

ABSTRACT. We construct a small realization as flow of every precubical set (modeling for example a process algebra). The realization is small in the sense that the construction does not make use of any cofibrant replacement functor and of any transfinite construction. In particular, if the precubical set is finite, then the corresponding flow has a finite globular decomposition. Two applications are given. The first one presents a realization functor from precubical sets to globular complexes which is characterized up to a natural S-homotopy. The second one proves that, for such flows, the underlying homotopy type is naturally isomorphic to the homotopy type of the standard cubical complex associated with the precubical set.