CoveragePkg Release Notes

1 Revision 2013.04 April 2013

Added control for merging and deletion. Merging is off by default. Use function SetMerging to turn it on. Warning merging will change in a future revision.

Added RandCovPoint for integer.

Thresholding is now enabled or disabled by an internal variable. Enable or disable using SetThresholding. Thresholding is off by default. Revised RandCovPoint and RandCovBinVal to use the threshold variable and removed the thresholding by PercentCov value.

Added coverage target as a scaling factor to all AtLeast values. Multiplier is CovTarget/100. It is 100% by default. Change it with SetCovTarget. Removed the default value from the PercentCov parameter of all methods (RandCovPoint, RandCovBinVal, IsCovered, CountCovHoles, GetHoleBinVal, and WriteCovHoles). Replaced the default value with an overloaded function that uses coverage target instead.

Added ILLEGAL_FAILURE mode to illegal bin control. When set, if an illegal bin is encountered, a severity failure will be generated.

Added manual bin iteration support. Bin values are indexed with a value from 1 to NumBins. Use GetNumBins to the value of NumBins. To get bins with minimum and maximum coverage use GetMinIndex and GetMaxIndex. To get bin values, use GetBinVal(BinIndex), GetMinBinVal, and GetMaxBinVal. To get point values, use GetPoint(BinIndex), GetMinPoint, and GetMaxPoint.

Since a file parameter cannot be used with WriteBin and WriteCovHoles, an internal file open and file close was added in the form of FileOpenWriteBin and FileCloseWriteBin. This allows these procedures to be used with a named file without having to specify it on every call.

Added CompareBins to facilitate comparing two coverage models.

Added IsInitialized to check if a coverage model is initialized. Added GetCov to return the current percent done of the entire coverage model.

Changed default for File_Open_Kind to WRITE_MODE for WriteCovDb. Generally only one WriteCovDb is needed per coverage model.

Updated WriteCovDb and ReadCovDb for new internal control/state variables, in the order of ThresholdingEnable, CovTarget, and MergingEnable. To manually edit old file, add FALSE, 100.0, FALSE to end of first line.

Additional bin information methods were added in the form of GetBinInfo and GetBinValLength.

Added error checking to methods. Added uninitialized model checks to WriteBin, WriteCovHoles, and WriteCovDb. Added check to make sure AddBins or AddCross do not change the current BinVal size.

WriteBins and WriteCovHoles only print weight if the selected WeightMode uses the weight.

Removed IgnoreBin with AtLeast and Weight parameters. These are zero for ignore bins.

Working on consistency of naming. The following have changed:

New Name	Old Name	Why
GetErrorCount	CovBinErrCnt	Consistency between packages
GetMinCount	GetMinCov[return integer]	Naming clarity
GetMaxCount	GetMaxCov[return integer]	Naming clarity
SetName	SetItemName	SetName now does multi-line messages
RandCovBinVal	RandCovHole	Naming consistency (2.4)
GetHoleBinVal	GetCovHole	Naming consistency (2.4)

The following methods with an AtLeast parameter are deprecated, RandCovPoint, RandCovBinVal, IsCovered, CountCovHoles, GetHoleBinVal, and WriteCovHoles.

2 Revision 2.4 January 2012

Added bin merging and deletion for overlapping bins.

Working on consistency of naming. Renamed RandCovHole to RandCovBinVal. Renamed GetCovHole to GetCovBinVal. Old names maintained for backward compatibility.

New Name	Old Name	Why
RandCovBinVal	RandCovHole	Naming consistency
GetCovBinVal	GetCovHole	Naming consistency

3 Revision 2.3 January 2012

Revision 2.3 adds the function GetBin. GetBin is an accessor function that returns a bin in the form of a record. It is only intended for debugging. In particular, the return value of this function may change as the internal data types evolve.

4 Revision 2.2 July 2011

Revision 2.2 adds AtLeast and Weights to the coverage database. The AtLeast value allows individual bins to have a specific coverage goal. A conjunction of the AtLeast and Weight (depending on the WeightMode) are used to weight the random selection of coverage holes. These features are at the heart of intelligent coverage.

5 Revision 2.1 June 2011

Removed signal based coverage support.

6 Revision 2.0 April 2011

Coverage modeled in a protected type.

The STANDARD revision of this package requires VHDL-2008. It will work with a VHDL-2002 compliant simulator by uncommenting the VHDL-2008 compatibility packages.

7 Revision 1.X June 2010

Coverage modeled in signals of type integer_vector. The signal based coverage methodology is available in the package, CoverageSigPkg, however, it is recommended that you use CoveragePkg instead.