

## Function of Change

This is the the generalized version of the function of change.

It encodes all the possible msgs that the system could receive or accept, independent of the structure of the system, ie the number of actors present. It also defines the change that happens after the msg has arrived or has been sent.

```
open import PredP
open Pred

module FCP (Msg :  $\mathcal{U}$ ) (Secret :  $\mathcal{U}^*$ )  $\mathcal{V}$  (B :  $\mathcal{W}$ ) where

open import Definitions Msg Secret

open  $\Sigma$ Pred

FC :  $\mathcal{U} \sqcup \mathcal{W} \sqcup (\mathcal{V}^+) \sqcup (\mathcal{U} \sqcup \mathcal{W} \sqcup (\mathcal{V}^+))^*$ 
FC =  $(\Sigma \text{ Mp} : \text{BSet } \mathcal{V}, (\forall x \rightarrow \langle \text{Mp} \rangle x \rightarrow B)) \times (\Sigma \text{ Ap} : \text{BSet } \mathcal{V}, (\forall x \rightarrow \langle \text{Ap} \rangle x \rightarrow B))$ 

module FC (fc : FC) where
  Mp :  $\_$ 
  Mp = fc .pr1 .pr1

  fm :  $\forall x \rightarrow \langle \text{Mp} \rangle x \rightarrow B$ 
  fm = fc .pr1 .pr2

  Ap :  $\_$ 
  Ap = fc .pr2 .pr1

  fa :  $\forall x \rightarrow \langle \text{Ap} \rangle x \rightarrow B$ 
  fa = fc .pr2 .pr2
```