

◆ NATIONAL TECHNICAL NEWS ◆

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Plan for the Growing of the NTA and Reviving the Journal

A plan of action for the long-term (as well as near-term) growth of the National Technical Association, including revival of its quarterly Journal, is currently proposed. A re-structuring of the organization is a significant part of this plan. This involves the organization of the NTA body at large into the following two sets of categories:

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NTA Journal to Resume Publication

An agreement has been reached between NTA and IMinorities, Inc. (formerly Black Collegiate Services, Inc.) to resume publication of the *Journal of the National Technical Association*, with the premiere issue planned for distribution in time for the NTA 2001 Conference (to be held September 26-29, 2001 in Atlanta, GA).

As many NTA members know, the Journal was published by Black Collegiate Services from 1986 through 1994. Peterson's Magazine Group published the Journal from 1995 through 1997, and the last issue (prior to the upcoming one) was published by Cedric D. Fisher & Co. in 1998.

The premiere issue of the new Journal is planned to include the NTA 2001 conference program outline, and information about keynote speakers. It will also include special feature articles and technical papers written by NTA members. Request and guidelines for future manuscript submissions will also be included.



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The Minority Voice of the New Millennium

By Kachandra Harwell

“Science”, “minorities”, and “organizations” were the three keywords that led to my discovery of the National Technical Association (NTA). I stumbled upon the organization while I was on-line (i.e., via the Internet) trying to complete an “Interview with a Professional” assignment for a technical writing course. The task was to choose a professional in a field of interest, and learn about the type of work they are involved with. As an African-American chemistry major at the University of Arizona, I wanted to investigate the various professional organizations that dedicate themselves to advancing the careers of women and minorities in the sciences. The NTA mission statement is a perfect match with the type of organization I’m interested in exploring, so I contacted several representatives hoping to gain more information.

Remarkably, several NTA members responded to my inquiry and granted my request for an interview. I was surprised not only by the immediacy of their replies, but also by their friendly and helpful demeanors. Certainly, chapter presidents of a nationally recognized organization have more pressing responsibilities than helping an anonymous college

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student finish her assignment. However, these professionals were willing to put these responsibilities aside and answer a series of questions regarding their careers, training and working environments.

Mr. Leon Collins, Immediate Past President of the Cleveland Chapter, was the first and most invaluable in providing me with information. This information consisted of technical job-related memos, studies and NTA correspondence/documentation produced while president of the Cleveland Chapter. Through our electronic correspondence, I discovered that Mr. Collins' involvement with NTA is balanced alongside his career as a senior subsystem engineer/manager at NASA Glenn Research Center. Besides managing the design, development and operation of the space station's photovoltaic thermal control system, Mr. Collins must also evaluate all test procedures and specifications to ensure compliance with the technical requirements. Yet somehow, he finds time to participate in conferences, Career Awareness Programs and other endeavors that allow underrepresented professionals to exchange science related ideas and experiences.

It was Mr. Collins' enthusiasm toward NTA and the amazing accomplishments of its members that inspired me to become a part of the organization. In my opinion, there is no better method of encouraging young minority engineers and scientists than by showcasing the achievements of those who have overcome setbacks and opposition to become prominent in their area of expertise. Mr. Collins and other NTA members certainly act as positive role models through their successful careers, and their commitment to develop and integrate other minorities into the sciences.

My decision to become a part of NTA was not solely based on my positive encounter with its members. Throughout my education, I often was in search of opportunities where I could surround myself with my peers and learn about science in a positive, informal environment. Unfortunately, it is at the end of my college experience that I realize that NTA provides minorities with that opportunity. This association also offers career fairs, scientific/technical presentations, workshops and networking socials. All with the goal of ensuring the success of minorities entering the technical world.

I realize that I have just graduated from the University of Arizona and have a long way before I reach the level of success achieved by Mr. Collins or any of the other NTA professional members. However, I look forward to a future with a professional organization that enthusiastically serves as the minority voice for

excellence in the sciences. I also look forward in helping the National Technical Association fulfill its goals and objectives.

Kachandra Harwell graduated from the University of Arizona in August, 2001 and plans a non-traditional science career— one that revolves around public relations and technical writing, rather than a laboratory bench and reagents.

NTA Baltimore Chapter holds Joseph H. Tyler Awards Banquet

The Baltimore Chapter of the NTA held its 21st Annual Joseph S. Tyler, Jr. Scholarship Awards Banquet on June 6, 2001. The guest speaker was Dillard Menchan, who is the Chief of the Equal Opportunity Programs Office at NASA Goddard Space Flight Center. The following awards were made.

Middle School Student

\$ 100 Savings Bond

Antonio Mosby

Garrison Middle School

High School Student

\$ 1000 Scholarship

Philonese Brickus

Douglass High School

Teacher Award

Ruth G. Lorenz

Gwynns Falls Elementary School

Community Institution Award

Alpha Kappa Alpha Sorority, Inc.

NTA Baltimore Chapter

Baltimore Chapter NTA Mentor of the Year Award

John H. Thompson

3-T Mentor- Program Director

NTA Baltimore Chapter

Joseph S. Tyler Jr. Award

Dillard Menchan

Chief, Equal Opportunity

Program, NASA Goddard Space Center

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I. Seven Areas of Emphasis:

<i>Operations Area</i>	<i>Emphasis</i>
1. NTA At-Large	Infrastructure
2. Societies of the NTA	New Technical Emphasis
3. Human Resources Development, Job Opportunities, and Employment	People Emphasis
1. Technical Education	Professional Development
2. Research and Development	Technical Advancement & Contribution
3. Public and Institutional Relation	Government, Education, Organization
4. Policy and International	Impact on Society

The focus of each of the seven areas is as follows:

1. Infrastructure (Operations, Management, Maintenance, and Enhancement)
2. Technical (Membership, Contributions, Industry, and Public Appeal)
3. People (Training, Jobs, Employer Needs)
4. Technical Experts (professional training for members and others)
5. R & D (encourage and facilitate in all disciplines)
6. Public/International (collaborate with other organizations, government, and industry)
7. Technology Assessment and Global Impacts

II. Seven Societies of the NTA (technical areas of emphasis):

1. The NTA Society of Architects and Architecture
2. The NTA Society of Computer Science and Computing
3. The NTA Society of Engineers and Engineering
4. The NTA Society of Mathematicians and Mathematics
5. The NTA Society of Information Science, Systems, and Technology
6. The NTA Society of Scientists and Science
7. The NTA Society of Technologists and Technology

The profile of an NTA Society begins with people.

- People are members, participants, contributors, recipients, and include students.
- People generate and contribute ideas, information, and publications
- Academia, Colleges and Universities are participants, contributors, recipients, advertisers, sponsor, and exhibitors.
- Commercialization of ideas and information are efforts by participants, contributors, recipients, advertisers, sponsors and exhibitors.
- Commercial and consumer enterprises are members, participants, contributors, recipients. sponsors, and exhibitors
- Government agencies participate, contribute, and are recipients, advertisers, sponsors, and an exhibitor
- Industries are members, participants, contributors, recipients, advertisers, sponsors, and exhibitors
- Organizations are members, participants, contributors, recipients, advertisers, and exhibitors.
- Publications are contributions.
- Publishers are members, participants, contributors, recipients, advertisers, sponsors, and exhibitors.

This mixture of elements, and interactions in a given society around subsections in each of the seven disciplines, is the source of an infinite variety of opportunities, beyond our ability to harness and manage it all. However, it is not necessary that we harness or attempt to manage it all; we just need to build a sufficient and viable economically sound portion of the total. At the same time, we must use the total as a measure for growth in all areas.

The new perspective is defining an NTA with greater dimensions than what we have viewed in the past (that is, the bottom line), and this should give us more sources to draw from in all areas.

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Seven technical sessions at the 2001 Conference are scheduled that profile, in detail, each of the seven Societies. These sessions are to be dynamic in presentation, diverse in content, personalities, participation, and interaction, as well as, exciting to all who attend. This is an experience that is to never be forgotten. See you then.

Carrington H. Stewart
NTA Past President

Important Notice

All NTA Members are requested to complete, and return to the NTA National Office, the questionnaire on **page 8 of this issue** of the Newsletter.

In order to effectively implement the plan described above, we need to know how many of our members have primary and secondary interests and/or occupations in each of the seven Areas of Emphasis, as well as in each of the proposed Seven Societies of the NTA (within the Technical Area of Emphasis).

The African Solar Village: Community Informal Education

Introduction:

The African Solar Village (ASV) is a community based outreach program, developed from a NASA exhibit on NASA's contribution to USAID's developing nations energy initiative during the mid-1970s. Interest is currently centered on the NASA Glenn photovoltaic power system project at Tangaye, Burkina Faso, West Africa. The African Solar Village educational model is derived from the involvement learning model. The ASV extends the involvement theory to include the natural inquiry attributes of informal education settings, resulting in the conversion of involvement to immersion. Focusing on Africa, Solar Energy, Cultural Immersion and Community Service, the ASV actively implements the above outreach philosophy. A description of the ASV project accomplishments to date is given.

Major Developments: African Solar Village

- Attended World Bank Village Power 2000 conference.
- NASA Tangaye Solar Power Exhibit Installed and Operational. (see **Figure 1**)
- Implemented monthly college intern program with

5 Central State and 5 Wilberforce University students, plus 2 Cleveland and one Texas high school students. (See **Fig. 2**)

- Developing a renewable energy proposal for Chifamba and Vanirayi villages in Zimbabwe, and acquired 10 computers from Compaq Computer, Inc. for Boston, Cleveland, and Zimbabwe, for community-to-community Telecenter.
- Acquired second State of Ohio Energy Project Solar School Program 1 Kilowatt solar power system, for Cleveland's Martin Luther King School.
- Provided technical assistance and site report to the Cleveland City Council, on replicating the Spire Corporation, Chicago Solar Project. See: <http://www.spireolarchicago.net/>
- Advised the Chicago DuSable Museum on its Chicago solar educational participation.
- Presented two papers on ASV at the National Renewable Energy Laboratory (NREL): REAP conference, August 8-11. See: <http://www.nrel.gov/reap2000/index.html>
- An ASV educational model is being developed for national expansion by Central State University, National African American Museum in Wilberforce Ohio, and the NREL/Texas Southern University - Renewable Energy Education Program (REAP).
- Involved 287 summer campers, ages 10-16, at 5 different sites with 3 Central State University interns. Utilized the Harvard-Smithsonian Astrophysical Observatory's Every Day Classroom Tools, and the Department of Energy's Solar Energy-Solar Energy Projects curriculum. African Solar Village tours were also instituted (**Fig. 3**).
- Will host the Patriensah, Ghana and Greenstar Corporation Solar Community Center Project (<http://www.e-greenstar.com/Ghana/>) at the African American Museum Association conference in Cleveland, Ohio August 28 - September 1, 2001. This Conference is hosted by the African American Museum of Cleveland - home of the African Solar Village NASA-Tangaye Solar Village exhibit.

For detailed information, contact: Cleveland NTA member Willie Mackey, 216-433-8191, or e-mail: willie.mackey@grc.nasa.gov or ASV Director Qadwi Bey, 216-431-0200, or e-mail: qqadwi@ameritech.net

Dr. Willie Mackey
NTA Cleveland Chapter



Fig. 1. NASA Tangaye Solar Power Exhibit



Fig. 2. College student intern program sponsored by the African Solar Village



Fig. 3. Precollege student summer campers participating in African Solar Village activities

The First Solar Eclipse of the New Millennium: an Education and Public Outreach Program

Total eclipses of the sun, in which the moon passes directly in front of the sun and blocks it from view, are one of the rarest (at any given location on Earth) and most spectacular of natural phenomena. Prior to the advent of space-based solar observations, they provided the only means for observing the sun's outermost atmosphere, or corona. The most recent solar eclipse occurred June 21, 2001, and offered an exceptional opportunity to involve students and the general public in the exciting field of space science.

George R. Carruthers, Harold Goodridge, and Valerie L. Thomas, who over the years have been active in NTA, are also members of Science, Mathematics, Aerospace, Research, and Technology (S.M.A.R.T.), Inc. They worked with other members of S.M.A.R.T., the Sun-Earth Connection Education Forum, National Society of Black Physicists (NSBP), World Conference of Mayors, and the Minority University-Space Interdisciplinary Network (MU-SPIN) to prepare activities to generate interest within the minority community about the June 21, 2001 total solar eclipse. Two main events were planned, for the S.M.A.R.T. Technology Learning Center (TLC) in Lanham, MD: the S.M.A.R.T. Solar Eclipse 2001 Family Night on June 18, and the S.M.A.R.T. Solar Eclipse Workshop and Eclipse 2001: The View from Zambia webcast, on June 21.

When the guests arrived for the Family Night activities, we were pleasantly surprised to see a number of very young children, who were very well behaved and eager to learn. They were quick to volunteer to help Carruthers (also NSBP) with the solar eclipse demonstration and Carolyn Ng (NASA/Goddard Space Flight Center (GSFC)) with the solar cookie construction demonstration. Phil Sakimoto (NASA/Headquarters) gave a slide presentation on a total solar eclipse that he had experienced motivated the audience to want to have a similar experience. According to Sakimoto, the next total solar eclipse on the East Coast of the US will be in 2017, and will be visible in South Carolina. While Beth Brown (NSBP and NASA/GSFC) and Lou Mayo (NASA/GSFC) finished setting up for their presentations on the sun, the children were sitting on the floor in the front of the room and could be overheard saying, "I will be 26." "I will be 21." "I will be 25." They were actually calculating the ages they will be in 2017.

Since the first solar eclipse of the new millennium would only be visible in the Southern Hemisphere,
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NASA and the Exploratorium planned to send the video over the Internet from Zambia for the webcast, so that museums and other groups could also experience the total solar eclipse in real time. The S.M.A.R.T. Technology Learning Center was one of those groups. Because of a schedule change for installing the high speed Internet access at the TLC, the webcast was relocated to the NASA Goddard Space Flight Center.



S.M.A.R.T. Family Night presenters (at rear) Beth Brown, Lawrence Norris, and Lou Mayo give the participating children and adults information about the Sun, eclipses, and the Sun-Earth Connection. Carolyn Ng is seated at the rear, right.

The turn-out for the webcast was great, with mostly students from GSFC's summer programs and a number of very young children. Lawrence Norris gave a presentation on the impact of the sun on the body, and Beth Brown and Phil Sakimoto discussed the solar eclipse. George Carruthers conducted a solar eclipse simulation demo for the audience. The highlights of the webcast were: watching and hearing the changes in Zambia, from daytime to night to daytime; the pin-hole projections of the partially hidden sun on the ground and everything else around; and the spectacular "diamond ring" affect around the sun just before and just after totality. It was an experience that the audience will probably never forget.

After the webcast ended, Dawn Meyers (NASA/GSFC) discussed the detailed mosaic of photos of the sun taken for the TRACE project, and distributed handouts. Carolyn Ng conducted an ultraviolet (UV) beads demonstration to illustrate the degree of protection from various levels of sun block solutions. She also gave out UV beads and pipe cleaners so that the audience could make bracelets with UV beads that change colors when exposed to the sun. And outside, George Carruthers and Lou Mayo had set up solar telescopes for guests to safely view the sun and its sunspots. We were thankful for clear weather, both in Zambia and in Greenbelt, MD!



An Exploratorium member, in Zambia for the eclipse, explains events to the webcast viewers.



Following the Eclipse 2001 Webcast at NASA GSFC, participants used telescopes for viewing the sun and sunspots.

For more information about Solar Eclipse 2001: The View from Zambia, visit the web site at: <http://www.exploratorium.edu/eclipse/zambia/index.html>

Dr. Valerie L. Thomas
President, S.M.A.R.T., Inc.
and Past President, NTA

The Legacy of the National Technical Association Exhibit

The legacy of the NTA, an integral part of its history, is being showcased at the NTA 2001 Conference, in the NTA Legacy Room. This project was created to document the careers and individual achievements of all NTA members, past and present, and bestow upon each member, the recognition deserved for their contri-

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butions in Science, Engineering, Architecture, Technology, and Education.

We entered into this profession and thrived because of the work of those who came before us. We, likewise, are paving the way for future scientists, engineers, architects, technologists, and educators who will follow our steps. This is an opportunity for future generations and us to learn about the unique and vast range of work, which has been shaped and touched by NTA members.

Therefore, we are now requesting present and past members of the NTA to send us information about their technical careers and/or other activities relevant to the goals and objectives of the NTA. Those selected will be part of the NTA Legacy Display.

To be considered to be a part of this historic display, please do the following:

1. Tell us about any advancements and innovations in your field to which you have contributed.
2. Any accomplishments inside or outside your field, which you have made.
3. Your job, business, or life's work and the challenges you have encountered and/or overcome.
4. Honors, awards, distinctions, life themes.

Please limit the above to two pages, 12 point font, as "Word" file or text-file; could be a biography.

5. Send us a 5x7" photo, or (by e-mail) a .jpg image file (only).
6. Please send us a signed release form, so that we may use the material for NTA publication only.

To be included in the 2001 NTA Legacy Exhibit, we will need these items by **September 12, 2001**. Any submissions after this date will be added next year.

Please complete, sign, and send us the following:
I give The National Technical Association free use of my Legacy material, to display and publish.

Your name: **print and sign**

Date: _____

Send to: NTA Legacy
P.O. Box 81635
Cleveland, OH 44181

Or e-mail to: Johnsinc@worldnet.att.net

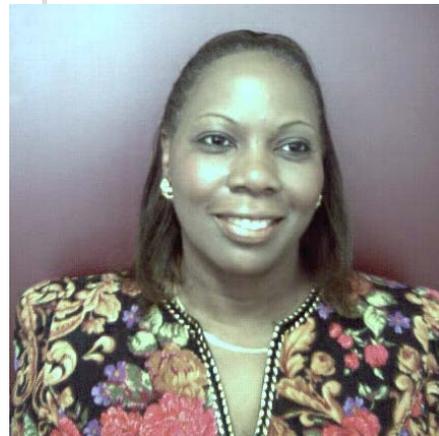
Albert L. Johns
NTA Cleveland Chapter and
NTA Northwest Regional Director

Greetings, Team NTA!

I am excited as the 73rd NTA Conference nears. The conference theme: "*The Legacy of NTA: Scientists, Engineers, Architects, Technologists and Educators – 75 YEARS OF TURNING DREAMS INTO REALITY*" reminds me of a stream flowing into a great river. We are proud to boast of members who started as students, and are now professional members with big hearts for the National Technical Association. Some are serving as local and National officers, as you will see in the 2001 Conference issue of the new NTA Journal!

I'm sometimes asked "why haven't I/we heard about the National Technical Association?" My response is: "we have been the best kept secret around, but that is changing". In the coming year, there will be a heavy focus on marketing and publicity, as we work with the IMinorities Publishers, chapter presidents and the NTA web site committee headed by Mr. Darrell Thomas of the Space Coast Chapter to promote the NTA.

We have a lineup of keynote speakers and panelists to die for: **Dr. Donald Campbell** – Director, NASA Glenn Research Center, is the opening plenary speaker; **Dr. Yvonne Freeman** of SECME, Georgia Technical University is moderator for the Panel "*Educational Strategies for Blacks in the 21st Century*"; and **Dr. Darryl Tukufu** is the Technical Achievers Awards Banquet Keynoter, just to name a few. We will also be introducing the NTA Technical Societies (this one you'll learn more about at the conference and in future Journal issues). Make your reservations now! I'll see you there!

Katherine W. Coleman
NTA President

Plan for Growing of the NTA: Membership Questionnaire

Please Complete the Following and return to the NTA National Office (address on this page):

Name _____

I am a (underline one): professional/student/other member of the NTA (if other, describe):

Of the proposed Seven Areas of Emphasis of the NTA (see page 3), my personal primary and secondary areas of employment or interest are: (primary) # _____ (secondary) # _____.

Of the proposed Seven Societies of the NTA under the Technical Area of Emphasis, my areas of employment or interest are (primary) # _____ (secondary) # _____.

I have comments or suggestions regarding this plan, which are included on a separate sheet.

Provide full mailing address, if Newsletter address on this page is incorrect.

E-Mail Address (optional, please print carefully)

NTA Past Presidents Special Meeting

All Past Presidents of the National Technical Association are invited to attend a special meeting to be held at the NTA 2001 Conference in Atlanta. This meeting is in celebration of NTA's 75th Anniversary.

Past presidents are requested to inform us as to whether or not they will be attending the Conference and can take part in this special program.

All NTA Members and other readers of this Newsletter, who are in contact with past presidents who may not be currently receiving the Newsletter, should pass on this information to them.

NTA 2001 Conference Local School Visitation Day

The NTA 3-T Science Mentor Program invites NTA scientists, engineers, architects, technologists, and educators to visit Atlanta-area local schools, and speak to their students and teachers, on **September 27, 2001**, 8:30 to 11:30 AM. Please send your name, area of specialization, and contact information to (e-mail): Johnsinc@worldnet.att.net , or (postal mail) to: School Visitation, PO Box 81635, Cleveland OH 44181.

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Plan for Growing of NTA - African Solar Village - 2001 Conference

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