

handout-p2.md

Data types in Code

from bsvr/block/block.go:

```

1: ...
2: // BlockType is a single block in the block chain.
3: type BlockType struct {
4:     Index      int           // position of this block in the chain, 0, 1, 2, ...
5:     Desc       string        // if "genesis" string then this is a genesis block.
6:     ThisBlockHash hash.BlockHashType //
7:     PrevBlockHash hash.BlockHashType // This is 0 length if this is a "genesis" block
8:     Nonce       uint64        //
9:     Seal       hash.SealType //
10:    MerkleHash  hash.MerkleHashType // AS-03
11:    Tx         []*transactions.TransactionType // Add Transactions to Block Later, (AS-04 will do this)
12: }
13: ...

```

from bsvr/transactions/tx.go:

```

1: ...
2: type TransactionType struct {
3:     TxOffset    int           // The position of this in the block.
4:     Input       []TxInputType // Set of inputs to a transaction
5:     Output       []TxOutputType // Set of outputs to a transaction
6:     SCOwnerAccount addr.AddressType // Used in HW 6 - Smart Contracts - Owner of Contract
7:     SCAddress    addr.AddressType // Used in HW 6 - Smart Contracts - Address of Contract
8:     SCOutputData string        // Used in HW 6 - Smart Contracts - Output data from contract
9:     Account     addr.AddressType //
10:    Signature    lib.SignatureType // Used in HW 5 - Signature that this is a valid transaction for this account
11:    Message     string        // Used in HW 5 - Message (hash of original) that signature signs for
12:    Comment     string        //
13: }
14:
15: type TxInputType struct {
16:     BlockNo    int // Which block is this from
17:     TxOffset    int // The transaction in the block. In the block[BlockHash].Tx[TxOffset]
18:     TxOutputPos int // Position of the output in the transaction. In the block[BlockHash].Tx[TxOffset].Output
19:     Amount     int // Value
20: }
21:
22: type TxOutputType struct {
23:     BlockNo    int // Which block is this in
24:     TxOffset    int // Which transaction in this block. block[this].Tx[TxOffset]
25:     TxOutputPos int // Position of the output in this block. In the block[this].Tx[TxOffset].Output
26:     Account     addr.AddressType // Account funds go to (If this is ""chagne"" then this is the same as Transaction)
27:     Amount     int // Amount to go to account
28: }
29: ...

```

