

How to Establish a National Codification Bureau (NCB)



[AC/135](#) = NATO Allied Committee 135 (Group of National Directors on Codification)
[PASOLS](#) = Pacific Area Senior Officer Logistics Seminar

There is no one single way to implement a National Codification Bureau and the NATO Codification System like there are no two codification bureaus identical in organization, scope, systems and methods. This brochure collects some of the more recent experiences in developing a national codification capability. The experiences are recorded from NATO Countries assisting countries that are new to the NCS and from the countries themselves establishing the NCS.

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A. Study and Develop an Understanding of the NATO Codification System (NCS)

Step 1: Familiarization – A core study team needs to establish a thorough understanding of the NCS so they may be able to articulate the basic process and champion the benefits both nationally and internationally with Defense decision-makers.

A core team needs to be established to carry through the analysis, planning and implementation steps. The key personnel involved in the initial actions should be supplemented with team members having broad experience in the existing defense logistics operations (to include corporate purchasing and field level operations) as well as individuals well versed in Information Technology.

A good way to begin the process is to have a team from one of the NATO National Codification Bureaus (NCB), or through BASELOG a combined team, visit the country and provide an extensive workshop on the NCS. A sample agenda for such a workshop is shown below in part. The agenda is developed for a visit of 8 days. The agenda can be shortened or altered to meet the needs of each country. As a result, the country should be able to refine its requirements for establishing an NCB. There are various funds available in some of the NATO countries and AC/135 to fund this type of visit.

Step 2: Concept approval and national support - The use of the NCS needs to be approved “in concept” by national authorities, and support given for detailed planning.

It is very important to have senior defense decision-makers support for NCS implementation. This is essential to insure you will receive the acceptance and cooperation of individual military services. Therefore, you must obtain approval of the concept and support for the detailed study phases. Appropriate “Concept Papers” or briefings, on the merits of introducing a standardized materiel management language for use by the armed forces, need to be given to obtain high-level approvals for further action. This paper should also include a forecast of anticipated cost benefits.

To assist the core team it might be useful to visit a country that operates the NATO Codification System.

The core team must study the various concepts for establishing an NCB, what coverage it should have and whether it should be centralized or decentralized. An introduction to these concepts can be found in part K.

At this point you should obtain senior command’s approval to proceed with the detailed studies. You may wish to have a formal “charter” for the study developed and approved. This initial approval provides the cornerstone for subsequent political, budgetary, and legislative support, which will be necessary for subsequent implementation.

Step 3: Develop a detailed understanding of NCS concepts, technical requirements and the options for implementation.

Send a team of 2-3 to the training courses on offer in some of the NATO NCBs to learn about basic codification followed by a period of on-the-job-training. Those receiving the instruction can then instruct others in the country

The country should as far as possible familiarize themselves with the available documentation on the NCS. Some of the NATO documentation will not be officially

available until the country has obtained sponsorship by AC/135 (Allied Committee 135 – The Group of National Directors on Codification), but most of the information they need at this stage will be freely available through workshops, consultations, brochures and Internet access. See part F and G for references.

Evaluate NCS and other nation's CD-ROM and on-line codification products currently available for their usefulness.

At this point establish internet access for your team, if they don't have it already. A lot of information is already available there, and in the future a great deal related to codification will depend on it. The NATO Codification Web site provides a good overview of the NCS. That Web site also provides addresses, telephone numbers, and FAX numbers for each of the NATO NCBs.

The core team must study the various concepts for establishing an NCB, what coverage it should have and whether it should be centralized or decentralized. An introduction to these concepts can be found in part H.

At the end of this phase the core team must produce a proposal to the senior command that must include:

- a. Personnel Requirements for a National Bureau
- b. Computer Hardware
- c. Information Systems
- d. Supporting Documentation Costs
- e. Training
- f. Implementation Timeframe
- g. Sponsorship

B. Determine How to Apply the NATO Codification System Nationally

Step 4: Conduct a detailed analysis of current national codification methods, and the interfaces and uses of codification data in logistics life-cycle applications.

Establish a working group to determine and document current armed forces item identification practices.

Determine the following:

- The degree of application of existing NATO Stock Numbers (NSN) to items of supply used by the country.
- The nature of possible NCS use in logistics applications, including requisitioning, technical manuals, warehouse markings, and so forth.
- The transition process necessary to effectively implement the NCS throughout national logistics processes.

Carry out a macro cost benefit analysis in consultation with the national military departments. Evaluate if the costs of becoming part of the NATO Codification System (NCS) will deliver commensurate benefits.

Step 5: Develop recommendations for national implementation. Propose these to decision makers and get approval to proceed to detailed implementation.

Determine parameters for NCS implementation and stock number assignment. For example: will all repetitively ordered, stocked, stored and issued materials be assigned National Stock Numbers? Will certain weapon systems scheduled to be

discontinued from inventory be exempt from codification? Will base-level local purchase consumable items, not related to a weapon system, be exempt?

Define data elements required for material management and control within the logistics operations. For example: information on how and from where to requisition the item, information on special handling or safety requirements, information on special disposal or security requirements.

Make final recommendations on codification concept and coverage

Establish procedures for codification of new weapon systems and their parts.

Establish procedures and priorities for codification and transition of existing materials.

Define how the NCS and other data will be used and distributed, in catalogs, in repair parts manuals, on CD-ROM or other media.

Formally present a costed proposal to senior command and get final approval to proceed. Including

- Agreement to adopt the NATO Codification System (NCS)
- Agreement to establish a National Codification Bureau (NCB)
- Approval to proceed to implement.

C. Implementation of the NATO Codification System (NCS)

Step 6: Establish legal and regulatory authority and assign responsibilities.

Appoint NCB Management Team and provide accommodation.

Establish the legal and regulatory structure necessary to mandate use of the NCS within national forces. National legislation may be necessary to make compulsory use of codification by national forces. If an NCS based system is only used partly by national forces, the benefits that can be derived from the system may never be realized.

For non-NATO countries, consider applying for sponsorship in the NCS.

Sponsored countries need to and new NATO countries will be required to implement the Standard NATO Agreements (STANAGs) that are applicable to codification. The names of these STANAGs are listed below. The complete text of the STANAGs can be found in the AC/135 brochure on Sponsorship

- 3150: Universal System of Supply Classification
- 3151: Universal System of Item Identification
- 4177: Uniform System of Data Acquisition
- 4438: Uniform System of Dissemination of Data

Establish bilateral agreements with other NCS countries as necessary for exchange of data and acquisition of documentation and support.

Step 7: Identify and establish procedural changes that are required.

Change publications and functional diagrams in use nationally to make clear the role and requirements of codification.

Provide overview training for national forces and major national manufacturers to familiarize them with the structure and benefits of the NCS. This training will be very important to win a broad-based acceptance and understanding of the system. This

training may be provided either by national representatives or with the assistance of a NATO country.

Step 8: Determine Basic Infrastructure Development & Milestones

For smaller countries or for any country looking for an inexpensive way to begin usage of the NCS, consider participating in the BASELOG program. BASELOG was established by NATO Allied Committee 135 (AC/135) and is coordinated by the NATO Maintenance and Supply Agency (NAMSA). Under BASELOG, NAMSA or a NATO country can: provide consultation, training, and other support. Under BASELOG, countries may even perform codification processing for participating countries and help them establish a codification infrastructure. BASELOG can be a permanent setup or a temporary setup for a few years while a country establishes an independent codification capability. For more information and a complete BASELOG catalog, contact NAMSA.

If a country decides to develop an independent NATO codification capability, they may wish to hire a consultant. The consultant should be experienced in operating a National Codification Bureau and have a background, which includes both system design and logistics application of item data. His or her role should be to develop a business plan for implementation of an NCS compliant codification system based on the country's specific needs and funding availability. The country may be able to obtain a consultant from another NATO NCB or hire an independent consultant. Some of the things that should be considered:

- The plan should include data base construction and maintenance and both internal and external communications requirements, such as a possible link to the NATO Mailbox System (NMBS) system of telecommunications data exchange.
- Of particular importance is establishing a means of distributing codification information to those within national forces who can benefit from it. The medium of distribution may be either CD-ROM or telecommunications or both and ideally will utilize existing means of distribution and communication.
- Consider whether it will be most beneficial to develop a national codification CD or to utilize an existing product, such as the NATO Mater Cross Reference List (NMCRL). Tier 1 Sponsored countries can have their data included into this product.
- Determine how to integrate the new data elements added from the NCS with existing data elements, which are required for operational decision-making.
- How to insure continued flow of proper information to national logistics systems.

Based on the business plan, develop milestones, with dates, to carry out the implementation plan. The milestones should include interface testing with other NCBs and NAMSA to ensure compatibility.

Develop a national codification manual that reflects the unique application and usage of the NCS based system within the country.

Evaluate the extent to which NCS codification publications need to be translated into the national language.

Establish an NCB with sufficient staffing. Initially a country may only require a small staff to carry out the planning duties specified in this paper. Eventually the country may require a larger staff to fully implement the planned function of the NCB. This could include people to write and maintain item identifications, maintain codification

publications, provide technical and ADP support, provide administrative support, and provide liaison support to national forces and other players in the NCS world, such as NATO AC/135 (see "A Sample NCB Organization" below). An important element of the staffing process will be to determine the number of items in the national logistics system that will require codification. The answer to that question will lead naturally to the central staffing question: How many codifiers will the country require?

The NCB should be in a single location. Its location and the services it provides should be widely publicized throughout the national force structure. Note: A central office for codification matters is required for NATO and NCS sponsored countries.

Evaluate the work to be done to provide a transition from the existing system of identification to the new NCS based system, considering the following criteria:

- Evaluate and categorize existing items, with input from all branches of the national forces.
- Include groupings by weapon system or end item and the country of manufacture/design control.
- Focus on items of national manufacture for initial codification.
- The country should identify items in its system that are manufactured in NATO countries and assigned NATO Stock Numbers (NSNs) using the NATO MCRL. The country may find that the majority of the items it uses have already been assigned NSNs and have item identification data, particularly if it utilizes systems manufactured in the U.S. or other NATO countries. For those items, they will be able to import the data from those countries' systems to its system.

The country should analyze existing processes for registration and identification of national manufacturers and develop a strategy for building a national NATO Commercial and Governmental Entity (NCAGE) code file and assign NCAGEs to national companies it procures from. Exchange of NCAGE data within the NCS is carried out by a transaction called DIC KHN. See Chapter V of ACodP-1 for details. NCAGE files are published and displayed in H4 handbooks, found in the H-SERIES CD-ROM, the NATO MCRL, and other national files.

The time frame for implementation will vary depending on the amount of money available for implementation and the number of staff members devoted to the task. Four years is probably a realistic goal. However, BASELOG can probably be implemented in one year or less.

If you aim for full participation in NCS (Tier 2 Sponsorship), develop and manage test information and codification systems in compliance with the rules defined in ACodP-1 (Allied Codification Publication no. 1).

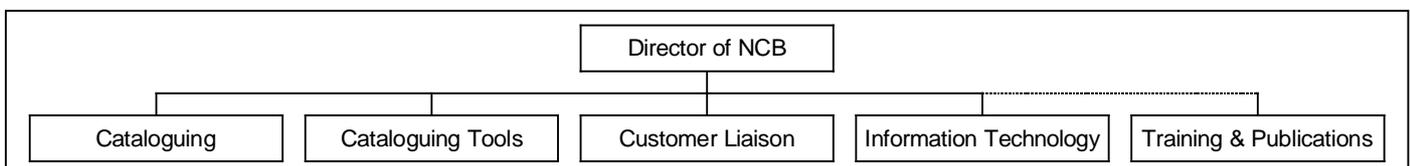
'Sell' the codification concept to the logistics user community and other government entities through familiarization visits and training courses.

Arrange for trial transactions to be exchanged with another NCS participating system.

Produce your own country catalogue and catalogue products.

D. Sample NCB Organization

The structure of a National Codification Bureau will of course depend on the decisions reached on the functions to be performed by the organization. A sample organization is shown below:



Cataloging: This department actively applies the cataloging rules, researching, naming, classifying, and describing items of supply and assigning National Stock Numbers to them. Subject to bilateral agreements, they may interface with other NCBs on the assignment of external NSNs. After NSN assignment, it is their responsibility to maintain the cataloging records.

Cataloging Tools: The staff that translates the International Standards (to include ACodP-1, Item Classification (H2), and Item Name Directory (H6) (this makes English or French language skills a necessity for some members of this department. In addition, this department is responsible for the assignment of national NCAGEs.

Customer Liaison, Training and Publications: This department focuses on support of the using military forces with information about the items they use, provided in forms or formats which effectively satisfies their information needs. This function may include providing user training, in such subjects as the national cataloging system/NCS and in the interpretation and use of publications. These personnel help define the functional requirements leading to systems changes and product development.

Information Technology: This department will design, develop, operate and upgrade the data system, which supports the cataloging process and the interfaces with other organizations. Often this support will be provided by an external specialist organization, or by a contractor.

E. Develop Partnership Opportunities

- Consider active participation in the NCS by requesting NATO Codification System sponsorship. Countries in the Pacific region may want to consider participation in the Pacific Area Cataloging System (PACS) Forum. Participation in these groups is necessary to keep up with the development of the NCS. Any country interested in NCS sponsorship should contact NAMSA at the address below. Details about the requirements for sponsorship are included in the Sponsorship Brochure.
- Among other things, sponsorship in the NCS will allow the country to participate in BASELOG and join the NATO MBS, which permits telecommunications data exchange with all NATO countries and many non-NATO countries. Also, sponsored countries are assigned a National Codification Bureau (NCB) code and a NATO Commercial and Governmental Entity (NCAGE) code identifier to distinguish their NSNs and NCAGEs from other participants in the NCS. These codes are also required for exchanging data within the NCS.
- Several NCS user countries, NATO and non-NATO, have developed mature NCS-compliant automated cataloging systems, which may be available for purchase. It would be worthwhile to review each of these and the costs and benefits involved. For information contact NAMSA.

F. Bottom Line Advice

Don't try to reinvent the wheel. Find out what other NCBs have already developed to review the possibility of adapting a system that is already developed, rather than starting from scratch. NAMSA, the United States, or other NATO or NCS sponsored countries can provide advice about the possible options.

If possible, develop a PC-based system, because that would be far less expensive to develop and maintain than a system based on a mini-computer or mainframe. The increasing power of PCs and networked PCs makes this a distinct possibility. If a PC

based system isn't feasible, the next option should be a mini-computer based system. Countries will find that a system based on a mainframe will be more expensive and more difficult to change than a system residing on a mini-computer or a PC network.

G. Sample Agenda for NCS Workshop.

Day 1 and 2: Introduction to host country systems.

NCS Workshops are two-way information workshops. On the first two days, the staff of the hosting country provides the visiting expert team with an overview of their current codification and logistics systems.

Day 3: Executive overview for managers and decision makers

BACKGROUND

- What is Codification and Why Does It Exist?
- History and Governance of the NATO Codification System
- NCS Benefits

NSC ORGANISATION

- AC/135
- Sponsorship
- BASELOG

NSN BASICS

- Structure and Function of NSN's
- How NSN's Are Assigned
- Codification Tools and Data Products: CD-ROM and On-Line
- NATO Codification Data Exchange

EXAMPLES OF CODIFICATION ORGANIZATIONS IN VARIOUS COUNTRIES

THE RELATIONSHIP OF CODIFICATION TO LOGISTICS

- How NSN Data is Used Throughout the Supply Chain

THE FUTURE OF CODIFICATION

- Expansion of the NATO Codification System (NCS)
- New Initiatives in Codification
- Future of Codification

Day 4 – 7: TECHNICAL SESSIONS for technicians and logisticians who will actually implement and use the NCS.

The following seminars/workshops can be presented according to requirements

1. Technical Cataloging Concepts Seminar/Workshop

- a. Basic Concepts Review
 - 1) NATO Codification System (NCS) Overview
 - 2) The Item Name Standards—Approved Item Names

- 3) The NATO Stock Number (NSN)—Structure & Usage & Classification Standards—NATO Supply Groups and Classes
- b. Role of a National Codification Bureau
- c. Origins of Catalog Data
 - 1) Where Catalog Data Originates
 - 2) Provisioning & Post Provisioning
 - 3) Technical Data & Reference Number Coding
- d. Catalog Data Usage
 - 1) Catalog Management Data (CMD)
 - 2) Supply Management & Life Cycle Application Interfaces
- e. NATO Commercial and Governmental Entity Codes
 - 1) Purpose & Structure
 - 2) Statistics
 - 3) How to Apply for an NCAGE Code
- f. The NATO Codification System -- Governance & International Outreach
 - 1) Allied Committee 135
 - 2) Standard NATO Agreements (STANAGs)
 - 3) The NATO Manual on Codification (ACodP-1)
 - 4) Role of NAMSA in the NCS
- g. NATO Mailbox System
 - 1) Structure & Function
 - 2) NMBS Messaging Format
 - 3) The Automated Document & Agenda Management System
- h. The NATO Codification System & Industry
 - 1) The Interface Between Government & Industry
 - 2) The Contractor's Role in Provisioning

2. Cataloging System Design & Structure

- a. Design Overview
 - 1) Options for national codification systems
- b. Characteristics Data Options
 - 1) NATO Country Review—Which Countries Use Characteristics Data
 - 2) Segment M (Clear Text)
 - 3) Segment V (Coded)
 - 4) MRD/TIR/Guide Relationships
- c. The Total Item Record (TIR) & Transaction Processing
 - 1) Mandatory and Optional Data Segments on NSNs
 - 2) Data Record Numbers (DRNs)
 - 3) The LSA Process—Requesting Assignment of a NATO NSN

- 4) User Recordation & NSN Maintenance
 - 5) Output Capabilities From the U.S. TIR
 - 6) Codification Edits
- d. Codification Tools & Products Including Product Demos
- 1) ACodP-2 (NATO Supply Groups & Classes)
 - 2) ACodP-3 (NATO Item Name Directory)
 - 3) Codification Handbooks (H-SERIES)
 - 4) The NATO MCRL & NATO Ammunition Data Base
 - 5) FED LOG & Other CD-ROM Products
 - 6) NATO on the Web
- e. System Support Files - Data Structure, Exchange Formats & Logical File Interrelationships to Other Records
- 1) Item Name File
 - 2) Master Requirements Directory (MRD)
 - 3) FIIG Edit Guides
 - 4) Reference Drawing Group (RDG) File
 - 5) NCAGE data (to Include KHN Exchange Format & Process)

H. Some useful Web site addresses and references.

The Main entry point into NCS information can be found on the AC/135 website:

<http://www.nato.int/codification>

Besides containing information and documentation, this website has links to all the countries participating in NCS.

The US Defense Logistics Information Service (DLIS) has some useful websites, which specifically deals with the US NCS documentation and training.

Consult DLIS's training Web site for training opportunities, including Computer Based Training (CBT) modules available for download:

<http://www.dlis.dla.mil/training/default.asp>

The FLIS manual is found at <http://www.dlis.dla.mil/forms/forms.asp> on the Web. The U.S. codification products produced by DLIS are described at

<http://www.dlis.dla.mil/prod.asp>, and the NATO Ammunition Data Base Web site is at <http://www.king.igs.net/~ammo>.

Other related Web sites are:

- Belgian NCB: <http://www.mil.be/itc/blc>
- UK NCB: <http://www.ncb.mod.uk>
- NATO MCRL: http://www.nato.int/structur/AC/135/nmcrl/nmcrl_e/index.htm
- Pacific Area Cataloguing System (PACS):
http://www.defence.gov.au/dmo/_jlc/pacs/homepage.htm

If you require further information please contact NAMSA:

*NATO Maintenance and Supply Agency (NAMSA)
Codification Services Branch
Co-operative Logistics Program
L-8302 Capellen
G.D. Luxembourg*

TEL: 352 3063 6896 or 352 3063 6004

FAX: 352 3063 6580 or 352 3063 4004

E-mail: ac135secretary@namsa.nato.int

I. Literature

Allied Codification Publication no. 1 (ACodP-1): This publication is indispensable for developing the automated systems supporting NCS. It is, however, only available to NATO Sponsored countries, which supports the fact that it will be very useful for a country to seek NATO sponsorship quite early in the process. There are, however, a number of publications, which contain enough information for a country to get started.

- *NATO Codification System ... A Bridge to Global Logistics Knowledge:*
A high level introduction to the NCS
- *Guide to the NATO Codification System:*
A more detailed description of the principles of NATO Codification.
- *AC/135 Sponsorship program:*
Principles and framework of the Sponsorship program. This brochure also contains the standardization agreements (STANAGS) that must be adopted by a country seeking sponsorship.
- *BASELOG – Basic Tools for NATO Codification*
Principles and framework of the BASELOG program that provides assistance to countries when developing their codification capabilities.
- *BASELOG Catalogue:*
This brochure describes some of the services and tools available from NATO countries to assist new NCS countries.
- *NATO Mailbox System (NMBS):*
A high level introduction to the NATO Mailbox System
- *NATO Automated Business System (NABS):*
A high level introduction to NABS, a system being used to manage agendas and documents for the AC/135 meetings.
- *NATO Ammunition Database (NADB)*
A high level introduction to the NATO Ammunition database.

All these brochures can be requested from NAMSA at the address mentioned above and most of them are available at the AC/135 Web site

The US has an extensive set of publications and user guides, which can be found on the website mentioned above.

J. Potential time frame for developing a National Codification Bureau.

This was the time frame recorded by New Zealand when they implemented their National Codification Bureau and NCS.

YEAR ONE:

1. Briefing paper to Senior Command on the merits of introducing a Standardised Materiel Management Language for use by the Armed Forces.
2. Senior Command's endorsement of the concept.
3. Establish a Working Party to determine and document current Armed Forces Item Identification practices.
4. Summarise results to Senior Command with a forecast of anticipated cost benefits of introducing a single system of Materiel Management for the Armed Forces and requesting approval to proceed.

YEAR TWO:

1. Approval to proceed from Senior Command.
2. Exploratory visit to a country which operates the NATO Codification System.
3. NCS adoption proposal to Senior Command.

Proposal to include:

- a. Personal requirement for a National Bureau
 - b. Computer Hardware
 - c. Information Systems
 - d. Supporting Documentation Costs
 - e. Training
 - f. Implementation Timeframe
 - g. Sponsorship
4. Senior Command approval.
Including:
 - a. Agreement to adopt the NATO Codification System (NCS) and the Pacific Area Cataloguing System (PACS)
 - b. Agreement to establish a National Codification Bureau (NCB)
 - c. Approval to proceed to implement.

YEAR THREE:

1. Appoint NCB Management Team and provide accommodation.
2. Produce Implementation Project Time-line.
3. Capital Project Funding Proposals.
4. Obtain Policy and Procedural advice from a PACS/NCS participating nation.
5. Appoint Single Service Logistics Representative to the NCB for single service access points of contact and for technical information.
6. Familiarisation visits to NCS NCBs for determining operating methods, concepts, practices, etc.
7. External planning and codification courses.

8. Establish bi-lateral agreement with the USA.

For:

- a. Exchange of data
- b. Acquisition FIIGs
- c. Acquisition of FSC Tables
- d. Acquisition of FSC Handbooks
- e. Acquisition of future support

YEAR FOUR:

1. Obtain sponsorship to the NATO Codification System through NATO Committee AC/135.
2. Approval of sponsorship by AC/135.
Including:
 - a. Assignment of Nation Code for NIINs
 - b. Assignment of Nation Code for NCAGEs
 - c. Ratification of STANAGs
 - d. Issue of ACodP-1 Publications
 - e. Issue of subscription to NATO MCRL
3. Develop and manage test information system and codification systems in compliance with the rules defined in ACodP-1.
4. Appoint staff and undertake codification, rationalisation and standardisation tasks.
5. Establish bi-lateral agreements with NCS/PACS participating nations with whom your country sources items of supply.
6. 'Sell' the concept to the logistics user community and other governmental entities through familiarisation visits and training courses.
7. Implement NCS Information System and introduce 'in country' policy and procedures manuals.
8. Load catalogue data.
9. Trial transactions with another NCS participating system.
10. Sign off implementation of the Cataloguing System.
11. Produce 'own country' catalogue and catalogue products.

K. Excerpts From A Briefing By Mr. Jim Burns, Retired Chief Of The New Zealand NCB And Past Chairman Of The Pacific Area Cataloging System (PACS) Working Group Made To The Group Of National Directors On Codification 2nd Annual Partnership Day Battle Creek, MI 20 May 1999

With what I have said as a background I would now like to move onto the purpose of this presentation, that of what is involved in establishing a National Codification Bureau. One condition of achieving sponsorship to NCS is that a country will represent itself through a SINGLE National Codification Bureau.

This Bureau will have the responsibility for the application of the NATO Codification System.

Each current NCS participating nation operates through the one point of contact, the National Codification Bureau. However, to the best of my knowledge, as I stated earlier, there are no two nations that operate their Bureaus by the same methods. While each nation satisfies the external requirements of the operation of the NCS, they have customized the internal operation of their Bureau to accommodate the mandates and operating conditions appropriate to their nation.

In my opinion you only get one chance to establish a Bureau correctly. That is the first chance. If the condition and mood is right politically for progressing to NCS membership, then this is also the ideal condition to establish the ultimate National Codification Bureau. I can assure you that as the year's progress and the Bureau just becomes another logistics function then you will be continually looked at by the money cutters. They have a habit of targeting functions they don't understand. So what should be considered?

COVERAGE

Should the Bureau be established for Defense purposes only or should it be for all Government Departments?

In a number of countries the Bureau operates with a mandate covering all Government Departments, where they all use, or are encouraged to use, the NCS disciplines in the management of their inventories. Here in the United States they have the Federal Supply System applicable to a number of Federal Government Departments. The stock numbering system is an integral part of that supply system. The Canadian Bureau also has a responsibility as the Government Bureau. The more common approach is that the Bureau has the responsibility for the Armed Forces materiel management, but encourages the use of the system by other Government and Defense industry participants.

The advantage of being the Government Bureau is that all Government entities use the same stock numbers to identify the same item. It is possible through this to maximize the use of finance available for inventory within the Government consumers. It is also possible to provide national industry with more accurate forecasting of Government annual requirements of particular products. For example empty 10 liter plastic pails. If the total annual Government requirement for the pails was put out for registration of interest, industry would be able to plan its production more accurately, and economy of scale price advantages would also be realizable. There is also the ability to redistribute Government stocks if one Department has a surplus of a commodity, while another has a shortfall.

Naturally there are also disadvantages of being a Government Bureau. The principal one being of data security, specifically characteristics data. Because of the need to provide a concise identification as part of the standard associated with codification,

some manufacturers reveal to the Codification Authority processes and products that currently give that manufacturer a leading edge in their industry. If you expect to have an ongoing relationship based on trust with industry, you must protect the information provided by industry to the same degree that an employee is obligated not to reveal their employer's trade secrets. This can obviously be more realistically achieved under the normal security controls imposed on Defense employees, than those of other Government Departments. STANAG 4438 on the dissemination of data lays down the requirements of data promulgation.

CENTRALISATION VS DECENTRALISATION

There are many discussions and theories on centralization vs. decentralization of Bureau operations. The concept falls into three major categories:

CENTRALISED CONCEPT

All codification activity is undertaken by a centralized Bureau under the control of the Department of Defense, or equivalent, and treated as a corporate expense.

DECENTRALISED CONCEPT

Codification activity is undertaken on a delegated basis, by the single services through their logistics organizations with the data being fed to a central catalogue database. The National Codification Bureau retains the policy, procedures, quality control and international transaction functions.

ALTERNATIVE DECENTRALISED CONCEPT

Codification activity is undertaken by a contractor, or contractors, or by another Bureau, to the National Bureau. The National Bureau maintains the central catalogue database and retains the policy, procedures, quality control and international transaction functions.

I will deal with the last concept first. Personally I can see no advantages with this concept. I cannot see how a contractor can undertake a task like codification, which is a small highly technical profession, as cost effectively as undertaking the codification activity in house. Commercial enterprises have a bottom line motivation which translates to maximized profits from minimum efforts. I would also doubt if they are motivated to provide the best information for the end user of the item of supply, the soldier, sailor or airman. I am well aware of codification work undertaken by contractors where the information provided to the contractor should have resulted in a Type 1 codification, but a Type 2 was provided. Minimum effort for maximum profit. It is an option, and should therefore be considered.

The other part of this option is for another Bureau to undertake the codification task on your behalf. This would obviously incur costs, but probably not as high as that encountered by using a contractor. The Defense culture motivation would be there, but you would be competing for codification resources against their own internal priorities.

There is also another consideration to be taken into account with this option and that is co-operation with national Defense industry. A national Bureau would be more likely to obtain information from a national manufacturer than would a contractor to the Bureau, or another Bureau. Readily obtaining information on an item of supply is the key to a successful codification. I will cover industry participation a little later on.

The second decentralized option was that of codification being undertaken by single services. This option has been used by a number of nations. It seems to operate better where the de-centralized functions are in the same geographical area. I wouldn't dare say where the decentralized functions are centralized. The principal

disadvantage of this option is that there is the potential for each of the contributing services to operate the rules to differing quality standards.

To illustrate, you may have one service that totally integrates the cataloguing function into its logistics support. No item may enter the inventory until it is properly codified. Minimum information requirements are well defined and applications for codification services will be rejected if the compulsory fields are not completed. Type 1 codifications are the common result.

The second service may endeavour to keep rigidly to the rules but they are remote from their parent logistics organization. Supporting information may be difficult to obtain and they are not involved at an early stage with capital purchases. Compromise codifications are therefore probable.

The third service has cataloguers sitting beside the purchasing staff. The philosophy of the service is that the cataloguers are only number crunchers. Type 2 codifications are the only ones generated. Conforms to the rules, but not to the spirit. Results in making it difficult to advance inter-service standardization and rationalization decisions.

The final option is the centralized option. Under this option all the codification activities being undertaken by the main national Bureau. This option has, as its principal advantage, that the quality of the codification product will be consistent. It also has a disadvantage in that all the knowledge of the NCS is contained within one organization and logisticians are prone to treat the Bureau as a specialist function, and providing the Bureau meets the defined objectives they are basically ignored.

What I am really saying is that each option has advantages and disadvantages. Overall there seems to be a move to the centralized concept.

INDUSTRY INVOLVEMENT

One of the most important aspects of establishing a Bureau is taking your national defense industry along with you. If you convince them of the potential marketing advantage of listing their items in national and international cross reference listings you will be well on the way to achieving this.

To illustrate I will use a New Zealand example. New Zealand's defense industry is very small. We had one contractor who had invented a maritime signal lamp that was superior to anything on the market at that time. They wanted to market the product to other nations' Navies. An NCB Project Officer was assigned to them, who designed their part numbering system and applied national stock numbers to all the components. The NCB produced a microfiche of the total product. When their marketers went international to sell the product they could produce all the firm's data on the product, together with a listing of the stock numbers. In their opinion the stock number listing greatly aided successful sales to other nations.

By involving industry from the start you will find, as time progresses, it easier to obtain technical information from them for future codification. It will also aid in determining those companies that you have to be cautious of and those who will be totally co-operative. It is also wise to advise them that the Contract Codification Clause will be included in all future orders and requisitions originating from defense sources. An example of this clause can be found in the ACodP-1, STANAG 4177. It places obligations on the manufacturers for the provision of information in support of codification. A very worthwhile clause in any supply contract.

There are two notes of caution I would add to industry participation. One is to constantly remind industry of their obligation to reveal the true manufacturer and part number of every component they provide. Some international manufacturers I have encountered will renumber parts they buy in to their own numbering system. This

hides the true identity of the part, which may well be an item manufactured to Mil Spec or DIN type specifications. They profit by charging higher prices for their items while at the same time limiting the provisioning service from finding suitable alternative sources of supply.

The second note is to watch warranty clauses when purchasing capital equipment. Some manufacturers warn that a warranty will be negated if any part other than theirs is found in a capital asset subject to warranty conditions. Remember whom we are there for, not industry, but our forces. In operational conditions the difference between life or death of our personnel may be the ability to fix a piece of equipment with a suitable substitute, acquired from your own services or the service of another nation you may be working with. Visibility of alternative parts is a primary consideration when on operations, specifically of items that are manufactured to International, National, Defense, or specific to Industry specifications.

NATIONAL FORCES PARTICIPATION

Last, but by no means least, is the need to have the Armed Forces of your nation on your side. Show them the benefits of having the NCS. A good example to look for is where each service has purchased the same capital item from the same manufacturer within the same timeframe. Had the different forces been operating a standardized materiel management language, they would have identified a purchase option of combining all their requirements into one order, obtaining economy of scale and gaining pricing advantages, plus the cataloguing exercise would only be done once. I am well aware of this situation. The only one who gained in this scenario was the manufacturer, who is probably still laughing all the way to the Bank. Just picture the amount of initial spares support he must have supplied and profited from.

It is very advisable to establish a legal and regulatory structure to mandate the use of the NCS within National Forces. Making the use of the NCS compulsory for all National Forces, to the exclusion of all other numbering systems, will maximize the benefits of the NCS.

I would suggest that you should negotiate an NCB Charter, which is approved and endorsed by your Government, supported by Defense Headquarters, but administered by the Bureau. The Charter should include a national commitment to the policies and principles of the NCS and should detail the mission statement, objectives and service levels required of the Bureau. When the initial enthusiasm for the Bureau is at its peak is the best time to get a positive response to such a Charter. Remember you only get one chance to get an ideal Bureau.

In addition service level agreements between the various National Forces and the Bureau is also advisable. These agreements will provide valuable information for planning the structure and composition of the Bureau.

That, in my opinion, concludes the big philosophical and political issues affecting the establishment of a National Codification Bureau and progressing towards sponsorship of the NATO Codification System. I would now like to move on to the "nuts and bolts" activities associated with developing a Bureau.

BASIC INFRASTRUCTURE EVOLUTION

After the preparatory work comes the hard work of developing the Bureau infrastructure. In New Zealand we have a television advertisement for the Pantene brand of hair shampoo and conditioner in which one of our top models, Rachel Hunter, says, "You too can have beautiful hair. It wont happen over night, but it will happen." We have relabeled this to be the Pantene Principle. I can assure you that developing the infrastructure of an NCB is not an overnight task.

In summary I feel the best advice to give is:

"Don't re-invent the wheel". Everything you are about to do has been done by someone else already. Remember the system has been working well for half a century. For instance you may wish to evaluate an existing computer based system rather than starting from scratch yourself. There are systems which have been developed by commercial software companies and by, or for, Bureaus in Australia, Czech Republic, Spain and Turkey. Using a PC based system is now a realizable possibility.

The NCS is family, and like any family there may well be times when there are differing opinions on subjects. In the final analysis how you progress in achieving a successful implementation of the NCS in your nation and the establishment of a Bureau is proportional to the contribution you make to the NCS as a whole, now and in the future. The timeframe for implementation will vary depending on the amount of money and resources available. Four years is probably a realistic goal.

Captain Zas, the Spanish Bureau Director, in his 1996 retirement letter, provides some excellent comments and guidance points on this subject. I would strongly recommend you acquire a copy of that letter, if you can. The letter was to all AC/135 members and was dated 25 May 1996.

I enjoyed my fourteen years in the NCB, especially my time as the Bureau Director. I have met a great number of dedicated NCS professionals in that time and still maintain a contact with a number of them. I believe the NCS family is in good heart to face the challenges of the new century. May all your expectations for the future be realized. I leave you with this thought from Sam Levenson:

"Learn from the mistakes of others, you can't possibly live long enough to make them all yourself."