

es_realizer^{11,40}

```

es_realizer{i:l}
≡def rec(X.(Unit + (left:X × X) + (loc:Id
  × (T:Type
  × (x:Id
  × (T + (rationals→T)))))) + (loc:Id
  × (T:Type
  × (x:Id
  × (Knd List)))) + (lnk:IdLnk × (tag:Id × (Knd List))) + (loc:Id
  × (ds:fpf(Id; x.Type)
  × knd:Knd
  × T:Type
  × (x:Id
  × ((decl-state(ds)→T→decl-type{i:l}
  (ds; x)) + (decl-state(ds)→T→rationals→
  decl-type{i:l}
  (ds; x)))))) + (ds:fpf(Id; x.Type)
  × (knd:Knd
  × T:Type
  × l:IdLnk
  × (dt:fpf(Id; x.Type)
  × ((tg:Id
  × (decl-state(ds)→T→(decl-type{i:l}
  (dt; tg) List))) List)))) + (loc:Id
  × (ds:fpf(Id; x.Type)
  × a:Id
  × (p:finite-prob-space
  × (decl-state(ds)→ℕ)))) + (loc:Id × (k:Knd × (Id List))) + (loc:Id
  × (k:Knd
  × (IdLnk List))) + (loc:Id × (x:Id × (Knd List))))))

```

clarification:

```

es_realizer{i:l}
≡def rec(X.(Unit + (left:X × X) + (loc:Id
  × (T:Type{i}
  × (x:Id
  × (T + (rationals→T)))))) + (loc:Id
  × (T:Type{i}
  × (x:Id
  × (Knd List)))) + (lnk:IdLnk × (tag:Id × (Knd List))) + (loc:Id
  × (ds:fpf(Id; x.Type{i})
  × knd:Knd

```

$\times T:\text{Type}\{i\}$
 $\times (x:\text{Id}$
 $\times ((\text{decl-state}(ds) \rightarrow T \rightarrow \text{decl-type}\{i:l\}$
 $\quad (ds; x)) + (\text{decl-state}(ds) \rightarrow T \rightarrow \text{rationals} \rightarrow$
 $\quad \text{decl-type}\{i:l\}$
 $\quad (ds; x)))))) + (ds:\text{fpf}(\text{Id}; x.\text{Type}\{i\})$
 $\times (knd:\text{Knd}$
 $\times T:\text{Type}\{i\}$
 $\times l:\text{IdLnk}$
 $\times (dt:\text{fpf}(\text{Id}; x.\text{Type}\{i\})$
 $\times ((tg:\text{Id}$
 $\quad \times (\text{decl-state}(ds) \rightarrow T \rightarrow (\text{decl-type}\{i:l\}$
 $\quad (dt; tg) \text{List})) \text{List})))) + (loc:\text{Id}$
 $\times (ds:\text{fpf}(\text{Id}; x.\text{Type}\{i\})$
 $\times a:\text{Id}$
 $\times (p:\text{finite-prob-space}$
 $\times (\text{decl-state}(ds) \rightarrow \mathbb{B})))) + (loc:\text{Id} \times (k:\text{Knd} \times (\text{Id List})) + (loc:\text{Id}$
 $\times (k:\text{Knd}$
 $\times (\text{IdLnk List})) + (loc:\text{Id} \times (x:\text{Id} \times (\text{Knd List}))))))$