

Potentialities

```
open import PredP
open Pred

module PotP (Msg :  $\mathcal{U}$ )  $\mathcal{V}$  (Cm : Pred (Pred Msg  $\mathcal{V}$ ) ( $\mathcal{U} \sqcup \mathcal{V}$ ))  $\mathcal{W}$  (Cp : Pred ( $\Sigma$  Cm)  $\mathcal{W}$ )
where

  open import FCP { $\mathcal{W} = \mathcal{U} \sqcup \mathcal{V} + \sqcup \mathcal{W} +$ } Msg  $\mathcal{V}$  Cm

  open  $\Sigma$ Pred

  BSet =  $\Sigma$  Cm
  &PSet =  $\Sigma$  Cp

  open import FunctorP
  open import Final-CoAlgebraP

  Fpot : Functor ( $\mathcal{U} \sqcup \mathcal{V} + \sqcup \mathcal{W} +$ )
  Fpot =
    (  $\lambda$  X  $\rightarrow$  X  $\times$  &PSet  $\times$  FC X )
    , (  $\lambda$  f (x , &ps , ((mp , fm) , (ap , fa)))  $\rightarrow$  f x , &ps , (mp ,  $\lambda$  x c  $\rightarrow$  f (fm x
c)) , (ap ,  $\lambda$  x c  $\rightarrow$  f (fa x c)))
    , (  $\lambda$  f g x  $\rightarrow$  refl )
    ,  $\lambda$  x  $\rightarrow$  refl

  Pot = Final-CoAlgebra Fseq
```