Objectives

This proposal elaborates VPI diagrams for checkers. The basic checker proposal is covered by Mantis 1900.

36.4 Module

REPLACE

WITH

Note to the editor: Only modified part is shown.

36.5 Interface

REPLACE

WITH
36.8 Program

REPLACE

WITH

Note to the editor: Only modified part is shown.

36.9a (section to be renumbered by editor) Checker

Note to the editor: Please, shift the numeration of the subsequent clauses accordingly.
Details:

1) If a checker is an element within an instance array, the `vpiIndex` transition is used to access the index within the array. If a checker is not part of an instance array, this transition shall return `NULL`.

### 36.9b (section to be renumbered by editor) Instance

CHANGE TO
36.10 Instance arrays
WITH

instance array

primitive array

interface array

program array

module array

36.16 Variables
ADD to the property list
-> CheckQualifier

   int: vpiCheckQualifier

ADD to Details

Insert appropriate number here) A value of vpiNoCheck for the property vpiCheckQualifier shall indicate that the variable is a regular variable. A value of vpiCheck shall indicate that the variable is a regular checker variable. A value of vpiFreeCheck shall indicate that the variable is a free checker variable (see 16.18.6).

36.51 Atomic Statements

REPLACE
WITH

- atomic stmt
  - if
  - if else
  - while
  - repeat
  - waits
  - case
  - for
  - delay control
  - event control
  - event stmt
  - assignment
  - assign stmt
  - deassign
  - disables
  - if call
  - forever
  - force
  - release
  - do while
  - expect stmt
  - foreach stmt
  - return stmt
  - break
  - continue
  - immediate assert
  - null stmt

  → labeled
  → attr: vpiName
36.53 Process

REPLACE

-> always type

bool: vpiAlwaysType

WITH
Details:

1) `vpiAlwaysType` can be one of `vpiAlways`, `vpiAlwaysComb`, `vpiAlwaysFF`, or `vpiAlwaysLatch`.

2) `vpiInitialType` can be one of `vpiInitial`, `vpiInitialCheck`.

36.75 Generates

Replace

```
 gen scope
```  

WITH

```
 gen scope
   checker
   checker array
```  

Note to the editor: Only modified part is shown.

M.2 Source code

Replace

```
#define vpiProgram 602
```  

WITH

```
#define vpiProgram 602
#define vpiChecker Editor to fill
```
#define vpiProgramArray 604

WITH

#define vpiProgramArray 604
#define vpiCheckerArray Editor to fill

#define vpiConstantVariable 612
#define vpiStructUnionMember 615

WITH

#define vpiConstantVariable 612
#define vpiStructUnionMember 615

#define vpiCheckQualifier Editor to fill
#define vpiNoCheck 1
#define vpiCheck 2
#define vpiFreeCheck 3

#define vpiAlwaysType 624
#define vpiAlwaysComb 2
#define vpiAlwaysFF 3
#define vpiAlwaysLatch 4

WITH

#define vpiAlwaysType 624
#define vpiAlwaysComb 2
#define vpiAlwaysFF 3
#define vpiAlwaysLatch 4
#define vpiAlwaysCheck Editor to fill
#define vpiInitialType Editor to fill
#define vpiInitialCheck Editor to fill