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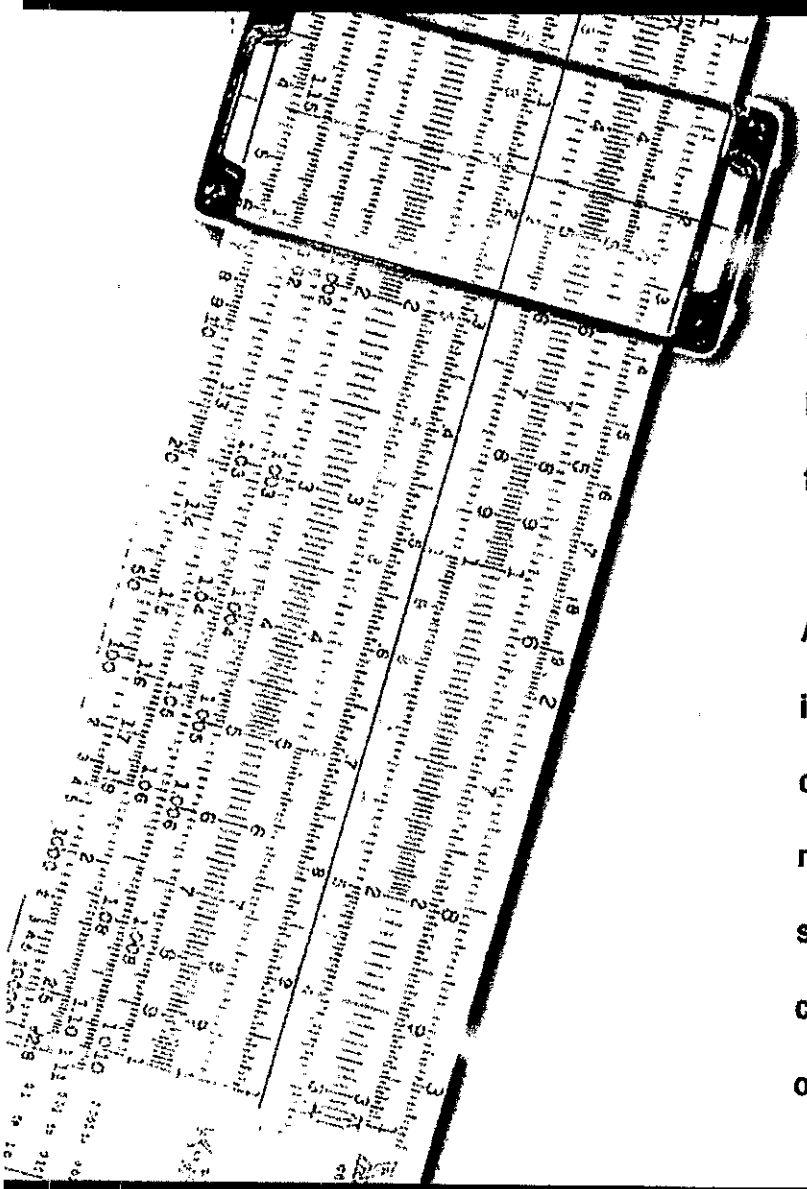
SECURITY newsletter

THE RETIREMENT OF BYEMAN



From the spark of genius comes history-shaping innovation. Our greatest achievements have been in our ability to conceive and implement revolutionary solutions from the simplest of tools.

As our history evolves, the spirit of innovation challenges us to embrace change, realize our potential, and meet the expanding needs of national security. The retirement of the BYE control system is one more example of how innovation can shape history.

(U) From *the* FRONT OFFICE

by Ken Renshaw

(C) So here we are, at the end of an era. Within months, the BYEMAN control system will be retired. This is a watershed moment for the NRO and NRO Security.

(C) Those of you who have worked the bulk of your careers with BYEMAN access will likely feel a sense of nostalgia in coming months. The control system retirement might stir emotions similar to those present at the retirement of a close colleague. You will think about programs and people and places you've known over the years. You'll wonder about change and whether or not things change for the better.

(~~U//FOUO~~) NRO Security does not take the control system retirement lightly. A great many hours have gone into working this issue. For the past year, the Retirement Tiger Team, led by [redacted] and comprised of [redacted] have been going at this full time. In February, a call went out for volunteers and subsequently eight retirement action teams were formed to analyze and assess the impact of implementing control system change upon information technology, personnel security, training, classification, infrastructure, [redacted] physical security, and authorities/policies; much progress has been made. I laud the efforts of the Tiger Team and others who have volunteered time to participate in the action teams.

(U) Given the degree to which this topic has been considered, discussed, and argued, we in NRO Security are confident the proposed control system changes slated to take effect 90 days after DCI signature and Congressional notification are appropriate and will provide an effective architecture for securing NRO information.

(U) The reality is, emerging demands for NRO information require us to reflect and act upon improved methods of implementing security. An excellent example of the changed paradigm under which we operate is the increasing call for horizontal integration across the intelligence and defense communities. Not so long ago, the NRO, like every other intelligence agency, was fighting the Cold War. Warfighter support was not the priority it is today.

(~~U//FOUO~~) The point is, times change. I have said before, and continue to say, that good security is proactive, flexible, and is designed to meet program needs. Therefore, to say BYE Retirement is due, at least in part, to the demands of a new era is a statement of fact that should not be construed quantitatively.

Control system retirement might stir emotions similar to those present at the retirement of a close colleague

(~~U//FOUO~~) Recently, I was reading through some of the oral history compiled by the Office for the Study of National Reconnaissance (formerly the Historian's Office). I was not surprised by comments from [redacted] (CIA, ret.) who worked on early programs, including SR-71. [redacted] said: "The success of those programs in the beginning was the philosophy that you designed the security to fit the program." He added that the attitude of security was to ask of program offices: "What do you need to do to build a program and how can we make it secure?"

(C) As we move forward with control system retirement, we recognize the impact of change and will work to make it as seamless as possible. My sense is that the initial shock of retiring BYEMAN has passed and, you, the security professionals are ready to hit the ground running when we obtain implementation approval. Though the BYEMAN control system is being retired, the underlying reality is this: Our fundamental approach to security has not changed.

(C) The RETIREMENT of BYEMAN

(C) After forty-two years, during which time the very word became synonymous for NRO data, the BYEMAN control system is being retired.

(C) NRO Security has been diligently working this issue for over a year now. A Tiger Team was formed, a SOCOMM sent out, plans written and re-written, briefings given . . . the feedback has been varied—some of the workforce doesn't want to see BYE go. But the reality is, the requirements of a new era dictate change and the fact that BYEMAN equals NRO, in the minds of many, is one reason the system is being retired.

Origins . . .

(U) Post WWII, with the advent of nuclear weapons, long-range bombers and ballistic missiles, the reconnaissance needs of the nation had evolved dramatically. President Eisenhower understood this need and authorized development of over-head reconnaissance capability to include SIGINT and IMINT satellites.

(C) The first programs, GRAB and CORONA, progressed in fits and starts—both satellite and launch technologies were new science then. Ultimately, each was successful. Both programs embraced streamlined management and security models that formed the basis for the BYEMAN system. [redacted] an early Security Director of OXCART (SR-71) and CORONA programs, recalled in a 1993 interview: "The success of those programs in the beginning was the philosophy that you designed the security to fit the program. You didn't say, 'this is what the security system is, now go ahead and build it.' You said, 'what do you need to build a program and how can we make it secure'?"

(U) Secretary of Defense McNamara signed the National Reconnaissance Office into being in 1962. The NRO was established to administer the National Reconnaissance Program (NRP). These programs remained under parent organization supervision, hence the division of the NRO into Programs A, B, C & D. Although each program had a separate hierarchy and reporting structure, the security approach was based on best practices from the covert CIA and DoD programs of the era.

(C) The BYEMAN control system was put in place in 1961. "BYEMAN was a formalization of the way things were being done. It was a common sense approach," recalls [redacted] (CIA, ret.).

(C) Also in 1962, the NRO began publishing NRP Directives establishing basic BYEMAN security policy and procedures. On 22 April 1963, the first BYEMAN Control System Manual was published.

(C) In interviews conducted by the Historian's Office back in 1993, many security veterans spoke of a BYEMAN culture that grew up around the programs. Part of this culture resulted from the newness of the endeavor and the problem solving spirit that was required of security professionals to help build successful programs.

what's in a name?

(C) There is no intrigue behind the selection of the word BYEMAN as the NRO control system designator. Back in 1961, a gentleman named [redacted] who worked in CIA's Special Security Center, was assigned to be security advisor for the nascent NRO. At the time, the NRO had no overarching security system. As the story goes, [redacted] was given a list of three or four words to choose from the CIA codeword file. BYEMAN, defined as "a man who toils underground," was his choice. There is no record of whether he knew the word's meaning and, if so, whether or not the definition influenced his decision.

~~(U//FOUO)~~ Back in the 60's, the NRO was still a small community. Evidence of this fact comes in a 1993 interview with Program A veteran [redacted] In that interview, [redacted] recalled that the first SP-3 access roster was actually a shoebox full of 3x5 cards.

Evolution...

(U) Flash forward thirty years and the NRO's mission focus had changed considerably. The primary NRO customer was no longer just the policy community as in the 60's. By the mid-80's, the realization that NRO assets could be employed for purposes other than intelligence gathering resulted in an increasing number of national customers such as the Federal Emergency Management Agency and National Oceanographic and Atmospheric Association. The U.S. Forest Service uses satellite images in fighting wildfires.

~~(U//FOUO)~~ The evolution of technology—computers, cell phones, satellites—in the late 70's and through the 80's required security to adjust also. Infosec, or information security, was becoming a priority and there were OPSEC concerns as well. [redacted] (Col, USAF, ret.) puts a fine point on the issue: "The recognition of advances in technology caused people to observe that if you can do this in commercial technology, imagine what you could do from a satellite if you applied advanced technology."

(C) By 1988, the decision was made to create a BYEMAN Security Center (BSC) based upon a study of the viability of restructuring security commissioned by then DNRO Aldridge. The BSC opened its doors in August 1990 with the intention of consolidating BYEMAN processes and procedures. At this time, the BYEMAN control system had grown to encompass 400 Secure Compartmented Information Facilities (SCIFs) and a briefed workforce of [redacted] The NRO was doing business with 175 corporate partners.

(U) Through the 90's, the military became the NRO's primary customer. The Gulf War had enormous impact on the organization. By 1992, military commanders realized the value of NRO information on the battlefield and were demanding national asset support during the conduct of Desert Storm operations. The trend continues. Also in 1992, the 'fact of' the NRO was openly acknowledged.

(C) Security readily adapted to the change. In 1993, the many compartments and studies that comprised BYEMAN were consolidated into a single, large compartment. To better support the warfighter, much BYEMAN information was transitioned to TALENT-KEYHOLE. Since 1995, there has been a concerted effort to this end. To date, approximately 85% of BYE data has been moved to other classifications. In the intervening years, NRO Security has become increasingly skeptical of control system effectiveness. Currently, close to [redacted] individuals are briefed BYEMAN.

(C) Today, NRO Security is responding to the call for increased information sharing across organizational lines. In the aftermath of September 11, 2001, the customer for NRO information expanded again to include civilian agencies such as the FBI and Department of Homeland Security. The demand for greater information sharing, however, creates a challenge for employing security methodology. NRO Security is facilitating horizontal integration by removing what many customers have long presumed was an institutional barrier—BYEMAN—and creating a new security architecture designed to protect the exquisite and unique NRO information. The reality is joint programs are now the norm and the NRO must be responsive to customer requirements and perceptions. By retiring BYEMAN, the NRO can maximize the data that needs to be shared within the IC and DoD, and will reduce the perception that vital information is being withheld from customers.

A hard look...

(C) Charged with taking a hard look at the NRO security architecture [redacted] Chief, OS Policy Branch, formed a Tiger Team to evaluate the issue and make recommendations as to how NRO Security can best respond to the current IC environment. Discussions with security professionals throughout the enterprise led to the conclusion that the protection mechanisms of the BYEMAN control system needed a system redesign to enable the secure development and acquisition of future sources and methods.

(C) After months of work sequestered in the basement of Tower 4, the Tiger Team: [redacted] and [redacted] completed and submitted a plan for comment to industry and stakeholders. As of June, internal coordination of the BYEMAN Retirement Plan had been completed. On 9 August, the package requesting retirement of BYEMAN

control system designators

(U) The TALENT control system was created in 1956 to protect U-2 derived intelligence products. Keep in mind the U-2 became operational in June 1956. The first overflight of the Soviet Union took place in July 1956. The U-2 acquisition effort was protected under the codeword AQUATONE (later IDEALIST). TALENT served to limit need-to-know and compartment actual intelligence product. KEYHOLE was created as a subcompartment to TALENT to protect the early satellite reconnaissance product. In 1960, President Eisenhower issued an executive order creating the TK system.

was sent from DNRO Teets to the Community Management Staff and ultimately will go to the DCI for signature. For now, the anticipated retirement implementation is the end of the 2004 calendar year.

(C) The first phase of implementation — communicating the plan — has begun. The expectation is that full implementation of the control system change will take several months. "We do not expect change at the flip of a switch," says [redacted] Simply, the plan calls for transitioning remaining BYEMAN information into TK and establishing a new, significantly smaller Sensitive Compartmented Information system to be called RESERVE that will encompass current BYEMAN Special Handling compartments.

(U) To ease the transition, eight retirement action teams comprised of security professionals throughout Westfields have been examining the impact of control system retirement upon information technology, personnel security, physical security, classification, infrastructure, [redacted] authorities/policies, and training.

(U) A comment that has come up repeatedly during the retirement plan vetting process laments the perceived loss of control over NRO information. NRO Security disagrees with this assessment. The NRO is not losing control over NRO data. A driving factor behind control system retirement is to make NRO data more accessible to mission partners and users in TK. In fact, the proposed architecture ensures unique, exquisite new sources and methods are adequately protected while under development and acquisition.

(U) The goal is to draw a distinct line between how future information is protected and how current program data is protected.

(U) By retaining need-to-know authority for information restricted within TK, a Program Manager gains significant control over the NRO data that he/she wants to keep from general dissemination within TK. This is a risk management approach enabling the NRO to exercise control over dissemination of NRO data as necessary to balance protection and sharing.

The time has come...

(C) So, after four decades the time has come to retire the control system. Back in 1993, and in more recent interviews as well, Security veterans foresaw this change. Most felt retirement of BYEMAN inevitable given the circumstance of the NRO's increasing role in our national security apparatus.

(C) The increasing number of customers for NRO information is indicative of the success the organization has enjoyed the past 42 years. Similarly, the retirement of the BYEMAN control system does not represent a loss of control over the most precious nuggets of data but, rather, the necessary solution for a successful organization to facilitate an ever growing number of requirements.

(U) NRO Security is committed to protecting NRO information in a manner commensurate with practices honed since 1961.

(C) Though BYEMAN will soon be retired, NRO security remains dedicated to protecting NRO information in a manner that ensures mission success.

Contact Us...

(U) The NRO Security Newsletter is published by the Security Education Division of NRO Security. For requests, questions, or content submission, please call (703) [redacted] (commercial) or [redacted] (secure). Please direct all distribution questions to (703) [redacted] (commercial) or [redacted] (secure).

(U) In Brief

(U) Read the One Book

(U) The Security Policy Branch is developing a publication outlining the many facets of control system retirement for distribution throughout the enterprise. This document, currently being called the 'one book,' is expected to be the primary resource for security professionals seeking a quick reference guide and will be available in both soft and hard copy.

(U) The Security Education Division will distribute hard copy versions to all Programs Security Officers (PSOs). The document will be available in soft copy on the on the BYEMAN Retirement website.

(U) Posters

~~(C)~~ Soon, after DCI Signature, security offices should have received the full sized BYEMAN retirement campaign posters for display throughout your site. If you or your site does not receive posters please contact [redacted] at [redacted] (secure).

(U) Security Education to Offer Briefing Packages

(U) In an effort to assist PSOs communicate the details and impact of control system retirement, the Security Education Division will disseminate packages containing a variety of awareness products. Of particular interest to PSOs is the inclusion of briefing slides and briefing guide to assist PSOs in presenting retirement information to constituents. SED plans to distribute these packages in conjunction with DCI signature.

(U) FISD Open House

(U) Operating under the theory that the easiest way to a PSO's heart is through their stomach, the Facilities and Information Security Division (F&ISD) hosted a reception for PSOs featuring a full array of refreshments.

(U) The reception was held to provide PSOs with easy access to F&ISD personnel prior to the F&ISD offsite from 14-16 July. Representatives from all offices of F&ISD, including the Industrial Certification Branch, Vulnerability Assessment Program, Government Security Branch, Technical Security Branch, plus the Management and Administrative Staffs were also in attendance.

~~(S)~~ [redacted]

(U) If attendance is any indicator, the reception was quite a success with PSOs. All Program Security Offices were represented at the reception and PSOs seemed pleased to have an opportunity to discuss current projects, as well as socialize with their F&ISD colleagues.

(U) SMS Update

(U) The Security Management System (SMS) team is halfway through Phase II of the project: the creation of a working prototype, which will be mocked up HTML pages connected to live data.

(U) SMS is a major Director of Security initiative; the goal of which is to capture, organize, manage, and leverage the organizational knowledge within NRO Security for achieving mission and operational success.

(U) The intent is to make the collective knowledge of NRO Security available for day-to-day operational, strategic, and risk management decisions in an easily accessible web-based tool.

(U) In creating this tool, the team's first task was not the development of the technology but, rather, to capture the right knowledge. The framework for determining what knowledge to leverage began with consideration of how people work together, the type of work they do, and how the work is accomplished.

(U) As for the technology piece, team members state the "challenge lies in selecting the appropriate tools to support collaboration and workflow in a way that is natural and does not change the management and organizational infrastructure."

(U) The SMS approach is based on the assumption that users must be involved in the process to ensure the tool meets their needs. The prototype is expected to debut in January 2005.

(U) Multi-Use Switches

(U) The CIO has issued NRO Instruction 60-8-2 which outlines the process for approving the integration of multi-use switches with NRO Information Systems (IS).

(U) Multi-use switches enable the use of a single keyboard, mouse, or video monitor between two or more systems. The Instruction also provides a list of pre-approved devices.