

# ASLEV Data Flow Diagrams

Leon Starr

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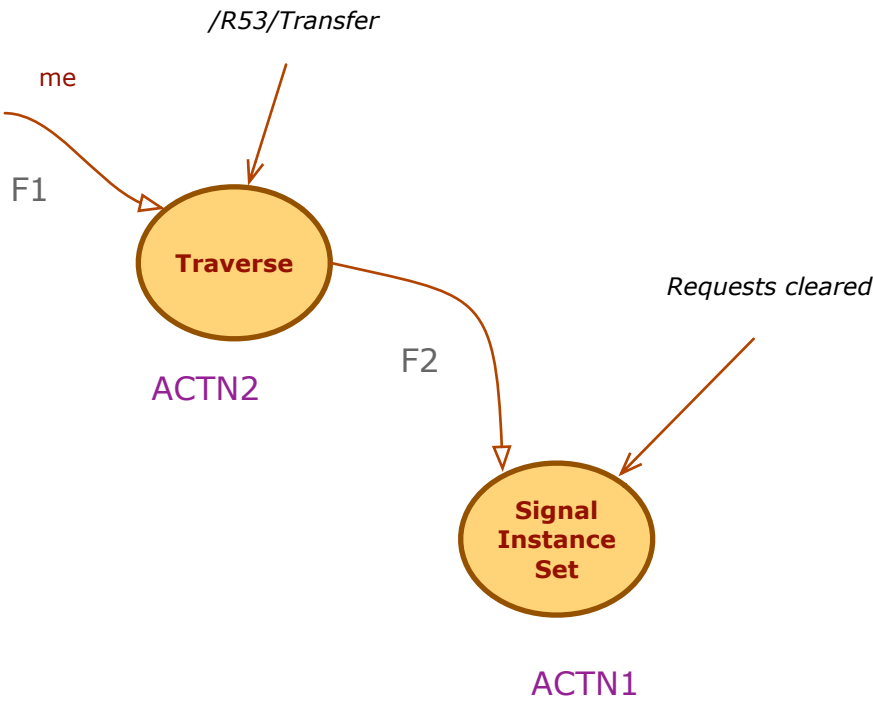
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MODEL INTEGRATION, LLC

A7

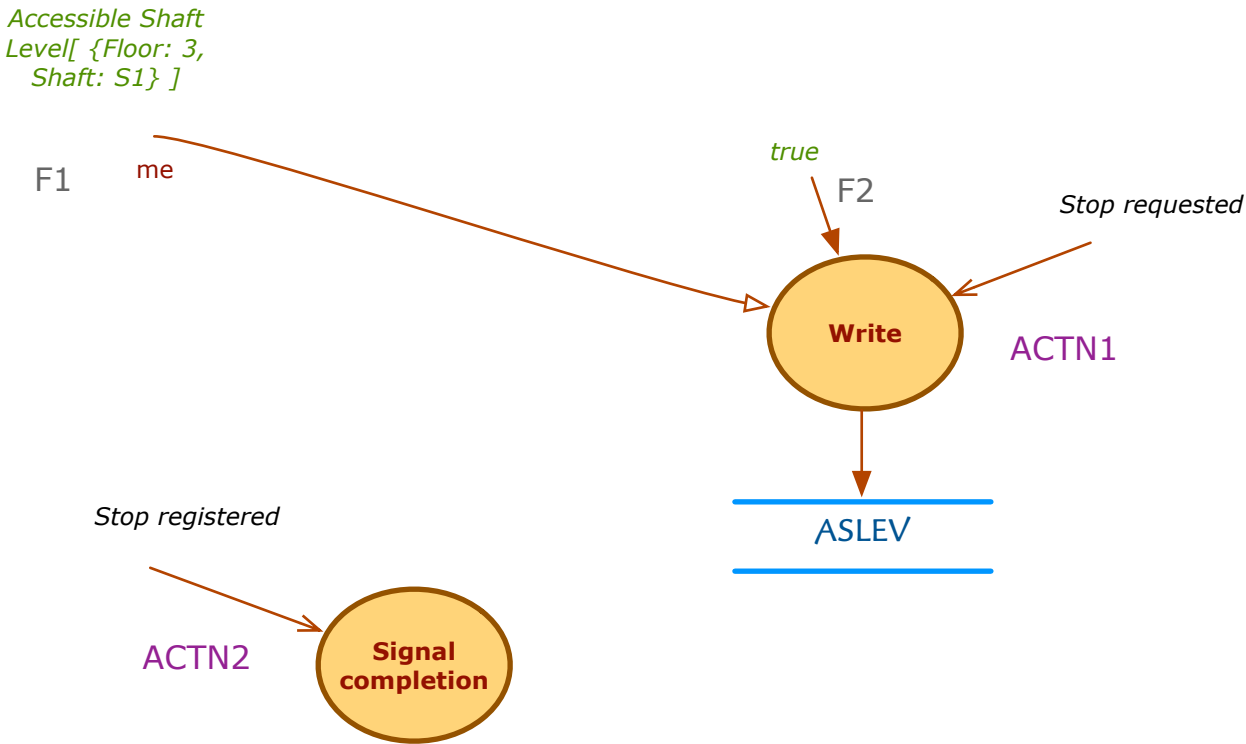
State name: NOT REQUESTED

```
state NOT REQUESTED
activity
  Requests cleared -> /R53/Transfer
```



State name: Registering stop

A9



```
state Registering stop
activity
    Stop requested = TRUE
    Stop registered -> me
transitions
    Stop registered > Requesting service
```

The problem with `Stop requested.set` is that we are implicitly writing the value of the `Stop Requested` attribute instead of merely applying a type operator.

We would have to know somehow that the `.set` operator does not require a scalar input, it always sets the value to `true`, regardless, and that an attribute write is required.

Instead, we need to clearly distinguish in the Scroll grammar, between the output of a type operator, which is always a single scalar flow and a write or an assignment

So, instead of `Stop requested.set`, we could do one of these:

```
Stop requested = true // keyword
Stop requested = Boolean[true] // Selector op
Stop requested = _yes // if Symbol type
```

Instead of saying `Direction.toggle()` for the purpose of changing the up value to down or vice versa, with the implied write, we do this instead:

```
Direction = Direction.toggle // operator based on current value
```

In the first case, we specify an assignment taking advantage of the `true` keyword. This approach only works for a boolean type.

Here we make the assignment explicit, and the toggle operator simply outputs `_up` or `_down` depending on the current value of `Direction`.

We could also use a symbolic selector `Boolean[true]`, but the `true` keyword is shorthand for this anyway.

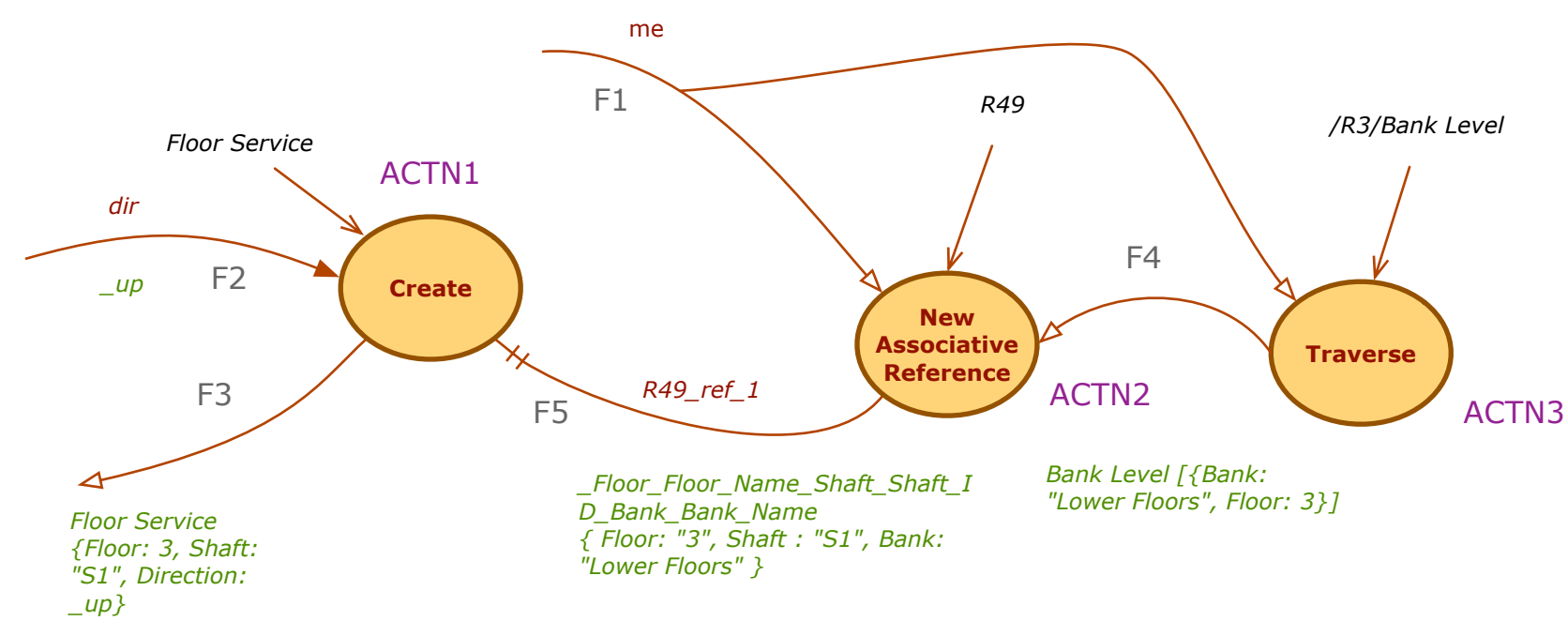
Here we do use the boolean name pair `_up/_down` mapped to `true/false` on the `Boolean` base type.

Or, we could use a Symbol Set type instead of boolean and define `_yes`, `_no` values. But this doesn't add any enlightenment from an analysis perspective.

Se could apply a boolean name pair to get the same effect, but we discard this approach for the same reason.

State name: Registering floor call

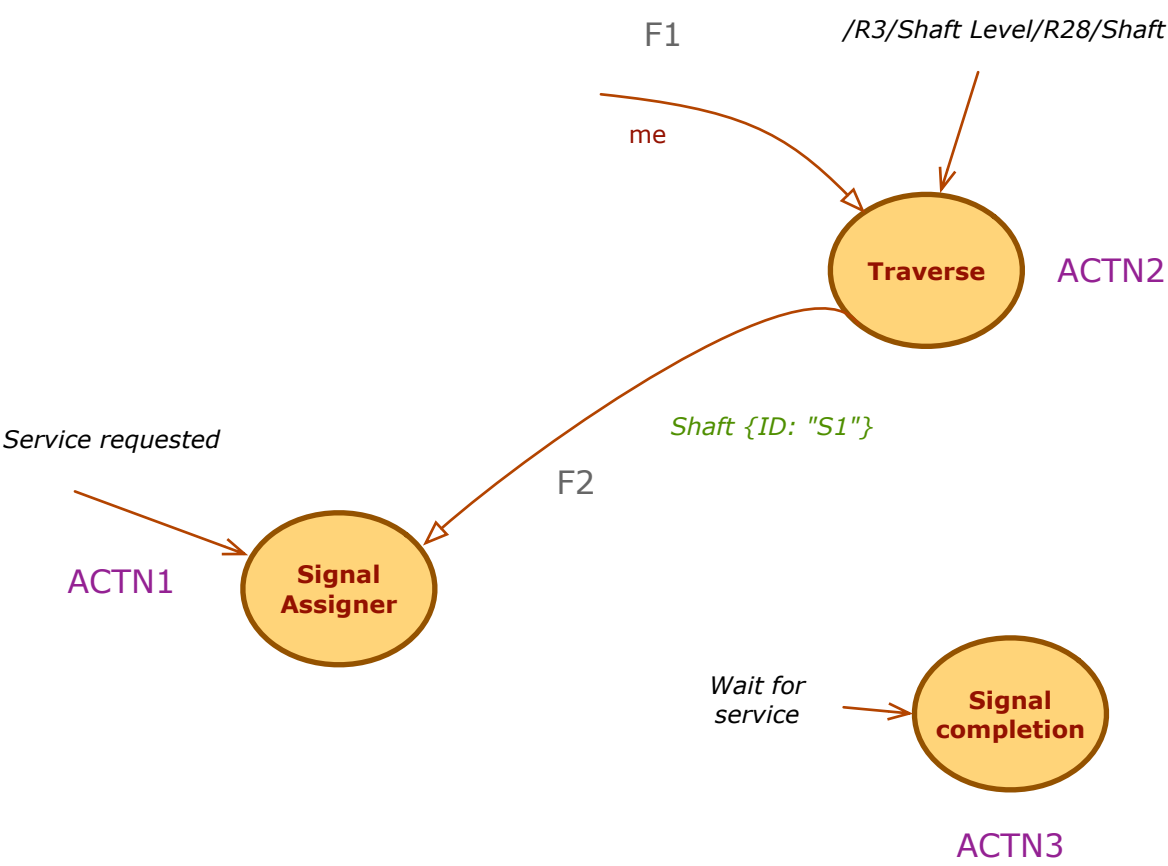
A10



```
state Registering floor call( dir: Direction )
activity
    *Floor Service( Direction: ^dir ) &R49 me, /R3/Bank Level
    Floor call registered -> me
transitions
    Floor call registered > Requesting service
```

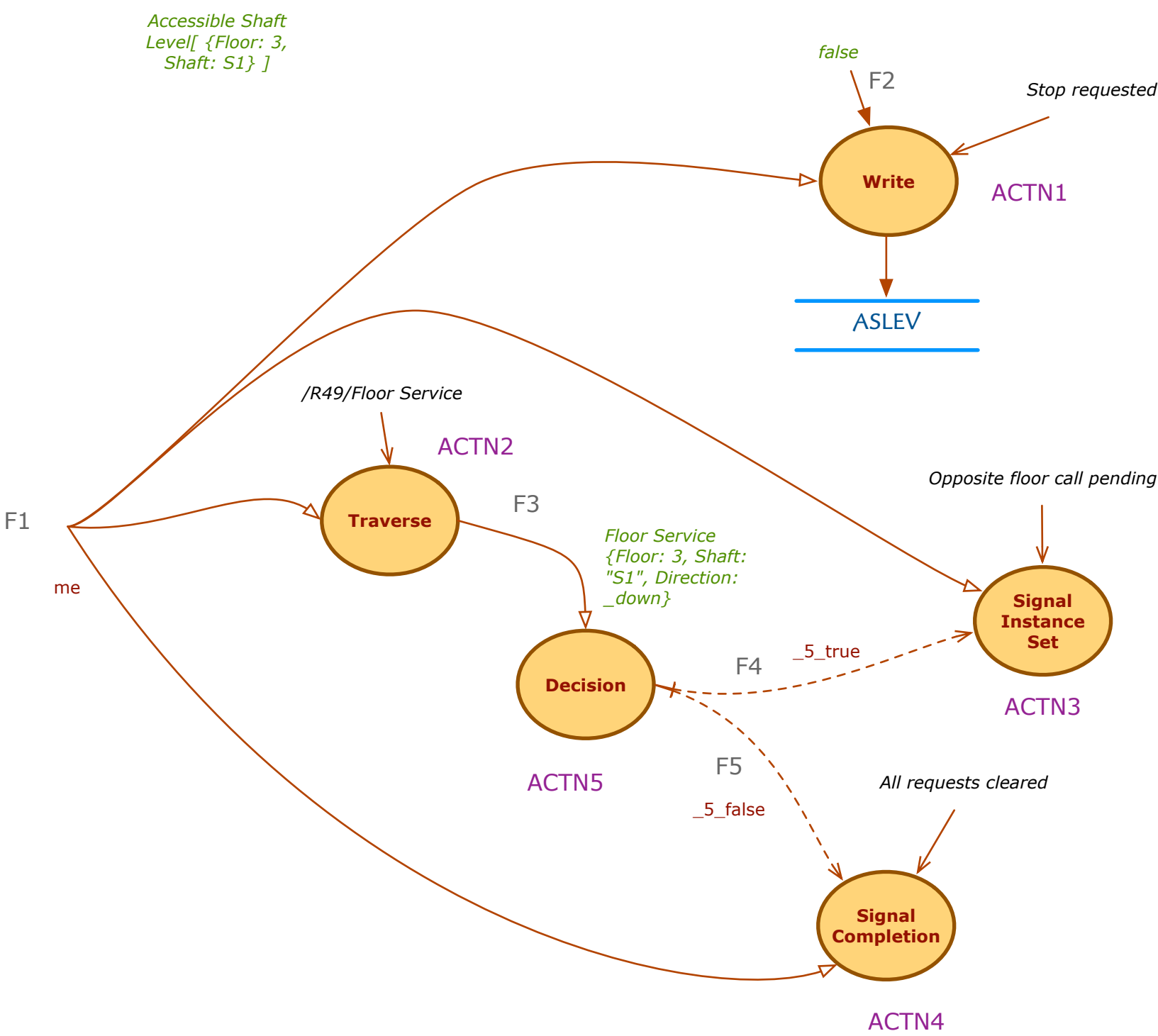
State name: Requesting service

A17



```
state Requesting service
activity
    Service requested -> R53( /R3/R28/Shaft )
    Wait for service -> me
transitions
    Wait for service > REQUESTED
```

A19

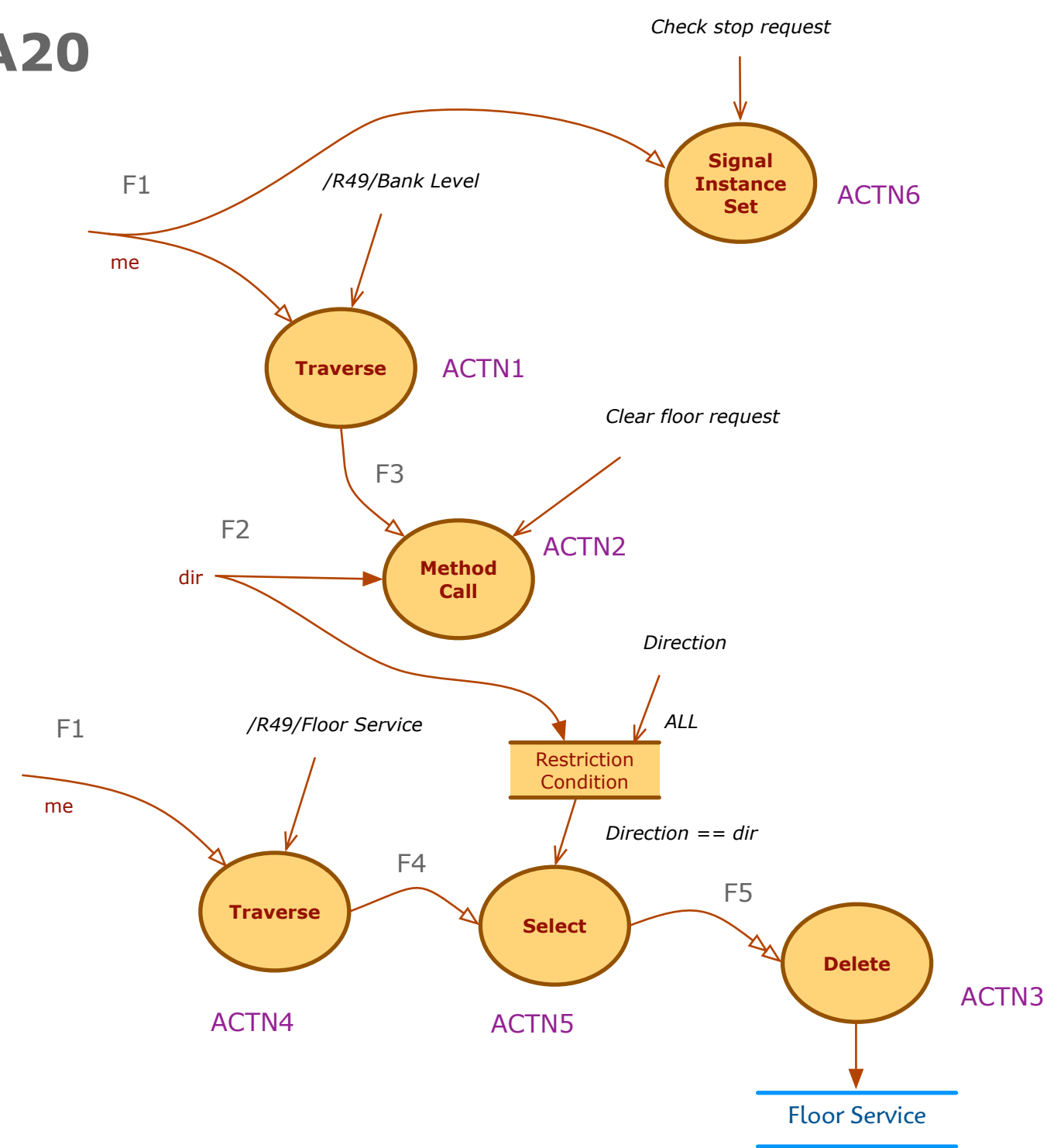


```
state Clear stop request
activity
    Stop requested = FALSE

    /R49/Floor Service?
        Opposite floor call pending -> :
        All requests cleared -> me
transitions
    Opposite floor call pending > REQUESTED
    All requests cleared > NOT REQUESTED
```

State name: Clear floor request

A20



```
state Clear floor request( dir: Direction )
activity
  /R49/Bank Level.Clear floor request( ^dir )
  !* /R49/Floor Service( Direction: ^dir )
  Check stop request -> me
transitions
  Check stop request > Clear stop request
```