7-26-2019

Digital Enterprise Center

Nathan W. Hartman

Purdue University, nhartman@purdue.edu

Purdue University Office of Research and Partnerships

Follow this and additional works at: https://docs.lib.purdue.edu/ovprcores

Recommended Citation

https://docs.lib.purdue.edu/ovprcores/13

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.
Digital Enterprise Center (DEC)
https://polytechnic.purdue.edu/digital-enterprise-center
Indiana Manufacturing Institute, Rm 124
Dr. Nathan W. Hartman (765-494-4585; nhartman@purdue.edu)

Through high technology-readiness-level (TRL) research, training, and implementation of product lifecycle management, DEC provides its partners in business and industry with knowledge and methods to improve their bottom line. The Digital Enterprise Laboratory was originally formed in 1999 through the faculty vision in the Department of Computer Graphics Technology. In 2002, it became the Product Lifecycle Management Center of Excellence and within the larger Center for Advanced Manufacturing in Purdue’s Discovery Park. In 2018, it changed its name to the Digital Enterprise Center to reflect the changes in its research mission and the changing industrial practices within the manufacturing sector.

As an interdisciplinary research center located in the Indiana Manufacturing Institute in the Purdue Research Park, DEC works in conjunction with the Indiana Manufacturing Competitiveness Center to operate a digital manufacturing research testbed. DEC fuses the talents and expertise of university faculty to serve as a resource for the manufacturing industry's transformation to the digital enterprise and Industry 4.0. Through research and practice around the tools, processes, and information models used in digital manufacturing across the lifecycle, DEC draws industry and academia together to enhance manufacturing competitiveness.

The objectives of the Digital Enterprise Center are:

- Conduct research that promotes the digital transformation of the manufacturing sector, both in the U.S. and abroad
- Promote the evolution and use of model-based digital product data throughout the enterprise
- Promote the use and development of tools and practices that emphasize the concept of a “digital twin” for products
- Promote the author/consumer communication model around the use of digital product data
- Establish industry partnerships that guide, support, and validate digital enterprise research and education activities
- Enable the creation of curriculum to support the next-generation manufacturing workforce
- Enable the adoption of digital enterprise methods and tools across industry sectors

Equipment and resources include:

- All major PLM toolsets and utilities from commercial PLM software providers
- PLM server capacity for research and education
- Digital manufacturing enterprise testbed (DMET) located at the Indiana Manufacturing Institute in the Purdue Research Park, including polymer/composite and metallic
production capability, additive manufacturing capability, automated material handling and robotics, and metrology.

- 8 Servers
- 15 CPUs
- 52 Physical Cores / 80 Logical Cores
- 1 TB Memory
- 13TB Storage Capacity (2 external arrays plus direct attached storage)
- 30 Server Gigabit ports, all gigabit networking for PLM server to clients