1. Purpose and patterns

The purpose of this model is to create simulated GPS paths of African bush elephant (*Loxodonta africana*) in the KAZA region of south-central Africa. The patterns we are trying to replicate are:

* 1. Spatial
     1. Channeled movements along certain linear features, especially veterinary fences and omiramba (long dry riverbeds)
     2. Pinchpoints (bottlenecks) of movement across roads and at rivers
     3. Habitual movement to and from water sources, especially artificial waterholes
  2. Agent-based
     1. Differentiation of linear boundary permeability by agent type (sex) and boundary type (fence, river, road)
  3. Temporal
     1. Increased movement and crossing rates in the wet season (seasonality)

1. Entities, state variables, and scales
   1. Elephants
      1. Can be either male or female
2. Process overview and scheduling
   1. Submodel A
   2. Submodel B
3. Design concepts
   1. Basic principles
   2. Emergence
   3. Adaptation
   4. Objectives
   5. Learning
   6. Prediction
   7. Sensing
   8. Interaction
   9. Stochasticity
   10. Collectives
   11. Observation
4. Initialization
5. Input data
6. Submodels
   1. Submodel A details
   2. Submodel B details