



ARKANSAS SCIENCE & TECHNOLOGY AUTHORITY

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**MINUTES OF THE 88TH MEETING OF THE
ARKANSAS SCIENCE & TECHNOLOGY AUTHORITY
BOARD OF DIRECTORS
LITTLE ROCK, ARKANSAS
SEPTEMBER 17, 1999**

CALL TO ORDER

The meeting was called to order by Dr. Charles Hathaway, Chairman of the Board, in the Board Room of the Arkansas Cancer Research Center, on the campus of the University of Arkansas for Medical Sciences.

A quorum of Board members was present and included: Dr. Gene Aist, Dr. Joel Anderson, Dr. Merlin Augustine, Mr. D.W. May, Mr. Stephen Nipper, Mr. Anthony Rampley, Mr. Ron Roberts, and Dr. Harry Ward.

Staff members present included: Ms. Melissa Adams, Dr. John Ahlen, Mr. Bob Alvey, Mr. Jerry Buckingham, Mr. Kevin Carr, Mr. Roger Edwards, Mr. Les Lane, Dr. Herbert Monoson, Mr. Chuck Myers, Mr. Tony Robinson and Ms. Joyce Sadler.

Visitors included: Ms. Rebekah Lee, Governor's Office; Mr. Charles Chalfant, Space Photonics Incorporated; Dr. David Nelms, Arkansas Microelectronics Development Corporation; Dr. Pat Parkerson, University of Arkansas, Fayetteville; and Dr. John Stokes, University of Arkansas, Fayetteville.

Dr. Ahlen introduced two new staff members. Kevin Carr, Finance Program Manager and Tony Robinson, Marketing Manager.

Dr. Hathaway informed members that he asked Mr. Rampley not to vote during the meeting. The reason being that Mr. Rampley was an officer and investor in one of the companies that would be considered for funding. Dr. Hathaway stated that this was a possible conflict of interest.

APPROVAL OF MINUTES

Dr. Hathaway presented the minutes from the May 21, 1999 Board meeting. There being no corrections, the minutes were approved as presented.

Dr. Hathaway presented the minutes from the June 23, 1999 Board meeting. Dr. Ahlen stated that this meeting was conducted via conference call. During the call, the staff thought that there was a quorum. It was determined later that there was not because some members were unable to participate.

For that reason, Dr. Ahlen asked that the Board vote to affirm its approval of the items approved at the June 23, 1999 meeting. There being no discussion, Dr. Ward moved that the Board affirm the actions approved at the June 23, 1999 Board meeting. Dr. Augustine seconded the motion; the Board gave its unanimous approval.

PRESIDENT'S REPORT

Dr. Ahlen asked Dr. Herb Monoson to review a memo that was sent to the Board concerning empowerment of the executive committee.

Dr. Monoson explained that there have been situations when action needed to be taken on certain items between Board meetings. This includes proposals that have deadlines.

The Board has statutory authority to establish and empower the executive committee to act on items when the full Board does not meet. Allowing the executive committee to act on these items on an as needed basis will allow the staff to process them in a timely fashion.

Dr. Hathaway assured the Board that this would not be a standard mode of operation. The Executive Committee would only be used when absolutely necessary. All actions taken by the Executive Committee would be reported at the next regularly scheduled Board meeting.

There being no further discussion, Mr. Roberts moved that the Executive Committee be empowered to meet between Board meetings on an as needed basis. Dr. Ward seconded the motion; the Board gave its unanimous approval.

Agency Operations

Dr. Ahlen reviewed a memo sent to the Board concerning agency operations over the next two years. He stated that he would be involved in the Governor's Technology Initiative, which would take him away from the office.

Chuck Myers, the Authority's Vice President Management Services, will serve as the agency's deputy director. His title will be changed to Executive Vice President. The Executive Vice President will oversee agency operations in the President's absence.

INDUSTRY COMMITTEE REPORT

Mr. May presented the Industry Committee Report.

The Network has hired one field engineer. Brian Naylor is working at the Arkansas Center for Technology Transfer at the University of Arkansas, Fayetteville.

Draft Resolution 00-01

Draft Resolution 00-01 provides for the formal acceptance of Network Technology Transfer Assistance Grant (TTAG) projects funded since May 21, 1999. There were a total of 16 projects funded.

Assisted Enterprise	Application Description	TASP	TTAG Funds
Neste Polyester, Inc Ft Smith, AR 99-NTTAG-11	Preparation/Review of Quality Manual & ISO 9001 Elements App. Rec'd 4/21/99	Holiday Quality Consultants	\$3,750
Rheem Corp Ft Smith, AR 99-NTTAG-13	Process Improvement—Assure Long Term Environmental Compliance App. Rec'd 4/15/99	M & M Environmental Services	\$3,750
PRADCO Ft Smith, AR 99-NTTAG-14	Process Improvement—Assure Long Term Environmental Compliance App. Rec'd 4/15/99	M & M Environmental Services	\$3,750
Mid South Roller Clarksville, AR 99-NTTAG-15	Process Improvement—Phase I of ISO 9000 Certification App. Rec'd 5/10/99	Jim Willis Quality Systems International	\$3,750
Arkansas Metallurgical Laboratories Searcy, AR 99-NTTAG-16	Process Improvement—Stage I—Implementation of Total Quality Management System App. Rec'd 5/12/99	Benny Blackwell Quality Management Systems	\$2812.50
Southeast Truss, Inc. Monticello, AR 99-NTTAG-17	Analyze Plant and Equipment Options to Optimize Productivity and Output App. Rec'd 5/26/99	Wood Management Systems, Inc	\$3,750
Fort Smith Rim & Bow Ft Smith, AR 99-NTTAG-18	Process Improvement—Analyze Business Strategy App. Rec'd 6/8/99	Jerger & Associates	\$2,500
Oak Mountain, Inc. Pyatt, AR 99-NTTAG-19	Process Improvement—Business Practices App. Rec'd 6/9/99	Jerger & Associates	\$2,500
Hog Eye Pallet Co. Prairie Grove, AR 99-NTTAG-20	Analyze Feasibility of an Electricity Co-Generation Facility App. Rec'd 6/14/99	Jerger & Associates	\$2,500
Combined Products & Services Heber Springs, AR 99-NTTAG-21	Program and Implement Software to Automate Design Process and Shop Drawings App. Rec'd 6/21/99	Davis Technology Resources	\$3,750
Trax America, Inc. Forrest City, AR 00-NTTAG-0001	Software evaluation for Y2K compliance App. Rec'd 7/2/99	Vandiver Consulting	\$2,500

Assisted Enterprise	Application Description	TASP	TTAG Funds
Mid South Roller Clarksville, AR 00-NTTAG-0002	Phase II of ISO 9002 certification App. Rec'd 7/2/99	Quality Systems International, Inc.	\$3,750
Capital Structures Ft. Smith, AR 00-NTTAG-0003	Equipment selection and lumber optimization App. Rec'd 7/7/99	Winrock/ Harry Watt	\$3,750
Calvin Alley Assoc./ Ft Smith Laminating Ft. Smith, AR 00-NTTAG-0004	Process improvement for joint operation App. Rec'd 7/13/99	Winrock/ Harry Watt	\$3,750
B & G Wood Products Ft. Smith, AR 00-NTTAG-0005	Improve material handling and plant layout. App. Rec'd 7/13/99	Winrock/ Harry Watt	\$3,750
Century Flooring Co. Melbourne, AR 00-NTTAG-0006	Improve information handling and tracking systems. App. Rec'd 7/19/99	ACTT	\$3,750

Mr. May made a motion for the approval of Draft Resolution 00-01. Dr. Ward seconded the motion; the Board gave its unanimous approval.

Draft Resolution 00-02

Draft Resolution 00-02 will provide monies for funding recommended projects under the Network Technology Transfer Assistance Grant (TTAG) Program during the second quarter of state fiscal year 2000. The funding is in an amount not to exceed \$50,000.

Mr. May made a motion for the approval of Draft Resolution 00-02. Dr. Augustine seconded the motion; the Board gave its unanimous approval.

Draft Resolution 00-03

Draft Resolution 00-03 will provide funds for Y2K projects under the Technology Transfer Assistance Grant Program. The funding is an amount not to exceed \$50,000. The money will be used to help small companies prepare in the event they face a Y2K problem. The Network field engineers have been apprised of this service and are ready to provide assistance.

Mr. May made a motion for the approval of Draft Resolution 00-03. Mr. Nipper seconded the motion; the Board gave its unanimous approval.

INVESTMENT COMMITTEE REPORT

Mr. Nipper presented the Investment Committee Report.

Mr. Nipper presented the FY99 General Fund Expenditure Report and the Investment Fund Report for the quarter ending June 30, 1999.

Mr. Nipper moved for the acceptance of both reports. Mr. Roberts seconded the motion; the Board gave its unanimous approval.

Draft Resolution 00-04

Draft Resolution 00-04 provides for the formal acceptance of Technology Transfer Assistance Grant (TTAG) projects funded since May 21, 1999. There were a total of 16 projects funded.

Assisted Enterprise	Application Description	TASP	TTAG Funds
North American Marine Jet Benton, AR 99-TTAG-0040	Product Development & Design Assistance App. Rec'd 5/10/99	UAF	\$ 3,750
Paradigm Technology, Inc. Little Rock, AR 99-TTAG-0041	SBIR Assistance App. Rec'd 5/25/99	UAMS/UALR	\$1,000
Bumper Buggy, Inc. Heber Springs, AR 99-TTAG-0042	Product Development & Design Assistance App. Rec'd 5/28/99	Perkins & Associates	\$ 3,450
OmniSys, Inc. Little Rock, AR 99-TTAG-0043	Product Development & Design Assistance App. Rec'd 6/1/99	OmniSys	\$2,068
Digital Realms, Inc. Springdale, AR 99-TTAG-0045	SBIR Assistance App. Rec'd 6/21/99	Digital Realms	\$ 3,750
OmniSys, Inc. Little Rock, AR 99-TTAG-0046	SBIR Assistance App. Rec'd 6/28/99	OmniSys	\$2,000
Agricultural Research Initiatives Harrison, AR 99-TTAG-0044	SBIR Assistance App. Rec'd 7/9/99	ARI, Inc.	\$3,750
Altronic Research, Inc. Yellville, AR 00-TTAG-0001	Product Development & Design Assistance App. Rec'd 7/2/99	UAF	\$3,750
Manor Oil Norphlet, AR 00-TTAG-0002	Environmental Assistance App. Rec'd 7/2/99	HSU	\$3,750
ContourMed, Incorporated Little Rock, AR 00-TTAG-0003	SBIR Assistance App. Rec'd 7/12/99	ContourMed	\$3,525
Rural Industries Corporation Coy, AR 00-TTAG-0004	SBIR Assistance App. Rec'd 7/9/99	Dr. Worstell	\$2,500
Danaher Tool Group Fayetteville, AR 00-TTAG-0005	Product Development & Design Assistance App. Rec'd 7/13/99	UAF	\$2,500
Pel Industries Fayetteville, AR 00-TTAG-0006	Environmental Assistance App. Rec'd 7/19/99	UAF	\$ 2,500
Digital Infrared Access, Little Rock, AR 00-TTAG-0007	SBIR Assistance App. Rec'd 7/20/99	P.A. Hames	\$ 2,500

AMDC Fayetteville, AR 00-TTAG-0009	SBIR Assistance App. Rec'd 8/4/99	AMDC	\$ 3,250
InvoTek, Inc. Alma, AR 00-TTAG-0010	SBIR Assistance App. Rec'd 8/12/99	InvoTek	\$ 3,250

Mr. Nipper made a motion for the approval of Draft Resolution 00-04. Mr. May seconded the motion. Dr. Augustine stated that four of the projects were from UAF, the institution of his affiliation. Dr. Ward and Dr. Hathaway stated that one of the projects was from UAMS and UALR, the institution of their affiliation. The Board gave its unanimous approval.

Draft Resolution 00-05

Draft Resolution 00-05 will provide monies for funding recommended projects under the Technology Transfer Assistance (TTAG) Program during the second quarter of state fiscal year 2000. The funding is in an amount not to exceed \$50,000.

Mr. Nipper made a motion for the approval of Draft Resolution 00-05. Dr. Augustine seconded the motion; the Board gave its unanimous approval.

Draft Resolution 00-06

Draft Resolution 00-06 would provide for the investment of monies into an SBIR Fast Track project, "Spaceworthy 2.488 Gbps IEEE 1393 Fiber Optic Transceiver," submitted by Space Photonics, Incorporated in an amount not to exceed \$187,500.

The component and network node products proposed include high-speed fiber optic transceivers, spacecraft data network node interface cards and ground test equipment test beds. These products will provide the backbone for the advanced high-speed 1393 fiber optic networks. These networks will be one of the most advanced spacecraft data networks in the world, and therefore provide not only a unique competitive advantage, but also a high level of insurance that the company will capture a substantial share of the growing market.

Space Photonics has already received an SBIR Phase I award. The Authority's investment will allow the company to enter the Department of Defense's Fast Track Program, which greatly enhances the company's odds of receiving a Phase II award totaling \$750,000. The Phase II award would help the company get their concepts to the marketplace.

Les Lane explained that this award would be funded using the Applied Research rules, but would use a pool of funds. The funds would come from the Energy Office of the Arkansas Department of Economic Development, the Applied Research Program and the Technology Development Program. If approved, the funds would be awarded over a

two-year period and would flow to the High Density Electronics Center (HIDEC) at UAF, who will be working with Space Photonics on the research.

There being no further discussion, Mr. Nipper made a motion for the approval of Draft Resolution 00-06. Dr. Anderson seconded the motion. Dr. Augustine stated that this project was from UAF, the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 00-15

Draft Resolution 00-15 would provide for the investment of monies into an SBIR Fast Track project, "High Performance On-Chip Decoupling Capacitors," submitted by Arkansas Microelectronics Development Corporation in an amount not to exceed \$158,000.

AMDC is developing a process for fabricating commonly used capacitors directly on top of integrated circuits. This process has several advantages over the most common method of attaching them to the printed wiring board. The main advantages are smaller products due to less wasted space and increased performance due to the closer proximity of the capacitor to the integrated circuit.

Mr. Lane explained that the funds for this project would also come from the same pool of funds as the SBIR Fast Track project from Space Photonics. That would include Technology Development, Applied Research and energy funds from the Arkansas Department of Economic Development. If approved, the funds would be awarded over a two-year time period.

Mr. Nipper made a motion for the approval of Draft Resolution 00-15. Mr. Roberts seconded the motion; the Board gave its unanimous approval.

RESEARCH COMMITTEE REPORT

Dr. Anderson presented the Research Committee Report.

Draft Resolution 00-07 would provide for the funding of one applied research project.

Proposal No. 00-A-02, "Commercialization of CPC for Use in the Poultry Industry," by Dr. Amy L. Waldroup of the University of Arkansas, Fayetteville, in the amount not to exceed \$75,005.00. This project is cosponsored by Safe Foods, Inc. in the amount of \$37,447.00.

Dr. Anderson made a motion for the approval of Draft Resolution 00-07. Mr. May seconded the motion. Dr. Augustine stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 00-08

Draft Resolution 00-08 would provide for the funding of one applied research project.

Proposal No. 00-A-05, "Data Acquisition System for High Speed Waterjet Propulsion System," by Dr. Andrew B. Wright of the University of Arkansas at Little Rock, in an amount not to exceed \$26,000.00. This project is cosponsored by North American Marine Jet in the amount of \$13,000.00.

Dr. Anderson made a motion for the approval of Draft Resolution 00-08. Mr. Nipper seconded the motion. Dr. Anderson and Dr. Hathaway stated that UALR was the institution of their affiliation. The Board gave its unanimous approval.

Draft Resolution 00-09

Draft Resolution 00-09 would provide for the funding of two basic research projects.

Proposal No. 00-B-02, "New Inorganic Materials Synthesized in Supercritical Solvents," by Dr. Wally Cordes of the University of Arkansas, Fayetteville, in the amount not to exceed \$50,000.00

Proposal No. 00-B-08, "Electrothermal Modeling of Mixed-Signal Circuits," by Dr. H. Alan Mantooth of the University of Arkansas, Fayetteville, in the amount not to exceed \$29,637.00.

Dr. Ward made a motion for the approval of Draft Resolution 00-09. Mr. Roberts seconded the motion. Dr. Augustine stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 00-10

Draft Resolution 00-10 would provide for the funding of one basic research project.

Proposal No. 00-B-03, "Neuroendocrine Control of Microglial Nitric Oxide Production," by Dr. Jason Y. Chang of the University of Arkansas for Medical Sciences, in the amount not to exceed \$42,000.00.

Dr. Ward made a motion for the approval of Draft Resolution 00-10. Mr. Roberts seconded the motion. Dr. Ward stated that UAMS was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 00-11

Draft Resolution 00-11 would provide funding for the Arkansas Space Grant Consortium, which is located at the University of Arkansas at Little Rock, in an amount not to exceed \$93,750.00.

Dr. Anderson made a motion for the approval of Draft Resolution 00-11. Dr. Augustine seconded the motion. Dr. Anderson and Dr. Hathaway stated that UALR was the institution of their affiliation. The Board gave its unanimous approval.

Draft Resolution 00-12

Draft Resolution 00-12 would provide for the funding of eight Arkansas Research Matching Fund proposals, in an amount not to exceed \$3,373,583.00.

Proposal No. 00-ARMF-01, "Molecular and Biological Engineering of Plant-derived Antibodies," by Dr. S. Michael Owens, of the University of Arkansas for Medical Sciences, in the amount not to exceed \$487,858. This project is funded federally by a National Science Foundation EPSCoR Grant in the amount of \$487,858.

Proposal No. 00-ARMF-02, "Arkansas EPSCoR Cooperative Agreement," by Dr. John H. Hehr, of the University of Arkansas, Fayetteville, in the amount not to exceed \$1,000,000. This project is funded federally by a National Science Foundation EPSCoR Cooperative Agreement in the amount of \$1,000,000.

Proposal No. 00-ARMF-03, "IGERT Formal Proposal: A New Era in Electronics Education," by Dr. Leonard Schaper, of the University of Arkansas, Fayetteville, in the amount not to exceed \$280,465. This project is funded federally by a National Science Foundation IGERT award in the amount of \$1,260,531.

Proposal No. 00-ARMF-04, "The Arkansas Plan for Enhancement of Aerospace Research and Economic Development," by Dr. M. Keith Hudson, of the University of Arkansas at Little Rock, in the amount not to exceed \$168,724. This project is funded federally by a National Aeronautics and Space Administration EPSCoR Grant in the amount of \$625,000.

Proposal No. 00-ARMF-05, "Developing Competitive Environmental Research in Arkansas," by Dr. Richard H.

Kennedy, of the University of Arkansas for Medical Sciences, in the amount not to exceed \$500,000. This project is funded federally by a Environmental Protection Agency EPSCoR Grant in the amount of \$500,000.

Proposal No. 00-ARMF-06, "Establishment of a Center for Advanced Sensing Technology," by Dr. Charles Wilkins, of the University of Arkansas, Fayetteville, in the amount not to exceed \$499,993. This project is funded federally by a National Science Foundation EPSCoR grant in the amount of \$499,993.

Proposal No. 00-ARMF-07, "Development of an Optical Microscope to Investigate the Nonlinear Optical Properties of Single Quantum Dots and to Train Students," by Dr. Gregory Salamo and Dr. Min Xiao, of the University of Arkansas, Fayetteville, in the amount not to exceed \$182,500. This project is funded federally by a National Science Foundation grant in the amount of \$182,500

Proposal No. 00-ARMF-08, "Science and Engineering Research Center (SERC) for Durable Miniaturized Systems," by Dr. Ajay Malshe, of the University of Arkansas, Fayetteville, in the amount not to exceed \$254,043. This project is funded federally by a National Science Foundation EPSCoR grant in the amount of \$749,302.

Dr. Anderson stated that the Arkansas Research Matching Fund was established to provide matching funds for federally-funded research projects. The Board was being asked to approve funding for the eight projects contingent upon money being released by the Governor's Office. Letters have been sent to the Governor requesting the release of funds.

Dr. Anderson made a motion for the approval of Draft Resolution 00-12. Dr. Ward seconded the motion. Dr. Anderson and Dr. Hathaway stated that UALR was the institution of their affiliation. Dr. Ward stated that UAMS was the institution of his affiliation. Dr. Augustine stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

EPSCoR Committee

Dr. Anderson presented one nomination to the EPSCoR Committee, Dr. Robert Heflich with the National Center for Toxicological Research. Dr. Heflich replaces Dr. Dan Casciano. Dr. Anderson made a motion to approve Dr. Robert Heflich's nomination to

the EPSCoR Committee. Dr. Augustine seconded the motion; the Board gave its unanimous approval.

SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM & SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM GUIDELINES

Dr. Anderson presented the draft guidelines for the SBIR & STTR program. He stated that both the Research Committee and Investment Committee had reviewed the guidelines and recommended them for approval.

Dr. Anderson made a motion for the approval of the draft guidelines. Mr. Nipper seconded the motion; the Board gave its unanimous approval.

NEW BUSINESS

Draft Resolutions 00-13 and 00-14 were commendations for former Board members Catherine Janosky and Donna Young.

Both resolutions were passed without objection.

Annual Report

Dr. Ahlen presented the FY99 Annual Report. He stated that this report would be posted on the Authority's web page.

Dr. Augustine moved that the FY99 Annual Report be released. Mr. Roberts seconded the motion; the Board gave its unanimous approval.

Nominating Committee

Mr. Nipper stated that the Nominating Committee offered for consideration the following slate of officers for the upcoming year: Dr. Merlin Augustine, Chairman; Mr. Anthony Rampley, Vice Chairman; Mr. Ron Roberts, Secretary.

Mr. Nipper made a motion for the acceptance of the slate of officers for the upcoming year. Dr. Anderson seconded the motion; the Board gave its unanimous approval.

Dr. Hathaway reminded members that the next Board meeting would be November 19, 1999.

ADJOURNMENT

There being no further business to conduct, the meeting was adjourned.

Respectfully submitted,



Ron Roberts
Secretary
Board of Directors

Approved by the Board of Directors
on this 19th day of November, 1999



Ron Roberts
Secretary
Board of Directors