





# Visualizing Smackdown Scenario with

## **OPM** and HLA

SISO Smackdown 2012 <a href="http://sisosmackdown.com/about/welcome/">http://sisosmackdown.com/about/welcome/</a>

The project focuses on two variations of object models:

- Object Process Methodology (OPM)
- Base Object Model (BOM)

Goal: Develop and implement a correct mapping mechanism between OPM and BOM for High-Level Architecture utilizing to enable using a combination of OPM and HLA for Smackdown future simulation.

# Lunar Mining and Transportation System Earth Mined Material Set

### **NASA Smackdown Project**



### **OPM-Procedural Enabling Links**

Name	Symbol	OPL	Semantics
Agent Link	AB	A handles B.	Denotes that object A is a human operator who triggers process B.
Instrument Link	AB	B requires A.	"Wait until" semantics: Process B cannot happen if object A does not exist.
State- Specified Instrument Link	A sı B	B requires s1 A.	"Wait until" semantics: Process B cannot happen if object A is not at state s1.

We focus on mapping four tables related to Conceptual Model Definition:

- Pattern of Interplay provides a mechanism for identifying sequences of pattern actions.
- State Machine provides a mechanism for identifying the behavior states expected to be exhibited by one or more conceptual entities.
- Entity Type provides a mechanism for describing the types of conceptual entities used to represent senders and receivers.
- Event Type provides a mechanism for describing the types of conceptual events.

### **Key Staff**

Ney Stail			
	<b>Prof. Dov Dori</b> , Technion, Israel		
	Mr. David Howes – Ret. NASA		
	engineer (USA)		
	Mr. Sergey N. Bolshchikov –		
	graduate student of Information		
	Systems, Technion, Israel		
	Mr. Aharon Renick – graduate		
-1952	student of Information Systems,		
	Technion, Israel		