## Line model

## Jeroen Chua

April 25, 2013

## 1 Notation

- $\beta$ : Finite set of bricks
- t: brick index (we will imagine that associate with each brick in the active set is an index).
- $s_t \in [0,1]$ : random variable indicating on/off state of brick t
- $s_{1:t} \in [0,1]^t$ : set of random variables on/off state of bricks [1..t].
- $x_t$ : pose of brick t.
- $G_{t,i} \in 0 \cup [1..G]$ : random variable indicating whether brick i is the **child** of brick t, and if so, which of the G slots it is in. 0 indicates not a child, any other value indicates slot number.
- $R_t = \{G_{i,t}, \forall i\}$ : set of random variables indicating whether each brick is a parent of t.

## 2 Model