



NADC/NAWC 10th Reunion
and Dinner Dance
" Thanks for the Memories ..."

**Spring Mill Manor
Ivyland, Pennsylvania
October 20, 2006**





This wonderful gathering is to celebrate the accomplishments and the relationships realized by the employees of the Naval Air Development Center during almost sixty years of service to the United States Navy.

Under the leadership of very dedicated and competent Naval Officers and Enlisted men and women, the NADC thrived as a very influential force in the R&D of Naval Weapons Systems. We are all fortunate to have had the opportunity to participate in such a remarkable organization.

This booklet is dedicated to all of the individuals who had the good fortune of working at the Naval Air Development Center, Warminster, PA.





This is a brief history of NADC based on a speech given by Captain William McCracken at a ceremony in June 2006 dedicating a plaque that recognized the civilian and military men and women who worked and served at NADC from 1944-1996. The ceremony was organized by ACT TECHNICO, a company that had provided services for NADC before its closure and is now located where the Aircraft Hangers formerly stood on Jacksonville Road.

In 1939, the Brewster Aircraft Corporation purchased property from the Greenfield Farm and transitioned it into an aircraft manufacturing plant. WWII was in full swing in Europe and Asia and there was a great demand for aircraft by the countries involved in the conflict plus the needs for this country to prepare for possible entry into the conflict. Brewster needed to expand its existing facilities in NY and NJ to meet this demand. The Brewster Buffalo and Buccaneer aircraft were among the first high performance monoplanes of the early 30's. However, by 1942 they were no match for the Japanese Zero and the German Messerschmidt.

In 1944, the Navy purchased the Brewster Plant and transitioned this property into the Naval Aircraft Modification Unit. The first Navy use of the property involved modifying large quantities of naval aircraft and the development of guided missiles. With the end of WW II, it was a time to downsize and reorganize the Navy and

there was no longer a need to modify aircraft for war use. There was, however a need to centralize the research and development activities in naval aviation. Based on the research that had begun on guided missiles, this base established the Pilotless Aircraft Laboratory. Other research and development activities followed, including the Aeronautical Electronic and Electrical Laboratory, and the Aircraft Armament Laboratory. In 1947, the base transitioned into the Naval Air Development Station.

More aviation research activities and facilities transferred from Boston, Lakehurst, Philadelphia and Washington DC. In 1949, this base became the Naval Air Development Center, the principal Navy Research, Development, Test and Evaluation Center for Aircraft, Airborne anti-submarine warfare and aircraft systems. Sonobuoys and sensors were developed here that met the Soviet threat.

In 1950, using the Typhoon computer, the world's largest analog computer, the Aeronautical Computer Laboratory was established and soon this base became the leader in computer analysis and flight simulation. There was now a rapid growth in technology. We had jet aircraft breaking the sound barrier and flying at unheard of heights with pilots now exposed to an unknown environment.

The property with its bedrock so close to the surface was the ideal location to build the Dynamic Flight Simulator or Centrifuge and this base became the Center for Aviation Medical Physiology. The first use of the Dynamic Flight Simulator was to run simulations for the X-15 rocket aircraft. Then the original seven astronauts came to NADC for training in the Mercury, Gemini and Apollo space programs. Space was also an unknown environment and NADC had the physiologists and facilities, including the centrifuge, to test the physical limits of the astronauts. CAPT Allen Sheppard stated at a conference on space travel that the most important facility in his training was the Dynamic Flight Simulator at NADC. This facility continued its use as the primary test facility and trainer for naval aviators in a high G environment. If you remember in the movie, TOPGUN, Maverick loses his F-14 aircraft and his partner Goose when his F-14 went into a flat spin. NADC used the Dynamic Flight Simulator to duplicate a flat spin in the F-14 and taught pilots how to

get out of it. NADC also developed the ejection seats that kept the aircrew alive even if they ejected while upside down at low altitude.

Then, with pillars on this wonderful bedrock, the inertial navigation facility was born. The Navy moved its navigation Center here from Brooklyn and NADC became the Center for Navigation for all Navy aircraft, submarines and Ships. This laboratory is still in use today as part of the Applied Research Laboratory of Penn State University.



In the 50's we were in the cold war. The greatest threat to the United States was the Soviet Union's very large submarine force and the new threat it posed with submarine launched missiles. In 1958, NADC established the Anti-Submarine Warfare Laboratory. This laboratory was the center for all airborne Anti-Submarine technology development. Here the sonobuoys and sensors were developed that met the Soviet threat. NADC developed sonobuoys that could listen for submarines passively, could send out active signals to bounce off the submarine hull, computers that could identify submarines from the signals, radars that could pick up the small periscope of the submarine, a

Magnetic Detector that could sense the change in the earth's magnetic field from a submarine below the surface and even a laser that could penetrate water to communicate with a submarine. As the Soviet submarines got quieter, our sonobuoys and technology got more sensitive and smarter. With Soviet missile-carrying submarines off each of our coasts, NADC technology gave us the ability to keep an aircraft on top of them at all times.

NADC employed 2600 civilians including 1600 scientists and engineers, along with 300 military personnel. Before there was a Silicon Valley or Research Triangle, in the 50's, 60's, and 70's NADC was the research Center for Aviation. With all the new technologies being developed at laboratories and universities, NADC scientists determined which new technologies had possible applications to Naval Aviation. As an example, when digital computer technology was in its infancy at MIT and the University of Pennsylvania, NADC was prototyping aircraft with a computer to reduce the workload of pilots and operators. By the early 70's NADC was developing and delivering to Naval Aviation the largest real-time computer programs in the world.

The scope and quality of NADC's technical capabilities later became the springboard for its involvement with complete aircraft systems. Because of NADC's strong Anti-Submarine Warfare expertise, it's not surprising that the Navy's newest platform, designed at NADC (called ANEW), became the basis for a subsequent series of sophisticated P-3C ASW platforms. The Center also became the lead lab for several TACAIR (F-14; F-18); Helo (SH-60B - LAMPS; the Presidential Helo); and Communications (TACAMO) platforms.

There were over 30 major laboratories housed in NADC with virtually every aspect of Naval Aviation being developed and prototyped, starting with the safety and survivability needs of the pilots and crew, including clothing, helmets, ejection seats, and survival gear. The use of NOMEX as a fire retardant material in flight suits was developed at the center. NADC is credited with significantly increasing the survival rate in helicopter crashing at

sea with crash worthy seats, lights to lead disoriented crew members out of the helicopter and even oxygen bottles to provide air to the individual crew members while they escaped.

NADC developed and prototyped many types of electronic equipment, including avionics, displays, communication, navigation, computers, as well as the GPS receivers used by all of the services. You can thank NADC for your car's navigation systems.

Many sensor technologies including radar, infra-red, laser, optical, night vision were first developed and proven at NADC. Starting out as a mere concept NADC scientists would prove that it could work by building a prototype and testing it on one of the test bed aircraft. When it proved out, it went to industry where it was manufactured for use in naval aviation. One of our systems, the stabilized telescope was very effective in Afghanistan. A P-3 aircraft could fly at a high altitude and with the telescope could tell troops on the ground what or who was behind the rock in front of them.



And of course the aircraft itself: structure, materials, lubricants, paints, control surfaces. I can remember keeping one of the Blue Angel's aircraft in our structural test rig to continuously bend and stress it to ensure that it would be able to handle the stresses it would face in their demonstration program.

It is no secret that NADC was home to many classified projects. And NO, we didn't have any alien space ships here. For those curious about the upside down aircraft we had on pillars out in the field, they were used for antenna placement tests. The aircraft could be moved into different attitudes to ensure that a part of the aircraft wasn't blocking an antenna and causing it to lose critical information.

All this helped to win the cold war. The people of NADC served their Nation well. Nevertheless, with the end of the Cold war, the Navy was once again faced with downsizing and consolidation. The decision was made to consolidate the aviation research and



development facilities of NADC, the avionics production facilities of Indianapolis, Test and Evaluation facilities at Patuxent River, and the Aviation Acquisition Headquarters in Arlington into one location at Patuxent River, Maryland.

Though the Warminster facility has closed, the history of NADC and its accomplishments will live on in the legacy of all those who worked here. Their contributions to Naval Aircraft, Anti-Submarine Warfare, and Advanced Technology will never be forgotten.

William L. McCracken, Captain, USN Ret.

IN MEMORIAM

The listing of deceased former employees, by no means complete, vivifies the quality of individuals with whom we have had the honor of calling fellow employees. Although they are not here with us today, they will always hold a place in our hearts.

Wesley R. Ahn Sr. 2003	Paul Cahill
Forrestine Akinfosile	Carl Campbell 2000
Brad Algeo	Pasqual(Al) Canavo
Paul Aller	Charlie Carr
Parke E. Anderson 1999	Vince Catone 2001
Ciro Andinolfi	Floyd Caviller
William Angermann 1996	Jim Celli 2001
Frank Aronson 2001	Dick Chambers
Manny Asness 2004	Michael Cipriano
John Babiarz 1998	Mary Lou Cohen 2006
Carl E. Baddorf 1999	Dr. J. J. Coop
Miriam (Betty) Baddorf 2000	Cynthia Crippen 2001
Earl Bair	James J. Davidson 2003
Chuck Ballaro 1998	Harry Davis 2003
Robert Barlow	Anthony DeLaurentis
Walter Barno	Alexis DeLeon 1996
Darrin Barr 1997	Charles DelleRose 2001
Alfred Barrett 1989	Eleanor J. DePalantino
Charlie Bartberger 1997	Ron DiPalma 2006
Al Basciano	Harold Doerfel 1984
Clete Bashore 1995	Helen Doerfel 2006)
Albert Bates 2000	John Joseph Dorff 2002
Emil Bazow 2001	Fran Douglass
Robert Becker	Jean Drelick 2002
Robert (Bob) Bello 2005	Arthur R. II DuHaime 2002
Morris Bellows	Bernard H. Dupee 2005
Eugene Bock 2000	George and Margaret Eck 2005
Andrew Bogusky 2000	Ray Eckert 2000
Bob Bollard 1998	Florence Eddowes
Larry Bolmarcich 1997	Lawrence V. Edwards 2003
Stuart Boose 2004	Rosemary Farley 2005
Theodore J. Boyce 2005	James E. Field 2006
Bill Brenner	Lyonel Finizie
Jim Brown	Clair Fisher 2001
William Brown 2002	Lisa Fitzpatrick 2001

Florence Frederick
Valentine (Wally) Freitag 2003
George Frisch
Margaret Claire Furta 2003
James Gallagher 2003
Frank Garofalo
Rosalie T. Garofalo 2005
Christy Gianios
Bob Giannascoli 2002
Rosalie Gilles
Lee Gittings 2002
Werner Gleiter
James Glenn 1997
John Godshall
Louis Greco 2003
Hal Green
Walter Grzwacz
Louis Guarino
Joeseph Guidos
Walter Gustafson
Al Gutt
David C. Hammond 2006
Paul Hand
Harry Hansen 2005
Ben Harrison
Ellen Hayes 1991
Irene Heitzman 2006
Dennis Joseph Herbert 2005
Mary Hilger 1994
Gil Hollingsworth Former TD
John Horan
Ruth Horan
Ralph C. Horton 2005
Margaret Hildenberger Howard 1985
Homer Huey
Matt Iatesta
Chuck Jacobs 2002
Helen Jaconski
Richard P. James 2006
Ezra Jewell 1999
Joseph Kacergis 2006
Sam Kaniss 2005
Richard Kannair 2004
Jack Kauker
John Keane
Edward Keener
John Keifer
Sue King
David Bruce Klock 2002
Bob Klump 1996
Bill Knebel 2000
Roy Knouse 2001
Chris Koochembere
Neil Kreshover
Mike Kreuter
Vern Kromer
Dr. Harry Krutter
John Kulick 2005
Dr. George Kydd
William Law
John Lawler 2001
Beverly Lazarus
Larry Lehman
Herb Leitsch 1999
Edward Lesoravage 1999
Walt Leupold
Edward Linke
Louis Lippel 1993
Frank L. Lis 1999
Nick Loggia 2001
Carla (Mackey) Luecke 2005
Joan M. Lyons 2004
Don Mackiernan
Edward Maloy 2002
Dino Mancinelli
John W. Markow 2004
Frank Marshall 2005
Bill Maslin 1989
Russ Mason
Mario Mattucci
Dan McCauley
Delisa McCreary 2001
John McCullough 1991
Jim McFarland
Robert G. McFetridge 2004
Barbara A. McGrath 2005
William McManimie 2005
John J. Mellon 2004
Ted Micklin
Tony Mickus 2000
William Middleton 2002
George F. Miller 2005

Joseph F. Miller 2004
Dan Mills 2003
John Monastra 2006
Kathleen Moore 2002
John Morgan
Bernice F. Morris 2006
Philip T. Morrissey 2004
David Ngo 1997
Edith M. Nichparenko 2003
Edward Niemzura 1993
Eileen Nikander 2004
Scott Nissley
Bob Oakley
Tom Odom
Gene O'Donnell
Bill O'Donnell
Jim Ohora
Paul Oliveri 2005
Albert Packard
Jerry Palatucci
Louis Pelosi 2004
Peg Pembroke
Vince Petrone 2005
Don Pisechko
Char Pohle 2006
Dr. Bill Polis
John M. Reeves 2001
Gilbert Ridley 2003
Joe Ritz 2003
James Alton Roach 2004
Marc Ross
Ida Rossnick 2005
Dan Rosso 1985
Rae Routzan
Russell Rud 2002
Lou Russo
Anthony J. Russo 2004
John L. Santini 2004
Donald Savage
Joe Schnipper 2003
William Schrandt
Dr. Herman Shmukler
Stephen Joseph Sikora 1999
Samuek Sizgorich 2002

Murray Sloane
William Snuffin 2003
Lee Sprunger
Dr. Rudy Stampfl
Harry Stein
CDR Edward Stewart
Christine Stewart 2004
George Tatnall 2004
Nick Tavani 2005
Squire Thomas 1999
Erminia M. Tinari 2004
Ralph Tinari Sr. 2005
Joe Tither
Wendy Stewart Tollison 2006
Andy Toth 2003
Harold G. Tremblay 2003
Ted Trilling 2002
Walter Tunstall 1998
Ted Turnock 2006
Frank Uphoff
Louis Uslin 2004
Joe Vaccaro 2005
Basil Vafakos 2005
Ron Vaughn
Stanley Vekteris 2002
Tony Ventriglia 2006
Jim Verdi 2006
Charles Vogel
Peggy Walter 2002
Robert Walter
Diane (Sierzega) Ware 2002
Bernie Watts
Horace B. Welk 2003
Donald Werb 2004
Herb West
William Wirtz
Clifford Woodward
Edward A. Yannuzzi 2006
Jack Yates
Harold Yentzer 2004
Richard Zabelicky
Ruth Zimmerman
David Zimmerman
Irene Zuegel 2002

In planning for this event and this program booklet, it was thought that we might have included a variety of past NADC pictures for your viewing enjoyment. Unfortunately the sheer quantity of pictures to choose from and the limited space and added cost to print them was a limiting factor. Instead, we decided that since most of the photographs already appear on the NADC web page we would advertise that fact and direct you there instead. We recently registered a new URL for the NADC web site that is easier to remember. It is:

www.navairdevcen.org

There you will find many historical documents, personal accounts, pictures, REFLECTORS, information on get-togethers and events, and other interesting links. You may also subscribe to our NADC mail list for immediate updates on events. Information on subscription is at the web site. If you have old documents, pictures, REFLECTORS or other NADC history we would be interested in obtaining or copying them for use on the web page and maybe even a future museum. Please contact doug@crompton.com

While this is a more formal 10th anniversary party, we have been meeting at least twice a year for informal get-togethers since the base closed. We expect our next event to be this December, usually between Christmas and New Years. Information on this party and others in the future will be published on the NADC web site and email list.

A thank you to the staff that made this all possible

Celebrations such as this require much effort in order to assure success for the event. A small cadre of dedicated, former employees worked tirelessly to make this night such a success. The core team of Jack Eyth, Steve Fleischut, Doug Crompton, Bill and Barabra McCracken, supported by John Bowes and Maureen Talley (both in Florida) and Toastmaster Jerry Guarini, deserve your appreciation for their unselfish efforts.

Please seek them out tonight, and thank them for their hard work, which have made this evening an *Affair to Remember!*



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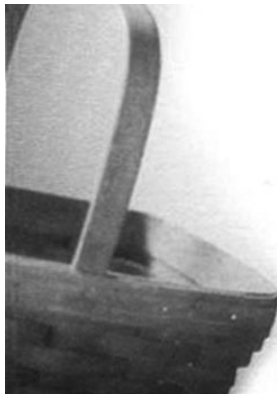
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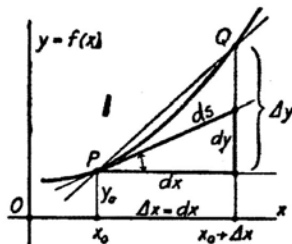
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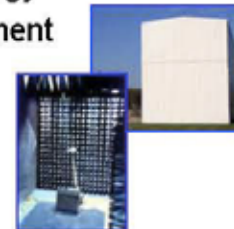


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