

Cabin Lifecycle DFDs

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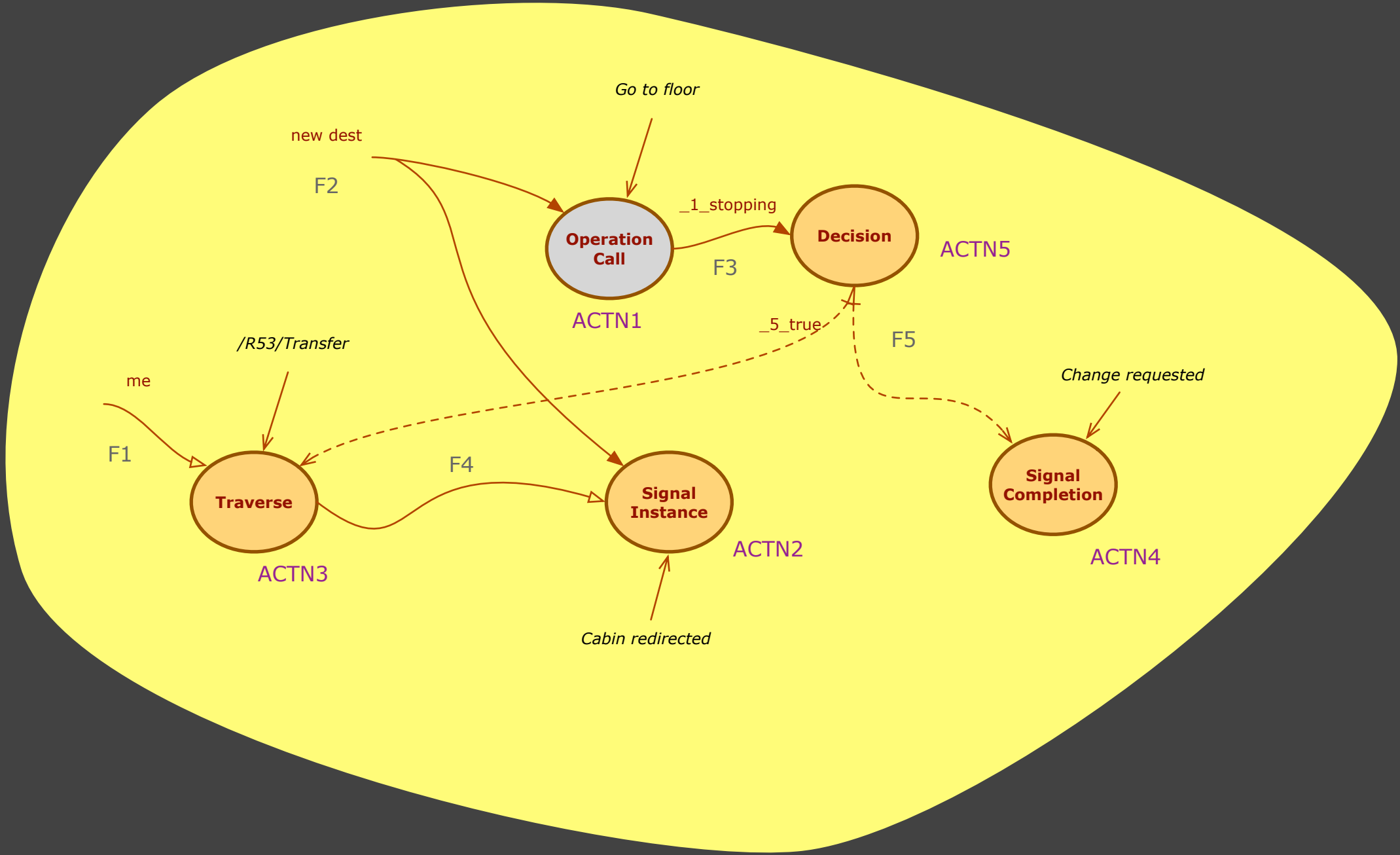
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MODEL INTEGRATION, LLC

A28

Changing destination

```
~.Go to floor( Dest floor: ^new dest )? {  
  Cabin redirected( Updated dest: ^new dest ) -> /R53/Transfer  
  Change requested -> me  
}
```

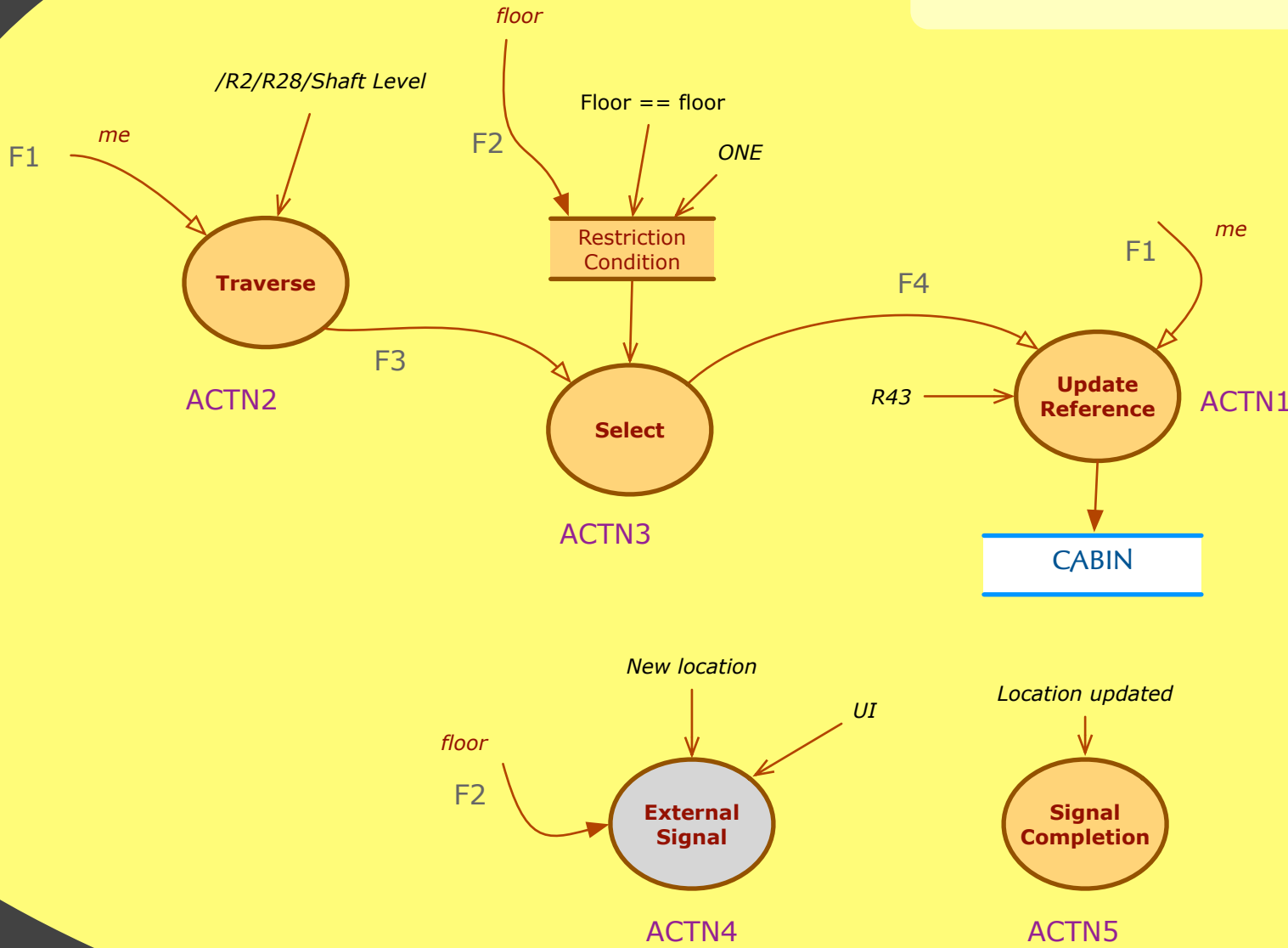


A27

Update location

&R43 /R2/R28/Shaft Level(1, ^floor)
New location(^floor) -> ~UI
Location updated -> me

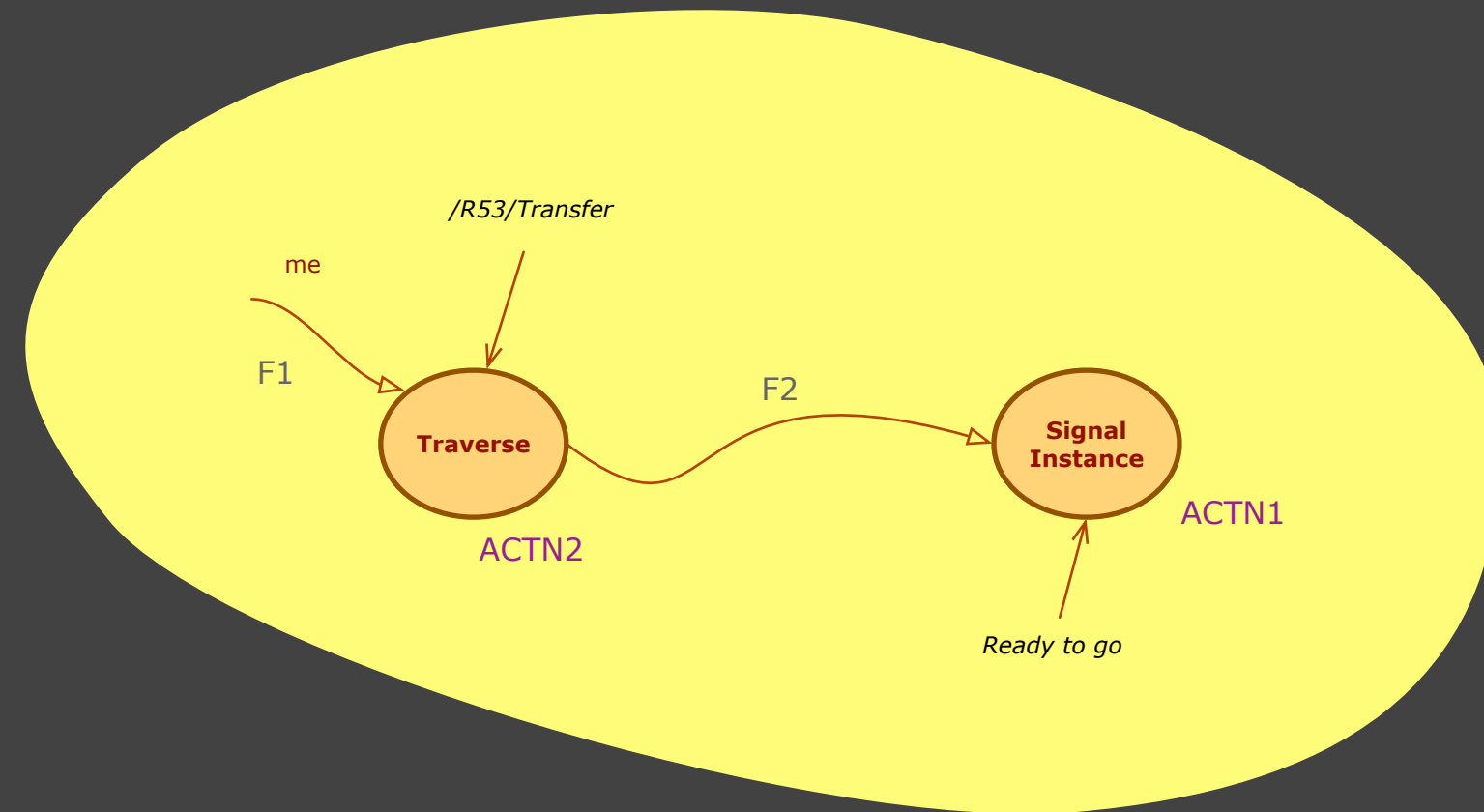
We require the explicit 1 cardinality in the Shaft Level selection even though it could be derived. But the populate isn't smart enough to do that yet. It should be seeing that since we traverse from a single instance of Cabin to a single instance of Shaft to many instances of Shaft Level and that the 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.



A30

READY TO GO

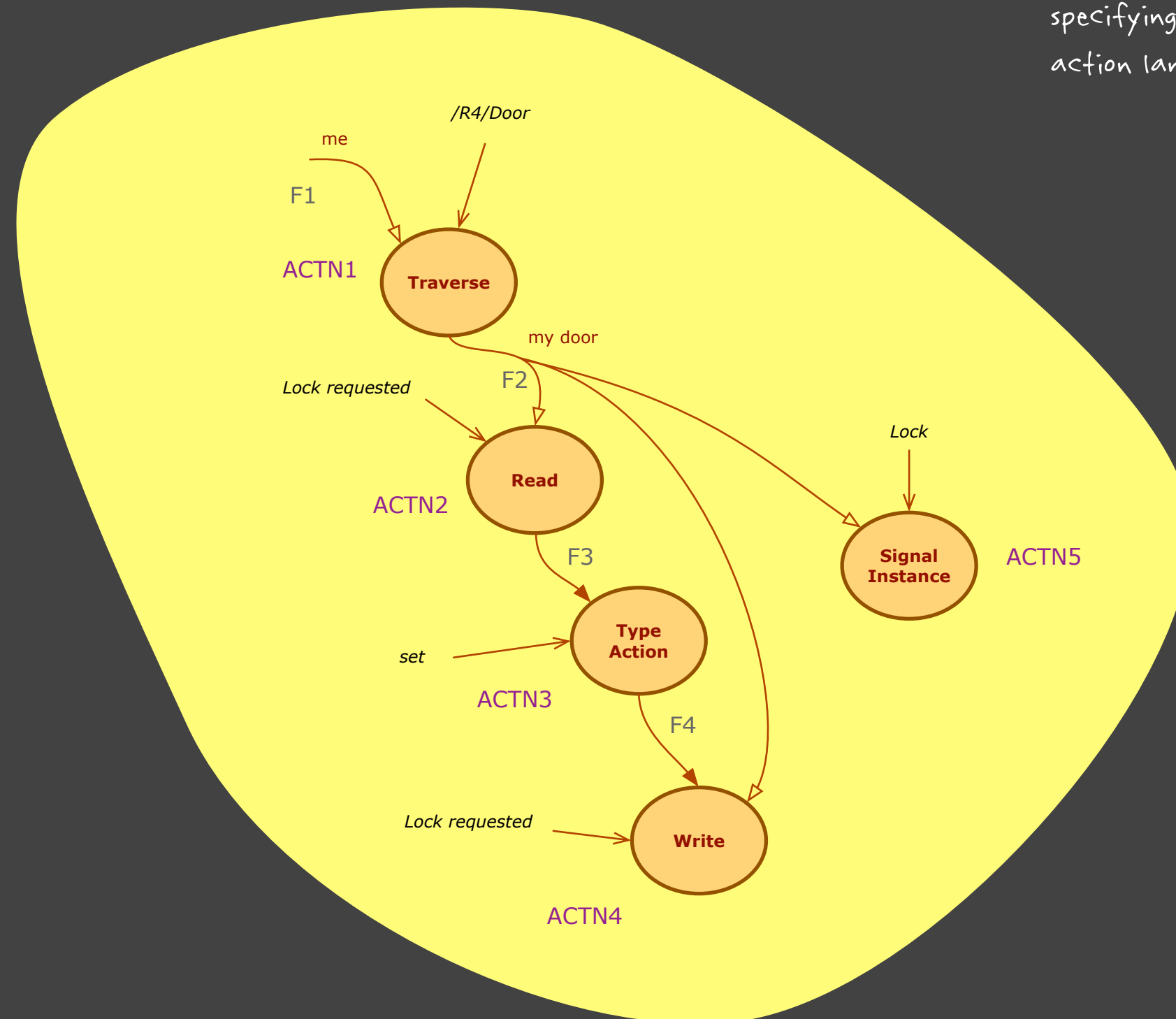
Ready to go -> /R53/Transfer



A32



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).



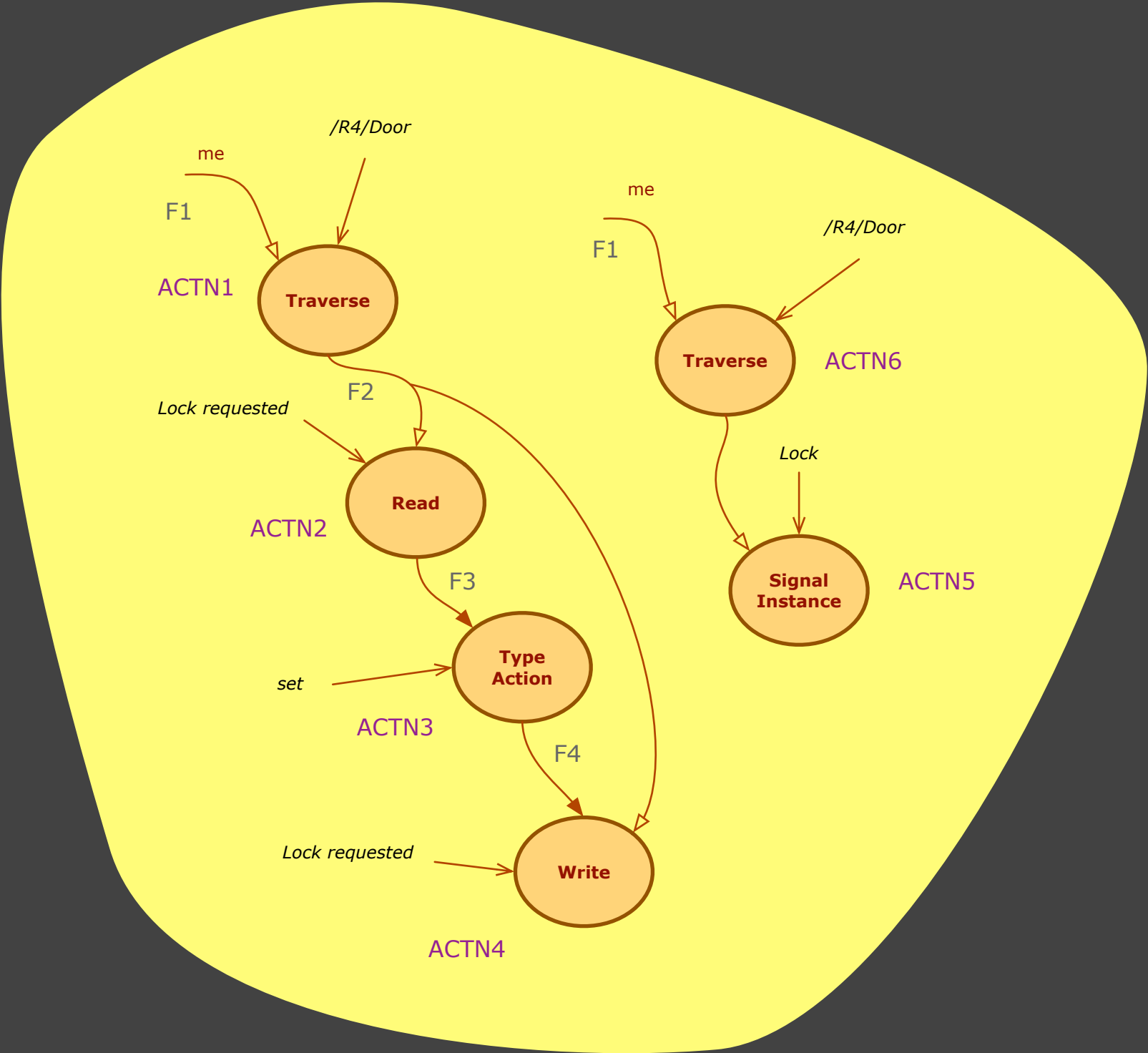
Of course we could post process the action recognizing and replacing the duplicate actions. And in the future, we should definitely perform flow graph optimizations prior to execution. For now, let's just simplify the action language we write.

A32

SECURING DOORS

/R4/Door.Lock requested.set

Lock -> /R4/Door

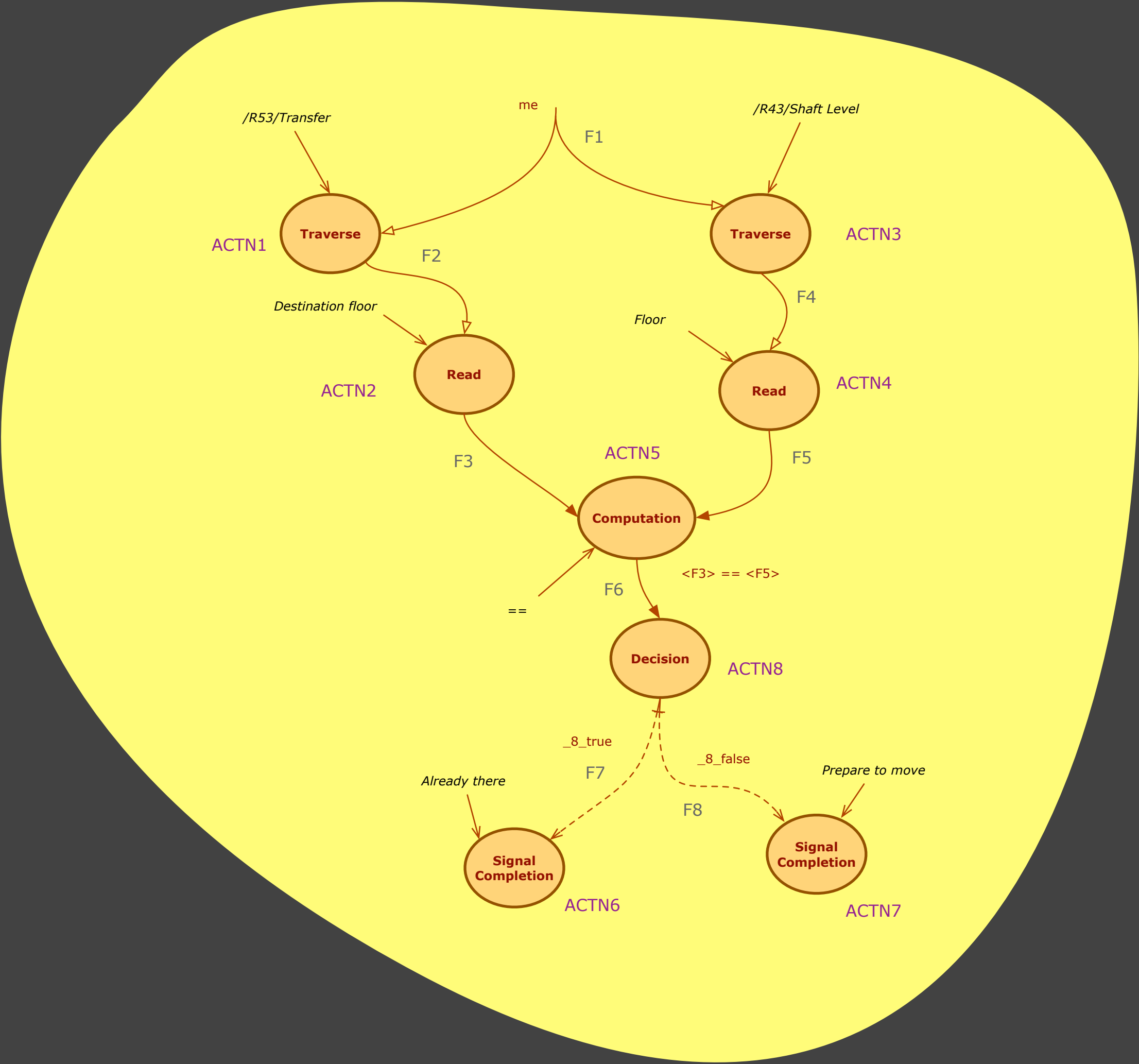


A33

Are we already there?

/R53/Transfer.Destination floor == /R43/Shaft Level.Floor ?

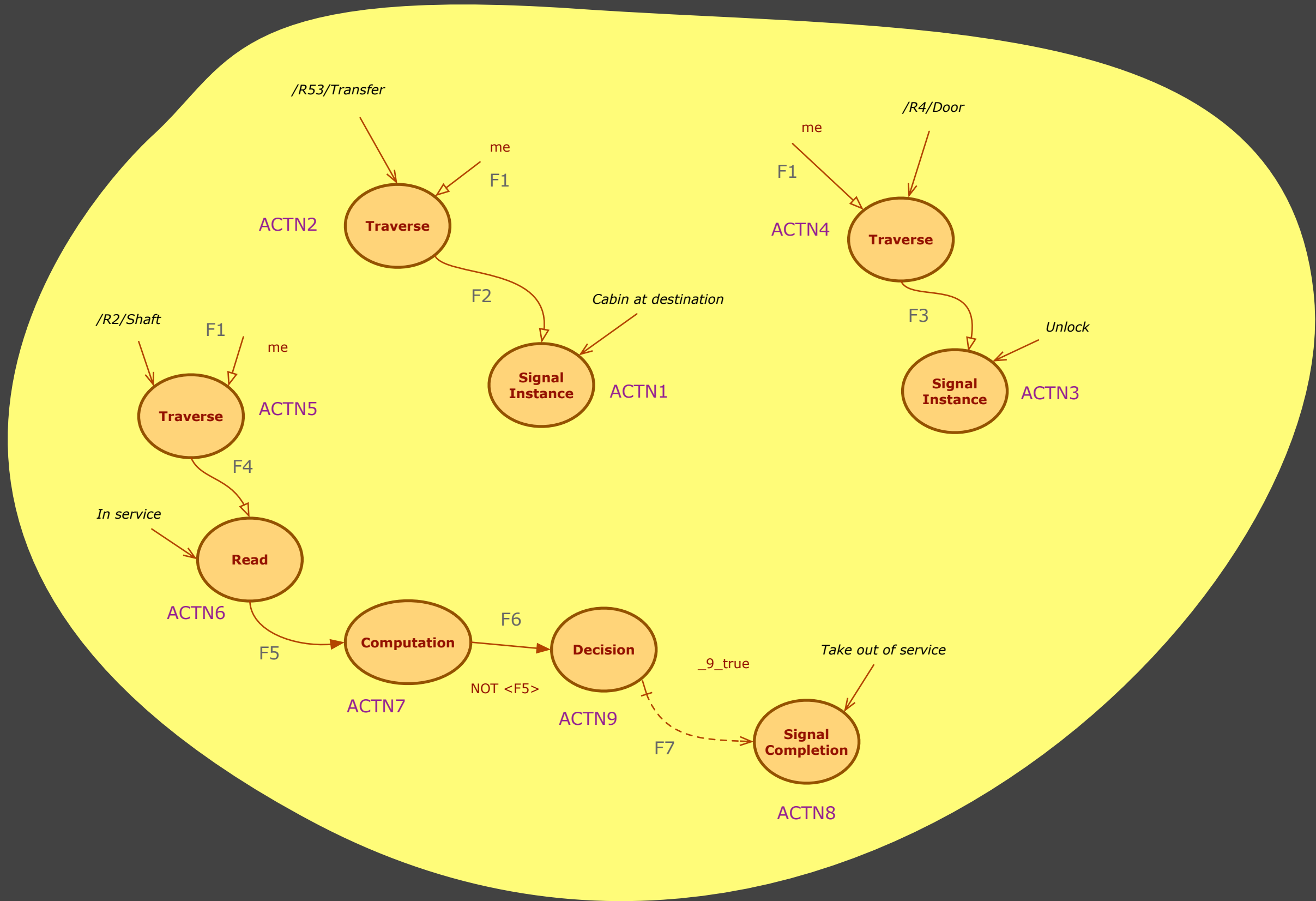
Already there -> : Prepare to move -> me



A34

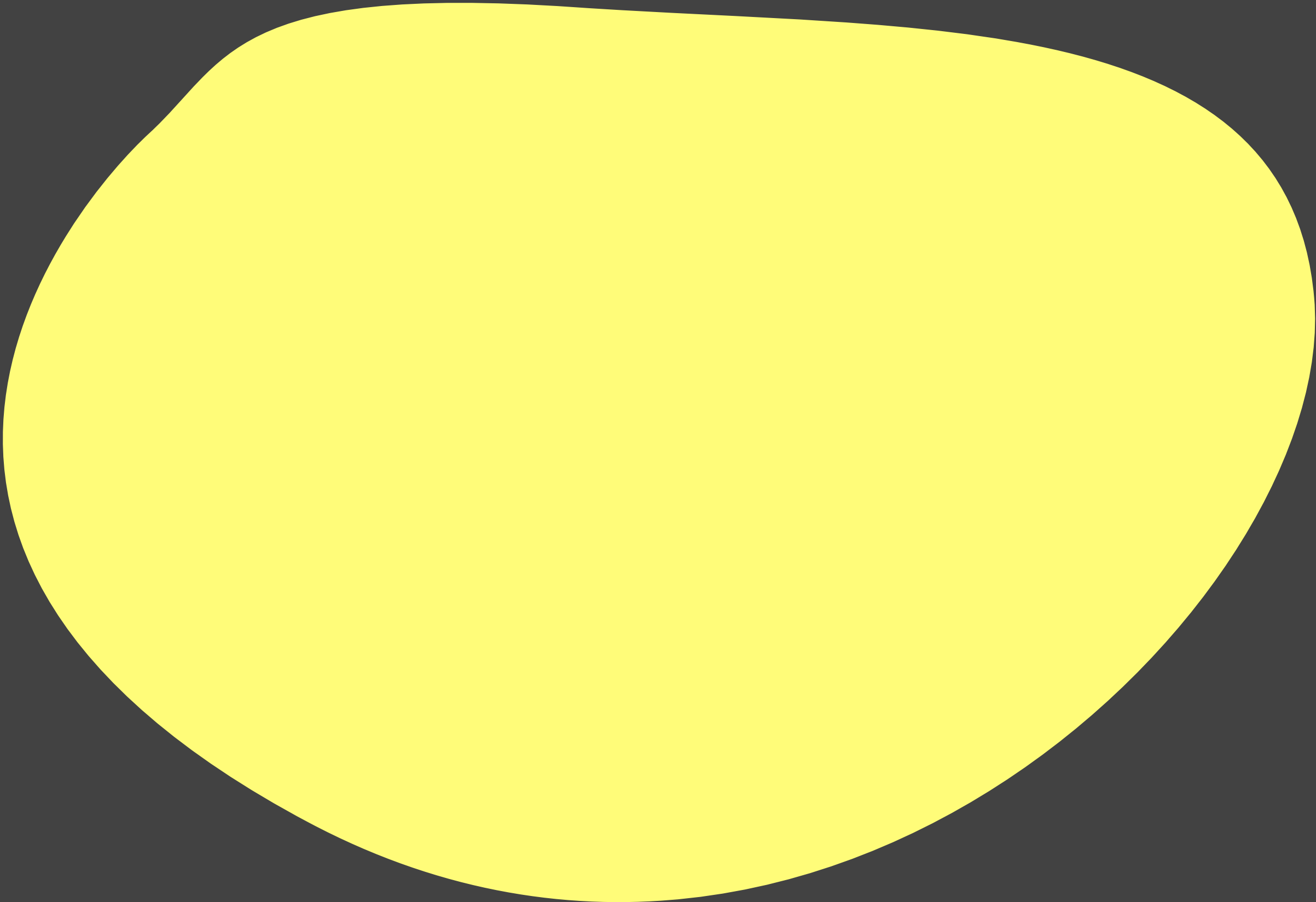
PICKUP DROPOFF

Cabin at destination -> /R53/Transfer
Unlock -> /R4/Door
! /R2/Shaft.In service ? Take out of service -> me



A35

OUT OF SERVICE
<code>/R4/Door.Emergency hold.set</code> Passenger open -> <code>/R4/Door</code>



A36

EMERGENCY BRAKING

Stop at nearest floor -> ~

