

Structural convergence is a framework for convergence of graphs and relational structures based on the probability of satisfaction of first-order formulas. We consider gadget construction, which is a ubiquitous tool in many areas of mathematics, as a method for constructing convergent sequences of structures. Both for elementary and local convergence, we investigate the behavior of a sequence created by gadget construction from convergent sequences of base structures and gadgets. We show that elementary convergence is always preserved while additional assumptions are necessary for local convergence as witnessed by several examples. We give various different conditions that ensure local convergence. One of them states that the resulting sequence is local convergent if the replaced edges are dense in the sequence of base structures. The sufficient conditions are partially complemented by inverse theorems.