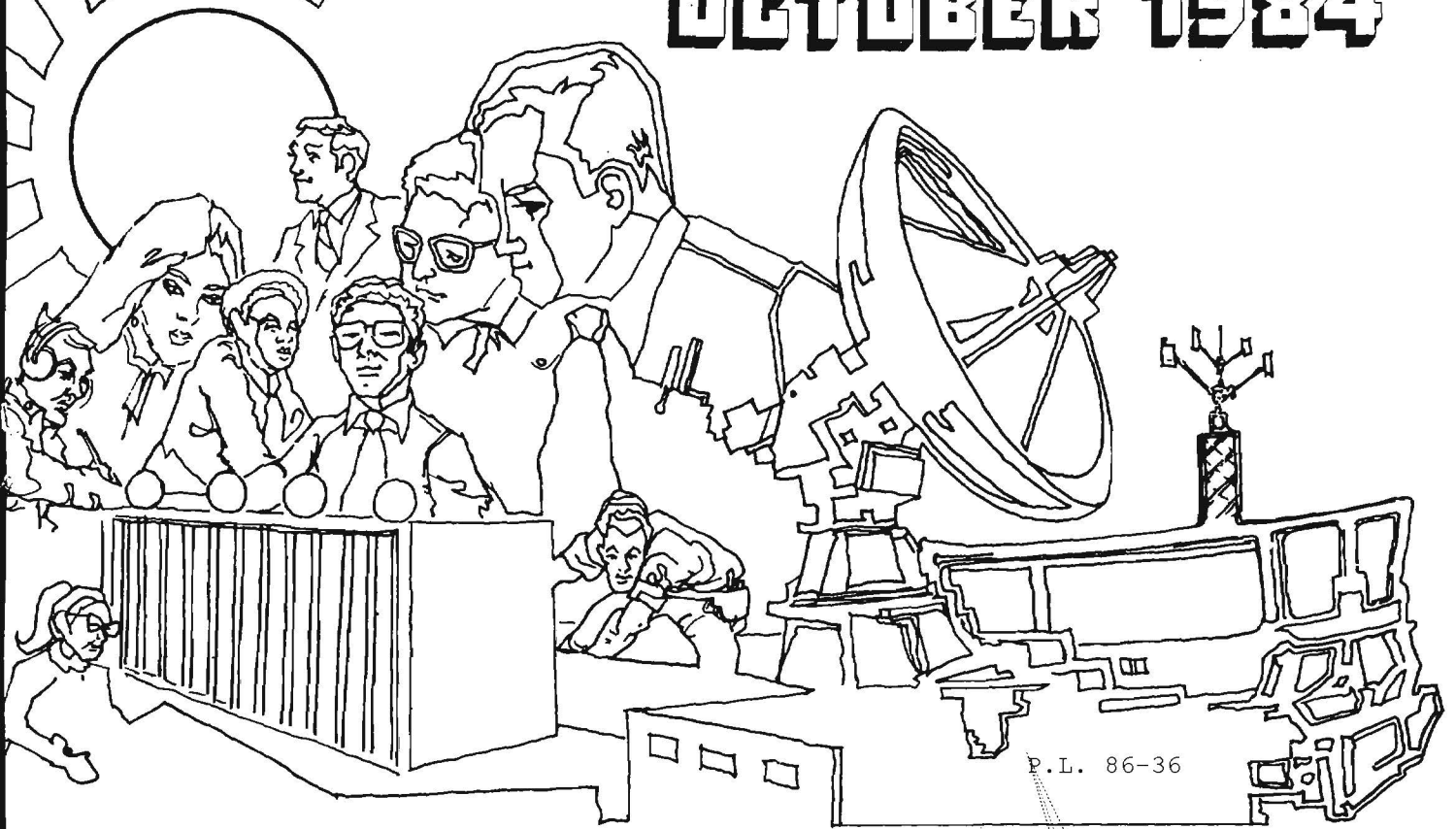


NATIONAL SECURITY AGENCY  
FORT GEORGE G. MEADE, MARYLAND

# CRYPTOLOG

## OCTOBER 1984



P.L. 86-36

THOUGHTS OLD AND NEW, RANDOM AND CAUSAL (U).....	[REDACTED].....	1
DEVELOPMENT OF ON-LINE PROCESSING SYSTEMS (U).....	[REDACTED].....	5
A PARTING SHOT (U).....	E. Leigh Sawyer.....	9
I REMEMBER... (U).....	W.P. Meyer.....	11
ON SPELLING "PLAIN?TEXT" (U).....	[REDACTED].....	12
NATIONAL INTERESTS:		
CORNERSTONE OF OUR FOREIGN POLICY (U).....	[REDACTED].....	14
PROGRAMMING, CREATIVITY, AND HUMOR (U).....	[REDACTED].....	18
NSA-CROSTIC NO. 58 (U).....	D.H.W.....	20

~~THIS DOCUMENT CONTAINS CODEWORD MATERIAL~~

~~TOP SECRET~~

~~CLASSIFIED BY NSA/CSSM 123-2~~  
~~DECLASSIFY ON: Originating~~  
~~Agency's Determination Required~~

# CRYPTOLOG

Published by Pl, Techniques and Standards

VOL. XI, No. 10

OCTOBER 1984

## Editorial

PUBLISHER

[Redacted]

### BOARD OF EDITORS

- Editor..... [Redacted] (963-3045s)
- Production..... [Redacted] (963-3369s)
- Collection..... [Redacted] (963-3961s)
- Computer Security  
..... [Redacted] (859-6044)
- Cryptolinguistics..... [Redacted] (963-1103s)
- Data Systems..... [Redacted] (963-4953s)
- Information Science  
..... [Redacted] (963-5711s)
- Puzzles..... David H. Williams (963-1103s)
- Special Research..... Vera R. Filby (968-7119s)
- Traffic Analysis.. Robert J. Hanyok (968-8418s)

Well, we moved again. Just about the time we got the magazine caught up, too. Once again we were reminded about how far we have come since the old pencil and graph paper days. It was a shock to realize that without this big brown Volkswagen Bus of a terminal, we were lost.

It was once true that after a move we could just sit down and begin to work. All our raw data was on paper, in folders or bundles, safely tucked away in our file cabinets. So long as those file cabinets stayed with us, so did our ability to do our assigned job.

But that is no longer true. All our data is now buried in a computer somewhere among the viscera of this mini-city. To touch it, to look at it, to work with it, you need an electrical connection to wherever it resides. Given that connection, any one of us can do things it took many people to do in those "good old" days, and often in much less time. However, once we come to rely upon this new high-tech approach, we are at the mercy (literally) of the system that keeps those connections working.

I put quotes around the "good old" days because I'm not so sure they were. Frankly, I like the new approach. I think that moving the computer out of the machine room and onto the analyst's desk is the right thing to do. However, I have just spent seven weeks without my terminal connection; on a previous move, I waited almost six months to be permitted to do my job. I still advocate this new high-tech approach, but at just this moment it is not easy to plead the case with a straight face.

In fact, I'm thinking of ordering another file cabinet.

*WES*

For subscriptions  
send name and organization  
to: [Redacted] P14

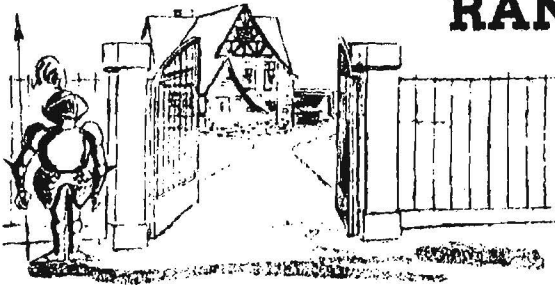
P.L. 86-36

To submit articles or letters  
by mail, to: Pl, Cryptolog  
  
via PLATFORM mail, send to:  
cryptolg at barlc05  
(bar-one-c-zero-five)  
(note: no 'O' in 'log')

Contents of Cryptolog should not be reproduced, or further disseminated outside the National Security Agency without the permission of the Publisher. Inquiries regarding reproduction and dissemination should be directed to the Editor.

# THOUGHTS OLD *and* NEW,

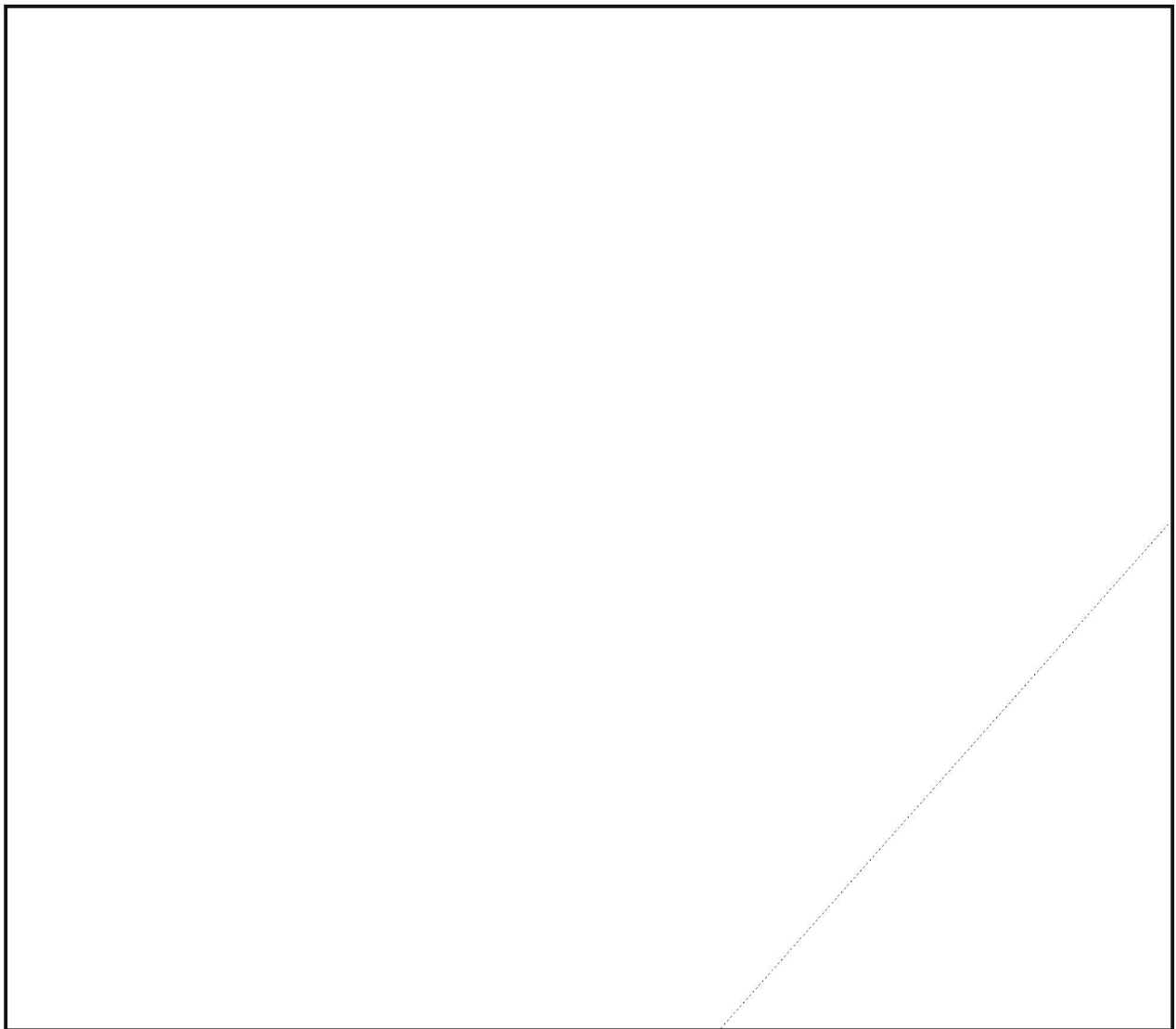
## RANDOM *and* CAUSAL [U]

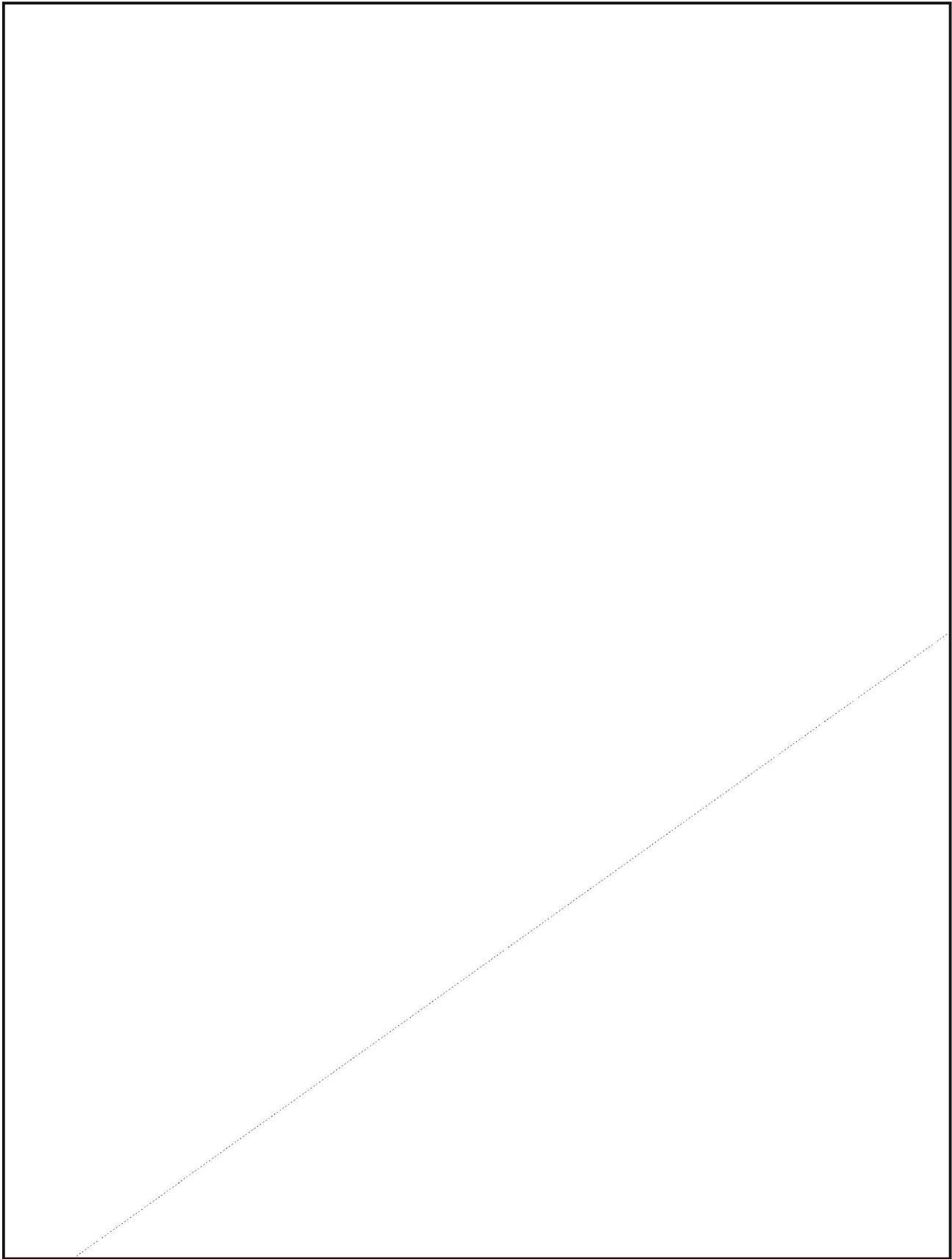


EO 1.4.(d)  
P.L. 86-36

by

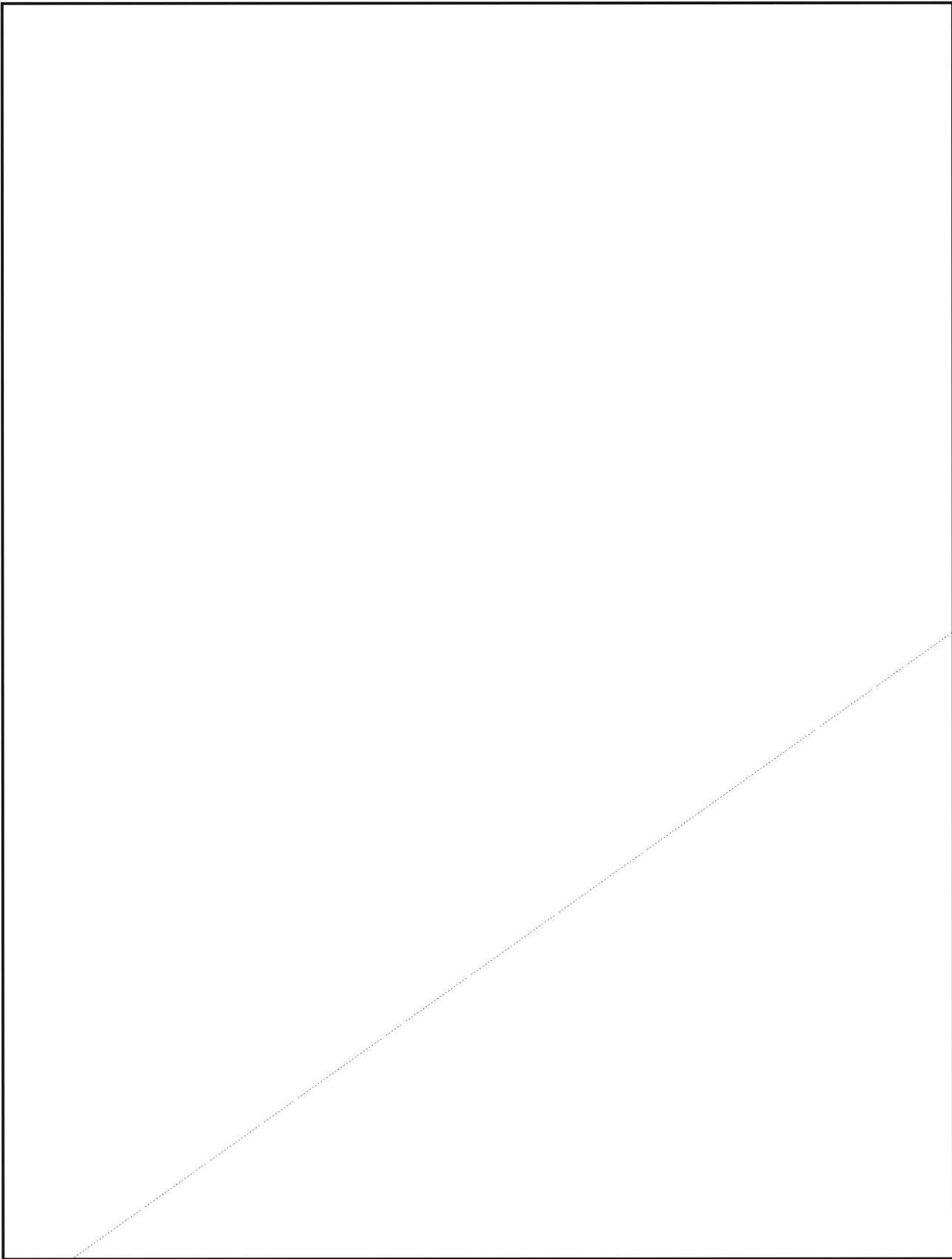
[Redacted box]



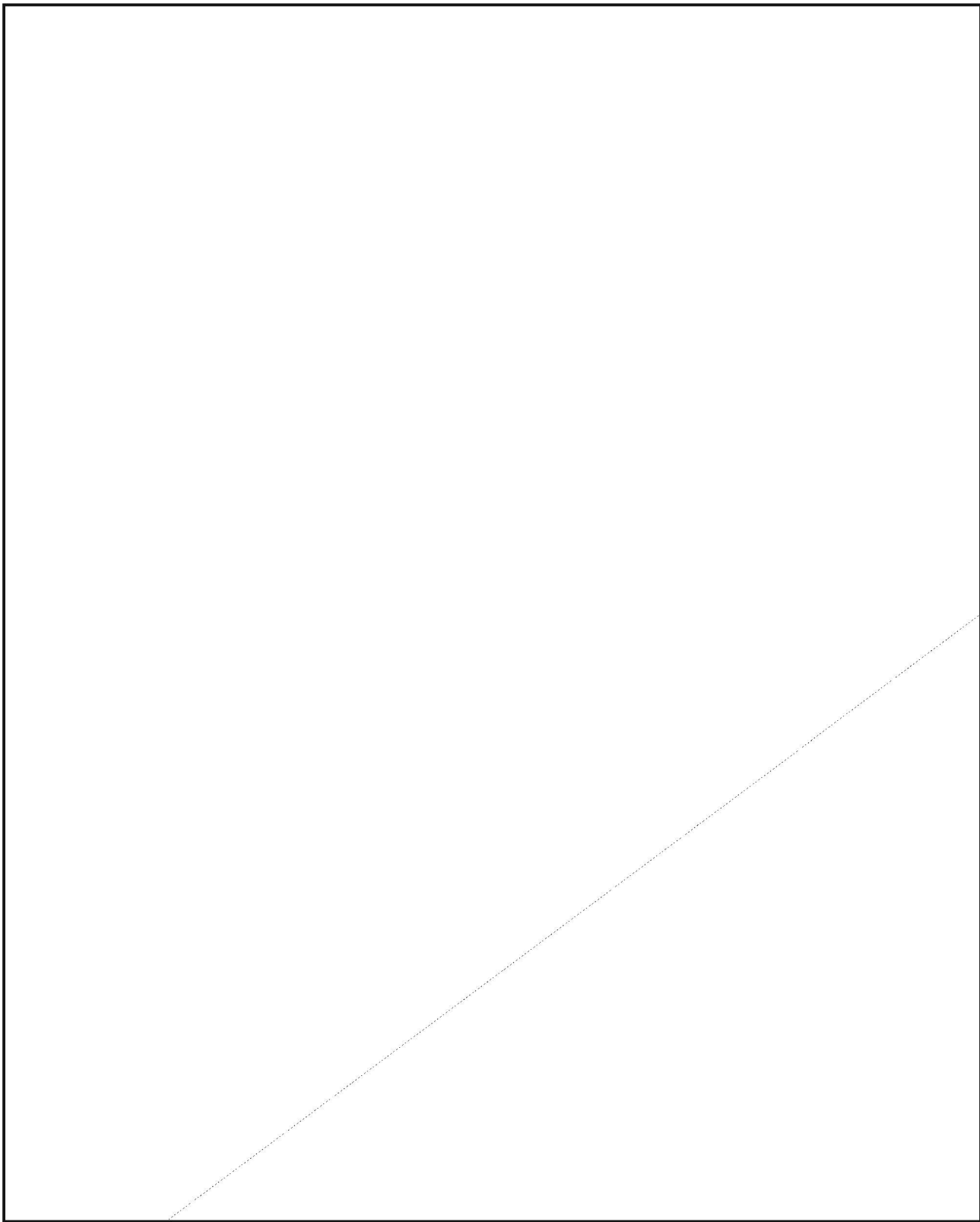


EO 1.4.(c)  
EO 1.4.(d)  
P.L. 86-36





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



[Redacted Name]

*Chairman*

P.L. 86-36

*Bookbreakers' Forum on Machine Aids*

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

# DEVELOPMENT OF ON-LINE PROCESSING SYSTEMS



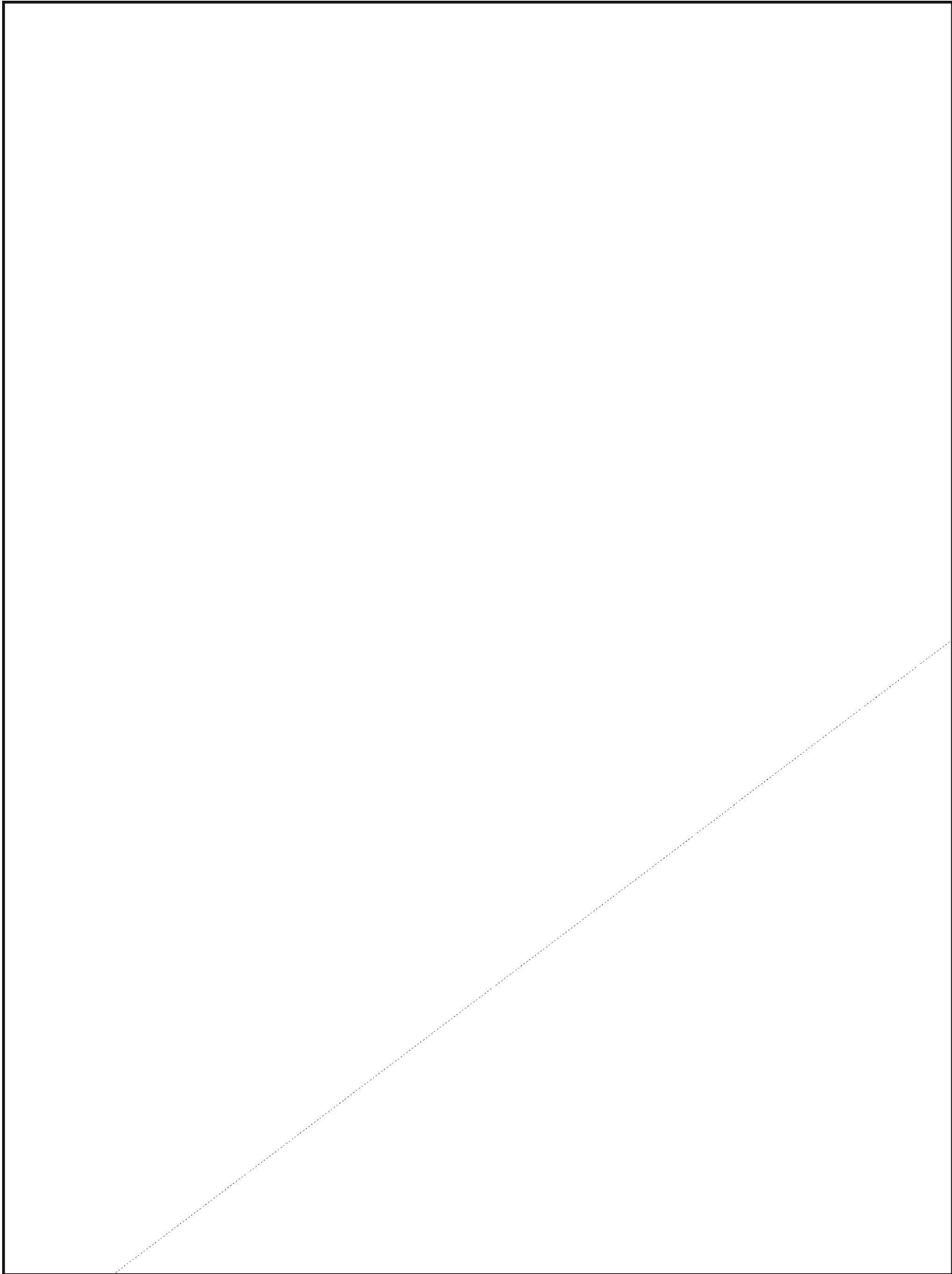
P.L. 86-36

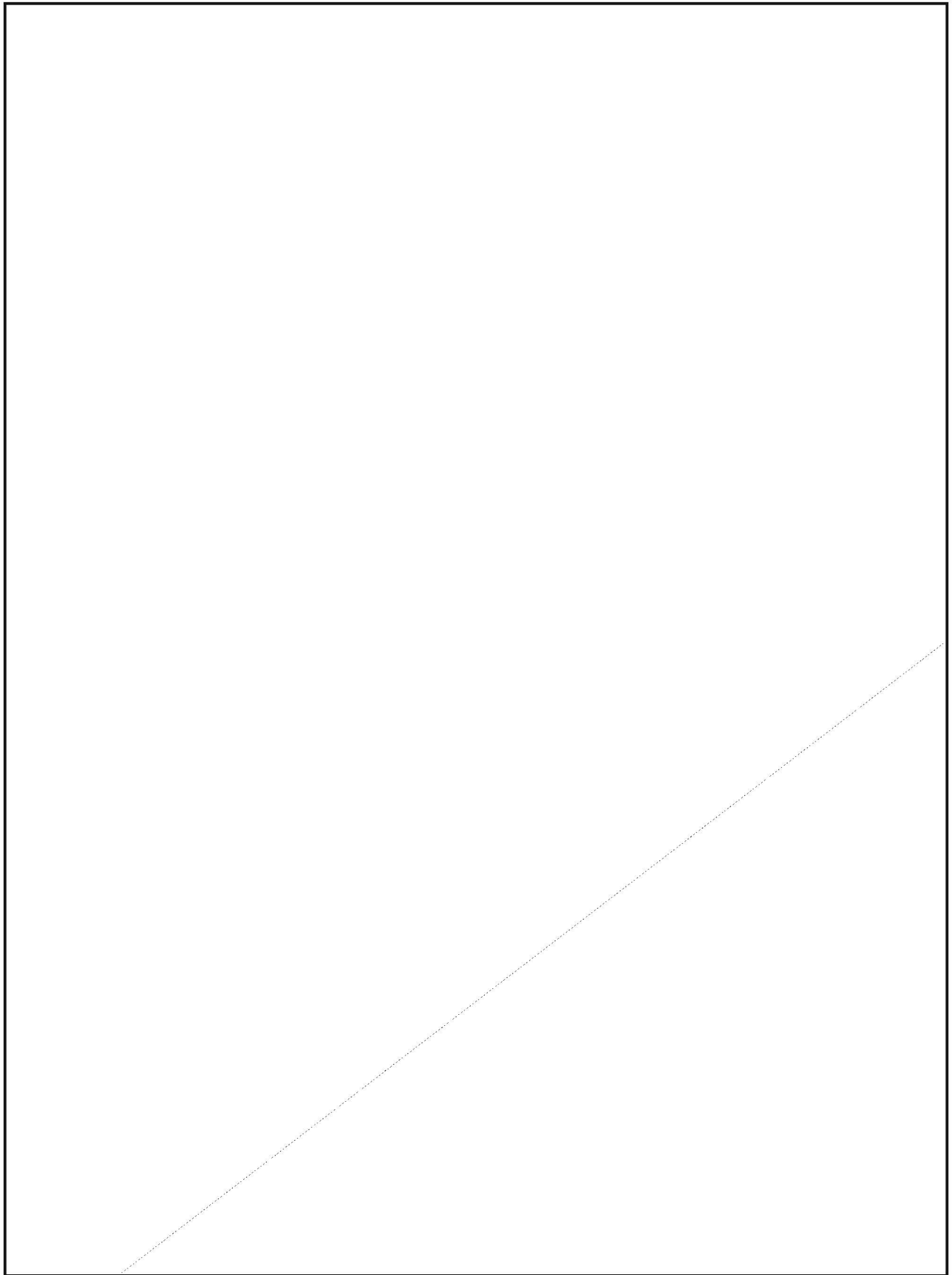
by

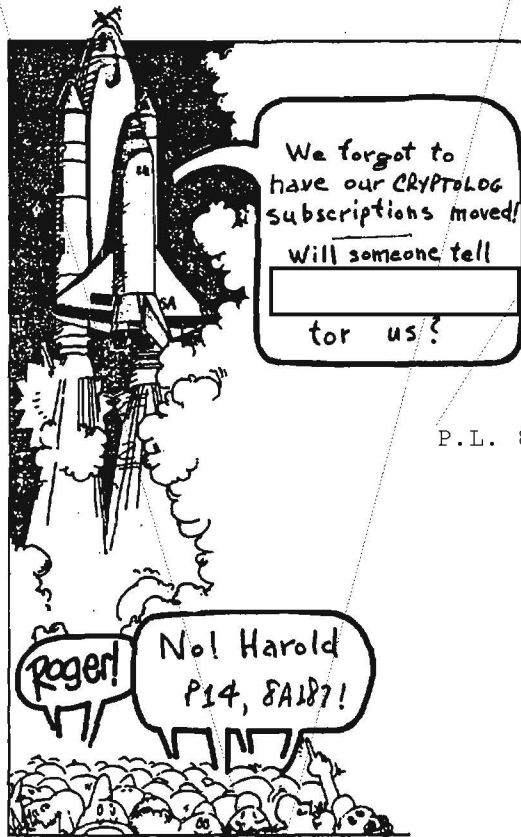
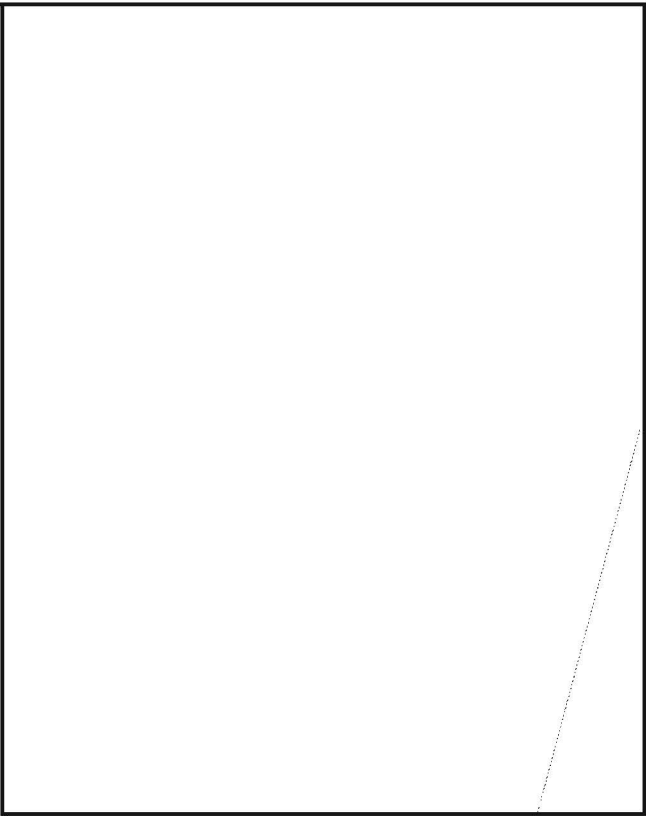
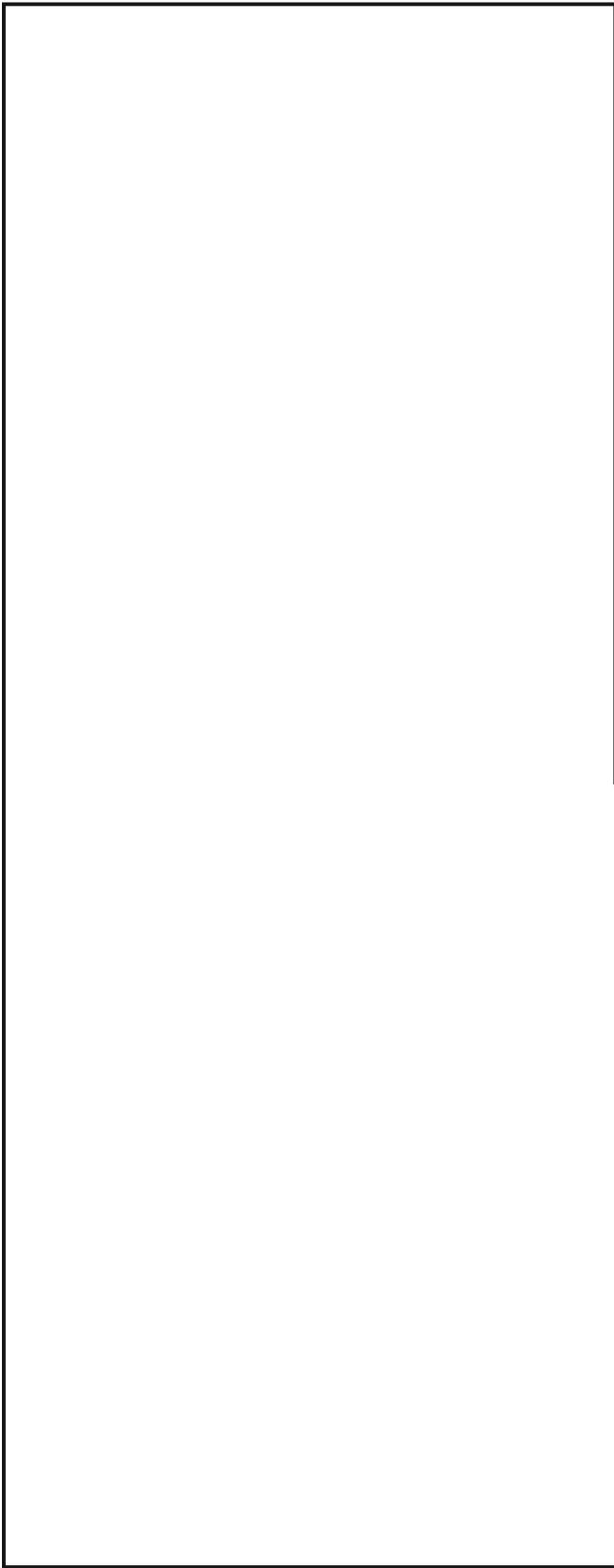


685









P.L. 86-36



## PARTING SHOT (U)

by E. Leigh Sawyer, B

### PREFACE

When I was recalled to military service in 1951, I was living in Connecticut and had never heard of some sort of government instrumentality with the acronym AFSA. I soon found out when I found myself working in Building 19 at 3801 Nebraska Avenue. I was soon aware as well of AFSA operations going on at Arlington Hall Station in A and B Buildings. Since that time, I have watched NSA, the successor of AFSA, grow at Fort Meade, FANX and, for that matter, world-wide. Some NSA folks still on board will remember the two locomotives in the mid-50's, adjacent to the barracks just to the east of the eastern segment of Canine Road. Belching steam and smoke all day, they supplied the heat to the barracks we were occupying temporarily until the new operations building was completed. Since that time, the proliferation of NSA plant facilities, and of the people to work in them, has been dramatic. In fact, the looming of Building 2A in its final stages of completion and Building 2B not too far behind in its construction is almost mind-boggling when considering the NSA of 25 years ago. On the other hand, from this growth arises the specter of the penalty of bigness. One symptom of this specter is what led me to write what is to follow. In this connection, there occurs to me at times what might be termed the parable of the dinosaur and the cockroach. The dinosaur, in essence, specialized himself into extinction. From what I understand, the cockroach today is pretty much unchanged from when it co-existed with the dinosaurs and is still sufficiently efficient to be fattening the pockets of extermination companies. A lesson of sorts here?

*CRYPTOLOG* has published a number of articles by Leigh Sawyer. This will be his last, for he is retiring at the end of this year. His "Parting Shot" draws upon his perceptions from the era of Ralph J. Canine to the present. His concern expressed in this article reflects a deep-seated devotion to NSA and sensitivity to the critical importance of its mission to the nation.

In the September 1984 UPDATE on the Campaign for Excellence (PQS), the results of a survey were included which reflected the views of a slice of the civilian work force on PQS issues. The issues concerned covered a fairly broad spectrum involving a variety of individual perceptions of being a part of NSA. As I read the results of the survey, I was particularly interested in the findings appearing under "EMPLOYEE KNOWLEDGE OF THE NSA MISSION." These were:

- 53%: A good understanding
- 40%: Some idea but would like more
- 5%: Very little but would like to know more
- 2%: Not important

The survey results noted above immediately triggered my mind on a subject that I have preached on many times in the past--ranging from lunch table conversation to addresses I

have made to various management classes. My text has been centered on some confusion between ends and means. It is my very strong conviction that far too many NSA personnel believe that their work may be characterized as ends in themselves when, if the truth were to be known, they are involved only in the means. The distinction is of the greatest importance and relates directly to those survey results noted above.

The mission of P, with which I am most familiar, is to report SIGINT. This is one of the two prime reasons for the existence of this Agency. The other, of course, is the mission of S. On the one hand, we exploit the communications of target countries; on the other, we protect our own. This is it in a nutshell. It follows naturally that every drop of energy exerted by the entire NSA work force somehow relates to the successful accomplishment of either one of these two mission objectives. The survey results confirm my long time conviction that too many NSA employees are far from sensitive to this fact of life.

Delving into the P organization, let's consider for a moment which people are involved in ends and which ones in means. If you wish to be a complete purist, you might judge that only those who write SIGINT reports are involved with ends. This is probably far too narrow for definition purposes. Certainly the transcriber, the traffic analyst, the cryptanalyst, and others directly involved in hands-on processes must also be counted in as "ends" people. You needn't ask them if they are aware of the NSA mission in any survey. Insofar as P is concerned, they are what the success of the mission directly depends upon, beyond any question. If you don't believe this, consider the consequences if suddenly, with a wave of the magic wand, they all disappeared. Consider further the remaining P organization. On the basis of the bottom line mission objective of P, as noted above, the remaining P organization would have literally nothing to do. This is somewhat akin to what would happen to the multi-faceted fishing industry--from processing plants to the man in the white apron at the local super market who will fillet your flounder; from the wholesale outlets to the guy who writes TV commercials for cat food; and on and on--if all fishermen worldwide decided that they would rather raise chickens? Whether it be fresh fish or fresh SIGINT, one can easily bring to mind in either case the dust rising from a vast expanse of rubble after a previously elaborate structure has collapsed on itself.

One may ask how far we must go to reach that magic dividing line with the "ends" types on one side and the "means" types on the other. Not very far, really. In the P world, I would draw the line basically at the division level. To put it in the vernacular, from the division down is "Where it's all at." The further you go up the line from the division level, the less frequently will you encounter people in "ends" jobs--if you find any at all. This is not to stigmatize unfairly the "means" people in any way. As a matter of fact, I would judge throughout the P organization that the entire work force has a good perspective of the ends being sought and how their work relates in some fashion to it. There might be a few backwashes where this assumption does not hold up, but not many in my opinion.

So let's depart from P and consider the rest of the Agency (except for some chunks of S and R). If I could find a blanket large enough, I would throw it over them emblazoned with the letters, "MEANS". Now, supposing I were to lift a corner of this blanket and grab out the first soul I saw. Supposing I were to say to him, "Sir, step outside here for a moment. See those big words on the blanket? You and all those other people under the blanket are 'means' types. What basic ends do you serve?" If he were one of the 2% respondents in the survey, he would say, "I don't know, I don't care. Get off my back." If he were one of the 5% respondents, he might say, "I'm not sure. It's got something to do with national security, doesn't it?" And as for a respondent in the 40% bracket, he might say, "It's something or other about something called SIGNIT, or something like that."

I'm not certain what the latest buzz figure is for the total Agency civilian population, but I do know that 47% of it (assuming the 825 people polled are representative) constitutes a lot of people who are far from clear in varying degrees about basic work motivations. Pride on the part of a person doing a job in some sort of a supporting role is to be expected. But this same pride can be far deeper, far more meaningful, if that same person understands that, somehow, what he has done, and done well, is traceable for ultimate effect to the "ends" people on the firing line. If he does not know this, he can only experience what I would term pride in a vacuum. How much greater and meaningful is his pride if he knows his accomplishment, no matter how remote from the firing line, was done as a part of "the team." Every blessed person in the Agency is part of that team. The depressing thing is that they all don't know it. It follows that the challenge of this is to ensure that everyone knows what the



fundamental ends are that justify the existence of NSA. Putting it in horological terms, that little itty bitty cog on that little itty bitty gear in the innards of the clock is contributing somehow to the movement of the hands. If you were to ask that cog what it does, it would be much better to hear "I help people tell time" rather than "I hang on and spin around."

Without belaboring further the main thread of the foregoing, the prime question arising is how to cope with this problem. One might be inclined to suggest that the initiation of some kind of program to make all personnel far more sensitive to the fundamental ends that the Agency attempts to accomplish might trespass on the principle of "need to know." This would be a ridiculous reservation since there is a sharp difference between what the ends are and the methods used to achieve them. Along these lines, a flier was recently distributed about a program labelled "HINT." In essence, the program invites all cleared and indoctrinated personnel, especially those outside the Operations Directorate, to hear briefings on current intelligence and related subjects. This is a step in the right direction but will never overcome the basic problem of mission awareness. The main reasons for this are very simple--lethargy, apathy, and physical remoteness for many from either of the two auditoriums specified for the purpose.

(U) We are continually bombarded by the need for innovativeness and imaginativeness in our work. In this particular situation, such is badly needed. How can you expect a person to be a cognizant member of "the team" until he knows what "the game" is? For example, if we trundle a VCR from work space to work space so that the cast of "Cheers" can tell us why we should buy bonds, why can't we use the same device to broaden awareness of the fundamental Agency mission? This is one way to do it. There are others. The point is, who is smart enough to know that something of this sort should be done and has the authority to say "do it"?

(U) Back in the 6th century B.C., the Chinese philosopher Lao Zi proposed the planting of trees around the imperial palace both for beautification and for screening from the winter winds. He was told that the trees would need at least 100 years to reach full growth. Lao Zi replied, "Then we'd better get started now."

SOLUTION TO NSA-CROSTIC No. 57

Department of Golden Oldies: Management Survey of the Philharmonic." Reprinted in CRYPTOLOG, Vol. I, No. 1, August 1974, from HOSPITALS, March 1954. The author is unknown.

"Excerpt from a 'management survey' of the ----- Philharmonic Orchestra.

"...For considerable periods the four oboe players have nothing to do. Their number should be reduced and the work spread more evenly over the whole of the concert thus eliminating peaks of activity."

## I Remember ... (U)

~~(C)~~ During the 1960's, Security asked Library Acquisitions to obtain a publication called, I believe, "Directory of Far Right Organizations." It was published by an obscure post office box firm somewhere in the West. Price unknown.

(U) Library Acquisitions normally verified price and availability of all publications before placing an order. This time I asked a small book store in Washington, D.C. if they would order it for us. After a few weeks, the publication was received by them and forwarded on to us.

~~(C)~~ A year later the same firm issued their new publication, "Individuals and Organizations interested in the Far Right." The Washington Post picked up on this and published a little squib about the only book store in the Washington area that was listed as being an outlet (sic) of far right publications. The book store listing was a direct result of our request to them to order the publication.

(U) Many organizations rent their membership list out to other publishers; obviously this firm had taken their mailing list and capitalized on it. What if I had written a cost-and-availability letter to them? Certainly it would have been very embarrassing to have NSA appear on their list.

W.P. Meyer  
FANX Librarian



# N SPELLING

## "PLAIN?TEXT" (U)

by



G61

P.L. 86-36



First of all, if "plain text" were the suitable spelling for the noun, then "plain-text" would be the appropriate spelling when the noun is used to modify another noun. However, as I intend to demonstrate that "plain text" is not at all desirable, this observation will be rendered moot.

Secondly, to avoid begging the question, I resort to spellings like "plain?text". Fortunately, this essay is written rather than spoken, since "plain text" and "plaintext" have quite different pronunciations, and I don't know how to pronounce "plain?text".

Now the spelling of compounds in English is not at all straightforward. It fluctuates a good bit, almost always in the direction of the solid spelling (sometimes bypassing a hyphenated spelling entirely). In this article I will concentrate on adjective-noun compounds, hoping that everyone can agree that the "plain" of "plain?text" is an adjective even though the "cipher" of "cipher?text" is a noun.

Consider the following sentences:

- Blue?birds are blue?birds.
- The blue?bird is a blue?bird.
- That blue?bird is a cerulean warbler.

Without visual or aural clues, it may be difficult at first to discern even what is being said, but nearly everyone will agree that the correct spellings are:

- Bluebirds are blue birds.
- The bluebird is a blue bird.
- That blue bird is a cerulean warbler.

Wayne:

I think that I told you about the brief discussion I had with [redacted] when we changed his title from "On Saving Plain-text" to "On Saving Plain Text" because Creepylog had been making a distinction between the adj (one wd) & the noun (2 wds). He doesn't exactly agree, as you can see.

HGR

(Other spellings give other meanings, some of which even make sense in certain contexts.) Note how the accentual pattern of "bluebirds" differs from that of "blue birds": in the compound, the first syllable has the stronger accent.

Now "plain?text" has the accentual pattern of "bluebird". The spelling "plain text" suggests the accentual pattern of "blue bird", and can momentarily throw the reader off the track. (Note that "plain?text" when contrasted with "cipher?text" has a third accentual pattern, the same as in "That's not a green bird, it's a blue bird"; this pattern is sometimes represented in writing with italics, but the reader usually needs no clue beyond the context. In any case, this paper does not deal with the contrastive pattern.) Derailing readers, as the preceding long parenthesis may have done, is not nice.

So we have at least a prima facie case for the spelling "plaintext". The burden of proof shifts to those who favor the broken spelling. And perhaps I should simply let them speak for

themselves. But (to prepare the way for weightier matters) I will suggest two arguments they could put forth.

First, not all English compounds with the accentual pattern of "plain?text" are written solid. We have "yellow jacket" (not a flavid garment, but a wasp); some noun-noun examples include "ice cream" (originally "iced cream") and "light ray" (no, not a slender manta). Sometimes a compound remains open because closing it would lead to a word odd in appearance or seemingly hard to pronounce, as in "lightray" or "seaurchin". These observations hardly seem to provide adequate reason to flout common sense in the case of a compound like "plain?text". Tradition gives "plain text" some support, whether it be CRYPTOLOG's Consistency Guidelines, or Random House's Dictionary (rumored to have assigned the wrong number of humps to a dromedary), or Funk & Wagnalls (once a national joke, now out of print). Although Merriam-Webster used to have "plain text", it now gives "plaintext"; Merriam wisely refuses to give space to alternate spellings of compounds, listing the version it observes most or a version formed by analogy to similar compounds. The other two leading college dictionaries are silent on "plain?text", but the New World does suggest the solid spelling when "the referent having a compound name becomes so familiar that it is thought of for itself rather than mainly within a generic classification, as ha[s] 'redbird'" (page xxi). No cryptanalyst thinks of "plain?text" as merely some kind of "text"! Tradition is certainly a good thing, but to insist that standards never be changed is logically equivalent to insisting on the spelling "clarus textus", or whatever the Proto-Indo-European for "plain?text" may have been.

A second argument is that consistency has merit, whether to enhance a publication's esthetic appeal or to facilitate data retrieval. But as standards change, and some inevitably do, there comes a time when a new consistency should be inaugurated. Possibly "plain?text" did in fact have the accentual pattern of "blue bird" years ago when the standards were first promulgated, and only years of frequent contrast with "cipher?text" have given it a pattern like "bluebird". A new standard seems to be in order. Certainly most examples of "plain?text" that I have seen in print have the spelling "plaintext", especially if I may discount examples in publications like CRYPTOLOG that consciously adhere to other standards. For editors to insist on consistency in the spelling of compounds may result in the slowing down of the natural process by which careful writers enable a language's written form to more closely approximate its spoken cadencies.

It's certainly desirable to encourage good writing standards, but I think it is important to advocate sympathetic reading habits as well. Let me give two examples that I think reflect an excessive zeal for standards that inhibits a reader's comprehension. Please don't misunderstand: I do not ascribe to all who wield a red pencil the infelicities I am about to relate. For one thing, I sometimes wield a red pencil myself; moreover, I realize that many who do so are trying to protect people like me from what nearly befell me in the second incident below. (Incidentally, it was refreshing to see the spelling 'Bluepencils' in the December issue; CRYPTOLOG is way ahead of the lexicographers on this one.)

A recent CRYPTOLOG writer chided a reporter who "either didn't do his homework or decided to go modern when, in describing a recent hurricane, he said: 'Damage will be in the millions, but only one person lost their life.'" Apparently the reporter is male, but the sex of the victim is irrelevant to the story and perhaps unknown to the reporter. "His or her" and "his/her" seem especially inappropriate. "Their" is the only pronoun suitable to the occasion. This use of "their" is not "modern"; the Oxford English Dictionary has examples as long ago as Middle English. Now I suppose the reporter could have said "... only one person died." These grammatical reflections distract us from the observation that perhaps the reporter should have said: "Damage will be in the millions. One person has died."

A few years ago I submitted a paper towards certification in Computer Science. The first reader rejected it, citing for the most part alleged grammatical errors. A second reader accepted it, as did the tiebreaking third reader; in fact, they both accepted the paper "with honors", entitling me to the sweetest after-taxes \$37.50 in a long time. The first reader's zeal obscured the paper's merit from him. And his zeal was all but unbounded. One "error" was my use of "commoner" and "commonest" (Fowler insists on the morphological comparison, and I have noted dozens of fine writers using these forms). The other "error" was the absence of "with" after "begin" (as if the answer to the question "How does the National Anthem begin?" has to be "It begins with 'O say can you see ...'").

So now you know why I originally entitled my CRYPTOLOG article from last January "On Saving Plaintext" (and why I am glad the CRYPTOLOG people didn't reject it out of hand for alleged spelling errors). Anyways, I at least snuck a split infinitive past the editors' watchful eyes ("... to automatically generate ...")!

# NATIONAL INTERESTS

## CORNERSTONE OF OUR FOREIGN POLICY (U)

by

664

P.L. 86-36

**A** noted historian recently wrote "Foreign policy is the face a nation wears to the world. The minimal motive is the same for all states-- (U) the protection of national integrity and interest." The allusion to the protection of national interest will be a familiar phrase to those who follow recent discussions of foreign policy. Within the last year the protection of national interests has been evoked as the basis for our country's military action in Grenada and the stationing of American marines in Lebanon. The terms "national interest," "vital interests," and "strategic interests" pervade media discussions of our nation's relations with the rest of the world. The almost constant references to these concepts naturally lead to the question "What are these national interests that seem so quickly threatened and require such decisive action?"

(U) The purpose of this essay is to look at the concept of American interests in its most basic form. The essay seeks to trace very briefly the historical background and trends that have made our perception of American national interests what it is. Along with defining broadly national interests, this essay will also seek to point out the implications resulting from how we define our national interests.

(U) At this juncture, a disclaimer is necessary. This essay will not attempt to judge the various perceptions of national interests adopted by past administrations. This discussion is not large enough in scope to judge between such nuances, and the taking of particular sides is not a function of this undertaking. Still, although limited in scope,

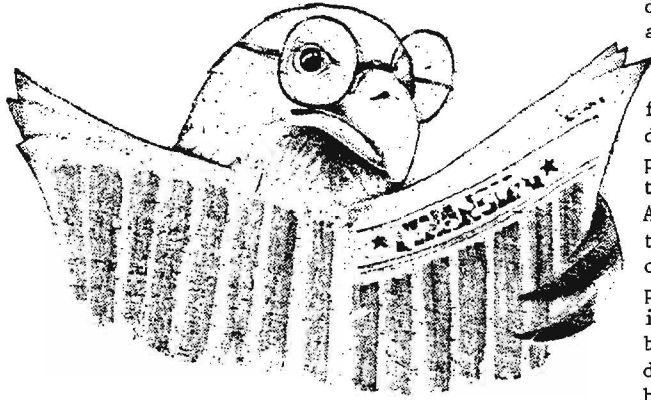
the importance of analyzing the concepts at hand must again be emphasized. A direct and concise discussion of American national interests in the foreign policy sphere should provide a valuable perspective concerning the place our country has assumed in the world community.

(U) Our nation's early leaders recognized the role of national interests in the sphere of international relations. Of their views, it has been written

"They believed that states responded to specific national interests--and were morally obliged to do so, if there were to be regularity and predictability in international affairs."

George Washington said "No nation is to be trusted farther than it is bound by interest."

(U) Our founding fathers viewed the birth of our nation as the beginning of a unique experiment in democracy. The precarious nature of the undertaking became all too apparent when the newly established colonies were threatened by the great powers of Europe early in the nineteenth century. It was at this point in our history that an abiding aspect of our national interest took form. The continuation of our experiment in democracy depended upon the maintenance of a balance of power in Europe. In other words, it became in our national interest to have those countries who were in a position to threaten us held in check by one another. In those years the threats came from France and Great Britain.



a single place. A dangerous level was perceived to be the point at which the American democratic experiment could be threatened by an outside party.

(U) Following the resolution of the threats from England and France during the first few decades of America's existence, the European powers were held in balance by each other throughout most of the nineteenth century. American intervention to protect national interests was not needed. However, as evidence of the concern, the Monroe Doctrine evoked a prohibition for the Old World against meddling in the New World. Through this action a buffer was provided against possible hindrances to American development. Because a balance of power was maintained in Europe, there was no threat to America and thus the new nation was able to distance itself from European entanglements.

(U) The possibility that one country should come to dominate the others in the Old World greatly concerned our first policymakers. Such a series of events was perceived to be a grave threat. John Adams noted, concerning the two great powers of his time:

"It never could be in our interest to unite with France in the destruction of England. ... On the other hand, it could never be our duty to unite with Britain in too great a humiliation of France."

(U) In 1814, when Britain was at war against France and America, Thomas Jefferson nevertheless expressed concern for Napoleon's victories in the rest of Europe. He wrote:

"It cannot be to our interest that all Europe should be reduced to a single monarchy. Were he [Napoleon] advanced to Moscow, I should again wish him disaster as would prevent his reaching Petersburg. And were the consequences even to be the longer continuance of our war, I would rather meet them than see the whole force of Europe wielded by a single hand."

(U) The view of our early policy makers was that the United States was marking the beginning of an experiment in democracy that could affect the whole world. If left on its own course, the early leaders expected that the development of democracy in America would, in time, prove to be an example for other nations. Therefore, the overriding national interest became the encouragement of international events to proceed in a direction that would keep power from becoming concentrated in

(U) With the coming of the twentieth century, a new threat arose. Twice in the first half of the century the domination of Europe by a single nation seemed a possibility. As Jefferson had earlier remarked, our interest dictated that war was a more attractive option than seeing Europe succumb to foreign domination.

(U) Following World War II, the threat to the international balance of power shifted eastward to the Soviet Union, where it remains today. In fact, the need to contain the USSR's expansionist policies has been the primary concern of American national interests since 1945.

(U) Although the way our nation defined its national interest remained basically the same following World War II, the American position on the international scene permanently changed. After the war, the United States emerged as a superpower and began to assume a position as leader of the Free World. Also, the potential for threats to our experiment became much greater with the advent of nuclear weapons. These factors contributed to the reluctant end of the American tradition of isolationism, once and for all.

(U) Because of America's new-found responsibility as leader of the Free World, our national interests naturally have been affected. While not being significantly altered, the concept of protecting democratic experiments has expanded. In time the assumption developed that our interests were not merely confined to ensuring the prosperity of our own unique experiment in democracy. As the leader of the Free World, our responsibility now involved guaranteeing the potential of other nations to pursue their own experiments as well.



(U) It is precisely at this point that we find ourselves today. After a decade in which the view of national interests seemed muddled or slightly out of focus, the outline is emerging clearly once again. The threat to our national interest is again perceived to be the concentration of international power in the hands of a force that could threaten the democratic institutions of the Free World, including our own.

(U) Foreign policy makers within the current administration have articulated this traditional view of American interests succinctly. In 1982, when testifying before a subcommittee of the House of Representatives Foreign Affairs Committee, the Deputy Assistant Secretary for East Asian and Pacific Affairs stated:

"In its broadest terms, our principal strategic interest is deterring the increasingly assertive Soviet presence in East Asia and the Indian Ocean. This can best be achieved by supporting growth and stability in the region through the variety of security, political, economic, and commercial programs we pursue."

(U) In Latin America, this country's interests are defined in similar terms. The President's speech before the National Association of Managers in March 1983 provided the following excerpts:

"Central America is simply too close, and the strategic stakes too high, for us to ignore the danger of governments seizing power there with ideological and military ties to the Soviet Union."

"The Communist agenda, on the other hand, is to exploit human suffering in Central America to strike at the heart of the Western Hemisphere. By preventing reform and instilling their own brand of totalitarianism, they can threaten freedom and peace and weaken our national security."

"We've been too slow to understand that the defense of the Caribbean and Central America against Marxist-Leninist takeover is vital to our national security in ways we're not accustomed to thinking about."

(U) Hopefully, at this point in our discussion a definition of American national interests is becoming clear. Although the definition is admittedly broad, these interests can be summarized as the desire to contain the

consolidation of power and influence in the world by a single state. This containment is desirable so that democratic institutions may prosper. While American concern initially centered primarily on the protection of our own institutions, our responsibilities have in this century expanded to include protecting similar institutions in other nations.

(U) The natural progression of our discussion leads now to an analysis of the implications that our definition of American national interests has for our country's foreign policy. Commenting on America's aptitude for engaging in foreign affairs, Alexis de Tocqueville wrote:

"Foreign politics demand scarcely any of those qualities which are peculiar to democracy. They require, on the contrary, the perfect use of almost all those [qualities] in which it is deficient. Democracy is favorable to the increase of the internal resources of the state; it diffuses wealth and comfort, promotes public spirit, and fortifies the respect of law in all classes of society. All these advantages have only an indirect influence over the relations one people bears to another. A democracy can only with great difficulty regulate the details of an important undertaking, persevere in a fixed design, and work out its execution in spite of serious obstacles."

(U) Tocqueville suggests that inherent qualities of a democratic nation make it difficult for that nation to operate in the foreign policy sphere. One aspect of the difficulty is that a democratic nation is quite capable of operating in an international political vacuum. Even in the absence of political support from abroad, a democratic state can still perfect its own national institutions. In fact, it is during this absence of outside political interference that democratic institutions often find their most fertile environment for growth.

(U) But the question is raised "How does this relate to a discussion of the national interest?" Basically, the implication is that our national interests will have a tendency to combine with these inherent qualities of democracy to cause our foreign policy to be reactionary. In other words, a foreign policy will be fostered that is better suited to respond or react to threats or crises than to dictate the course of world events. Left to their own devices, American policymakers would be content to concentrate on our nation's internal development. The reluctance of many policymakers to endorse our recent deployment

of American forces in the Caribbean and Middle East evidences this tendency. Also, this internal development of our nation can be accomplished with no political help or influence from abroad. However, when threats are perceived to the safety of our institutions, then we undertake the most active involvement in foreign affairs.

(U) The vision (mentioned earlier) that the United States is destined to provide a democratic example to the world is not precluded because of our tendency to be reactive to international events. While this vision has been a part of our national psyche from the beginning, it has never been a precondition for our national development. The contrast can be drawn with the Soviet Union. A fundamental principle of the Soviet *raison d'etre* is that fostering revolution in other countries. The fulfillment of its purposes means significant involvement in the affairs of other nations. In much the same way, our vision for influence by example is far removed from the insatiable appetite for domination evidenced by some ultra-rightwing regimes, most notably Nazi Germany.

(U) The tendency to participate most actively in the international arena when responding to threats leads to some difficulties. An emphasis is placed on solving the pressing international problems. Less importance is given to the preventive possibilities of foreign policy, in other words on catching the problems before they become pressing. America has at times remained on the sidelines in great disputes until catastrophes have occurred. Our positions with regard to the aggression of Japan and Nazi Germany, prior to our involvement in World War II, comes to mind.

(U) Another implication of our definition of national interests is that our foreign policy might tend to globalize regional disputes. The tendency could be to focus on the threats to the global balance of power resulting from a local dispute. An obvious example of this is the Middle East. This area, where enhancement of the Soviet position is rightly perceived as a threat to the stability of the

democratic institutions of the West, is also experiencing much of the turmoil simply because of local conflicting cultural and religious factors. The conflicts between the various Muslim and Christian ethnic groups, which are responsible for most of the fighting, are factors that have at times been lost in concerns about a threat to vital national interests. The danger, in this situation and in similar ones, is that the United States may delay its active involvement to resolve local difficulties until a crisis is reached where the global implications are very real and threatening.

(U) Another foreign policy issue resulting from our basic definition of national interests is how to clarify the degree to which our interests are being threatened. Although general agreement may be reached concerning the basic definition of American national interests, the very nature of a democracy dictates that there will be diversity of opinion when the threat potential of a particular situation is questioned. Once consensus is reached that a real threat to our national interests exists, a new consensus must be reached regarding the adequate response. Again, Tocqueville's observation that those qualities considered great about a democracy tend to be the least useful in international affairs seems to be quite relevant.

(U) In summary, the implications of our nation's foreign policy are not as bleak as might be concluded from several of the previous paragraphs. Our objectives, as defined by our national interests, have generally been met when those interests have been clearly articulated to the world. The Cuban Missile Crisis, when a Soviet action was clearly declared to be opposed to our national interest, shows the effectiveness of such a forthright reaction. When other nations, whether allies or potential adversaries, have been fully aware of the high priority the United States places on protecting developing democratic institutions, our ability to exert a positive influence on other nations in the world has been enhanced. When America has accepted the role as leader and, at times, protector of the Free World, our ability to mediate and assist in disputes at various points around the world has been increased. In short, it is evident that certain uniquely democratic qualities might make it difficult for the United States to undertake and execute many great foreign policy initiatives; however, it is just as clear that these same democratic qualities have allowed us to rise to a pinnacle of influence where we are looked to for such initiatives and leadership. Our national interests dictate that we continue to protect the development of these democratic institutions in our nation and the world.



PROGRAMMING,  
CREATIVITY, and  
HUMOR

P.L. 86-36

If I were asked to give one word to describe government writing, that word would probably be "humorless." Not only are there no jokes in government documents (actually, I agree there should not be), but there are no figures of speech, no similes or metaphors, and rarely is there anything in a government document which appeals to anything but your sense of duty to read it.

(U) This problem also exists in government computer program documentation. It seems the more bland and serious the commentary of a computer program is, the more likely it will be accepted by one's boss and the cryptologic community. I contend that such an emphasis on seriousness may sometimes hamper the computer programming effort here at NSA.

(U) Let me fully explain such a drastic statement. During my tours as a Computer Systems Intern, I met a programmer who had a novel (for me) concept of programming: A program and, indeed, a computer itself are nothing more than tools. As such, they should be easy to use, and techniques for designing better tools really must meet a single criterion: Do they get the job done? I believe this has been misconstrued as a concept, and now the question that supervisors are asking is, "Does a program get the job done in the most direct, lackluster, standard, structured way possible?"

(U) The wrong that is inherent here is the neglect of creativity and motivational aids. Too much emphasis on structure (stricture?)

not only blinds some people to sense, but it can also hamper the creativity of many brilliant minds. The freedom to program in the fashion you find readable and easy for you, and the freedom to document your program in a way that might even make it enjoyable to use, should not be denied. If I am going to warn the prospective user of my program that a certain procedure is dangerous, I should not be censured for displaying

WHOA!!!! HOLD ON A MINUTE!

on the terminal. It is much more likely to get someone's attention than a message such as:

POSSIBLE DATASET HAZARD -- <CR> to continue, <CTRL>Y to halt

Unfortunately, it is also more likely to get me a reprimand for the "unprofessional" appearance of my programs. When supervisors vehemently discourage a lighthearted approach to documentation of a program, they make the documentation harder to read (because of its dryness, who would WANT to read it?), and thus impede the ease of use and the ability to pass the programs on to future generations of programmers.

(U) But something worse happens. (Hang on. I'm about to wax philosophical now.) The rejection of humor leads to a danger rarely admitted at NSA: It is possible to take our work, and the cause for which we work, too



seriously. We can take it seriously enough to do our jobs properly, using whatever techniques work well for us, or we can impose a seriousness that stifles, produces stress, and makes an uneasy, totalitarian uniformity settle glumly over all of us. The serious struggle for peace, which NSA fights bravely, makes humor necessary. Certainly, we do not go through the traumatic experiences of a MASH unit or a combat battalion on the front lines, but our work is hard, stressful, and often monotonous. If a programmer responds to the pressure by writing a program that produces a chuckle while it does its job, this is certainly no sin.

(U) Maybe a humorous line in a program or a programmer's affinity for exploring a computer's collection of games should enlighten a supervisor rather than anger him or her. It could well be that the occasional joke--or the occasional fight against Space Invaders--is a programmer's way of saying, "My work sometimes seems fruitless, and once in a while I need to fool myself into thinking I'M WINNING!" The mental rewards that such humor can create may lead to a happier programmer and a more successful effort on his or her part.

(U) There's one more argument I haven't tackled:

"When I was programming, there wasn't any time to joke around. We came in, we did our job, we went home. I don't see any reason for all the nonsense some people get away with nowadays."

My only answer to this argument is to remind the reader that this is merely the expression of the urge we all have to keep things the way they are. Certainly the people of the 16th century might envy us because of all of our modern conveniences. Still, just because previous generations of programmers wrote their programs stodgily doesn't mean that future generations shouldn't try to improve their product by adding a little levity.

(U) Certainly, let's not overdo humor. But let's not overdo seriousness, either.



TO: Cryptolog

P.L. 86-36

SUBJ: "User Friendly Writing"

(U) I endorse [redacted] "Human Factors" in "User Friendly Writing" (CRYPTOLOG, Feb 84). Most culprits will not recognize themselves as guilty. Most who do will not make the effort to change, because they either don't care or are lazy. Mary's efforts are worthwhile for the couple of people who try to improve their writing style. (Personnel Summaries are as fraught with being not "user-friendly" as Mary's Research Summaries. I wonder if people realize that managers read the former as examples of a person's writing abilities, as well as for the content?)

(U) Mary's article reminded me of two "classic" memos. The text of one, in two numbered paragraphs, said: "1. Agency correspondence should be brief. 2. This is an example." It was signed by the Director, VADM Noel Gaylor. The text of the other, on the subject of "Utilization," was "Please stop utilizing "utilize" and utilize "use." That one was from MG John Morrison, Assistant Director for Production (the forerunner of DDO). I mislaid my copy of the first memo, but still have a copy of the second as an example of clear writing.

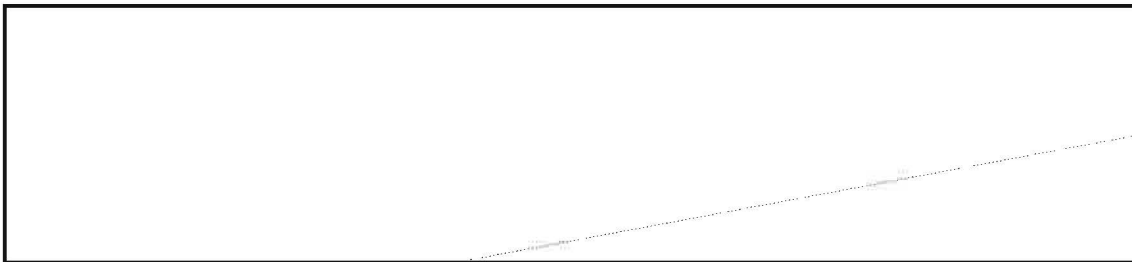
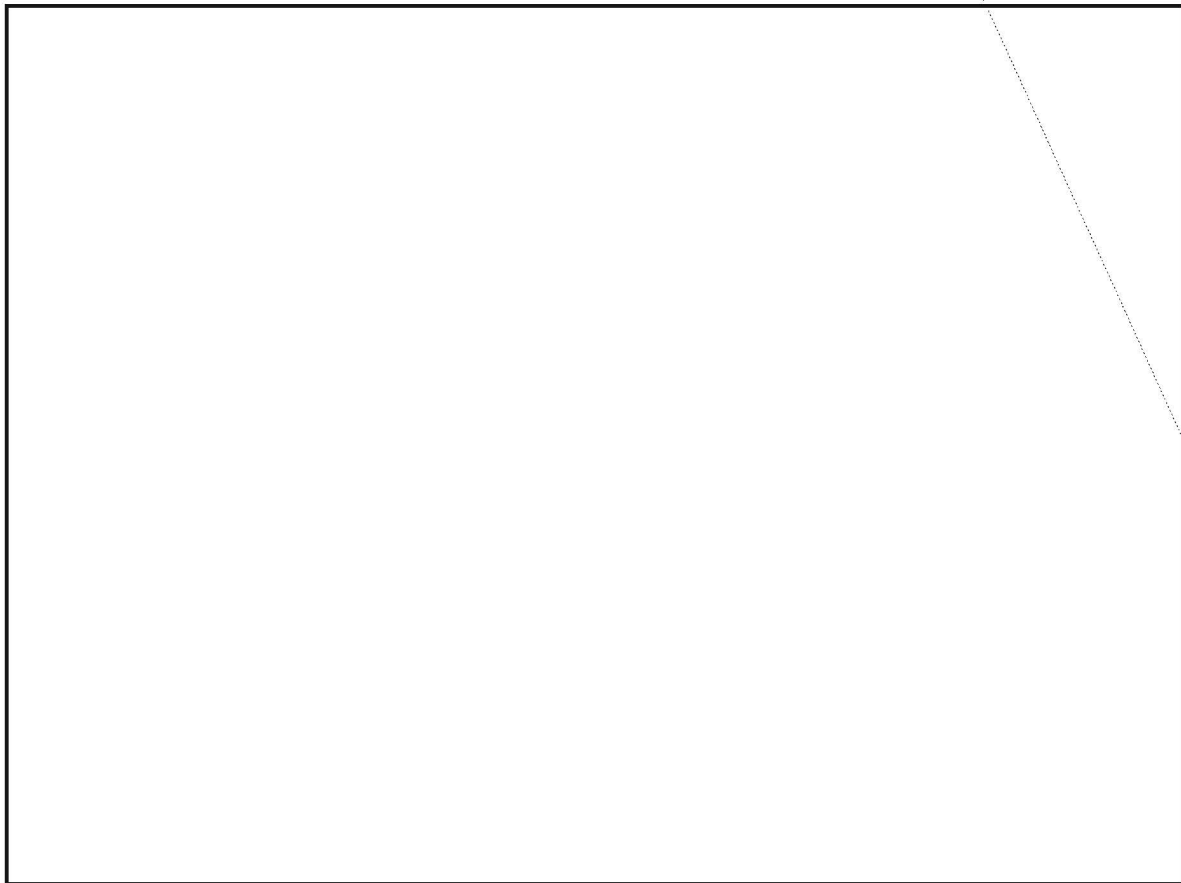


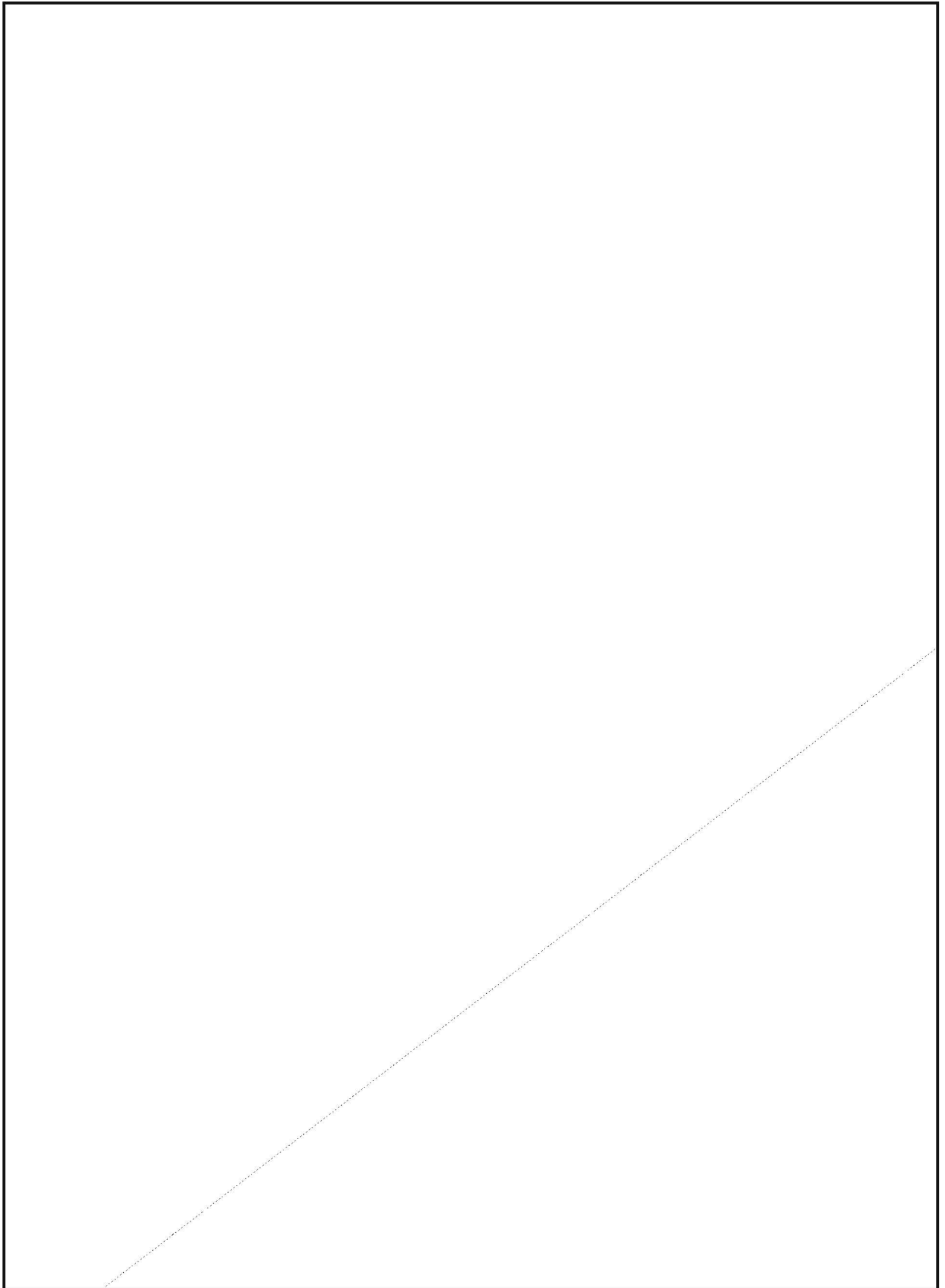
P.L. 86-36

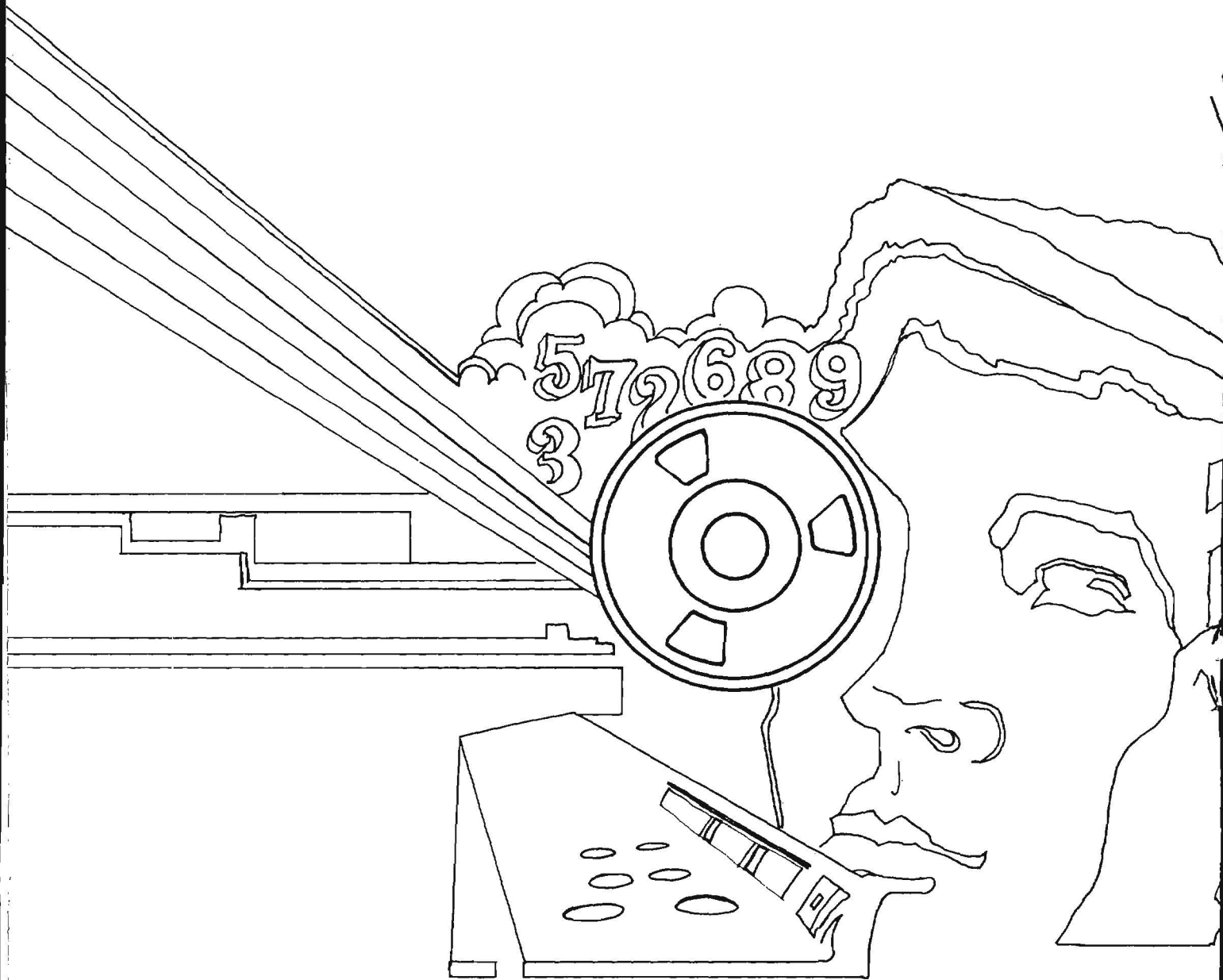
*NIA Crossic No. 58*

Several of the definitions in this puzzle consist of the ticketing code trigrams for various American airports. The answer to each of these is a major league sports team which might use this airport. (For the purposes of this puzzle, the USFL is considered to be a major league.)

P.L. 86-36







~~THIS DOCUMENT CONTAINS CODEWORD MATERIAL~~

~~TOP SECRET~~