es_realizer_ind^{0,22}

case x_1 of
Rnone => *none*
Rplus(*left*,*right*)=>rec_1,rec_2.*plus*(*left*;*right*;rec_1;rec_2)
Rinit(*loc*,*T*,*x*,*v*)=> *init*(*loc*;*T*;*x*;*v*)
Rframe(*loc*,*T*,*x*,*L*)=> *frame*(*loc*;*T*;*x*;*L*)
Rsframe(*lnk*,*tag*,*L*)=> *sframe*(*lnk*;*tag*;*L*)
Reffect(*loc*,*ds*,*knd*,*T*,*x*,*f*)=> *effect*(*loc*;*ds*;*knd*;*T*;*x*;*f*)
Rsends(*ds*,*knd*,*T*,*l*,*dt*,*g*)=> *sends*(*ds*;*knd*;*T*;*l*;*dt*;*g*)
Rpre(*loc*,*ds*,*a*,*T*,*P*)=> *pre*(*loc*;*ds*;*a*;*T*;*P*)
Raframe(*loc*,*k*,*L*)=> *aframe*(*loc*;*k*;*L*)
Rbframe(*loc*,*k*,*L*)=> *bframe*(*loc*;*k*;*L*)
Rrframe(*loc*,*x*,*L*)=> *rframe*(*loc*;*x*;*L*)
$\equiv_{\text{def}}$ Case x_1 of
  inl(x) $\Rightarrow$ *none*
  inr(x)
  $\Rightarrow$ Case x of
    inl(x) $\Rightarrow$ *plus*(1of(x)
      ;2of(x)
      ;case 1of(x) of
       Rnone => *none*
       Rplus(*left*,*right*)=>rec_1,rec_2.*plus*(*left*;*right*;rec_1;rec_2)
       Rinit(*loc*,*T*,*x*,*v*)=> *init*(*loc*;*T*;*x*;*v*)
       Rframe(*loc*,*T*,*x*,*L*)=> *frame*(*loc*;*T*;*x*;*L*)
       Rsframe(*lnk*,*tag*,*L*)=> *sframe*(*lnk*;*tag*;*L*)
       Reffect(*loc*,*ds*,*knd*,*T*,*x*,*f*)=> *effect*(*loc*;*ds*;*knd*;*T*;*x*;*f*)
       Rsends(*ds*,*knd*,*T*,*l*,*dt*,*g*)=> *sends*(*ds*;*knd*;*T*;*l*;*dt*;*g*)
       Rpre(*loc*,*ds*,*a*,*T*,*P*)=> *pre*(*loc*;*ds*;*a*;*T*;*P*)
       Raframe(*loc*,*k*,*L*)=> *aframe*(*loc*;*k*;*L*)
       Rbframe(*loc*,*k*,*L*)=> *bframe*(*loc*;*k*;*L*)
       Rrframe(*loc*,*x*,*L*)=> *rframe*(*loc*;*x*;*L*)
      ;case 2of(x) of
       Rnone => *none*
       Rplus(*left*,*right*)=>rec_1,rec_2.*plus*(*left*;*right*;rec_1;rec_2)
       Rinit(*loc*,*T*,*x*,*v*)=> *init*(*loc*;*T*;*x*;*v*)
       Rframe(*loc*,*T*,*x*,*L*)=> *frame*(*loc*;*T*;*x*;*L*)
       Rsframe(*lnk*,*tag*,*L*)=> *sframe*(*lnk*;*tag*;*L*)
       Reffect(*loc*,*ds*,*knd*,*T*,*x*,*f*)=> *effect*(*loc*;*ds*;*knd*;*T*;*x*;*f*)
       Rsends(*ds*,*knd*,*T*,*l*,*dt*,*g*)=> *sends*(*ds*;*knd*;*T*;*l*;*dt*;*g*)
       Rpre(*loc*,*ds*,*a*,*T*,*P*)=> *pre*(*loc*;*ds*;*a*;*T*;*P*)
       Raframe(*loc*,*k*,*L*)=> *aframe*(*loc*;*k*;*L*)
       Rbframe(*loc*,*k*,*L*)=> *bframe*(*loc*;*k*;*L*)
       Rrframe(*loc*,*x*,*L*)=> *rframe*(*loc*;*x*;*L*))

```
inr(x)
⇒ Case x of
    inl(x) ⇒ init(1of(x);1of(2of(x));1of(2of(2of(x)));2of(2of(2of(x))))
    inr(x) ⇒ Case x of
                inl(x) ⇒ frame(1of(x);1of(2of(x));1of(2of(2of(x)));2of(2of(2of(x))))
                inr(x) ⇒ Case x of
                            inl(x) ⇒ sframe(1of(x);1of(2of(x));2of(2of(x)))
                            inr(x) ⇒ Case x of
                                        inl(x) ⇒ effect(1of(x)
                                                        ;1of(2of(x))
                                                        ;1of(2of(2of(x)))
                                                        ;1of(2of(2of(2of(x))))
                                                        ;1of(2of(2of(2of(2of(x)))))
                                                        ;2of(2of(2of(2of(2of(x))))))
                                        inr(x) ⇒ Case x of
                                                    inl(x) ⇒ sends(1of(x)
                                                                   ;1of(2of(x))
                                                                   ;1of(2of(2of(x)))
                                                                   ;1of(2of(2of(2of(x))))
                                                                   ;1of(2of(2of(2of(2of(x)))))
                                                                   ;2of(2of(2of(2of(2of(x))))))
                                                    inr(x) ⇒ Case x of
                                                                inl(x) ⇒ pre(1of(x)
                                                                             ;1of(2of(x))
                                                                             ;1of(2of(2of(x)))
                                                                             ;1of(2of(2of(2of(x))))
                                                                             ;2of(2of(2of(2of(x)))))
                                                                inr(x) ⇒ Case x of
                                                                            inl(x) ⇒ aframe(1of(x)
                                                                                            ;1of(2of(x))
                                                                                            ;2of(2of(
                                                                                             x)))
                                                                            inr(x) ⇒ Case x of
                                                                                        inl(x)
                                                                                        ⇒ bframe(1of(x)
                                                                                                 ;1of(2of(
                                                                                                      x))
                                                                                                 ;2of(2of(
                                                                                                  x)))
                                                                                        inr(x)
                                                                                        ⇒ rframe(1of(x)
                                                                                                 ;1of(2of(
                                                                                                      x))
                                                                                                 ;2of(2of(
                                                                                                  x)))
```

(recursive)

http://www.cs.cornell.edu/Info/Projects/NuPrl/FDLcontent/p0_286125_/p46_80154_{es_realizer_ind}.html