

combine-ecl-tuples2^{11,40}

```
combine-ecl-tuples2(A; B; f; g)
≡def spreadn(A;
  Ta,ksa,ia,ga,ha,aa,ea.spreadn
  (B;
    Tb,ksb,ib,gb,hb,ab,eb.<:Ta × (:Tb × (?ℕ))
    , append(ksa; ksb)
    , <ia, ib, inr · >
    , λk',s,v,x. let sa = if deq-member(Kind-deq; k'; ksa)
      then ga(k',s,v,x.1)
      else x.1
    fi in
      let sb = if deq-member(Kind-deq; k'; ksb)
        then gb(k',s,v,(x.2).1)
        else (x.2).1
      fi in
        <sa
        , sb
        , combine-halt-info(ea;
          eb;
          (λm.ha(m,sa));
          (λm.hb(m,sb));
          (x.2.2))>
    , λn,x. f((x.2.2),λm.ha(m,x.1),λm.hb(m,(x.2).1),n)
    , λn,k',s,v,x. g
      (ha(0,x.1)
      ,hb(0,(x.2).1)
      ,reduce((λm,b. bor((ha(m,x.1)); b)); ff; ea)
      ,reduce((λm,b. bor((hb(m,(x.2).1)); b)); ff; eb)
      ,if deq-member(Kind-deq; k'; ksa)
        then aa(n,k',s,v,x.1)
        else ff
      fi
      ,if deq-member(Kind-deq; k'; ksb)
        then ab(n,k',s,v,(x.2).1)
        else ff
      fi )
    , merge(ea; eb)>))
```

clarification:

```
combine-ecl-tuples2(A; B; f; g)
≡def spreadn(A;
```

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Ta,ksa,ia,ga,ha,aa,ea.spreadn
(B;
  Tb,ksb,ib,gb,hb,ab,eb.<:Ta × (:Tb × ( $\mathbb{B}$  + Unit))
  , append(ksa; ksb)
  , <ia, ib, inr · >
  , λk',s,v,x. let sa = if deq-member(Kind-deq; k'; ksa)
    then ga(k',s,v,x.1)
    else x.1
    fi in
    let sb = if deq-member(Kind-deq; k'; ksb)
      then gb(k',s,v,(x.2).1)
      else (x.2).1
      fi in
      <sa
      , sb
      , combine-halt-info(ea;
        eb;
        (λm.ha(m,sa));
        (λm.hb(m,sb));
        (x.2.2)>
      , λn,x. f((x.2.2),λm.ha(m,x.1),λm.hb(m,(x.2).1),n)
      , λn,k',s,v,x. g
        (ha(0,x.1)
        ,hb(0,(x.2).1)
        ,reduce((λm,b. bor((ha(m,x.1)); b)); ff; ea)
        ,reduce((λm,b. bor((hb(m,(x.2).1)); b)); ff; eb)
        ,if deq-member(Kind-deq; k'; ksa)
          then aa(n,k',s,v,x.1)
          else ff
        fi
        ,if deq-member(Kind-deq; k'; ksb)
          then ab(n,k',s,v,(x.2).1)
          else ff
        fi )
      , merge(ea; eb)>))

```