R53 Multiple Assigner DFDs

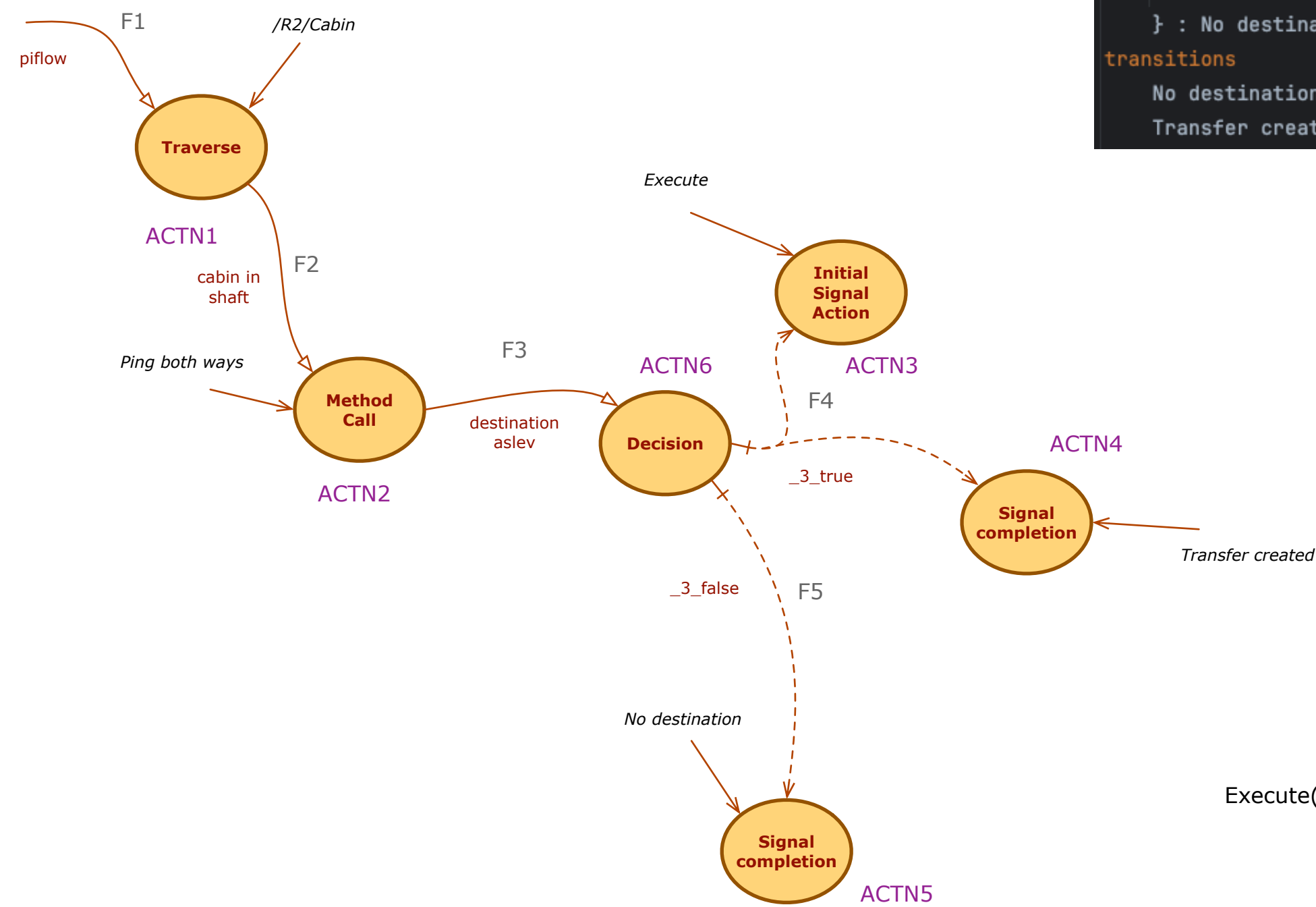Leon Starr
2025-9-26/ v1.0.1

State name: NO TRANSFER

No actions

```
state NO TRANSFER
activity
    // Waiting for service request
transitions
    Service requested > Search for new destination
```

Leon Starr

State name: Search for new destination
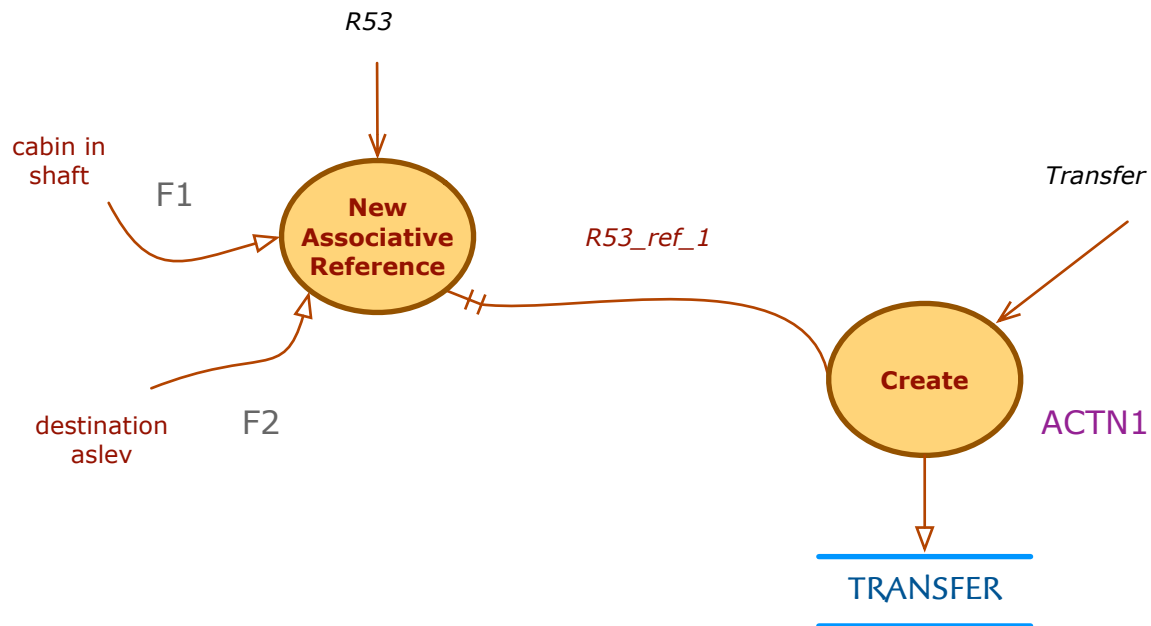
A9

```
state Search for new destination
activity
    // The Cabin in this Shaft is stationary and has no Transfer
    cabin in shaft .= /R2/Cabin
    destination aslev .= cabin in shaft.Ping both ways()
    destination aslev? {
        Execute -> *Transfer &R53 cabin in shaft, destination aslev
        Transfer created -> me
    } : No destination -> me
transitions
    No destination > NO TRANSFER
    Transfer created > TRANSFER IN PROGRESS
```

F1

piflow

/R2/Cabin

Traverse

ACTN1

F2

cabin in
shaft

Ping both ways

**Method
Call**

ACTN2

F3

destination
aslev

ACTN6

Decision

Execute

**Initial
Signal
Action**

ACTN3

F4

__3_true

ACTN4

Transfer created

**Signal
completion**

__3_false

F5

No destination

**Signal
completion**

ACTN5

Execute(cabin in shaft: Cabin, destination aslev: Accessible Shaft Level)

Delegated Creation Activity on Transfer

A38

R53

cabin in
shaft

F1

**New
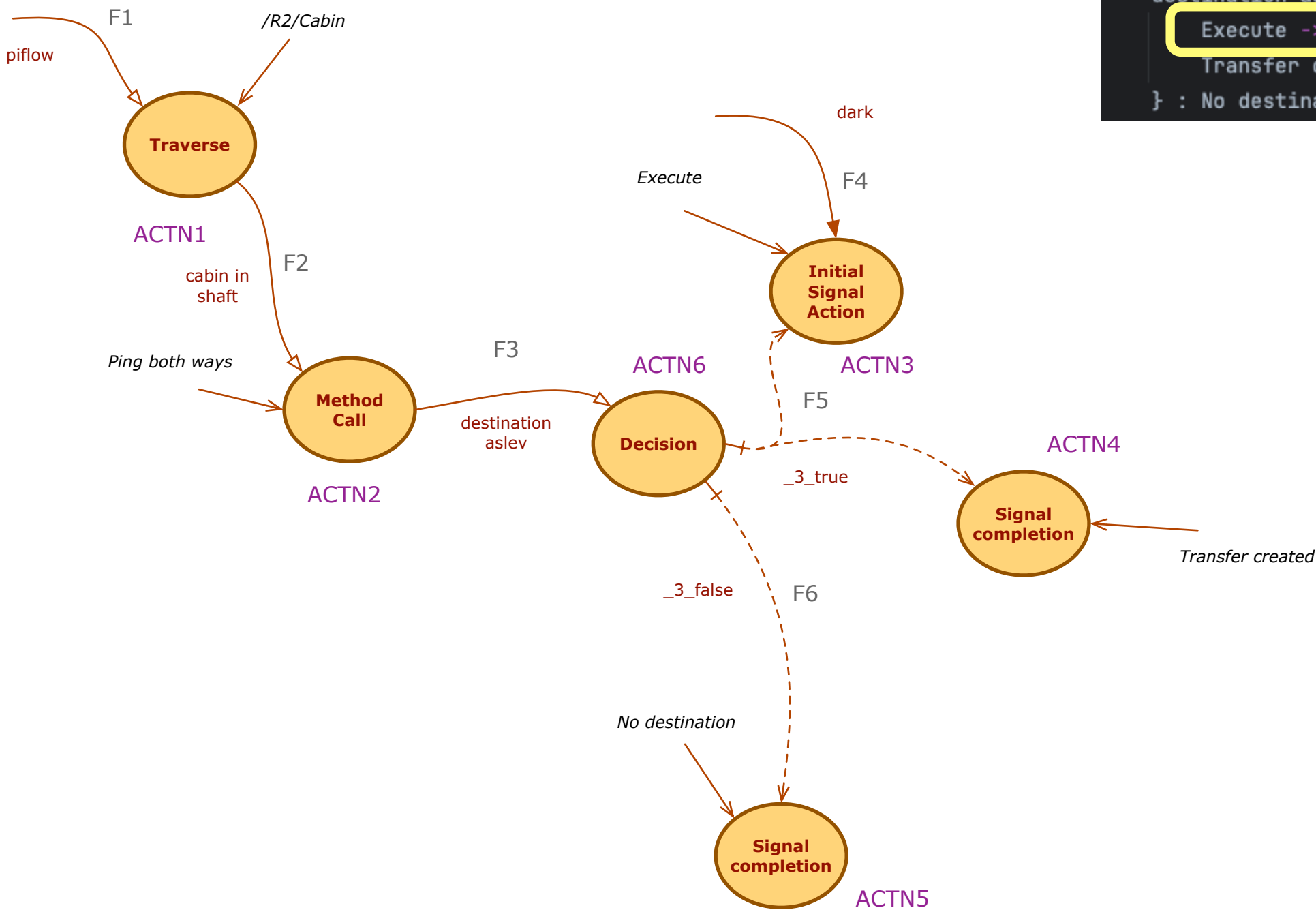Associative
Reference**

R53_ref_1

Transfer

destination
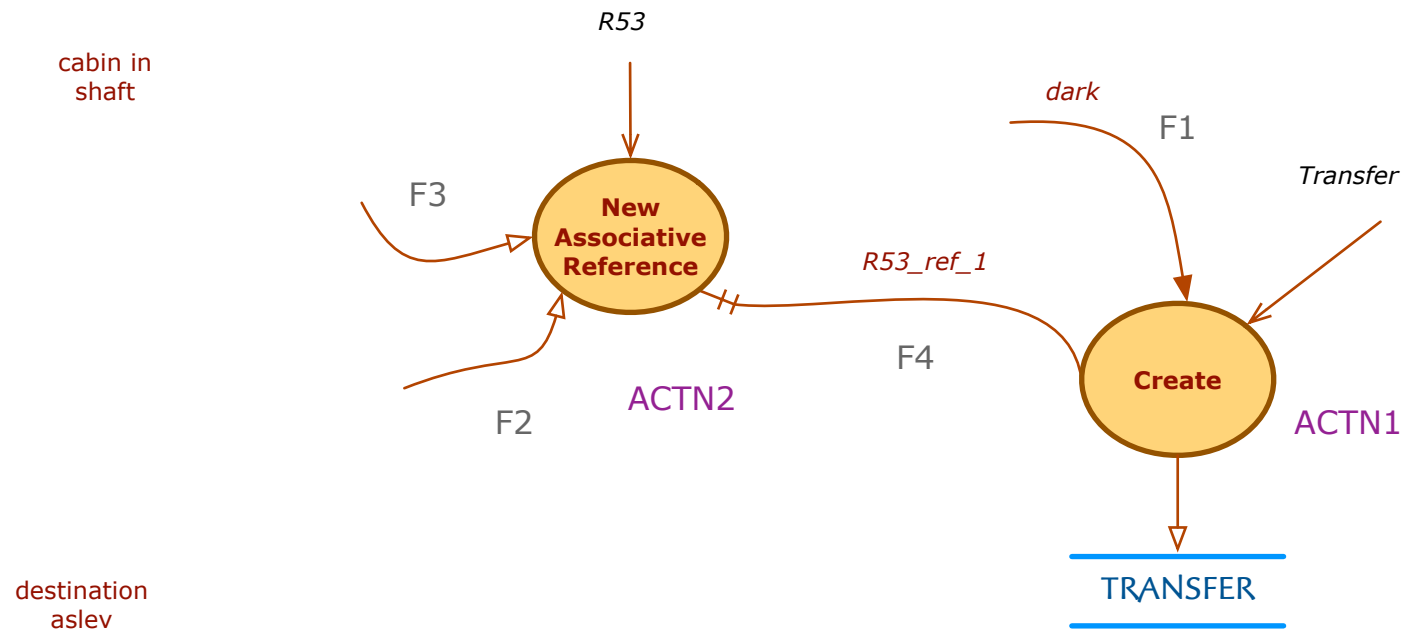aslev

F2

Create

ACTN1

TRANSFER

A9

Added Tint/Color attributes to test setting of explicit and default scalar attribute values

```
state Search for new destination
activity
    // The Cabin in this Shaft is stationary and has no Transfer
    cabin in shaft .= /R2/Cabin
    destination aslev .= cabin in shaft.Ping both ways()
    destination aslev? {
        Execute -> *Transfer(Tint: _dark) &R53 cabin in shaft, destination aslev
        Transfer created -> me
    } : No destination -> me
```
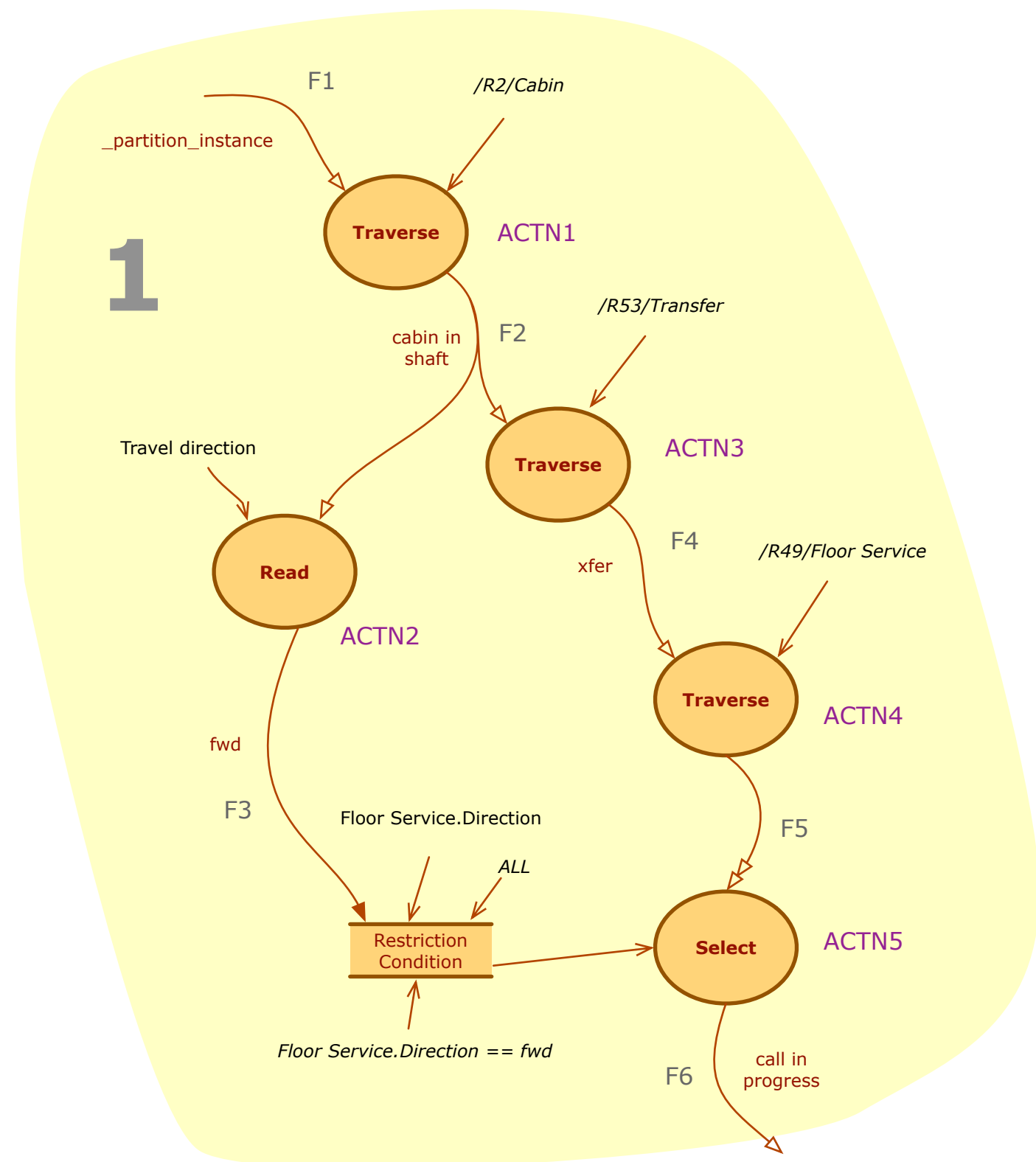
F1
/R2/Cabin
piflow

Traverse

ACTN1

F2
cabin in shaft

Ping both ways

Method Call

ACTN2

F3

ACTN6

destination aslev

Decision

dark
F4

Execute

Initial Signal Action

ACTN3

F5

__3_true

ACTN4

Signal completion

Transfer created

__3_false
F6

No destination

Signal completion

ACTN5

Delegated Creation Activity on Transfer

A37

Added Tint/Color attributes to test setting of explicit and default scalar attribute values

R53

cabin in shaft

dark

F1

F3

New Associative Reference

Transfer

R53_ref_1

F4

Create

ACTN2

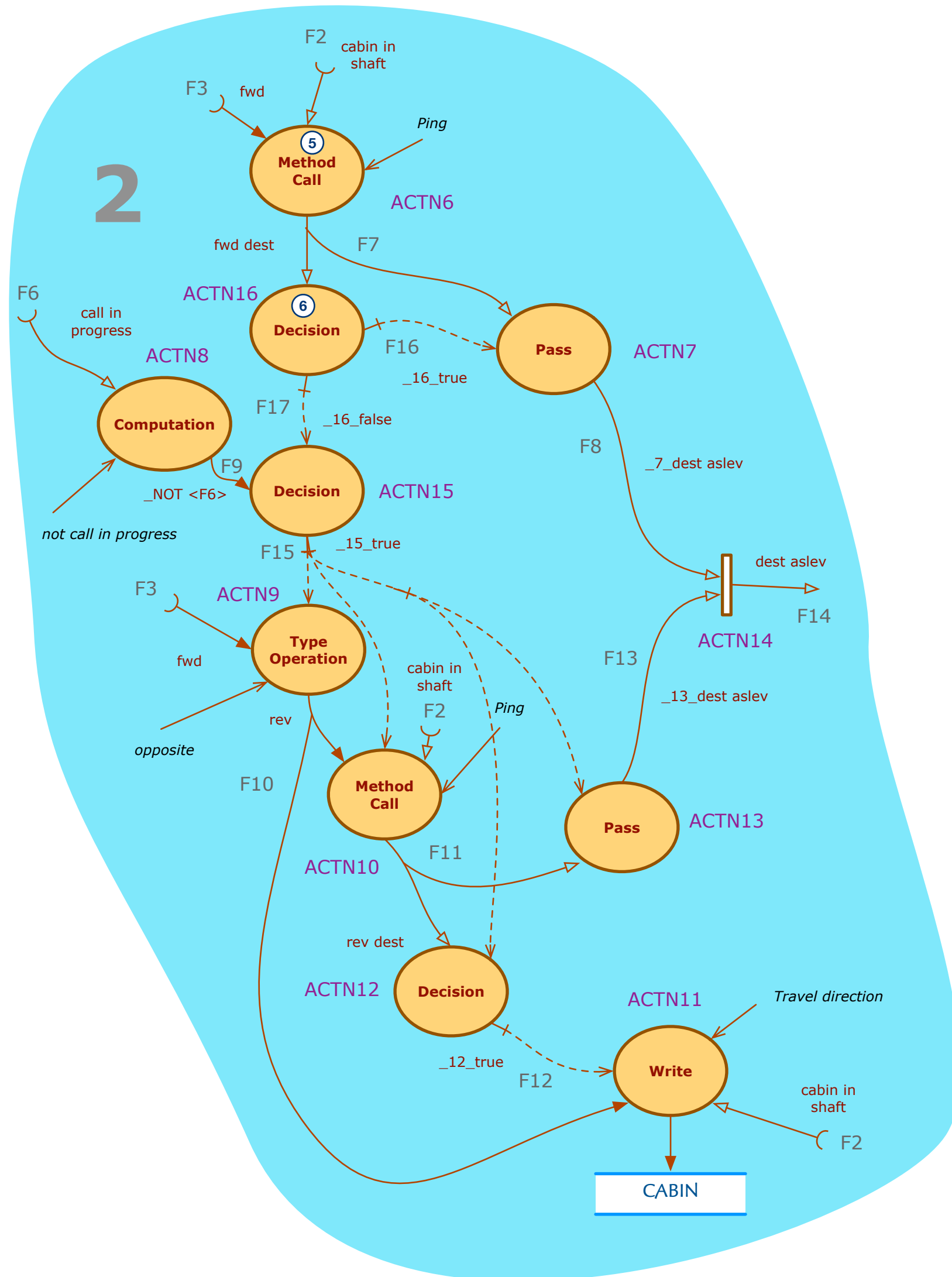ACTN1

F2

destination aslev

TRANSFER

A11


```
state Search for alternate destination
activity
    cabin in shaft .= /R2/Cabin
    fwd = cabin in shaft.Travel direction
    xfer .= cabin in shaft/R53/Transfer
    call in progress .= xfer/R53/Accessible Shaft Level/R49/Floor Service( Direction: fwd )

5  fwd dest .= cabin in shaft.Ping( dir: fwd )
6  fwd dest? dest aslev .= fwd dest :
       !call in progress? {
           // Search opposite the travel direction only if not servicing
           // a floor request in the current direction
           rev = fwd.opposite
           rev dest .= cabin in shaft.Ping( dir: rev )
           rev dest? cabin in shaft.Travel direction = rev
           // may be empty
           dest aslev .= rev dest
       }

7  dest aslev? {
       dest floor = dest aslev.Floor
       dest floor != xfer.Destination floor?
           Dest change request( new dest: dest floor ) -> xfer
   }

8  Dest change evaluated -> me
```