Resolution of Mantis items 2575, 2598, 2608: specifying access to class parameters and type parameters.

Ballot ids: 50, 52, 55, 59, 64

Section 8.5

Change title of 8.5:

REPLACE: 8.5 Object properties

WITH: 8.5 Object properties and object parameter data

After : There are no restrictions on the data type of a class property.

Add:

The parameter data values of an object can also be accessed by qualifying the class parameter or local parameter names with an instance name. Example:

```
class vector #(parameter width = 7);
endclass
```

vector #(3) v = new; initial \$display (v.width);

Such an expression is not a constant expression.

Section 8.10 This

REPLACE:

The this keyword is used to unambiguously refer to class properties or methods of the current instance.

WITH:

The **this** keyword is used to unambiguously refer to class properties, parameters, local params or methods of the current instance.

Section 8.14 Super

REPLACE:

The super keyword is used from within a derived class to refer to members of the base class. It is necessary

to use super to access members of a base class when those members are overridden by the derived class.

WITH:

The **super** keyword is used from within a derived class to refer to members, class parameters or local parameters of the base class. It is necessary to use **super** to access members or parameters of a base class when those members – are overridden by the derived class. A parameter expression using super to access the parameter is not a constant expression.

REPLACE:

The member can be a member declared a level up or be inherited by the class one level up.

WITH:

The member or parameter can be a member declared a level up or be inherited by the class one level up

Section 8.17

REPLACE:

In SystemVerilog, unqualified class properties and methods are public, available to anyone who has access to the object's name.

WITH:

In SystemVerilog, unqualified class properties and methods are public, available to anyone who has access to the object's name. Class parameters and class local parameters are also public.

Section 8.22

In 8.22, REPLACE

Because classes and other scopes can have the same identifiers, the class scope resolution operator uniquely identifies a member of a particular class. In addition to disambiguating class scope identifiers, the :: operator also allows access to static members (class properties and methods) from outside the class, as well as access to public or protected elements of a superclass from within the derived classes.

WITH

Because classes and other scopes can have the same identifiers, the class scope resolution operator uniquely identifies a member of a particular class, a class parameter, class type parameter or class local parameter. In addition to disambiguating class scope identifiers, the :: operator also allows access to static members (class properties and methods, class parameters, class type parameters and class local parameters from outside the class, as well as access to public or protected elements of a superclass from within the derived classes. A class parameter, type parameter or local param is a public element of a class.

REPLACE:

In SystemVerilog, the class scope resolution operator applies to all static elements of a class: static class properties, static methods, typedefs, enumerations, structures, unions, and nested class declarations.

WITH

In SystemVerilog, the class scope resolution operator applies to all static elements of a class: static class properties, static methods, typedefs, enumerations, parameters, type parameters, local parameters, constraints, covergroups, structures, unions, and nested class declarations.

REPLACE:

The class scope resolution operator enables the following:

- Access to static public members (methods and class properties) from outside the class hierarchy.
- Access to public or protected class members of a superclass from within the derived classes.

 Access to type declarations and enumeration named constants declared inside the class from outside the class hierarchy or from within derived classes.

WITH:

The class scope resolution operator enables the following:

- Access to static public members (methods and class properties) from outside the class hierarchy.
- Access to public or protected class members of a superclass from within the derived classes.

— Access to constraint, covergroup, type declarations and enumeration named constants declared inside the class from outside the class hierarchy or from within derived classes.

— Access to parameters, type parameters and local params declared inside the class from outside the class hierarchy or from within derived classes.

REPLACE:

Nested classes shall have the same access rights as methods do in the containing class. They have full access rights to **local** and **protected** methods and properties of the containing class. Nested classes have lexically-scoped, unqualified access to the **static** properties and methods of the containing class

WITH:

Nested classes shall have the same access rights as methods do in the containing class. They have full access rights to **local** and **protected** methods and properties of the containing class. Nested classes have lexically-scoped, unqualified access to the **static** properties and methods, parameters, type parameters and local parameters of the containing class.