Boolean asynchronous systems: the concept of attractor

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The Boolean asynchronous systems are systems generated by the functions $\Phi : \{0,1\}^n \longrightarrow \{0,1\}^n$ which iterate their coordinates independently on each other. Our purpose is to introduce their attractors by analogy with the dynamical systems literature.

The attractors are defined by Andrew Ilachinski in a real space, real time context (David Ruelle, Floris Takens, Jean-Pierre Eckmann and Robert Devaney are also cited) as sets that fulfill invariance, attractivity, minimality and topological transitivity is mentioned also.

John Milnor refers to real space, discrete time dynamical systems. He defines the trapped attractors, the trapping neighborhoods (or trapped attracting sets) and finally the attractors, in a manner that proves to be equivalent to that of D. V. Anosov, V. I. Arnold, Michael Brin, Garrett Stuck, Boris Hasselblatt, Anatole Katok and Jurgen Jost.

Such suggestions that we have grouped around the ideas of Ilachinski and Milnor bring in the Boolean asynchronous context a unique concept of attractor.