

**THEORY** EvtBStruc**TYPE PARAMETERS**  $STATE, EVENT$ **DATA TYPES**Machine( $STATE, EVENT$ )**CONSTRUCTORS**

Cons\_machine(  
  Event :  $\mathbb{P}(EVENT)$ ,  
  State :  $\mathbb{P}(STATE)$ ,  
  Init :  $EVENT$ ,  
  Progress :  $\mathbb{P}(EVENT)$ ,  
  AP :  $\mathbb{P}(STATE)$ ,  
  Grd :  $\mathbb{P}(EVENT \times STATE)$ ,  
  BAP :  $\mathbb{P}(EVENT \times (STATE \times STATE))$ ,  
  Inv :  $\mathbb{P}(STATE)$ ,  
  Thm :  $\mathbb{P}(STATE)$ ,  
  Ordinary :  $\mathbb{P}(EVENT)$ ,  
  Variant :  $\mathbb{P}(STATE \times \mathbb{Z})$ ,  
  Convergent :  $\mathbb{P}(EVENT)$ )

**OPERATORS****Grd\_WellCons predicate** ( $m : Machine(STATE, EVENT)$ )**direct definition** $dom(Grd(m)) = Progress(m)$ **BAP\_WellCons predicate** ( $m : Machine(STATE, EVENT)$ )**direct definition** $dom(BAP(m)) = Progress(m)$ **Event\_WellCons predicate** ( $m : Machine(STATE, EVENT)$ )**direct definition** $partition(Event(m), \{Init(m)\}, Progress(m))$ **Variant\_WellCons predicate** ( $m : Machine(STATE, EVENT)$ )**direct definition** $Inv(m) \triangleleft Variant(m) \in Inv(m) \rightarrow \mathbb{Z}$ **Tag\_Event\_WellCons predicate** ( $m : Machine(EVENT, STATE)$ )**direct definition** $partition(Event(m), Ordinary(m), Convergent(m)) \wedge Init(m) \in Ordinary(m)$ **Machine\_WellCons predicate** ( $m : Machine(STATE, EVENT)$ )**direct definition** $BAP\_WellCons(m) \wedge$   
 $Grd\_WellCons(m) \wedge$   
 $Event\_WellCons(m) \wedge$   
 $Tag\_Event\_WellCons(m) \wedge$   
 $Variant\_WellCons(m)$ **END**