We present a time-optimal algorithm to construct a well-connected overlay from any initial topology in time O(log(n)) with high probability.
Our analysis uses and extends several results from the theory of Markov Chains, in particular their intermediate behaviour (i.e before they reach their stationary distribution)
In addition, we also present applications for our algorithm and our analysis:

* Using our algorithm as a subroutine, the MIS problem can be solved in time (log(d)+log(log(n))) where d is the initial topology's degree.
* One can test if the initial topology has a certain conductance (or is far from it) in time O(log(n)).
* We can create Spanning Trees of the initial topology in time O(log(n)).

Finally, we talk about the possibilities to extend our algorithm to other models.