



Applied Research Laboratory
P.O. Box 30
State College, PA 16804-0030
(814) 865-6531



Memorandum of Understanding

Center for Innovative Materials Processing through Direct Digital Deposition (CIMP-3D)

This Memorandum of Understanding (“MOU”) is by and between The Penn State University, through its Applied Research Laboratory (“PSU-ARL”), having an address at P.O. Box 30, State College PA 16804-0030 USA, and _____ (“Center Associate”), a _____ corporation or organization, with its principal place of business at _____.

Acknowledgement of Support

PSU-ARL expects to receive support from the U.S. Defense Advanced Research Projects Agency under solicitation DARPA BAA-11-54 Open Manufacturing to operate the Center for Innovative Materials Processing through Direct Digital Deposition (CIMP-3D).

1. Objective of the MOU

PSU-ARL and the Center Associate enter into this Memorandum of Understanding to define participation in and collaboration with the Penn State Applied Research Laboratory’s Center for Innovative Materials Processing through Direct Digital Deposition, consistent with each Party’s respective organizational missions and capabilities.

2. Background Information

Penn State is a multi-campus public research university that educates students from Pennsylvania, the nation and the world, and improves the well being and health of individuals and communities through integrated programs of teaching, research, and service.

Penn State’s instructional mission includes undergraduate, graduate, professional, and continuing education offered through both resident instruction and online delivery. Our educational programs are enriched by the cutting edge knowledge, diversity, and creativity of our faculty, students, and staff.

Penn State's research, scholarship, and creative activity promote human and economic development, global understanding, and progress in professional practice through the expansion of knowledge and its applications in the natural and applied sciences, social sciences, arts, humanities, and the professions.

As Pennsylvania's land-grant university, Penn State provides unparalleled access and public service to support the citizens of the Commonwealth. The University is engaged in collaborative activities with industrial, educational, and agricultural partners here and abroad to generate, disseminate, integrate, and apply knowledge that is valuable to society.

The Penn State University's Applied Research Laboratory performs basic and applied research, exploratory and advanced development, and manufacturing technology in support of the Department of Defense technology base. PSU-ARL champions the transfer of advanced technologies and manufacturing processes, in partnership with industry and Navy research development centers, to acquisition programs and fleet operations, as well as to other government agencies and the private sector. The ARL also has research capabilities that are distributed among advanced technology, communication, information & navigation, fluids & structural mechanics, materials and manufacturing, research and academic programs, undersea weapons, and centers and institutes.

3. Goals

With a mission to advance direct digital manufacturing (DDM) technology of metallic and advanced material systems and deploy this technology to industry, the Center for Innovative Materials Processing through Direct Digital Deposition seeks to:

- advance enabling technologies required to successfully implement DDM technology for critical components and structures,
- as an objective and unbiased subject matter expert, independent of commercial interests, provide technical assistance to industry through selection, demonstration, and validation of DDM technology, and
- promote the potential of DDM technology through training, education and dissemination of information.

To effectively accomplish this mission, the Center realizes the importance of possessing a broad view and knowledge base of DDM technology, and this perspective is bolstered by a network of Center Associates equally dedicated to the advancement and implementation of DDM technology. Hence, the Center cultivates associates that include developers of DDM systems, institutions engaged in various aspects of innovative product design and process simulation techniques, materials suppliers and developers that realize the potential of DDM, corporations that plan to strategically exploit the technology, and government organizations that stand to benefit from the massive insertion of this disruptive technology to the industrial base.

Collaboration between the Center and Center Associates is based upon a mutually beneficial relationship which defines the roles and benefits for each party. Under this collaboration, Center Associates receive:

- direct access to data and information through the Center's Shared Network related to DDM technology that is produced through the Center that is not proprietary or in any other way controlled,
- participation in education and training activities conducted by the Center,
- participation in DDM technology demonstrations conducted by the Center,
- access to the network of other Center Associates for the exchange of ideas and opportunities,
- ready access, subject to cost, to state-of-the-art processing, testing, and characterization facilities within the Center for development and demonstration of DDM technologies,
- potential participation in future development activities as a project team member,
- contact with highly trained students that may be considered for employment, and
- recognition of the importance that the Associate has placed in DDM through participation in a network dedicated to the development and dissemination of this technology.

Benefits to the Center from its Associates include:

- access to information concerning non-proprietary materials and system technology that may play a role in expanding the use of DDM,
- input into non-proprietary commercial applications that may be applicable to DDM,
- ability to draw upon the collective expertise of the Center's Associates in developing strategic plans for development and implementation of DDM technology,
- providing novel materials, components, and systems, when of interest to the Associate and on a limited basis, for process and technology demonstrations,
- cultivating potential team partners for future development activities, and
- potential participation in Center activities involving demonstration, education, and training regarding Associate-developed DDM technology.

It is further understood that the growth of DDM technology will be beneficial to the Center for Innovative Materials Processing through Direct Digital Deposition and its Associates, both having a vested interest in this critical technology. The intention of the Center and its network of Associates is to hasten growth and interest in DDM technology, while enabling its successful transition to industry.

4. Costs

PSU-ARL and the Center Associate shall each be responsible for their own costs related to the activities of this Memorandum of Understanding.

During the course of the Collaboration and in support of the goals and activities of this Memorandum of Understanding, specific projects may be identified which may involve sponsorship or funds exchanged between PSU-ARL and the Center Associate or with a third party, as well as potential equipment consignment or loan. Any such projects will be documented and conducted through a separate sponsored research contract between the sponsoring party and the performing party, and equipment consignment or loans will be conducted through a supplemental agreement between the Center and the Associate.

5. Limitations

This Memorandum of Understanding does not obligate either party to purchase goods or services from the other party.

6. Duration

This MOU is effective upon the date of last signature hereon (the "Effective Date") and shall remain in effect for a period of two (2) years, unless extended by mutual written agreement between the parties hereto.

Any amendments to this Memorandum must be made by mutual written agreement of both PSU-ARL and the Center Associate. This Memorandum may be terminated by either party hereto, by providing thirty (30) day's written notice to the other party.

7. Liability

Each party assumes all risks of personal injury, bodily injury including death, and property damage caused by the negligent acts or omissions of that party. Except as provided above, Center Associate shall fully indemnify and hold harmless PSU-ARL against all claims and costs (including counsel fees) arising out of Center Associate's use, commercialization, or distribution of information, materials or products which result in whole or in part from the research performed pursuant to this Agreement. Center Associate will hold University harmless from any claims arising from third party claims that the work performed hereunder infringes third party intellectual property rights.

8. Disputes

Any and all claims, disputes or controversies arising under, out of, or in connection with this MOU, which the parties hereto shall be unable to resolve within sixty (60) days, shall be mediated in good faith. The party raising such dispute shall promptly advise the other party of such claim, dispute or controversy in writing which describes in reasonable detail the nature of such dispute. By not later than five (5) business days after the recipient has received such notice of dispute, each party shall have selected for itself a representative who shall have the

authority to bind such party, and shall additionally have advised the other party in writing of the name and title of such representative. By not later than ten (10) business days after the date of such notice of dispute, the party against whom the dispute shall be raised shall select a mediation firm in Pennsylvania and such representatives shall schedule a date with such firm for a mediation hearing not to exceed one (1) day in length, and less where applicable. The parties shall enter into good faith mediation and shall share the costs equally. If the representatives of the parties have not been able to resolve the dispute within fifteen (15) business days after such mediation hearing, the parties shall have the right to pursue any other remedies legally available to resolve such dispute in either the Courts of the Common Pleas of Centre County of Pennsylvania or in the United States District Court for the Middle District of Pennsylvania, to whose jurisdiction for such purposes the University and Sponsor each hereby irrevocably consents and submits.

Notwithstanding the foregoing, nothing in this clause shall be construed to waive any rights or timely performance of any obligations existing under this Agreement.

9. Governing Law

This Agreement shall be governed by and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, United States of America.

10. Export Controls

Each party agrees that it will and shall comply with all applicable export control regulations of the United States of America.

By the signatures below of officials authorized to commit the parties to this Agreement, both Penn State University and Center Associate represent and certify that they are incorporated to do business in the United States of America and meet the definition of a U.S. Person as defined by United States Code Title 8 Chapter 12 Subchapter 1101 Definitions, and by United States Code of Federal Regulations Title 22 Foreign Relations Parts 120 through 130 including Subchapter Part 120 Section 120.

11. Assignment

The rights and obligations of the parties under this Agreement shall not be assignable without written permission of the other party.

12. Severability

If any provision hereof is held unenforceable or void, the remaining provisions shall be enforced in accordance with their terms.

13. Independent Contractor

Neither party hereto is authorized or empowered to act as agent for the other for any purpose and shall not on behalf of the other enter into any contract, warranty, or representation as to any matter. Neither party shall be bound by the acts or conduct of the other.

14. Publicity

Neither party to this Agreement will use the name of the other party, nor the name of any member of the other party's employees, in any publicity, advertising, or news release without the prior written approval of an authorized representative of that party. However, the Center for Innovative Materials Processing through Direct Digital Deposition shall be granted the right to use the Center Associate's name in membership listings for the purpose of promoting the Center to prospective associates.

15. Primary Contacts for the Center Associate and Center

Primary Contact of Organization:	Director, Center for Innovative Materials Processing through Direct Digital Deposition:
Name: _____	Name: _____
Title: _____	Title: _____
Phone: _____	Phone: _____
Email: _____	Email: _____

16. Authorization

By the signatures below of officials authorized to commit the parties to this Agreement, both PSU-ARL and Center Associate agree to the above terms and conditions of this Memorandum of Understanding.

Organization: _____	The Pennsylvania State University
Signature: _____	Signature: _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Date: _____	Date: _____