SST Analysis Validation Cases

Dynamic Roll-Up Use Cases based on TMT

What do we want to capture

- Operational modes for system components using state machines
- Dependencies of operational modes (e.g. if A is in state S1, B must be in state S2)
- Power constraints per component per state
- Power draws per activity
- Different levels of abstractions
  - Table of which component is in which state and the power draw for a given scenario with a certainty, without defining a complete state machine
  - Specify assemblies of components
  - Fully fledged state machine with activities drawing power
- Scenarios which specify the operational mode for each component and their sequence and dependencies

What do we want to analyze?

- Roll-ups for assemblies for a given scenario
- Total Power roll-up
- Simulation of a given scenario producing a power profile over time for assemblies and total power
- Analytically determine the “optimal” sequence of events given a power constraint for a scenario, the dependencies of operational modes, and dependencies of events.

Example table to specify scenarios

	A	B	C	D
1		Scenario		
2		Scenario1	Scenario2	Scenario3
3	Duration:	5hr	2hr	4hr
4	**Component**			
5	Component1	Off	On	On
6	Component2	Off	On	Off
7	Component3	Off	Off	On
8				