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# Statement of Capabilities

D-U-N-S: 078654177 Cage Code: 6SY82

Imagars LLC provides engineering design software and services aimed primarily at mechanical design. Our patented Ecosystem is being used by mechanical engineering (ME) student design teams, in the US and Korea, both capstone, Formula and BAJA SAE teams. To companies in the automotive or aerospace industry, we offer software for requirement assessment and tracking, along with R&D services. In Phase II of our Small Business Innovative Research project with the National Science Foundation, we are developing a generic design framework capable of automatic verification of structured engineering requirements as well as improving design decision fidelity through application of big data analytics to repositories of known, good designs. The team behind Imagars consists of ME faculties from Portland State University, also with significant industry experience. Our distinguished software architect is a doctor from University of Minnesota with several awards from Intel for engineering excellence.



The Ecosystem for Design Assessment and Verification is a comprehensive design decision support system with the central purpose of uncovering design oversights early in the design process



"If a reliability problem is detected during engineering, the cost of the product goes up by a factor of 10. If the problem is caught in production phase, the cost of the product increases by a factor of 100 or more."

R.S.M. Harry

## **Ecosystem Product**

- 1. Electronic journal of the complete design history
- 2. Structured way of guiding designers through the design process and help eliminate design oversights
- 3. Automatic & objective assessment of design activities
- 4. Systematic capture of rationale supporting design decisions greatly helps with knowledge transfer
- 5. Multiple features for facilitating communications
- 6. Great facilities for project and part management
- 7. Facilities for automatic generation of formatted project reports for inclusion in progress reports or presentations
- 8. Requirement tracking and critical parameter management

### Services

- 1. Research and Development (NAICS 541712, 541715)
- Requirement & project management
- Decision making systems
- Big data analytics
- 2. Engineering Services (NAICS 541330)
- Design training and support
- Intellectual property

### Patent

US 9,923,949B2

# Sample Clients / References

















# Sample Testimonials

"I really like the interface of the Ecosystem with the e-Drawings Viewer as well as the manufacturing support (e.g. the ability to specify the tooling level)."

Joel Ludwig, Chief Executive Engineer, TriCon

I have only two teams and both have performed admirably. The Dynamometer team has managed to stay on schedule a little better but I'm not certain whether that is due to Ecosystem or some other factor."

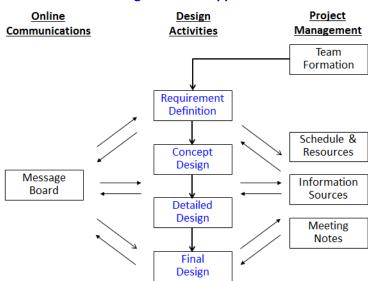
Dr. William Dick, Faculty Advisor, BAJA SAE Dynamometer team, University of Nebraska

This software seems like something that would be very useful to all Formula SAE teams. One of the biggest challenges we face is not the engineering, but the project management of all of the different components on the car."

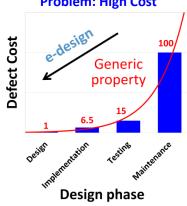
Alex Allmandinger, Aerodynamics Team Leader, Formula SAE, University of Illinois, Urbana Champaign

### **Further Illustrations**

### **Design Process Supported**



### **Problem: High Cost**



### **Solution: Design Decision Support**



#### **Uniqueness: High-Level Decision Support**

