



Non-Confidential Description
**Web-Based Software Suite for the Management
and Operation of Laboratory Equipment**

Technology Case: RFT-281

Invention Summary

This NDSU invention is a web-based suite of software tools designed to help with the management and operation of advanced laboratories and laboratory equipment. Software features include the scheduling and tracking of lab equipment and instrumentation, providing built-in security functions, and the generation of periodic reports and financial records.



Figure 1: Screen Shot of Laboratory Information Management Software User Interface

Benefits

- Eliminates paper logs for tracking equipment usage.
- Offers built-in security features and does not allow access to unauthorized personnel.
- Allows authorized users to see who is working with the laboratory equipment.
- Automates month-end report generation and financials for management.
- The system can be tailored to meet the needs of any institution.
- Ideal for computer-controlled instrumentation, but also manages record keeping for equipment without a separate controller.

Software Features

- **Tracker Module:** Tracks instrument usage.
- **Scheduling Module:** Allows a user to select and reserve equipment.
- **Rates Module:** Allows authorized users such as managers to access and maintain up-to-date ("live") equipment usage rates.
- **Financial Reports Module:** Used to generate a variety of periodic reports.
- **Settings Module:** Allows authorized users to change system settings and usage information.
- **Other Modules:** Other modules are currently in development.

Intellectual Property

This software is owned by the NDSU Research Foundation, and is protected by copyright. It is available for licensing.

Center for Nanoscale Science and Engineering (CNSE)



The disclosed suite of software tools was developed by a team at NDSU's Center for Nanoscale Science and Engineering (CNSE). CNSE, established in 2002, conducts large-scale, multidisciplinary research for government and industry. Located in a state-of-the-art research facility in the NDSU Research & Technology Park, CNSE employs approximately 65 full-time staff, and 80 part-time students and faculty researchers. CNSE's Research 2 facility includes 77,000 square feet of cleanroom, laboratory and engineering spaces that house its design, synthesis, fabrication, and characterization capabilities. Core competencies include wireless miniaturized electronics design and prototype fabrication, research on polymeric and hard protective coatings, and materials for electronics and energy conversion.

CNSE's electronics-oriented facilities occupy 25,000 square feet of Research 2, including 6,500 square feet of Class 10,000 and Class 100 cleanrooms, design and device testing laboratories, and an antenna design and test facility in the nearby NDSU Business & Technology Incubator. Equipment and prototyping tools are valued at nearly \$10M. Technologies transferred from Alien Technology (Morgan Hill, Calif.) and Tessera Incorporated (San Jose, Calif.) are utilized in electronics packaging R&D. The Center also has an extensive research program in which students and faculty participate with staff researchers on studies of materials, design, and manufacturing process innovations in the electronics area.

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