

Crossing the Street

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References

M. van Lambalgen and F. Hamm. *The Proper Treatment of Events*. Blackwell, Malden, 2005.

Axiom 1 $\text{Initially}(f) \rightarrow \text{HoldsAt}(f, 0)$

Axiom 2 $\text{HoldsAt}(f, r) \wedge r < t \wedge \neg \exists s < r \text{HoldsAt}(f, s) \wedge \neg \text{Clipped}(r, f, t) \rightarrow \text{HoldsAt}(f, t)$

Axiom 3 $\text{Happens}(e, t) \wedge \text{Initiates}(e, f, t) \wedge t < t' \wedge \neg \text{Clipped}(t, f, t') \rightarrow \text{HoldsAt}(f, t')$

Axiom 4 $\text{Happens}(e, t) \wedge \text{Initiates}(e, f_1, t) \wedge t < t' \wedge t' = t + d \wedge \text{Trajectory}(f_1, t, f_2, d) \wedge \neg \text{Clipped}(t, f_1, t') \rightarrow \text{HoldsAt}(f_2, t')$

Axiom 5 $\text{Happens}(e, s) \wedge t < s < t' \wedge (\text{Terminates}(e, f, s) \vee \text{Releases}(e, f, s)) \rightarrow \text{Clipped}(t, f, t')$

1. $\text{Initially}(\text{one-side})$
2. $\text{Initially}(\text{distance}(0))$
3. $\text{HoldsAt}(\text{distance}(m), t) \wedge \text{HoldsAt}(\text{crossing}, t) \rightarrow \text{Happens}(\text{reach}, t)$
4. $\text{Initiates}(\text{start}, \text{crossing}, t)$
5. $\text{Releases}(\text{start}, \text{distance}(0), t)$
6. $\text{Initiates}(\text{reach}, \text{other-side}, t)$
7. $\text{Terminates}(\text{reach}, \text{crossing}, t)$
8. $\text{HoldsAt}(\text{distance}(x), t) \rightarrow \text{Trajectory}(\text{crossing}, t, \text{distance}(x + d), d)$
9. $\text{HoldsAt}(\text{distance}(x_1), t) \wedge \text{HoldsAt}(\text{distance}(x_2), t) \rightarrow x_1 = x_2.$





