

Project Status Report

JPL Parallel SPICE Implementation

As of 02/15/2021

Project Status Summary

Percent Complete: 0%

	Scope	We have had no issues with the scope of the project
	Schedule	We have hit a snag and are now likely behind schedule.
	Quality	We are seeing flaws with our initial planning and development strategy
	Issues	SPICE function call patterns

Work Planned For Last Week

- Improve task dispatch engine to better support SPICE call polymorphism
- Merge the marshalling and dispatching modules of the project

Work Planned For This Week

- Improve task dispatch engine to better support SPICE call polymorphism
- Merge the marshalling and dispatching modules of the project

Open Issues

- We have discovered that our assumptions of the underlying CSPICE library are heavily flawed and we must now do a full evaluation of the entire function API. We assumed that most of the CSPICE functions followed a similar call pattern. We have learned that this is not the case. Lately, we have been prepping for function rollout automation, and we keep finding functions with different call semantics. This has forced us to stop and evaluate all 400 CSPICE functions and classify them by scheme. This is a very unfortunate setback that we were hoping to avoid.

Deliverables and Milestones

Milestone	Planned	Forecasted	Actual	Status
Understand SPICE in a Java Context	10/12/2020	10/19/2020	10/19/2020	100%
Understand the scope of the project	10/12/2020	10/19/2020	10/19/2020	100%
Develop a preliminary design for parallelizing SPICE functions in Java	10/12/2020	02/12/2021	-	50%
Automating the coverage of the SPICE Library	01/25/2021	03/05/2021	-	5%
Deliverable	Planned	Forecasted	Actual	Status
Create a requirements document	10/19/2020	10/19/2020	10/19/2020	100%
Create a design document	10/19/2020	03/05/2021	-	45%
Develop a preliminary prototype of the user-side of ParSPICE	11/02/2020	02/12/2021	-	80%
Develop a preliminary prototype of the engine-side of ParSPICE	11/02/2020	02/12/2021	-	80%
Develop a prototype of ParSPICE with both the client-side and engine-side components	01/24/2021	03/12/2021	-	0%

Key Performance Indicators

- **Schedule** - Project is on Schedule
 - Schedule Variance (SV): +/- 14 days