Abstract

We study various scaling behaviors of n-partite information during a process of thermalization after a global quantum quench for n disjoint system consisting of n parallel strips whose widths are much larger than the separation between them. By making use of the holographic description for entanglement entropy we explore holographic description of the n-partite information by which we show that it has a definite sign: it is positive for even n and negative for odd n. This might be thought of as an intrinsic property of a field theory which has gravity dual.