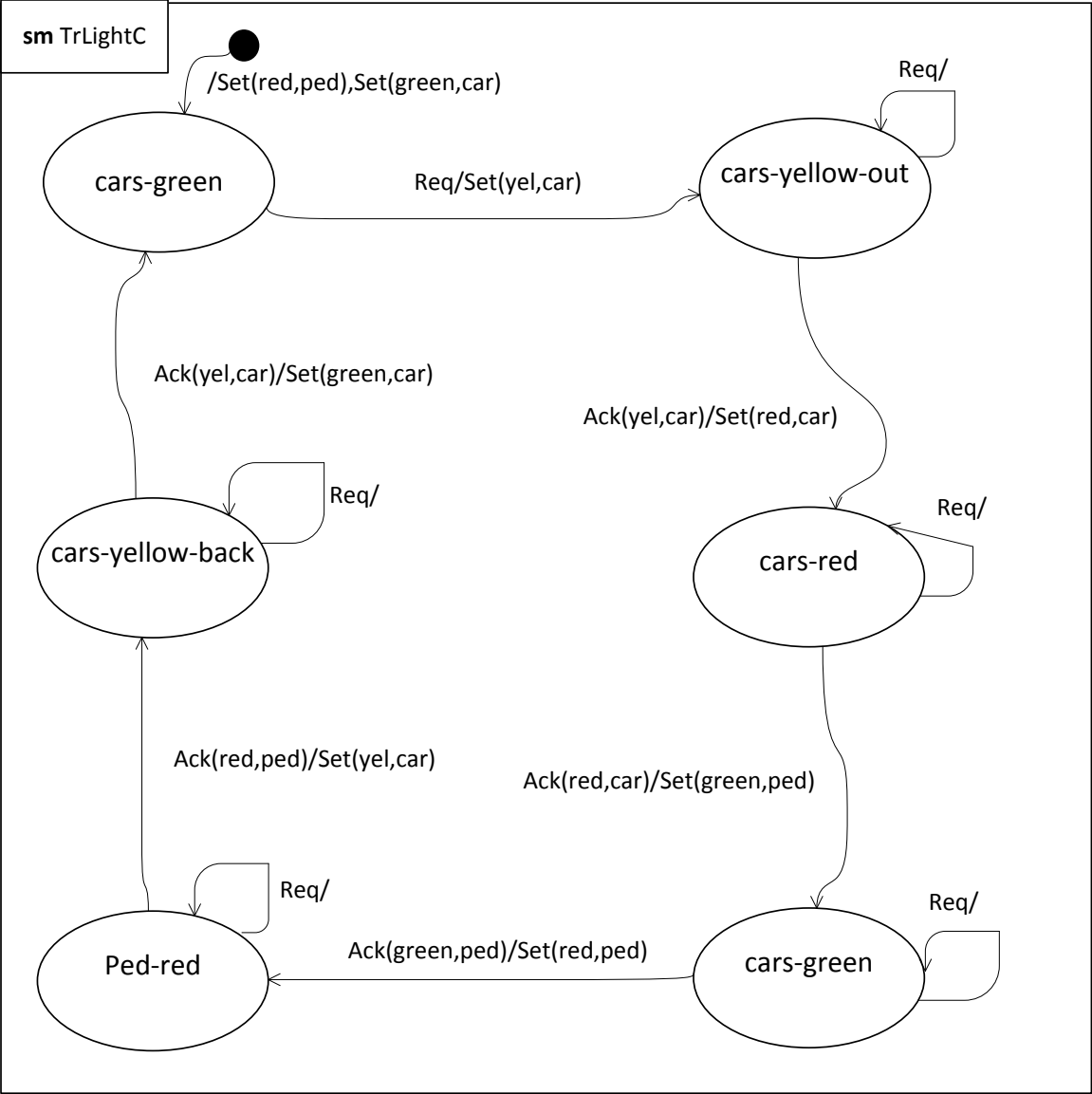
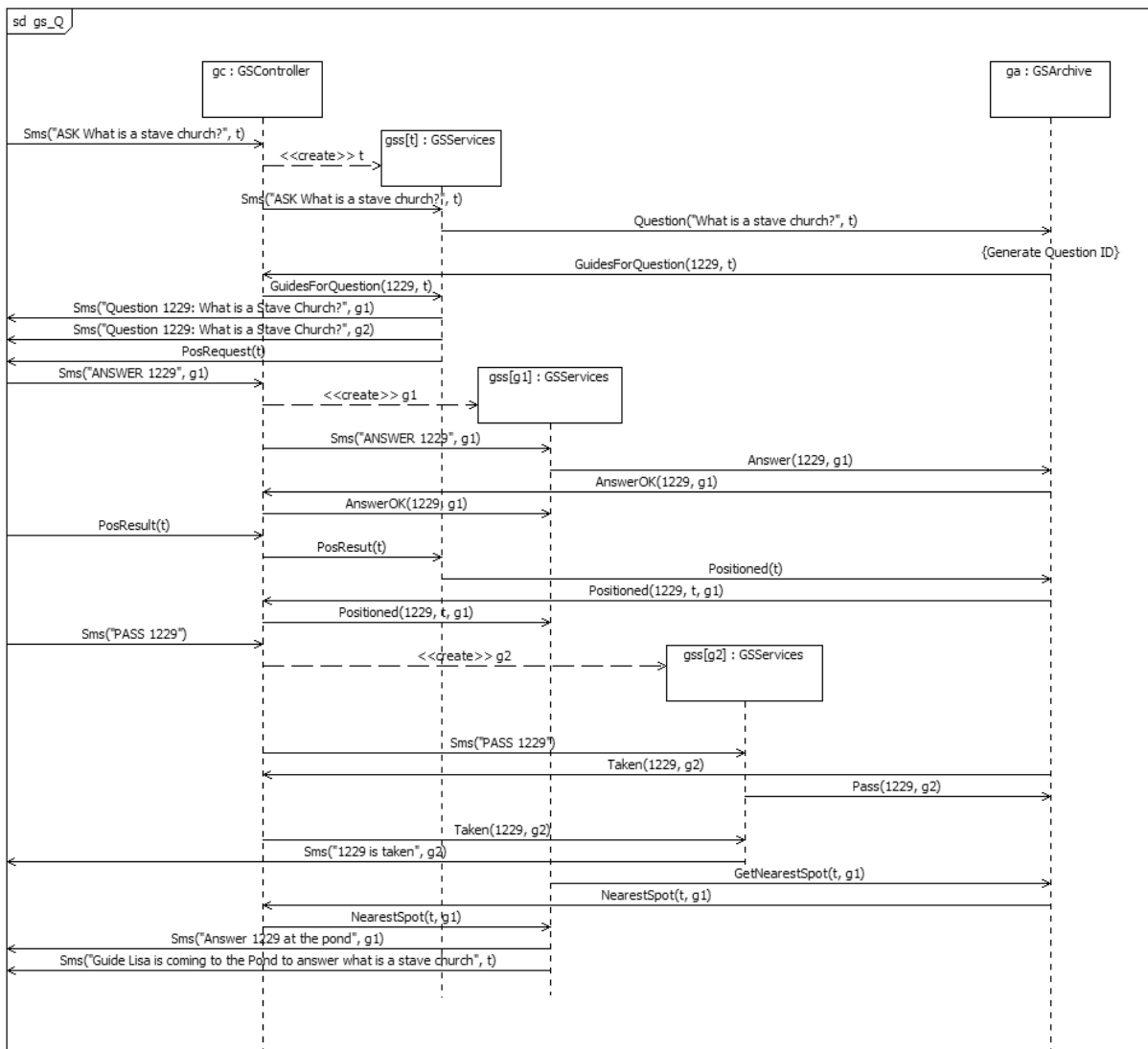


Solution

1)



2a)



Remarks: last parameter in signals is always the routing parameter (identifier). Lifelines that explicitly end within the Interaction are *destroyed/terminated*.

Points to make here:

1. The gates match the events on the lifeline precisely
2. Every time an Sms enters from the environment a new lifeline is created (3 times)
3. gc serves as a router such that all communication internally must go through the gc
4. External communication from gss should go directly out

2b)

The state machine in Figure 3 is consistent with the sequence diagram in Figure 1. When the sequence diagram has been exhausted, the state machine is in state Answering.