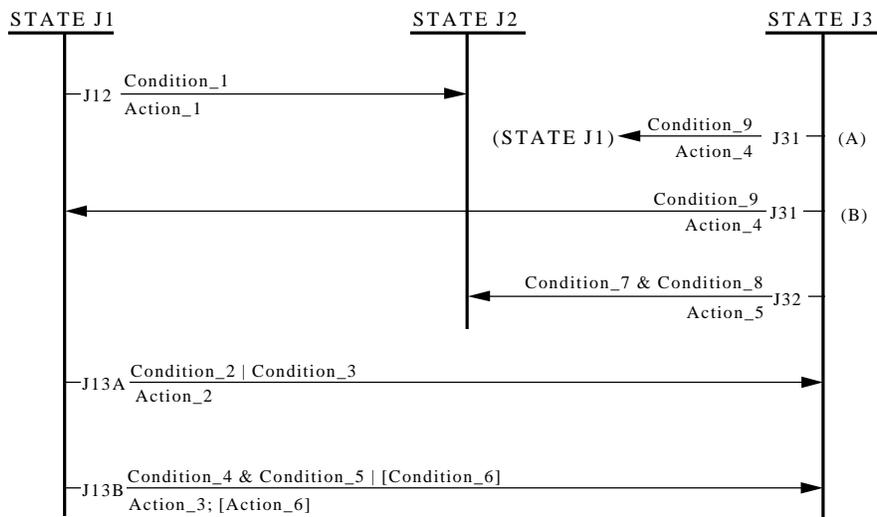### *9.1.1.9 Interpreting the FSMs*

The high level FSMs contained in 9.2 through 9.6 and the low level FSMs contained in annexes L, M, N, Q and R use the following set of rules.

These FSMs illustrate only the Port and Station Join, Transmit and Monitor Operation Tables even though *all* Port and Station Operation Tables defined are required for correct operation.

The Join, Transmit, and Monitor FSMs can operate simultaneously. Each FSM can have only *one* State active at a time.

Figure 9.1-3 illustrates states and transitions as follows.

1. STATES as vertical lines with the State name at the top of the line.

2. TRANSITIONS as horizontal lines, always contain an arrow head to show a connection to a STATE and may contain a number to indicate state/transition number (e.g., J12).

    a) When state/transition numbers are present within a FSM, the first character represents the FSM (J for Join, T for Transmit and M for Monitor), the first digit is the State being exited and the second digit is the State being entered.

    b) Occasionally multiple transitions with different conditions and actions occur between two States and the state/transition number ends with an additional letter (e.g., J13A and J13B).

3. Entry into a STATE occurs *only* when the transition ends at a STATE with an arrow head.

4. Some transitions are awkward to illustrate because of location within the FSM. TRANSITION J31 exits STATE J3 and enters STATE J1 (e.g., J31 labeled (A)).

5. Some transitions cross a STATE without an arrow head which indicates the STATE is not entered. TRANSITION J31 exits STATE J3 and enters STATE J1 (e.g., J31 labeled (B)).

6. OPTIONAL conditions are enclosed in brackets (e.g., [Condition_6]).

7. OPTIONAL actions are enclosed in brackets (e.g., [Action_6]).

25   Figure 9.1-3 - State/transitions (S/T) illustration

26   Figure 9.1-3 illustrates the following state transitions.

27   1.   STATE J1 to STATE J2 (transition J12) due to event of Condition_1, action of Action_1.

28   2.   STATE J1 to STATE J3 (transition J13A) due to event of Condition_2 OR Condition_3, action of
29   Action_2.

30   3.   STATE J1 to STATE J3 (transition J13B) due to event of Condition_4 AND Condition_5 OR
31   optional Condition_6, action of Action_3 or optional Action_6.

32   4.   STATE J3 to State J1 - two different ways of illustrating the same transition.

33   (A) STATE J3 to STATE J1 (transition J31) due to event of Condition_9, action of Action_4.

34   (B) STATE J3 to STATE J1 (transition J31) due to event of Condition_9, action of Action_4.

35   The Clause 9 Port and Station Operation Tables Event/Condition columns contain the current state, but
36   this state is not shown in the Low Level FSMs in annexes L, M, N, Q or R since the current state is
37   illustrated by the vertical line.

38   The Clause 9 Port and Station Operation Tables Action/Output column contains the state being entered,
39   but this state is not shown in the Low Level FSMs in annexes L, M, N, Q or R since the state being
40   entered is illustrated by the arrow head connection to a vertical line.

41   Some of the Clause 9 Port and Station Operation Tables contain transitions without a state/transition entry
42   (S/T) and, although these transitions are not shown in the FSMs in annexes L, M, N, Q or R, they are
43   required for proper operations.

44