

## Common State Machine Diagram Errors

1. Lack of clarity regarding which entity or object can enter the states shown on the diagram. The diagram should be *about* the state of *one thing*. While that thing may be represented in the data model with more than one entity type, there still must be a unifying theme to the diagram.
2. Confusing actions and states. The boxes in state machine diagrams represent states. The actions are expressed by the arrows and are labeled with triggers. This is the exact opposite of the approach that we use for activity diagrams. If you don't get the difference, you will wind up with an activity diagram.
3. Showing a trigger on the terminal arrow. The last state shown in every path to the termination should be a terminal state. The blank arrow between that state and the termination symbol just serves to identify the state as terminal. If the arrow shows a trigger, then the arrow should lead to some further state documented in the diagram.
4. Using a choice symbol (diamond) without documenting the [guard conditions] under which each path leaving the choice symbol can be taken.
5. Showing states that cannot be reached from the start of the diagram.
6. Showing states from which one cannot reach the termination of the diagram.