

~~TOP SECRET~~

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

CRYPTOLOG

APRIL 1975



P.L. 86-36

A COMM CHANGE AT RAMASUN STATION.....	[REDACTED]	1
A GUIDE TO CENTRAL INFORMATION.....	[REDACTED]	3
ORAL REPORTING: A NEW CHALLENGE FOR NSA....	[REDACTED]	4
COVERTERMS.....	Vera Ruth Filby	7
THE USES OF ELINT.....	[REDACTED]	15
LANGUAGE IN THE NEWS.....	Emery Tetrault	17
Answer to CAN YOU MAKE OUT THE NAME?.....	[REDACTED]	18
PSYCHING THE CODE CLERK.....	L.D. Callimahos	19
LETTERS TO THE EDITOR.....		21

~~THIS DOCUMENT CONTAINS CODEWORD MATERIAL~~

~~TOP SECRET~~

~~TOP SECRET~~

CRYPTOLOG

Published Monthly by P1, Techniques and Standards,
for the Personnel of Operations

VOL. II, No. 4

APRIL 1975

PUBLISHER

WILLIAM LUTWINIAK

BOARD OF EDITORS

Editor in Chief.....	Doris Miller (5642s)	
Collection.....	<input type="text"/> (3571s)	P.L. 86-36
Cryptanalysis.....	<input type="text"/> (8025s)	
Language.....	Emery W. Tetrault (5236s)	
Machine Support.....	<input type="text"/> (3321s)	
Special Research.....	Vera R. Filby (7119s)	

For individual subscriptions
send
name and organizational designator
to: CRYPTOLOG, P1

~~TOP SECRET~~

~~SECRET SPOKE~~

A Comm Change at Ramasun Station

The document below originally appeared as part of the Weekly Operations Review for the week 9-16 January at USM-7 in Udorn, Thailand. It was an open letter from the Officer in Charge of the Collection Management Branch to all personnel at Ramasun Station, just after a hectic day involving one communications change [redacted] by Cambodian guerrillas. We reprint it here, with the author's permission, for the vivid glimpse it provides into the working of a field station at such a time.

EO 1.4.(c)
P.L. 86-36

For those unfamiliar with the context, the following short glossary will be helpful: [redacted]

[redacted] ASB, CMB, DFSB--Analytic Support Branch, Collection Management Branch, Direction Finding Support Branch; TI--Traffic Identification; KSR--a keyboard on line to a computer; CATWALK--an in-station mechanized target identification system; ASRP--Airborne SIGINT Reconnaissance Platform; CEG--trigraph for Cambodian Guerrilla; SOT--Signal Operating Instructions; CIL, OSB, IMF--Central Intelligence Library, Operations Support Branch, Intercept Maintenance Facility.

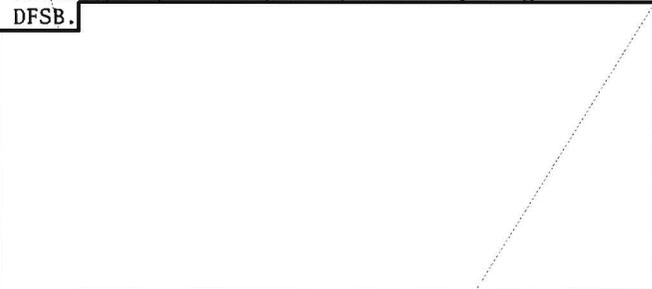
P.L. 86-36
EO 1.4.(c)

[redacted] Though this change was expected and accurately predicted by ASB, the actual degree and seriousness of the change was not known.

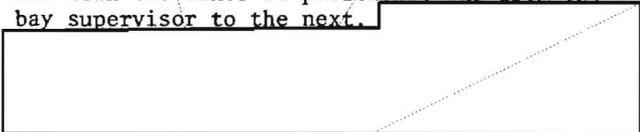
I spent much of the day running around like a chicken with its head cut off (such is the career of Warrant Officers), coordinating between ASB, DFSB and the intercept bays. The scenes I encountered during that day reaffirmed my faith in USASA operational personnel, and, in particular, my faith in the potential and professionalism of the personnel of USM-7. I would like you, each and every one, to know what thoughts go through the mind of a Warrant Officer with my MOS and experience, as I venture through the heart of a field station on the day of a Comm Change.

Scene: ASB. Great! All the key NCO's are here at once!...There's a couple of people in civvies. They're probably trying to muscle in on my overtime fund!...Look at the analysts--every one of them looks like he or she has the weight of the world on his or her shoulders. I can still remember my very first Comm Change, circa 1954, in Europe. How eager, nervous, and desperate I was to recover as many targets as possible! I wonder--do I still have that drive? That interest? I hope so!...I talk with the appropriate supervisors and learn that they have everything well in hand. Arrangements have been made for every possible contingency. I move on to the bays.

Scene: Bay One. Good God! Look at all the people! TI personnel sitting on operators' laps. TI personnel standing in the aisle. An ASB/CMB NCO running back and forth, dodging bodies, leaning over operators' shoulders, competing with the bay supervisor for room and access to pounding, searching operators. They've already isolated numerous good suspects, targets which will be developed through a concerted effort by intercept operators, ASB personnel, and good ole DFSB.



Ha! Ignorance is truly bliss... Later I will see the swing trick come in and relieve the day trick in Bay One. The transition of one operator on the position to another operator on the position is smooth, though filled with anxious, interested queries. All known history of what has happened to date is passed along, all down the lines of positions, and from one bay supervisor to the next. [redacted]



~~SECRET SPOKE~~

EO 1.4.(c)
P.L. 86-36

~~SECRET SPOKE~~EO 1.4.(c)
P.L. 86-36

Scene: Bays Two and Four. At last! A small semblance of normalcy. Just the same old thing! Bay supervisors handing out folders like they were dealing cards; operators hunched over their keyboards, fingers flying;

Scene: Bays Five and Six. I make several trips into these bays, and each time I am awed by the concentration of all operators, and the coordination between the operators and the professional Air Force floorwalkers. The reason?

Without these personnel--men and women who give of themselves selflessly; men and women who endure hours of noise, nerve-wracking tension, mental strain and fatigue; men and women willing to endure the responsibility and discipline of military life; men and women who often bitch about the unfairness, the inequity of their plight, but never fail to get the job done--How would the free world know?

Scene: Comm Center. Though I did not have time to enter the Comm Center, nor any valid reason to intrude on their hectic day, I have had enough familiarization with communications centers to readily visualize their frenzied chores on this "bad day at Black Rock." Inside their secure vault, teletypes are clacking out their incessant chatter. Bells are ringing and lights are flashing. Tired, blurry eyes are scanning incoming messages which pertain to every element of life and business on our post. Experienced fingers deftly twist and fold the individual punched tapes from each message and staple them to their messages. Outgoing messages are patiently poked onto tape, and then transmitted to all points of the world. This hustling, busy center of activity is often overlooked in our daily lives. But without these men and women contributing their bit to our unique tasks here at Ramasun station, we would have no contact with the real world. They too are a vital part of our organization; and the analytical answers, the operational facts that we discover on each and every day of the year are relayed swiftly to our headquarters and NSA by the devoted toil of these men and women.

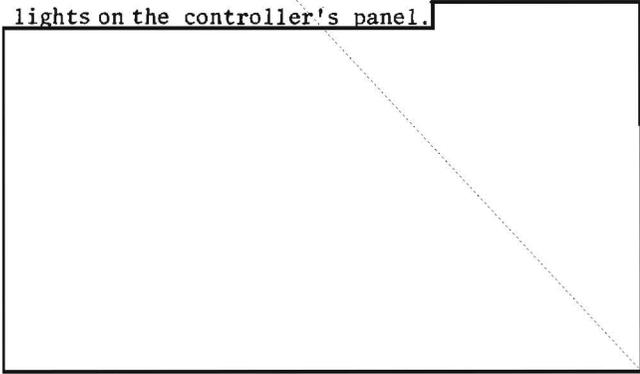
Scene: Bay Three. Aha, the CEGs tried to catch the world with its pants down!

Scene: DFSB. Ye gods! Another bedlam and bustle of activity! That poor controller! Look at those damned lights--how can he possibly tell which one has priority? Which one came on first? There--four of them together! Rots o' ruck, fella! And over there--and there! Those crazy, almost psychedelic, whirling circles of light! And look how fast they are able to align the bearing with the null of the signal! Yes, here too the pros are at work. All the key NCO's present for whatever assistance may be needed, all the shift personnel hustling to keep up with the constant and continuous blinking of the

~~SECRET SPOKE~~

~~SECRET SPOKE~~

lights on the controller's panel.



Scene: The Operations Gate, CIL, OSB, IMF. Though the personnel who man these activities are not intimately involved with the actual recovery of the communications change, without them we could not function successfully. These are the men and women who ensure our security; who support our intercept and analysis efforts with regulatory and historical documentation; who furnish the material things we need to operate with; and who maintain and repair the equipment so vital to our efforts. Though we, the operators and analysts, may often feel that we are the only reason Ramasun station exists, it would behoove us, particularly at times of crises, to reflect that without these various vital supporting elements we could not do our jobs. We are a team. A professional team. Our victories and our successes are not measured in terms of individual heroes. They are accomplished by the united efforts of every member of our team. Without our "security guards, our water-boys, our equipment managers, our coaches, and our fans," who serve quietly and unnoticed on the sidelines, our team could not exist. These people are pros, too, every single one of them.

When 04 Jan 75 finally came to an end, when I crawled into my bed, one thought made me glow, made me proud, and made my career seem very worthwhile. These men and women down in the box, these operators, analysts, DF operators and Comm Center personnel were a glorious, unsung breed. And I'd go to hell and back with any one of them! I slept very well. I thank you; all of you, and each of you. Very much!

[Redacted]
CW3, MI
OIC, CMB

A GUIDE TO



The little directory given away at the INFO '75 exhibit seemed to us to be worth reprinting, just in case you missed it. So here it is.

Central Reference Service	2C051	3258s
Information Services Officer	2E099	4853s
Book and Periodical Libraries		
Main Library	2C051	5848s
S Branch	C1A09	2341s
Fanx Branch	B6B06	8447s
Inter-Library Loan	2N072	4868s
Soviet Information	B1B20	8445s
Fanx 3		
Middle East	4A187	4806s
Southeast Asia	6A198	4278s
China	7A187	5320s
International Information	2C051	3258s
Geography and Maps	2N075	5918s
Technical Documents	2N090	5759s
Collateral Documents	2E024	5670s
SIGINT Repository	2E054	5853s
Cryptologic Library	3W076	4017s
Language Library	3W076	4017s
Field Support	2E029	3265s
Publications Purchasing	2N111	3096s
24-Hour Service	2E099	4853s

~~FOR OFFICIAL USE ONLY~~

•O•P•P•O•R•T•U•N•I•T•I•E•S•

The Intelligence Department of the National Cryptologic School is interested in contacting NSA employees who would like to teach English writing courses on a part-time basis. These courses emphasize intermediate and advanced writing skills and usually meet six hours a week for eight weeks. Anyone interested in teaching should contact [Redacted] E12, telephone 7119s.

~~SECRET SPOKE~~

~~CONFIDENTIAL~~

ORAL REPORTING: A New Challenge for NSA



by William G.
Volenick, A71

The author of this article serves as the "A" Representative on a V4 team which provides weekly briefings--or "oral reports"--to the Director of the Defense Intelligence Agency (DIA), the Deputy Director, DIA, for Intelligence, and the Chiefs of Staff for Intelligence (ACSI's) of the four services; to DIA's Deputy Director for Estimates, and staff; to the Deputy Director, Central Intelligence, Intelligence Community, and the Committee Chairmen of the United States Intelligence Board (USIB) and appropriate National Intelligence Officers (NIO's); plus ad hoc briefings, as required, to the Chairman of the Joint Chiefs of Staff, the State Department, the National Security Council staff, and others.

Traditionally, NSA has regarded the production of the *written* report as the ultimate in the intelligence process. Through personal observation over the last 20 years, and particularly as a result of my experiences during the last year and a half in reporting to some of the top decision-makers in Washington, I have come to the conclusion that an additional requirement is crystallizing for the *oral* report. The function of the written report is to inform a wide audience in such a manner as both to enlighten and to provide a permanent record of the enlightenment. While this will continue as a critical requirement, the modern age of rapidly changing situations requires a more timely approach for the executive level--that of the oral report.

I cannot state it as a hard and fast rule, but it has been my experience that executives

do not read reports. Their time is limited and they must become informed on a subject quickly. When SIGINT is one of the inputs, the fusion of SIGINT with other sources of intelligence is normally performed by their staffs. Thus, they exist on briefings and rely on their staffs to continually filter to them the information that they should have.

As the information proceeds up the chain of command, the filtering process continues, both in numbers of items being forwarded and in the length of individual items. For example, when presenting an item for the Chairman of the Joint Chiefs of Staff, a briefer is allowed no longer than six minutes, regardless of the complexity of his subject! The JCS daily intelligence briefing usually lasts only 20 minutes. If that is all the time that people at that level have for intelligence, it is obvious that

~~CONFIDENTIAL~~ HANDLE VIA COMINT CHANNELS ONLY

~~CONFIDENTIAL~~

they cannot spend time perusing lengthy reports, particularly when they cannot ask the written report a question! In contrast, the oral report is primarily for the decision-maker and treats specific events or situations, enabling him to take actions as required. It is a most effective way of presenting information, in that, first, it allows for questioning to clear up points which may appear ambiguous or vague, second, the dialogue which develops allows the briefer to be sure he has made his point, and, third, any follow-up actions that may be necessary can be initiated immediately, without having to wait for questions to flow through the chain of command and possibly be distorted in the process.

Within the intelligence community, the normal method of preparing a presentation is to select an individual with a good voice and stage presence, let him read the immediate facts surrounding an event, prepare a written script, and then "brief" (read the script). What is needed is an oral reporter who, without use of notes, can summarize events bearing on a situation, provide background to place those events in perspective, present the material in a professional manner with well-designed visual displays, and, most important, be prepared to answer detailed questions on the facts as well as to offer opinions when requested. The wide divergence between the "professional briefer" and the "oral reporter" was best summarized in a plaque hung in the small conference room of Admiral Gaylor, which said, "DON'T BRIEF ME, JUST TELL ME WHAT YOU KNOW."

As a result of the lack of equal recognition by NSA for these two forms of reporting, we have produced highly qualified report writers and very few oral reporters. A major reason for this situation is the fear by many analysts of being type-cast as "briefers," which would put an end to their careers. It is ironic that many of our managers feel that briefing requires no special skills or training and that almost anybody can do it, ever though every time they actually have to find someone to brief a high-level visitor to the Agency, or select an individual to "go down-town," it seems to become an almost impossible task, which repeatedly falls to the same few people.

In some areas of the Agency, managers have seen the need for the oral reporter and have attempted to meet the problem by training their senior analysts in basic briefing skills so that they can give briefings on their specific problems, should the need arise. Although this would appear to be an effective solution, it is only a stop-gap measure and ultimately doomed to failure. This conclusion is based on two facts: that there are many large audiences in the Washington area alone which have a well-established need for direct person-to-person exchange in the form of intelligence briefings by NSA, and that their number is rapidly growing. The net result will be a demand for the "senior analyst"

to spend more and more time away from his problem and less and less in analysis. Further, although they may be knowledgeable, many analysts are not physically or emotionally suited to the task. I have seen poor voice projection, lack of confidence, or nervous mannerisms completely destroy a good intelligence presentation. On a few occasions, emotional tension and/or lack of experience in briefing has rendered an "expert" physically ill to the point of considering canceling the briefing commitment.

A major occupational hazard faced by the professional oral reporter is fielding loaded questions. Questions which bear on the Agency's capabilities or shortcomings, those which are designed to embarrass rather than elicit information, or those that focus on our techniques rather than our results, all can be disastrous to a novice briefer. Rather than appear to be less than totally knowledgeable, he will attempt to answer questions that should never have been asked. Similarly, questions that may exceed the clearance level of the audience can cause problems; the senior officer may be cleared for a direct answer to his perfectly legitimate question, his audience may not. Under the pressure of the moment, the briefer must know how to sort out immediately what can be said, or how --tactfully--to say nothing.

The obvious solution is a core of oral reporters possessing a good background in SIGINT, an understanding of the hierarchy of the intelligence community, a knowledge of its personalities and varying needs, and the ability to present NSA and its product with competence. This approach allows the individual oral reporter to accustom himself to this form of reporting, develop familiarity with his audiences through repeated exposure, and, most important, realize that he can brief without scripts, file cards, and other memory joggers. It is this type of presentation that establishes in the minds of the audience an immediate sense of confidence that "he knows what he is talking about." Additionally, the rapport which is established between NSA personnel and executives throughout the Washington area is priceless in selling NSA and its product.

Having recognized the need to develop this capability within NSA and the reluctance of individuals to volunteer for such assignments, let us consider the elements of the solution.

Who should our oral reporters be? They should be experienced analysts and reporters in the middle grade-level who will make a positive impression on the executives with whom they are dealing. It has been suggested by some that prior experience as a recruiting officer, a used car salesman, or an insurance agent is vital as a prerequisite for an oral reporter. While I would prefer not to comment on this directly, I would emphasize that it is a selling job. For many years, NSA has referred to our published re-

~~CONFIDENTIAL~~ HANDLE VIA COMINT CHANNELS ONLY

~~CONFIDENTIAL~~

ports as "product," and that is exactly what they are. We have a product to be sold, and sold as forcefully as any item in the business world. In this day of dwindling funds and stiff competition wherein all of the intelligence sensors are competing for their share of the money available, the lack of salesmanship by NSA not only affects decision-making on military and diplomatic issues, it affects future budgeting--your job and mine.

What should they be presenting? The NSA/CSS story: the contribution that SIGINT can make to the solution of the intelligence problem. Qualified persons presenting this at the proper levels can do greater good than pounds of written reports which find their way into the files of other intelligence agencies but are never given proper credit at the top levels where the intelligence and budgetary decisions are made.

When should they begin? The time is long overdue. However, other agencies have not yet realized the full potential of such a field of endeavor, so that we can still venture forth in this area and reap the benefits. The standard military approach of having a script-reader present intelligence briefings while a myriad of back-up personnel stand in the wings is still being followed by most agencies. This allows NSA/CSS to take the initiative and begin to train effective oral reporters. In my experience, a good presentation by an individual having the qualifications of an oral reporter stands out and repeatedly draws praise from an executive audience.

How do we get such reporters? First of all, the National Cryptologic School must recognize the need and begin to design courses on executive briefings, visual aid design, and other parts of the mechanics of producing an oral reporter. These courses would be directed toward developing the extemporaneous briefer as opposed to the more stilted, "canned" style now used. Further, just as the writer of reports needs to know how to distribute his reports, the oral reporter needs to be familiar with his potential audiences within the U.S. Intelligence Community, their missions and functions, how they can use SIGINT, and how to be effective with each. He needs to consider certain questions before presenting an oral report: Why does this executive need to hear this report? What do I want to achieve in presenting it? What is his knowledge of SIGINT, and what is his feeling toward the Agency? These questions and many others must be answered before an oral reporter steps to the podium and begins.

Further, the style of an oral report may differ substantially from that of one designed to be read. The various styles, and the uses of each, should be instilled in the student, so that he will be able to select the most effective format for a given audience or individual.

He should be taught the effective use of

visual aids, the various forms available to him and the advantages of each.

Lastly, he should become familiar with the facilities available to provide audio back-up for his presentation. This all-too-often neglected technique is helpful in enlivening a long presentation or as an "attention-getter." Contrast the normal approach to reporting an air engagement with that using a short cut of the voice tape played while the screen shows a map of the battle area. The latter gives a "you-are-there" feeling that is lost in a written report. It also allows those not accustomed to SIGINT to hear first-hand and observe the difficulties encountered in what they have previously considered a simple transcription effort.

Where should they come from? From the various reporting staffs and senior analysts with backgrounds in a number of operational problems. But--our career and promotion systems being what they are--don't expect volunteers to jump forward. At present, to become a "briefer" is all too often the kiss of death for a good analyst. The incentive must be created by our managers to attract the proper type of individual. A major assist in this area should be provided by the NSA SR career panel. The criteria for professionalization should be changed to require not only in-depth training in oral reporting, but mandatory experience points for holding an oral reporting job.

Last, and most important, consider the "why." At the executive level, the "why" is the valuable input that SIGINT presented in this form can make to decision-making. In far too many cases, the full SIGINT story has been published but is not available to the decision-maker when a determination has to be made. Two frequently encountered attitudes of Agency managers, however, are: "I've already published a report on that; why should I have to go down and tell them about it?" and "I have more important places to put my resources than a dog-and-pony show." These attitudes not only sell NSA short but might lead to an erroneous decision affecting the national interests and even the security of the United States. The "why" to NSA/CSS is the new image that can be created, one of professional competence and diversity which will result in greater recognition of SIGINT. The "why" to the individual is answered by allowing him to see things happen as the decision-makers react to his presentation, question his experience, probe his views, and then make the determination of what is to be done.

Thus, the oral report should be the ultimate in satisfaction for both NSA--in that it is fulfilling its mission to the utmost--and the individual. "We had intelligence for top executives, we got it to them, and they used it!" How many SIGINT reporters, as good as they are, can say that?

~~CONFIDENTIAL~~ HANDLE VIA COMINT CHANNELS ONLY

~~SECRET~~

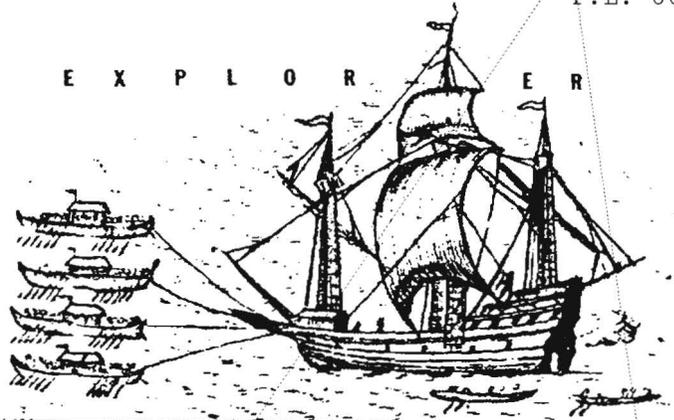
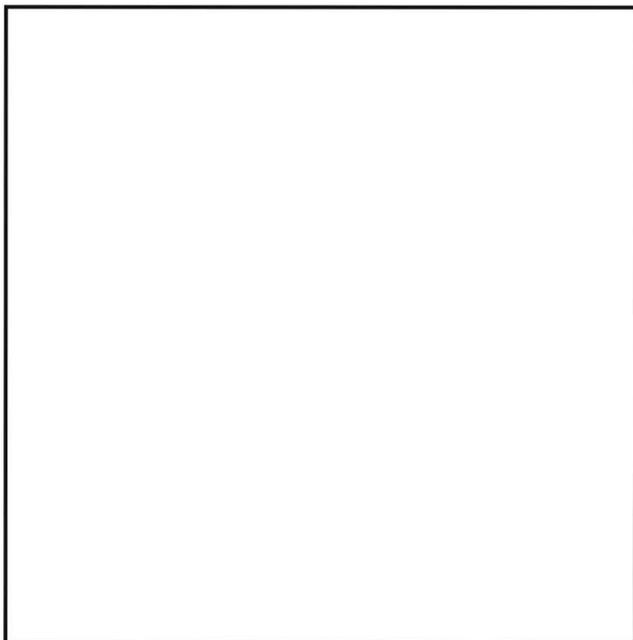
COVERTERMS

Vera Ruth Filby, E12

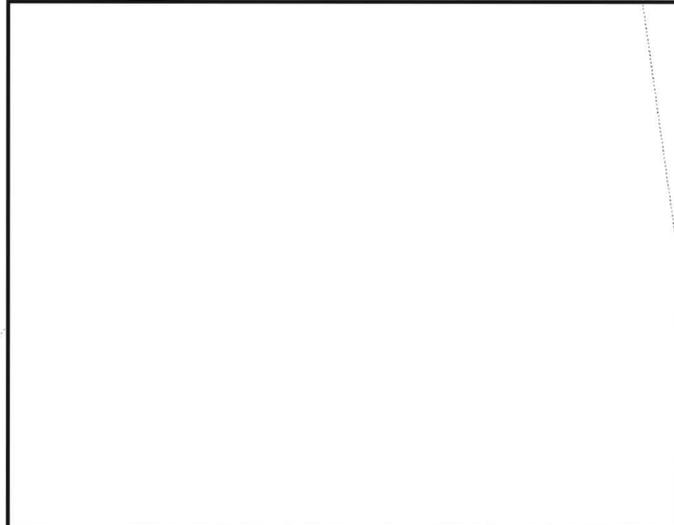
A Memo from Prime Minister Churchill to General Ismay, 8 August 1943

I have crossed out on the attached paper many unsuitable names. Operations in which large numbers of men may lose their lives ought not to be described by code-words which imply a boastful and overconfident sentiment, such as "Triumphant," or, conversely, which are calculated to invest the plan with an air of despondency, such as "Woebetide," "Massacre," "Jumble," "Trouble," "Fidget," "Flimsy," "Pathetic," and "Jaundice." They ought not to be names of frivolous character. . . . The world is wide, and intelligent thought will readily supply an unlimited number of well-sounding names which do not suggest the character of the operation or disparage it in any way and do not enable some widow or mother to say that her son was killed in an operation called "Bunnyhug" or "Ballyhoo"...Care should be taken in all this process. An efficient and a successful administration manifests itself equally in small as in great matters.

Let us suppose that the basic ideas for a project have been formulated and discussions of plans for field tests are about to begin. The time seems right to assign a name, for convenience--and for prestige. The project is designed to determine the amount and usefulness of a certain type of data recovered as a by-product of traffic intercepted for a different purpose. What should the name be? How about BYPRODUCT, since that is what the experiment is all about? That doesn't exactly stir the blood, though, does it? Well, how about something catchier, like SCAVENGER? Or SCRAPS? Or maybe just a pretty, pleasant name that everyone would like? Or maybe it would be nice to let Diana choose a name; she has done a really good job as secretary, typing up all those figures... That's it! Project DIANA!



EO 1.4.(c)
P.L. 86-36



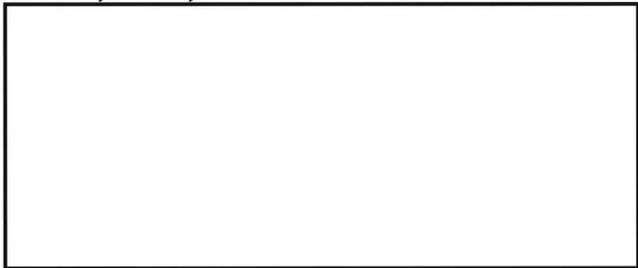
names to be shunned, in addition to those prescribed for any of the reasons noted, are words listed in the Joint Chiefs of Staff (JCS) publications JANAP 299, UNITED STATES JOINT SERVICES CODE-WORD INDEX, and ACP 119, ALLIED TACTICAL

~~SECRET~~ HANDLE VIA COMINT CHANNELS ONLY

~~SECRET~~

VOICE CALL SIGN SYSTEM INSTRUCTIONS AND ASSIGNMENTS.

There is no question, of course, that there are a great many unofficial, semiofficial, informal, local, and oddball coverterms around.



To facilitate the assignment of official coverterms, STINFO and other responsible organizations compile and maintain lists of available coverterms. Despite the enormous stock of English words, coverterm lists are remarkably difficult to compile because of restrictions and a number of other considerations. None of the following, for example, would be eligible:

ALOUETTE: because it is a foreign word not used in English, and: because it is the name of a French helicopter

BUGGER: because although it is innocuous in American usage, it is vulgar in British

CANOE: because it is a five-letter word, and: because it was once used as a COMINT codeword

CHELTENHAM: because placenames are reserved for machine programs and systems, and: because it is already in use

COWPER: because two-syllable surnames are reserved for research and engineering projects,



HADRIAN: because names of Roman emperors are



HONKY: because it is a five-letter word, and: because it is offensive and derogatory

JAGGER: because it has been used as a coverterm within the last five years

KLEENEX: because it is a registered trademark

MARLIN SPIKE: because it is listed as a root word voice callsign in ACP 119(A)

NECTAR: because it is in use as an



PEDRO: because it is a five-letter word, and: because it is a fixed callsign, listed in ACP 119(A), for search and rescue helicopters

PERSEPHONE: because mythological designators



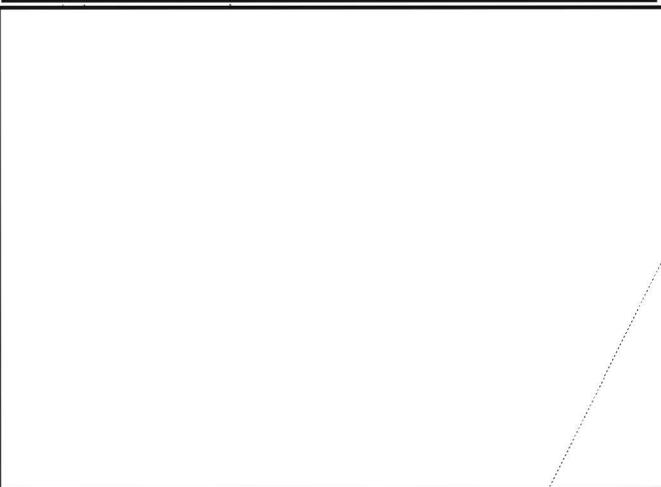
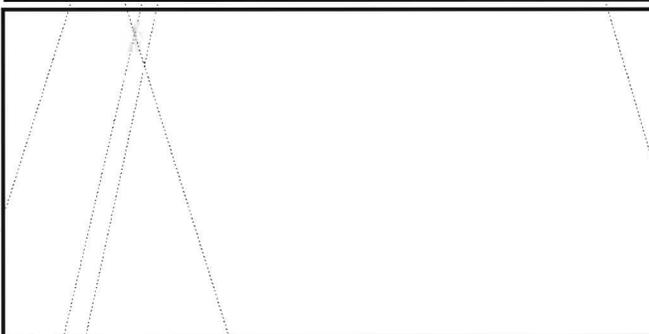
PHOOEY: because it is trite, pejorative, and potentially displeasing to senior officials

SOBRIQUET: because it is listed in JANAP 299(A)

WAVEGUIDE: (if descriptive) because it reveals the nature of the activity

ZEALOT: because it is a [redacted] listed in ACP 119(A).

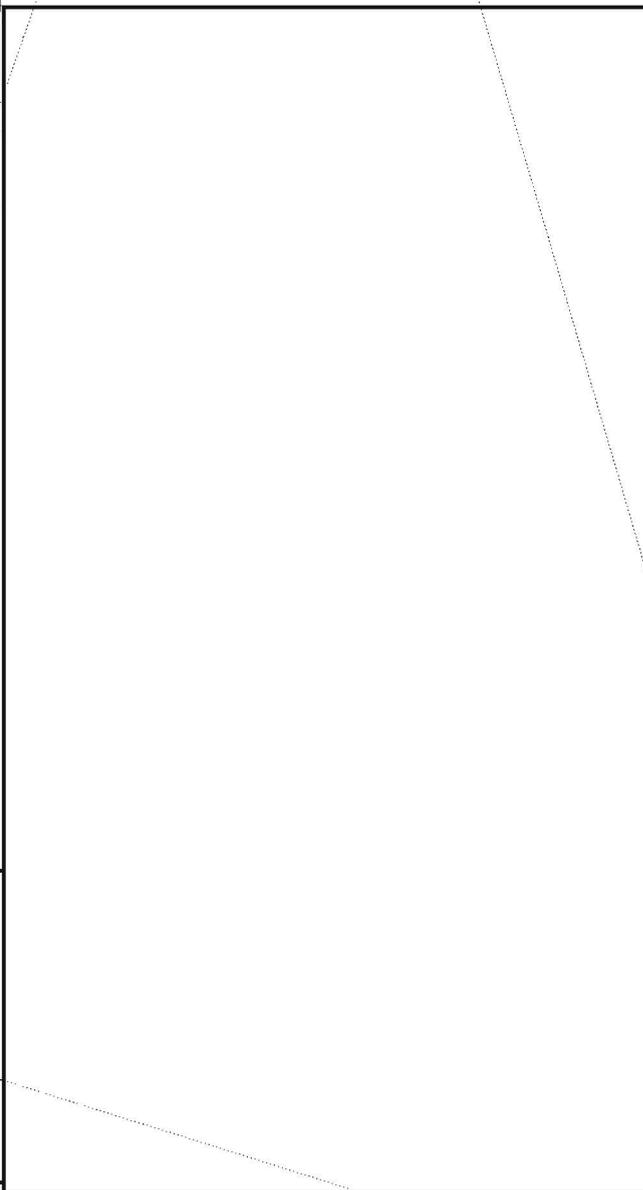
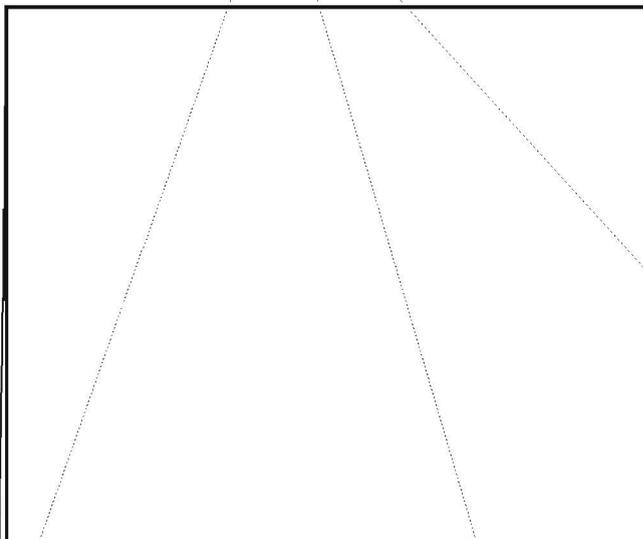
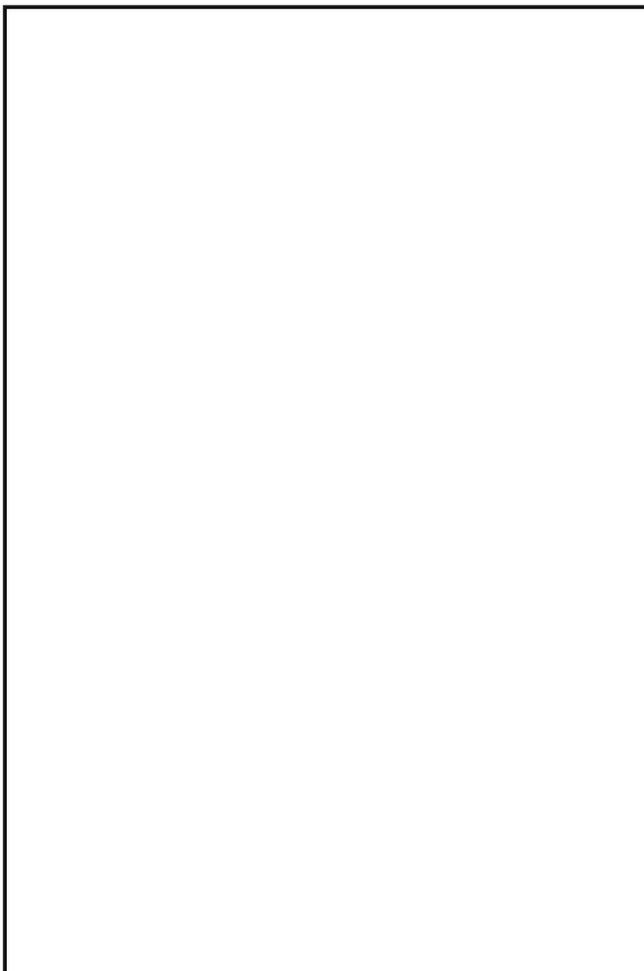
A further limitation in the selection of covernames, even those on the STINFO reserved list and available, is that they may not form a "family." For example, if a project is named FORSYTHIA, related projects may not be named DEUTZIA, HYDRANGEA, RHODODENDRON, or other names of shrubs, the obvious reason being that if one name is compromised, then all are compromised. Randomness in all covername features is normally preferred, but sometimes special requirements prevail. For example, when the quadripartite



The current reserve list was picked from the Washington telephone directory, but the choices were not random. Limitations included avoidance of surnames which are also placenames and of names easily misunderstood, misheard or misspelled because of homonyms, common variants, or other

~~SECRET~~

reasons (CARNEY/KEARNEY/KEARNY; D'ARCY/DARCY/
DARCEY; HAYWOOD/HEYWOOD; WALLACE/WALLIS). Names
with spaces, apostrophes, or hyphens (DE GROFF,
O'KEEFE, RAIT-KERR) would not necessarily be
ineligible, but their marks of punctuation would
be eliminated.

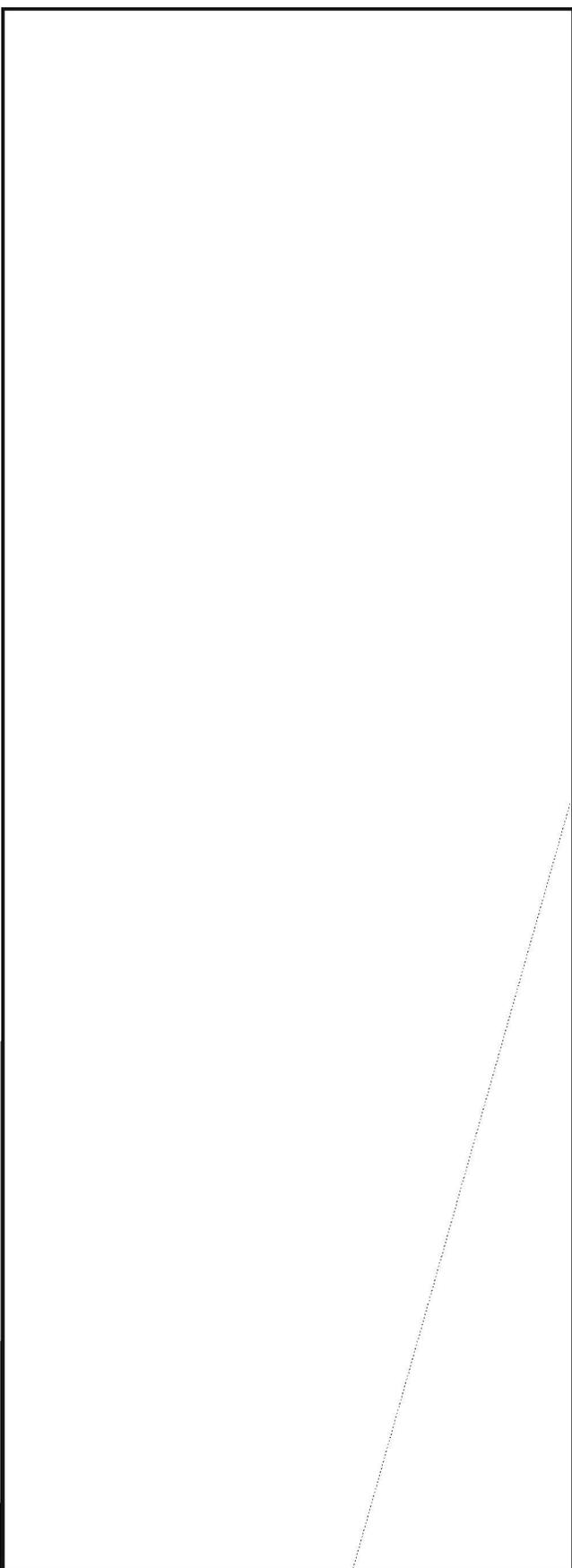
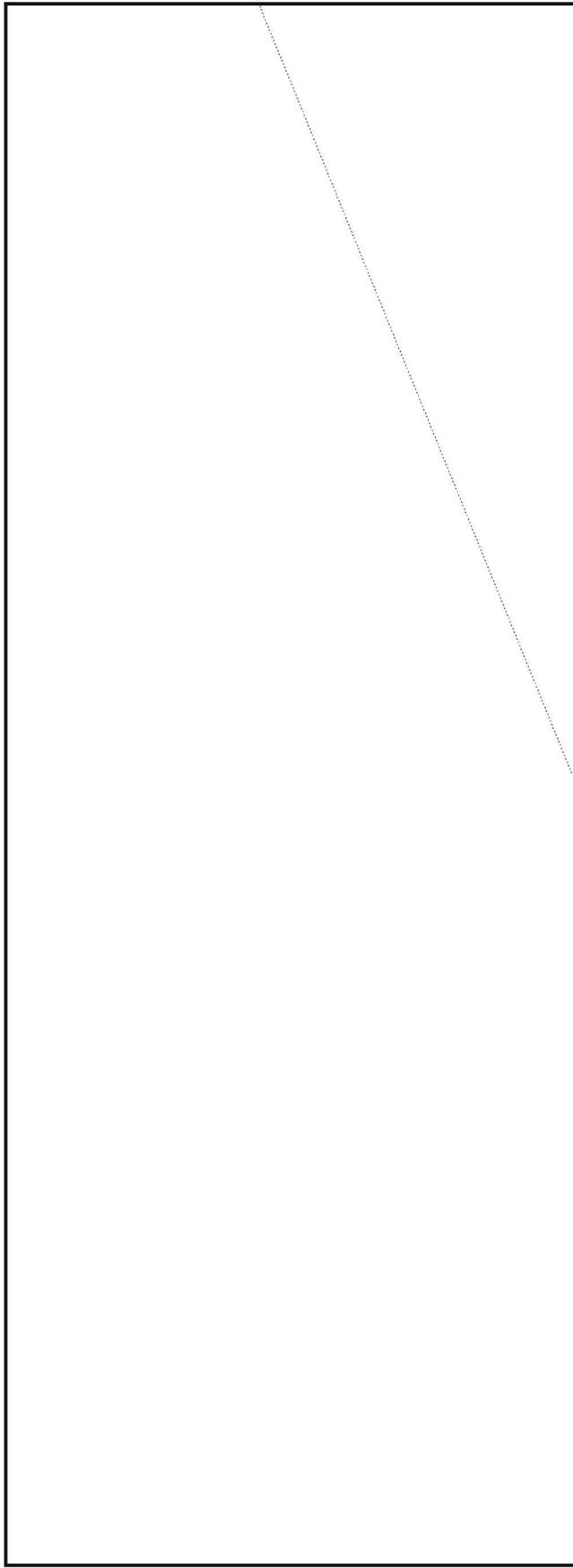


LEFOX GREY LEFOX GREEN LEFOX



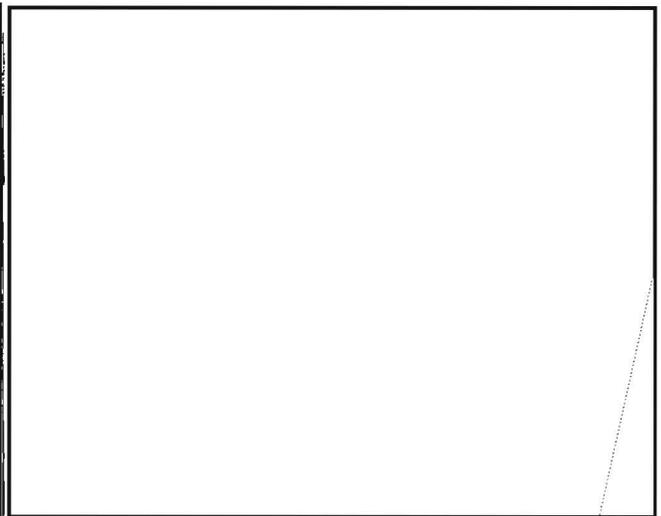
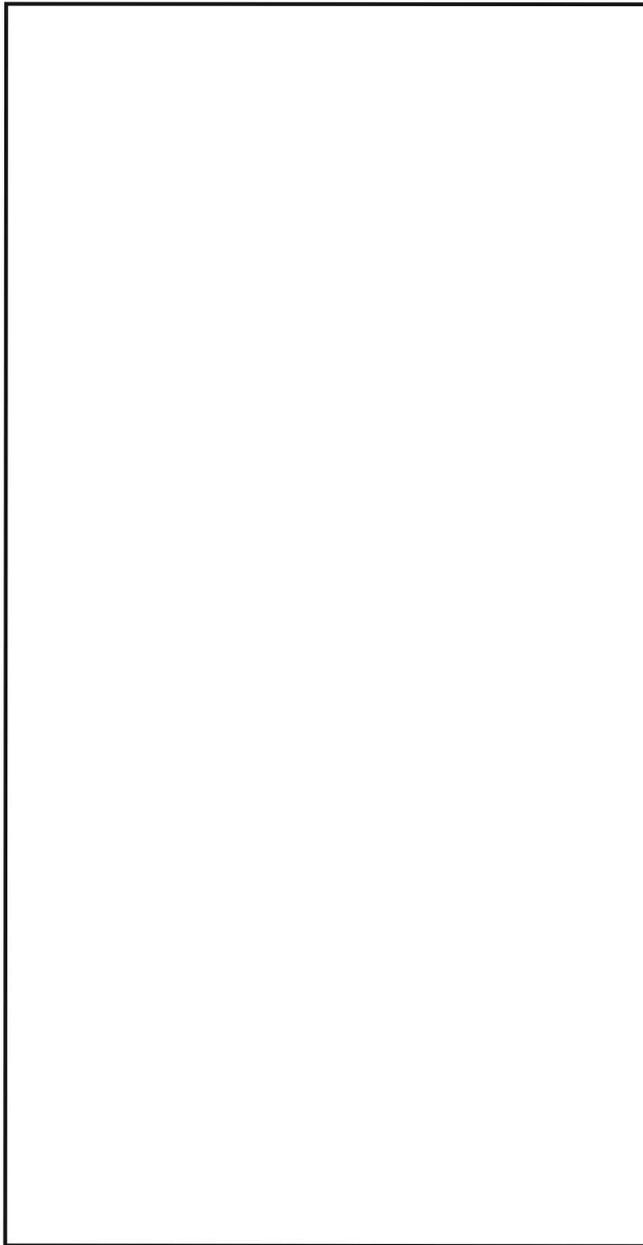
~~SECRET~~ ~~HANDLE VIA COMINT CHANNELS ONLY~~

~~SECRET~~



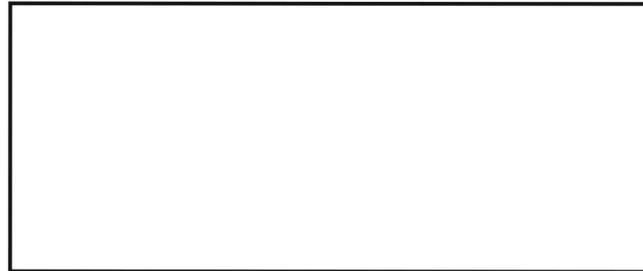
~~SECRET~~ ~~HANDLE VIA COMINT CHANNELS ONLY~~ 36

~~SECRET~~

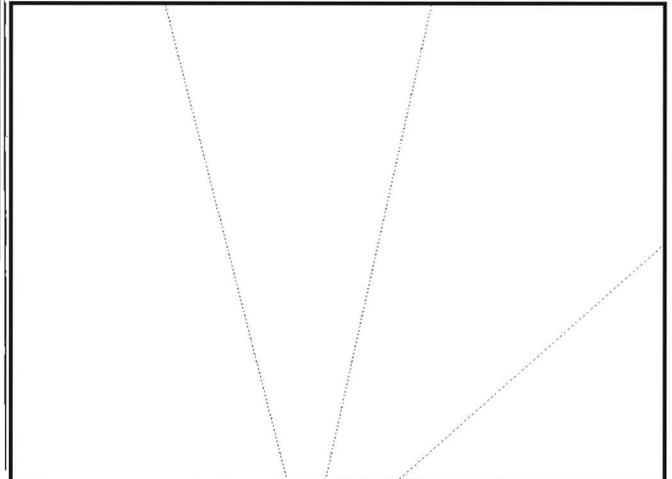


ASCC Nickname	GMAIC Designator	Description
SCARP	SS-9	Third-generation intercontinental ballistic missile
STYX	SS-N-2	Naval aerodynamic antiship missile
SCUD A	SS-1b	Short-range tactical ballistic missile
GRAIL	SA-7	Man-portable, shoulder-launched, heat-seeking SAM
GALOSH	ABM-1	Ballistic missile defense system
KIPPER	AS-2	Supersonic aerodynamic cruise missile carried by BADGER C (TU-16)
ASH	AA-5b	Infrared homing variant missile carried by FIDDLER (TU-128)

Another missile name probably familiar to many readers is FROG, which is not a nickname but an acronym for Free Rocket Over Ground. Abbreviations, like acronyms, are not controlled, and considering all the complexities and ramifications of coverterms of all kinds, freedom from control may be an attractive feature for some potential namers of projects.



For guided missile designators, as for aircraft names, the first letter expresses the type: S for surface-to-surface missiles (SSM), G for surface-to-air (SAM), K for air-to-surface (ASM), and A for air-to-air (AAM). The 1972 reserve list of names perhaps reflects expectations for the future; 29 names, ACRID to AUBURN, are held in reserve for A, 19 for K, nine for

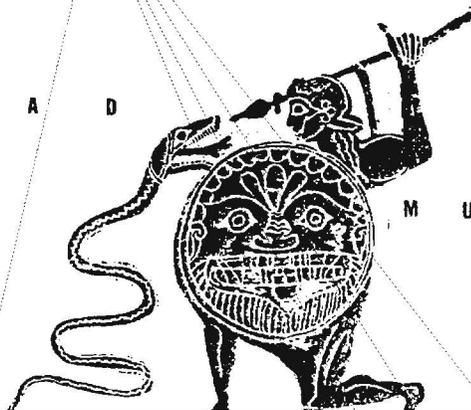


~~SECRET~~ HANDLE VIA COMINT CHANNELS ONLY

~~SECRET~~

P.L. 86-36
EO 1.4.(c)

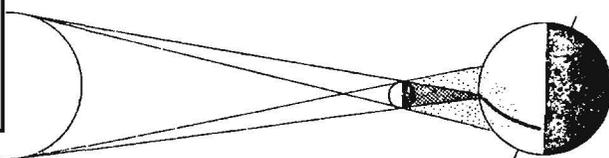
C A D



M U S

as an example, is VINSON, covername for a half-

cal. PARKHILL, for example, refers to/



U M B R A

One peculiar communications security requirement is reflected in a special group of coverterms used to identify and protect COMINT and distinguish between its categories. These are the familiar COMINT codewords. They belong to the cryptologic community, and ultimate authority for them lies with the United States Intelligence Board, the London Signal Intelligence Board (LSIB), representing the U.K., Australia, and New Zealand, and the Canadian Intelligence Advisory Committee (IAC).

~~SECRET~~ ~~HANDLE VIA COMINT CHANNELS ONLY~~

~~SECRET~~

USIB, LSIB, and IAC jointly select the COMINT codewords and decide when they are to be changed. The current three, used for Category III, Category II, and Subcategory II(X) COMINT, came into effect in 1969, about nine months after the compromise of the previous codewords resulting from the PUEBLO seizure. Change has been infrequent in recent years, because change means massive and costly administrative problems and is necessarily slow. Just the practicalities of disposing of and arranging for preprinted paper stock and rubber stamps take time and work, to say nothing of all the computer programs that have to be updated to incorporate changes.

COMINT codewords must be five-letter, pronounceable, infrequently used words that are not offensive or derogatory and do not reveal their COMINT meaning. The codewords are unclassified by themselves. When used on rubber stamps or preprinted paper stock they are CONFIDENTIAL, HANDLE VIA COMINT CHANNELS ONLY. When used in their codeword sense they take the classification of the category to which they apply. That means that when, for example, the word SPOKE is defined as the codeword for Category II COMINT, or when it is used in any way in specific reference to COMINT, then it is itself classified SECRET, HANDLE VIA COMINT CHANNELS ONLY. Other restrictions are the same prohibitions that apply to other coverterms: they must not be the name of an English poet or a Roman emperor, not a mythological designator, and not listed in JANAP 299 or its successors.



A P A C H E



JANAP 299 (A), dated September 1971, contains an index of all codewords authorized for use by the Armed Forces of the United States. Codewords are assigned to designate classified plans, projects, operations, movements, locations, etc., and they are assigned in blocks of 10 to components of the Department of Defense.

One final source of prohibited words is another JCS document, ACP 119(A). This document provides lists of voice callsign root words for Allied tactical use, convoy internal voice callsigns, and search and rescue callsigns.

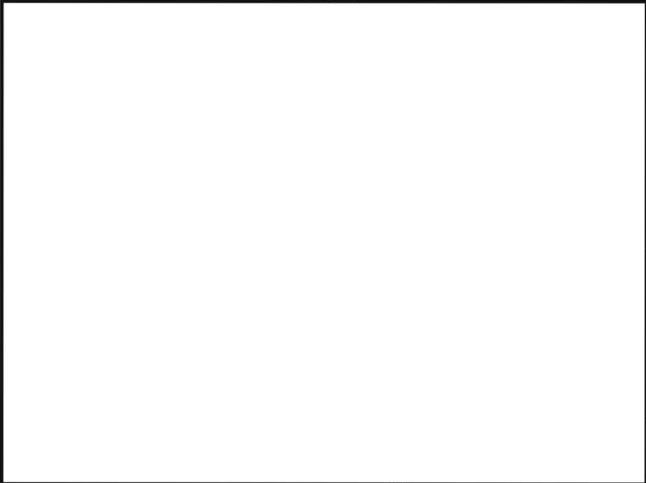
Voice callsigns for tactical aircraft are based on a root word assigned to the parent command or activity, with a suffix for the aircraft. APACHE ZERO SEVEN, for example, means aircraft 07 of the 541st Tactical Fighter Interceptor Squadron (APACHE).

A convoy is assigned a two-letter or figure-letter group called a convoy radio distinguishing group before sailing. Fixed suffixes denoting function are used with these distinguishing groups for internal convoy communications. Among these fixed function suffixes are CHIEF for the commodore, LUCK for the vice commodore, and TEAM as a convoy collective, so that the internal callsign for the commodore of a convoy assigned radio distinguishing group XY would be XRAY YANKEE CHIEF.

In the search and rescue callsign system also, a basic callsign is assigned to a function. These function callsigns are supplemented with a geographical reference for certain operations and a number suffix for others. BULLMOOSE is the callsign for any and all search and rescue airplanes, so that BULLMOOSE ARGENTIA would be the callsign for any search and rescue aircraft operating in the area of Argentia, Newfoundland. SAPPHIRE is the callsign for a search and rescue boat, so SAPPHIRE FOUR would be search and rescue boat number 4. In addition to these, four-letter scene-of-action callsigns are used in both military and non-military communications. The callsign HAWK, for example, is used for any air force airplane at the scene of action, ABLE for any helicopter, CREW for any navy airplane, and TIFF for the senior officer present.

Finally, certain voice callsigns are known and used internationally:

- MAYDAY Distress signal (SOS)
- SECURITY Safety signal
- PAN Urgent signal



~~SECRET~~ HANDLE VIA COMINT CHANNELS ONLY

~~SECRET~~

If you are a potential user of a coverterm, you may feel, now that you appreciate all the complexities, that life would probably be simpler if you just skipped the whole thing and used an acronym or abbreviation. But, as Mrs. Marjorie E. Miller, the NSA/CSS Cover Term Officer, writes:

"Besides the fact that you would possibly be in violation of security, abbreviations and acronyms are sometimes misleading or confusing due to multiple use of the same letters for various words or phrases. The acronym BOSS, for instance, has the meanings: BMEWS Operational Simulation System, Broad Ocean Scoring System, Bioastronautics Orbital Space Satellite, Burroughs Operational Simulator. PAR means--in addition to its common use for 'paragraph' and 'parallel'--Precision Approach Radar, Perimeter Acquisition Radar, Palletized Airborne Relay, and probably many other things. Others with multiple meanings that we have run into in this office are AIDS, ADAS, ATR, DDC, MAD, MTR... After looking this over you may decide that what appears to be 'an attractive feature' (freedom from control) is not a bargain after all."

Anyhow, the problem isn't really all that bad. The whole system can be summarized in the chart below.

As always, when you have a problem, the best thing to do is ask someone who knows the answer. The people listed below have been most helpful in supplying information for this article, and will assist you, too. [redacted] will give you guidance on the general procedure for a coverterm request, and the others will help in their special fields, at need.

- GENERAL Mrs. Marjorie E. Miller, CS13, Room 2N090, tel. 5801s
- ASCC NICKNAMES [redacted] CS34, Room B6114, tel. 8657s
- CANUKUS NICKNAMES Mr. Paul W. DeCamp, W2, Room B4135, tel. 8891s
- " " [redacted] W09, Room 3W116, tel. 3401s
- COMINT CODEWORDS Mr. G.P. Morgan, D41, Room 9A187-3, tel. 5825s
- COMPUTER PROGRAM NAMES [redacted] C09, Room 1S013, tel. 3321s
- COMSEC DESIGNATORS Mr. John J. Sullivan S133, Room C2A24, tel. 2343s
- NSOC/AUTOLINE [redacted] V36, Room OE229, tel. 3412s
- RESEARCH AND ENGINEERING [redacted] R043, Room 2W038, tel. 5603s

ASSIGNMENT AND HANDLING OF COVER TERMS (U)

type of cover term	definition	authority	length	alphabetic allocation	security classification		exclusions
					word alone	word meaning	
1. Covernames a. general b. for use by R c. for use by C	A single word, under exclusive control of NSA, used to designate classified cryptologic projects, equipment, or operations.	NSA	one word (not five letters)	no restr.	usually unclass.	must be classified	Words listed in JANAP 299 or ACP 119; mythological characters; English poets, Roman emperors; first words of JCS nicknames; registered trade names; abbreviations, acronyms, etc.; two-syllable surnames; geographical locations
2. Nicknames	A combination of two separate unclassified words employed for unclassified administrative convenience.	DoD(JCS)	two words	first word must begin with DA, DE, HO, HU, HY, MA or ME	unclass.	unclass.	Words listed in JANAP 299 (first word) or two-word combinations listed in ACP 119; mythological characters; registered trade names; NSA covernames; trite words
3. Mythological Designators	Names from ancient pagan mythologies applied to general cryptosystems.	NSA	one word	no restr.	unclass.	unclass.	(Not Applicable)
4. COMINT Codewords	Designators assigned to identify source as COMINT.	USIB, LSIB, IAC	one word (tradition-5 letters)	no restr.	C-CCO when used w/o class.	class. of category plus CCO	Words listed in JANAP 299; mythological characters; English poets; Roman emperors; first words of JCS nicknames; registered trade names; abbreviations, acronyms, etc.
5. Code Words	Designators for classified military plans, operations, or geographic locations.	DoD(JCS)	one word	must come from JANAP 299	must be classified	must be classified	(Not Applicable)

(As of March 1975)

~~SECRET~~ HANDLE VIA COMINT CHANNELS ONLY

~~SECRET SPOKE~~

THE USES OF ELINT

What we now call Signals Intelligence began as simple Communications Intelligence. It took us a while to discover the other half of SIGINT: Electronic Intelligence, in the form of radar signals, data signals, and electronic jamming. Many of us still have a rather hazy idea of what ELINT contributes, and the short article below may serve as a useful introduction to the subject.

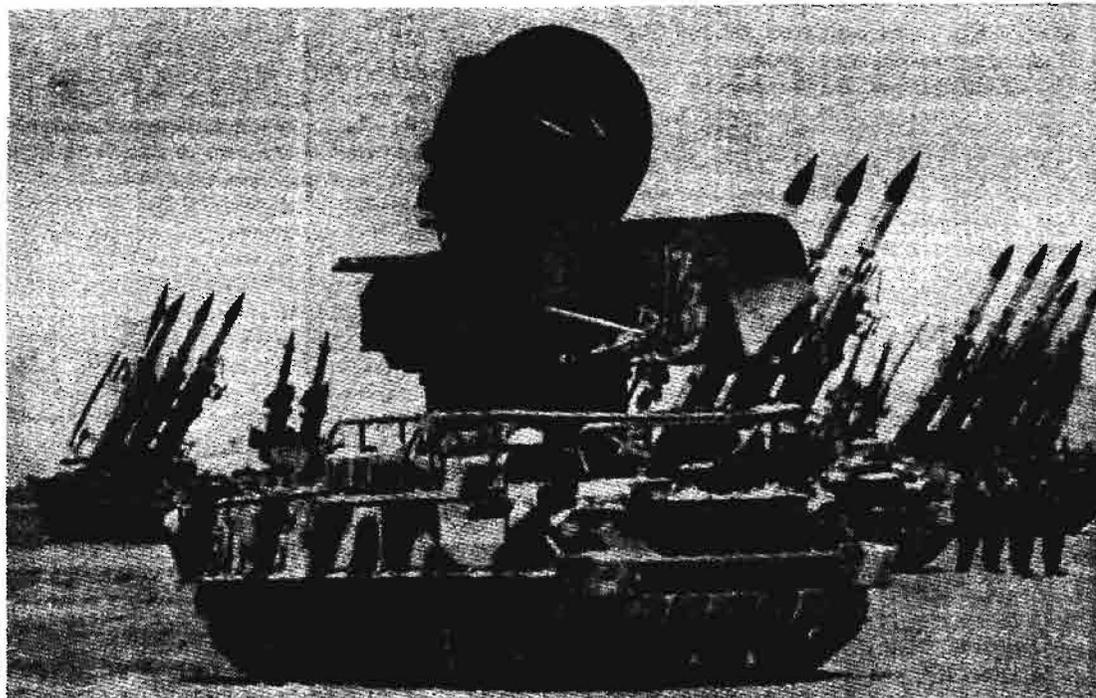
ELINT--Electronic Intelligence--is a part of the SIGINT effort that should become better known and better used by analysts in NSA/CSS. This article defines the two roles of ELINT--operational and technical--and gives examples of how each is used to aid in the SIGINT process.

The field of electronic intelligence covers the collection, processing, analysis, and reporting of information concerned with the non-communications electronic systems of target nations.

Operational ELINT is concerned with the identification, employment, deployment, trends and tactics of foreign radars, weapon systems, jamming signals, and data signals, in connection with specific operations. It employs event recognition*, all-source data, and SIGINT interaction, and produces both time-sensitive and term product reporting.

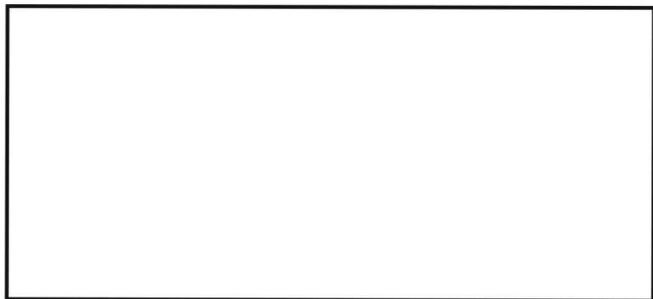
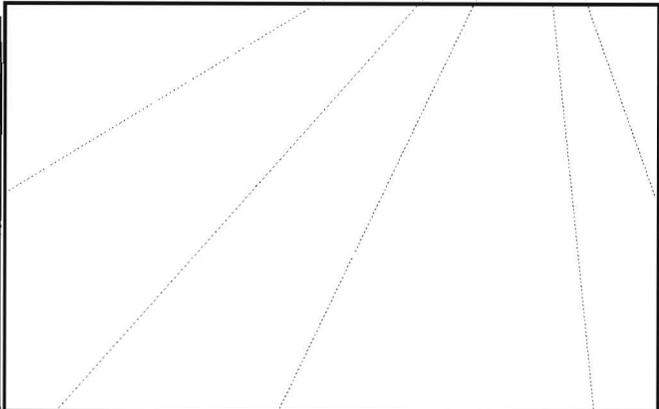
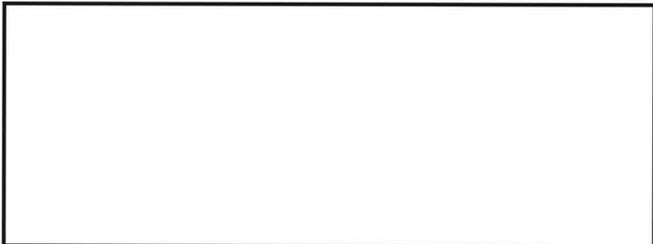
Technical ELINT provides detailed parametric information for assessment of the performance, capabilities and vulnerabilities of the above-mentioned emitters. Technical ELINT also provides the input for the development of electronic warfare tactics and electronic countermeasures equipment. Like Operational ELINT, it employs all-source data and SIGINT interaction, but the product is generally on a term basis rather than a time-sensitive one. A somewhat oversimplified explanation of the difference between the two is that Technical ELINT tells what the system is *capable* of doing while Operational ELINT tells what it *is* doing at a given time.

Let's take a look at an example. Below is a picture of the radar and missiles of the Soviet-built SA-6 surface-to-air missile system. (This is the system that obtained a great deal of publicity during the 1973 Yom Kippur War.)

~~SECRET SPOKE~~

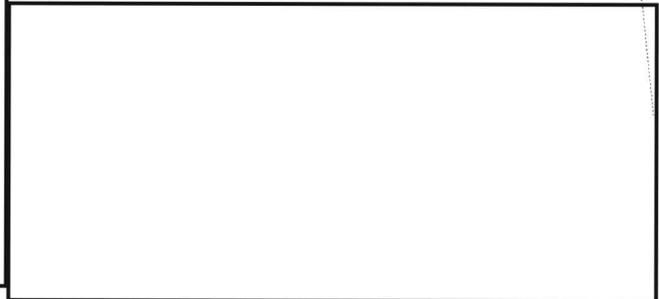
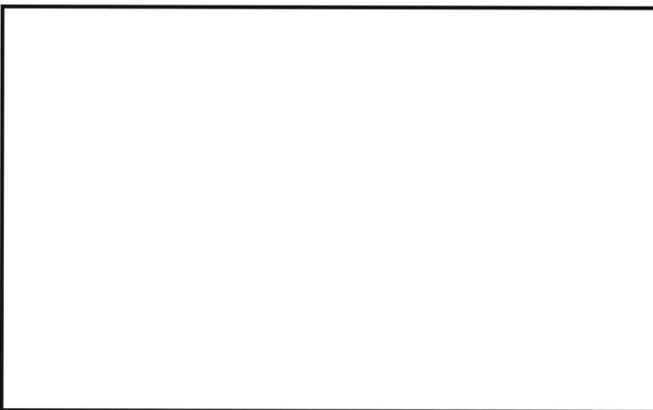
~~SECRET SPOKE~~

Technical ELINT directly or indirectly gives us such details on the system as the following:



I hope I have given the reader some feel for the nature and value of ELINT. As a final remark I would like to comment on the present emphasis within the Agency for a fused COMINT-ELINT product. As of 22 October 1974, the Operational ELINT job has been transferred from W Group to A, B and G Groups, in the hopes that COMINT and ELINT analysts working side by side will produce a better product--a fused product--which is more complete and responsive to our customers. The Technical ELINT function has remained in W, but that does not mean that the ELINT analysts in W do not need COMINT, as well as "PHOTINT," "HUMINT," etc. The better COMINT people understand the nature of ELINT, and vice versa, the easier it will be for this agency to satisfy our many customer requirements.

I could go on with examples such as the one above, but for purposes of this article let me just list some major items, including Key Intelligence Questions (KIQ's) to which ELINT can contribute:



~~(SECRET SPOKE)~~

TAKE FIVE AND TRY THIS

Fill in the vertical five-letter words and find a punnish phrase reading across.



W.L.



C	U	D	F	A	S	S	A	S	W	T	D
.
U	O	T	O	M	E	D	A	R	E	E	A
.
E	T	Y	E	T	L	Y	H	S	T	S	D
.

~~SECRET SPOKE~~

~~CONFIDENTIAL~~

LANGUAGE IN THE NEWS

EMERY

TETRAULT, P16

P.L. 86-36

AT HOME

LANGUAGE PANEL NAMES NEW EXEC

[redacted] has replaced [redacted] as Language Career Panel Executive. [redacted] is now assigned to G77.

[redacted] brings to his new duties an impressive background in Soviet studies and Russian language along with extensive operational, supervisory and managerial experience.

MACHINE COURSE FOR LINGUISTS

For years linguists were either told absolutely nothing about machine processing or were made to learn one or more dialects of FORTRAN to the same degree of proficiency as a native speaker. Then a third way, a course about machine systems for linguists, was tried in at least two variants, and a revision of this approach is now under way. [redacted] P16, is developing the course in support of the National Cryptologic School.

For about one-third of the program, students will consider what must be done to plan and carry out a machine processing task. Topics in this section of the course will be: determining what computers can or cannot do for you, planning a job, stating requirements (for example, learning how to communicate with programmers), testing data and setting acceptance criteria for programs, maintaining quality control during production, providing documentation, and considering some of the junctures at which things are most likely to go wrong. Present plans call for a student project to accompany this part of the course; for example, a project to come up with a new application of machine processing and carry it through each of the steps covered in the course, or to take an existing (or past) application and analyze its strengths and weaknesses in terms of what has been presented in the classroom.

The rest of the course will be spent in surveying machine processing facilities: both computer systems and data processing systems.

Under the former heading, students will be given a quick survey of NSA machines and there will be a discussion of some of the more frequently encountered terms and concepts such as "off-line," "on-line," "remote," "batch," "conversational," "interactive (fast, intermediate, slower) access," etc. The latter category includes processing systems and applications:

[redacted] data bases; and the production of various working aids. As in the first section of the course, it is planned that students will be assigned some project such as analyzing the machine systems used in their own areas in terms of speed of turnaround, convenience of access, ease of use, etc., and writing up a detailed evaluation of these systems, or studying one or more of the machine-system applications related to their work, the systems which help process incoming traffic or outgoing product, produce working aids, etc.

Course materials will include a text, a glossary of terms, and a directory of machine services.

CLA NEWS

The Annual Business Meeting. Mark your calendar for the CLA's annual business meeting, which has been set for Tuesday, 6 May, 0930, in the NSA Auditorium. This is a particularly important meeting, since a full slate of officers (President-Elect, Secretary, and Treasurer) and two board members will be elected. One board member will be chosen for a regular three-year term and one for a two-year term. The latter is necessary because the most recently elected board member, [redacted] was transferred to Korea.

The members of the nominating committee are Jacob Gurin, Pl, Chairman, [redacted]

SIGTRAN Lives! A Special Interest Group of the CLA, SIGTRAN (Special Interest Group for Translation), is forming under the guidance of [redacted] P16 (see CRYPTOLOG, January 1975). Mr. Whitney Reed's talk on free-lance translation was well attended, and by the time this issue of CRYPTOLOG emerges there will have been a second meeting featuring Mr. Arthur Salemme on the joys of technical translation.

~~CONFIDENTIAL - HANDLE VIA COMINT CHANNELS ONLY~~

.....And So Does the NSA Japan Forum!

Another new Special Interest Group, the NSA Japan Forum, held its first meeting 29 January. Lambros D. Callimahos spoke on Japanese World War II cryptosystems and the attacks on those systems by U.S. Army cryptanalysts.

A second program is planned for late March with Japanese language training, pre-war and post-war, the topic for a panel discussion.

...Not to Mention SIGVOICE.

One of the most dynamic and firmly established of the CIA Special Interest groups is SIGVOICE. In February [redacted] R54, spoke (twice) on "Voiceprints: Fact or Fancy?" (Voice prints are a fact, but Dr. Wood warned against expecting the same degree of reliability from them that one expects from fingerprints; handwriting analysis, he said, would be a better comparison.)

P.L. 86-36

ABROAD

BEIRUT, Lebanon - Akhram Hannoush, a Lebanese systems engineer, has a promising new business going in the Middle East with computers that work in both Arabic and Roman characters.

What's more, the computers being assembled by Mr. Hannoush's Systems Technology Corporation from imported components are competitive in price with big foreign suppliers and are tailored to the special needs of Middle Eastern customers.

The added dimension of making computers that answer in Arabic opens up a large number of potential users, such as an internal Government service sold to Saudi Arabia for more than \$1-million.

A similar service, also in Arabic, has been installed in Egypt for the army.

The development of computers that work in both Arabic and Roman characters involves a more complicated keyboard for the computer operator and the design of components based on 64 characters, including letters and numbers, for Arabic, compared with 36 characters for Roman letters and numbers used by English and other Western languages.

Mr. Hannoush says that Systems Technology's units can be assembled for half the price of the large international computer companies' standard systems.

The concern now includes among its Lebanese customers the American University Hospital, Middle East Airlines, and Unicrat, the country's largest automobile parts distributor; in Egypt, the Arab International Bank and Cairo University, and in Kuwait, the Beidou Trading Company.

Systems Technology has been financed by a group of Lebanese investors with backing from private Middle East capital.

(The New York Times, 26 January 1975)

Answer to last month's puzzle:

Can you make out the name?

The cryptolinguistic solution to this real-life puzzle was achieved as follows:

EO 1.4.(c)
P.L. 86-36



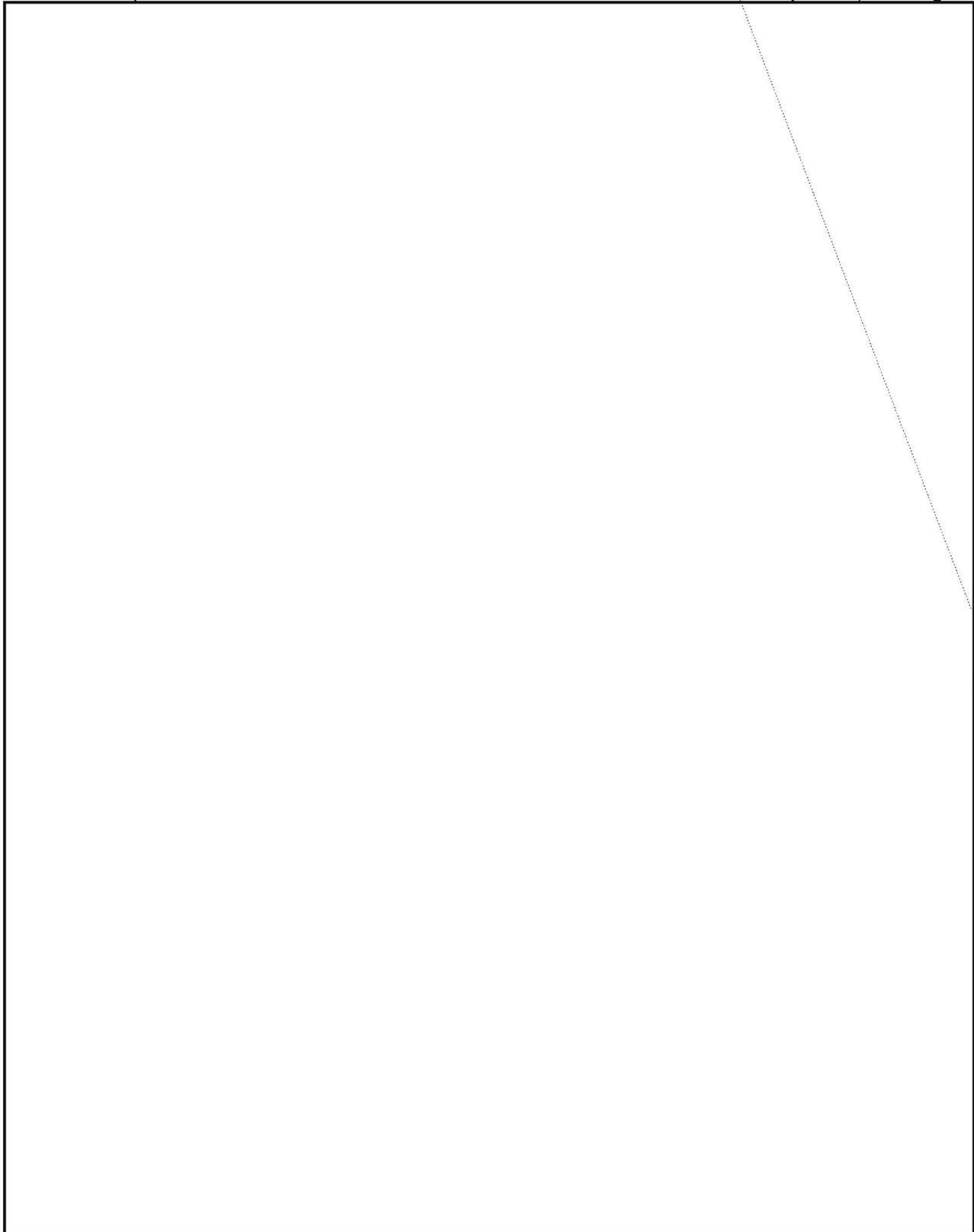
P.L. 86-36

Moral: When you run into trouble on the conventional road to results, consider the possibility of a shortcut via Central Information.

~~(TOP SECRET UMBRA)~~

~~SECRET SPOKE~~

PSYCHING THE CODE CLERK:



~~SECRET SPOKE~~

~~SECRET SPOKE~~**OPTOC RGLY****SPEAKING...**

The name CRYPTOLOG, with its paucity of high-frequency vowels, doesn't seem to be very good material to play the word game with, but can you find 50 good English words of 4 or more letters, using only the letters in CRYPTOLOG? Usual rules for the game.

H.G.R.

4. (c)
86-36~~(SECRET SPOKE)~~

LETTERS TO THE EDITOR

To the Editor, CRYPTOLOG:

Kudos to CRYPTOLOG for being a fine publication in general, but especially for printing the excellent Anne Exinterne series. Overall, the articles present cogent arguments and raise very many valid questions.

Drawing on my own experience as a member of the first intern group (in SR), I would like to comment specifically on a point or three:

1. I agree wholeheartedly that new employees should take basic courses in TA, CA, data systems, etc., as soon as possible. Hopefully, this could be done without placing them in a stultifying, wholly academic atmosphere. Anne's idea of placing new hires in productive jobs with plenty of allowance for courses, self-study or otherwise, is very good. Perhaps this could be formalized into a general "pre-intern" program, designed to give new hires some exposure to all the major Agency career fields. New employees could be given OJT assignments in each field while taking the courses. At the end of this period, they would have a fairly good overview of Agency operations as well as a good idea of which career field best suited them. The Agency would also have a more accurate indication of each trainee's actual abilities in each field, not just aptitudes. The trainees could then enter directly into an assignment in a suitable field or into an intern program for more specialized assignments and advanced courses. This method could eliminate the problem of employees being assigned to "wrong" career fields; and, by giving people good grounding in all the disciplines, it could make cross-training easier for those interested in professionalizing in more than one field.

2. Anne touches on another problem briefly, that of the "dud" OJT assignment. I'm sure every intern has a tale about the office where he or she was allowed only to sort and file

traffic; or about the "special study" that still lies unpublished in the supervisor's desk; or about the boss who told the intern there was no work to do, so "find something to keep busy!" Now I'm not saying that interns or "pre-interns" should not be exposed to what I call "drudge work," which is a necessary albeit tedious part of many Agency jobs. (The gathering and logging of data preparatory to tackling a CA problem comes to mind as a good example of drudge work.) "Dud" assignments are those in which the trainee is misused or not used at all. When reports come back that an assignment is a dud, that assignment should be checked out. If the job is really a dud, the trainee should be placed in another OJT assignment, and no more trainees should be put in that dud job. If the job turns out to be drudge work, but genuine work, the trainee should be told why he or she should remain in the assignment and why the job is a valid learning situation.

3. Lastly and leastly, I'd like to clarify the beginnings of the "FSG" title. A close friend and fellow intern returned from an interview for a job in D (or whatever it was then) and reported, incredulously, that the interviewer had dubbed her, as an intern, a "future super-grade." We didn't just laugh appreciatively at this story, we thought it was funny as hell. So we adopted the title as a cynical joke, attaching the initials (among others) to our names on notes among ourselves, or dropping the title in conversation. It was a good joke (and still is) and caught on and spread. If there were some later who began taking the title seriously... Well, I hope none of us who started the thing were silly enough to do that.

Thanks again for a good series.

DSA, SRA, EX-SRI, FSG, BA, HSG, etc.

P.L. 86-36

~~SECRET SPOKE~~

To the Editor, CRYPTOLOG:

As an Agency employee for over 15 years, ten of which were spent in the cryptolinguistic field, I for one feel discriminated against. You see, I am a "bookbreaker," one of that special breed of people who live in limbo as far as professionalization is concerned. Why? Because we have no Career Panel to call "home": we have to visit elsewhere (Language, Cryptanalysis, Special Research, etc.) for our certification.

For years now, we "bookbreakers" have been told how special we are and how important our skills are to the Agency's mission. But when Professionalization came along, we were almost forgotten. I say "almost" because the Language Panel has thrown us a bone of sorts. For instance, if we take Part I (the open-source part) of the Language PQE, then we are allowed to take Part II which at our option has a bookbreaker's part. We can only do this, though, if we pass Part I, which for some may be quite difficult, for translation is something we do not do every day.

The CA PQE is even harder for us than the Language test. Less than 10 percent of the most recent CA test dealt with bookbreaking. It appears that the trend is away from hand systems and more toward statistics.

As far as points toward professionalization are concerned, I am sure I would receive the maximum amount from a Bookbreaking Panel for experience, but with the other panels this is not always true. And, to qualify for maximum points from those other panels, required courses have to be taken and as a result valuable time, money and effort would be wasted by the "bookbreaker" trying to become a linguist or a "cryppie."

As an individual who has attended "Bookbreakers" Forums and has regularly received "Bookbreakers Notes" from meetings, I do not welcome the idea of having to compete with the linguists (translators/transcribers) or cryppies in this Agency for professionalization as I am sure they would not want to compete with the "bookbreakers" for certification if there were no Language or CA Panels.

Duncan Battison, B34

Mr. Battison poses a question that has troubled thoughtful NSA people for years. Where the bookbreaker fits into the SIGINT professionalization scheme is at once a semantic question of definition of terms and a human question of fair dealing for the people involved. Is a bookbreaker one who "breaks into" a code? Then he must be a cryptanalyst. Is he one who "reconstructs a codebook"? Then he must be a language analyst. Is he both--or neither, but a special breed as Mr. Battison contends?

It seems to us that we must define the umbrella term "bookbreaker" which now covers both the crypt and the language skills necessary to turn encoded text into plain language through analysis. Then we can identify the special experience, training, and attributes of those who exercise those skills.

CRYPTOLOG solicits the views of its readers on this thorny question whose answers affect the livelihood of people who engage in this peculiarly SIGINT occupation. Responses will be published in a future issue.

Crypt. Ed.



Are We Getting Through to You?

If your personal copy of CRYPTOLOG is not correctly addressed, or if your organization is getting too few (or too many) copies, please let us know on the form below, so that our distribution list can be corrected. Clip and send to CRYPTOLOG, P16.

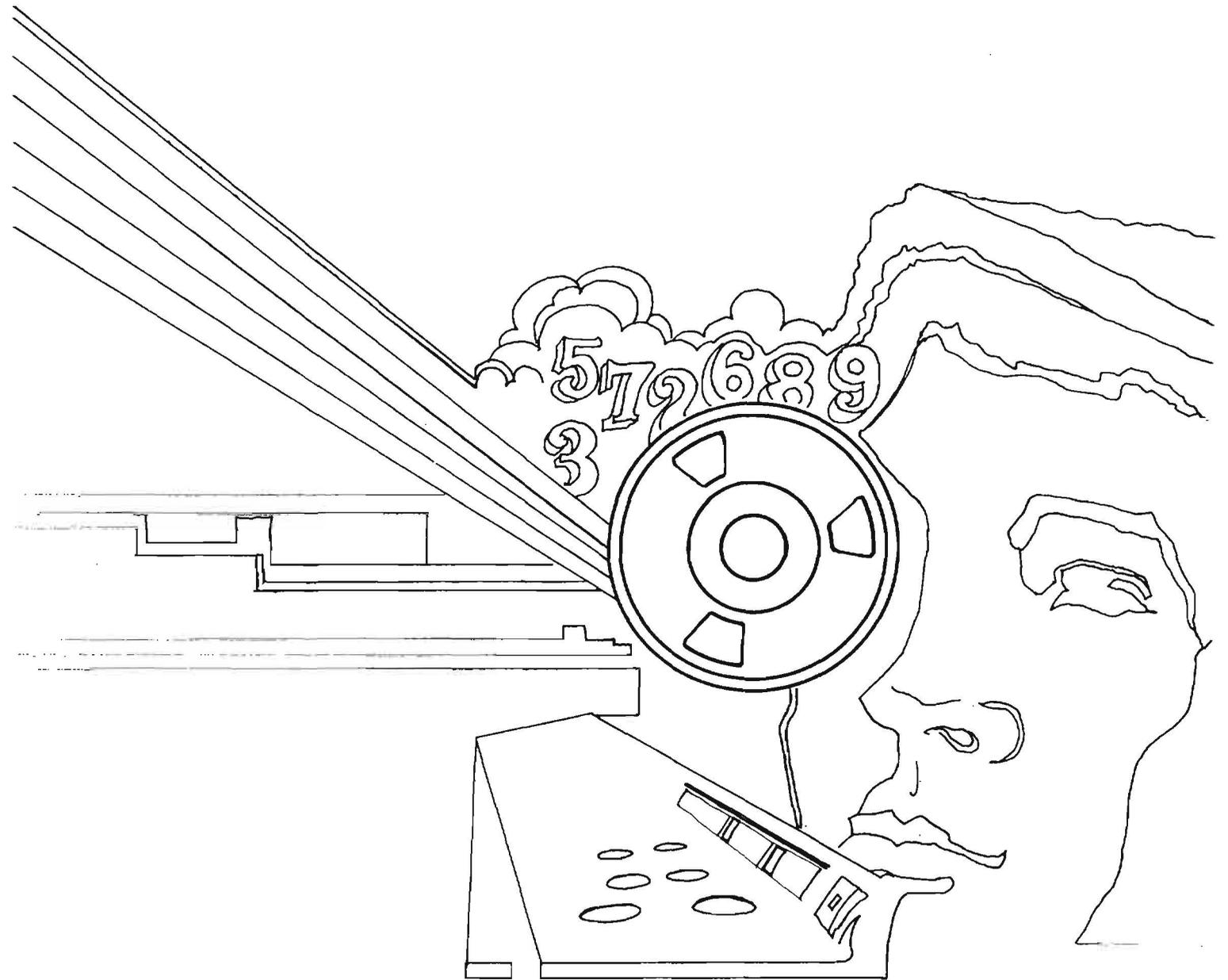
On individual-distribution copy addressed to _____ (name) _____

Please change organizational designator to _____

Please change name to _____

On organizational distribution, please change number of copies for _____ (organization) _____ to _____ copies.

~~TOP SECRET~~



~~THIS DOCUMENT CONTAINS CODEWORD MATERIAL~~

~~TOP SECRET~~