Experiment Report

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Experiment Configuration

Advanced algorand with concurrency constant **10**

Dataset name is **2020-12-21__14:50:20**

Number of machines is **20**

Bandwidth limit per process using Trickle: **tc rules with 4 cities**

tc Delay on outgoing channel: **none**

Node Configuration

```
## 
## Attaching package: 'jsonlite'

## The following object is masked from 'package:purrr':
## 
##     flatten

## {
##     "NodeCount": 500,
##     "BAStar": {
##         "UserMoney": 10,
##         "ThresholdProposer": 26,
##         "TSmallStep": 200,
##         "TBigStep": 0.68,
##         "TBigFinal": 1000,
##         "TSmallFinal": 0.74,
##         "LamdaPriority": 5,
##         "LamdaBlock": 60,
##         "LamdaStep": 20,
##         "LamdaStepVar": 5,
##         "ConcurrencyConstant": 15
##     },
##     "Blockchain": {
##         "BlockPayloadSize": 1000000,
##         "StopOnRound": 20
##     },
##     "Network": {
##         "GossipNodeMessageBufferSize": 100,
##         "PeerCount": 4
##     },
##     "Logger": {
##         "EnableAgreementLoging": true,
##         "EnableMemoryPoolLoging": true,
##         "EnableBlockchainLoging": true,
##         "EnableGossipNodeLoging": false
##     },
##     "Validation": {
##         "ValidateBlock": true,
##         "ValidateVote": true
##     }
## }
## 
```

Sanity Check

FileName	count	mean_bp	mean_ba_wo_final	mean_ba_w_final	distinct_hash	max_round
nuc10.maas.stat	475	10.32500	17.32508	18.96913	19	19
nuc14.maas.stat	475	10.02191	16.34932	18.98649	19	19
nuc15.maas.stat	475	10.89315	17.20558	18.99808	19	19
nuc16.maas.stat	475	10.00156	16.52353	18.94637	19	19
nuc18.maas.stat	475	10.22053	17.43066	19.00908	19	19
nuc19.maas.stat	475	10.00612	16.54240	18.96905	19	19
nuc2.maas.stat	475	11.44899	17.15164	18.99508	19	19
nuc20.maas.stat	475	10.02658	16.54369	18.93425	19	19
nuc21.maas.stat	475	10.53901	17.26795	18.99290	19	19
nuc22.maas.stat	475	10.00400	16.47638	18.95835	19	19
nuc23.maas.stat	475	10.91895	17.20886	18.96824	19	19
nuc24.maas.stat	475	10.00474	16.40407	18.97294	19	19
nuc27.maas.stat	475	10.12452	17.29641	18.98664	19	19
nuc3.maas.stat	475	10.38367	16.44674	18.97312	19	19
nuc4.maas.stat	475	11.80953	17.14189	19.00327	19	19
nuc5.maas.stat	475	10.00450	16.46720	18.98344	19	19
nuc6.maas.stat	475	10.80579	17.17181	18.97717	19	19
nuc7.maas.stat	475	10.08389	16.56675	18.97036	19	19
nuc8.maas.stat	475	11.27250	17.06666	18.98238	19	19
nuc9.maas.stat	475	10.00466	16.50137	18.93918	19	19

The number of rows in data set is **9500**
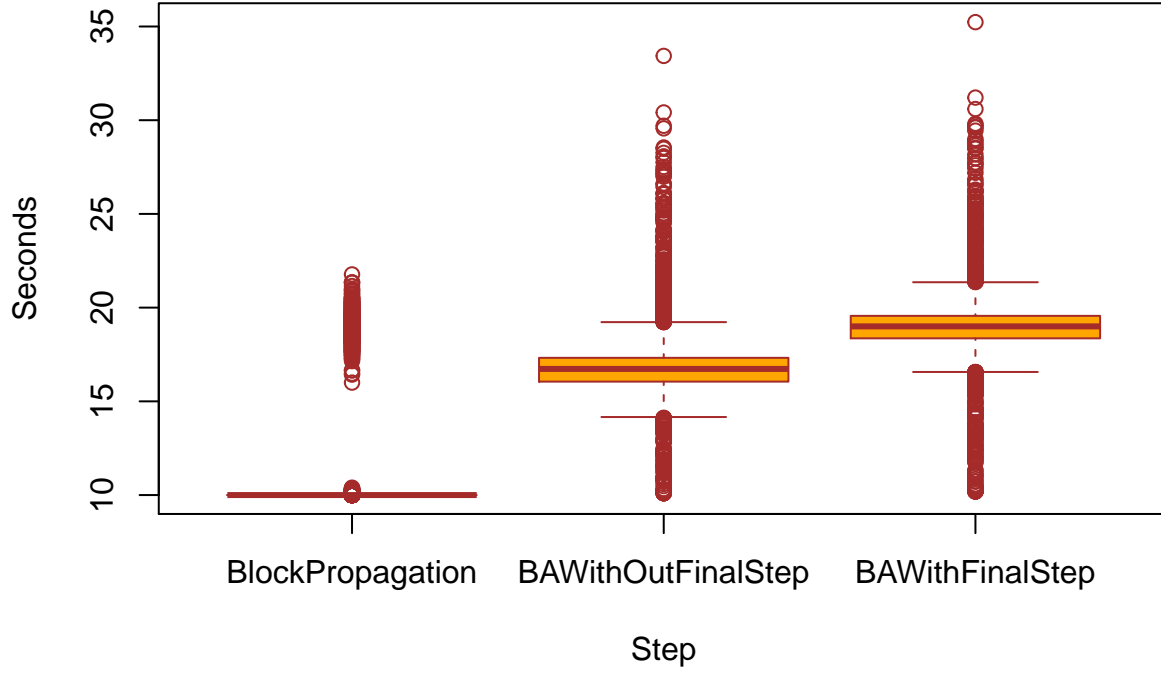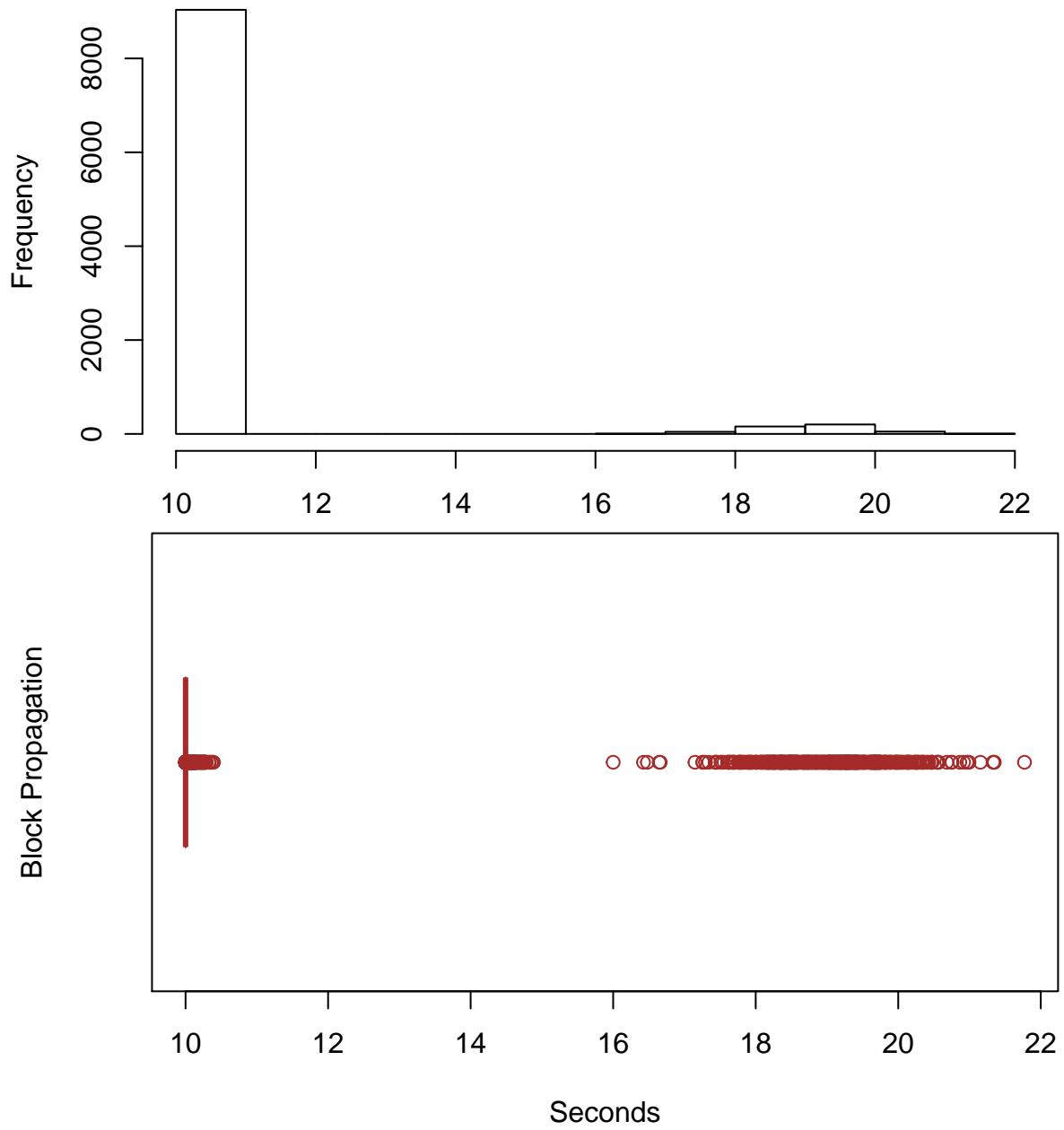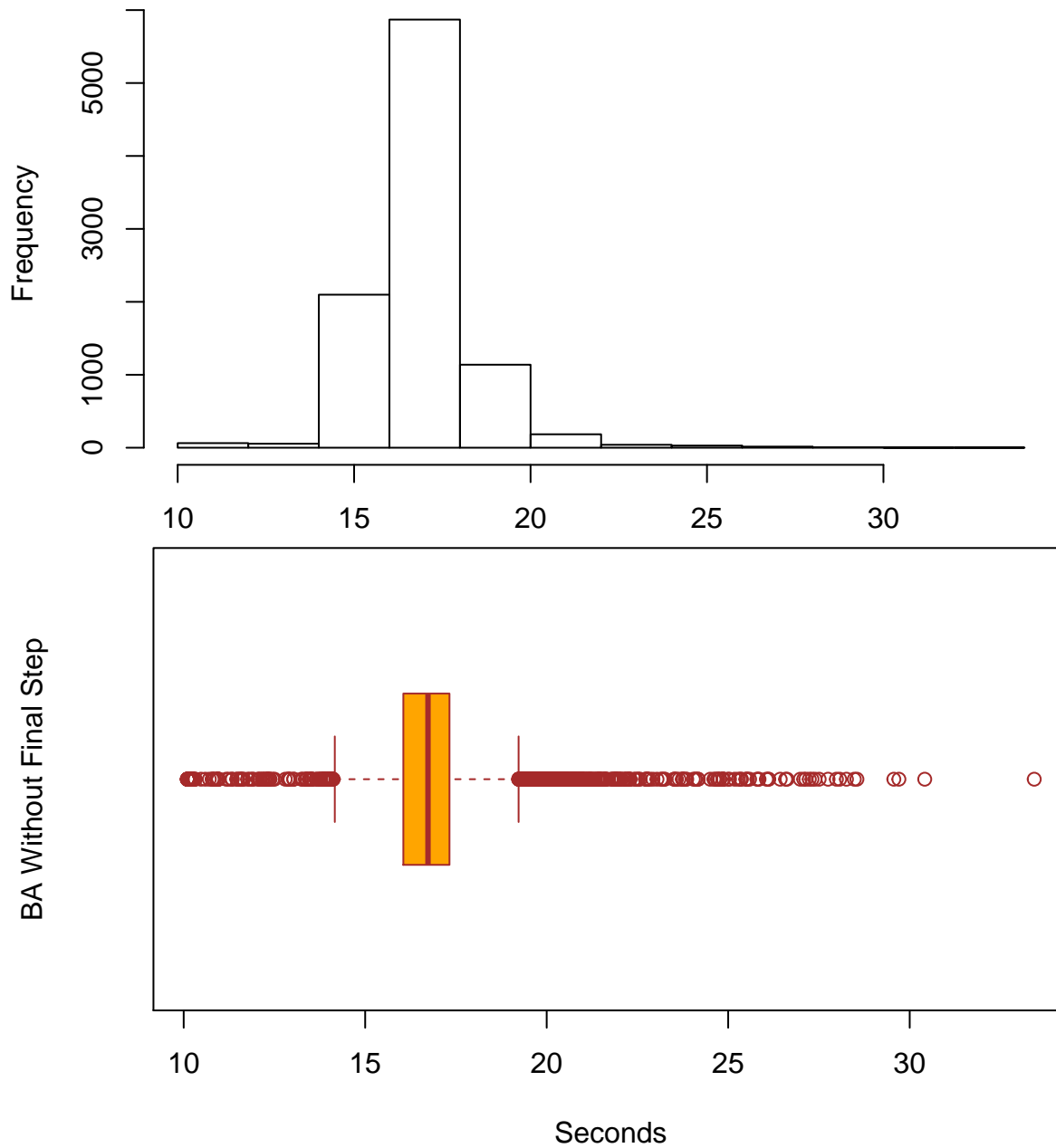
Maximum round number is **19**

Overal Results

Table 2: Summaries

BlockPropagation	BAWithOutFinalStep	BAWithFinalStep
Min. :10.00	Min. :10.10	Min. :10.19
1st Qu.:10.00	1st Qu.:16.05	1st Qu.:18.36
Median :10.00	Median :16.73	Median :19.00
Mean :10.44	Mean :16.85	Mean :18.98
3rd Qu.:10.00	3rd Qu.:17.32	3rd Qu.:19.56
Max. :21.77	Max. :33.43	Max. :35.23

Block Propagation Statistics

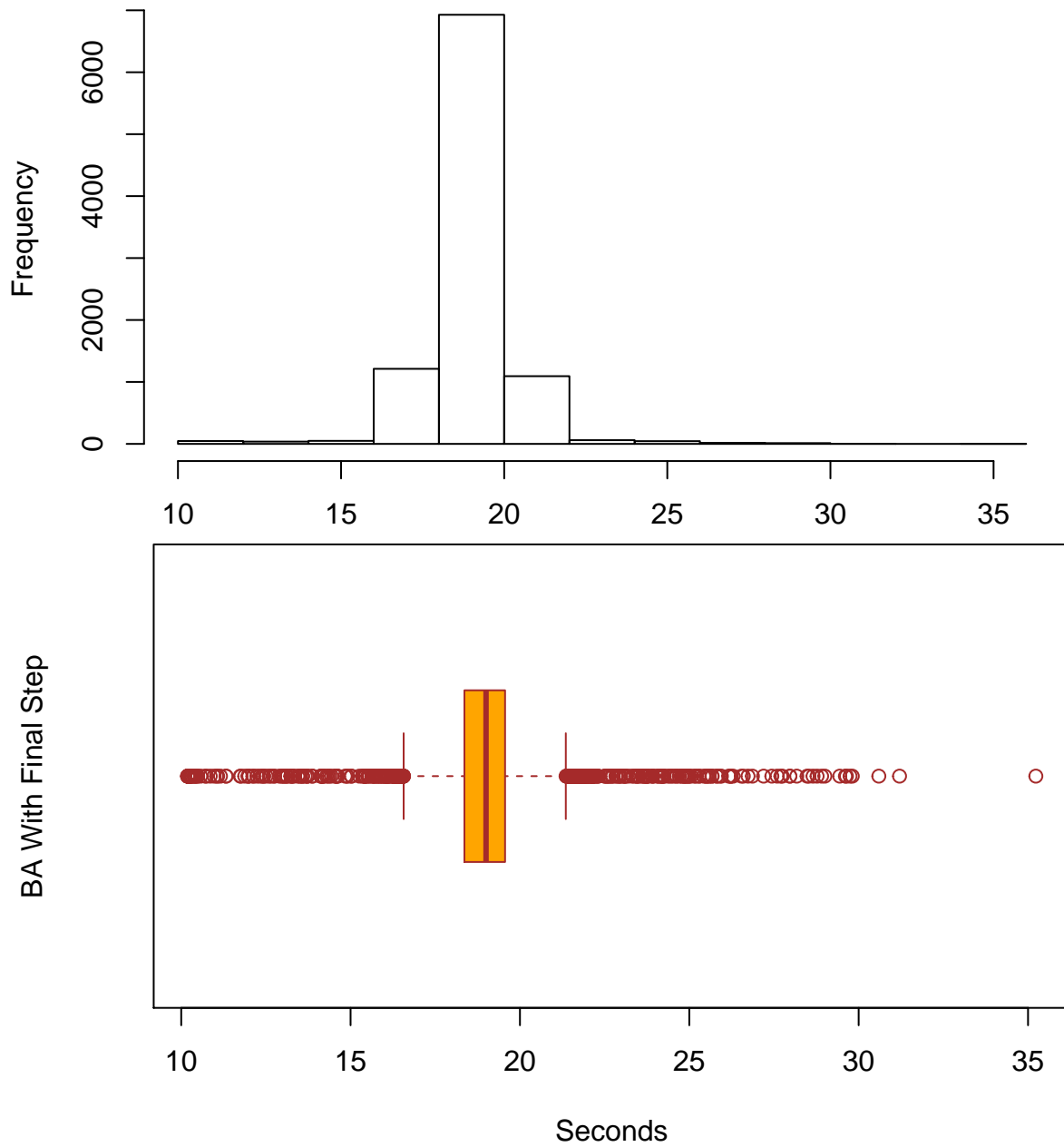# BA Elapsed Time Without Final Step Statistics

BA Elapsed Time With Final Step Statistics

Forwarded Message Counts Per Round