EVENTS
CREATE TXN
SEND TXN
RECV TXN
CREATE/MINE BLOCK
SEND BLOCK
RECV BLOCK

SIMULATOR PARAM
T_{tx}

GLOBAL
hash
Random

20% slow

fast/slow

21% low CPU

high/low

$$P_{ij} + \frac{|m|}{c_{ij}} + d_{ij}$$

C,d edge latencies

Mempool

Blockchain

n → Random graph → UID

NODES

CREAT_TXN

RECV TXN BLK

SEND TXN

if not SEEN

MINE-BLOCK

Validate

orders

TREENODE

Children

node balances

EVENT HANDLER

SEND TXN
will create RECV-TXN for neighbors

SEND BLK
will create RECV-BLK for neighbors

VAL

at $t + t_0$
$t_0 \sim C^{T_{tx}}$

at $t + t_0$
$t_0 \sim C^{T_{tx}}$

create TXN

mine BLK

validate BLK

TRANSACTION

amount

TxnID: ID_x pays ID_y C coins

each txn size

1KB

TxnID Sender Receiver Amount

BLOCK

BLKID

Parent BLKID

miner

creation time

list Transactions