



ARKANSAS SCIENCE & TECHNOLOGY AUTHORITY

2002 Annual Report

2002 Annual Report

Letter from Chairman & President



Dear Governor Huckabee & Distinguished Legislators:

The Board of Directors and staff of the Arkansas Science & Technology Authority are pleased to submit to you the Authority's "Fiscal Year 2002 Annual Report."

The Authority's Annual Reports usually summarize the scientific and technological projects by which the Authority carries out its statutory mission to bring the benefits of science and advanced technology to the people and State of Arkansas. This report presents that summary, but Fiscal Year 2002 was not a typical year for the Authority, for Arkansas, or for the Nation.

For the first time since research funding began in Fiscal Year 1987, no funds were allocated to the basic research grant program; solicitation of basic research grant proposals was suspended for the year by the Board due to the lack of funds; and no investments were made in basic research. Cost savings in other parts of the budget allowed an end-of-year investment of \$79,780 in two unsolicited applied research grant projects. Other investments included \$50,000 in a technology development project and \$78,060 in technology transfer assistance mini-grants. All of these programmatic investments were less than in Fiscal Years 2000 and 2001. The terrorist attack on America and the subsequent turndown in the economy had a devastating effect on the Authority's programs. The ironies are that (1) the previous two years, Fiscal Years 2000 and 2001, were the best years ever for investments in science and technology projects and (2) the Authority seemed to have more things to do despite the shortage of funds.

The Authority's high level of activity is attributed to the broad and flexible statutory authority that allows it to keep abreast of changes in science and technology. The Authority has always viewed its mission as continuous because of the ongoing nature and rapid pace of scientific discovery, but it has become apparent that its mission is more important now than ever. The reason is the recognition that scientific research and engineering development are central to the state's economic well-being.

During Fiscal Year 2002, the Authority focused its attention on its mission and the Board's seven goals. While the Authority was unable to address the first two of the Board's goals because of the budgetary impact, it carried out a variety of other important activities corresponding to the remaining five goals.

Goal 1 – Increase per capita research and development (R&D) funding at colleges and universities by increasing the national competitiveness of Arkansas scientists in basic research. The Authority made no investments in Basic Research projects.

Goal 2 – Increase per capita R&D funding at colleges and universities by building a critical mass of research strength in research centers in the state. The Authority made no investments in projects through the Arkansas Research Matching Fund.

Goal 3 – Provide extension services to customers. The Authority was able to provide some extension services through funding of applied research, the Arkansas Manufacturing Extension Network (the Network), and technology transfer assistance grants. The Authority invested \$79,780 in [Applied Research Program](#) projects and \$78,060 in [Technology Transfer Assistance Grant Program](#) projects. The Board approved investments that attracted matching funds from the private sector totaling \$93,872.

The Arkansas Manufacturing Extension Network (Network) received \$612,355 in federal funding from the U.S. Department of Commerce's National Institute of Standards and Technology Manufacturing Extension Partnership (NIST MEP) and \$317,064 from clients for assistance provided. The Network's impact reported in independent FY 2002 NIST MEP surveys indicates that over a 12-month period Arkansas companies had (1) increased or retained sales of \$103.9 million, (2) cost savings of \$5.5 million, (3) created or retained 854 jobs, and (4) company investments of \$8.1 million. The Network's impact performance is excellent compared to other MEP centers as shown in the following rankings:

- **Bottom-line Client Impact** (client sales and cost savings impact divided by federal cost) - Better than 90th Percentile;
- **Cost Per Impacted Client** (federal cost divided by # customers reporting impact) - Better than 75th Percentile;
- **Investment Leverage Ratio** (client investment divided by federal cost) - Better than Median;
- **Cost Per Job Created/Retained** (federal cost divided by # jobs created/retained) - Better than 75th Percentile; and
- **Customer Satisfaction** - 75th Percentile.

These performance metrics are all the more significant because the budget constraints prevented the Network from filling two field staff positions during the year. In addition, the Authority's Network staff documented and implemented operating procedures that ensure consistent and effective service delivery to the Arkansas manufacturers and developed and implemented a fully functioning financial management system that supports Network management decision-making and ensures compliance with federal program requirements. An improved field staff performance measurement system was put in place and staff implemented a new and improved version of the Network's project tracking database (Manufacturing Extension Information System).

Providing extension services included a unique combining of Applied Research Grant Program Guidelines and Network funds, with matching corporate funding, to make possible the testing of bridge pads developed by [Garlock Rubber Technologies](#) of Paragould. Compression, shear and rotational tests on the bridge pads were completed in June 2002 and the pads performed well in other tests and the results have been forwarded to the company.

The Authority continued its applied research relationship with [Acxiom Corporation](#) during Fiscal Year 2002. The Authority's Board approved three projects representing a total investment of \$79,780. Co-sponsorship funding from Acxiom totaled \$157,042. This joint effort between the Authority and Acxiom is a model for developing industry-specific innovations and expertise through a working relationship between Acxiom, the University of Arkansas at Little Rock (UALR), and the Authority. One notable achievement is the development of the Acxiom Data Engineering Laboratory ([ADEL](#)) at UALR. ADEL affords an environment in which faculty benefit from professional development, graduate students get mentoring, and knowledge workers are educated.

Goal 4 – Develop innovative technology-based businesses while stimulating economic growth and global competition. The Authority continued to identify new and interesting technologies, nurture them, move them to the marketplace, and create new businesses and jobs in the process through two of its programs: [Seed Capital Investment Program](#) (SCIP) and the [Technology Development Program](#) (TDP).

The Board approved \$710,000 and \$50,000 for SCIP and TDP projects, respectively, for a total investment of \$760,000.

One example of the Seed Capital Investments was the continued support of Contour Med. This company was developed from research begun at the University of Arkansas for Medical Sciences and offers a custom prosthetic for mastectomy patients. This was one of six presenting companies at the Inaugural Arkansas Venture Capital Forum.

It is important to point out that the Seed Capital Investment Fund was originally established with a one-time infusion of funds in 1985. The number of seed capital investment projects has accelerated in recent years and, at the current pace, the fund will be fully invested in Arkansas-based companies before January 2004.

A second example project is the \$50,000 Technology Development Program investment made to the University of Arkansas for Medical Sciences (UAMS). This investment was for the further development of a novel therapeutic vaccine for the treatment of ovarian cancer. This exciting new treatment option illustrates the excellent research conducted in Arkansas. DCV Technologies, the company formed by the Principle Investigators from UAMS, was one of six companies featured at the Inaugural Arkansas Venture Capital Forum and will also be one of fifteen presenting companies at the World's Best Technologies forum (www.wbt02.com) in Pittsburgh September 24-26, 2002. The organizers of the World's Best

Technologies have combed all the federal laboratories and university research facilities in search of these exciting new technologies.

In related activities, the Authority was heavily involved in organizing the May 21, 2002 Inaugural Arkansas Venture Capital Forum. Over 350 attendees came to listen to the investment opportunities presented by eight Arkansas-based entrepreneurs at the Peabody Hotel in Little Rock. General Wesley Clark, U.S. Army (ret.), Managing Director - Merchant Banking, Stephens Group, was the keynote speaker.

The Authority was represented on the Winthrop Rockefeller Foundations "Entrepreneurial Arkansas" advisory panel. This advisory panel, with representatives from the private sector, non-profit sector and government sector, worked to develop a statewide entrepreneurship strategy for Arkansas. The report is expected to be issued in the fourth quarter of calendar year 2002.

The Authority was also represented on the Department of Economic Development's Task Force for the Creation of Knowledge-Based Jobs, which met monthly throughout the fiscal year to discuss programs and recommendations that will enhance the creation of jobs for knowledge workers and increase per capita income. The Task Force will issue its report in fiscal year 2003.

Goal 5 – Help build the education infrastructure for the future. The Authority is represented, in an ex officio capacity, on the Board of Trustees of the [Arkansas School for Mathematics and Sciences](#), the state supported residential math and science high school in Hot Springs. This year, the Authority's President was invited to serve on the board of directors (and elected as the organizing chair) of the newly organized non-profit organization, EAST, Inc., which was established to give oversight to the Arkansas originated Environmental And Spatial Technology (EAST) initiative as it expands from Arkansas to other states.

The Authority's staff made significant contributions of time and know-how in support of the Governor's Award for Entrepreneurial Development - Business Plan Competition. The Student Business Plan Competition currently offers the fourth largest cash awards pool in America and is managed by the Capital Resource Corporation, an affiliate company of The Arkansas Capital Corporation Group, in association with the Arkansas Small Business Development Center, the Arkansas Department of Economic Development, the Arkansas Development Finance Authority, and the Arkansas Science & Technology Authority.

The Winthrop Rockefeller Foundation made a grant to the Authority to support middle school science teaching. The grant will allow the Authority to make two types of awards. One award type is a \$500 mini-grant to a school so that teachers will be able to purchase either consumable supplies or science kits for student hands-on learning experiences. The other award type is a \$6,000 Science Teaching Using Audience Response Technology (STUART) grant that uses classroom participation technology to promote learning in middle school classrooms. Each student is given a hand-held, TV-like remote control, which is connected through an infrared link to the teacher's computer. The teacher questions the class during instruction and student responses are entered via the remote and sent directly to the teacher's computer where the software monitors the rate of comprehension among students in the class.

The Authority's staff were instrumental in supporting "Educating Tomorrow's Engineers," a one-day symposium held at the University of Arkansas at Little Rock, focused on how to encourage women and minorities in the Delta region to pursue careers in engineering, science and technology. Sponsored by the American Society of Mechanical Engineers' (ASME's) Board on Government Relations' State Action Program, the ASME Board on Minorities and Women, and the Arkansas Science & Technology Authority, the program drew representatives from government, industry and academia. Attendees participated in a brainstorming session and developed an outline for a model state bill based on nineteen goals. The May 29th meeting was a follow-up to the Team DELTA project involving Arkansas, Mississippi, and Louisiana. The ideas produced by the symposium are contained in a model state bill titled the: "Science, Technology, Engineering, and Mathematics Education Competitiveness Act."

The Authority's Board and staff have a continuing interest in the health of the educational infrastructure because it has such an important role in supporting the innovation and human resource development that is necessary to realize fully the benefits of the new information-age economy.

Goal 6 – Become more of an information organization. The Authority continues its effort to improve the management of information.

In May of 2002, the Authority refocused its marketing strategy. New logos were created for both the Authority and the Network. The logos combined elements of both previous logos to form a single, cohesive identity. The finished logo was incorporated into a total redesign of the Authority's Internet site, www.arkansasscienceandtechnology.org, in June of 2002.

Also in June, the Authority implemented an intranet that is based on the web templates created for the Internet site redesign. The Authority's intranet utilizes a dynamic server database to allow Authority employees web-based access to important agency information, news, and frequently used files. Brent Lauer, a graduate student in the UALR Cyber College, did the programming for the Authority's intranet.

The Authority successfully made the transition to AASIS, the Arkansas Administrative Statewide Information System. Related management services functions have been streamlined and improved. The staff also developed a Weekly Report Database and a procedure for keeping it current.

Goal 7 – Contribute to the preparation of a coherent research and development road map. Again because of the budget constraints, there were no funds released for support of the Arkansas Research Matching Fund, which was created in 1999. The experience of managing ARMF in Fiscal Years 2000 and 2001 showed that Arkansas scientists are competitive nationally for large federal research and development projects. Their competitiveness was enhanced because ARMF provided the leverage that federal funding agencies often require of university researchers. Funds for research matching, unfortunately, are limited: only about \$3.4 million of \$10 million was released in the 1999-2001 biennium. The challenge is to find the non-federal research matching dollars increasingly required by federal agencies *and* to allocate the matching funds to strategically important projects.

In January, the Board adopted an updated 2002 Research and Development Plan that identifies five areas of research emphasis. These areas are a first step in identifying strategically important research and include:

- Advanced Materials and Manufacturing Systems,
- Agriculture, Food and Environment Sciences,
- Biotechnology, Bioengineering, and Life Sciences,
- Information Technology, and
- Human Resource Development in these areas.

The President of the Authority, by virtue of position, was included as a member of the newly created Arkansas Tobacco Settlement Commission, which has the responsibility of monitoring and evaluating the programs established by the Tobacco Settlement Proceeds Act. One of the programs established by the Act is the Arkansas Biosciences Institute. The President of the Authority, again by virtue of position, was included as a member of the Institute's Board of Directors.

As you can see from the goals and the associated activities, the Authority had a productive year, although one during which investments in science and technology were much reduced. The remainder of this report gives an overview of specific investments.

With your ongoing support, the Authority will continue to meet the challenges of the new economy and efficiently and effectively carry out its mission. We are proud of our achievements and thank you for the opportunity to serve our state. We appreciate your support of the Arkansas Science & Technology Authority.

Sincerely,

Buzz May, Chair Board of Directors
John W. Ahlen, Ph.D., President

ABOUT THE AUTHORITY

The Authority was created by statute in 1983 with the mission to bring the benefits of science and advanced technology to the people and state of Arkansas. This mission is addressed by strategies to promote scientific research, technology development, business innovation, and math, science and engineering education.

The Authority is comprised of a Board of Directors, Advisory Committees and staff. The 14-member Board is appointed by the Governor to staggered four-year terms. The Board has three directors who are scientists or engineers, two directors who are representatives of academic institutions, five directors who represent the private sector, three directors who represent the private sector and have knowledge and experience in the field of manufacturing, and the Director of the Department of Higher Education (or the Director's designee).

The Authority's staff is led by the President, the chief executive officer, who is responsible for the agency's programs, services and support functions.

The Authority's activities are divided into three programmatic areas that include research, development and technology.

The Board determines the allocation of funds to all projects supported by the Authority. Three standing committees, comprised exclusively of members of the Board, make recommendations to the full Board. Advisory Committees, comprised of Board and non-Board members, offer additional advice to the Authority. All of the Authority's activities are audited annually to ensure compliance with state and federal guidelines.

RESEARCH

Applied Research Grant Program

Purpose

The Program provides incentives to Arkansas industry to participate in applied research. A goal is to encourage investment by industry in the transfer of science and technology from Arkansas colleges and universities.

Program Description

The Authority's Applied Research Grant Program is a (50:50) cash-matching effort to support applied research in science and engineering. (A match of \$2 from the state is available for every \$1 from an Arkansas business with 50 or fewer employees.) The goal of the Applied Research Grant Program is to stimulate the transfer of science and technology in Arkansas by enhancing opportunities for research partnerships between Arkansas colleges and universities and private industries.

Awards

The Board approved three Applied Research projects for FY02, representing a total investment of \$79,780. Private industry match totaled \$157,042, for a combined total of \$236,822.

| Proposal | Institution | P.I.* | Co-Sponsor | Project Title | Match | Amount |
|-----------------------|-------------|---------|-------------------|--|---------------------|-------------|
| 02-A-01 | UALR | Chan | Axiom Corporation | ACXIOM Data Engineering Laboratory (ADEL), Second-Year Funding | \$63,170.00 | \$0.00 |
| 02-A-02 | UALR | Wu | Axiom Corporation | Mining Hidden Information From Large Datasets | \$47,792.00 | \$39,390.00 |
| 02-A-03 | UALR | Hashemi | Axiom Corporation | An Architecture for Capturing, Storing, and Connecting Event Information to Facilitate Customer Data Integration | \$46,080.00 | \$40,390.00 |
| Subtotal | | | | | \$157,042.00 | \$79,780.00 |
| Combined Total | | | | | \$236,822.00 | |

* P.I.: Principle Investigator

TECHNOLOGY

Technology Transfer Assistance Grant Program

Purpose

The Technology Transfer Assistance Grant Program (TTAG) assists Arkansas' enterprises in developing or improving products or processes through the transfer of technical solutions to technology-based, industry-driven problems, thus enhancing that enterprise's market competitiveness.

Program Description

The Authority provides limited financial support for the transfer and deployment of innovative technology. The Authority will fund up to \$3,750 of costs associated with transferring new or existing technology from a qualified applicant -- such as a public or private enterprise, laboratory, college or university -- to an enterprise based in Arkansas. Up to \$5,000 of total project costs will be considered, with the first \$2,500 funded by the Authority; the remaining \$2,500 is cost-shared equally (50:50) between the Authority and the enterprise. Each enterprise is eligible to receive assistance for two technology transfer projects per year. Projects are evaluated on a competitive basis.

Awards

In FY02, the Authority's Board of Directors authorized TTAG projects totaling \$78,060 through TTAG to help clients solve technical problems. The private sector invested an additional \$29,810 in these solutions. These investments assisted 21 separate companies, located in 11 counties representing the following Standard Industrial Classification (SIC) groups:

| Industry Type | Number |
|--|-----------|
| Agriculture production - crops | 1 |
| Apparel and accessory stores | 1 |
| Automotive repair, services, and parking | 1 |
| Business services | 1 |
| Chemicals and allied products | 1 |
| Electronic and other electrical equipment and components, not computer | 2 |
| Engineering, accounting, research, management, and related services | 3 |
| Food and kindred products | 1 |
| Food stores | 1 |
| Furniture and fixtures | 1 |
| Industrial and commercial machinery and computer equipment | 2 |
| Lumber and wood products, except | 4 |
| Miscellaneous services | 1 |
| Motion pictures | 1 |
| Total | 21 |

| Service Area | Number |
|--------------------------------------|--------|
| Business Systems/Business Management | 1 |
| E-Commerce | 4 |
| Environmental | 3 |
| Market Development | 4 |
| Material Engineering | 1 |

| | |
|--|-----------|
| Other | 1 |
| Layout/Manufacturing | 2 |
| Process Improvement | 1 |
| Quality/Inspection | 3 |
| Small Business Innovation Research (SBIR) Assistance | 1 |
| Total | 21 |

Client Company Profile

| | |
|-------------------------------------|----------------------------|
| Average Number of Employees | 119 |
| Average Age of Company | 18 Years |
| Average Year of Corporation Founded | 1984 |
| Most Active Counties | Pulaski (5), Sebastian (5) |
| Average Authority Investment | \$3,717.14 |
| Total Authority Investment | \$78,060.00 |
| Average Client Investment | \$1,321.70 |
| Total Client Investment | \$29,810.00 |

TECHNOLOGY

Arkansas Manufacturing Extension Network

Purpose:

The Arkansas Manufacturing Extension Network (Network) is designed to improve Arkansas' manufacturing and industrial competitiveness through the delivery of comprehensive technical and business assistance services.

Network Description:

The Network is an affiliate of the National Institute of Standards and Technology Manufacturing Extension Partnership. It strives to improve the quality, productivity and global competitiveness of Arkansas' small and medium-sized manufacturers by providing technical and business management assistance services.

The Network's primary partners are the University of Arkansas, Fayetteville; Southern Arkansas University Tech, Camden; Arkansas State University, Jonesboro; the University of Arkansas at Little Rock; and Winrock International, Morrilton.

Eight field engineers deliver services to manufacturers. Typical services include Lean Manufacturing, Quality Management Systems, Six Sigma, Environmental, Health & Safety Management Systems, and General Technical and Management Assistance.

Awards:

In FY02, the Board approved funding in the amount of \$997,476 to support the director and eight field engineers: three at the University of Arkansas, Fayetteville; two at the University of Arkansas at Little Rock; one at Arkansas State University; one at Southern Arkansas University Tech; and one at Winrock International.

The following improvements were reported by clients during the NIST MEP Survey of Network projects completed from April 2000-March 2001 with Arkansas companies:

| | |
|-----------------------------|-----------------|
| Increased or Retained Sales | \$103.9 million |
| Cost Savings | \$5.5 million |
| Company Investments | \$8.1 million |
| Jobs Created or Retained | 854 |

In FY02, Network field engineers completed 80 Network projects of less than 8 hours and 247 projects greater than or equal to 8 hours in the following manufacturing industries and service areas.

| Industry Type | Number |
|--|--------|
| Apparel and other Textile Prods. | 1 |
| Chemicals and Allied Prods. | 3 |
| Electronic and Other Electrical Equip. | 43 |
| Fabricated Metal Prods. | 14 |
| Food and Kindred Prods. | 12 |
| Furniture and Fixtures | 11 |
| Industrial Machinery | 32 |
| Instruments and Related Prods. | 7 |

| | |
|--|------------|
| Leather and Leather Prods. | 1 |
| Lumber and Wood Prods. | 26 |
| Misc. Manufacturing | 2 |
| Paper and Allied Prods. | 11 |
| Primary Metal Prods. | 18 |
| Printing & Publishing | 6 |
| Rubber and Misc. Plastic Prods. | 32 |
| Stone, Clay, Glass and Concrete Prods. | 3 |
| Textile Mill Prods. | 5 |
| Transportation Equip. | 19 |
| Total | 247 |

| Service Area | Number |
|--|---------------|
| Automation/ Robotics | 3 |
| Business Systems/ Business Management | 18 |
| CAD/CAM/CAE | 2 |
| EDI/Communications/LAN | 2 |
| Environmental/ Health/ Safety | 28 |
| Market Development/ Strategic Planning | 5 |
| Other | 1 |
| Plant Layout/ Manufacturing Cells | 11 |
| Process Improvement | 129 |
| Product Development and Design | 12 |
| Quality Management Systems | 36 |
| Total | 247 |

| Funding Received | |
|-------------------------|---------------------|
| NIST Funding | \$612,355.00 |
| Client Fees | \$317,064.00 |
| Total | \$929,419.00 |

DEVELOPMENT

Seed Capital Investment Program

Purpose

The Seed Capital Investment Program (SCIP) fosters the development of innovative technology-based businesses and projects that will stimulate economic growth and industrial competitiveness in Arkansas.

Program Description

The Program assists in the initial capitalization or expansion of Arkansas-based businesses undertaking projects that are science or technology based and have a commercial or job creation potential. Each dollar invested by SCIP is leveraged by three dollars in matching funds from other sources. SCIP is limited to working capital and does not finance fixed assets.

Investment

The Board approved two SCIP investments in FY02 for a total of \$710,000.

| Proposal | Company | Description | Funds Approved | Amount Dispersed |
|--------------|-----------------------------------|--|---------------------|---------------------|
| 01-S-08 | Alloy Castings & Composites, Inc. | 3-D imaging and production of Airplane tools | \$300,000.00 | \$300,000.00 |
| 02-S-02 | ContourMed, Inc. | Custom Breast Prosthesis | \$410,000.00 | \$410,000.00 |
| Total | | | \$710,000.00 | \$710,000.00 |

DEVELOPMENT

Technology Development Program

Purpose

The Technology Development Program (TDP) provides assistance in the development and commercialization of new technology-based products and processes through innovative technology development projects.

Program Description

The Program may provide monies to qualified applicants if their proposed project possesses a well-defined and comprehensive project plan and promotes the purpose of the Authority. The maximum award is limited by law to \$50,000. Awards are considered investments with terms negotiated on a case-by-case basis with a maximum 5 percent royalty on net sales for a maximum period of 10 years.

Investments

The Board approved one TDP investment of \$50,000 in FY02.

| Proposal | Awardee | Description | Funds Approved |
|--------------|----------------------|---|--------------------|
| 01-TDP-02 | UAMS/Dr. Tim O'Brien | Development of a Therapeutic Ovarian Cancer Vaccine | \$50,000.00 |
| Total | | | \$50,000.00 |

FINANCIALS

| GENERAL REVENUE | | APPROPRIATION | Y-T-D | | | % OF BUDGET |
|-----------------------------|----------------|-----------------------|---------------------|---------------------|--------------------|--------------|
| APP/ALL | CHARACTER | BALANCES | BUDGET | EXPENSE | BALANCE | |
| 678/01 | REGULAR SAL | \$501,916.00 | \$461,397.00 | \$459,946.43 | \$1,450.57 | 99.69 |
| | EXTRA HELP | \$12,000.00 | \$5,425.00 | \$5,421.35 | \$3.65 | 99.93 |
| | M & O | \$144,204.00 | \$126,881.00 | \$123,247.70 | \$3,633.30 | 97.14 |
| | FRINGE | \$126,079.00 | \$126,079.00 | \$122,439.91 | \$3,639.09 | 97.11 |
| | RESEARCH | \$1,083,750.00 | \$80,780.00 | \$79,780.00 | \$1,000.00 | 98.76 |
| | RESERVE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | 0 |
| | CONFERENCE | \$27,223.00 | \$13,166.00 | \$11,867.23 | \$1,298.77 | 90.14 |
| | PROF FEES | \$16,800.00 | \$11,357.00 | \$3,701.23 | \$7,655.77 | 32.59 |
| | CAPITAL OUTLAY | \$20,500.00 | \$0.00 | \$0.00 | \$0.00 | 0 |
| | M & R | \$0.00 | \$0.00 | \$0.00 | \$0.00 | 0 |
| | TECH DEV | \$315,000.00 | \$128,064.00 | \$128,060.00 | \$4.00 | 100 |
| TOTAL ACT 12 of 2001 | | \$2,247,472.00 | \$953,149.00 | \$934,463.85 | \$18,685.15 | 98.04 |

| CASH | | APPROPRIATION | Y-T-D | | | % OF BUDGET |
|---------|--------------|----------------|----------------|--------------|--------------|-------------|
| APP/ALL | CHARACTER | BALANCES | BUDGET | EXPENSE | BALANCE | |
| A87/01 | SEED CAPITAL | \$1,900,000.00 | \$1,900,000.00 | \$960,000.00 | \$940,000.00 | 50.53 |

| MEP FEDERAL | | APPROPRIATION | Y-T-D | | | % OF BUDGET |
|--------------|----------------|-----------------------|-----------------------|---------------------|-----------------------|-------------|
| APP/ALL | CHARACTER | BALANCES | BUDGET | EXPENSE | BALANCE | |
| 919/02 | REGULAR SAL | \$251,339.00 | \$150,355.00 | \$115,482.66 | \$34,872.34 | 76.81 |
| | M & O | \$126,000.00 | \$84,836.00 | \$65,733.98 | \$19,102.02 | 77.48 |
| | FRINGE | \$62,652.00 | \$40,434.00 | \$33,857.59 | \$6,576.41 | 83.74 |
| | GRANTS | \$200,000.00 | \$200,000.00 | \$1,250.00 | \$198,750.00 | 0.63 |
| | CONF FEES | \$62,928.00 | \$37,928.00 | \$10,517.75 | \$27,410.25 | 27.73 |
| | PROF FEES | \$50,000.00 | \$50,000.00 | \$26,366.37 | \$23,633.63 | 52.73 |
| | CAPITAL OUTLAY | \$77,250.00 | \$20,857.00 | \$0.00 | \$20,857.00 | 0 |
| | FIELD SERVICES | \$1,210,000.00 | \$1,210,000.00 | \$450,883.68 | \$759,116.32 | 37.26 |
| TOTAL | | \$2,040,169.00 | \$1,794,410.00 | \$704,092.03 | \$1,090,317.97 | |

| RE-APPROPRIATION GENERAL IMPROVEMENT | | APPROPRIATION | Y-T-D | | | % OF BUDGET |
|---|--------------------|---------------------|---------------------|---------------------|-------------------|-------------|
| APP/ALL | CHARACTER | BALANCES | BUDGET | EXPENSE | BALANCE | |
| 961/46KBG | NETWORK ENHANCEMEN | \$431,104.00 | \$431,104.00 | \$431,104.00 | \$0.00 | 100 |
| 965/04/KBG | VIE PILOT PROJECT | \$6,894.00 | \$6,893.00 | \$0.00 | \$6,893.31.00 | 0 |
| TOTAL ACT 101 of 2001 | | \$437,998.00 | \$437,997.00 | \$431,104.00 | \$6,893.00 | |

BOARD OF DIRECTORS

| | |
|--|---|
| <p>D.W. May - Chair May and Associates Bryant Term Expires 2006 Executive Committee Chair</p> | <p>Charles Hathaway, Ph.D. Chancellor University of Arkansas at Little Rock Term Expires 2003</p> |
| <p>Melinda Saunders - Vice Chair St. Paul Term Expires 2003</p> | <p>Sue McGowan Hometown Realty Paragould Term Expires 2004 Authority Investment Committee Chair</p> |
| <p>Harry Ward, M.D. - Secretary Professor of Medicine and Retired Chancellor University of Arkansas for Medical Sciences - Little Rock Term Expires 2006 Authority Research Committee Chair</p> | <p>Cynthia Moten Arkansas Department of Higher Education - Little Rock Term Permanent</p> |
| <p>Merlin Augustine, Ed.D. Financial Systems Coordinator University of Arkansas, Fayetteville Term Expires 2005</p> | <p>Ron Roberts Maumelle Term Expires 2004 Authority Industry Committee Chair</p> |
| <p>Jonathan Davis President Davis Tractor, Inc., Monticello Term Expires 2004</p> | <p>Neil Rutger, Ph.D. Director and Supervisory Research Geneticist Dale Bumpers National Rice Research Center USDA Agricultural Research Service Term Expires 2005</p> |
| <p>Mary L. Good, Ph.D. University of Arkansas at Little Rock Term Expires 2003</p> | <p>John White, Ph.D. Chancellor University of Arkansas at Fayetteville Term Expires 2006</p> |
| <p>J. Wylie Harris, Jr. Oil, Mining & Ranching Operations Salem Term Expires 2005</p> | <p>Rickey Williams President & Chief Executive Officer of Rickey Williams & Associates, Inc. Term Expires 2003</p> |

STAFF

| | |
|---|---|
| <p>John W. Ahlen, Ph.D. <i>President</i> 501-324-9006 john.ahlen@mail.state.ar.us</p> | |
| <p>Lydia Carson <i>V.P. Manufacturing Ext.</i> 501-324-8764 lydia.carson@mail.state.ar.us</p> | <p>Cathy Ma <i>Research Program Manager</i> 501-324-8760 cathy.ma@mail.state.ar.us</p> |
| <p>Leslie G. Lane <i>V.P. Finance</i> 501-324-8755 les.lane@mail.state.ar.us</p> | <p>Ed Sartain <i>Fiscal Officer</i> 501-324-8756 ed.sartain@mail.state.ar.us</p> |
| <p>Herbert L. Monoson, Ph.D. <i>V.P. Research</i> 501-324-8754 herb.monoson@mail.state.ar.us</p> | <p>Amy Scivally <i>Management Project Analyst</i> 501-324-8757 amy.scivally@mail.state.ar.us</p> |
| <p>Chuck Myers <i>Executive Vice President</i> 501-324-8753 chuck.myers@mail.state.ar.us</p> | <p>Brad Sims <i>Communications Mgr.</i> 501-324-8765 brad.sims@mail.state.ar.us</p> |
| <p>Melissa Adams <i>Business Controller</i> 501-324-8759 melissa.adams@mail.state.ar.us</p> | <p>Larry J. Smith <i>Information System Planner</i> 501-324-8763 larry.smith@mail.state.ar.us</p> |
| <p>Tovia Chan <i>Operations Administrator Manufacturing Ext.</i> 501-324-8766 tovia.chan@mail.state.ar.us</p> | <p>Alma Valley <i>Accounting Supervisor</i> 501-324-8762 alma.valley@mail.state.ar.us</p> |
| <p>Chase Conyer <i>Research Project Analyst</i> 501-324-8761 chase.conyer@mail.state.ar.us</p> | <p>Rebecca Wright <i>Executive Secretary</i> 501-324-9006 rebecca.wright@mail.state.ar.us</p> |

STAFF

NETWORK FIELD ENGINEERS

Loren Berry

Field Engineer

Arkansas Center for Technology Transfer
University of Arkansas, Fayetteville
West 20th St.
Fayetteville, AR 72701
Phone: (479) 575-6886
Fax: (479) 575-7446
lberry@enr.uark.edu

Scotty McKnight

Field Engineer

Arkansas Center for Technology Transfer
University of Arkansas, Fayetteville
Fort Smith office
W. 20th St.
Fayetteville, AR 72701
Phone: (479) 651-5439
Fax: (479) 996-4114
smcknigh@jpa.net

John Hebard

Field Engineer

Institute of Economic Advancement
University of AR at Little Rock
2801 South University Avenue
Little Rock, AR 72204
Phone: (501) 569-3031
Fax: (501) 569-8538
jrhebard@ualr.edu

Brian Naylor

Field Engineer

Engineering Research Center
University of Arkansas, Fayetteville
700 Research Center Blvd.
Fayetteville, Arkansas 72701
Phone: (479) 575-3190
Fax: (479) 575-7446
bnaylor@enr.uark.edu

Bill Kraus

Field Engineer

Delta Center for Economic Development
Arkansas State University
P.O. Box 2700
State University, AR 72467
Phone: (870) 910-8180
Fax: (870) 910-8185
wkraus@osage.astate.edu

Sherry Smith

Field Engineer

MEP, Ross Hall 220
University of Arkansas at Little Rock
2801 S. University
Little Rock, AR 72205
Phone: (501) 837-8679
Fax: (501) 569-8538
smith1205@aol.com

Tom Mann

Field Engineer

Center for Competitive Manufacturing
Southern Arkansas University Tech.
Box 3499
Camden, AR 71701
Phone: (870) 574-4545
Fax: (870) 574-4520
tmann@sautech.edu

Richard J. (Dick) Udouj

Wood Manufacturing Specialist

Winrock International
P.O. Box 1843
101 N. 6th St., Suite 9-10
Fort Smith, AR 72902
Phone: (479) 782-5600
Fax: (479) 782-1967
winfs@msmail.winrock.org