Prasaga DataGrid Blockchain Frequently Asked Questions (FAQ)

What is the DataGrid Blockchain?

The DataGrid Blockchain ("DGB") is a new design for a blockchain from the "ground up". It incorporates components of the following concepts: proof-of-work, proof-of-stake, parallel chain/sharding, byzantine fault tolerance, verifiable random functions, staking, open permissionless design, open source code.

Its design goal is to enable secure low latency, high throughput transaction rates, scalable with increased resource availability.

The DGB is designed to be a general purpose blockchain enabling a cryptocurrency and both simple and complex business relationships, with global scale.

What the DGB is not?

The DGB is not a smart contract implemented on top of any other blockchain technology in existence. The DGB is not designed for a specific vertical use-case, but is designed as a "horizontal technology" suitable for a virtually unlimited number of applications worldwide.

What type of coin is the DataGrid Token?

The DGB uses the DataGrid Token ("DGT") as its "native" coin. The DGT is a mined coin that functions similarly to the Ethereum coin. That is, transactions consume DGT similarly to Ethereum "GAS". New DGT is created as incentive rewards for block production by miners similar to both Ethereum and Bitcoin. The DGT monetary policy is a unique new approach to coin supply management (i.e. tokenomics) to improve the stability of the DGT based on economic activity as opposed to static algorithmic minting (e.g. Ethereum and Bitcoin), or tethering (e.g. Tether), enabled by the DGB and the XBOM.

How is the DataGrid Token different from a token smart contract (e.g. ERC20/223)?

The DGT is the native coin operating the DGB. It is not a token in a smart contract such as an Ethereum ERC 20 contract or similar. The DGB can support the concept of a token smart contract. However, given the technology advances that the DGB provides it is believed that the token smart contract as it is currently implemented will become obsolete.

What is the Extensible Blockchain Object Model?

The Extensible Blockchain Object Model ("XBOM") uses a "first-class" object model to instantiate classes on the DGB, loading the code for the classes. The XBOM then enables inheritance of the code by subclasses and instantiation of object instances of the classes. Since the XBOM explicitly uses code already loaded on the DGB, the opportunity for individual

coding errors is significantly reduced, increasing the reliability of business logic almost exponentially. XBOM objects are stored explicitly in each user's account state.

How is the XBOM different than the Smart Contract concept?

The XBOM is different from Smart Contract concept. The XBOM enables direct support for an object-oriented model where the objects are instances of classes containing code that was previously instantiated on the DGB. This means that creating a new XBOM object does not require loading any code by the user. Since the XBOM is object-centric as opposed to account-centric, a transaction sent to an object executes the code for the class of that object, regardless of which account state the object is resident in.

What language are XBOM objects written in?

The XBOM uses a language agnostic message-passing paradigm. It is possible to mix programming languages even within the inheritance hierarchy of a single class. However, Prasaga will implement an XBOM language that is based loosely on python, and will support just-in-time compiling for local node execution performance.

What are some of the advantages of the XBOM over the Smart Contract model?

This is an evolutionary change in the concept of blockchain code execution and the concept of the blockchain as a world computer. As examples: the XBOM concept leads directly to "title of ownership" support for each account; automated KYC enforcement accounting for the various jurisdictions involved; and non-custodial decentralized market places.

Further, the XBOM enables a new concept, the XBOM Smart Object Asset ("XSOA"). The XSOA can represent a digital security, title of ownership of a physical asset, or any other "static data" element. The XSOA can also implement a buyer and seller relationship of other XSOA objects, priced in DGT. Further the XSOA can inherit code to automate enforcement of KYC/AML regulations and other jurisdictional requirements without any direct actions by a buyer or seller.

The XSOA concept enables multiple new decentralized and distributed architectures such as a non-custodial decentralized multisided marketplace, where KYC/AML rules are enforced automatically, by the XSOA objects independent of the marketplace. This transfer the liability of enforcement from the decentralized marketplace to the individual accounts.

What are some of the uses for the DataGrid Blockchain?

Although the DGB is envisioned as a general purpose blockchain, a "horizontal" infrastructure technology, we believe that its first use-cases are Internet-of-Things applications and "Fintech" applications. In both cases, the ability to create and track complex business relationships and business logic in an open, but secure manner are fundamental requirements. The DGB with the XBOM provides the underlying technology, while the DGT provides the means for innovative

monetization strategies. We believe that this combination will enable new applications and unleash entirely new market segments.

What is the Monetary Policy of the DataGrid Token?

The DGT monetary policy uses an economy driven approach to managing the supply of coins. To accomplish this, the monetary policy algorithm includes the ability to mint new coins via block production to increase the coin supply, as well as to implicitly burn coins as part of the mining node staking bonus scheme. The monetary policy algorithm adjusts these two values to increase or decrease the coin supply over time.

The monetary policy algorithm determines a current coin supply goal and a rate of change of the coin supply to move towards that goal based on economic parameters derived from the use of the DGB. This approach takes into account the velocity of the DGT, and its internal current rate of inflation/deflation. The monetary policy algorithm acts to reduce price volatility increasing the usability of the DGT as a digital payment coin.

What are some of the technical issues the DataGrid Blockchain is intended to address?

The DGB tackles the blockchain trilemma problems as well as Dapp problems from a different viewpoint from the smart contract account model and from the UTXO script model. We believe this is an approach that has not been tried yet. We are also coming at the cryptocurrency question from a different viewpoint, which is also an approach that has not been tried yet. The problems we are trying to address are listed as follows:

- a transaction latency that is suitable for most forms of commerce including retail POS;
- transaction capacity that scales up with the amount of new resources added (i.e. new miner nodes);
- maintaining security with scale;
- maintaining security with latency;
- implemented as an open permissionless blockchain;
- robustness in the presence of network partitions;
- support for direct code reuse, previously loaded on the blockchain;
- flexible monetary policy approach;
- decentralization of all aspects of management of the blockchain;
- solutions for the "train and hotel" problem of application layer arbitrary synchronization;
- support for multiple signature schemes and new ones as they are invented;
- independence of implementation (no single official code base required);
- means for enforcing external rules such as KYC;
- and (optionally) transparent multi-language support.