University of Minnesota  

Digital Technology Center  

Mission  

- Educate graduates for high-technology industries  
- Create, coordinate, and promote interdisciplinary digital technology  
- Communication and collaboration between the university and industry  

Point of Entry
DTC Facilities

- $64 Million renovation
- Home to Science and Engineering Library, I.T. Dean’s Office, and a student computing laboratory
- Over 45,000 square feet assigned to the DTC
Gifts to the DTC

- ADC – Five Chairs and an endowment for graduate student fellowships
- Unisys – Supercomputing equipment
- Ted and Linda Johnson – Established Digital Design Consortium
- 3M – Networking equipment
- IBM – Supercomputing and data storage equipment
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**DTC Funding**

**Recurring funds**
- 12 Faculty appointments tied directly to the DTC
- Technical Support for DTC faculty and researchers
- Administrative support for researchers and programs

**Other funding sources**
- Research grants
- Seed funding for select initiatives
- Consortium fees
- Affiliates membership fees
Research Areas and Interactions

- Digital Design
- Storage
- Systems Recognition & Verification
- Graphics & Visualization
- AI, Robotics, and Vision
- Networks
- Bioinformatics & Computational Biology
- Databases, Datamining
- Signal Processing, Wireless
Digital Technology Center Intelligent Storage Consortium (DISC)

- System level storage architecture
- Consortium is up and running
- Currently two consortium members:
  - StorageTek
  - Veritas
Current Programs and Initiatives

Digital Design Consortium (DDC)

- Application of graphics and visualization tools to design processes
- Developing new tools
- 3D Visualization
- Interactive color designing system
- 2nd DTC consortium initiative

Digital scanner on the Northrop Mall
Current Programs and Initiatives

Grid Computing

- Uses processing power of student lab PCs for data analysis and visualization
- Researchers from Institute of Technology, Academic Health Center, and Office of Information Technology
- Funded by National Science Foundation
Current Programs and Initiatives

Summer Bioinformatics Institute

- Developing bioinformatics skills and interests in 16 undergraduate interns
- Faculty from Academic Health Center, College of Biological Sciences, and Institute of Technology
- Funded by National Science Foundation and National Institutes of Health
- DTC instrumental in obtaining funding
Current Programs and Initiatives

Usability Laboratory

• State-of-the-art facility for real-time evaluations of human-computer interactions

• Partnership between the Office of Information Technology and the Digital Technology Center

• Available to DTC Affiliate Program members
Current Programs and Initiatives

Supercomputing Institute for Digital Simulation and Advanced Computation

- High-performance computation and visualization
- Supports over 1,600 U of M researchers
- Resources includes: IBM, SGI, Sun and Unisys Systems
- Professor Donald Truhlar, Director
Current Programs and Initiatives

Laboratory for Computational Science and Engineering (LCSE)

- 3D visualization of large-scale data sets
- Home of the PowerWall
- Integrating Unisys supercomputer using Microsoft operating system
- Part of the Grid Computing project
- Professor Paul Woodward, Director
Partnership Program
Partnership Program

Three Levels of Participation

- Affiliates Program
- Consortium Program
- Research Program
Partnership Program

Affiliates Program

- General membership
- Yearly meeting to review DTC research and latest trends in digital technology
- Quarterly members E-mail updates
- Reduced fee access to Usability Laboratory
- A $10,000 per year fee
Partnership Program
Partnership Program

Consortium Program

• Formal agreement/contract
• Intellectual Property (IP) rights
• Participation in DTC seed funding and external grants
• Must be an Affiliates Program member to participate
• Fees vary by Consortium: ~ $50K per year
• Residency Program
Partnership Program

Research Program

• One-to-one contractual agreement opportunities between partners and the DTC faculty
• Possible proprietary research agreements between partners and DTC faculty