and disadvantages

2) **OPAL as a Platform for AI and Machine Learning, Sandy Pentland**

Discussed how hardware "containers" (a la Intel) could be swapped in or out for some parts of OPAL, similar for other secure hardware resources (like DSM engine on cell phones).

Discussed methods of avoiding revealing data through question answering: aggregation including k-anonymity; equivalence to "census like" data aggregation, etc.
Discussed how the "ultimate" evolution of OPAL is Secure Multi Party Computation, where date is always encrypted (even for computation) and shared. Discussed how many entities (NEC, Lincoln Labs, startups) are making this technology much more efficient, and how use of block chain can make some of the most expensive parts of sMPC much less expensive.

Discussed need for use business cases in addition to credit card example we already have, e.g., identity confirmation, and fraud detection across many businesses, etc.

We had long discussion about how cyber security paradigm is broken: it is after the fact, treats all data as equally valuable, is perimeter defense, etc. Discussed "network centric" view of data protection that would continuously monitor data transactions and develop model of data use and sensitivity, and seek to use that as core of protection. This is somewhat related to our "stealing reality" methods for avoiding conventional data protection, and our "influence model" methods of identifying dynamics of the data transaction systems.

Sandy’s comments included the over all topics we covered in the session. I would add the comments from DataWalk (TalkingData?), guy when he mentioned that we need to protect data not network in the cyber security realm and we need to know how to do distributed data analytics. The group mentioned that we need to design new environment that knows what goodness looks like and blocks anything else. We used MetLife as an example that uses data to predict health. Finally, IBM wants to build new types of machine learning algorithms that could learn from less data.

3) Trust Network for Data Sharing, Thomas Hardjono

Breakout group name: System Rules for Data Sharing
The breakout group addressed the aspects related to establishing a (commercial) Data Sharing Consortium based on the OPAL model.

The topics discussed include System Rules (or Trust Frameworks), some Characteristics of System Rules, Purposes of System Rules and the Business Case for OPAL-based data sharing consortium.

The summaries of the System Rules are as follows:

An OPAL Data Sharing System Rules consists of
-- set of rules, methods, procedures and routines, technology, standards, policies, and processes,
-- applicable to a group of participating entities,
-- governing the collection, verification, storage, exchange of
-- algorithms (for specific data-sets) which
-- provide information and insights about an individual, a community, or organization
-- under their consent
Discussion

An audience member comes the insurance industry. He is finding that data is very siloed even within organizations (e.g. his organization). His organization provides insurance for different industries. Some parts of the data are legally not permitted to cross business units. He is also seeing the same data siloization pattern in some retail customers.

This pattern siloization of data is precisely what the OPAL paradigm seeks to address. People in the room agree that the first important consideration is establishing the business case or business need for sharing data either across BUs or across organizations.

A couple of audience members are very concerned about the implications of GDPR on the current business processes that make use of data. A word that comes-up repeatedly is "consent", but often the interpretation of "consent" maybe difficult to establish in some scenarios.

The group discussed the need for organizations in the B2C scenario to better "involve" consumers in the data ecosystem, perhaps remunerating the user in some visible way.