



**Laboratory for Manufacturing
and Productivity**

30 YEARS OF ENGINEERING THE REAL WORLD

Lee-Schuster Semantic Enterprise Architecture (LSSEA)

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An innovation dating to the 1960's, packaged software has benefited industries around the world. However, this approach forces developers to limit functionality to the lowest common denominator of the user base. For diverse industries such as manufacturing, business process reengineering has become the means to deal with the limited functionality of software packages.

In many situations, specific mathematical models exist that meet all the functional needs of industry. Delivering these models to specific users is a challenge to software vendors in terms of versioning.

LSSEA represents an innovation in the delivery of models to users through intranets or the Internet, and is the next step for Enterprise Resource Planning (ERP) Systems. The LSSEA software has two elements: 1) a simple user interface, and 2) a means to connect the interface to computer code located on servers.

The central idea of LSSEA is to host a model, written in a structured computer language like Java or C++, on a single server with a simple interface that can be loaded onto any personal computer. The interface then connects to the central server when running the model. Such a system allows users located anywhere in the enterprise to connect to a particular model via personal computer with quick implementation and at little cost.

An important feature of the approach is a unique way of accomplishing machine understandable semantics to describe the inputs, outputs, and attributes of a mathematical model. Ultimately, the goal of LSSEA is to have many models loaded on a server, accessible through a simple interface distributed to users. This provides central control over versions of the code while giving users the flexibility of experimenting with different models for a specific problem. Currently, ERP systems employ a single model to solve practical problems like production scheduling. This limits the ability to experiment.

LSSEA uses existing IT standards in combination with several innovations. The software is at the prototype level. Several examples exist for demonstration.

For more information about licensing LSSEA, please contact:

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MIT Case No. 13754