

State Diagram - Command Processing Flow

State Flow:

Idle

System is ready to receive commands

Receiving

User input is being received

Parsing

Command text is being parsed

Validating

Parsed command is being validated

Interpreting

Valid command is being interpreted

Executing

Command is being executed

UpdatingState

Device state is being updated

SavingHistory

Command is being saved to history

Completed

Command processing is complete

Error

An error occurred during processing

State Transitions:

- Idle → Receiving (User Input)
- Receiving → Parsing (Command Received)
- Parsing → Validating (Parse Complete)
- Validating → Interpreting (Validation Pass)
- Validating → Error (Validation Fail)
- Interpreting → Executing (Interpretation Complete)
- Executing → UpdatingState (Execution Success)
- Executing → Error (Execution Fail)
- UpdatingState → SavingHistory (State Updated)
- SavingHistory → Completed (History Saved)
- Completed → Idle (Ready for Next Command)
- Error → Idle (Error Handled)