# Eclipse Attacks - Hardening the P2P Layer

Hardening the P2P overlay network

1. Why not smaller static timeouts?

2. Why not requesting from multiple peers?

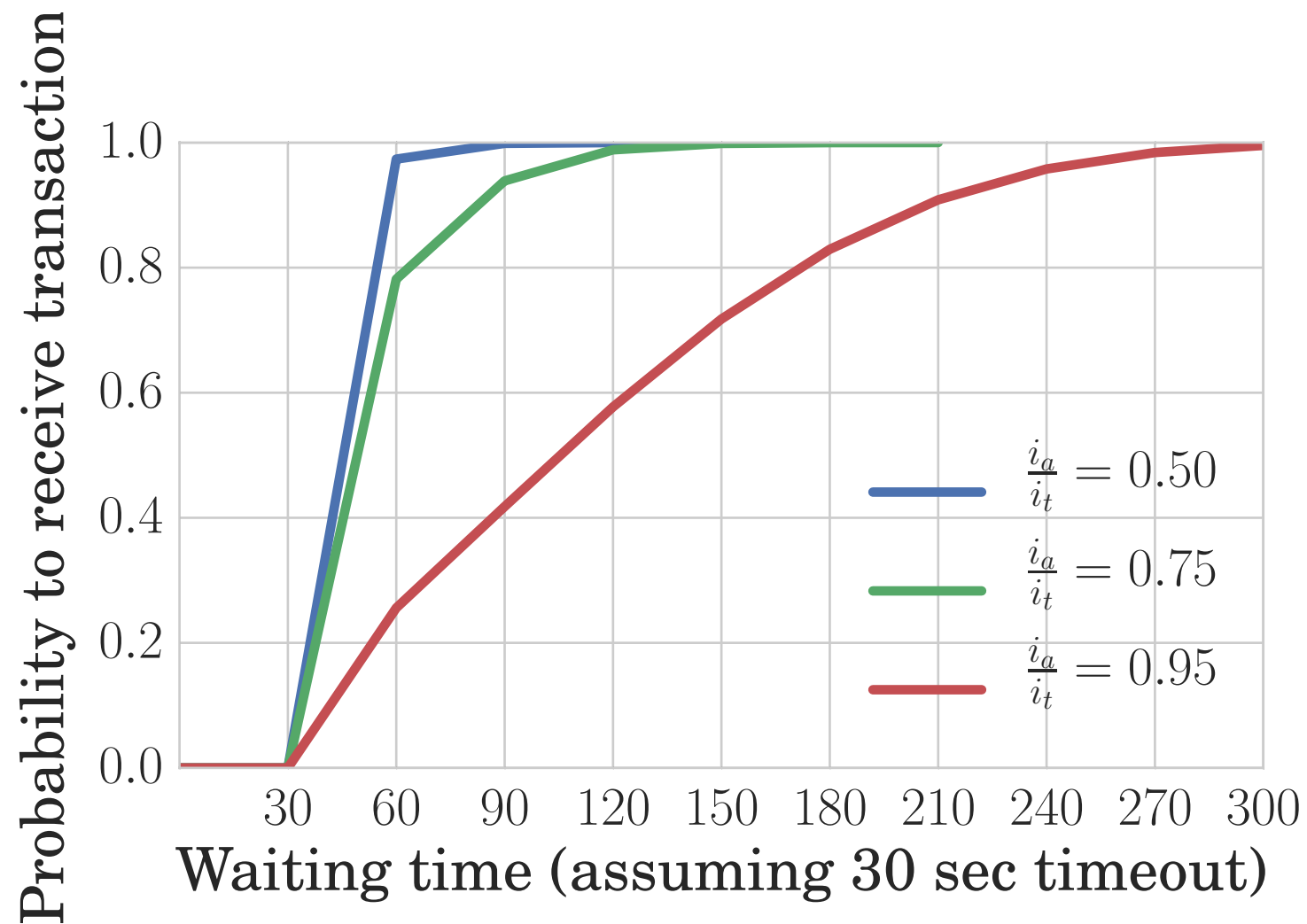3. What about alternative relay networks?

Security vs Scalability tradeoffs

Hardening the P2P overlay network

Better Block request management

Blocks

inv

get header

get data

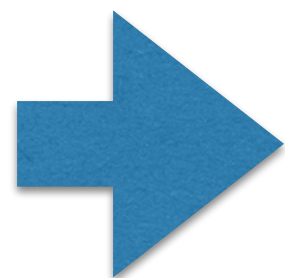headers

block

Blocks

header

get data

block
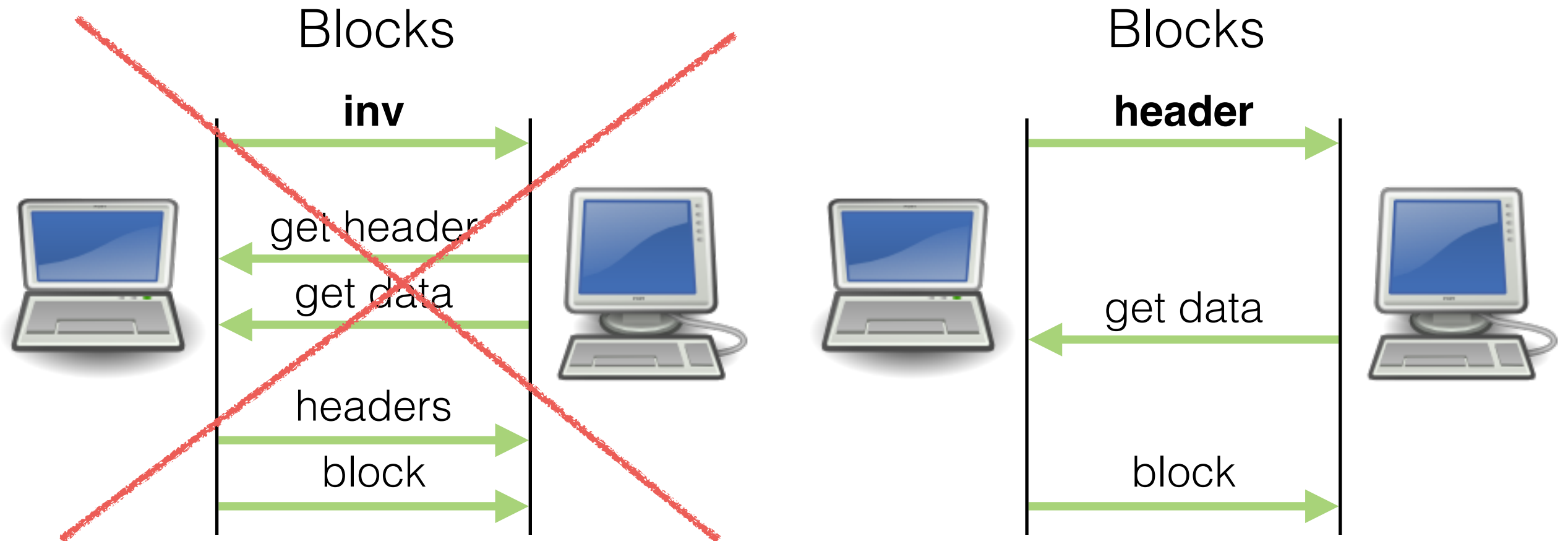
size(inv) = 36 bytes
size(header) = 80 bytes

Hardening the P2P overlay network

i_a = **inv** messages sent by adversary

i_t = total **inv** messages

Legend:
- $\frac{i_a}{i_t} = 0.50$
- $\frac{i_a}{i_t} = 0.75$
- $\frac{i_a}{i_t} = 0.95$

After 5 minutes, transaction is received, even if the adversary controls 95% of the inv