

Assumptions

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2. Accepted data must be reviewed
3. Can review only when not connected
4. Only way to change from level high to level low or low to high is by first accepting data

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6. The terminal buffer's contents cannot change when not connected except by sanitization

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Transitions

- Connect to host
- Disconnect
- Process in host
- Sanitize
- Move data
- Output data
- Review
- Release decision
- Accept

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```

Transition First_Page
ENTRY
  ~Connected
EXIT
  Top_Line = 1
  & FORALL i: Integer (
    Reviewed(i) =
      IF i>0 & i<=Screen_Size
      THEN TRUE
      ELSE Reviewed'(i)
    FI )
  & FORALL s: Screen_Number (
    Screen[s] = Display(Terminal_Buffer[s]))

```

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```

Transition Plus_Page
ENTRY
  ~Connected
EXIT
  Top_Line =
    if Bottom_Line' + Screen_Size <= File_Size'
    then Top_Line' + Screen_Size
    else if File_Size' >= Screen_Size
    then File_Size' - Screen_Size + 1
    else 1
  fi
  & FORALL i: Integer (
    Reviewed(i) =
      if i >= Top_Line & i <= Bottom_Line
      then TRUE
      else Reviewed'(i)
    fi )
  & FORALL s: Screen_Number (
    Dummy = s + Top_Line - 1
    & Screen[s] = Display(Terminal_Buffer[Dummy]))

```

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```

Transition Connect_To_Low
ENTRY
    ~Connected
    & Terminal_Level ~= High

EXIT
    Connected
    & Terminal_Level = Low
    & FORALL i: Integer(i>0 & i<=Max_Buffer -> ~Reviewed(i))
    & ~Accepted
    & Terminal_Mode = Normal
    & Active_Host = Low
    & Screen = Screen

```

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```

Transition Change_Mode
ENTRY
    ~Connected
EXIT
    ( Terminal_Mode' = Normal
    & Terminal_Mode = Show_Control
    & FORALL s:Screen_Number(
        Dummy = s + Top_Line' - 1
        & Screen[s] = Expanded(Terminal_Buffer'[Dummy]))
    | Terminal_Mode' = Show_Control
    & Terminal_Mode = Normal
    & FORALL s: Screen_Number(
        Dummy = s + Top_Line' - 1
        & Screen[s] = Terminal_Buffer'[Dummy]))

```

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```

IMPLEMENTATION
LLevel == LLevel,
High == High,
Low == Low,
Sanitized == Sanitized,
Connect_Level == Connect_Level,
Buffer == Buffer,

Sanitized_Buffer == Sanitized_Buffer,

```

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Terminal_Level == Terminal_Level,
Connected == Connected,
Reviewed == FORALL i: Integer (
    i>0 & i <= File_Size -> Reviewed(i))
    & File_Size ~= 0,
Accepted == Accepted,
Host_Buffer(Lev) == Host_Buffer(Lev),
Terminal_Buffer == Terminal_Buffer,
Active_Host == Active_Host,

```

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Connect_To(Lev) == (
    Lev = High & Connect_To_High
    | Lev = Low & Connect_To_Low),
Disconnect == Disconnect,
Receive_Data == Receive_Data,
Send_Data == Send_Data,
Sanitize == Sanitize,
Review_Data ==
    Accept
    | Change_Mode
    | First_Page
    | Last_Page
    | Plus_Page
    | Minus_Page
    | Plus_Lines
    | Minus_Lines,
Change_Level == Change_Level,
Process_Normal == Process_Normal

```

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