**Deliverables of the Sidechains Federated Peg Project**

**Blockchain Generation –** The sidechain network is pre configured and setup using Blockchain Generation. This creates a new blockchain (genesis, default ports etc).

**Federation Key Pair Generator** – This is a simple command line utility that can be distributed to the federation members. It takes their name and a passphrase and generates a public and private key for both mainchain and the sidechain.

**Sidechain Initializer** – Creates the multi-sig addresses by combining the federation member keys. Outputs the multi sigs and script pub keys and pre-mines the coins into the multisig address on the sidechain.

**Send Funding Transaction** on mainchain. Creates a transaction with an OP\_RETURN that contains destination address on the sidechain.

**Monitor mainchain for fund transactions** – The federation node monitors the mainchain for Funding Transactions and checks whether it has already been actioned on the sidechain.

**Send Fund transaction into sidechain** – After a delay of x blocks. A federation gateway node is selected to build and broadcast the multi-sig distribution to the sidechain destination. The node requests partial transactions be signed and returned to the builderbroadcast node. When a sufficient number of confirmations are received the transaction is marked as complete.

**Send withdrawal transactions** and **Monitor sidechain for withdrawal transactions** and **Send withdrawal into mainchain** are identical to the three steps above except funds move from sidechain to mainchain.

**multi-sig wallet** – a feature that will track multi-sig transactions and expose multi-sig functions like building a multi-sign transaction template and partial transactions.

**Federation node internode comms -** used to collect the partial transactions from the other federation gateway node members.

**Lock mining to federation nodes** – optional extra where we write a simple consensus rule that checks rewards are mined only into the multisig addresses and hence privately mined.

**web pages for coordinating members** – currently out of scope, command line tool and email will be used.

**build packages –** currently out of scope

**UI for Blockchain Generation** – simply to display the currency name and symbol in the UI and provide a startup options to indicate whether the api uri and whether the chain should be started automatically.

**UI for Fund Transaction and UI for Withdrawal Transaction** – a dialog box that creates a transaction where the destination address on the counter chain can be specified.