

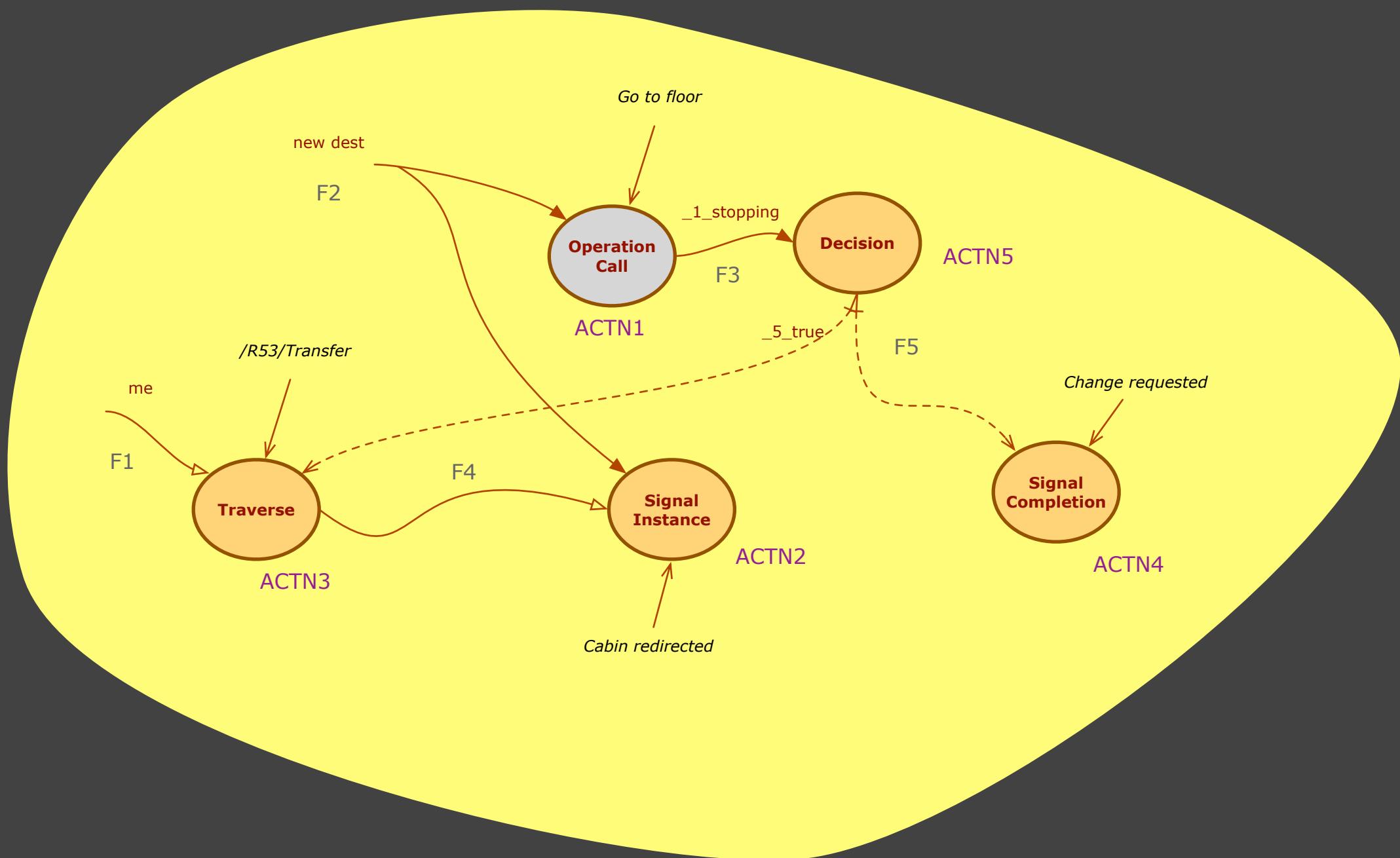
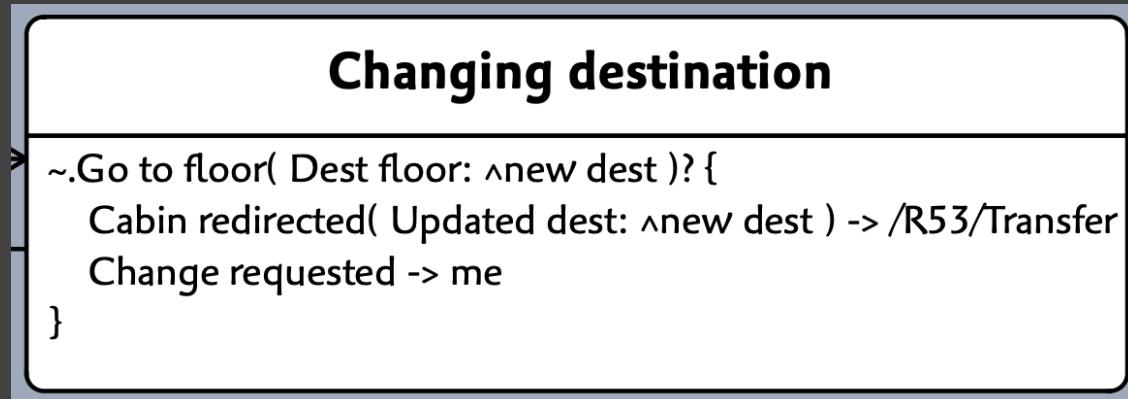
Cabin Lifecycle DFDs

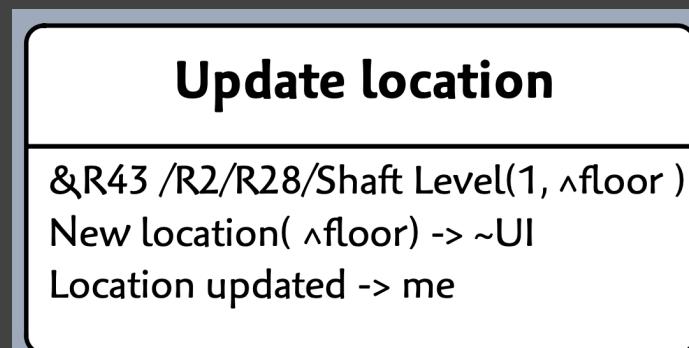
Leon Starr
2026-1-16/ v0.8



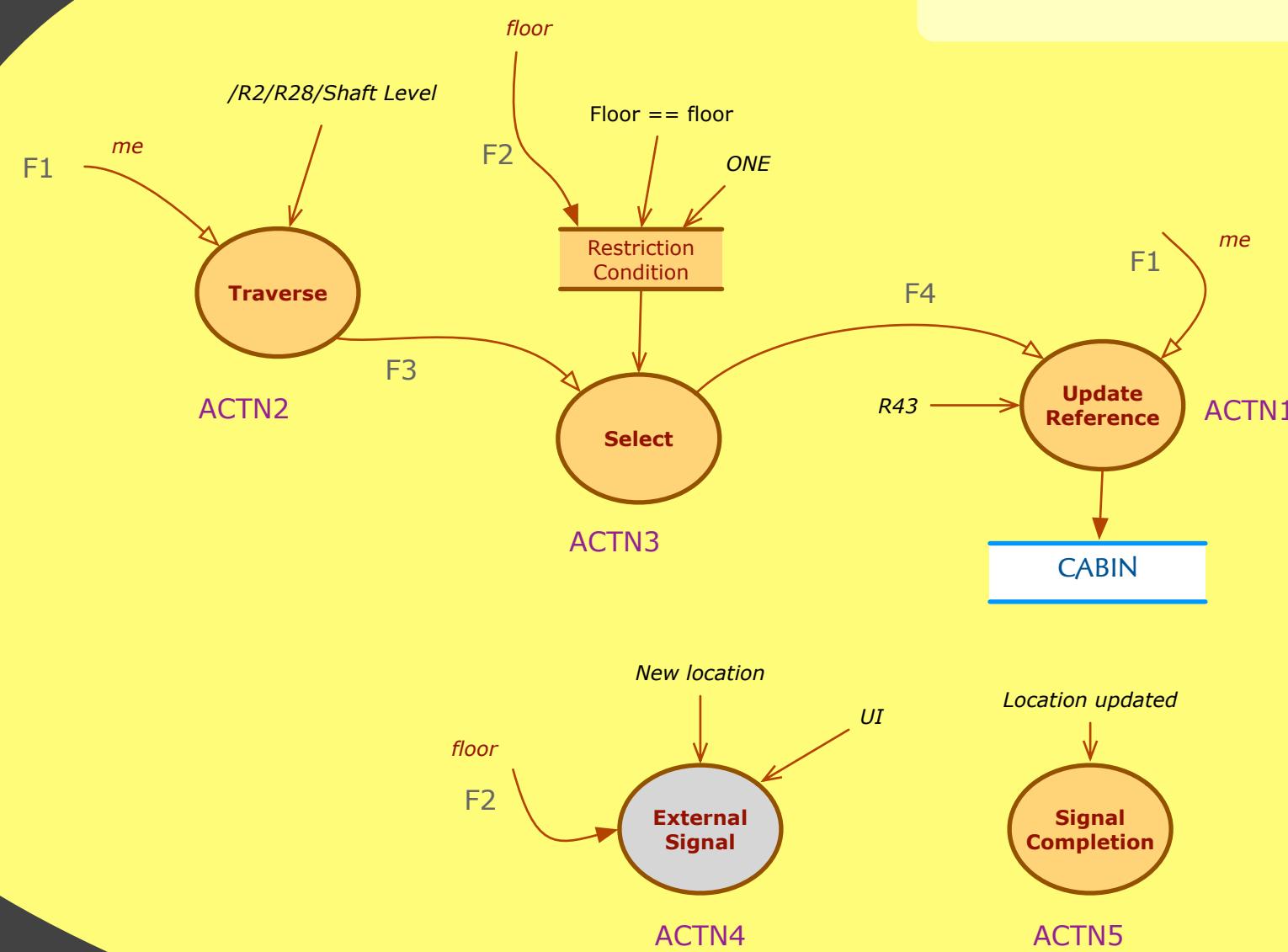
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M O D E L I N T E G R A T I O N , L L C

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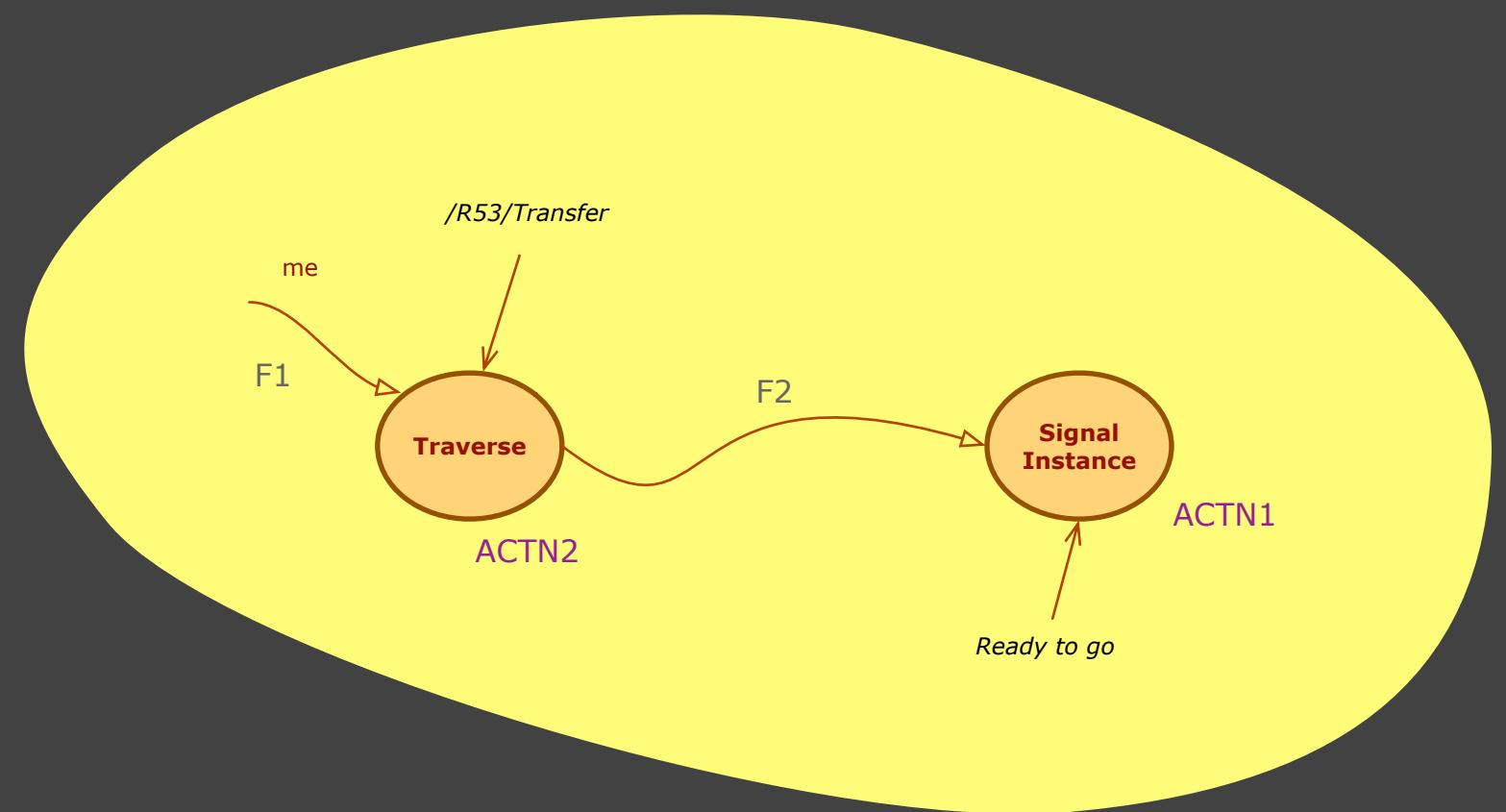
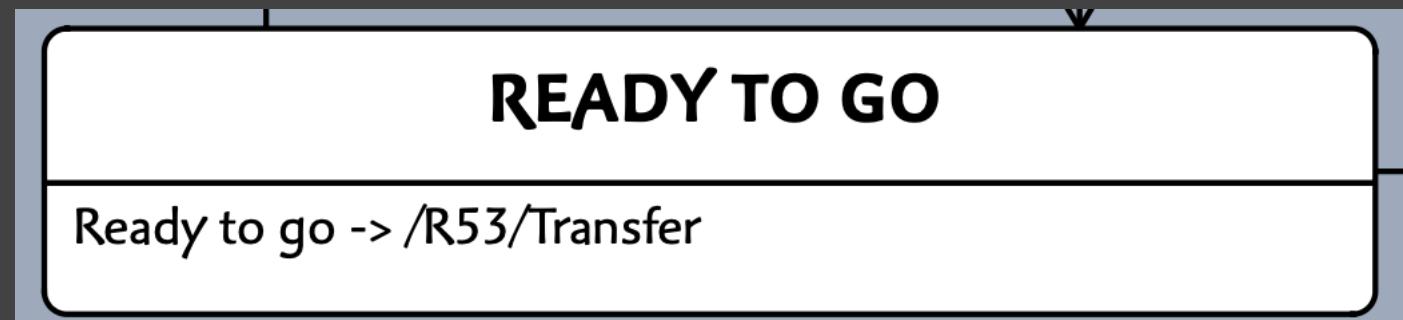


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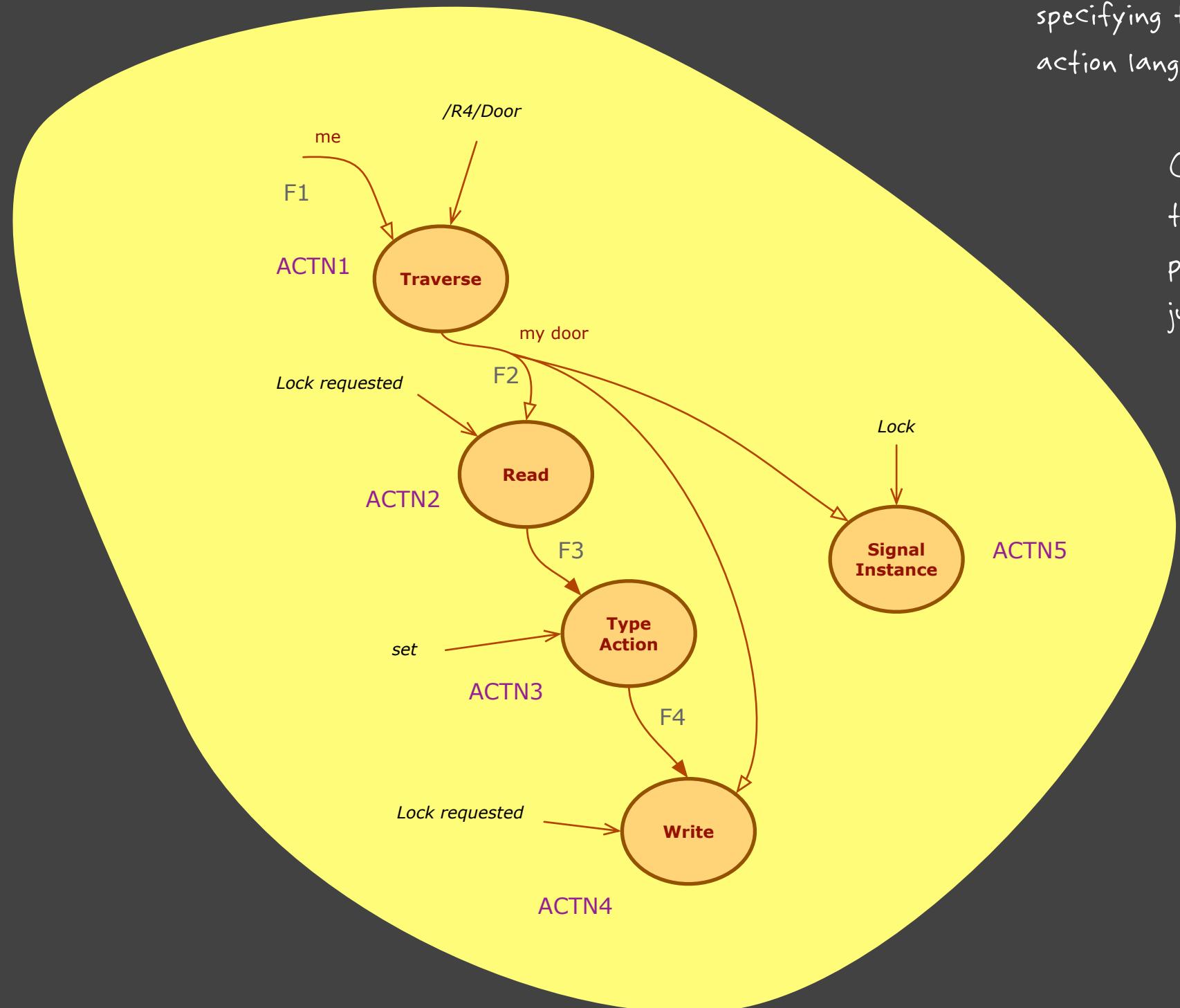
We require the explicit 1 cardinality in the Shaft Level selection even though it could be derived. But the populate isn't smart enough to do that yet. It should be seeing that since we traverse from a single instance of Cabin to a single instance of Shaft to many instances of Shaft Level and that the identifier of Shaft Level is Shaft + Floor with Shaft implicitly provided by the navigation with a single value of Floor specified that we are, effectively, selecting on an identifier. For now, cardinality must be explicit unless a full identifier is supplied in the select expression.



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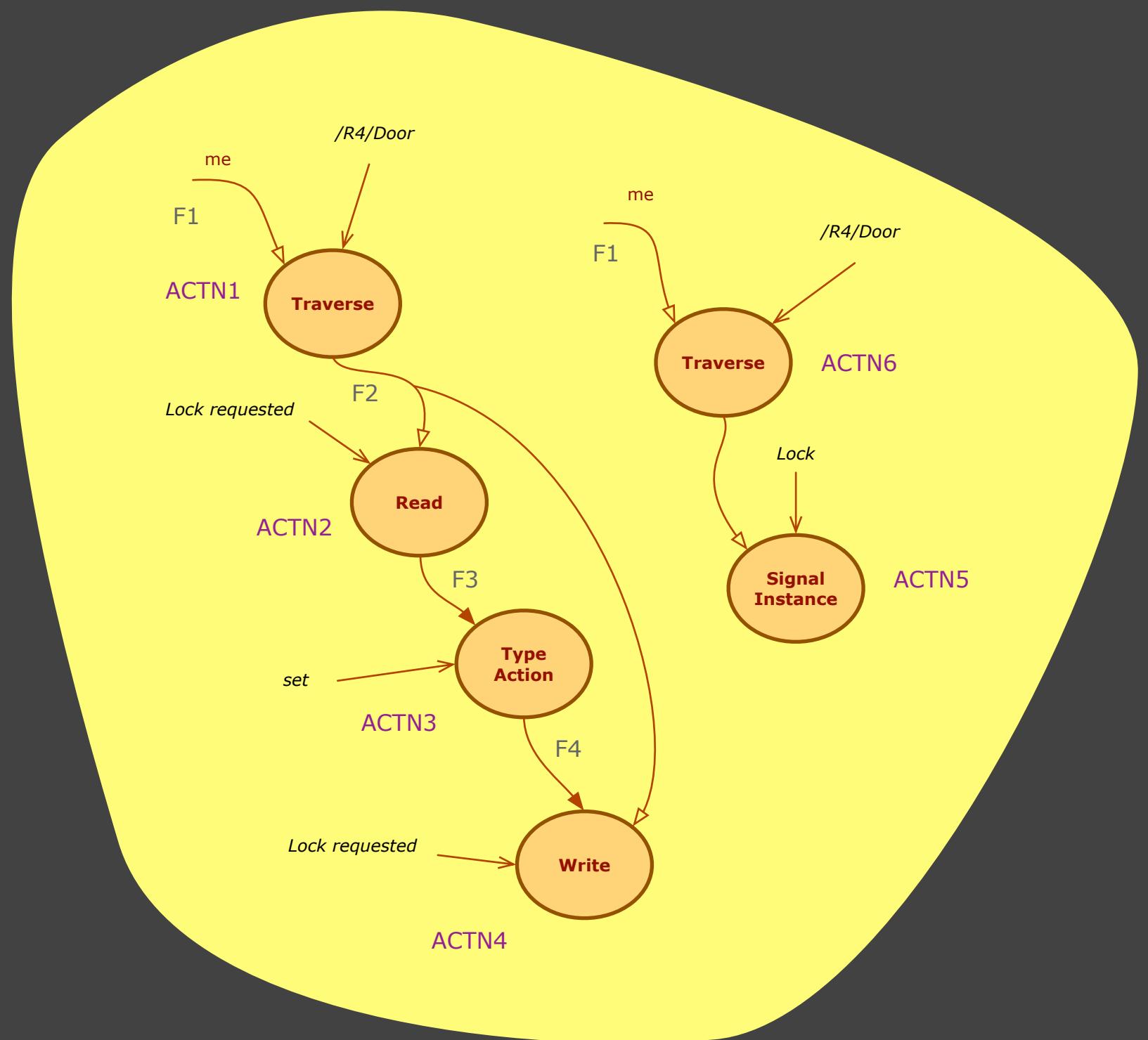
By assigning the traversal result to a labeled flow, we avoid specifying two identical traverse actions as we do with the alternate action language (see next page).

Of course we could post process the action recognizing and replacing the duplicate actions. And in the future, we should definitely perform flow graph optimizations prior to execution. For now, let's just simplify the action language we write.

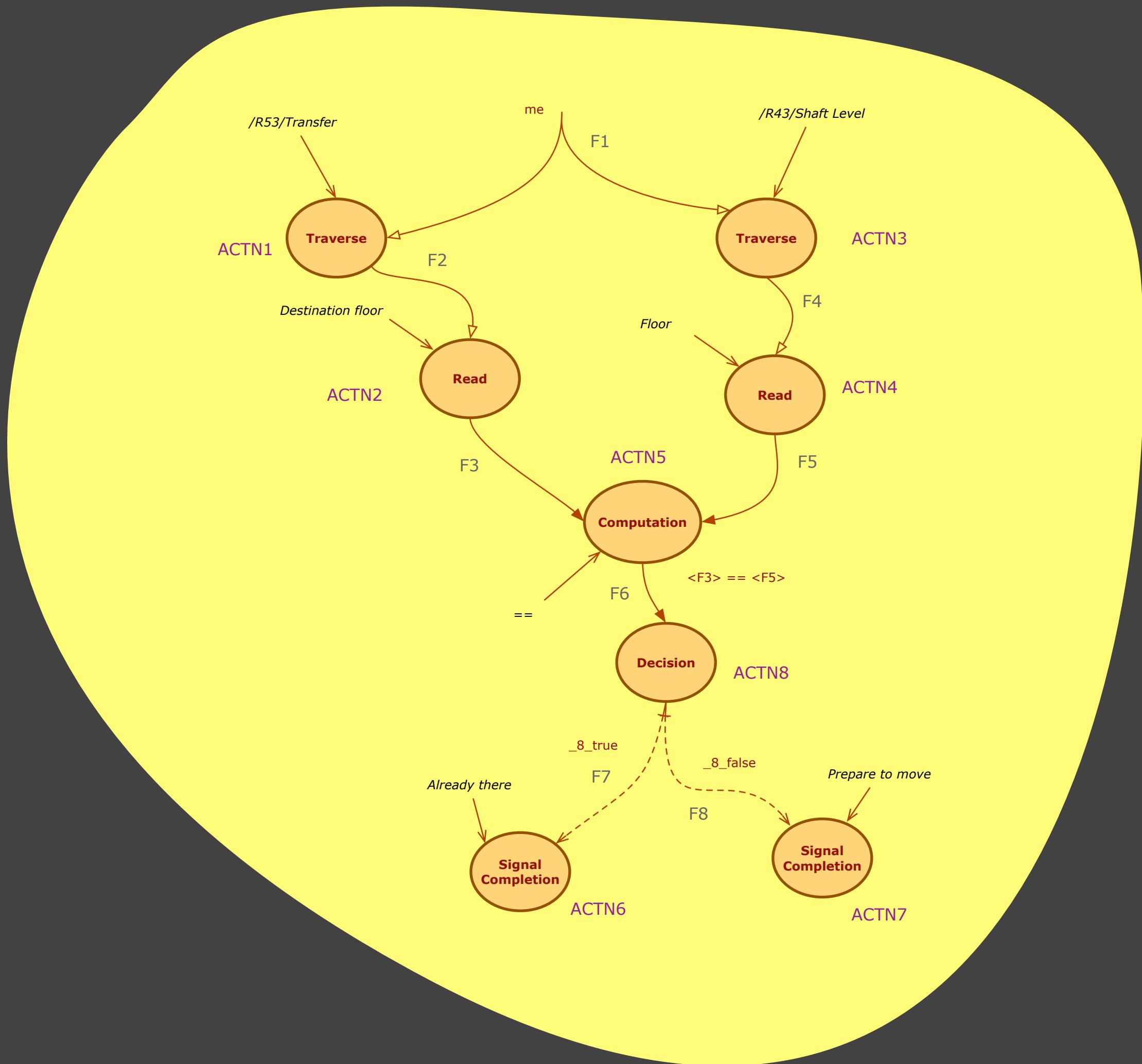
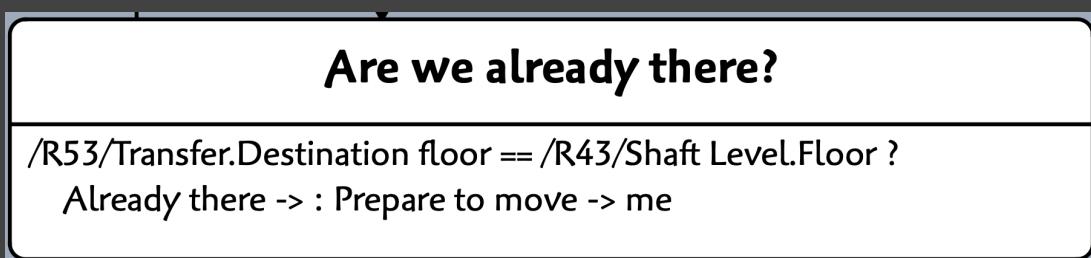
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SECURING DOORS

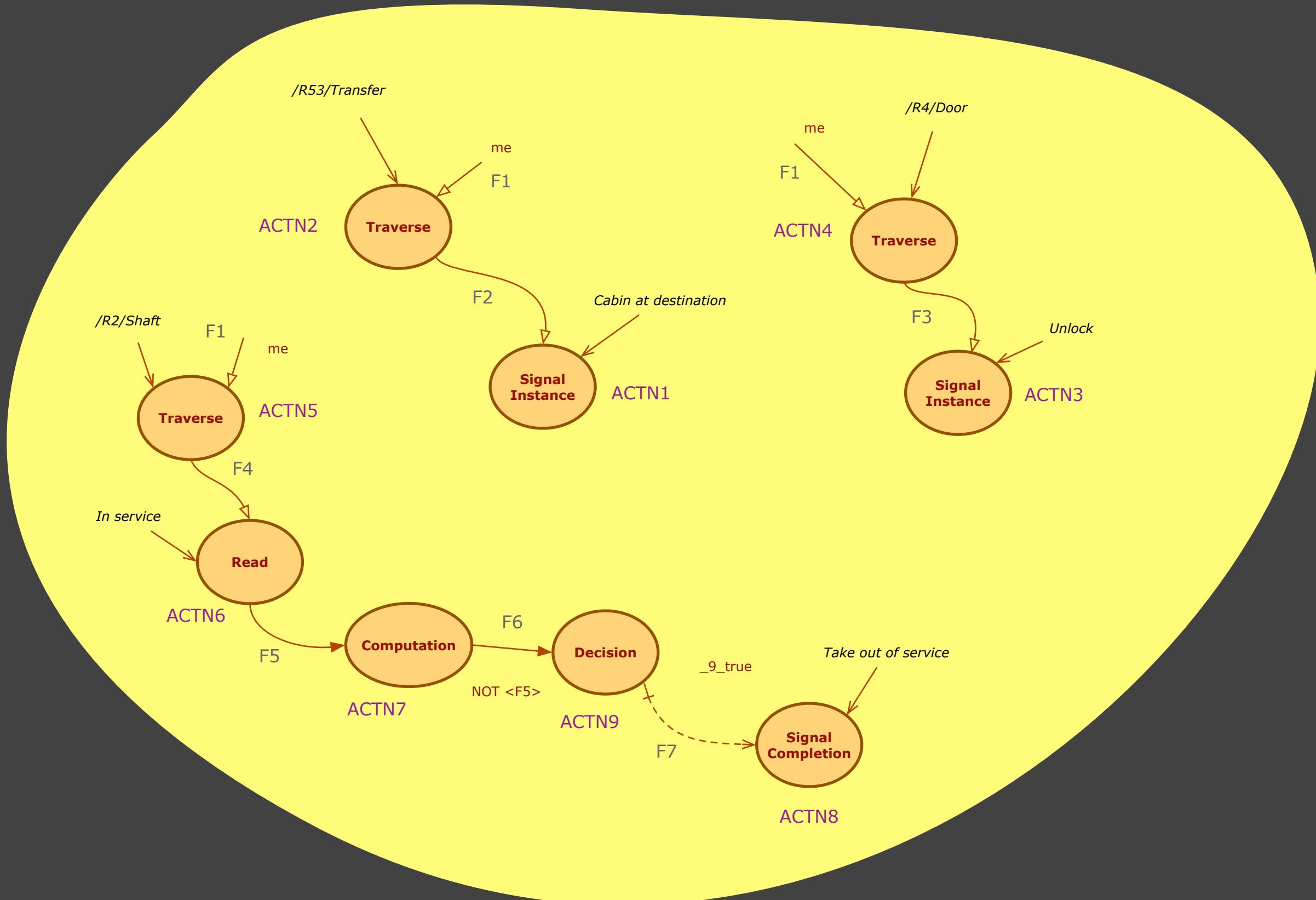
/R4/Door.Lock requested.set
Lock -> /R4/Door



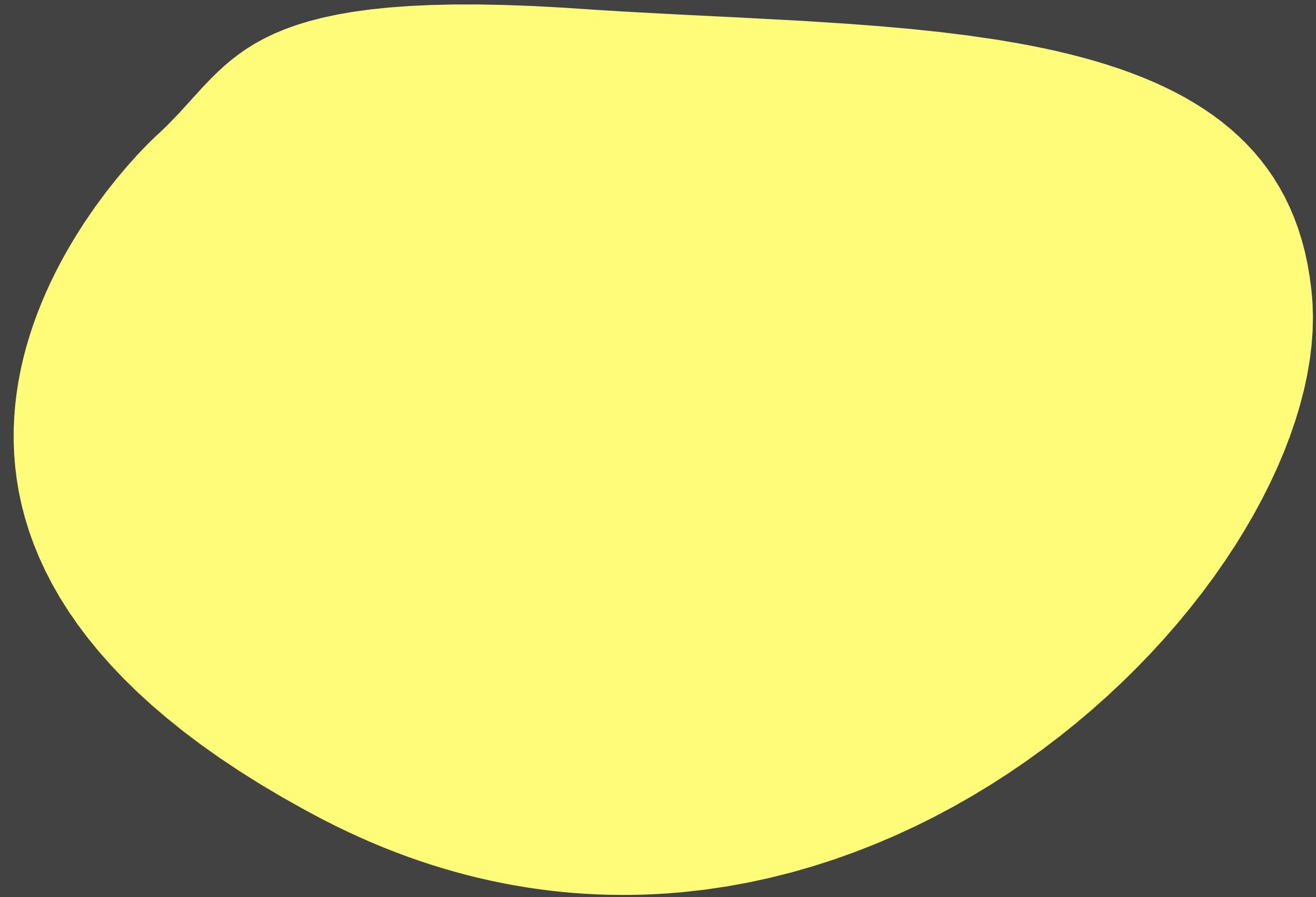
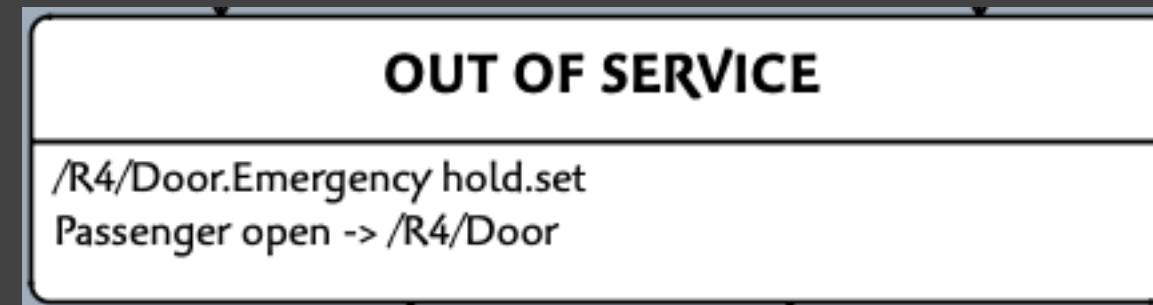
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