d-comp^{0,22}

```
d-comp(D;v;sched;dec)(t,f)
≡def  let s = λi.if t=₂0→ λx.M(i).init(x)?v(i,x) else 1of(f(t−1,i)) fi in
      λi.let si = s(i) in
         let w = d-partial-world(D;f;t;s) in
         let a = Case sched(i) of
                 inl(f) ⇒ Case f(t) of
                          inl(l) ⇒ if destination(l) = i ∧₂ 0<₂‖queue(l;t)‖→
                                      doact(rcv(l,mtag(hd(queue(l;t))))
                                          ;mval(hd(queue(l;t))))
                                   else null fi
                          inr(a) ⇒ if isl(dec(i,a,si))→ doact(inr(a);outl(dec(i,a,si)))
                                    else null fi
                 inr(x) ⇒ null in
         let m = if isl(a)→ nil
                  else filter(λm.source(mlnk(m)) = i
                          ;M(i).sends(1of(outr(a)),si,2of(outr(a)))) fi in
         let s′ = if isl(a)→ si
                  else λx.M(i).ef(1of(outr(a)),x,si,2of(outr(a)))?si(x) fi in
         ⟨s′, a, m⟩
```

clarification:

```
d-comp(D;v;sched;dec)(t,f)
≡def  let s = λi.if t=₂0→ λx.d-m(D; i).init(x)?v(i,x) else 1of(f(t−1,i)) fi in
      λi.let si = s(i) in
         let w = d-partial-world(D;f;t;s) in
         let a = Case sched(i) of
                 inl(f) ⇒ Case f(t) of
                          inl(l) ⇒ if destination(l) = i ∧₂ 0<₂‖w-queue(w; l; t)‖→
                                      doact(rcv(l,mtag(hd(w-queue(w; l; t))))
                                          ;mval(hd(w-queue(w; l; t))))
                                   else null fi
                          inr(a) ⇒ if isl(dec(i,a,si))→ doact(inr(a);outl(dec(i,a,si)))
                                    else null fi
                 inr(x) ⇒ null in
         let m = if isl(a)→ nil
                  else filter(λm.source(mlnk(m)) = i
                          ;d-m(D; i).sends(1of(outr(a)),si,2of(outr(a)))) fi in
         let s′ = if isl(a)→ si
                  else λx.d-m(D; i).ef(1of(outr(a)),x,si,2of(outr(a)))?si(x) fi in
         ⟨s′, a, m⟩
```

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http://www.cs.cornell.edu/Info/Projects/NuPrl/FDLcontent/p0_286125_/p12_68442_{d-comp}.html