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ABSTRACT

In 1983, I was assigned the responsibility
of developing a long range plan for my employer,
the Defense Technical Information Center (DTIC).
That plan, DTIC 2000 - A Corporate Plan for the
Future was published in July 1984. This paper
highlights the methodology used to develop the
plan. It also outlines an anticipated future
information environment in which the Center will
operate. Additionally, it displays the long
range Scientific and Technical Information
Program (STIP) goals which were developed for
DTIC in the planning process. Before developing
the plan, the group researched many planning and
management reference sources. Two of these
sources were particularly helpful in determining
the planning methodology used to develop DTIC
2000. One key reference was written by Peter
Drucker, Management: Tasks, Responsibilities,
Practices, a recognized authority in the field of
planning and management. The other key reference
was from an unexpected source and author, A
Christmas Carol, by Charles Dickens. Drucker's
advice to long range planners closely parallels
insights presented by Dickens in his Christmas
story. Both writers were helpful in the
development of the planning methodology.

INTRODUCTION

The Defense Technical Information Center
(DTIC) is a field activity of the Defense
Logistics Agency (DLA). DTIC's mission is to
provide centralized services in support of the
Department of Defense (DoD) Scientific and
Technical Information Program (STIP). It also
serves as the central activity within the
Department of Defense (DoD) for applying advanced
techniques and technologies to DoD STI systems
and for developing improvements in information
transfer services. One of DTIC's activities, in
common with most organizations, is planning for
the future.

In support of this activity DTIC's
Administrator established a Center-wide project

in July 1983 to develop a long range plan for
DTIC. The project called for the establishment
of a small multidiscipline group chaired by me
and had as its main objective the development of
a corporate plan for the Center.

In July 1984, the long range planning group
published DTIC 2000, A Corporate Plan for the
Future, Ref. 1. Since its publication, the plan
has received considerable interest and praise.
It has also caused some heated discussion within
the information community and has encouraged
other information centers to develop and publish
long-range plans of their own. Its readers have
found both its content and its developmental
methodology provocative.

The plan provides general long range
guidance to all DTIC managers from which they may
prepare plans applicable to their specific areas
of functional responsibility. It also describes
national, DoD, and technological environments
within which DTIC will most likely operate over
the next 15-20 years. Additionally, it relates
this future environment to long range goals for
DTIC.

Highlighted in the plan are the products
and services offered by DTIC, the personnel
who supply them, and the financial resources
available to meet mission needs.

METHODOLOGY

Long range planning is not new. Charles
Dickens, that preeminent long range planner,
expressed the basic principles of long range
planning (or strategic planning if you prefer) in
his classic text on planning entitled A Christmas
Carol, Ref. 2. Consider the scene toward the end
of the story where Scrooge stands with the Spirit
of Christmas Yet to Come among the graves. As the
spirit points down to one particular grave,
Scrooge says, "Before I draw nearer to that stone
to which you point, answer me one question. Are
these the shadows of the things that Will Be, or
are they shadows of the things that May Be only?"

Scrooge and Dickens recognize in this passage
the simple, but important, truth that it is not
possible to predict and plan for the future with
accuracy. Peter Drucker corraborated this
principle in his more recent text, Management:
Tasks, Responsibilities, Practices, Ref. 3, where
he states, "Strategic planning is not forecasting.
It is not masterminding the future. Any attempt
to do so is foolish; the future is unpredictable."
Thus, the first basic principle that guided the
DTIC planning team was that it could not predict
the future.

If Dickens and Drucker were right, then what
is the point of long range planning? Would the
DTIC planners be wasting time and energy on a
pointless exercise? Dickens, Ref. 2, speaking
through Scrooge, answers these questions, "Men's
courses will foreshadow certain ends, to which, if
persevered in, they must lead, but if the courses

be departed from the ends will change. Say it is thus with what you show me." Drucker, Ref. 3, is less eloquent but more direct, with his answers, "Strategic planning is necessary precisely because we cannot forecast. The question that faces the strategic decision-maker is not what his organization should do tomorrow. It is, "What do we have to do today to be ready for an uncertain tomorrow?" Therefore, the second basic principle guiding the DTIC plan was that a long range plan was necessary for the health of the organization to insure that DTIC took responsible near-term actions which would position DTIC to be viable in an uncertain future.

The words of Dickens and Drucker contributed significantly to the philosophy used during the development of DTIC's long range plan. The most important tangible product of the plan is a list of goals and subgoals that address Drucker's, Ref. 3, basic question of "What do we have to do today to be ready for an uncertain tomorrow?"

Dickens was again helpful to the planning group in developing its planning methodology. The planning steps taken by the group paralleled the methodology to which Dickens subjected Scrooge. Just as the Ghost of Christmas Past showed Scrooge previous events that had led him to his current condition, the group forced DTIC's management to review its past. Trend charts were developed that indicated how previous decisions had led DTIC to its current posture. Later in the story, the Ghost of Christmas Present, Ref. 2, had a simple message for Scrooge, "I am . . . the present, look upon me." Drucker, Ref. 3, had a similar, simple message, "But the work starts with the question, "What is our present business?" Although most managers believe they understand their current business condition, it was the group's experience from the planning exercise that DTIC managers had an incomplete mental picture of DTIC's current business posture.

The objective review of present business practices proved to be enlightening for DTIC management. The "present business condition" was arrived at through interviews and staff seminars, and an objective management reevaluation of DTIC's current posture and practices. Finally, DTIC confronted its own "Ghost of the Future" when the planning group talked with DTIC's user community, read the writings of futurists, and extended its collective mind and thoughts toward the future.

Dickens, Ref. 2, demonstrates great long range planning insight when he has Scrooge say, "Ghost of the Future, I fear you more than any specter I have seen. . . Will you speak to me?" It (the specter) gave no reply. In developing DTIC 2000, Ref. 1, the planning group discovered that most managers do not deal well with long range planning. They are so preoccupied with present problems that they rarely take time to consider the future. Most have been well trained to deal with past or present business certainties. Few have been educated to plan for the uncertain but inevitable future. It also became clear that the future never "speaks" to managers, it only points. The best that a

manager can do is to observe the trends and shadows and hope that he or she is interpreting those pointers correctly. Hence, basic principle three: "Management has no choice but to anticipate the future," Peter Drucker, Ref. 3. With some of the principles of Dickens and Drucker well in mind the planning group proceeded through the various steps of plan development.

Step 1:   Information Gathering

As is fitting in an organization whose primary mission is information storage and retrieval, the first phase of the information gathering process was a literature search of the DTIC collection for material on planning activities within other Defense components. The DTIC Technical Library was used as a source of texts by futurists and planners, and management theoreticians. Textual materials from other libraries and the private libraries of the group members were also used.

The second phase of the information gathering process concerned personal visits by the planning group. The group visited planners in all branches of the Services and a number of DoD components. Visits were also made to Federal organizations with missions similar to those of DTIC such as the National Library of Medicine and the National Technical Information Service. In addition to these organizations, the senior DTIC staff was interviewed by long range planning group members. These were indepth interviews covering a wide range of questions about the operations of the Center as a whole and in particular the area for which the staff member was responsible.

Concurrently with these two phases, the group conducted a "data gathering" operation. This involved the collection of data on DTIC's users, products, services, personnel and financial history, and statistical analysis of that data.

Information collected was used to review alternate planning methodologies, to review management theory on planning and the planning process, and to develop a picture of the social, economic, political, and technological factors that might shape the environment in which DTIC will be operating in the early years of the 21st century.

Step 2:   Draft of a Plan

The group analyzed the information obtained in step one and arrived at a consensus as to the general shape of the future. Then data on DTIC's current situation in respect to the budget, personnel, and the products and services provided to users were analyzed and statistical trends were projected for the period to be covered by the plan. These trends were analyzed further to highlight areas where action would be needed. Each group member then developed a section of the paper dealing with his/her specific area of expertise. Draft sections were combined to form a "strawman" which was circulated to DTIC's directors and senior staff for comment.

Step 3:   Staff Seminar on Planning Options

The planning group led a seminar for the

DTIC Administrator and senior staff in February 1984. At the seminar the options raised by the group were discussed in detail and a general consensus was reached on the direction that DTIC should pursue in the next 15-20 years. Directors also presented their projections for their individual directorates and offices. These presentations focused on the impacts of technology on the projects, services, and work force. In general, the seminar stressed the definition of goals rather than plans for accomplishing the goals.

Step 4: Final Preparation of the Plan

Following the staff seminar, a consolidated list of goals was developed and coordinated. Each of the previously written sections was reviewed and revised where necessary. A table of contents and additional sections were prepared along with an executive summary.

ANTICIPATED FUTURE OPERATING ENVIRONMENT

While the only long range certainty is uncertainty, there is a surprising degree of unanimity among futurists in their views of the factors that will shape our environment by the year 2000. America will be a post-industrial society where services play a larger role in the Gross National Product (GNP) than do products. This growth in services will not occur in the areas generally thought of as services, e.g., waiters, store clerks, but in areas associated with what John Naisbitt, in his book Megatrends, Ref. 4, calls "the information float." He sees a fairly static percentage of traditional service jobs but a big increase in the number of people who create, process, and distribute information.

Alvin Toffler describes a coming society that differs radically from the Industrial Age. His book, The Third Wave, Ref. 5, contrasts today with the future as: standardization giving way to customization, synchronization to flexitime, concentration to dispersal, maximization to appropriate scale, and centralization yielding to decentralization. He also sees this trend affecting the products produced by the work-force -- "the direction in which we are heading: products custom cut for individual users."

The Military Services

The Military futurists do not differ substantively from their civilian counterparts. They too see a society in which high-tech information transfer is an integral part. They also tend to agree that the next 15-20 years will not see a global war. Air Force 2000, Ref. 6, says, "the effects of such an event would be incalculable and it is thus not useful to consider them in (this) context. . . ." Although they do not see war, they do not see disarmament either. Rather, they envision a balance of power punctuated by local actions generally contested by "surrogates" for the major powers.

They see a marked reliance on sophisticated weapons. In part, they hope to use these "smart" weapon systems to compensate for the increasing manpower shortages in the 18-26 age bracket. The

military planners expect the DoD budget to grow but not at the same rate as it is currently experiencing. The research and development (R&D) portion of that budget should continue to show 2-3 percent real growth through the period, fueled in part by the need to modernize our equipment. A goodly portion of this R&D will be spent on automating the management of the Armed Forces. It is thought by some, however, that a greater emphasis will be put on the soft sciences such as research into the training of the volunteer force to operate and maintain these very sophisticated systems now being developed.

DoD Research and Development

A study by the National Science Foundation, Ref. 7, projects an R&D budget growth of 2.5-3 percent and spending ranges of $19.7 to $20.4 billion expressed in 1972 constant dollars. The study also predicts a further shift away from in-house laboratory performances toward performance of R&D by industry and academia. By 1990 they see the distribution of Federal R&D funding as: 51 percent industry, 27 percent in-house, 12 percent universities, 6 percent Federally funded R&D centers, and, 4 percent other non-profit institutions.

What This Means for DTIC

DTIC will be operating in a time when the sheer volume of available information makes it imperative that the wheat be separated from the chaff. As Naisbitt, Ref. 4, says, "With the coming of the information society, we have for the first time an economy based on a key resource that is not only renewable but self-generating. Running out of it is not a problem, but drowning in it is."

He sees the emphasis in information shifting from supply to selection. The sheer volume of information available will add a new dimension to the question of relevance versus recall. In this environment massive quantities of information, along with increased familiarity of the general population with direct computer access, and the shortening of time between the generation and consumption of information will have major impacts upon DTIC's acquisition, indexing, announcement, and distribution services and products. Users will expect real-time access to facts. Expert systems and support systems will be standard DoD management tasks. DTIC will have to supply factual information in both hard and soft sciences for researchers, planners, and managers who will operate in an environment where real-time access to customized results is the expected form in an "electronic information age."

DTIC's Long Range Goals

Moving from the overview of what the planning group did, how we went about gathering background information, and what others think about the future of information, we arrive at the summary of goals that DTIC has established for itself. DTIC 2000 provides the rationale for each of these goals in detail and gives a further breakdown of subgoals that are more specific and actionable.

1. DTIC will approach the future as an innovative organization.

2. DTIC will expand its user community.

3. DTIC will expand coverage of its data collections.

4. DTIC will be an information-oriented organization providing a wider range of technical information for DoD.

5. DTIC will be a user-oriented organization.

6. DTIC will identify the types and numbers of skills required to run DTIC in the future.

7. DTIC will identify positions that may be restructured, reduced, or eliminated because of new technologies.

8. DTIC will identify future training needs.

9. DTIC will seek improved administrative systems and programs to enhance its civilian personnel support services.

10. DTIC will strive to have its rate of increase in funding parallel the rate of increase in DoD RDT&E funding.

11. DTIC will determine how to do better with its funding.
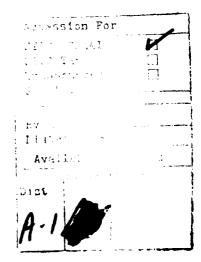
CONCLUSION

Although they worked in different times, Dickens and Drucker were consistent in their planning guidance as they stated the first three basic principles of long range planning. They understood that the past and present can "talk directly" to managers concerning business events that have taken place or are currently happening. However, they also knew that the future cannot "talk;" it can only point to possibilities based upon events that have taken place. It is up to planners and managers to exercise control over the present to influence their business futures. Dickens and Drucker are equally consistent when describing their fourth and final basic principle. Drucker, Ref. 3, states it well: "The best plan is only a plan, that is, good intentions unless it degenerates into work." Dickens, Ref. 2, understood this. Not only did Scrooge promise to "honor Christmas in my heart and try to keep it all the year," he worked at keeping his promise by taking immediate actions to change his behavior. He bought the prize turkey, and gave it to Bob Cratchit. He spoke cheerfully to strangers on the street. He visited his nephew's house and raised Bob Cratchit's salary. "He did it all and infinitely more."

DTIC is now positioning itself to honor the promises it has made to itself in its long range plan. Actions have been initiated, priorities have been established, and resources have been requested or allocated to accomplish each goal. The plan has "degenerated into Work!"

God Bless Us, Every One!

REFERENCES

1. R. Douglas, E. McCauley, A. Kuhn, J. Bell, K. Woolridge, DTIC 2000 a Corporate Plan for the Future, July 1984. Available for registered users from the Defense Technical Information Center Alexandria, VA 22304-6145, as AD-A-143-900. Also available from the National Technical Information Service, Springfield, VA.

2. Dickens, Charles. A Christmas Carol. Peter Fenelon Collier.

3. Drucker, Peter F., Management: Tasks, Responsibilities, Practices. New York: Harper & Row, 1974.

4. Naisbitt, John. Megatrends: Ten New Directions Transforming Our Lives. New York: Warner Books, 1982.

5. Toffler, Alvin. The Third Wave. New York: William Morrow and Company, Inc., 1980.

6. Department of the Air Force, Washington, DC. (S) Air Force 2000: Air Power Entering the 21st Century. Executive Summary (U). (1982).

7. National Science Foundation, Washington, DC. 1990 R&D Funding Projections. NSF-82-315, July 1982.

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