

## d-comp<sup>0,22</sup>

$\text{d-comp}(D;v;\text{sched};\text{dec})(t,f)$   
 $\equiv_{\text{def}}$  let  $s = \lambda i.\text{if } t=20 \rightarrow \lambda x.M(i).\text{init}(x)?v(i,x)$  else  $1\text{of}(f(t-1,i))$  fi in  
 $\lambda i.\text{let } si = s(i)$  in  
 let  $w = \text{d-partial-world}(D;f;t;s)$  in  
 let  $a = \text{Case } \text{sched}(i)$  of  
    $\text{inl}(f) \Rightarrow \text{Case } f(t)$  of  
      $\text{inl}(l) \Rightarrow \text{if } \text{destination}(l) = i \wedge_2 0 <_2 \|\text{queue}(l;t)\| \rightarrow$   
        $\text{doact}(\text{rcv}(l,\text{mtag}(\text{hd}(\text{queue}(l;t))))$   
        $\quad ;\text{mval}(\text{hd}(\text{queue}(l;t))))$   
     else null fi  
      $\text{inr}(a) \Rightarrow \text{if } \text{isl}(\text{dec}(i,a,si)) \rightarrow \text{doact}(\text{inr}(a);\text{outl}(\text{dec}(i,a,si)))$   
     else null fi  
    $\text{inr}(x) \Rightarrow \text{null}$  in  
 let  $m = \text{if } \text{isl}(a) \rightarrow \text{nil}$   
   else  $\text{filter}(\lambda m.\text{source}(\text{mlnk}(m)) = i$   
      $\quad ;M(i).\text{sends}(1\text{of}(\text{outr}(a)),si,2\text{of}(\text{outr}(a))))$  fi in  
 let  $s' = \text{if } \text{isl}(a) \rightarrow si$   
   else  $\lambda x.M(i).\text{ef}(1\text{of}(\text{outr}(a)),x,si,2\text{of}(\text{outr}(a)))?si(x)$  fi in  
 $\langle s', a, m \rangle$

*clarification:*

$\text{d-comp}(D;v;\text{sched};\text{dec})(t,f)$   
 $\equiv_{\text{def}}$  let  $s = \lambda i.\text{if } t=20 \rightarrow \lambda x.\text{d-m}(D; i).\text{init}(x)?v(i,x)$  else  $1\text{of}(f(t-1,i))$  fi in  
 $\lambda i.\text{let } si = s(i)$  in  
 let  $w = \text{d-partial-world}(D;f;t;s)$  in  
 let  $a = \text{Case } \text{sched}(i)$  of  
    $\text{inl}(f) \Rightarrow \text{Case } f(t)$  of  
      $\text{inl}(l) \Rightarrow \text{if } \text{destination}(l) = i \wedge_2 0 <_2 \|\text{w-queue}(w; l; t)\| \rightarrow$   
        $\text{doact}(\text{rcv}(l,\text{mtag}(\text{hd}(\text{w-queue}(w; l; t))))$   
        $\quad ;\text{mval}(\text{hd}(\text{w-queue}(w; l; t))))$   
     else null fi  
      $\text{inr}(a) \Rightarrow \text{if } \text{isl}(\text{dec}(i,a,si)) \rightarrow \text{doact}(\text{inr}(a);\text{outl}(\text{dec}(i,a,si)))$   
     else null fi  
    $\text{inr}(x) \Rightarrow \text{null}$  in  
 let  $m = \text{if } \text{isl}(a) \rightarrow \text{nil}$   
   else  $\text{filter}(\lambda m.\text{source}(\text{mlnk}(m)) = i$   
      $\quad ;\text{d-m}(D; i).\text{sends}(1\text{of}(\text{outr}(a)),si,2\text{of}(\text{outr}(a))))$  fi in  
 let  $s' = \text{if } \text{isl}(a) \rightarrow si$   
   else  $\lambda x.\text{d-m}(D; i).\text{ef}(1\text{of}(\text{outr}(a)),x,si,2\text{of}(\text{outr}(a)))?si(x)$  fi in  
 $\langle s', a, m \rangle$

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