

**MICHIGAN STATE**  
**UNIVERSITY**

# Beta Presentation

## O-Show for Simulation Software

### The Capstone Experience

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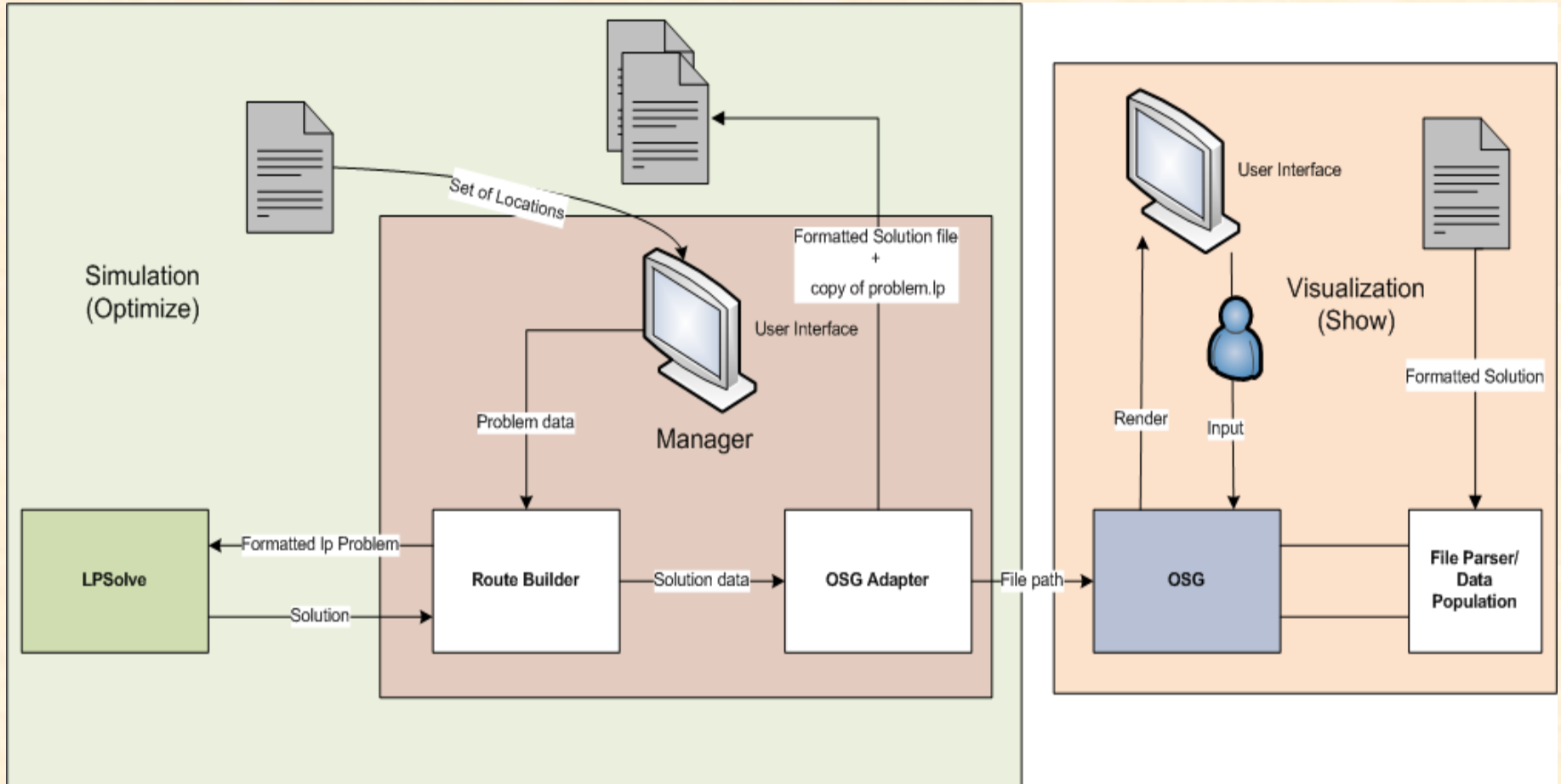
*From Students...*  
*...to Professionals*

# Project Overview

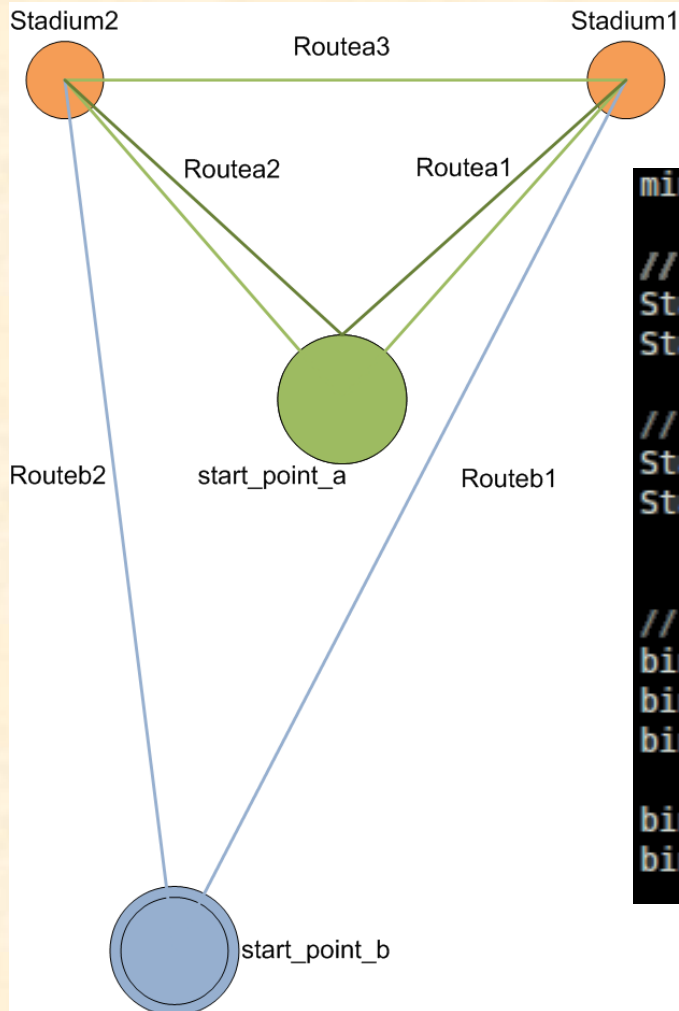
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- Read-in Problem Set
  - Multiple Starting Points (1-10)
  - Multiple Evaluators (1 – 100)
  - Multiple Destination Arenas (1-100)
- Optimize
  - Number of Evaluators Commissioned
- Show
  - Evaluator Routes

# System Architecture



# Example Problem and .lp File



```
min: routea1 + routea2 + routea3 + routeb1 + routeb2;  
  
// each starting point has 100 available evaluators  
Start_point_a: routea1 + routea2 + routea3 <= 100;  
Start_point_b: routeb1 + routeb2 <= 100;  
  
// each stadium served one time  
Stadium1: routea1 + routeb1 + routea3 = 1;  
Stadium2: routeb2 + routea2 + routea3 = 1;  
  
// possible routes leaving starting points  
bin routea1;           //route 1 leaving starting point a  
bin routea2;           //route 2 leaving starting point a  
bin routea3;           //route 3 leaving starting point a  
  
bin routeb1;           //route 1 leaving starting point b  
bin routeb2;           //route 2 leaving starting point b
```



# Launcher

File Help

Input start points:

Input arena file:  
(destinations)

Calories / Evaluator:

Time Limit:  
(Hours)

Maximum Speed:  
(MPH)



# Arena Input and Starting Point Files

## Starting Point.txt

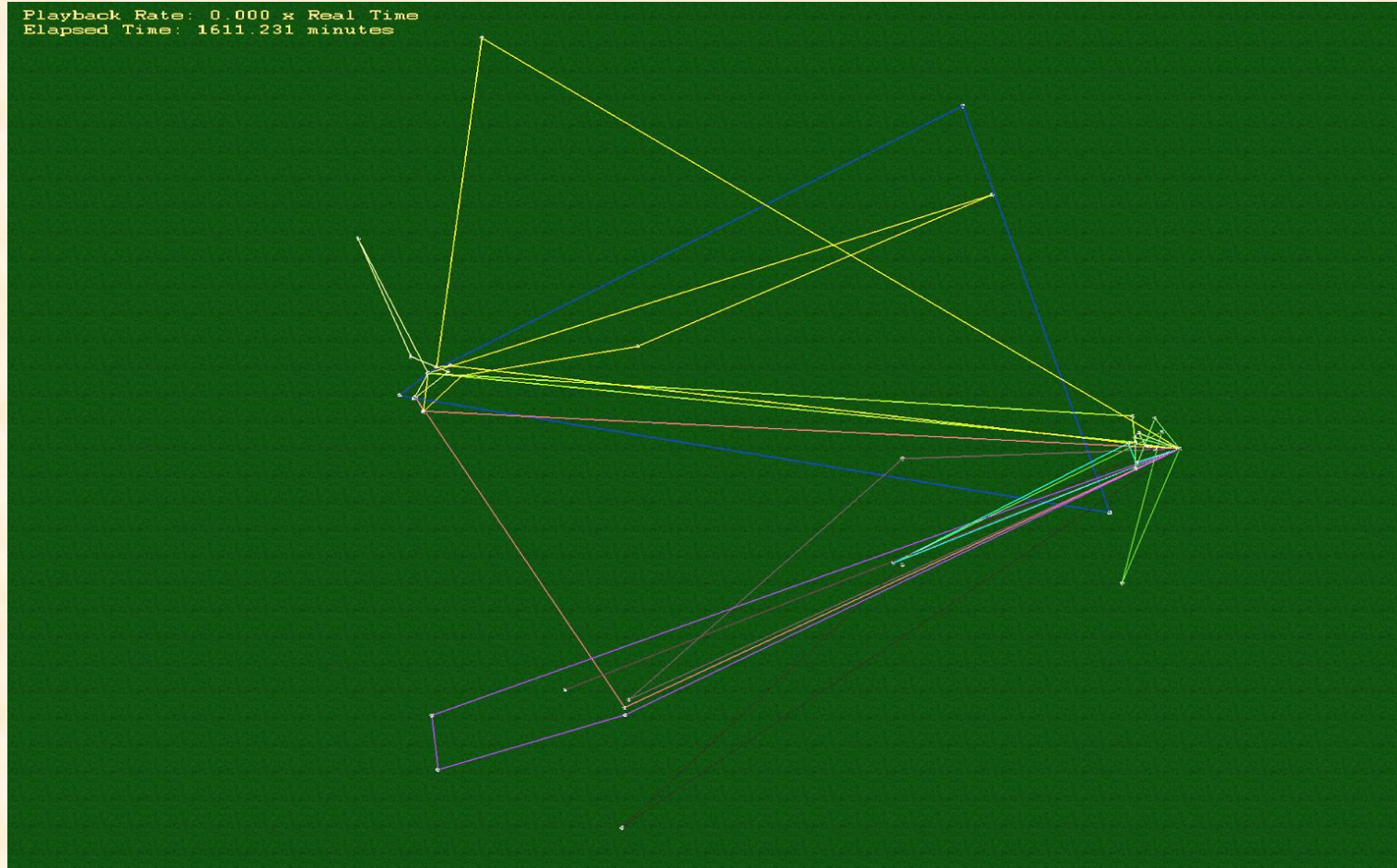
	Latitude	Longitude	Evaluators
St. Louis Arch	38.624444	90.184722	100
Arrowhead Stadium	39.048889	94.483889	100

## Arena Input.txt

	Latitude	Longitude	Meeting Time	
			Start	End
University of Phoenix	39.03	94.279489	17:00	19:00
DeVry University	38.922764	94.583598	12:00	14:00
Sanford-Brown College	38.782273	90.362784	15:00	20:00
Le Cordon Bleu Schools of North America	37.9642529	91.8318334	6:00	10:00
TechSkills	38.679167	90.464167	6:00	8:00



# Visualization





# What's left to do?

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- Input Error Checking
- Launcher UI Tweaks
- Potential Visualization UI Tweaks
- Performance Optimization

