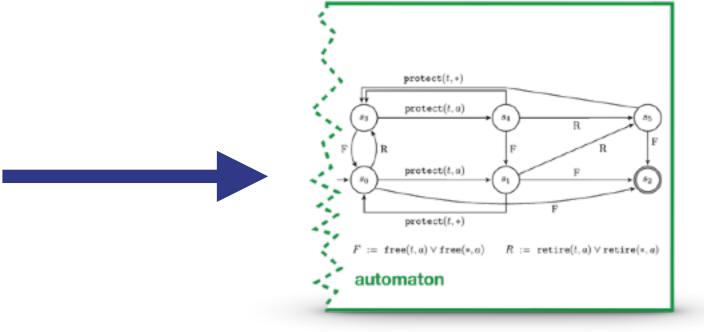
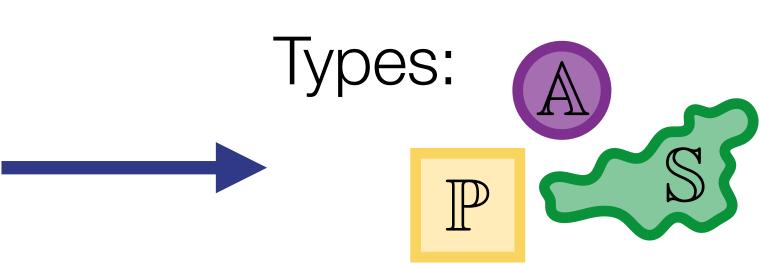
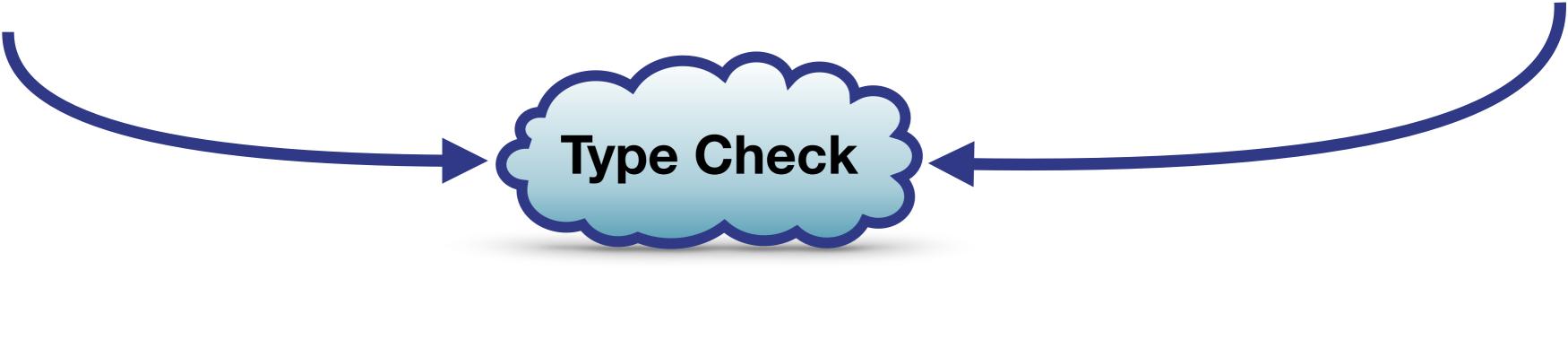


off-the-shelf verifier

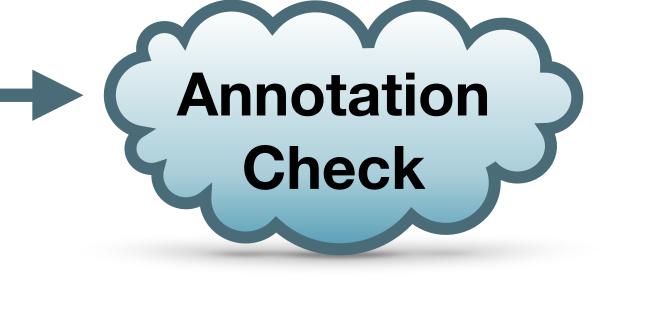
Final Approach











wood instill (struct Neds { shared: data_t data; Moder Head; Head - new Model by Nodex node; Moder Tails Head-o-mext x multi-Table = Head; data_t dequeue() { while (true) 4 void enqueue(data_t va/) { Nodes node = new Node(): node-relata = val; Nodex head + Head; node-essent = sulli; while (true) (eni Moder tail = Tails Mode= tail = Tail; Nodex next = head->next; if (Read 1- head) continues Mode+ next = tail->sext; if CTuil to tail) continue; if (beed -- tail) (ŭ n if frest on multip (if (next == mult) return empty_t; If (CAS(Tail->next, nutl, node)) (CAS(Tail, tail, node); else DAS(Tabl, tabl, mext);) else (data = head-o-data;) else (of OCMSONIAN, head, next D 4 GASITAGI, tabl, next); nstr return firts;

```
Struct Bods (
                                               3 (Ottool bioso
                         pharmal r
     distant distant
                            Restrict Manufa
                                                  Board in one binde (1)
     Nodex node:
                            Neder Facil:
                                                  Monday says a malfill
                                                  Tail - Bout:
3 (For J. and)lesseems bins
                                             data.t dequeue() (
   Node: made i mey Node():
                                                satella decord d
    nede-odata i vali:
                                                    Soder head a sheet
    name-years a multi-
                                                    protects thead:
    while formed d
                                                    of Oteas to beauty continue;
       Soder tail - Tail:
                                                    Soder Suit - Tails
       productB(Failt)
                                                    Bodes orall a bead control
       of Chail to Saill continue:
                                                    products (meetle
       Bodes next a tail coneutr
                                                    If Omead he breath continue:
       of Chail to hall continue:
                                                    of Object on Section 6
                                                       of deput in sulfil return empty, to
       of depart on earlie d
          of Castract court, pull, point f
                                                       after DESTREET, Built, equities
              CASIDAGI, tail, nodel:
                                                   3 etse 6
                                                       date = head -- duta:
       3 else 3
                                                       of Childwood, head, next D C
          CHITCH, tail, early
                                                           retire(head);
                                                           return data:
queue SMR
```

```
struct Bar I
                                                3. Foto autoMRHoutes block
                                                   sufferenchad a settle
   Back parts
   Birdina hadin
   BODEN NOTE:
                                                A firth authoriti Madeu Afrik F.
                                                   sufface-had a ptro
educated t
   Beck Hilbert
                                                vald retirefisides atro (
thread-backto
                                                   retired; but, addingtoly
                                                   if (e) restaieth.
   Back mellaci
   Ligh-Medican and Lead Light
S. Chebert Street
                                                wast rectated file
   ruffer, a new HPRes(1) (
                                                   List-Madern protected.bits
   white freezel f
                                                   Seco top - MFRecta
       Sacr tep + HMors:
                                                   white time to sulfit it
       myflecio nevt in teec
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       of (Catinggers, two, syllect) (
                                                       Nodes hell a currentelia
           binessis ::
                                                       protected, int. add (tpb) :
                                                       protected, int. edition(1)
                                                       our is curso south
                                                    for (Biodea atr : retarn(Last) (
3 (177eq blev
                                                       if ((pretectedList,costales(ptr)) (
   sepretect/80;
                                                           retaredList, resevelptr3;
   empretectible;
                                                           defete ptru
```

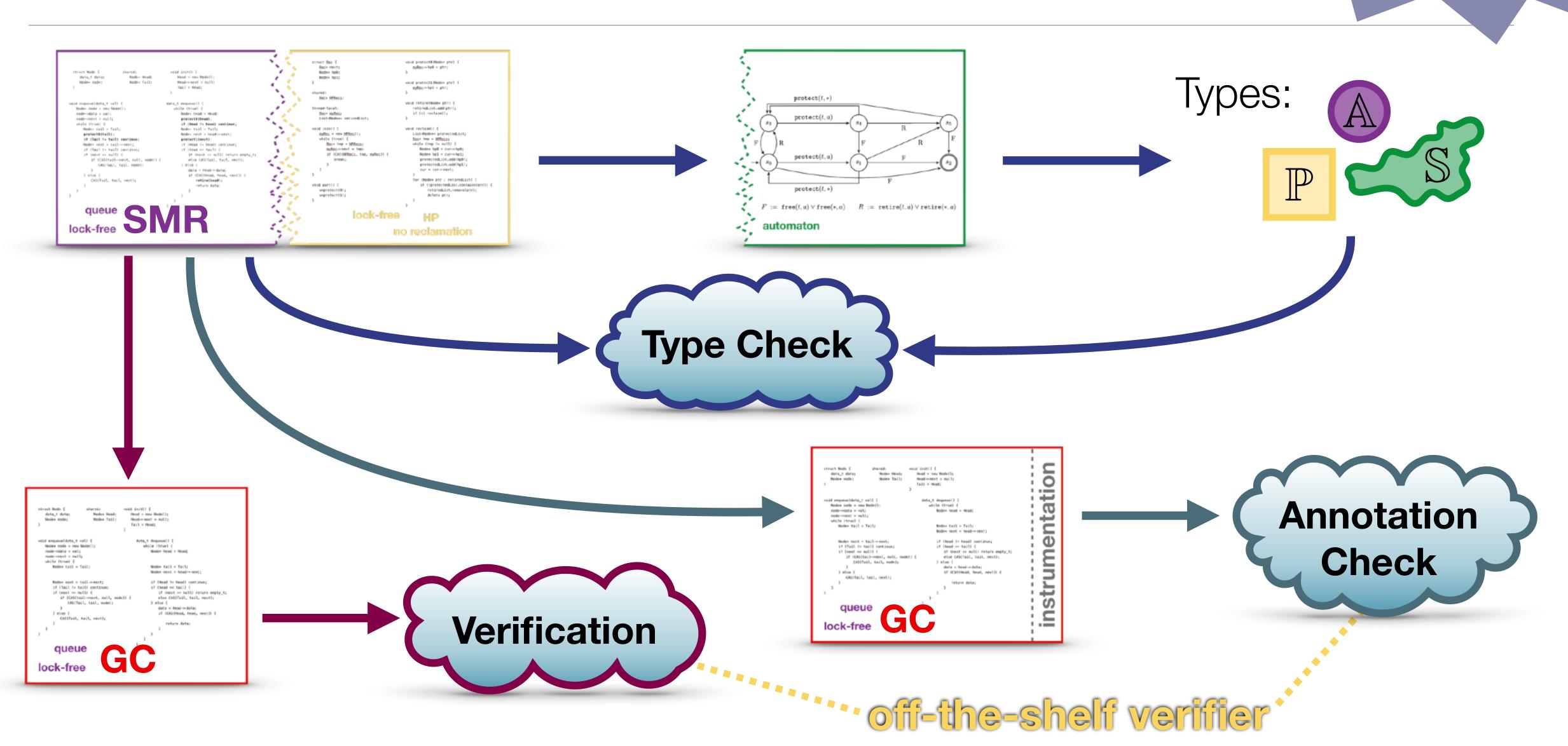
lock-free no reclamation

```
struct Bode (
                                      THE BUILD (
                     sharesis
                        Redex Head;
                                         Head = new Node();
   data_t data;
                                         Head-o next = null;
                        Rodes Tail:
   Nodes node;
                                         Tail - Head;
                                     3
) iler t_stellermunen blor
                                           drta_t dequeue() {
                                              while (true) (
   Nodex node = nev Node();
   nade-odata = val;
                                                 Nodex head + Head;
   node-mest = nutty
   while (true) (
      Nodes tast = Tast:
                                                  Nodes tact = Tact;
                                                  Nodes next a head-shext;
                                                  if (Head to head) continue;
      Nodes next = tail-o ment;
      of (Tail to tail) continue;
                                                  if (head == tail) (
                                                      if (next -- ne'll) return empty_t;
       if (rest == meVI) {
         if (CAS(tail->next, null, mode)) {
                                                      else CAS(Tail, tail, next);
            CAS(Tail, tail, model)
                                                  5 else (
                                                     data = head->data;
      ) else (
                                                     of CASOMond, hear, nextle (
         CAS(Tail, tail, rest);
                                                         return data;
lock-free
```



Thanks

Final Approach



Fin.