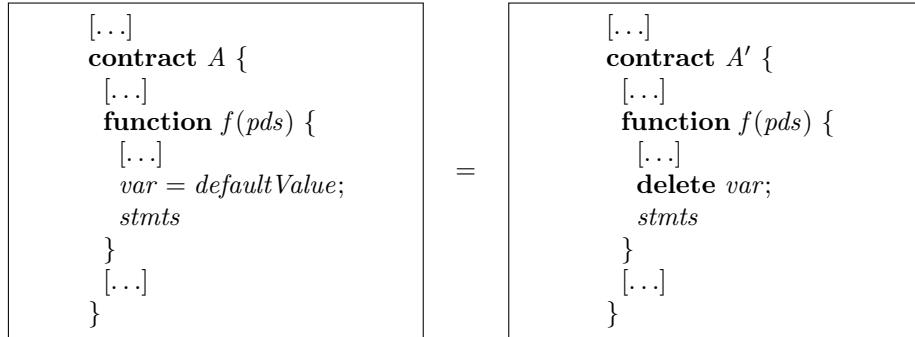

Rule 0.11 *(Delete Unused Storage Variables)*



where

var is a storage variable or storage location being reset;

defaultValue is the default zero value for the type of *var*;

stmts represents the sequence of statements following the operation;

pds are the parameter declarations of function *f*.

provided

var refers to a storage location (state variable, mapping entry, or array element);

The assignment *var* = *defaultValue* is semantically equivalent to **delete** *var*;

The **delete** operation triggers gas refunds in the EVM;

var is not read again within the same transaction after this operation;

The storage being cleared is no longer needed by the contract logic.

Invariant:

Let s_i and s'_i be the initial state of A and A' , respectively.

Let s_f and s'_f be the state reached by A and A' , respectively, after $A.f()$ and $A'.f()$ are executed from s_i and s'_i , respectively.

Then, the coupling invariant is

$$\forall s_i, s'_i . (s_i = s'_i) \rightarrow (s_f = s'_f)$$
