

2003 ANNUAL REPORT



NATIBO

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John B. Todaro
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**North American Technology and Industrial Base Organization
(NATIBO)
Calendar Year 2003 Annual Report**

Background

At the 1985 Shamrock Summit, Ronald Reagan, President of the United States, and Brian Mulroney, Prime Minister of Canada, pledged to work to reduce barriers and to stimulate the two-way flow of defense goods, establish a free exchange of technology, knowledge, and skill involved in defense production. This led to the establishment of the Charter signed by the two Nations' Defense Departments on March 23, 1987. At that time the NATIBO focused on the combined capacity and capability of the defense industrial bases of the U.S. and Canada to jointly support military requirements. In 1992 the Organization determined it needed to review its objectives and explore new roles and initiatives to respond to the challenges of the 1990s. This change is reflected in more focus on technology vice industrial capacity issues. The NATIBO is now charged with ensuring a cost effective, healthy, technology and industrial base that is responsive to the national and economic security needs of the United States and Canada.

Focus/Objectives of NATIBO

- Promote the development, administration, communication, and execution of the U.S. Department of Defense and Canadian Department of National Defence technology and industrial base programs and policies.
- Foster cooperation between the Governments of the United States and Canada in development of coordinated technology and industrial base policies and programs, including policies and programs that promote the integration of the defense and commercial industrial sector and the greater use of dual use products and technologies.
- Leverage resources through cost sharing and economies of scale afforded through coordinated studies and projects involving research, development, industrial capability, and logistics programs.
- Promote the interchange of technology and industrial base data between Canada and the U.S., the military services, other government agencies, and industry.
- Promote coordination of technology and industrial base planning and insertion programs undertaken by the responsible U.S. and Canadian departments and agencies in support of their national security responsibilities.
- Facilitate enhanced joint activity through Canada/U.S. involvement in studies and implementation of resulting technology and industrial base recommendations.

- Ensure that North American technology and industrial base considerations are taken into account during U.S. or Canadian military and/or civilian emergency planning activities.
- Enhance the national security of both nations by promoting the competitiveness of the North American technology and industrial base.
- In performing the above, raise issues with relevant bi-lateral committees in those cases where interface between the NATIBO and these committees is determined to be advisable.

Memorandum of Understanding (MOU)

On May 30, 2001, the Department of Defense of the USA and the Department of National Defence for Canada entered into an agreement whereby the Defense Departments can more efficiently continue their efforts to improve the defense posture of the North American technology and industrial base. The MOU (short title NATIBO) is an umbrella document that covers research, development, technical demonstration and technology insertion activity in the two Defense Departments and “grandfathers” activity performed by NATIBO under the charter. The MOU allows three basic activities: Information Exchange, the creation of Working Groups, and formal Project Arrangements (PAs). The MOU provides a recognized framework for which funds can be transferred between the participants in support of NATIBO studies and projects.

The objectives of the MOU are to:

- Effectively leverage dollars/resources and reduce redundant efforts through bilateral cooperation on studies and projects relating to the defense technology and industrial base of the USA and Canada.
- Achieve rapid technology insertion and commercialization of emerging technologies that can be used in the manufacture and repair of military weapon systems.
- Permit a wide variety of work to be accomplished on a single project from paper studies and initial research to technology insertion efforts.

Organization

The NATIBO is co-chaired by the Director, Office of Technology Transition, for the U.S. and the Director General, International & Industry Programs, for Canada. U.S. members represent the Office of Secretary of Defense, Army, Navy, Air Force, Marines, Defense Logistics Agency, and Defense Contract Management Agency. Canadian representation is from the Department of National Defence. These representatives form the Steering Committee and provide strategic direction, make recommendations on proposed projects, review the progress of the organization, and act as a conduit for addressing recommendations to U.S. and Canadian authorities. Under the provisions of the MOU,

Terms of Reference (TOR) for the Steering Committee were prepared, staffed and implemented July 11, 2001. There are five observing organizations that provide assistance to the Steering Committee as appropriate. These observers are the U.S. Federal Emergency Management Agency, U.S. Department of Commerce, Public Works and Government Services Canada, Industry Canada, and Canadian Commercial Corporation.

Steering Committee Members

Mr. John Todaro, U.S. Co-Chair
Mrs. Cynthia Gonsalves, OSD
Mr. Luis Garcia-Baco, U.S. Army
Ms. Adrienne Gould, U.S. Navy
COL Craig Kimberlin, U.S. Air Force
Mr. Rod Manzano, U.S. Marine Corps
Mr. John Christensen, DLA
Mr. William Ennis, DCMA
Mr. David Shaffer, U.S. Army

Ms. Evelyn Levine, Canadian Co-Chair
Mr. Michael Slack, DGIIP

Secretariat

The U.S. Army Materiel Systems Analysis Activity is the NATIBO Secretariat. The Secretariat is responsible for all business management functions in support of the NATIBO, including the planning and recording of meetings, the correspondence with and between sub-committees, the maintenance of a central repository of data/files on NATIBO activities, and other business management duties as assigned by the Steering Committee. The Secretariat is also responsible for selected functions in support of the MOU.

Business Development Working Group (BDWG)

The BDWG provides a permanent forum for the exchange of views on the means of utilizing the technology and industrial base to meet defense program objectives, and through this forum identify mutually beneficial cooperative technology and industrial base activities between DoD and DND. The BDWG also will facilitate exploratory discussions and review documentation prepared by proponents for the purpose of establishing a Working Group or PA under the provisions of the MOU. The BDWG will also advocate and increase awareness of all NATIBO sponsored activities.

Calendar Year 2003 Activity

Working Groups Established. The NATIBO MOU has generated considerable interest. The following Working Groups were established this calendar year on a broad spectrum of topics.

- **US/CA Soldier Systems Technology Working Group (SSTWG).** The SSTWG was established to maintain a continuous overview of the respective programs of U.S. Objective Force Warrior (OFW) or related programs and Canada's Soldier Systems Science and Technology Thrust and/or related programs in order to identify mutually beneficial technology and industrial base cooperative activities between the Participants. In addition, the SSTWG will provide the framework for the exchange of information, identify potential project arrangements for OFW and Canada's Soldier System Science and Technology Thrust.
- **Future Fire Control Systems Working Group (FFCSWG).** The FFCSWG provides a forum for the bilateral exchange of research, development, test and evaluation information of FFCS to encompass all aspects of fire control, from target acquisition to post action assessment. The FFCSWG anticipates implementing Project Arrangements under the NATIBO MOU for FFCS.
- **Medium Logistic Vehicle Replacement Working Group (MLVRWG).** The MLVRWG will provide a framework for the exchange of information and identification of potential collaborative activities related to replacement options for medium logistic vehicles (land). In addition the MLVRWG will serve as a forum through which to investigate the benefits that could be derived through potential harmonization of the Canadian and U.S. replacement programs.

Ongoing Efforts From 2002. The NATIBO MOU was signed in the spring of 2001 and several working groups were established in 2001 and 2002. These working groups continue to work under and support NATIBO MOU objectives.

- **BDWG.** The BDWG had a variety of inquiries from potential users, mostly via phone call, regarding the use of the NATIBO MOU on a broad spectrum of topics. Several projects were not within the scope of the MOU and the BDWG suggested other international agreements or referred proponents to their International Programs Office for guidance.
- **Light Armored Vehicle Working Group (LAVWG).** The LAVWG has had no activity in the past year that produced any significant results. However, they have had liaison activity with the LAV User Nations Group.
- **Multi Service Regenerative Electrolyser/Fuel Cell Working Group (MREFWG).** Phase I of this project is complete. U.S. Army Tank-automotive Command contracted with Hydrogenics to produce a 'fuel cell in a box' and it was delivered in November 2002. The MREFWG is proceeding to Phase II which involves developing and testing this auxiliary power unit mounted in a light armored vehicle (Coyote) to

demonstrate long duration silent overwatch capabilities with advantages over battery or diesel auxiliary power units. During CY2003 the MREFWG has started the Project Arrangement documentation process.

- **Gas Turbine Engine-Industrial Base Analysis Working Group (GTE-IBAWG).** The GTE-IBAWG undertook a study focusing on industry's ability to meet current and future military requirements for military helicopters. Focusing on common parts, the GTE-IBAWG will identify problems with parts (reliability issues) or suppliers manufacturing/logistics issues, and identify any future collaborative opportunities. The report will be published early CY2004.
- **First Responder Technology Working Group (FRTWG).** The FRTWG is undertaking an effort that will explore, study and report on specific technology and industrial base issues associated with migrating military technologies and products which can be used by civilian First Responders. The FRTWG is collaborating with military laboratories, civil agencies, industry associations, and First Responder professional associations on windows of opportunity for identified military technologies and products.

NATIBO Website. During CY2003 over 52,000 users accessed the NATIBO website and approximately 23,852 reports were downloaded. The Bio Detection Study, the Joint Battery Sector Study and the Rechargeable Battery Systems reports captured the most interest. The website also has information on how to prepare required documentation when forming a working group or preparing a PA to be implemented under the MOU. Examples are also provided. The TOR and PA downloads are indicative of sufficient interest, although they have not materialized in a comparable number of new agreements. The URL is <http://www.dtic.mil/natibo>. Updates are made when appropriate.

Steering Committee Meeting. The CY2003 Steering Committee meeting, hosted by Canada's Department of National Defence, was held June 10-11 in Montréal, Quebec, Canada. In addition to the business meeting, attendees toured CAE, a global leader in providing advanced simulation and control equipment and integrated training solutions to customers in the civil aviation, military and marine markets.

Exhibit. The NATIBO exhibit is displayed at selected forums, conferences and expositions. In February, the Canadian Embassy organized a "Canada on Capital Hill Day" to promote Canada's close relationship with the United States. The NATIBO exhibit was on display with Military members from both countries staffing the exhibit. It was estimated that over one thousand congressional staffers walked through the event.

In August the exhibit was displayed and staffed at the DOD Diminishing Manufacturing Sources and Material Shortages Conference, in San Diego, California. Over 600 government and industry representatives participated in the three day event.

The exhibit was also displayed and staffed at the Defense Manufacturing Conference in December. Over 625 representatives from government and industry participated in the two day event.

Presentations. Members are frequently invited to make presentations on NATIBO projects to their senior staff or other departments, agencies, activities. In response to calls for papers, submissions are frequently selected for presentation at conferences and symposiums. Some of these events are described below.

- Canadian Forces Air Force Liaison Officers, October 30, 2003, Washington DC, NATIBO briefing, Major Robert Boucher.
- Rolls Royce Inc, Indianapolis, Indiana, February 20, 2003, Small Gas Turbine Engine Study, Mr. Alan Taylor
- Pratt & Whitney Canada, Montréal, Quebec, Canada, June 11, 2003, Small Gas Turbine Engine Study, Mr. Alan Taylor

Funding

The NATIBO has no direct funding line in U.S. or Canadian defense budget systems. Projects are funded from the operating budget of member organizations. The U.S. Army, U.S. Navy, U.S. Air Force and Canada's Department of National Defence equitably support the NATIBO Secretariat.

The NATIBO functions with 'payment in kind' contributions from its members. The U.S. Army prints and publishes studies and brochures. The U.S. Air Force pays expenses associated with the exhibit. OSD sponsors the website and Canada has provided materiel for the exhibit. The U.S. Air Force waived the entrance fee for the NATIBO exhibit at the DOD Diminishing Manufacturing Sources and Material Shortages Conference and the Defense Manufacturing Conference. All the Services and Canada have had employees staff the exhibit at events.

Planned Activities for Calendar Year 2004

BDWG. The BDWG will continue to work with prospective users of the MOU to ensure that prospective activity is consistent with the objectives of the NATIBO MOU. They will assist users in the preparation and staffing of documentation required for international activity. The BDWG will continue to work closely with the Steering Committee and Co-Chairs regarding the business activity of the NATIBO.

First Responder Technology Working Group (FRTWG). The FRTWG is studying Effervescent Liquid Fine Mist Apparatus for Extinguishing Fire; Joint Firefighter Integrated Response Ensemble; Panoramic Night Vision Goggles; Remote Casualty Location Assessment Device; and Threat Containment Unit technologies and will assess production capabilities (do they exist; where; who; what is the capability); what are the barriers and facilitators to manufacturing; and what could be done to encourage a

production source; and look for joint opportunities between the US and Canada. This exclusively in-house effort is scheduled for completion by May 2004.

Exhibit Schedule. The tentative NATIBO exhibit schedule for CY2004 follows:

December Defense Manufacturing Conference, Las Vegas, Nevada

Conclusion

In an era of declining defense budgets, changing threats to national security, and increasing "equipment geriatrics," the North American technology and industrial base faces the challenges of advancing and maintaining technological superiority with reduced government research and development funding. Meeting these challenges requires the leveraging and promoting of commercial use and investment in technologies which will have both defense and industrial applications. Broadening the technology industrial base to include both US and Canadian resources so that investment costs may be shared across a broader base will better prepare us to face these challenges and improve the affordability of defense systems. The key to the future is rational use of industrial, economic, and technological resources in the U.S. and Canada to achieve the greatest attainable military capability at the lowest cost.