

THIS DOCUMENT CONTAINS CODEWORD MATERIAL

TOP SECRET

Classified by DIRNSA/CHCSS (NSA/CSSM 123-2)

Exempt from CDS, EO 11652, Category 2

Declassify Upon Notification by the Originator

Declassified and Approved for Release by NSA on 10-11-2012 pursuant to E.O. 13526," MDR Case # 54778 DOCID: 4009727

TOP SECRET

GETTOLOG

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

VOL. II, NO. 12

PUBLISHER

WILLIAM LUTWINIAK

BOARD OF EDITORS

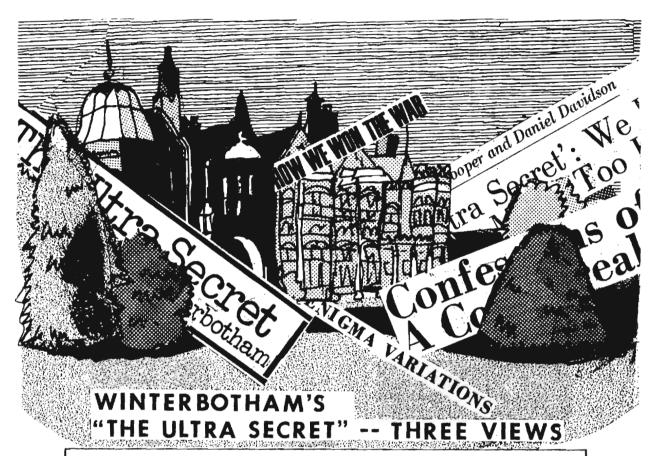
Editor in Chief	Arthur J. Salemme (5642s)
Cryptanalysis	(8025s) P.L. 86-3
Language	
Machine Support	(3321s)
Special Research	Vera R. Filby (7119s)
Traffic Analysis	Frederic () Mason Ir (4142s)

For individual subscriptions send

name and organizational designator

to: CRYPTOLOG, P1

TOP SECRET



The following three articles deal in various ways with the publicity given in the British and American press and on television to F. W. Winterbotham's book "The Ultra Secret." The first article, by Brigadier John H. Tiltman, deals with the accuracy of the statements in the book and the degree of harm done by them. The second article, by P. W. Filby, is a review of the book as assessed by a member of the team of specialists who worked the German diplomatic problem. The third article, by M542, gives a word of advice to those who might now be tempted to tell everything they know.

P.L. 86-36

A PERSONAL COMMENT By Brigadier John H. Tiltman, P1

When Winterbotham's book was first published late in 1974 in England, some members of NSA who had served at Bletchley Park during World War II, on reading early reviews, assumed that it was officially authorised. This was definitely not the case. Its publication was strenuously opposed by British responsible authorities, who took legal advice on the probable consequences of prosecuting the author under the British Official Secrets Act. They were advised that prosecution could not be effective without the case going to court and evidence produced that British national security had been damaged by the book's publication with consequent public disclosure of more current intelligence activities. They therefore decided that legal action would probably do more harm than good.

Another and perhaps a decisive factor making prosecution unlikely to succeed was the publication in France in 1973 of Bertrand's book Enigma, ou La Plus Grande Enigme de la Guerre 1939-1945. This revealed for the first time the fact of an analytic success against the Enigma and was decisive in the discussions between Deputy Director NSA and Director GCHQ on the matter of whether to attempt to restrain Winterbotham and his publisher.

I am not alone in believing that an early official public description (perhaps a joint US-UK statement) of the basic facts of the wartime exploitation of the intelligence derived from the solution of the Enigma keys might have mitigated the damage done to security. Perhaps this could have been strengthened by a further

December 75 * CRYPTOLOG * Page 1

HANDLE VIA COMINT CHANNELS ONLY

statement that the revelation of technical details of the methods of solution would be resisted indefinitely. I realise however that there must be other valid arguments which persuaded the responsible authorities not to take such action.

I myself took no part in the solution of Enigma keys in Huts 6 and 8, nor in its exploitation in Hut 3, but I am, I believe, the only person around who was on the directorate level at Bletchley Park during the war and had a hand in many of the policy decisions made regarding the production and use of the intelligence derived.

The book is poorly written and very inaccurate in some areas where I know the facts. The references to the early history of Enigma solution and to the activities of the staff of Hut 6 (who performed the cryptanalytic part of the enterprise) are hopelessly wrong. It is difficult to understand how the author who had considerable responsibilities for the organisation and distribution of Enigma intelligence could have been so completely ignorant of the technical side of the operation. He doesn't know the difference between the Enigma (a rotor machine), other German ciphers, the Japanese high-grade diplomatic machine (the "Purple," a totally different kind of machine), and the Japanese Fleet general cipher (a codebook and additive hand system). His remarks about the "Bronze Goddess" appear to be a complete invention.

Some people gather the impression when they read the book that the author greatly magnifies his own part in the winning of the war. I give an example from my own experience. To quote some passages, "It was at this point that Menzies told me he had decided to hand over my shadow OKW in Hut 3 to the General Administration at Bletchley. One never knew where one stood with Menzies. He softened the pill by confirming me as his deputy, . . ." (p. 87). "Despite the loss of my personal control of Hut 3 and the shadow OKW, I still had direct access to it when required. I was never told by Menzies the real reasons for the takeover, . . ." (p. 92). The facts are that I reported to the Director of Military Intelligence at the War Office, that Curtis, the War Office representative in Hut 3, in conjunction with Humphries, the corresponding Air Force representative, had on two separate occasions gone behind my back to recommend reorganisation of Hut 3 under their own more direct control. In consequence, a SIGINT Board meeting was called with General Menzies in the chair and consisting of the three Service Directors of Intelligence and Director GCHQ. At this meeting it was decided to withdraw Humphries, Curtis, and the naval representative.

I knew Winterbotham slightly and flew with him to Paris on the occasion of one of my official visits to France in 1940. His outstanding achievement was the establishment of SLUs (special liaison units) for the dissemination of ULTRA to commanders in the field. I have no reason to doubt that he records this faithfully. He gives rise to feelings of discomfort, however, when he describes his relations with the more high-ranking recipients of his wares. It appears that Montgomery must have treated him with less courtesy than others and consequently he feels sure he himself could have fought Montgomery's battles far more efficiently!

In view of its general inaccuracy, especially when touching on technical matters, I believe the book, taken by itself, does no harm. This cannot be said for the side effects it touched off. The first review I read was in the Washington Post by Al Friendly, who himself served in Hut 3. He headlines his review "Confessions of a Codebreaker." He gives the impression that for a great part of the war every telegraphic order issued by Hitler was currently on the desk of the Prime Minister and concerned Allied commanders. This is simply not true. Such a picture takes no account of the many difficulties of the operation, the decisions to be taken on insufficient evidence as to priorities of attack on some keys to the exclusion of others, the many failures and delays, the early misunderstanding as to the real meaning of messages, etc. The general success of the project was as much a triumph of organisation of the large-scale attack as of the ingenuity and persistence of the cryptanalysts, especially the mathematicians.

Perhaps the most objectionable of the reviews was a long article in one of the London Sunday newspapers by Peter Calvocoressi. He was an important figure in Hut 3, presumably recruited by Winterbotham. He is now, I believe, managing director of Penguin Books and was the joint author of a distinguished history of World War II. His article is an extremely well-written description of life in Hut 3, but he has gone further than anyone else in including a photograph of the German Service Enigma and in mentioning the Bombe. I believe this was the first time a picture of the service Enigma appeared in public print. Not even Bertrand in his book Enigma gives a photograph of the machine. I am quite unable to understand Calvocoressi's arrogant assumption that he can say what he likes in public now that Winterbotham's book has appeared. I hold the view that everyone who worked in Bletchley Park is still under a moral obligation not to disclose secrets not previously published without official permission and, I would have thought, is aware of this obligation.

Many of us were nervous of what David Kahn would have to say when his turn came to review the book. When his review did appear in the New York Review of Books, it was surprisingly mild and harmless. He, of course, is in a different category. Not ever having been a part of

DOCID: 4009727

SECRET

any Government agency, he cannot be regarded as subject to the same restrictions.

Other reviewers have been influential journalists who have taken the tone that the book has revealed the operations of World War II in a new light, that history will have to be rewritten, that the British have told only part of the story and that they will have to tell the rest. I do not know whether we have heard the last of this attitude.

Something has to be said about the paragraphs on page 14 of the book dealing with personalities. Winterbotham mentions the mathematicians Alexander, Babbage, Welchman, and Milner Barry, but doesn't seem to have heard of Turing, who is generally regarded as the leading genius of the methods of solution of the Enigma in its various forms. He says that "it was generally accepted that of our own backroom boys 'Dilly' Knox was the mastermind behind the Enigma affair." I do not agree with this at all, though I am aware that he was in general charge of the analysis of the machine before the war and long before the British had any success in solution. Incidentally, Winterbotham seems to confuse Knox with Foss, who fits much better into the physical description in the book and who had some influence on early solutions before

bombes became available. In his casual remarks about me, Winterbotham is somewhere near the truth: he says I had been borrowed from the Army. So I was -- 20 years earlier! Of Josh Cooper he says he was "another brilliant mathematician." Josh wasn't a mathematician at all -- he was a very fine linguist. For no known reason, Winterbotham mentions Dick Pritchard. He was a regular Army officer who had been with me for 8 or 9 years, before the war, but he had nothing whatever to do with the solution of the Enigma.

I think it quite likely that all this does no harm at all, but we cannot by any means be certain of this. Therefore, we have to continue to try to withhold further disclosures, particularly on technical methods of solution.

(HVCCO)

Brigadier Tiltman was Deputy Director and Chief Cryptographer, GCHQ, from 1941 to 1946. Since 1964 he has been working at NSA, Fort Meade. He is a Commander, Order of St. Michael and St. George; Commander, Order of the British Empire; and Distinguished Member, CMI.

ULTRA WAS SECRET WEAPON THAT HELPED DEFEAT NAZIS By P. W. Filby

(UNCLASSIFIED)

Shortly after the outbreak of World War II, the British Government acquired a stately home in a small town called Bletchley, a town renowned only for its railway junction and nearby brickyards.

For the next few months civilians and servicemen and women arrived in ever increasing numbers, and hardly a house in Bletchley escaped billeting. The citizens wondered at the motley crowd, raffishly dressed for the most part, often absent-minded and all having a studious air about them.

High iron fences were erected round the home known as Bletchley Park and armed Army guards were on duty at all times. The locals had to get used to comings and goings of their lodgers at all hours, and having taken in civilians they would suddenly see them emerge in full regalia as officers of the three services, especially when they made trips to London.

Many guesses were hazarded but the only thing that could be said was that it was a secret department -- and the secret was well kept, so well that it is not until now, thirty years later, that the Bletchley people and the world will know that the many thousands of people at the "Park" were working in enemy codes and ciphers.

Group Captain Winterbotham has taken advantage of the "30-year rule" to describe the success of one group, "Hut 3." It is an absorbing story, and although the chief defect is that Winterbotham was not a codebreaker and therefore makes several wrong assertions, the book is one of outstanding interest, and readers will marvel at the war's greatest secret and how it was kept until now.

Just before the outbreak of World War II the British had obtained by various means a complex machine known as "Enigma" which was being used for the encoding of the most secret and important German armed forces communications. After a prodigious effort the British cryptographers of "Hut 3" managed to break this machine and later built what might well have been the first computer, so that the communications could be read immediately upon receipt.

To everyone's surprise, the Germans continued to use this machine throughout the war and thus most plans made by Hitler and his High Command were known to the British (and later, the Americans also) at the same time as the German recipients.

Radio operators in remote, lonely locations intercepted the messages, which were rushed to

Bletchley, often by motorcycle until more sophisticated methods were evolved, and were promptly decoded and passed to the appropriate commands. The intelligence was code-named "Ultra."

Astonishingly, there is nothing in captured German documents to suggest that anyone suspected that the most secret cypher code was being read throughout the war. Much of the credit for this were the rules laid down by Winterbotham for the "need to know."

For instance, the Russians were never told of it, and the many free forces (French, Dutch, etc.) were not let in on the secret. Winterbotham toured British and American commands, lecturing users on this intelligence and warning them care had to be taken on how the information could be used.

For instance, although the presence of an enemy force might be given in detail by Ultra, to bomb it immediately would cause the Germans to wonder how the enemy knew of this force, so reconnaissance planes had to be used so that the Germans would suspect that they had been spotted from the air.

Unhappily, it was not unusual for holders of the German plans to have to forgo using them for fear of compromising the cypher break. One such occasion was the bombing of poor Coventry; enemy plans were known beforehand, but to defend the city would have aroused German suspicions. Although attempts to defend were made, the populace was not warned in advance. At that time it was not known whether German spies were working among the British.

But the information was used with telling effect in the Battle of Britain, when the Air Force knew exactly the direction and the force to be employed in each attack. It is probable that Ultra did much to save Britain in those dark days. Everyone knew the Air Force could not withstand these onslaughts for long, but Ultra allowed them breathing space by parceling out the slender defense forces where needed most.

Ultra played a particularly distinguished part in the North African campaign, where Montgomery was informed of Rommel's disposition of his forces and the extent of his supplies. Ultra also enabled supplies across the Mediterranean Sea to be sunk en route. Montgomery's face should be red, since he claimed verbally and in his books that he planned his battle order, but he acquired the record of invincibility only through his use of the information given by Ultra.

With the British losing thousands of tons of shipping weekly, the decoding of the German Navy's messages provided a welcome respite, and from 1943 the losses were significantly reduced since the disposition of the U-boats was known.

One wonders now just how the Normandy landing would have worked out without Ultra. Since decoded messages told of the German belief that the attack would come from the narrow Pas de

Calais, General Patton arrived with a phantom army to give the impression the landing would indeed be tried there. Consequently Rundstedt and a vast army were kept there, reducing the defenses in Normandy.

Ultra's strength was also shown when, in the Battle of the Bulge, the Germans relied on telephone rather than radio communications, and many lives were lost because the Allies could learn nothing of the German plans and intentions.

These and other exciting stories are related in this absorbing book. It suffers perhaps because Winterbotham was a "go-between" rather than one of the codebreakers, and thus credit is not given to the mathematicians and linguists who worked long hours in stuffy rooms where, because of blackout precautions, fresh air seldom penetrated the smoke-filled atmosphere.

Tribute must also have been paid to those radio operators, straining their ears when static and other conditions meant a missed group and maybe an important one at that, when the operator could not ask for a repeat -- these were the real heroes of one of the outstanding accomplishments of the war.

One amusing tailpiece to the whole affair is the effect it will have on those whose memoirs have already been written. Many should now be rewritten; if Ultra did not actually win the war it will cause historians to revise what has been written thus far. Books such as "D-Day" are exciting reading, but the present work must be included in all war history collections from now on, since it will affect all war histories in varying ways.

Winterbotham is rightly proud of Bletchley's achievement, but he tends to forget that information needs acting upon; it needs good generals and above all a great Air Force, Army, and Navy. Fortunately the Allies had these too, and though Ultra was one of the most important contributions to the victory, Winterbotham perhaps overrates it a little.

Sir John Masterman's book, "The Double-Cross System in the War of 1939-1945" (reviewed in these columns February 12, 1972) describes how captured spies were "turned around" and also contributed to the downfall of Germany. There were other great coups but Ultra and Double Cross must rank very high in the defeat of the Nazis.

P. W. Filby, in addition to his SIGINT experience at Bletchley Park and GCHQ, is an "honorary NSA-er by marriage" (his wife is CLA President and CRYPTOLOG's SRA Editor Vera R. Filby). Mr. Filby is the current Director of the Maryland Historial Society, Baltimore, Maryland. The preceding review is reprinted in entirety from the Baltimore Evening Sun, June 10, 1975.

Y =

MUM'S STILL THE WORD!

By

M542

Many people make their work and the organization they work for an extension of their own egos, especially when the organization is performing a vital service to society. For most people, one of the most compelling motivations on the job is the quest for approval by their peers and supervisors. But we NSAers are not like "most people." True, we have always been able to rely on peer and supervisory approval, but we have never been able to derive ego gratification from identifying with NSA -- historically, both the Agency itself and our specific jobs here have been obscured from public notice. Lately, however, the curtain cloaking our activities has been lifted slightly. Winterbotham's book The Ultra Secret and the follow-on revelations in the CBS television program, "Sixty Minutes," have provided the public with glimpses of the vital role that cryptology plays in protecting our nation's security. Certainly, all of us must feel a sense of pride, and perhaps indulge our egos a bit, to see our Agency's vital function finally made known to the public. It's a very seductive thing. We plug along for years without public recognition. We strive constantly to overcome the natural urge to discuss our work with non-NSA friends, particularly when that work involves events taking place on the world stage. Then, suddenly, there's our organization, our work -- us! -- on the television screen, the front page of the newspaper, the public bookshelf. How easy it is to feel proud about finally getting public recognition. But that initial feeling of pride and personal gratification is soon outweighed by the disquieting realization that someone has talked, someone has betrayed our tradition of keeping our mouths shut.

The fact that such revelations do not always compromise sensitive information, as in the case of *The Ultra Secret* and the TV follow-on, does not diminish our feelings of dismay. That precious shell of anonymity -- so carefully maintained over the years -- has been cracked. One can only expect that others will rush forth to give their versions of past events and open that crack still wider.



That our cryptologic operations are discussed at all in the public media, no matter how many decades have elapsed, is the primary concern here. Journalistic appetite begets appetite and, once titillated by the morsels served up by disclosures such as those in Winterbotham's book, it tends to become ravenous for the whole pot. Those who were associated with the cryptologic effort in the past -- and the numbers are prodigious -- as well as those currently involved, are presented with a psychological cop-out to indulge their agos 6-300 talk about their work. After all, everyone else is doing it. Thus, revelation begets revelation.

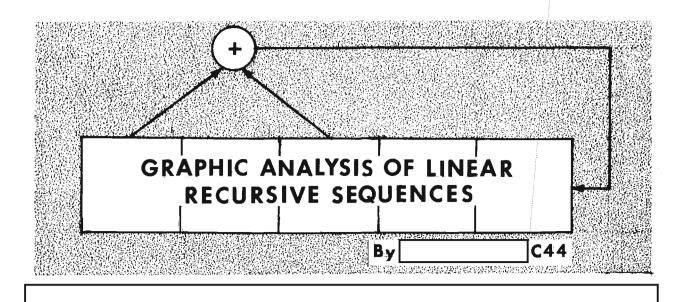
The publication of *The Ultra Secret*, however innocuous its specific revelations, can only be viewed with foreboding. It can only hasten the dropping of the next shoe. And when that shoe drops, we NSAers should remember, "Mum's *still* the word!"



A Nazi submarine is shown under attack by American planes. Deciphering the Ultra code enabled Allied destroyers to sink many German U boats.



December 75 * CRYPTOLOG * Page 5



DOCID:	4009727	UNCLASSIFIED	

December 75 * CRYPTOLOG * Page 7

UNCLASSIFIED

FEWER COFIES: (Hesignations: Tellienents:	·
NAME CHANGES? (Misspellings on current distri guys getting married and add	ibution list? girls getting married and taking husband's name? ing wife's maiden name as hyphenated adjunct to his own?)
ANY OTHER CHANGES?	
TO: Editor, CRYPTOLOG, P1	
Please make the following changes to distribution	Organization)
ADD copies for:	
DELETE copies for:	
CHANGE mailing labels as follows: LABEL READS	LABEL SHOULD READ
(If you do not want to cut this page, use plain pi	ece of paper.)

December 75 * CRYPTOLOG * Page 8

UNCLASSIFIED

EO 1.4.(C P.L. 86-3

SECRET

CUMULATIVE INDEX, 1974-1975

The following cumulative index of CRYPTOLOG (Vols. I and II, 1974-1975), was computer-produced using the Super Bee CRT/Tycom typewriter terminal on the B6700 and programs written by George P. Wood, P16. The index is printed in the middle of this issue so that it can be removed and used as a separate document if desired.

The index is in two parts. The first part is an index of <u>titles</u>, listed alphabetically (1) by title and (2) by keyword in the title. The second part is an index of <u>authors</u>. In both parts, multiple entries are listed in chronological sequence.

Items in the double issue February-March 1975 are indicated by "Feb 75," and those in the double issue August-September 1975 by "Aug 75."

Abdul and His 40 Tanks Frederic O. Mason, Jr Aug 75	BEISBOL The La
AFRIKAANS Language in the News Afrikaans, Amerind, Arabic, Chinese, French, Hebrew, Lycian, Spanish, Portuguese, Russian, Swahili	BOOKBRE Letter of
AMERIND Language in the News Afrikaans, Amerind, Arabic, Chinese, French, Hebrew, Lycian, Spanish, Portuguese, Russian, Swahili	Letter Letter
APOSTROPHE The Apostrophe Some Thought's Vera R. Filby Nov 74 The WinnahKid Apostrophe! Oct 75	Letter sio Letter Boo
An Approach to Callsign Analysis William J. Jackson Dec 74	Letter
COMINT Analysis of Derek K. Craig Sep 74	CA TA, Ha
Letters to the Editor article Dec 74	CAA Learne CLA
Language in the News Afrikaans, Amerind, Arabic, Chinese, French, Hebrew, Lycian, Spanish, Portuguese, Russian, Swahili	CALENDA A Prop
Language in the News Language Panel, NCS, Machine Course for Linguists, CLA News, Arabic	Calli
Are We Wasting Linguistic Time? Mary Roberta Irwin May 75	CALLSIC An App
AUTOMATED Maurice Welsh Nov 75	CAMINO CAMINO
AUTOMATION Automation of a TA Process Tim Murphy Oct 75	CAMINO
Basic Patterns of Codes and Ciphers Feb 75	CAREER A Shor
·	

BEISBOL
The Language of Beisbol in Everyday Talk
Ramon Santiago-Ortiz Aug 74
DOOVEDEAVEDS
BOOKBREAKERS Letters to the Editor Professionalization
of Bookbreakers
01 BOOKDTEARETS Apr 75
Letters to the Editor
letter on Bookbreakers
May 75
Letters to the Editor
letter on Bookbreakers
May 75
Letters to the Editor Bookbreakers; Profes-
sionalization of Country Specialists
. <u></u> Jun 75
Letters to the Editor - letter on Bookbreakers Jun 75
Bookbreakers Jun 75
Letters to the Editor Rebut tal
Aug 75
CA
TA, Handmaiden of CA
Frederic O. Mason, Jr May 75
CAA
Learned Organizations
CLA Essay Contest; CAA News Dec 75
32.1. 2000, 0011000, 0121 11010 , 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
CALENDAR REFORM
A Proposal for Calendar Reform
Francis T. Leahy Dec 74
Calling A <u>ll SRAs! SRA</u> Symposium
Aug 74
CALLSIGN
An Approach to Callsign Analysis
William J. Jackson Dec 74
CANTINO
CAMINO CAMINO News
CAMINO News
CAMINO Electronic Warfare Terms
LANGE PROPERTY AND A SUL 75
CAREER PANELS
A Short Directory of Career Panels Aug 74
· · · · · · · · · · · · · · · · · · ·

December 75 * CRYPTOLOG * Page 9

P.L. 86-36

CARRIAGE Project CARRIAGE Worldwide HFDF Modernization Plan James B. Webster Sep 74 The Case for COMINT Readers CENTRAL INFORMATION A Guide to Central Information C5 Apr 75 Character Building in the People's Republic of China	Arabic
CHARACTER STREAM SCANNING Paper on Character Stream Scanning by Machine Oct 75	The Navajo Code Talkers Jun 75 CODE CLERK Psyching the Code Clerk
CHINA Character Building in the People's Republic of China	L. D. Callimahos Apr 75 Re-psychling the Code Clerk P.L. 86-36
CHINESE Language in the News Afrikaans, Amerind,	CODE RECOVERY Cryptanalysis and Code Recovery Marjorie Mountjoy Sep 74
Arabic, Chinese, French, Hebrew, Lycian, Spanish, Portuguese, Russian, Swahili	CODES Basic Patterns of Godes and Ciphers 1.4.(C) Feb. 45 86-36
CIPHERS Basic Patterns of Codes and Ciphers Codes and Ciphers	CODEWORD "Codeword" or "COMINT Channels"? Puzzle - Crossed Codewords Jan 75
Computers, Comms, and Low-Grade Ciphers Oct 75	COLLECTION The New Collection Criteria Dec 74
CISI Learned Organizations CLA, CMI, CISI Prizes and Honors, Spring 1974 Aug 74	COLLECTOR UNNA, EO 1.4.(c) Jan.175 86-36
Learned Organizations CIŠI Forms Special Interest Group on Human Factors	COMINT Analysis of EO 1.4.(C) Derek K. Craig Sep. E4 86-36
CLA Is Ten Years Old! News from CISI, CMI, IAI Jan 75 CITIZENS OF THE WORLD	COMINT CHANNELS "Codeword" or "COMINT Channels"? May 75
Puzzle Citizens of the World Dec 74 Letters to the Editor Citizens of the World Feb 75	COMINT READERS The Case for COMINT Readers Jan 75 P.L. 86-36
CLA Learned Organizations CLA, CMI, CISI Prizes and Honors, Spring 1974 Aug 74 Learned Organizations CLA Is Ten Years Old! News from CISI, CMI, IAI Jan 75 Language in the News Language Panel, NCS, Machine Course for Linguists, CLA News,	COMM CHANGE A Comm Change at Ramasun Station The Warsaw Pact OPTOLOG * Page 10
EO 1.4.(c)	RET HANDLE VIA COMINT CHANNELS ONLY

	COMMS	CRYPTOGRAMS Secrets of the Altars The Moustier
	Computers, Comms, and Low-Grade Ciphers	Cryptograms
		Sep 74
EO 1.4.(C) P.L. 86-36	0ct 75	CRYPTOGRAPHIC
	COMMUNICATIONS SATELLITE	Psyching the Code Clerk
" reacher,		
		L. D. Callimahos Apr 75
	- COMPLEMEN	CSI NEWSLETTER
	COMPUTER The Yawn of the Computer Age	Establishment of CSI Newsletter Dec 75
	or, Wh <u>en Your Terminal Is Te</u> rminal	EO 1.4.(C) C5 P. L. 86-36
	Computers. Comms. and Low-Grade Ciphers	A Guide to Central Information C5 Apr 75
	combucers, commiss and how-oracle timers	Computer Network Resources in C5 Aug 75
	000 75	DANANG
	COMPUTER NETWORK	The Danang Processing Center
	Computer Network Resources in C5 Aug 75	
	COMPUTER SYSTEMS	DATA P.L. 86-36
	Professionalizing in Computer Systems	Data and Definitions Calling Things by Their Rightful Names
	Jun 75	Nov 74
	COMSEC	DATA BASE
	COMSEC Familiarization - Do You Need It?	The TEXTA Data Base
	Jun 75	William J. Jackson Aug 74 How Clean <u>Does a Data Base Need</u> To Be?
	COUNTRY SPECIALISTS	Jan 75
.0	Letters to the Editor	
	Bookbreakers; Professionalization of Country Specialists	The Warsaw Pact
P.L. 86-	36	Frederick W. Walton, J.PL. & Gu3 675
	COURSE-EQUIVALENCY	
	NCS Offers Course-equivalency Tests Nov 75	DECRYPTION
	COVERTERMS	
	Coverterms	• • • • • Nov 75
	Vera R. Filby Apr 75 Letters to the Editor article on	DEFINITIONS P.L. 86-3
	Coverterms	Data and Definitions Calling Things by Their Rightful Names
	• • • • • Jun 75	oy men kighthur kames
	CRYPTANALYSIS	
	Cryptanalysis and Code Recovery Marjorie Mountjoy Sep 74	
	New Trends in the Teaching of Cryptanalysis	Nov 75
	Nov 74	
	CRYPTANALYSTS	DESKPAD EO 1.4.(C)
	What Should You Expect? or, The Analysis of Cryptanalysts	DESKPAD A Programmer's 1001
	Aug 74	The Provide Pr
	CRYPTANALYTICS	The Devil's Dictionary Feb 75
	Puzzle Secret Messages, "Military	DICTIONARY
	Cryptanalytics" Dec 74	The Devil's Dictionary Feb 75
	CRYPTO	Glossaries versus Dictionaraes 36. Which Should It Be?
£:	More on Squaring the Page (A Crypto - TA Function)	Jacob Gurin Feb 75
	Frederic O. Mason, Jr Jun 75	l .

0 1.4.(0 .L. 86-3	Section Section Dec 74 Gary's Colors	Golden Oldies An Unofficial Glossary of Weasel Words
	Dec 74	Special Interest Group on Human Factors
	December 75 * CRY	PIULAG T PAGE LA

A COLUMN TO SERVED TO SERV

In Praise of SOLITS	LANGUAGE PROBLEM
Louis C. Grant Nov 75	A Fix for the Language Problem?
	John B. Thomas, Jr Aug 75
	IFARNED ORGANIZATIONS P.L. 86-36
Nov 75	DEMANDO ORGANIZATIONO
	Learned Organizations CLA, CMI, CISI
TAMBERN DROCKAM	Prizes and Honors, Spring 1974 Aug 74
INTERN PROGRAM A Long Hard Look at the Intern Program	Learned Organizations CISI Forms
Program Philosophy; Recruitment	Special Interest Group on Human Factors
Anne Exinterne Sep 74	Learned Organizations
A Long Hard Look at the Intern Program	CLA Is Ten Years Old!
Selection and Orientation	News from CISI, CMI, IAI Jan 75
Anne Exinterne Oct 74	Learned Organizations CLA, IAI May 75
A Long Hard Look at the Intern Program	Learned Organizations CMI, CLA Jul 75
Motivation and Morale	Learned Organizations
Anne Exinterne Nov 74	CLA Essay Contest; CAA News Dec 75
A Long Hard Look at the Intern Program	
What Happens to the Graduates?	LETTERS TO THE EDITOR
Anne Exinterne Dec 74	Letters to the Editor SRA Symposium Oct 74
Letters to the Editor Intern Program	Letters to the Editor - EQ Ded 7(C)
Emery W. Tetrault Feb 75	Letters to the Editor Citizens of the World6-36
Letters to the Editor Intern Program	Letters to the Editor Intern Program
• • • • Apr 75	
THERDRETT	Emery W. Tetrault Feb 75
INTERPRETER The Faithful Echo - The Role of the	Letters to the Editor Intern Program
State Department Interpreter	Letters to the Editor Professionalization
Feb 75	of Bookbreakers P.L. 86-3
	Apr 75
	Letters to the Editor
Psyching the Code Clerk	article on ELINT
	May 75
	Letters to the Editor
EO 1.4.(C) L. D. Callimahos Apr 75	<u>letter on Book</u> breakers
P.I. 86-36	May 75
KING EUSYB	Letters to the Editor
Golden Oldies King Eusyb and Queen Deodi	letter on Bookbreakers
LANGUAGE	Letters to the Editor Bookbreakers; Profes-
The Language of Beisbol in Everyday Talk	sionalization of Country Specialists
The hanguage of betseet an avery	315/11/12/2016 of Country Specializers. Jun 75 P.L. 86-36
Ramon Santiago-Ortiz Aug 74	Letters to the Editor - letter on
Language <u>Lessons LearnedA Personal Memoir</u>	Bookbreakers Jun 75
Oct 75	Bookbreakers Jun 75 Letters to the Editor article
Tactical Language Exploitation-	Jun 75
A Lesson Learned	Letters to the Editor Rebuttal
Oct 75	Aug 75
NEWA	Letters to the Editor
LANGUAGE IN THE NEWS	Typewriter keyboard Oct 75
Language in the News Afrikaans, Amerind,	A DAY GO GO A DAY
Arabic, Chinese, French, Hebrew, Lycian, Spanish, Portuguese, Russian, Swahili	LEXICOGRAPHY
Spanish, Portuguese, Russian, Smalling	Some Thoughts on Lexicography
Language in the News English Dec 74	Stuart A. Buck Sep 74
Language in the News Language Panel, NCS,	:
Machine Course for Linguists, CLA News,	LINEAR RECURSIVE SEQUENCES
Arabic Apr /5	Graphic Analysis of Linear Recursive
Language in the News English Aug 75	Sequences
	Dec 75
LANGUAGE PANEL	P.L. 86-36
Language in the News Language Panel, NCS,	LINGUISTIC
Machine Course for Linguists, CLA News,	Are We Wasting Linguistic Time?
Arabic Apr 75	May 75
	<u> </u>

LINGUISTS	NCS
Language in the News Language Panel, NCS, Machine Course for Linguists, CLA News,	News from NCS Agency Resumes Hiring of LICs; NCS Offers Course in "SIGINT"
Arabic	Appreciation
Linguists You Have an Expert to Call	Machine Course for Linguists, CLA News, Arabic
Linguists from the Melting Pot	NCS Offers Course-equivalency Tests Nov 75
Englists from the Merting For Dec 75	The New Traffic Analysis Glossary Aug 74 New Trends in the Teaching of Cryptanalysis
A Long Hard Look at the Intern Program Program Philosophy; Recruitment Anne Exinterne Sep 74	The New Collection Criteria Dec 74
A Long Hard Look at the Intern Program Selection and Orientation Anne Exinterne Oct 74	News from NCS Agency Resumes Hiring of LICs; NCS Offers Course in "SIGINT
A Long Hard Look at the Intern Program Motivation and Morale	Appreciation" Oct 74 Nice Busman's Holiday for One NSA Employee
Anne Exinterne Nov 74 A Long Hard Look at the Intern Program	Barbara Dudley Aug 74
What Happens to the Graduates? Anne Exinterne Dec 74	1972-73A Vietnam Odyssey Oct 75
MACHINE COURSE Language in the News Language Panel, NCS, Machine Course for Linguists, CLA News,	NSA-CROSTIC NSA-crostic No. 1
Arabic Apr 75	An October Overlap
MACHINE INTELLIGENCE Machine Intelligence Promise or Delusion?	The Old Section
Jul 75	Horace Booth Dec 74
MANAGEMENT SURVEY Golden Oldies The Management Survey of the Philharmonic Aug 74	One Chance in Three But It Worked EO 1.4.(C) William Gerhard
MAPS	
Maps in Mind A Photoessay	0ct 75
The Mission of the Signals Processing Requirements Panel	ORAL REPORTING Oral Reporting: A New Challenge for NSA Apr 75 P.L. 86-3
0ct 74	OVERLAP
MOLECULE SUPERSERIES Golden Oldies Establishment of Molecule Superseries Feb 75	An October Overlap Oct 74
Morecular supersection 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	PADS The Do Xa Pads EO 1.4.(C)
	Edward S. Wiley Oct 75
Nov 75	A Personal Comment on Winterbotham's "The ULTRA Secret"
More on Squaring the Page (A Crypto - TA Function)	Brig. John H. Tiltman Dec 75
Frederic O. Mason, Jr Jun 75	PHILHARMONIC Golden Oldies The Management Survey
Mum's Still the Word! ("The ULTRA Secret") Dec 75	of the Philharmonic Aug 74 P.L. 86-3
The Navajo Code Talkers Jun 75	PMDS Hooray for PMDs!
	May 75

-SECRET

	EO 1.4.(C)	
	PORTUGUESE P.L. 86-36	1 Purgle CDV DTO 10C-11in
	Language in the News Afrikaans, Amerind,	Puzzle CRY-PTO-LOGrolling Aug 75 Puzzle NSA-crostic No. 1 Oct 75
	Arabic, Chinese, French, Hebrew, Lycian,	
	Spanish, Portuguese, Russian, Swahili	RADIOTELEPHONE Puzzle Radiotelephone
		Puzzle Radiotelephone Jun 75
	PRIZES	
	Learned Organizations CLA, CMI, CISI	RAMASUN
	Prizes and Honors, Spring 1974 Aug 74	A Comm Change at Ramasun Station
		Apr 75
	Processing	RANDOM
	Communications	Typewriter Random A New Look EO 1.4.(C)
	Aug 75	P. L 8.6 A& 75
	PROFESSIONALIZATION	DADTOWNAM
	Letters to the Editor Professionalization	RAPIDTRAN
	of Bookbreakers	INTIDINAL
	Letters to the Editor	• • • • • Jul 75
	Bookbreakers; Professionalization of	Reflections on a Translators' Conference
	Country Specialists	• • • • Nov 74
	Jun 75	
	PROFESSIONALIZING	Replacement of the GUPPY Library
	Professionalizing in Computer Systems	Feb 75
	Jun 75	Re-psychling the Code Clerk
	PROGRAMMER	Jul 75
	Flag-Waving Programmer	REVIEW P.L. 86-36
	George John Dec 74	Review of "Guide to Russian Technical
	DESKPADA Programmer's Tool	Translation." by Arthur J. Salemme
\wedge		Feb 75
	Project CARRIAGE Worldwide HFDF	RIGHT-TO-LEFT TEXT
	Modernization Plan	Right-to- <u>Left Text Sorts</u> Are Not Impossible
	James B. Webster Sep 74 Project SYMBIOSIS	Aug 74
	Anonymous Jun 75	
	·	The Role of the Electronic Warfare Advisory Element (EWAE) of NSA
	A Proposal for Calendar Reform	Jun 75
	Francis T. Leahy Dec 74	
	Psyching the Code Clerk	RUSSIAN
		Language in the News Afrikaans, Amerind, Arabic, Chinese, French, Hebrew, Lycian,
	L D Colling	Spanish, Portuguese, Russian, Swahili
	L. D. Callimahos Apr 75	Sep 74
per constitution of the co	Purity of the Russian Language	Purity of the Russian Language P.L. 86-36
, part and a	Slavophiles vs. Westernizers	Slavophiles vs Westernizers P.L. 86-36
	Nov 74	Review of "Guide to Russian Technical
. retered	PUZZLE	Translation," by Arthur J. Salemme
	Puzzle Stinky Pinky Aug 74	Feb 75
P.L. 86-36	Puzzle Telephone Directory Aug 74	į
	Puzzle Telephone Recall Oct 74	Golden Oldies Blue Russian
	Puzzle Secret Messages, "Military	Nov 75
	Cryptanalytics" Dec 74 Puzzle Citizens of the World Dec 74	
	Puzzle Crossed Codewords	Processing
	Jan 75	Communications
	Puzzle Can You Make Out the Name?	Aug 75
	Puzzle How Many Words in "CRYPTOLOG"?	
	May 75	Secrets of the Altars The Moustier
	Puzzle Radiotelephone	Cryptograms Sep 74
_	Jun 75	
	December 75 * CRY	PTOLOG * Page 15
المعظمة العداد المعظمة العداد المعظمة العداد المعظمة العداد المعظمة العداد المعظمة العداد المعظمة العداد المعظمة المعظ	manus and the second	P.L. 86-36
		r.m. 00-30

		Р. Б. 86-36
	SELF-PACED INSTRUCTION	SRA SYMPOSIUM
	Self-Paced Instruction "The Future Is Now"	Calling A <u>ll SRAs: SRA</u> Symposium
	Aug 74	Aug 74
		Letters to the Editor SRA Symposium Oct 74
	SHIPBUILDING	/ * · · · · · · · · · · · · · · · · · ·
	The Great Soviet Shipbuilding Mystery	STATE DEPARTMENT
	Dec 75	The Faithful Echo - The Role of the
		State Department Interpreter
	The Exercise A Case Study	Feb 75
and the second of the second o	in Special Research Analysis	
EO 1.4.(C)	Vera R. Filby Oct 74	STINKY PINKY
P.L. 86-36		Puzzle Stinky Pinky Aug 74
	A Short Directory of Career Panels Aug 74	in the second se
	The control of the co	SWAHILI
	SIGINT USER'S HANDBOOK	Language in the News Afrikaans, Amerind,
	The SIGINT User's Handbook	Arabic, Chinese, French, Hebrew, Lycian,
	or, What's an Ishtar?	Spanish, Portuguese, Russian, Swahili
	Jan 75	Sep 74
	The state of the s	
	SIGNALS PROCESSING	SYMBIOSIS
	The Mission of the	Project SYMBIOSIS Jun 75
	Signal <u>s Processing Require</u> ments Panel	TA
		TA, Handmaiden of CA
		Frederic O. Mason, Jr May 75
	SIMP TABLES	More on Squaring the Page (A Crypto - TA
	Golden Oldies SIMP Tables Jun 75	Function)
		Frederic O. Mason, Jr Jun 75
	SOLITS	Automation of a TA Process
	In Praise of SOLITS	Tim Murphy Oct 75
	Louis C. Grant Nov 75	ram murphy
		TACTICAL
	Some Thoughts on Lexicography	IRONHORSEA Tactical SIGINT System
	Stuart A. Buck Sep 74	Oct 75
	and the second s	Tactical Language Exploitation-
	SORTS	A Lesson Learned
	Right-to- <u>Left Text Sort</u> s Are Not Impossible	Oct 75
	Aug 74	
		TEACHING
	SOVIET	New Trends in the Teaching of Cryptanalysis
		• • • • Nov 74
1	<u> </u>	
/	Nov. 75	TECHNICAL MANUALS
/	The Great Soviet Shipbuilding Mystery	Guidesmanship or, How to Write Technical Manuals Without Actually P.L. 86-3
	Dec 75	Technical Manuals Without Actually P.L. 86-3
/		Giving Anything Away
/	SPANISH	Nov 74
	Language in the News Afrikaans, Amerind,	
/	Arabic, Chinese, French, Hebrew, Lycian,	TELEPHONE
EO 1.4.(c	Spanish, Portuguese, Russian, Swahili	Puzzle Telephone Directory Aug 74
P.L. 86-3		Puzzle Telephone Recall Oct 74
Р.П. 60-3	The second secon	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
,	SPECIAL RESEARCH ANALYSI	UNNA
	The Exercise A Case Study	Jan 75
	in Special Research Analysis	
	Vera R. Filby Oct 74	TERMINAL
		The Yawn of the Computer Age
	A Spot by Any Other Name	or, When Your Terminal Is Terminal
	Vera R. Filby Aug 74	
	COLLAB TAKE THE DACE	Jan 75
	SQUARING THE PAGE	TEXTA P.L. 86-36
	More on Squaring the Page (A Crypto - TA	The TEXTA Data Base
	Function)	William J. Jackson Aug 74
	Frederic O. Mason, Jr Jun 75	"IIIIom of outhouse of a fing /4
		Too Many Garbles
		Jul 75
		<u> </u>
	December 75 * CRYI	PTOLOG * Page 16

SECRET HANDLE VIA COMINT CHANNELS ONLY

TRAFFIC ANALYSIS The New Traffic Analysis Glossary Aug 74 TRANSLATION Review of "Guide to Russian Technical Translation," by Arthur J. Salemme RAPIDTRAN	VIETNAM Vietnam Articles in Dragon Seeds Oct 75 1972-73A Vietnam Odyssey P.L. 86-36 VOYNICH The Voynich Manuscript Third Theory Doris E. Miller Aug 75 **Not 1.4.(c)** **Now 1.4.(c)** **WARSAW PACT** WEASEL WORDS Golden Oldies An Unofficial Glossary of Weasel Words Oct 74 What Should You Expect? or, The Analysis of Cryptanalysts Aug 74 What Are We About? (Fragments, Figments, or What?) What is a Collector?
EO 1.4.(c) P.L. 86-36	YELLOW PAGES Linguists We Need an Experts Yellow Pages! Aug 75
The Gulf of Tonkin Incident Feb 75 Tactical Language Exploitation— A Lesson Learned Oct 75 Graphic Analysis of Linear Recursive Sequences Dec 75 Anonymous Project SYMBIOSIS Jun 75 Self-Paced Instruction "The Future Is Now" Aug 74 Re-psychling the Code Clerk Jul 75 December 75 * CRYF	Letters to the Editor Professionalization of Bookbreakers Apr 75 The Uses of ELINT

Mana in Wind A Photography	Anne Exinterne
Maps in Mind A Photoessay Dec 74	A Long Hard Look at the Intern Program Program Philosophy; Recruitment Sep 74
Stuart A. Buck	A Long Hard Look at the Intern Program
Some Thoughts on Lexicography Sep 74	Selection and Orientation Oct 74
	A Long Hard Look at the Intern Program
D. 74	Motivation and Morale Nov 74 P.L. 86-36
The New Collection Criteria Dec 74 What is a Collector? Aug 74	A Long Hard Look at the Intern Program
what is a collector:	What Happens to the Graduates? Dec 74
L. D. Callimahos	
Psyching the Code Clerk	What? Where? Why? Nov 74
	EO 1.4.(C)
Apr 75	
***************************************	ULTRA Was Secret Weapon That Helped Defeat Nazis
The Danang Processing Center Oct 75	hazis
	Vera R. Filby A Spot by Any Other Name Aug 74
IRONHORSEA Tactical SIGINT System Oct 75	A Spot by Any Other Name Aug 74
	The Exercise A Case Study P.L. 86-36
	in Special Research Analysis Oct 74 The Apostrophe Some Thought's Nov 74
DESKPADA Programmer's Tool Nov 75	Coverterms Apr 75
	Apr / J
Linguists You Have an Expert to Call	Typowriton Bandom A New Look
Co-author: Rhea Nagle Oct 75	Typewriter Random A New Look Aug 75
Donak V. Craia	Caterino Garofalo
Derek K. Craig COMINT Analysis of Sep 74	Gary's Colors EO Sep 47.4(C)
COMINI Analysis of	P.L. 86-36
	William Gerhard One Chance in Three But It Worked Oct 75
Hooray for PMDs! May 75	one marco in mice but it notices.
	P.L. 86-36
0et 75	Linguists from the Melting Pot Dec 75 EO 1.4.(C)
	Louis C. Grant
The Windows Co.	In Praise of SOLITS Nov 75
The Mission of the Signals Processing	
Requirements Panel Oct 74	Jacob Gurin
Barbara Dudley	Glossaries versus Dictionaries Which Should It Be? Feb 75
Nice Busman's Holiday for One NSA Employee	milet offolia to be., , , , , , , , , reb /3
	Lettors to the Editor
	Letters to the Editor Bookbreakers; Professionalization of
What Should You Expect?	Country Specialists Jun 75
or, The Analysis of Cryptanalysts Aug 74	The state of the s
Secrets of the Altars The Moustier	Character Building in the People's Republic of China
Cryptograms	Republic of China
Twenty Years of Transposition Aug 75	Republic of China Co-author: Oct 74
CANTINO Name	Letters to the Editor article on
CAMINO News Feb 75 Machine Intelligence Promise or Delusion?	Coverterms Jun 75
Jul 75	
CAMINO Electronic Warfare Terms Jul 75	Puzzle Crossed Codewords Jan 75
	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Puzzle Can You Make Out the Name? Feb 75	Data and Definitions Calling Things
1 dazie dan 10d mare out the Name: Feb /5	by Their Rightful Names Nov 74
	 /
Puzzle - Radiotelephone	Mum's Still the Word! ("The ULTRA Secret")
Jun 75	Dec 75
FO 1 4 (C)	
EO 1.4.(C) December 75 * CRY	PTOLOG * Page 18
P.L. 86-36	

Mary Roberta Irwin Are We Wasting Linguistic Time? May 75	Linguists You Have an Expert to Call	
William J. Jackson The TEXTA Data Base Aug 74 An Approach to Callsign Analysis Dec 74	Co-author: Oct 75 1972-73A Vietnam Odvssey Co-author: Oct 75	
New Trends in the Teaching of Cryptanalysis	The SIGINT User's Handbook P.L. 86-36 or, What's an Ishtar? Jan 75	
Flag-Waving Programmer Dec 74 Purity of the Russian Language	The Faithful Echo - The Role of the State Department Interpreter Feb 75	
Slavophiles vs. Westernizers Nov 74 "Codeword" or "COMINT Channels"? May 75	RAPIDTRAN Jul 75	
When Censorship Backfires Nov 75	Language Lessons LearnedA Personal Mémoir	
Reflections on a Translators' Conference. Nov 74	Character Building in the People's p.L. 86-36 Republic of China Co-author: Oct 74	
Francis T. Leahy A Proposal for Calendar Reform Dec 74	A Comm Change at Ramasun Station Apr 75	86-36
The Yawn of the Computer Age or, When Your Terminal Is Terminal Jan 75	Golden Oldies Blue Russian Nov 75	
Golden Oldies King Eusyb and Queen Deodi	The Language of Beisbol in Everyday Talk Co-author: Ramon Santiago-Ortiz Aug 74 The Case for COMINT Readers Jan 75 Too Many Garbles Jul 75	
Frederic O. Mason, Jr. TA, Handmaiden of CA	Ramon Santiago-Ortiz The Language of Beisbol in Everyday Talk Co-author: Aug 74 P.L.	86-36
Professionalizing in Computer Systems . Jun 75	Calling All SRAs! SRA Symposium Aug 74	
Basic Patterns of Codes and Ciphers Feb 75	Nov 75 EO 1.4.(C) P.L. 86-36 Letters to the Editor Intern Program Apr 75	
Linguists We Need an Experts Yellow Pages!	1972-73A Vietnam Odyssey	86-36
The Voynich Manuscript Third Theory. Aug 75 Marjorie Mountjoy Cryptanalysis and Code Recovery Sep 74	How Clean Does a Data Base Need To Be?. Jan 75	
Tim Murphy Automation of a TA Process Oct 75 Letters to the Editor	Processing EO 1.4.(C) Communications	
letter on Bookbreakers May 75 Letters to the Editor Rebuttal Aug 75	Replacement of the GUPPY Library Feb 75	i
December 75 * CRYP P.L. 86-36	TOLOG - rage 19	.! !:

-SECRET

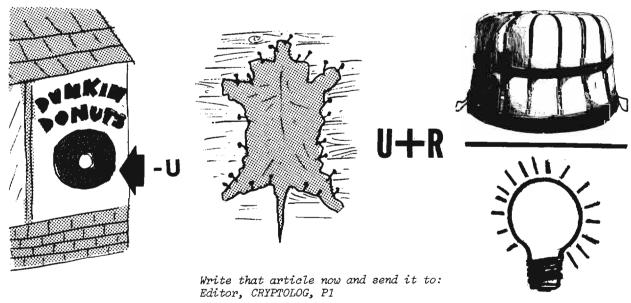
P.L. 86-36

SECRET

The same of the sa	
Emery W. Tetrault Even a 5-year-old Child Oct 74 Letters to the Editor Intern Program. Feb 75 Where Does "Does" Come From? Jun 75	UNNA, Jan 75
Guidesmanship or, How to Write Technical Manuals Without Actually	The Warsaw Pact Jul 75
Giving Anything Away Nov 74	James B. Webster Project CARRIAGE Worldwide HFDF P. L. 86-36 Modernization Plan Sep 74
Computers, Comms, and Low-Grade Ciphers Oct 75	Nov 75
John B. Thomas, Jr A Fix for the Language Problem? Aug 75	LCDR James T. Westwood What Are We About? (Fragments, Figments, or What?)
Brig. John H. Tiltman A Personal Comment on Winterbotham's "The ULTRA Secret" Dec 75	Edward S. Wiley The Do Xa Pads Oct 75
Review of "Guide to Russian Technical Translation," by Arthur J. Salemme . Feb 75	The Great Soviet Shipbuilding Mystery . Dec 75
Letters to the Editor letter on Bookbreakers May 75	Letters to the Editor P.L. 86-36 Citizens of the World Feb 75
Oral Reporting: A New Challenge for NSA Apr 75	Right-to-Left Text Sorts Are Not Impossible

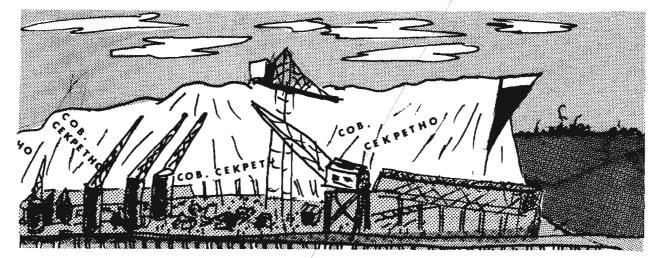
CRUP7010G Rebus

If your name is not included in the list of authors' names, and you have an idea for an article about a subject that hasn't been dealt with yet in CRYPTOLOG:



DOCID: 4009727

TOP SECRET UMBRA



THE GREAT SOVIET SHIPBUILDING MYSTERY
P16

P16

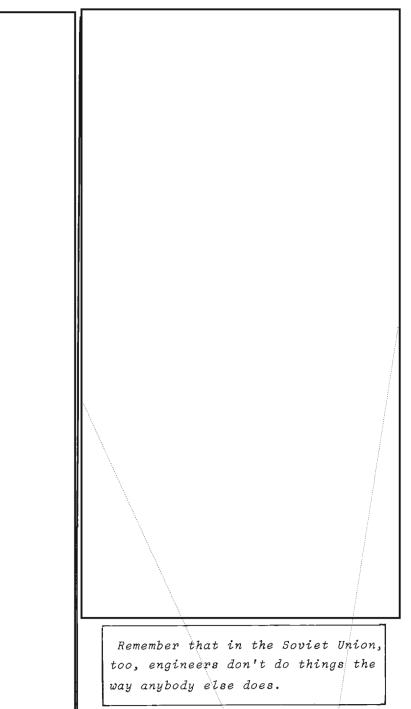
RYSTERY
P1.4. (c)
P1.4. (c)
P1.4. (c)

December 75 * CRYPTOLOG * Page 21

TOP SECRET UMBRA

DOCID: 4009727

TOP SECRET UMBRA







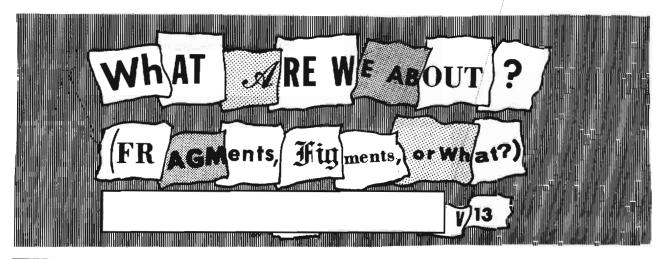
Editor's note: Russian phonetic alphabets, like English ones, reduce ambiguity ("BORIS" sounds different from "VLADIMIR," just as "Mary" sounds different from "Nancy"). Since phonetic alphabets are not used universally, transcribers of Russian voice often have as much trouble distinguishing between

"BEh" (the name of the letter) and "VEh" as we ordinary telephone users have in distinguishing between English "em" and "en." But the transcriber of Russian voice has yet another problem (those Russian engineers again!). The names of Latin letters, as spoken in Russian, don't sound like "ay," "bee," "see" at all. Instead, they are based on the French names of the letters. Hence, Latin H, as pronounced by a Russian engineer, is not like the English "aitch," but is "ASh" (French "ache"); Y is not "wye," but "IGREK" (French "y grec").

December 75 * CRYPTOLOG * Page 22

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

SECRET



rhe collection and dissemination of defense intelligence, or any other kind of intelligence, does not have to be especially complicated, so long as certain fundamental principles and goals are kept in mind. Defense intelligence, in which NSA/CSS and the Service Cryptologic Services are heavily involved, should seek to answer certain elemental questions in peacetime, wartime, or several other somewhat nebulous "times" between peace and war. These questions include:

- Do we have an enemy/adversary? If we do, who is he and why is he an opponent?
- Where is he and in what strength?
- What are his intentions?
- What are his perceptions of himself, his own purposes and goals?
- Are his intentions consistent with his strength (capability)? If not, might he be practicing deception?

Within defense intelligence, the business of signals intelligence is to "read the enemy's mail." This assumes that there is a bona fide enemy. Given the U.S. national interests, reading the enemy's mail requires a massive effort. For one thing, it takes a vast amount of mail to yield real nuggets of value on a continuing basis. It follows that, if the processing and reporting effort ever catches up with the collection effort, we would be in real trouble because we would certainly have the cart before the horse. There is, however, a sometimes overlooked proviso in this relationship: Any major SIGINT effort whose thrust is not in line with reading the enemy's mail (in an admittedly broad sense) is probably superfluous and ought to be redirected or abolished, because resources are limited and we must, therefore, keep expenditures of those resources tied to our fundamental purposes.

Of course, "reading the mail" is a figurative phrase. It does not mean just CA and TA. It means all that we do with men and machines that allows SIGINT to work its effectiveness in terms

of timeliness, uniqueness, and fidelity, that is, the faithful reflection of the enemy's intentions and activities.

Intelligence, in whatever form and from whatever source, is a service provided to decisionmakers. Decision-makers are civilian and military officials with distinct responsibility and personal accountability for solving problems that affect the public welfare. To make effective deployment of the people and property constituting their responsibility, the decisionmakers need certain information, much of which we have come to call intelligence. But this intelligence is not an end in itself. It does not exist to promote and serve itself. It exists to give decision-makers the best it can provide in the way of current, accurate, reliable information to answer the vital questions they have to answer. Additionally, and by its very nature, intelligence must be anonymous and quiet. A secret is best kept by not revealing it. Mr. Colby was recently quoted as saying, "Intelligence. . .will not work if exposed."

There is no small amount of confusion and resultant ineffectiveness at large in the intelligence business today because of the tendency of intelligence producers to provide intelligence users with too much, too fast, too often -that is, because of the "shotgun" approach. This tendency results from our attempt to cover ourselves against the possibility that we might fail to tell somebody something that he really needs to know. Morever, because we collect a lot of intelligence, we feel compelled to process a lot. That leads to wanting to report a lot, and, in turn, to inundating the user with so much intelligence that he cannot give certain portions of it the necessary attention. This gives rise to certain attendant problems: This tendency to broadfire intelligence then leads to the tendency for intelligence producers to dictate, however subtly or indirectly, how much of what kind of intelligence the users shall receive and, moreover, in what format and at

what rate they shall receive it. These tendencies are especially visible in terms of SIGINT support to military commanders. The result in this instance is that we make military commanders passive recipients of intelligence. An active role, with commanders saying, "This is what I want to know and this is how much I want," is precluded by a deluge of "This is what we want you to have." If this is drawn out to its ultimate conclusion, the presumed goal of "increased accessibility to intelligence product by decision-makers at all levels" is unattainable.

Those who pay close attention to dissemination might disclaim the existence of these tendencies. They might attempt to explain the present situation by splitting intelligence into "tactical" and "strategic." But the difference between "tactical" and "strategic," to my mind, lies not so much in the nature and content of the intelligence itself, as in the level or scope of the decision-making that the intelligence is supposed to serve. For example, was it tactical or was it strategic intelligence which foretold the Chinese crossing of the Yalu River into Korea? Obviously, it was both: it was tactically useful intelligence to the field commanders in Korea, and it was also strategically useful intelligence to the President and his Cabinet. We do our SIGINT profession an immense disservice when we fragment our efforts and our product into pieces and parts in an attempt to serve two or more users, for example, the tactical commander and the national decision-maker.

Perhaps we should devote some time away from the production process in order to get from all our users a clearer idea of what they would consider to be useful. Intelligence production today is much more efficient than ever before, given our increasing reliance on automatic data processing. Whether it is also effective is another question. Effectiveness is the accomplishment of objectives -- the satisfaction of requirements. Machines are not a substitute for human judgment. Decision-makers want to know that human judgment has been brought to bear to weigh the significance of the intelligence that is being machine-processed so efficiently for them.

Tactically, the fundamental questions have not changed since Moses sent spies into the Land of Canaan: Where is the enemy and in what strength? Strategically, basic questions persist: What are our interests and what and how much do we need to know about threats to those interests?

What are we about, then? We are about the business of providing intelligence service to decision-makers. We ourselves are not those decision-makers and we must resist the tendency to confuse roles. It is not in the nature of our business to decide what is strategic and what is tactical. We have skills and facilities that can respond to intelligence needs at various levels, often simultaneously, but not by saturation.

SIGINT is part of a larger intelligence business which, itself, requires us intelligence producers to integrate our efforts and to tailor our production and dissemination to answer the fundamental, but related, questions posed by a variety of users. Those users can best be served from the same, single set of resources if we all appreciate what we are about.



NSA COMPUTER SYSTEMS INTERN PROGRAM

The Intern Panel Advisory Board (IPAB) has established a new monthly publication, the *Computer Systems Intern Newsletter*, in order to provide "lines of communication both to and from the Interns themselves" and "to better inform and advise those associated with the Computer Systems Intern Program." The publication is classified FOR OFFICIAL USE ONLY and began with the September 1975 issue.

Anyone who would like to receive back issues or to be put on the distribution list should contact the Editor, R214, 3460s or 3469s.

(FOUO)

P.L. 86-36

LINGUISTS FROM THE MELTING POT





P.L. 86-36

P.L. 86-36

For several years, NSAers who grade language hiring examinations have noted that people's names do not always match up with their expected language ability: an applicant named, say, Yamashita can score horrendously on the Japanese hiring examination, and someone named Olivetti can do just as badly on the Italian. But it is often difficult to convince managers commissioned to "solve the language problem" that the solution to, say, the "Russian language problem" is not just a matter of running out and hiring 100 American citizens with names like Ivanov and Fedorenko. The following article by (NSA retiree), which is reprinted from Keyword (November 1971),

reprinted from Keyword (November 1971), deals with some of the reasons why Americans with foreign surnames often show a surprising lack of knowledge about the language they supposedly picked up at their mother's or grandmother's knee.

It is a common belief that since a large part of the United States population is made up of immigrants and the children of immigrants there is a ready source of foreign-language talent for any emergency. To a degree this is true, but the source has many limitations. Any language must undergo changes if its speakers are moved to a strange environment, and the speech of the immigrants to the United States is no exception.

If you examine the "Help Wanted" section of the German-American press, for example, you will find a large number of English words used to designate skills or crafts. At first there seems to be no pattern in the choice of German or English words, but the existence of Backergeselle (journeyman baker) in one advertisement not far from another that seeks an erstklassigen body-and-fender-Mann (first-class body and fender man) suggests that the borrowings are in response to a world of labor in which there is a greater, or perhaps only different, specialization. For the unfamiliar specialty the immigrant has a choice of coining a new word in his own language, or simply of borrowing directly from the other language. There are still other means of meeting the problem.

The book I Trapiantati (The Transplanted), written by Giuseppe Prezzolini, an Italian foreign correspondent in New York, and published by Longanesi & Co., Milano, 1963, contains

two chapters dealing with this subject as it concerns Italian-Americans. Since the general situation presented may be considered typical of many immigrant groups, I have gisted them briefly below.

Italians who visit the United States and come in contact with others who have settled here for one or two generations are amazed, puzzled, and sometimes horrified at the language they hear used by those who, like them, call themselves Italians. It is the same impression as that received by visitors, journalists, and consular employees who came here in decades past. What they heard was not Italian, it was not dialect, nor was it even English; still it was at the same time a little Italian, a little dialect (and this varied from place to place and sometimes from person to person), but it regularly revealed an English-language base, pronounced in the Italian fashion, that is to say an English root, with the round, vowel endings of Italian. For example there was:

contrattore contractor la tracca track la grosseria grocery il bordante boarder

Their amazement increased when they found this jargon written (often only approximately) in restaurant menus, the classified ads of Italian-American newspapers, and even in official documents of American authorities who wanted to be understood by Italian immigrants. "American Italian" was a deformation of English rather than an adaptation of Italian. It was the result of the effort made by a mass of poor and ignorant country people, dependent upon employers who spoke a foreign language, to make themselves understood by the latter and by their own fellow workers.

Anthony Turano, an American writer of Italian origin, observed very correctly that the rural origin of most immigrants made a mechanical vocabulary difficult for them. To express their needs the southern Italian peasants were compelled to use English terms, since they had never known the Italian equivalents. But in adopting the English terms they transformed them, as best they could, by making them phonetically similar to Italian. Turano distinguished three categories of borrowings:

UNCLASSIFIED

words remote from the immigrant's former

sexa, sescia

(railroad) section

ranciorodomastro

roadmaster

 words for things unknown to him before he came to America:

fensa morgheggio

fence mortgage

words that stuck in the immigrant's mind by dint of constant repetition, even though he knew the corresponding Italian words:

stritto denso carro

street dance car

There is also a well-known linguistic phenomenon by which a people when it accepts a foreign word finds one in its own language which is similar to it and which it adapts to the new use even though it may have a completely different meaning. For example,

shove11 sciabola (saber) olivetta (kind of sausage) elevator, elevated (tuna fish) tunnel tonno

At times the marriage of English and Italian involves a dialect, as in the case of coppastese (Neapolitan 'ncuop + English stairs), upstairs; or coppetane ('ncuop + English town), uptown. The Sicilians, however, do not use this expression, but instead say oppitauni.

In making a list of words in the American Italian jargon, it is easy to see that the proportion of adjectives to nouns is very small -- much smaller than in either Italian or English. The immigrant had to be able to express pezze2 (dollars), or bosso (boss), but not necessarily "pretty" or "good" or "true" or "false." Orre! (Hurray!), an expression from the American-Italian variety shows, barely reveals a feeling of admiration, and naise (nice) a favorable opinion.

At first, newspapers in the Italian language adhered fairly closely to standard Italian, but after about 1900 the flood of classified advertisements made it impossible to conceal or translate the jargon of the Italian-American working man. In the Bolletino della Sera in 1917, advertisements are found for:

sceperi

shapers (of garments)

pressatori

pressers

sottopressatori

pressers' helpers

There were also to be seen advertisements for a mezzo-barista (a man to work half a day in a bar). In these pages a country place was always a farma (farm). Heating was done with stima (steam, but meaning in Italian esteem), and a frequent advertisement was for sale of a casa senza stima -- a house without heat or without esteem, depending on how well you understood American English.

This occurs less and less frequently. Such expressions have almost disappeared from the classified advertisements of Il Progresso Italo-Americano, not because the older generation doesn't still use them, but because that generation no longer has to work. The new generation of Italians who are looking for work know Italian pretty well and do not need the job opportunities translated into jargon. Nobody is trying to buy a fruttistenne (fruit stand) any more.

Prezzolini feels that the whole of this interlingua will probably have ceased to exist within a few generations, since the more recent immigrants (much fewer in number) arrive under quite different circumstances. In Italy they have learned the logical bases of the Italian language (it must be remembered that a large part of the older immigration was illiterate) and here, as soon as they go to school -- even the adults -- they learn English and are (quoting Prezzolini) the first to be horrified at the crude linguistic mixture of their predecessors. Undoubtedly, the language he describes will vanish since it was based on the southern dialects of Italian and was the hasty creation of peasants abruptly thrust into an urban world. The newer immigrants more frequently speak standard Italian and are literate, often cultured people. So long as their Italian is a tool used in a foreign society, though, it must adapt, and it will evolve into an American Italian much different from the parent language.

With some exceptions, the immigrants of any nationality are much more concerned with earning a living, raising a family, buying a car, or any of a host of other things than they are in preserving the purity of their native languages. Their children will necessarily speak a truncated language, adequate for the needs of the family or neighborhood, but shot through with words borrowed or transformed from English. The value of the family-trained linguist to SIGINT should not be underestimated because of these limitations, but at the same time it should be recognized that this source produces only raw material that must be trained and developed.

Another observer mentioned his amazement at being told by an immigrant countryman that there was plenty of work in the United States for a man who knew how to use picca e sciabola, which in Italian means "pike and saber," but in American Italian, "pick and shovel." (R.E.G.)

²Pezze may be used because of Spanish peso. The word was commonly used in Nevada in a rudimentary Spanish-Italian jargon used by immigrant laborers of both nationalities when working together. Scudi and dollari were used by other Italian speakers, as I recall. (R.E.G.)

DOCID: 4009727

CONFIDENTIAL

CLA ESSAY CONTEST

The tenth annual essay contest of the Crypto-Linguistic Association is now open. Papers will be accepted until 19 March 1976. A panel of three judges will select the three best, which will be awarded prizes of \$100, \$50, and \$25 at the CLA's spring meeting. Every entry will be considered for publication in whichever of the Agency publications is most appropriate for its content and style.

The purpose of the contest is to encourage writing on topics concerning application of linguistic knowledge to the solution of Agency-related problems. Any writing on cryptology or a significantly related topic may be entered. Papers may be classified up to TOP SECRET CODE-

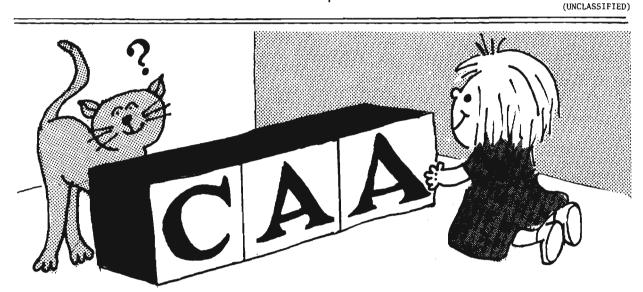
WORD. Any NSA or SCA employee (CLA member or nonmember) and any nonemployee CLA member may enter the contest.

Three copies of the manuscript (preferably typed), together with any necessary graphics, should be submitted to the CLA Secretary,

Room B5B21, Tel. 8560s.



P.L. 86-36



CAA-What's that?

"That" is the Communications Analysis Association, one of the Agency's Learned Organizations. The CAA was established in 1968 "to promote increased professionalism in the career fields of Traffic Analysis and SIGINT Research" by encouraging professional contact among its members and specialists in related fields; by conducting workshops and lectures; by encouraging the writing of technical papers to document the disciplines; and by recognizing those who advance the art and science of traffic analysis and SIGINT research. Membership in the CAA was originally restricted to professionals and aspirants in TA and SR in the U.S. Cryptologic family and collaborating agencies, but it was later opened to those in the related fields of Signals Collection, Signals Analysis, Cryptanalysis, etc. At one time the Association published the technical magazine COMMAND, now incorporated into CRYPTOLOG.

So far this 1975-1976 lecture year, the CAA has sponsored the following lectures:

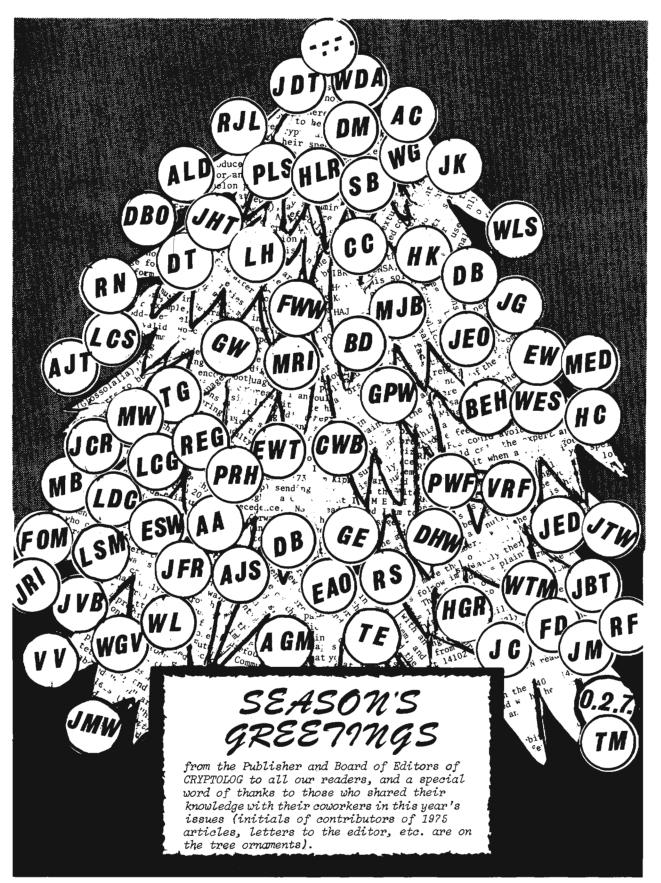
- "GUARDRAIL" (Col. Norman Campbell),
- "'Changing Emphasis in the USAFSS''
 (Maj. Gen. H. P. Smith), and
- "SIGINT in Vietnam: Lessons Unlearned"

P.L. 86-36

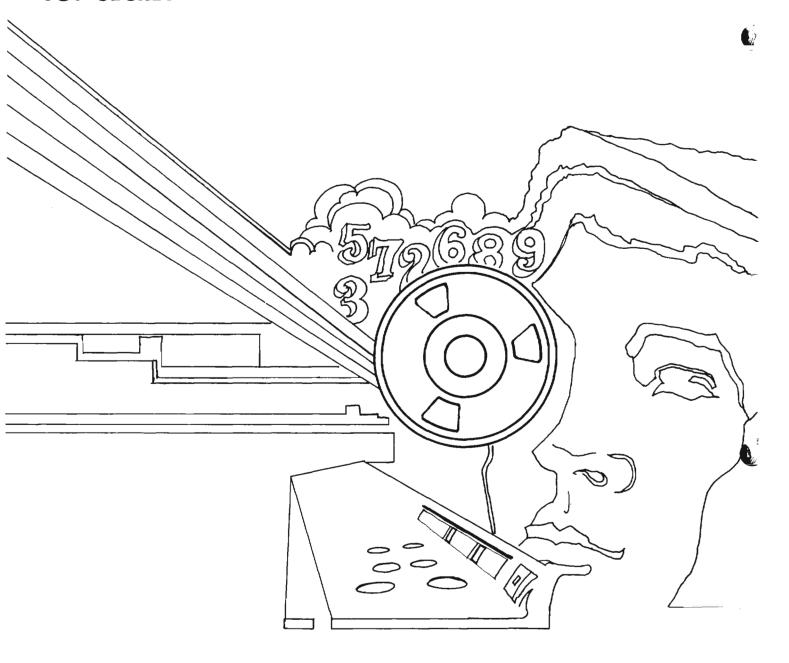
All three lectures drew standing-room-only audiences of members and nonmembers to the Friedman Auditorium. The Association, under its President, Frank Smead, is outlining a program of lectures and other activities for 1976 which will be in keeping with the organization's stated objectives.

Anyone interested in joining the CAA should call its Treasurer, Tim Murphy, on 4787s or its Secretary, Jane Dunn, on 8025s for more information.

(CONFIDENTIAL)



December 75 * CRYPTOLOG * Page 28



THIS DOCUMENT CONTAINS CODEWORD MATERIAL

TOP SECRET