Can a PlusCal Function Really be Any Function?

Yes. For example, you can write a PlusCal algorithm that manipulates functions whose domain is the set of all integers, and you can prove properties of the algorithm. However, TLC will not be able to model-check an algorithm containing a variable whose value is a function with an infinite domain. (It may be possible to debug such an algorithm with TLC by using a model in which functions with an infinite domain are replaced by ones with a finite domain.)

CLOSE