



Computerized Human Resource Systems and Organizational Downsizing

Richard R. Hicks¹

Assistant Professor of Management Information Systems,
College of Business, The University of Nevada Las Vegas.
and

John P. Kohl²

Professor of Management and Chair, the Department of Management,
College of Business, The University of Nevada Las Vegas.

- [Introduction](#)
 - [The United States Army and Downsizing/Rightsizing](#)
 - [Problem One : "Cross Leveling" During Time of Mobilization](#)
 - [Problem Two : Identifying Unique Skill for Assignments](#)
 - [Problem Three : Pinpointing Persons with Special Skills](#)
 - [Problem Four : Tracking Military Educational Progress](#)
 - [Computerized Skills Inventories and The "Chaplain Search Program"](#)
 - [Pilot Program](#)
 - [Conclusions and Recommendations](#)
-

Introduction

The past quarter century has been a time of rapid change for society as a whole, and for organizations in particular. Organizations world-wide are engaged in restructuring efforts to meet the challenges of the 1990s and beyond. One consequence of such efforts has been "downsizing" (or "rightsizing") to meet the challenges of both domestic and foreign competition. Such efforts have resulted in organizations which are "leaner and meaner" because of reductions in personnel at all organizational levels. One result of such efforts has been increased pressure on those who remain to do more with less -- and to do it both efficiently and effectively.

Accompanying this movement toward "rightsizing" has been a corresponding increase in the numbers and uses of computerized human resource information systems (HRIS). The wide-spread use of microcomputers and the development of HRIS allow both personnel specialists and line managers to do more with less, and to maximize the use of

people within organizations. In recent years, computer programmers and software firms have developed both generic and more specific programs to handle a wide range of personnel issues.

The authors were interested in the impact of HRIS on one large organization which is currently in the process of dramatic downsizing -- the United States Army. A variety of factors have contributed to the reduction force of the military, and even before Desert Shield/Desert Storm, the military had begun a period of retrenchment due to budgetary constraints and a changing world environment.

The 1980s saw a drastic lessening in potential hostilities world-wide as witnessed by the collapse of the Soviet Union. The reduction of external threats coupled with the financial realities of dramatic budget deficits at home resulted in decisions to reduce the numbers of personnel in both the active and reserve forces.

This article provides a case study of one branch in the United States Army Reserves, and the design, development, and the implementation of an HRIS during a time of downsizing. We will (1) provide an overview of the extent of the problem in the Army Reserve; (2) provide a brief overview of the nature and types of HRIS utilized in the civilian sector; (3) describe one actual system developed for a professional branch in the reserves; (4) provide suggestions to practicing managers on ways in which HRIS can be implemented and utilized by their organizations.



The United States Army and Downsizing/Rightsizing

The current trend in the United States military toward downsizing (or "reduction in force") was initiated in the mid-1980s. During this time, the world witnessed the collapse of the Soviet Union as a viable superpower, the fragmentation of the USSR into independent nations, and a continuing problem with federal budget deficits at home. Budget and military planners alike could no longer justify large numbers of troops deployed overseas in support of NATO, when in fact the threat justifying their existence no longer existed.

This reduction in the threat of war (and the requirement for massive mobilization of reserve forces) was coupled with fears of runaway budget deficits. A national debt in excess of \$5 trillion provided an opportunity for the American government to initiate reductions in military manpower.

The United States Army has been a major casualty of these efforts as it has declined from 785,000 active duty soldiers in the mid-1980s to a projected force level of 500,000 or less by the end of this decade. Corresponding reductions are also anticipated in the Reserve components.

The build-up for Desert Shield and Desert Storm was only a temporary blip in the downward trend which had already begun. However, the deployment of massive amounts of troops to Southwest Asia in 1991 focused attention on a number of problems

inherent in the military personnel system. Because of lessons learned, we now briefly recount the events of that deployment.

In 1990, Iraqi ground troops under Saddam Hussein invaded and overran Kuwait within a number of hours. His goal was to seize their oil fields, controlling approximately two thirds of the world's oil supply, and potentially to spread desolation to the entire Arab world. Desert Shield/Desert Storm were our Allies' response to that action, and resulted in a coalition of United Nations forces which would eventually reach more than 500,000 soldiers.

The United States Army Reserve and Army National Guard were utilized extensively in that military operation. In some instances, entire units were activated in order to supplement active forces. In other cases, individual branches of the military were called upon to provide qualified and available personnel to meet this national crisis. Some of the reservists so activated were members of the United States Army Chaplaincy.

The Chaplaincy is unlike other branches in that Chaplains must not only meet military qualifications, but must also be approved by their respective denominations or religious groups. Prospective chaplains must obtain and maintain what is referred to as an "ecclesiastical endorsement" from their sponsoring church.

"Ecclesiastical endorsement" is an agreement between religious denominations and the military that religious personnel are indeed endorsed by their separate faith groups to represent them. As a result of problems encountered during Desert Shield/ Desert Storm, coupled with the experiences already in place of a much smaller military presence for both active and reserve forces, a number of issues (depicted in Table 1) arose.

Table One

Issues Involved in Downsizing

- 1. Cross leveling requirements during mobilization**
- 2. Identifying unique skills for special assignments**
- 3. Quickly pinpointing persons possessing special skills**
- 4. Tracking educational progress within the military**



Problem One: "Cross Leveling" During Time of Mobilization

Reserve forces in the United States face different types of problems than their active duty counterparts. During peacetime many of these problems are either not readily evident, or may create only minor difficulties. However, when forces are mobilized many of these issues become huge problems which must be resolved.

We say "must be resolved" because mobilization for war brings with it the need to

properly assign reserve forces to active duty missions. Chaplains in both the United States Army Reserves and Army National Guard refer to this process as "cross leveling" For reservists entering active duty, "cross leveling" involves two distinct issues: (1) religious affiliation, and (2) military rank.

Religion

Unlike active forces, many reserve units are more homogeneous than heterogeneous. This is particularly true in the area of religion. This unique characteristic distinguishes many reserve forces from their active duty counterparts. In the reserves, for example, a large percentage of chaplains in Utah would likely be members of the Church of Jesus Christ of the Later Day Saints ("LDS" Or "Mormon") while units from Boston could be more heavily Roman Catholic. Likewise, units in many southern states would reflect more Southern Baptists. Units as well as chaplains serving those units typically reflect the geographical area of which they are a part.

During peacetime, such concentration of religious personnel in the reserves is non-problematic. Once reserve forces are activated, however, such concentration of religious personnel creates both a problem and an opportunity. Specialized chaplains needed elsewhere in order to serve the wider needs of the Army could be concentrated in a smaller Army unit where they perform only limited service to the wider military.

Such concentrations of religious groups may provide a valuable resource for the active force which experiences shortages of certain religious groups such as Roman Catholic, Orthodox Catholics, and Jewish Chaplains. In the event of mobilization reserve chaplains from these specialty religions may suddenly become available for service but require a plan for identifying and distributing personnel to areas in need of such coverages.

This issue becomes especially problematic for religious groups with limited representation in the active force. It could, for example, be necessary to reallocate a Jewish chaplain from his/her New York City unit to a Division, Corps, or even Army headquarters in order to allow the Rabbi to expand his/her ministry. The same is true of other specific religious groups where the total number of active duty chaplains is extremely limited.

A secondary issue involving "cross leveling" involves rank structures of chaplains. Because active and reserve forces in the United States Army have different promotion criteria, the result may be a rank structure which (may) create problems, Mobilization requires reassignment, or "cross leveling" of personnel to obtain both proper rank structures and religious representation.



Problem Two: Identifying Unique Skills for Assignments

Army reserve forces are divided into two components: the United States Army Reserves (USAR), and the Army National Guard (ARNG). The USAR is under federal

government control (both in peace and war); however, the National Guard Bureau is directed by the governors of respective states unless called to active duty under a presidential order.

United States Army Reserve Chaplains are divided into three separate categories depicted in Table 2.

Table 2
Categories of Reserve Chaplains

Troop Program Unit(TPU) -- Assigned to a drilling unit which meets one weekend per month (minimum) and attends two weeks of annual training with that unit.

Individual Mobilization Augmentee (IMA) -- Assigned to an installation or activity and attends two weeks of annual training at that installation.

Individual Ready Reserve (IRR) -- Not assigned to any specific unit or organization. Individuals in the IRR provide a general pool of manpower for utilization as needed during wartime. May or may not attend two weeks of annual training at an installation.

Virtually all TPU chaplains serve units within the geographic area in which they live . When civilian responsibilities result in transfer to another state or area of the country, individuals leave their previous units and seek another assignment.

Unlike TPU personnel, IMAs and IRRs generally do not work in their geographical locations. IMAs are generally chaplains with specialized skills that are assigned to a special position which utilizes their skills during peacetime, and which prepares them to work within that position during mobilization for war. Their annual training each year is at their wartime unit of assignment with the time in between frequently being utilized for special assignments or projects relating to their mobilization assignment. The IRR consists of a pool of individuals who do not drill regularly, and who may or may not complete two weeks of annual training.

In recent years, the number of IMAs has grown dramatically, and now comprises more than 10 percent of all Reserve chaplains. There has been a rational basis for this phenomenon. Soldiers in the IRR frequently do little if any training. As a result, although these soldiers are a ready reserve which might be utilized in the event of mobilization, their level of readiness may not be at the highest level of training. On the other extreme, assigning all personnel to reserve units is costly, frequently resulting in many times the annual cost of other reservists.

The IMA program provides a middle ground -- soldiers must attend two weeks of annual training with pay, but are utilized in the interim for specific types of special assignments without pay. The cost of such personnel is far less than for soldiers assigned to units, and the training is far greater than for soldiers assigned to the IRR. Thus, IMA positions frequently carry with them special assignments and projects contributing to the readiness of the active force, but with little or no cost to the government.

Typical IMA assignments could include assignment to a hospital units (where a chaplain requires special training), to military schools (where background and experience may prove useful), or to the Pentagon. Each of these examples involve situations where it is useful to access information concerning any specialized training, education, or skills which soldiers may possess.

In a period of shrinking budgets and fewer personnel, it becomes increasingly important to quickly identify and properly assign individuals with specific skills, or possessing unique demographic characteristics (e.g., "who is available with a Ph.D., who is a Lieutenant Colonel, who has completed military educational requirements that we can identify for an assignment at the US Army Chaplains' School as an instructor?")



Problem Three : Pinpointing Persons with Special Skills

In both peacetime and war, requirements frequently result in the need to identify individuals with a unique combination of skills, education, religious group, and rank. For example, in the post-Soviet era, many of the former eastern block countries may consider the re-establishment of chaplains within their military. If and when, for example, a delegation of foreign clergy come to the United States to discuss such issues, it is useful to be able to identify a chaplain of the same religion, national origin group, and proper rank to meet with them. A computerized skills inventory would allow accessing a data base of all chaplains and quickly identify the set of reservists with the unique skills required for such a short-term assignment.

Many members of the Army Reserves possess combinations of unique military and civilian skills and education, as well as civilian occupations and backgrounds which may prove to be of great use to the active component. As the Army continues to downsize, it will become increasingly important to maximize the skills of reservists throughout the entire system.



Problem Four : Tracking Military Educational Progress

A fourth problem unique to reservists involves tracking the level of military education completed. For USAR/ARNG Chaplains, specific courses of instruction must be completed at various discrete points in time in order to make an individual eligible for promotion to the next higher grade.

For promotion to major, for example, an individual must have completed an Officer Advanced Course. It is necessary to monitor individual chaplains at various points of their career to assure that they meet military standards of eligibility for promotion due to their having successfully completed the appropriate educational level.

This information is required not only for promotion boards, but to assure that in the event of mobilization individual chaplains are qualified to perform current or future assignments. This issue is especially problematic for Troop Program Units where a majority of newer and younger chaplains (generally of lower rank) may find themselves assigned for the first 10 to 15 years of their military career. It is at this level that mobilization is most likely to occur, making it essential that chaplains of these units meet these educational requirements. A method for screening these requirements is needed.



Computerized Skills Inventories and the "Chaplain Search Program"

Having identified these four distinct problem areas, the authors first investigated a variety of commercial programs which are available. One author teaches general management and human resource management courses, and had obtained numerous HRIS and other packages for classroom demonstration. One program entailed an elaborate HRIS system for micro computers and was produced by a Florida firm.

This program contains extensive detail not only on skills and educational levels, but on positions held in the organization, detailed information about spouse and children, etc. Unfortunately, as with many other generic programs, this program contained too much information in some areas -- and not enough in others.

The apparent lack of suitability of commercial products resulted in a decision to develop a program aimed at meeting the needs previously discussed. In fall 1991, one of the authors was assigned to teach an MIS course in the dBASE programming language. A portion of this course involved assigning projects which students could work on as a "hands on" project. A primary purpose of this advanced course is not only to teach the technical aspects of programming, but to convey to students the real problem of properly communicating and understanding a design and programming problem.

The two authors discussed utilizing this assignment to develop a pilot program for the Army Reserves. Two students were tasked to develop a dBASE program capable of searching a data base for solving the

problems outlined in Figure 1. At the end of the semester, the pilot program proved to be only that -- a pilot program. It worked in an extremely limited way and failed to completely capture the types of data which were envisioned by the instructors.

The following year the course was offered again, and the two instructors decided to try once more. At this point both were committed to complete the program in order to provide a useable product for the Army Reserve. This time two groups were assigned to the project. By the end of the semester one group had developed a crude working program in dBASE.

Although the semester had concluded (and students had obtained a grade!) the two students decided to continue their efforts in developing and refining the program for

possible future commercial use. Concurrently, the instructor worked on a compiled version of the program in the Clipper environment. Instructors and students worked closely together in order to eventually obtain a useable product.



Pilot Program

At the conclusion of over a year of developmental efforts, two programs had been successfully developed (one compiled in Clipper, and one compiled in FoxPro) . Following demonstration of both versions to the Army, the program compiled in Clipper was chosen as the preferred version. Although typical of many search programs, these are unique to the needs of chaplains.

In addition, the authors included some unique twists in the program, particularly in the area(s) of screening for multiple skills of personnel. For example, not only might it be necessary to search for a chaplain who possesses an MBA -- it may be acceptable to have either an MBA or a Master's degree in Accounting. Unlike other commercial products, this program allows the user to install a number of additional constraints as well, and permits a search on either/or of multiple criteria of literally thousands of USAR, ARNG, and retired reserve chaplains.

The development of the Chaplain Search Program provides a successful solution to all of the problems outlined in Table 1. For example, in the event that a group of clergy from overseas visits an installation, the program will identify a priest who speaks German, or for a Lieutenant Colonel who has a Ph.D. in Business Administration. The uses of the Chaplain Search Program are virtually unlimited.



Conclusions and Recommendations

Lessons from this teaching and learning experience are applicable to other branches of the military and to a variety of organizations in the civilian sector.

First, downsizing is a reality for a wide range of organizations. Industrial America is in the midst of an epidemic aimed at reducing personnel. We believe that the 1990s will be a decade characterized as "leaner and meaner" and with fewer mid- and- upper level managers. Organizations will need to become more creative in meeting both the human resource needs of the organization as well as the strategic objectives of the firm.

Doing "more with less" requires maximizing the potential which already exists within organizations. We have provided a case study of an organization engaged in downsizing, and one method which has been devised to assist them in a time of declining resources. Such a computerized HRIS program achieves precisely this objective. It is cost effective, and provides managers with an opportunity to maximize the talents of their employees. As organizations right size, such a requirement becomes

increasingly important. Microcomputers make such programs both simple and easy to use, and have provided a cost effective method for storing and retrieving data. Such systems can provide assistance to a wide range of organizations, and have virtually unlimited application for a wide range of operations.

Health care providers could, for example, institute such a skills search to identify primary and backup physicians, nurses, and technicians for specialized surgical teams. Centralized data bases at law firms could utilize such programs to identify primary and backup personnel for dealing with a wide variety of legal issues. Engineering firms engaged in overseas operations could utilize such programs to identify education, specialty degrees, and language fluency for assignments.

Firms should investigate commercial versions versus developmental costs for their own programs. In this study, the two students engaged in developing the program have established their own programming business in which they hope to develop specialized uses for these materials within both the profit and non-profit sectors. Even for smaller companies with such a specialized need, development of a company or industry specific program will not be prohibitive.

The 1990s promises to be a decade filled with problems -- and opportunities. The HRIS described in this article will provide one creative answer to the problems encountered by most organizations - whether they be large or small.

As more and more unique requirements are placed upon the reserve components at the same time that fewer and fewer resources are available to the active forces, it becomes increasingly important to identify individuals with needed skills quickly and easily. Doing less would be a waste of already scarce resources.

BIBLIOGRAPHY

Anonymous. "Group Benefits." *Systems Management* 23 (June 1995): 56 - 60.

Barclay, Lizabeth A. and Alan R. Bass. "Get the Most from Recruitment Efforts." *HR Magazine* 39 (June 1994): 70 - 72.

Fields, Randall K. "Leveraging Information Technology Can Increase Professionalism." *Human Resources Professional* 9 (January/February 1996): 29 - 32.

Gomez-Mejia, Luis R., and David B. Balkin, and Robert L. Cardy. *Managing Human Resources* (Second Edition). New Jersey: Prentice Hall, 1995.

Martinez, Michelle Neely. "Technology is Vital for HR Info." *HR Magazine* 40 (March 1995): 16.

Martinsons, Maris G. "Benchmarking Human Resource Information Systems in Canada and Hong Kong." *Information & Management* 26 (June 1994): 305 - 316.

Connell, Sandra E. "A Trio of Books for Summer Reading." HR Magazine 39 (June 1994): 37 - 40.

Connell, Sandra E. "Can You Still Say "It's Only Payroll"?" HR Magazine 40 (January 1995): 33-37.

Sobkowiak, Roger T., and Ronald E. LeBleu. "Repositioning HR Information Systems -- Empowering Employees." Information Systems Management 13 (Winter 1996): 62 - 64.

Wojcik, Joanne. "Employers Integrating Computer Systems for Optimum Information." Business Insurance 28:12 (March 21, 1994): 3, 12+.



[AU Intranet](#), Assumption University, Thailand
Tel.3004543 ext.1315, 3004886