

Next Generation Systems Modeling Environment – Model Construction

From a Macro Model Sketch to a High Fidelity Micro Model

Physical – Technical & Non Technical

CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

Context – Technical & Non Technical

CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

Logical – Technical & Non Technical

CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

Size, Weight, Location, Interface

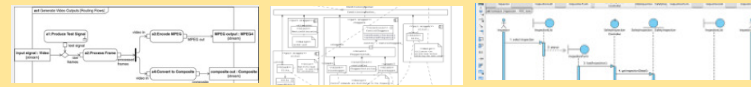
Macro Model Sketch
Environment, Location, Mission



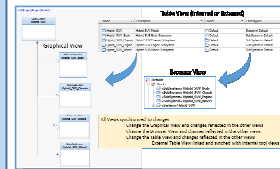
Systems, Subsystems, Products, Components, Interfaces

Synchronized View Model Construction with Tables

Micro Model High Fidelity



Sense, Control, Command, Effect, Communicate



Time, Power, Temperature, Resource Consumption



Cost, Schedule, People, Political



CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

Performance – Technical & Non Technical

CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

Constraints – Technical & Non Technical

CRUDEA Services: Create, Retrieve, Update, Delete, Execute, Analyze

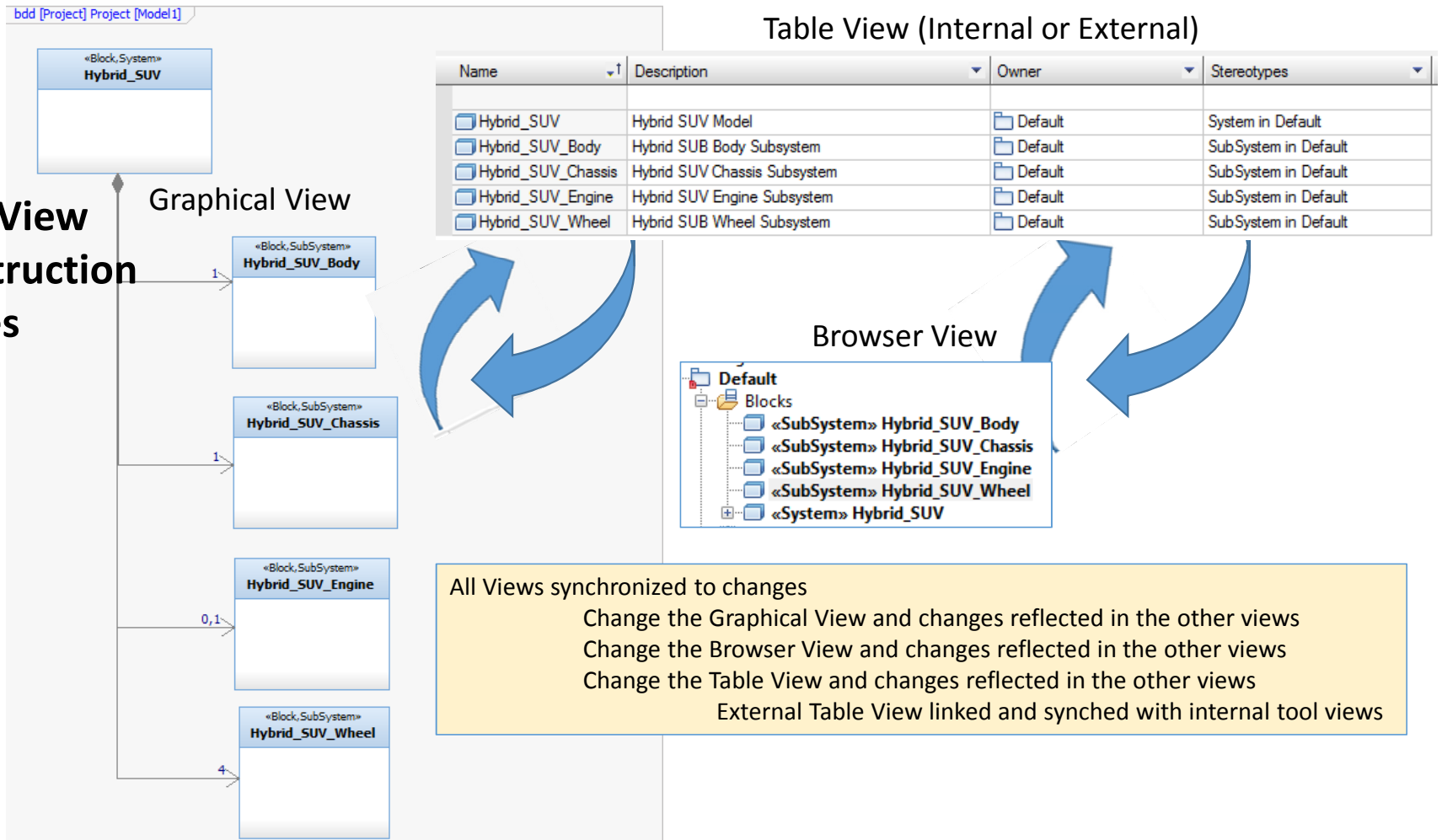
Functional – Technical & Non Technical

Synchronized View Model Construction Unstructured Text

	A	B	D
1	id	name	text
2	REQ-0	HSUV Specification	
3	REQ-0.1	Performance	The HSUV shall have...
4	REQ-0.2	Capacity	The HSUV shall have the capacity...
5	REQ-0.1.1	Braking	The HSUV shall have the braking...
6	REQ-0.1.2	Fuel Economy	The HSUV shall have fuel economy...
7	REQ-0.1.3	Acceleration	The vehicle should have a 0-30 mph...
8	REQ-0.1.4	OffRoad Capability	The HSUV shall have the offroad capability...
9	REQ-0.3	Regenerative Braking	Regenerative braking should not adversely impact...
9	REQ-0.4	Power	The power of the engine...
10	Requirement	Problems	Rationale



Synchronized View Model Construction with Tables



**Synchronized View
Model Construction
Unstructured Text**

Unique Requirement Name
Established

Unique Requirement ID
Established

	A	B	D	
1	id	name	text	
2	REQ-0	HSUV Specification		
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9	REQ-0.4	Power	The power of the engine...	
10	
	Requirement	Problems	Rationale	testCase

Requirement Text
Semantically Parsed
to capture system components,
characteristics, functions,
constraints, timing,
value properties, etc