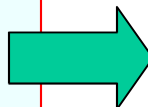


# DSP Main Loop (Concept)

## • Present Loop

- Check for new command
  - Validate DSP Parameters
  - If good command/params
    - Handshake command start
    - Execute command
    - Set DSP DONE
      - » Success
      - » Errors
- Continue



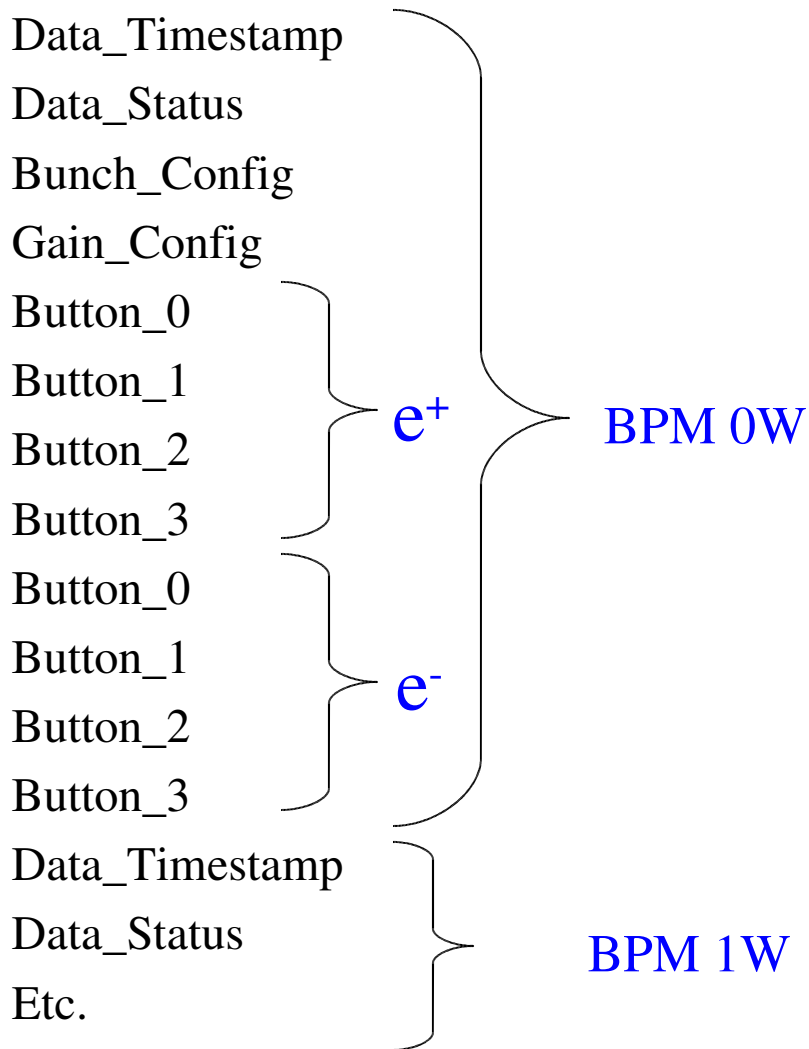
## • New Loop

- Check for new command
  - Validate DSP Parameters
  - If good command/params
    - Handshake command start
- Execute command
  - Set DSP DONE
    - » Success
    - » Errors
  - Wait for CTL data retrieval
    - Wait on CTL DONE
  - Execute DEFAULT OP
    - Default Config
    - Save Default Data
- Continue

- Data acquired at DSP limited rate
  - No XBus command request required
  - DSP takes data *whenever* not busy with specific user requests
  - Must be sure that control system retrieves necessary data before running default application Gaps in default data may reach 10 sec time-scale
- This operating mode required for FLM operation
  - Must provide significant support
- *Vector monitoring* requires *no* allocation access
  - Simple VXGETN data access
  - Easy to get basic real-time info

# Data Retrieval Methods

- Example MPM Vector



- Defaults for each module
  - Pre-loaded
  - Can be updated by means of standard interface command
- Expect that there will be a number of vector data nodes
  - Position
  - Tune
  - Differential Position
- Must have XBus Controller-DSP semaphore capability
  - Low-level data is interdependent
  - See CRS slides