Neurotransmission Simulation

Read the background about G protein coupled receptors and their associated signal transduction pathways. I recommend implementing the pathway that is summarized in figure 6.30. A couple of things to keep in mind:

1. Proteins do not seek each other out.
2. Proteins bind each other for some amount of time, then come apart; the interaction is usually transient.
3. Proteins and other biologically important molecules have a limited lifetime. In this simulation, don’t worry about receptors and G proteins degrading, but do give neurotransmitters and cAMP a limited lifespan.
4. Phosphorylation is also transient, although it lasts longer than protein binding.
5. Although this isn’t shown in the figures, adenylate cyclase will only actively make cAMP when the enzyme is bound to an activated G protein subunit.