

# A Framework to Foster Diversity at Penn State

Final Progress Assessment, 2001-2003

## Research and the Graduate School

including the Applied Research Laboratory

February 2004

Offices represented by this document:

### Research Offices

Vice President's Administrative Office

Animal Resource Program  
Center for Space Research Program  
Financial and Human Resources Office  
Marine Corps Research University  
Office for Research Protections  
Office of Research Information Systems  
Office of Sponsored Programs  
Penn State University Press  
Research Publications

Research and Technology Transfer Organization

Ben Franklin Technology Center of  
Central and Northern PA, Inc.  
Industrial Research Office  
Innovation Park at Penn State  
Intellectual Property Office  
Pennsylvania Technical Assistance  
Program (PENNTAP)  
Research Commercialization Office  
Small Business Development Center

Strategic and Interdisciplinary Initiatives

Applied Research Laboratory (*refer to appendix*)  
Children, Youth, and Families Consortium  
Huck Institutes of the Life Sciences  
Institute for the Arts and Humanities  
Materials Research Institute  
Penn State Institutes of the Environment  
Social Science Research Institute

### The Graduate School

Dean's Administrative Office

Data Systems and Analysis Office  
Fellowships and Awards Office  
Graduate School Alumni and Public Relations Office  
Office of Graduate Educational Equity  
Office of Graduate Enrollment Services  
Thesis Office

# TABLE OF CONTENTS

<b>Introduction</b> .....	3
<b>Challenge 1: Developing a Shared and Inclusive Understanding of Diversity</b> .....	4
<b>Challenge 2: Creating a Welcoming Campus Climate</b> .....	5
<b>Challenge 3: Recruiting and Retaining a Diverse Student Body</b> .....	7
<b>Challenge 4: Recruiting and Retaining a Diverse Workforce</b> .....	11
<b>Challenge 5: Developing a Curriculum that Fosters Intercultural and International Competencies</b> .....	14
<b>Challenge 6: Diversifying University Leadership and Management</b> .....	14
<b>Challenge 7: Coordinating Organizational Change to Support Our Diversity Goals</b> .....	15
<b>Appendix</b>	
<b>Applied Research Laboratory Diversity Plan for 2004-09</b> .....	17
<b>Attachment</b> .....	29

## INTRODUCTION

*As we come to a close on “A Framework to Foster Diversity at Penn State, 1998-2003,” the Research and Graduate School administrators, faculty, and staff believe we have made progress. We have, as a large interdisciplinary unit, developed and refined a definition of diversity; become more aware of the climate we offer to our visitors, students, business clients, etc.; implemented a variety of creative events to recruit and retain a diverse student body and a diverse workforce; recognized diverse research opportunities available to our faculty; and identified ways to diversify our leadership and coordinate organizational change.*

*Our administrative unit as outlined on the first page is comprised of many diverse areas: research administrative and service offices, interdisciplinary research institutes and consortia, technology transfer offices, and administrative and service offices for Penn State’s graduate students. These offices interact with many segments of the University community.*

*The impact of some of our diversity initiatives go well beyond the bounds of the University extending to the state and national levels. The results of research funded by many sources are shared internationally and nationally at conferences and published in professional and lay outlets. Our Research and Technology Transfer Organization supports businesses and companies within and beyond the Commonwealth; diverse constituents including women and individuals from underrepresented groups benefit from this assistance.*

- *Eva J. Pell, Vice President of Research, Dean of the Graduate School  
February 16, 2004*

## Challenge 1. Developing a Shared and Inclusive Understanding of Diversity

Research and Graduate School's definition of diversity:

*Diversity is an open, safe, and welcoming climate at Penn State and in the surrounding community, which encourages the presence of an increased number of faculty, staff, and students from underrepresented groups. The underrepresented groups we recognize include those from various racial/ethnic backgrounds, ages, ancestries, veteran statuses, colors, countries and cultures, genders (including those who describe themselves as trans-gendered), disabilities, religions, and sexual orientations. Diversity also includes interacting with companies, their owners, and clients of various origins, and promoting heterogeneity in research programs.*

Our definition of diversity is integral to all functions of the offices of the Research and Graduate School administrative units. We have always looked at diversity from a broad perspective. In our interdisciplinary consortia and institutes, which are highly diverse environments with representation from a variety of nationalities and religions, directors are expected to set the tone for a welcoming climate for all persons, and are urged to invite their employees to participate in diversity education programs. Our institute and consortia leaders support equity among all groups and are intolerant of discrimination or unfair treatment.

All Research and Graduate School directors and managers attended a December 2003 diversity organizational meeting, hosted by the Vice President and Dean, to discuss diversity initiatives and strategies within the Research and Graduate School units including the Applied Research Laboratory (ARL). *A Framework to Foster Diversity at Penn State, 2004-2009* and instructions for the Progress Assessment 2001-2003 were distributed to all office/unit directors for discussion and further dissemination to their staff. Links to numerous diversity websites were shared with the directors and managers.

When the previous update was reviewed, it was suggested that we form a diversity committee. Since our units are so disparate, we decided to continue for a period of time with ongoing individual unit efforts. However, as we began to prepare this final update, we came to the realization that our very disparate nature would benefit from an interactive Council. In December 2003, the Vice President and Dean appointed a Diversity Council comprised of faculty, staff, and several graduate students from various ethnic backgrounds, cultures, genders, and employment classifications (including leadership positions). The Council has been charged with:

- reviewing planning documents that represent the diversity initiatives of our units
- developing approaches to diversify leadership and management within our units
- identifying long-term planning strategies to support the University's diversity goals
- examining climate issues within our units
- addressing recruitment and retention issues of faculty, staff, and students within our units

The unit-wide Diversity Council will serve as a vital resource to our leadership bringing creative approaches to achieving a more inclusive environment. Prior to the appointment of this Council, the Vice President and Dean sought advice on diversity strategies from the Senior Research Staff Committees, the Graduate School Directors Committee, and her Human Resources Manager.

The Research and Graduate School leadership has used numerous approaches to communicate an understanding of diversity within our units. During the annual performance evaluations, our Human Resources Manager reminded all supervisors to address diversity when conducting reviews with their employees. She also provided supervisors with a document entitled “Suggested Language for Recommended Diversity Core Factor Ratings” to assist supervisors with completing the Support of Diversity core factor on the Staff Review and Development Plans. All staff were reminded during performance evaluations to respect differences, understand attitudes, and promote acceptance of individuals from diverse backgrounds, and were evaluated accordingly. Employees were encouraged to visit the University’s website on fostering diversity.

During 2001-2003, our Human Resources Manager conveyed to new employees the importance of respect for all faculty, staff, and students, and offered an open door for confidential discussions about diversity, harassment, and other issues of concern. All new employees were required to attend the expanded New Employee Orientation Program, which exposes new employees to the University’s customer service, diversity, and continuous improvement values.

Annually, our Human Resources Manager circulates a religious holiday list with a request to post the information on unit bulletin boards. These dates are taken into consideration when scheduling meetings. Diversity-related information is regularly e-mailed unit-wide by our Human Resources Manager. Our two University Editor representatives review all publications to ensure that their content and illustrations are inclusive and support our diversity goals.

At the Dean’s Graduate School Directors staff meetings, we regularly discuss ways to create a more inclusive environment for all graduate students with the understanding that our students must be groomed for effective participation in a global society. Our complex populations of international and domestic students require our staff to be sensitive to a broad range of cultural expectations. Our enrollment staff must stay on top of international matters as well as domestic educational issues, seeking always to provide a fair and equitable admissions process.

## **Challenge 2. Creating a Welcoming Campus Climate**

The leadership of the Research and Graduate School units provides consistent and visible support for diversity. Many of our staff members are encouraged to join and/or become involved with University committees and to participate in other service work related to fostering diversity. Our employees volunteer on their own time to provide goods and services to many diverse populations in the Penn State and surrounding communities (e.g., Lions Club, Special Olympics, Walk for Hunger, Women’s Resource Center, Day of Caring, etc.); our leadership sets an example by working and serving on similar committees and activities.

The Vice President and Dean recognizes and rewards employees annually at the Research and Graduate School Staff Appreciation Program. This program recognizes staff who have served with the University for 25 years, staff who have worked in the unit for 10-, 20-, 30-, and 40-years, and recent retirees. Four special awards are given for Staff Innovation, Staff Leadership, Staff Support, and Staff Diversity.

Our Human Resources Manager maintains an open door policy, and is available for group and confidential discussions with employees who has concerns. We also designated sexual harassment and Commission on Racial/Ethnic Diversity (CORED) representatives who regularly attend awareness and training sessions and who maintain an open door policy.

In Fall 2003, a new conversation series called “Research Unplugged” was initiated. This series, hosted at the Penn State Downtown Theater, sought to bring the community and Penn State together to discuss and explore research/scholarship-related issues that affect society. Diversity has been a common theme, as topics included:

- “The Emergence of the African Century”
- “Global Inequality and International Racism”
- “Investigating Terrorism”

The *Research/Penn State* editor and staff has sought to reflect and enhance the research environment of the University. In choosing subjects for the magazine, the editor is sensitive to the need to foster diversity. A standard issue seeks to present research by faculty and students of both genders and various ages, races, ethnicities, and backgrounds. Since 2001, a number of major articles in the magazine have focused directly on diversity-related research activities. The mission, as expressed in the masthead of the magazine, is to “sample the diversity and drama of Penn State’s \$545-million-a-year research program.”

The Social Science Research Institute (SSRI) has co-funded research projects with the Africana Research Center in 2003; provided financial and logistical support for a weekly meeting of a faculty/graduate student discussion group focused on social problems defined along race/ethnic lines; and provided financial and logistical support for an annual conference at Penn State, the National Family Symposium, which typically addresses social problems confronting minority families and women living in poverty.

The Penn State Institutes of the Environment (PSIE) leadership noted that there were no handicap parking stalls near a main door to their building, and worked with the Office of Physical Plant to ensure that a handicapped parking space was installed in Fall 2003.

We are pleased that our units are supportive of diversity activities. The Materials Research Institute (MRI) makes its meeting spaces available for religious and ethnic groups from across campus to meet during non-business hours.

The Animal Resource Program and Graduate Enrollment Services (GES) have participated in the Opportunity Network for Employment, which serves individuals with disabilities who are

seeking employment at Penn State. As a result, the offices ultimately created full-time positions for two participants.

Employee advocates for the Commission for Women participated in or supported a variety of the Commission's programs, such as, the Administrative Fellows Program, the Martin Luther King Banquet, the Take Our Daughters to Work Program, the Commission's Annual Banquet, and the monthly meetings that include reports/discussions of progress on Commission initiatives and diverse social events. Each year, Commission membership information is distributed to our offices. The Vice President and Dean hosts a table at the Commission's banquet inviting nine different women from our units to attend. In 2003, the Vice President and Dean was awarded the Commission's Rosemary Schraer Mentor Award.

The Office for Research Protections held two successful diversity events:

- Office Heritage Luncheon: employees were asked to prepare a covered dish that represented some aspect of their heritage, culture, religion, etc., along with a brief presentation about their selection (if the staff were willing)
- Diversity exhibits: employees attended various pre-selected diversity exhibits, after which a group discussion was held with all employees

### **Challenge 3. Recruiting and Retaining a Diverse Student Body**

#### ***The Graduate School***

An important distinction that must be recognized is that the Graduate School, unlike academic colleges, does not have faculty lines, and does not directly control academic decisions to accept any applicants into academic programs. These decisions are made at the graduate program level within the colleges. The Graduate School provides guidance and incentives, and leadership through University-wide dialogue and forums.

The Graduate School serves diverse populations from across the world. Therefore, diversity initiatives target domestic and international students, faculty, and staff members. The past five years have seen an increase of both domestic and international students:

1998	-	enrolled 7,815 U.S. citizens
2003	-	enrolled 8,058 U.S. citizens
1998	-	enrolled 1,913 international students
2003	-	enrolled 2,539 international students

As indicated in Table 1, the Graduate School has increased the number of domestic minority students attending graduate school. The number of African-Americans has increased by 12 percent over the past five years. We also experienced increases in the number of Hispanic students and small increases in the number of Native-American graduate students. The largest increases for Fall 2003 were from the Hispanic community. We continue to target all three populations with the goal of attracting a larger number of students from these three groups.

Table 1: Total New Graduate Student Enrollments by Ethnic Category	October 1 <sup>st</sup> Official Enrollments						# Change From Fall 2001
	Fall 1998	Fall 1999	Fall 2000	Fall 2001	Fall 2002	Fall 2003	
	<i>Ethnic Category</i>						
African-American/Black	88	73	89	92	103	105	13
Latino-American/Hispanic	52	43	44	34	46	52	18
Native-American	9	9	5	5	3	8	3
<i>Underrepresented Ethnic Minorities</i>	149	125	138	131	152	165	34
Asian American	60	80	65	86	69	89	3
International	537	578	630	698	599	555	-143
White	1,400	1,492	1,479	1,361	1,501	1,623	262
Declined to Report	164	154	142	171	220	102	-69
<i>Total University</i>	2,310	2,429	2,454	2,447	2,541	2,534	87

The Office of Graduate Educational Equity (OGEE) invested considerable effort in recruiting students from underrepresented groups and generating support for their studies. The OGEE Director, in coordination with the campus multicultural directors, worked closely with several minority-serving schools including Tuskegee University Howard University and Florida A& M University. The OGEE Director is also targeting small schools, such as, Medger Evers College in New York. Medger Evers' biology department has been educating many students of color who have gone on to medical school. The goal is to have some of the students from Medger Evers and other CUNY/SUNY schools attend Penn State's graduate programs.

The Graduate School has introduced a number of new strategies to engage more academic units in recruiting greater numbers of qualified students of color. For example, we launched The Pennsylvania State University and Howard University Graduate Student Exchange Program in Fall 2003. This program will allow Penn State graduate students to spend a year doing research and teaching at Howard University, and Howard University students will spend a year at University Park. The students will have the opportunity to experience education in environments very different from those at their home institutions. Faculty members, department heads, and associate deans are integral parts of this program. Faculty members and department heads from both schools must agree on expectations for visiting students and ensure that the needs of the students are met during their stay at both campuses.

The OGEE hosted the first Graduate School Visitation Day in 2002 bringing approximately 70 students from the Baltimore-Washington, DC, Philadelphia, and New York City areas to campus for recruitment purposes. The following year we were much more selective and cut the number back to 35 highly credentialed students in order to more fully engage the Penn State faculty in recruiting these students. Of the students who came in 2003, two students are now enrolled at Penn State. Of the students who visited in 2002, one student is enrolled.

We continue to support and enhance programs that have proven success records, e.g., Summer Research Opportunities Program (SROP). This program has been very successful in bringing minority students into our graduate programs. SROP students attend the national conference at one of the CIC campuses each year. The Annual SROP Symposium has become a community function, strongly supported by all other units in the Graduate School. The Symposium has been covered in the campus newspapers as well as the local newspapers and television stations. In 2002, Penn State hosted the Annual SROP National Conference. Over 500 students of color attended the conference. The students presented abstracts of their research projects, attended professional development workshops, and networked with other students from across the country. This was excellent exposure for Penn State to showcase its graduate programs, faculty, staff, and campus. Dr. Guy Bluford, an African-American Penn State alumnus, was the keynote speaker. He discussed his travels in space and the importance of graduate education.

In addition to Bunton-Waller assistantships available on a competitive basis to students who will enhance diversity, the Graduate School actively sought outside funding for additional assistantships and fellowships for students of color. The Sloan Fellows program continues to support several minority students. The Northeast Alliance for Graduate Education has been a great avenue for recruiting graduate students from underrepresented groups. The Alliance has provided funds to sponsor one graduate fellowship, funds for travel to math, science, and engineering conferences, funds to bring students to this campus, and funds for the several of the SROP students. We will continue to work with this group and hope to renew the grant with the National Science Foundation (NSF) for another five years.

The OGEE Director worked with faculty members who are writing grants for research funding. Often these faculty members will add a diversity component to their proposals. The Director supplies support letters whenever needed.

Staff from the Graduate Enrollment Services (GES) office participated in the Adult Student Fair sponsored by the Penn State Returning Adult Student Center. We believe that returning adult students constitute an important population that contributes richly to a diverse classroom experience. Several of the GES staff members are returning adult students engaged in academic pursuits. One staff member has declared a minor in African-American studies. The GES supports and encourages academic development for its staff, enabling them opportunities to interact with a diverse community of students, faculty, and staff.

GES targeted many of its diversity initiatives towards international groups. Several GES staff assisted this past Fall with the International Student Orientation hosted by the Office of International Students and Scholars. A representative from GES has twice attended and presented at The Education Fair for English as a Second Language to share information with students about the process international applicants must follow to apply to Graduate School at Penn State. The Director of GES serves on a committee to review international exchanges and proposed linkages with international universities. Throughout the past two years, she has met with several educational and international liaison representatives from different countries. Since 2001, GES hosted several international credential evaluation-training sessions for the staff. These training sessions provided the staff with an awareness of different international cultures. Many of the GES staff subscribes to international and foreign-abroad newsletters.

The Director of the Alumni and Public Relations Office has been working hard to bring attention to the successes of our minority graduates. In October 2003, we hosted our second Alumni Fellow, Dr. Mirian Graddick-Weir, who is the Executive Vice President of Human Resources at AT&T. As part of her visit to campus, Dr. Graddick-Weir gave a talk on "The Importance of Diversity in Corporations." Dr. Graddick-Weir is an African-American woman and an alumna of the industrial/organizational psychology program in the College of the Liberal Arts. In addition to Dr. Graddick-Weir, the Graduate School and the University recognized another outstanding African-American alumna, Dr. Shirley Mahaley Malcom. Dr. Malcom received the University's Distinguished Alumni Award in 2001. She is the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science. Visits by prominent professionals, such as, Drs. Graddick-Weir and Malcolm have brought attention to the success of Penn State graduates of our academic graduate programs. We plan to host more of these distinguished alumni. Their achievements are something of which we can all be proud; and we hope that their accomplishments will be an inspiration to other students considering graduate education opportunities at Penn State. . The Alumni Association for the Graduate School is committed to our efforts, and will be instrumental in the assistance of raising funds to support our recruitment programs.

### ***Research Offices***

A number of our research consortia/institutes have a long history of supporting graduate assistantships for minority students whose research interests include projects related to well being in ethnic minority populations. Some examples: the Children, Youth, and Families Consortium sent two minority graduate students to Thailand and India to examine the effects of sweat shop work on employees and their families; two African-American graduate students were sent to participate in a working conference in South Africa on HIV/AIDS prevention; an African-American graduate student was supported on a project targeting rural children.

In collaboration with the Pennsylvania Transportation Institute, the MRI supported a new NSF program that will provide fellowships to women in engineering. One of their faculty members, Ruyan Guo, ran a very successful 2003 Summer NSF Research Experience for Undergraduates program in cooperation with Electrical Engineering faculty members in which 12 of the 21 students were from underrepresented groups.

The graduate recruiter at the Huck Institutes of the Life Sciences (Huck) added seven graduate fairs and six other speaking engagements or session chairs at events/universities to her schedule that explicitly targeted underrepresented populations. Huck also advertised and promoted all summer undergraduate programs offered at Penn State in the form of a handout, including several targeted to underrepresented groups. As a result of her personal contacts and information dissemination, since 2001, Huck has received 19 applications from under-represented students, of which 12 received offers and 3 accepted.

The SSRI has fostered the recruitment and retention of minority students in the Demography graduate program and its National Institutes of Health (NIH) pre- and post-doctoral training programs, to include meeting annually with the training directors to review strategies for recruiting outstanding minority candidates, and providing additional financial support to supplement NIH post-doctoral stipends to aid in the recruitment of minority fellows.

Each year, the Small Business Development Center (SBDC) hires two graduate students under the assistantship program. The MBA department assisted the SBDC by providing resumes of potential prospects. This year, one of the graduate students was Asian and another one was an international student from Italy. Periodically, the SBDC has part-time positions available. Recruiting is done through various departments at the University. From the marketing department, one Asian student was hired to help with marketing for their clients.

The University Press has continued its Undergraduate Internship in Book Publishing with financial support from the Equal Opportunities Planning Committee (EOPC). Special efforts have been made to attract candidates for this internship from racial and ethnic minority groups, which historically have been very underrepresented in the book publishing industry and in the employment of university presses in particular. In 2003, the intern, an Hispanic-American, was so motivated by this experience that she decided to pursue a career in publishing and was admitted to the highly competitive NYU Summer Publishing Institute. Several of our previous interns now have editorial positions at very prestigious university presses—Princeton University Press, Oxford University Press, and Elsevier Science.

#### **Challenge 4. Recruiting and Retaining a Diverse Workforce**

Our Research and Graduate School units take a proactive approach to locating and recruiting staff from underrepresented groups. A number of staff positions, particularly those that are technical in nature, were advertised either nationally or in urban markets to reach minority candidates. We emphasize in our local postings the desirability of qualified women and minority candidates, and those who have experience managing a diverse staff. Many of our units use professional and social network opportunities at the local and national levels to identify potential candidates; feedback indicates that these opportunities are by far the most effective means of recruitment.

We continue to emphasize flexibility and a family-friendly work environment for our employees. We have had much success with flexible scheduling of employees' workweeks, telecommuting arrangements (both temporary and permanent), and our pilot job share arrangements. We have established telecommuting arrangements for employees when it has been demonstrated to be beneficial for both the employee and the employer. Employees have been able to continue their professional careers and to remain in the work force, while having the opportunity to spend valuable time with their families.

Our units have continued to successfully implement the Vacation Donation Program for staff employees. These opportunities permit staff to donate their personal vacation days to co-workers who were deemed to have catastrophic situations that required them to be absent from work long enough to exhaust all of their own personal paid time off. This Program has been very well received by our employees, as demonstrated by their generous contributions to their co-workers.

In order to form stronger ties with other institutions, the OGEE Director has been working to start new relationships with minority serving institutions while strengthening those that already exist. The 2003-04 year marked the start of the Visiting Graduate Student Exchange Program

with Howard University. This program gives graduate students at both institutions the opportunity to study and work in environments very different from the ones provided by their home schools. If successful, this program could allow identification of future faculty prospects at both institutions.

The Intellectual Property Office (IPO) hired three second-year MBA students including one international (India) to work as interns. The IPO had two licensing officer positions posted during calendar year 2003. One position focused on medicine and the second position focused on physical sciences, engineering, and information technology. Both positions were advertised nationally using the Association of University Technology Managers' website and a Philadelphia newspaper. The licensing officer for medicine position drew 70 applicants; eight applicants including three women were interviewed. The position was offered to an international female candidate, who was unable to accept our offer due to personal visa issues. The position was re-advertised and of the six applicants who were interviewed, a woman who is currently an NIH post-doctoral scholar was one of the final candidates for the position. Of those initial six, ultimately the position was offered to a white male. The licensing officer for the physical sciences vacancy attracted 78 applicants; ten applicants were interviewed including one Asian and two international (India) candidates. Three of the ten applicants were interviewed a second time including the Asian candidate. This selection process is still ongoing.

As reported in the previous progress update, the IPO hired one Asian female for a technical position, who had become a valuable member of the their team. In 2003, she resigned to further her education. She is currently a Penn State MBA student who keeps in contact with the IPO staff.

The Pennsylvania Technical Assistance Program (PENNTAP) has provided copies of their recruitment ads to the African-American Chamber of Commerce and Hispanic Chamber of Commerce in Pittsburgh when recruiting for technical specialists in the southwestern Pennsylvania region. We have also placed ads in the *Pittsburgh Courier*, a newspaper serving the minority community. However, these actions have not resulted in any minority applicants as far as can be identified. PENNTAP has hired five women senior technical specialists, one Hispanic senior technical specialist, one female student, and one international (India) student to support PENNTAP's e-Business Technical Assistance Program. Regarding the PENNTAP staff, an Hispanic senior technical specialist was appointed to the Penn State Commission on Racial and Ethnic Diversity (CORE), a University-wide diversity committee. Also, a female staff assistant completed Penn State's Mastering SuperVision program. A female student and a minority student supporting PENNTAP's E-TAP Program were given assignments that provided them with the opportunity to develop information technology related skills that should enhance their job prospects.

The Ben Franklin Technology Center (BFTC) continues to try to recruit qualified candidates from underrepresented groups to fill vacant staff positions. Advertisements are placed in local newspapers in Centre County, the Harrisburg region, and Erie—the three BFTC locations across the state.

A number of our research units provide consultation and support for faculty and graduate students from diverse backgrounds. Faculty in co-funded positions have engaged in research pertaining to the issues of those in developing countries and/or to disadvantaged populations e.g., South Africa, Global Alliance, Welfare to Work, Rural Poverty, etc. These research relationships have been particularly important in developing a professional and community environment that serves to recruit and retain diverse faculty.

Several of our Directors have sought to bring together ethnically diverse researchers to foster collaboration. Research is evolving to study the disparity of health-related services; programs are being developed, targeting university-community partnership programs for African-American youth.

In the area of minority recruitment, the PSIE leveraged support with the College of Earth and Mineral Sciences and the Provost's Office to assist in the hiring of an African-American into a new faculty position in the Department of Geography. Of the 15 new co-funded PSIE faculty hires, three are female, one is African-American, and one is Asian-American. The new Professor-in-Charge of the Environmental Inquiry minor in PSIE is female.

SSRI has had significant success in attracting and retaining women in its technical positions within the computing, Geospatial Information Systems, and survey cores—positions in which women are traditionally underrepresented. Over the past two and one-half years, SSRI has added 13 staff in new technical positions, of which seven are women. In addition, flexible scheduling has been encouraged and has allowed SSRI to retain two women in staff assistant positions. A telecommuting arrangement has also facilitated the retention of SSRI's female web master.

Efforts to retain employees with disabilities have included providing funding to accommodate needs, such as, specially designed chairs and desks, amplifiers for telephones, vision impairment equipment adjustments, and parking changes. We have invited Environmental Safety Office representatives to assess our offices on safety standards, including the positioning of keyboards, computer screen levels, and furniture/equipment layout.

While the University Press had very positive results with student interns and employees, the diversity of their permanent staff was reduced with the departure of one African-American and one Hispanic-American for other promotional opportunities. One left the Press to take the position of Marketing Manager at the University of Georgia, and the other accepted a position in the Development Office at Middlebury College.

Although the Marine Corps Research University staff numbers are relatively small at 5.5 FTE, they have been very proactive in diversifying their work force: their Program Manager is a Hispanic male; they have recently hired a Project Manager who is disabled; and their Business Manager and Administrative Assistant are both female.

## **Challenge 5. Developing a Curriculum that Supports the Goals of our New General Education Plan**

The Dean, Senior Associate Dean, and the Assistant Dean of the Graduate School work with college deans, research and graduate education deans, the Graduate Council, student groups, and many others to help ensure that our graduate curriculum is inclusive of all cultures and research interests. The Assistant Dean and OGEE Director are members of the Council on Graduate Student and Faculty issues, which is a subcommittee of the Graduate Council. This group of faculty members, graduate students, and administrators discuss issues that are pertinent to graduate education and design workshops and seminars that address matters, such as, curriculum.

Our research consortia and institutes support research that includes the study of diverse populations including racial and ethnic minorities, individuals with disabilities, the economically disadvantaged in rural and urban settings, women, persons of diverse sexual orientation, and individuals with various religious affiliations. We often have an international frame of reference for our research. Some areas that we have addressed are:

- research designed to understand diverse populations
- interventions targeted to improve the health and development of children and families from diverse backgrounds
- international efforts to improve the lives of diverse peoples (e.g., South African initiative to reduce HIV/AIDS risky behavior and alcohol/drug abuse)
- funding and hosting conferences and workshops on diversity issues (e.g., South African Working Conference, girls and aggression, health disparities)

## **Challenge 6. Diversifying University Leadership and Management**

The Fall 2000 and 2002 academic administrator numbers for these units include Great Valley and ARL. The Research and Graduate School academic administrators are drawn from the colleges' faculty ranks. Our central office, consortia, and institute directors are currently comprised of six white males and five white females. Women are strongly represented in leadership and management roles in units administered by the Vice President and Dean. We are very pleased that we have been able to retain these employees in the positions.

The SBDC is a spin-off of PENNTAP, which elevated the Center to a reporting line directly to the Associate Vice President for Research and Director of Technology Transfer. The Center, led by a female director, has established an advisory board of eight members--four female and four male.

One-third of the Board of Directors for Penn State's BFTC are women, including the Board Chair.

## Challenge 7. Coordinating Organizational Change to Support Our Diversity Goals

Our units have research and graduate education as a theme, but in fact many of the offices are quite disparate in function and mission. Of all our units, the Research and Technology Transfer Organization (RTTO) is the best example of a series of coordinated offices. As such their strategies for enhancing diversity are linked as discussed below.

During 2003, PENNTAP initiated Penn State's participation in the National Technology Transfer Center's Entrepreneurial Technology Apprenticeship Program. A Penn State female African-American graduate was accepted into the program, which included a summer academic program on technology transfer and commercialization at Wheeling Jesuit University, followed by an eight-month apprenticeship in RTTO. She worked full-time in the Intellectual Property Office as an apprentice during September through December of 2003. The SBDC committed to providing her with a part-time three-month position with the Center. This program provides quality training and career opportunities in Technology Management for Talented Minority College students.

In 2002, the SBDC sponsored a one-week stay for an intern through the USAID program. This intern was from the Ram Allah Chamber of Commerce in Palestine and was gathering information on strategies for rebuilding their infrastructure to promote small business growth. His stay involved meetings with the SBDC, BFTC, Industrial Research Office (IRO), and PENNTAP staffs; tours of the incubator facilities; and meetings with other resource partners. These other resource partners included the Chamber of Business and Industry of Centre County, SEDA-COG, the Industrial Modernization Center, and the Bucknell University's Product Development Center.

The SBDC sponsored five seminars on Small Business Contracting Opportunities for Minority Business Enterprises (MBE) and Women Business Enterprises (WBE). The seminar focuses on how to become a MBE/WBE member and how to get into government contracting. Those seminars attracted 83 attendees. All programs sponsored by the SBDC are open to the public. The SBDC sponsored 126 seminars of which there were 1,539 attendees, 91 or six percent indicated they were minorities, 681 or 44 percent indicated they were women, and 255 or 17 percent indicated they were veterans. SBDC is funded by federal and state tax dollars, the Center is open to any business owner or prospective business owner in the regions served by Penn State's SBDC. The staff strives to help their funding partners meet their goals for assisting minority and women owned businesses and are constantly looking for ways to draw in some of these businesses. The SBDC's services are open to the public within a designated region of the Commonwealth. During 2001-2003, the Center consulted with 618 clients of which 178 or 29 percent were women. Of the 589 clients that responded to the question regarding ethnic background/race, 27 or 5 percent of the clients indicated that they were American-Indian, Asian, or African-American. In addition, the SBDC assisted 14 women- or minority-owned businesses in obtaining loans totaling \$2,099,158.

The IRO assists companies in identifying and accessing Penn State research centers and facility expertise, and works to foster government-University-industry research partnerships. The IRO staff frequently assists industry with efforts to align with underrepresented groups on campus.

We regularly include the Women in Engineering Program, Minority Engineering Program, and Women in Science and Engineering Program in their agenda when we have companies requesting ways to interact with the diverse population at Penn State.

Penn State's BFTC provides technical and entrepreneurial assistance, as well as industrial research funding to small- and medium-size Pennsylvania companies. It is one of the most successful programs of its kind in the country aimed at promoting university-industry partnerships. During the past five years, the Program has funded 13 women-owned businesses amounting to nine percent of expenditures for research and development. The Center approved an investment in the Pennsylvania Latino Chamber of Commerce in Harrisburg in an attempt to increase outreach to entrepreneurs and businesses in the Latino Community. We have continued to work with Building and Supporting Entrepreneurship, a community action group focused on increasing the training and economic opportunities available to the African-American and Latino communities in Lancaster.

As stated in the February 8, 2004, *Centre Daily Times*, "The uniform design of the brick buildings of Innovation Park at Penn State belies the diversity inside. In these buildings are businesses conducting activities ranging from development of fuel cell technology, nanotechnology to a daycare center and small business consulting to manufacturing of optically components and research and testing laboratories." A goal of Innovation Park is to develop a diverse community of companies that will work closely with University faculty and students. The Park staff have recently worked with two incubator companies that were founded by members of underrepresented groups.

## APPENDIX



### *A Framework to Foster Diversity at Penn State, 1998-2003*

#### **Final Progress Assessment Period December 2001-December 2003**

#### **Introduction**

In 1996, the University Planning Council commissioned the Office of Educational Equity to develop a comprehensive strategic plan for diversity. The result was a document entitled *A Framework to Foster Diversity at Penn State: 1998-2003*.

The following report is an assessment of ARL's progress toward implementing the seven challenges of the "Framework" plan. Since an interim report was submitted in 2001, this report will outline activities from December 2001– December 2003. At some points it became necessary to include overlapping data to show continuity of programs. As was required in 2001, this report format parallels answers to the seven challenges of the "Framework." The report will indicate that though the ARL diversity programs includes heightened recruiting and hiring emphasis, the strength of the program remains in our outreach activities.

ARL's diversity efforts, which have been ongoing since the mid eighties, were not viewed as a formal effort until 1998 following the development of the University mandated diversity plan in 1994. The ARL Diversity Plan now results from the visions of the Director, the Diversity Program Coordinator, the Diversity Committee, Management, and from lessons learned from past experience.

Outreach efforts to underrepresented students and faculty at Historically Black Colleges and Universities (HBCUs) and Minority Serving Institutions (MSIs) continue as the focus of ARL's diversity strategy. This strategy assumes that while strengthening the largely untapped pool of potential engineers and scientists, we are also introducing these students and faculty to ARL and to Penn State. This exposes ARL and Penn State to a new population of potential employees and graduate students.

The Applied Research Laboratory has facilities in State College, Warminster, Kittanning, Uniontown, PA, Arlington, VA, Keyport, WA, and Hawaii. The information contained in this report pertains to Laboratories in four of the six locations with employees numbering ten or more.

ARL has experienced change during the period for this report. A new director was hired in August, 2002. The Laboratory re-organized into six Offices in October, 2003. Staffing has increased from 880 FTE to over 1,000 FTE. A new director for HR was hired to bring a renewed commitment to programs to improve programs in the areas of mentoring, professional development, recruitment and retention of underrepresented groups, and outreach to HBCUs.

## **The Seven Challenges of “A Framework to Foster Diversity at Penn State, 2001-2003”**

### **Challenge 1: Developing a Shared and Inclusive Understanding of Diversity**

The Applied Research Laboratory reports to the VP for Research, Dean of the Graduate School. This administrative unit offers the following definition of diversity.

*"Diversity is a climate which encourages representation of faculty, staff, and students from typically underrepresented entities, including those from racial/ethnic minority groups, diverse research clients, various countries and cultures, both genders, persons with disabilities, and those from a mixture of religions and sexual orientations."*

ARL further defines diversity as valuing the contribution that each individual person makes to the organization, and focuses on utilizing and strengthening each person's best talents to create an inclusive work environment supportive of all cultures, citizenships, and veteran status.

Although ARL's diversity goals are fashioned after the University's, ARL is limited in hiring practices by certain contractual compliance restrictions imposed by the U.S. Defense Security Service (DSS). Diversity information is now distributed throughout the organization in various ways: at management, staff and board meetings, via the ARL list serve, via the ARL public and private websites, through signs, motivational posters, routing of library diversity materials, and via the sponsoring of special events. Persons responsible for disseminating information include the ARL director, division/department heads, the assistant to the director, Information and Diversity Programs, members of the OHR staff, members of the re-established Diversity Committee, and the coordinator for Special Events.

The ARL Diversity Committee was restructured and re-established as a committee whose members were appointed by the director at the suggestion of the mid-point assessment review team, which consisted of PSU faculty, administrators, staff, and diversity analysts. The former diversity committee consisted of volunteers. In 2002, two representatives were appointed from the five Offices within the organization. Each member serves a one or two year rotating term in office. Standing appointees include members from the ARL OHR staff and two half-time diversity specialists, Patricia Hayes and Alan Payne. The committee is diverse in age, rank, abilities, racial and ethnic composition. This committee reports to the Director of the Laboratory.

After the reformation of the Diversity Committee, ARL employees were encouraged to read the PSU Framework plan, and the 2001 progress report and assessment for Research and the Graduate School. The public website <http://www.equity.psu.edu/Framework/> was posted on the ARL Intranet site. Employees were also asked to review the diversity component of ARL's Strategic and Operational Plan for Diversity, 2000-2005 at <http://pubdbs.arl.psu.edu/intranet/>.

To further develop an understanding of diversity, the Committee invites members of the University community, such as the Director of the Affirmative Action Office, or the Director of the Women in Engineering Program (WEP), to share at monthly committee meetings. Information to be shared with lab personnel is posted to the ARL Intranet site or disseminated as deemed appropriate.

A sub-committee of the Diversity Committee was formed in 2002 to collaborate with the ARL webmaster to create a diversity page for ARL's Intranet website. This page is an extension of the public webpage, and contains information regarding contracting with HBCUs. In addition, this page includes the links to the ARL Strategic and Operations Plan for Diversity, 2000-2005, the PSU

Framework plan and progress assessment reports. The public web site is being enhanced to include a repository for resumes and vita to be submitted by potential employees. The public site presently publicizes the ARL summer research programs, and will include ARL success stories related to diversity. A budget number was established for use by the Diversity Committee and for use by staff and volunteers who assist the Committee in any way.

ARL conducted a climate survey in late 2001. Employee comments noted that ARL should re-establish its newsletter to enhance communications within the Laboratory. Budget restraints in earlier years precluded the continued support of a newsletter editor. To fulfill the request of employees, a faculty member was appointed in late 2003 to work with the ARL webmaster to re-establish the newsletter. This newsletter will once again contain a "Diversity Corner" for promotion of diversity issues. Some ARL Offices have created their own newsletter to disseminate news of importance within their departments, which includes diversity news.

ARL maintains a circulating collection of diversity books, videos, and periodicals for its employees. A children's diversity book collection was established in the early 90's by a member of the Diversity Committee. The collection continues to grow with donations from employees and friends of the Information Center. The Diversity Committee is presently reviewing diversity videos to enhance the collection it presently owns. These videos will be made available to division and department heads for viewing and discussions at staff meetings. Committee members have expressed an interest in learning to be facilitators at the meetings. A recommendation was made to the director to add diversity training to the job of ARL's training coordinator.

The ARL Publications Staff supports diversity programming efforts by designing and producing brochures and advertising materials, developing the ARL websites, and providing assistance in creating and maintaining the photo boards and displays for use at career and trade fairs. The PSU non-discriminatory statement is included on all publications for public distribution. The Publications Staff also serves community organizations and partnering institutions. For the past four years, ARL has produced the program bulletins for The Forum on Black Affairs Martin Luther King, Jr. Banquet. The Partnering 2k Conference Committee at Morgan State University has also benefited from the creative talents of the ARL Publications staff that produced the P2k conference logo and publicity materials. These services are provided as gifts-in-kind at the request of ARL staff that serve on steering committees for underrepresented groups.

ARL sponsors several programs to assist in developing a shared and inclusive understanding of diversity. (See Attachment). Programs of note include two Summer Internship programs for women and students from HBCUs and PSU, an in-house Take Our Daughter & Sons to Work Day program, an Open House for Engineering Students, and tours/workshops for junior high and high school students. In December 2003, a Cultural Fest was held to celebrate cultural observances of various religious and ethnic groups.

## **Challenge 2: Creating a Welcoming Campus Climate**

A group of ARL's managers are promoting an "Open Door" policy for underrepresented groups, which allows for open communication between management and staff, including student employees. Coordinators of student programs become extensively involved in activities to acclimate visiting students to the Penn State campus and to Centre County. The Equal Opportunities Program Committee (EOPC), which has co-funded ARL's Open D.O.O.R. (Diversity Outreach Opportunities for Research) summer internship program for the past five years, has lauded ARL staff for their commitment to

extend themselves over-and-beyond the call of duty. ARL mentors make an effort to become the “extended family” for students who hold summer internships.

ARL fosters and schedules student interaction with other campus groups, administrators and faculty. Each summer the students have a chance to interact with interns and administrators for the Summer Research Opportunities Program (SROP), the Vice Provost for Educational Equity, the Director for Graduate Educational Equity, PSU science, engineering and IST faculty, engineering society members, graduate student organizations, and other student intern groups. The ARL Employee Benefit Association and the ARL Coordinator for Special Events offer additional programs to promote a welcoming work climate to all ARL employees.

ARL promotes:

- Equitable and fair treatment for all employees, students, visitors, and sponsors.
- Respect for the individual, regardless of race, creed, socioeconomic status, professional rank, or veterans status.
- Intolerance of social bias.
- Intolerance for sexual harassment.

The Workplace Enhancement Committee, referred to in the mid-point assessment report as the World Class Employer Committee, disbanded in 2002 soon after the re-establishment of the Diversity Committee. Issues related to the Climate survey of 2001 were re-distributed for study by the Diversity Committee and focus groups, which were established and charged by the new director. While active, the WEC worked to improve the physical climate of the laboratory. Furnishings were purchased to allow employees to socialize in groups during lunch and break hours.

ARL office managers have begun thinking of ways to successfully market ARL’s capabilities and its “best place to work” atmosphere as cited in the Black Engineer Magazine in the mid-90s. Flexible hours are available for employees and students to the extent that they are consistent with the contractual obligations of the department. This flex plan accommodates childcare givers, students, and observers of religious holidays. ARL supports employees who take classes to acquire advanced degrees that help their chances for promotion. People are recognized and rewarded according to their contributions, regardless of schedules.

### **Challenge 3: Recruiting and Retaining a Diverse Student Body**

The Applied Research Laboratory recruits a diverse group of student employees and potential graduate students through participation in multi-cultural job fairs at Penn State and at Historically Black Colleges and Universities. ARL also attends Latino and Puerto Rican job fairs within the Northeast region of the country. ARL is a regular participant in the PSU Diversity Chat sessions offered by Career Services, and makes concerted efforts to interact with student groups on campus and beyond. The ARL Office of Human Resources staff and the Assistant to the Director for Diversity Programs places announcements on majority and minority University bulletin boards, uses world-wide-web career service sites, and posts to list serves for underrepresented student organizations. ARL also coordinates recruitment efforts with colleges within the University, such as Engineering, Mathematics, Computer Science, and the School of Information Sciences and Technology.

The Applied Research Laboratory offers several programs to attract students to ARL and to the graduate programs at Penn State. In 2003, ARL and the College of Engineering were awarded a \$70k

grant to establish a Center for Excellence in Fluids Engineering. The Office of Naval Research funds are provided to attract students from underrepresented groups to a career in fluids engineering with either the Navy or a University Affiliated Research Center (UARC).

The ARL Manufacturing and Materials Office and the Communications and Navigation Office regularly offer summer internships for students from underrepresented groups. PSU undergraduates are encouraged to continue employment as wage payroll students while obtaining their undergraduate and graduate degrees.

The Energy Science and Power Systems Division maintain an ongoing collaborative research program with Prairie View A&M University (an HBCU). This research program was started in 2002, and is supported under the ONR University Laboratory Initiative (ULI), which specifically mandates the recruitment and retention of participating graduate students at the participating laboratory (ARL). During the regular school year, the participating student is resident at his/her home university (Prairie View). During the summer the student is resident at ARL, enabling a direct interaction with ARL-ESPDS faculty and direct exposure to ongoing projects. The ULI initiative was pursued after the 2001 visit of summer faculty member, Dr. Nelson Butuk.

Monetary support for graduate assistants is provided each year with funding from the Research and Academic Programs Office, Exploratory & Foundational Program. The E&F program is currently supporting 38 graduate students of which ten are women, two are Black males, and two are Asian. ARL also collaborates with the College of Engineering to support underrepresented graduate students employed by other laboratories on campus, ex. Materials Engineering Laboratory. ARL makes offers of full-time employment to students financially supported by ARL, although oftentimes students are lured to industry where salaries are considerably higher.

ARL is a regular participant in the Center for Undergraduate Research Opportunities (CURO) summer internship program coordinated by the College of Engineering Minority Engineering Program. Two past participants (American Indian and Hispanic) were offered assistantships to continue their research work with ARL. The students accepted scholarships to attend other universities in order to broaden their research contacts.

In recent years, the Metals and Ceramics Division at ARL has provided two to three seminars per year for a diverse group of students from the State College Area School District's drafting and design program. Opportunities for future employment in the industry are outlined and incentives given for matriculating in the field of engineering.

In 2002, ARL co-sponsored a career forum with Women in Science and Engineering (WISE), and one of ARL's navy sponsors. The event was intended for women and men with aspirations in the field of engineering and science.

In 2002, the Laboratory hired 56 individuals from underrepresented groups. This number includes student interns, wage payroll staff, visiting professors, and full-time employees. Office units collaborate with OHR, the Diversity Committee, and with the assistant to the director for Diversity Programs to help to identify potential students to support laboratory projects. Diversity is becoming central to the recruitment process. The diversity specialist, with the aid of the Diversity Committee, is working with OHR and the Affirmative Action Office to establish policies and guidelines, which will insure that diversity is inherent in the recruitment process to fill all vacant positions at ARL.

ARL has been successful in increasing the number of underrepresented employees in wage-payroll positions at the Laboratory. ARL faculty members on the whole encourage the retention of interns and wage payroll students by engaging them in meaningful work assignments, which could extend throughout their college career. ARL has supported students to obtain Masters through Ph.D. degrees.

Since 2002, the ARL CO-OP Program has met success in hiring underrepresented students enrolled in PSU's engineering programs. During the time period for this report, CO-OP students were specifically being trained and groomed as potential hires for the Navigation Research and Development Center. A Hispanic female student was recently employed at the State College facility as a result of her successful co-op experience at the Research Navigation and Development Center in Warminster, PA. ARL's intent is to maintain on-going relationships with co-op students and interns to improve our ability to recruit such individuals after graduation.

Many of ARL employees are involved in University sponsored activities to recruit and retain underrepresented students. Such activities include, but are not limited to:

- Participation in Multicultural Career Fairs and Diversity Chat sessions, '02-'03
- Participation in resume writing workshops for students, '02
- Participation in the FastStart mentoring program: a program to assist first year undergraduate students from underrepresented groups, '02-'03
- Participation in the Alumni Diversity Council meetings with students, '03
- Participation in Mentornet: a national electronic mentoring program promoted by WISE
- Service on the President's Commission on Racial & Ethnic Diversity (CORED), '87-'03
- Service on the Faculty Senate, '03
- Service to the Women in Science and Engineering (WISE) Society, '02, '03
- Service on boards for Pennsylvania Americans with Disabilities (PAID), '02, '03
- Service on HBCU boards, review panels, and steering committees, since '95

Decatur Rogers, Dean, TSU, College of Engineering serves as an ARL Board Member. In turn, Alan Payne serves on the TSU Senior Capstone Project Review team.

#### **Challenge 4: Recruiting and Retaining a Diverse Workforce**

Recruiting for a diverse workforce into professional positions has been the most challenging goal for ARL. ARL's employment makeup is approximately 50% women and includes naturalized citizens from diverse international backgrounds. The longevity of its employees does not often allow for recruitment of new people into positions, although the growth of the Laboratory is allowing for the creation of new positions.

ARL has had successes in hiring underrepresented persons into professional engineering and manager positions for two of the remote facilities. Success has also been met in hiring a Hispanic female into an engineering role at the Laboratory. During 2002-2003, the Laboratory hired a total of twenty new employees in the underrepresented category. (See chart below). This number does not include graduate assistants, summer interns, and wage payroll students.

In addition to recruiting for ARL, the Electro-Optics Center in Kittanning, PA sponsors a program which matches the needs and talents of disabled people with agencies in the Kittanning and Pittsburgh community. This team of researchers has participated in programs and supports the Pennsylvania Association for Disabled Individuals (PAID). EOC employees offer their services in many ways to the Association:

Table 1: New Hires, Underrepresented Groups\*, 2002 - 2003

	Blacks		Hispanic		Asian	
	Male	Female	Male	Female	Male	Female
Wage		2			2	
Asst Res Eng						1
Res Eng	1			1		1
Res Assoc			1		1	
Academic					3*	
Prog Mgr	1					
Post-Doc					2	
Co-op		1				
Visiting Profs	3					

\*Does not include graduate assistants, paid and unpaid interns, or wage payroll students.

\*\*1 Wage payroll

Source: ARL Office of Human Resources

- Serve on the Board of Directors
- Regularly meets with PAID to discuss opportunities for the disabled workforce
- Facilitates collaborations between PAID and EOC Alliances
- Has worked with local industry to write equipment grants to the Office of Vocational Rehabilitation
- EOC promotes the employment of individuals with disabilities
- EOC subcontracts with local firms that employ exclusively persons with disabilities to produce theme kits used in educational outreach activities
- EOC participates in various Kittanning/Pittsburgh regional education initiatives which promote science and engineering to females

The Electro-Optics Center has recently met with North Carolina A&T State University, College of Engineering to explore opportunities for co-sponsored research in Electro-optics technology. The EOC laboratory has promised to support four student interns during summer 2004.

The Electro-Optics Center is also conducting research with Alabama A&M University, a member of the Electro-optics consortium. A subcontract in the amount of \$16k was awarded to Alabama A&M to develop laser beam shaping through the use of holographic optical elements. The EOC will sponsor four internship opportunities for Alabama A&M undergraduates at the Kittanning, PA laboratory during the summer of 2004.

ARL's Navigation Research and Development Center in Warminster, PA, continues a partnership established in 2001 with North Carolina A&T State University, College of Electronics and Computer Technology. Collaborative efforts on navigation proposals with visiting faculty member, Dr. Derrek Dunn resulted in a 2002 DURIP award for purchase of Global Positioning Equipment (GPS) at NCATSU. Government funding was also awarded to support the research efforts of three NCATSU students who conduct research at the Warminster facility during the summer. Dr. Dunn was promoted to chair of his department as a result of research contracts and awards brought to North Carolina A&T State University through partnerships with ARL.

The success of the summer programs is measured quantitatively and qualitatively by having the students complete questionnaires, surveys, evaluation forms, and exit interviews. The Equal Opportunities Programming Committee has reviewed the results of the evaluation tools and deems the summer programs a success. Similar evaluation tools will be created to measure the success of employee recruitment programs,

The Laboratory will continue to use the Staff Review Development Plan (SRDP) to assess the diversity efforts of staff employees. Faculty and administrators will complete similar forms required for yearly reviews.

Evaluation tools will be developed to assess the value of the HBCU research partnerships, sponsored programs, and sub-contracting to partnering agencies and constituents.

### **Challenge 5: Developing a Curriculum That Fosters Intercultural and International Competency**

The Materials and Manufacturing Division sponsors participation in developing a curriculum that fosters diversity through Mr. William R. Sharpe – General Engineer, U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny Arsenal, NJ. An educational partnership between Penn State and the U.S. Army has been signed. Opportunities will be created to provide educational experiences for researchers from diverse backgrounds.

The Garfield Thomas Water Tunnel, with the aid of the PSU College of Engineering, has secured \$70k in funding from the Office of Naval Research (ONR) to establish a Center for Excellence in Fluids Engineering Research. The program will help to educate the future generation of underrepresented engineering professionals. A recommendation has been made to the program coordinators to integrate diversity into their research seminars and coursework.

The work of the Research and Academic Programs group has led to new courses in Mathematics, which are “diversity neutral.” These courses provide students with the opportunity to work with international teams of highly qualified research staff.

The Sound Quality course taught through the Graduate Program in Acoustics is offered in residence at ARL, via Continuing Education and via Distance Education world-wide. The course includes noise standards as well as an awareness of cross-cultural differences in the perception of sound. For instance, Indian and Asian cultures pose the greatest contrast to US and European cultures. Musical preferences influence one’s perception, and Indian music is tuned and performed quite differently than classical music. Compressor manufacturers have had different complaints about the tonal content of compressor noise from Indian companies than from American companies, requiring different approaches to noise remediation, and an awareness of cultural differences.

ARL’s research programs attract a diverse group of domestic and international students to continue their graduate study at Penn State. The newly appointed director has a renewed interest in conducting collaborative research with Colleges on the campus. It is expected that ARL will be more inclined to suggest changes to the International/Intercultural curriculum as faculty who hold dual appointments with ARL are encouraged by the Faculty Senate to examine their course content. Dr. Michael Jonson, Faculty Senate member, is directly involved with exploring ways to integrate diversity into coursework. ARL faculty continues to participate on thesis review and guidance committees for students who write honors papers, Masters theses, and Ph.D. dissertations. Opportunities to report on diversity within these reports will be explored.

ARL has co-funded the research of Ph.D. student, Karen Brooks (program coordinator, Graduate Program in Acoustics), in collaboration with the Africana Research Center (ARC) and the Children, Youth, and Families Consortium (CFYC). Research efforts are being conducted in Grenada with Penn State's Committee for Community Directed Research and Education (CCDRE). Findings will be shared with the University and world community through publications and presentations.

Dr. Robert Kunz provided a lecture at Florida International University (Hispanic Serving Institution). In so doing, Hispanic students have learned more about computational fluid dynamics, and opportunities for exploring internship positions with ARL.

### **Challenge 6: Diversifying University Leadership and Management**

ARL supports attendance in professional development courses provided by the University. Faculty and staff are selected to attend the Excellence in Leadership and Management, Penn State Leader, and Mastering Supervision programs. Additionally, employees are given release time to take advantage of courses offered through the Human Resources Development Center, Continuing Education, and other educational sources.

The assistant to the director, Information and Diversity Programs (Black female) is fully supported while she serves as the current chair of the President's Commission on Racial and Ethnic Diversity (CORED). She also received the support of CORED and ARL to receive the Commission for Women, Achieving Women Award in 2003. Current assignments include serving on the Research and Graduate School Dean's Council for Diversity, the Provost's Framework to Foster Diversity, 1998-2003 review team, chair, of the ARL Diversity Committee, and membership on various other University committees, including the Staff Advisory Committee. The assistant to the director was also supported to attend a recent professional development class entitled "Leader for a Small Planet" with the recommendations of Dr. Billie Willits, Dean David Monk, and Georgia Abbey, Leadership Centre County.

Underrepresented employees and women are encouraged and supported in their efforts to support diversity while serving in capacities of leadership for ARL and for the University. Tammy Miller, ARL Training Coordinator and Coordinator for Special Events, is given release time to teach diversity courses for the Human Resources Development Center (HRDC). Many other female employees assist with the Women in Science and Engineering (WISE) program, or FastStart Mentoring Program for underrepresented first year undergraduates.

The development of a diverse management team is a regular topic at ARL's executive and department meetings. ARL office heads are encouraged to identify administrative aspirations and provide opportunities to lead programs and direct research efforts. Yearly appraisal reviews are held with faculty and staff, which provide a means for discussion of career development plans. Females, as with all employees interested in leadership positions, are encouraged to attend professional development training courses, workshops, or conferences to enhance their leadership skills.

In some areas of the Laboratory, managers use a succession plan to promote women into roles of leadership within their groups. Promotions included advancement of female engineers into higher professional ranks established by the University. Females have assumed roles as department head or positions as lead principle investigators on sponsored research projects.

In 2003, ARL developed a monthly professional development seminar for Staff Assistants. These monthly sessions are used to develop skills in time management, customer relations, computer

skills, social graces, and other topics of interest. They also prepare the staff assistant to strive for promotional opportunities within the Laboratory. A mentoring program is in the developmental stages.

ARL has its own Toastmasters group, which holds regularly scheduled sessions to allow for improvement of one's speaking abilities before a group. The ARL Training Coordinator has proposed providing additional in-house management training classes for individuals interested in promotional opportunities.

A total of three women engineers were promoted in the research faculty/professional engineering ranks in 2002-2003.

Table 2: Promotions, Research Faculty/Professional Engineer Ranks, 2002 - 2003

	Res. Assist.	Assist. Res. Eng.	Res. Assoc. Eng.	Assoc. Res Eng	Sr. Res Assoc.	Res. Eng.	Sr. Sci.	Sr. Res. Eng.
Female				2		1		

Source: ARL Office of Human Resources

Twenty four women were promoted in the staff ranks and two in the tech service ranks. Of note was the promotion of the ARL Business and Contracts Office Manager to a position as Assistant Director of the Laboratory, Spec grade 30.

Table 3: Promotions, Staff Ranks, 2002 - 2003

	Spec 16	Spec 17	Spec 18	Spec 19	Spec 20	Spec 21	Spec 22	Spec 24	Spec 25	Spec 30
Female	1*	2	4	9	2	1	1	2	1	1

Source: ARL Office of Human Resources \*Promoted twice within reporting period

Table 4: Promotions, Technical Service Ranks, 2002 - 2003

	Grade 9	Grade 8	Grade 7
Female	1		1

Source: ARL Office of Human Resources

Additional females/minorities in positions of leadership include:

- Acting Division head – 1 female
- Acting Department head – 2 females
- Department Head – 3 females, (1 Black)
- Office Managers (Business or HR) – 7 females
- Major Research Program Managers – 9 females

The director of ARL will establish a Research Fellow position with the approval and encouragement of Eva Pell, VP Research, Dean of the Graduate School. The appointed fellow will be recruited from one

of the Colleges to work with the director on major research linkages between ARL and the rest of the University.

### **Challenge 7: Coordinating Organizational Change to Support Diversity Goals**

ARL's most recent Strategic and Operations Plan, FY 2000-2005, acknowledges the need to expand efforts and expenditures in outreach to individuals from underrepresented groups. Specific strategies include direct R&D funding, student summer internships, faculty exchanges, and the implementation of programs aimed at developing synergistic relationship with minority institutions.

The Laboratory spends more than \$150k per year to support the diversity agenda at ARL. These costs do not include the salaries to support graduate assistants and wage payroll employees. The director is committed to maintain a line item in the budget for diversity programming, and has proposed to support new initiatives for mentoring, professional development, and employee morale programs.

ARL funds support the assistant to the director, Information and Diversity Programs, the ARL Diversity Committee whose mission at this current time is to capitalize on opportunities to attract, recruit and retain members of underrepresented groups, and a half-time diversity specialist.

Research partnerships, established in 1996, continue with Tennessee State University (\$50k, 2002). Newly formed partnership agreements have been established with HBCUs and other constituents in the past two years:

- Jackson State University (Memorandum of Agreement, 2002)
- Florida International University (Memorandum of Understanding, 2002)
- Florida A&M University, (\$10k, Subcontract, 2003)
- New Mexico Institute of Technology (\$10k Subcontract, 2003)
- North Carolina A&T State University, Electronics & Computer Technology (DURIP Award, 2002)
- North Carolina A&T State University College of Engineering (\$10k Subcontract, 2003)
- Prairie View University/ARL (\$85k, \$95k University Laboratory Initiative (ULI, 2002)
- Pennsylvania Americans with Disabilities, PAID (\$2k, 2002-2003)

The current ARL organizational chart denotes the creation of an Office for Diversity.

The duties and responsibilities for the Office are being clearly defined to include the services of the Assistant to the Director for Information and Diversity Programs and a support staff. The mission of the Office will be included in the next Lab-wide 5-year Strategic and Operational Plan.

### **III. Summary**

As a leading research organization for defense applications, the Applied Research Laboratory looks to tap the creativity and perspective of its diverse workforce in order to continue its success in recruitment and retention of a diverse workforce. The work of the Diversity Committee, ARL focus groups and employees continues to move ARL forward in enhancing diversity at ARL. ARL employees are contributors to understanding and valuing differences that make this organization successful in a global society.

ARL continues to be presented with many challenges and opportunities to enhance diversity within the Laboratory. The Laboratory continues to be successful in its efforts to establish partnerships with Historically Black Colleges and Universities. The summer internship programs continue to produce quality engineers for ARL, industry and government. ARL continues to find success in collaborating with visiting faculty members to co-write research papers and award winning research grants.

Employee hires of underrepresented persons are increasing in the staff, student, and professional ranks. Promotional opportunities are flourishing and being sought by and awarded to more women in the workplace.

ARL's future efforts look to build on the successful strategies that have benefited the Laboratory over the years, plus move forward with working with Research and the Graduate School to accomplish common diversity goals for the future.

**ATTACHMENT**  
**to APPENDIX**

APPLIED RESEARCH LABORATORY/PENN STATE  
DIVERSITY ACTIVITIES  
(2002 – 2003)

***GOAL: DEVELOPING A SHARED AND INCLUSIVE UNDERSTANDING OF DIVERSITY/CREATING A WELCOMING CAMPUS CLIMATE***

*Support Services/Activities*

- Re-establishment of the ARL Diversity Committee, '02
- Promotion of Attendance at University Sponsored Diversity Events and Activities
- Orientation Program & Tours for summer interns and visiting faculty
- Health Promotion Day Activities, including women's issues
- Staffing by two Sexual Harassment Coordinators
- Staffing by two diversity specialist
- School/Career Counseling for Students/Staff
- Cultural Fest '03

*Publications/Communications*

- Additions to the ARL Diversity Children's Book Collection
- Routing of "Managing Diversity" publication and other library material to department/division heads, and the Diversity Committee
- Establishment of an ARL diversity webpage on the Intranet
- Reestablishment of the ARL Newsletter which will highlight diversity issues
- E-mail to NSBE, SHPE and list serves for underrepresented groups
- Internal organizational e-mail list serves, mailings, and postings
- Diversity presentations at manager's meetings, staff meetings & ARLAB board meetings
- Diversity presentations to student organizations

*Staff Supported Community Events (Support to Women and Underrepresented Groups)*

- Relay for Life
- ARL Community Service Fund (supports several charitable organizations)
- Toys for Tots
- March of Dimes fundraisers
- United Way fundraisers

***GOAL: RECRUITING AND RETAINING A DIVERSE STUDENT BODY & WORKFORCE***

*Faculty/Staff/Student Recruitment*

- Attendance at PSU "Steppin Up" Career Fairs, '02, '03
- Attendance at PSU "Diversity Chat," students meet employer social, '02, '03
- Attendance at WISE/SWE Career Fairs, '02, '03
- Attendance at Bryce Jordan Center Career Fairs, '02, '03
- Attendance at the Black Engineer of the Year Awards Conference/Career Fairs, '02, '03
- Attendance at the Pennsylvania Statewide Latino Conference, '02, '03

- Attendance at the Puerto Rican Job Fair, '02, '03
- Attendance and presentation at DoD/HBCU Conference, '02
- On-site recruitment at Morgan State University, North Carolina A&T State University, Tennessee State University, Prairie View University, Jackson State University, Penn State, Lincoln University, and Florida International University
- ARL/Kittanning Outreach Programs for PA Americans with Disabilities (PAID)

*Student Programs*

- ARL Open Diversity Outreach Opportunities for Research (DOOR) Summer Internship Program
- ARL Fluid Mechanics Summer Internship Program
- ARL Summer Faculty Research Program - (3) visiting faculty (NCATSU(2), Jackson State U (1))
- PSU Center for Undergraduate Research Opportunities (CURO) - (1) intern, '02
- ARL Computer Science and Engineering Honors Program
- ARL High School Student Intern Program in Engineering and Technology
- ARL Open House for Engineers from underrepresented groups, '03
- Tours/Class Sessions for H.S. students by the Materials & Manufacturing Division, '02, '03
- Faculty Participation in PSU's "Take Our Daughters to Work Day", '02, '03
- ARL in-house 4 hour program, "Take Our Daughters and Sons to Work Day", '03

*Visiting Faculty Seminars*

- Dr. Robert Kunz at Florida International University, '03
- Dr. Wilbur Walters (Prairie View) at Penn State University, '03

*Outreach Presentations/Meetings*

- ARLAB Board Meeting, '02, '03, by the Director
- NCATSU – North Carolina, '02 by Gilpin
- Jackson State U – Video-teleconference, '02 by ARL staff
- PSU Engineering Students, '03 by Payne, Hayes
- PSU NSBE Chapter, '03 by Payne
- PSU SHPE, '03 by Hayes
- PSU Alumni Diversity Council Session with Student Leaders, '03 by Hayes
- PSU GTWT/WISE Career Forum, '02 by Archibald and GTWT staff
- New Mexico Institute of Technology, '03 by Donnellan

***GOAL: DIVERSIFYING UNIVERSITY LEADERSHIP AND MANAGEMENT***

*Professional Development*

- Attendance at PSU Leadership/Management Programs
- SROP Professional Development Seminars for Student Interns, '02, '03
- Attendance at Faculty Staff Forums pertaining to diversity, '03
- Participation in "Women in Leadership" Conference, '03
- Diversity Coordinator, winner of Commission for Women's Achieving Woman Award '03

*University/Community Involvement/Participation*

- President's Commission on Racial/Ethnic Diversity (CORED), chair
- PSU Staff Advisory Committee (SAC)
- Community Diversity Group (CDG)
- Forum on Black Affairs (FOBA), Education Committee
- Martin Luther King Jr. Banquet Committee
- Faculty Senate
- Women in Science & Engineering (WISE)
- Women in Engineering Program (WEP)
- Religious Affairs
- FastStart Mentoring Program
- E-mail Mentoring Program through Women in Engineering
- Employee Relations Committee
- Academic Affairs
- Centre County Human Resource Association
- Women in Engineering Orientation Career Development Program
- PSU Alumni Association (Special Interest Groups)
- PSU Phone Recruitment Program

***GOAL: COORDINATING ORGANIZATIONAL CHANGE TO SUPPORT DIVERSITY GOALS***

*Financial Support*

- Established line item for diversity in ARL budget - \$200k
- Supported the ARL Open D.O.O.R. (Diversity Outreach Opportunities in Research) Program, '02, '03
- Supported the Summer Faculty Research Program, '02, '03
- Supported the Fluid Dynamics Summer Internship Program, '02, '03
- Supported (38) Assistantships on E&F Funding (10 females, 2 Black males) '02
- Supported Assistantships on Direct Funding (2 black females, 2 black males) '02, '03
- Supported Co-op Students – ARL Warminster (1 Hispanic female) '02, (1 black male) '03
- Supported TSU Ph.D. Student Summer Housing, (2 black males, 1 Asian male) '02, '03
- Supported Student Wage Payroll Positions
- Supported Faculty/staff in Higher Education Pursuits
- Supported the Forum On Black Affairs Martin Luther King, Jr. Scholarship Fund, '02, '03
- Co-supported Ph.D. student's work in Grenada, \$500 '03

*Promotions/Technical Service (Women)*

- Grade 9, May Carper, '02
- Grade 7, Bonnie Coulter, '03

*Promotions/Staff/Professional Rank (Women)*

- Grade 16 – (1) Robin Hammond, '02
- Grade 17 – (2) Linda Scerbo, '03, Lisa Nicely, '03
- Grade 18 – (3) Amanda Brooks, '02, Robin Hammond, '03, Evelyn Connor, '03, Christine Guyer, '03

- Grade 19 – (9) Julie Billotte, ‘02, Connie Peters, ‘02, Tina Lucas, ‘02, Rose Stewart, ‘02, Dawn Laubach, ‘02, Laurie Palmer, ‘02, Donnelle Cook, ‘03, Yvonne Foflygen, ‘03, Penny Evock, ‘03
- Grade 20 – (2) Deborah Shay, ‘02, Jennifer Drum, ‘03
- Grade 21 – (1) Debbie Brooks, ‘03
- Grade 22 – (1) Lynea Morgan, ‘02
- Grade 24 – (2) Robin Bennett ‘02, Joanne Reish, ‘03
- Grade 25 – (1) Mary Rogers, ‘02
- Grade 30 – (1) Pamela Righter ‘02

*Promotions/Faculty/Staff Rank (Women)*

- Associate Research Engineer (2), Terri Merdes ‘02, Mary Lou Sittler, ‘03
- Research Engineer, (1) Linda Scheckler, ‘03

*Collaborations/Partnerships*

- Memorandum of Agreement signed with Jackson State University, ‘02
- Memorandum of Understanding signed with Florida International University, ‘02
- Tennessee State University (Robotics sub-contract) ‘02
- Jackson State University (Co-sponsored research, Visiting Faculty, 2 Student Interns) ‘03
- North Carolina A&T State U, Electronics and Computing Technology (Co-sponsored research, Visiting Faculty, 2 Student Interns) ‘02-‘03
- Prairie View University ( Co-sponsored research, 2 Student Interns Joint Publications) ‘02-‘03
- Morgan State University (Steering Committee Representation, 2 Student Interns) ‘02-‘03

*Grant Funding/Awards for Outreach Programs*

- Equal Opportunity Planning Committee (EOPC) Summer Program Grant - \$18k, ‘02-‘03 Hayes
- ARL/Tennessee State University, \$50k, ‘02 – Phoha/Malkani
- ARL/NCASTSU, DURIP Award, ‘02 – Seligman/Dunn
- ARL/Florida International University, \$50k ONR Award, ‘03 – Kunz/Ebadian
- ARL/NCATSU, \$10k DTRA Award, 9/03 – Donnellan
- ARL/NMIMT, \$10k DTRA Award, 9/03 – Donnellan/Stanley
- ARL/FAMU, \$10k DTRA Award, 9/03 – Donnellan/Wekezer
- ARL /PSU College of Engineering, ONR Award, \$70k , ‘03 Archibald/Koopman
- ARL/Prairie View, ONR ULI Award, \$85/\$75, ‘02 Miller/Butuk
- ARL/Prairie View, ONR ULI Award, \$85/\$75, ‘03 Miller/Butuk
- ARL EOC/PAID, \$2k ‘02, ‘03 Gilpin
- ARL EOC/Alabama A&M, \$16k, ‘02

*Advisory Board Participation*

- Senior Capstone Project Evaluator, Tennessee State University
- University Affiliated Research Center (UARC)
- ARL Board Member - Dean Decatur Rogers, TSU
- Morgan State University Partnering 2k Steering Committee
- ONR HBCU/Minority Program Director Advisee