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ABSTRACT
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Character Recognition) mode of data entry was studied to analyze the
potential effectiveness of OCR data entry for future EPC/s (Editorial
Processing Centers). Study results are also applicable to any other
system involving decentralized bibliographic data capture and
conversion functions. The report does not recommend such OCR
applications unless: (1) all OCR keying can be done on standardized
forms; (2) consistent high quality of character images keyed on OCR
forms can be maintained; and (3) suitable methods can be devised for
coping with special notation (e.g., mathematical, chemical). The
report contains performance data on both the OCR keying and OCR
scanning functions, and provides a cost/savings analysis. Practical
guidelines are provided for the implementation and operation of OCR
data entry systems. (Author)

(Technical Report No. 1296)

FINAL REPORT

ON A

STUDY OF THE EFFECTIVENESS OF OCR

FOR

DECENTRALIZED DATA CAPTURE AND CONVERSION.

(GRANT NO. DSI-76-14760)

To The

NATIONAL SCIENCE FOUNDATION
Division of Science Information

FEBRUARY, 1978

BY

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The report contains performance data on both the OCR keying and OCR scanning functions, and provides a cost/savings analysis. Practical guidelines are provided for the implementation and operation of OCR data entry system.

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Data Converters
Optical Scanners
Cost Analysis
Startup Costs
Operating Costs
Unit Costs

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Optical Character Recognition   Data Capture
OCR   Data Conversion
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ACKNOWLEDGEMENTS

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ERIC Clearinghouse on EARLY CHILDHOOD
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I: INTRODUCTION

A. BACKGROUND

At the time this Grant (Grant No. DSI 76-14760) was made to ORI, Inc., the National Science Foundation, Division of Science Information, NSF/DSI (formerly, the Office of Science Information Service, OSIS) was actively investigating the concept of the Editorial Processing Center (EPC). The EPC concept comprised an integrated, centralized, and automated system, acting as a service bureau "to perform automatically all of the functions associated with primary publishing that lend themselves to processing by computers and other sophisticated modern equipment."

Two circumstances in particular that prevailed at that time were instrumental in justifying the study herein reported upon:

- The original analysis of the feasibility of the EPC concept by Westat Inc.[1] had envisioned the application of optical character recognition (OCR) for data capture and conversion to machine readable form.

- The ERIC Processing and Reference Facility (ERIC Facility), operated by ORI, Inc., was about to embark on a new program to convert the ERIC Network data entry system to OCR.

The striking similarities between the proposed EPC and ERIC application of OCR spawned the idea of using the ERIC/OCR implementation phase as a test bed for assessing the applicability of OCR data entry methodology to the EPC concept. These similarities between the two proposed applications were that both systems were to involve:

- Decentralized initial keying of data for OCR scanning.
- Centralized rekeying of corrections/revisions for OCR scanning.
- Centralized OCR data conversion.
- Centralized data base construction.
- Generation from the data base of:

  (a) Page proofs for the publication process.
  (b) Directories, indexes, and others similar products.
  (c) Magnetic tapes for information retrieval.

- Processing of a high volume of characters per unit time (about two million per month for ERIC).
- Operations paced to meet a strict monthly publication schedule with a rather short turnaround time.

On the basis of this parallel nature of the two proposed OCR applications, the grant was made to ORI, Inc. to conduct the study which is the

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[1]
Editorial Processing Centers — A Study to Determine Economic and Technical Feasibility, Westat, Incorporated, July 1974, PS-234959.

subject of this report.

B. GOALS AND OBJECTIVES

The study has been conducted under the NSF/DSI "Access Improvement Program" and relates explicitly to the first goal of that Program in the field of publication which is:

> "To capture significant new literature in computer-sensible form at its source".

More specifically, the study relates to the EPC concept developed within this goal, and even more specifically to the problem within the EPC of data capture and conversion to machine-sensible form. Situated in such a framework the study has the specific objectives to:

- Test and evaluate the technical, financial, and socio/political viability of OCR as a technique for data capture and conversion in an Editorial Processing Center.

- To systematically report any intelligence gained from the ERIC/OCR operation concerning hardware, software, personnel, training and other procedures that will enhance orderly and efficient imple- mentation of OCR in future EPC's, or in other similar applications.

C. GENERALITY OF RESULTS

This has been a study of an OCR application using one particular scanner, one particular OCR type font, and one particular type of keying device. Of course, for each of these system elements there are alternative pieces of equipment that could be substituted. It is natural to question to what extent our results can be generalized across all the types of equip- ment available. Certain results such as error rates are quite specifically related to the particular equipment tested. On the other hand, we feel the general types of problems encountered, the nature of their solutions can be considered to be quite typical of all OCR applications. The reader of this report is likely to have little difficulty deducing which of the results are generalizable and which are not. However, to assist in making this dis- tinction, we have also included some specific clarifications of this nature at various points throughout the report.

One particularly unique aspect of this OCR application is the general nature of the ERIC data base and the textual data it contains. The ERIC data base, in dealing with the field of education, contains virtually no special notation of the types prevalent in some of the harder sciences such as mathematics, chemistry, and physics. This can be seen from the ERIC character set illustrated in this report. Thus, the general level of success of the ERIC/OCR application may not be generalizable to Editorial Processing Centers (or other applications) that involve extensive special notation containing characters that the scanner may not be able to read. Extensive human intervention in the data entry process might be required in such cases.

II. THE NATURE OF ERIC AND ITS DATA·ENTRY SYSTEM

A. AN OVERVIEW OF ERIC

ERIC is the acronym for the Educational Resources Information Center. The ERIC system was originally conceived in the U.S. Office of Education in the mid-1960's to bring under control and provide ready access to the nation's educational literature.

Because of the decentralized nature of American education, education's many specializations, and the existence of numerous professional organizations, ERIC's designers opted for a network of organizations rather than a single monolithic information center located in Washington. ERIC was conceived, therefore, as a network of "clearinghouses," located across the country in "host" organizations that were already naturally strong in the field of education in which they would operate.

Figure 1 provides a diagrammatic view of the total network, its components, the functions of each component, and the general flow of materials through the network. Not completely clear in Figure 1 is the fact that there are sixteen separate Clearinghouses. Each clearinghouse gathers and processes documents in a specifically defined segment of the field of education. The remainder of the functions are each centralized and performed by one of the following organizations:

- The ERIC Processing and Reference Facility (The Facility --- operated by ORI, Inc.)
- The Government Printing Office (GPO)
- The ERIC Document Reproduction Service (EDRS --- operated by Computer Microfilm International Corporation)
- The Current Index to Journals in Education (CIJE Publication --- operated by Macmillan Publishing Co., Inc.)

all as indicated in the listings in Figure 1.

The data capture and conversion functions are shared between the Clearinghouses and the Facility. The Clearinghouses generate the system input data as a product of their document analysis functions, and they perform the initial keying. The Facility edits the data received from all the clearinghouses, converts it to machine-sensible form, constructs the ERIC data base, and prepares the ERIC abstract journal Resources in Education.

B. THE ERIC DATA ENTRY SYSTEM PRIOR TO OCR

The very first concept of a data entry system for ERIC was to install Flexowriters, one at each of the Clearinghouses, so that the initial keying performemd there would be in computer-sensible form. This concept had the advantage of avoiding any duplicate-keying functions.

In those early days of the ERIC operation, when automation of textual information was in its infancy and data input equipment for upper/lower case textual data was limited to rather difficult-to-operate punched paper tape devices such as the Flexowriter, it was found not feasible for

ERIC NETWORK COMPONENTS

CLEARINGHOUSES	FACILITY	GPO	EDRS	CIJE PUBLISHER	REFERENCE & RESOURCE CENTERS
•Subject Oriented Acquisition Selection •Abstracting •Indexing •Information Analysis •Inquiry-Processing	•Editing/Validation •Data Input •Lexicography •Computer Systems •Publication Preparation •Data Base Management	•Photocomposition •Abstract/Index Journal Publication (RIE) •Subscr. Management	•Microfilming •Dissemination Microfiche Hard Copy	•Commercial Publishing CIJE Journal Other Spinoffs	•Local User Dissemination Computer Searches Reference Services

FIGURE 1.   AN ERIC NETWORK OVERVIEW

the individual Clearinghouses to provide consistently clean computer-processable input. Problems were encountered not only with the consistent production of clean (error free) paper tape, but also with the protection of the paper tapes during shipment against moisture and physical damage. The Flexowriters were eventually recalled from the Clearinghouses and installed at the ERIC Facility for a centralized keying operation. Thus was born the "double keying" of the data in the course of which each Clearinghouse produced a clean typewritten copy of each document resume, and the ERIC Facility, after editing, rekeyed all of the document resumes to produce the computer-sensible records.

This mode of data entry persisted until the beginning of the 1976 Facility contract year, at which time it was proposed and accepted that the data entry system be revised to employ OCR. The primary motivation for the conversion was to eliminate the double-keying by having the Clearinghouses perform the initial keying on OCR forms that could be scanned and converted to machine-sensible form by the Facility with no further keying operations.

C. CONVERSION OF THE ERIC DATA ENTRY SYSTEM TO OCR

The conversion of the ERIC data entry system to OCR was accomplished in three basic phases:

- OCR keying done centrally and experimentally by the ERIC Facility. This phase facilitated the debugging of the keying and scanning operations without interference with the existing data entry functions.

- Experimental OCR keying operations assumed by the four local Washington D.C. Clearinghouses in parallel with normal keying operations. This phase permitted the development of training procedures and the OCR Keying Manual prior to the initiation of OCR keying by the remaining twelve Clearinghouses.

- Operational OCR keying by all the Clearinghouses, thereby eliminating the double keying requirements.

1. Central/Experimental OCR Keying and Scanning by the ERIC Facility

The conversion started with the acquisition by the ERIC Facility of three IBM Selectric II typewriters having the following specifications:

- 5 lines per inch carriage rachet
- 13 inch, 10 pitch carriage
- OCR one-time carbon ribbon cassettes
- ANSI OCR A typing element (Selectric Ball) IBM Printing and Publishing 1, Order #1167170. (See Figure 2 for an example of an OCR input form typed in the OCR font). This font is also the Federal Information Processing Standard (FIPS) for OCR input.

Keyword	ALIGN FIRST CHARACTER IN BOX
CH	CH::JC770165
PA	PDAT::Jan77
PDAT	LEVEL::1
LEVEL	AUTH::Zane, Lawrence F. H.; Rantala, John W.
PAGE	TITLE::A Report on the Establishment of Regional Colleges in the Socialist Republic
AUTH	of the Union of Burma.
TITLE	INST::=Ministry of Education, Rangoon (Burma).
INST	PUBTYPE::R
SPON	
CONT	DESC::*College Planning; *College Role; Foreign Countries; *Technical Institutes;
GR	Post Secondary Education; *Technical Education; Area Vocational Schools;
BN	Regional Planning
REPNO	IDEN::*Burma
PUBTYPE	

ABST::This document contains more than 30 specific recommendations made by two
American specialists regarding the efforts of the Socialist Republic of Burma
as it seeks to establish approximately 20 production-oriented Regional Colleges
throughout the 14 States and Divisions of Burma. The proposed colleges, patterned
after the American community college, are designed to produce middle rung
technicians, to train students both theoretically and practically, to engage
students in production while studying in their various disciplines, and to provide
an opportunity for those of high intellectual caliber to pursue a further university
degree. The specific recommendations included in this report are comprehensive in
nature and cover such areas as staffing, college/community interface, long-range
planning, academic policy, open admission, public relations, vocational counseling,
other student personnel services, alternative modes of utilization of instructional
personnel, development of instructional materials, publication of college catalogs,
institutional role, student activities, staff development, community services, and
administration. A brief bibliography is appended. (JDS).

NOTE
AVAIL
JNL
DESC
IDEN
ABST

MANDATORY
DATA FIELDS
ARE IN BOLO
TYPE

Substitution
Characters

ERIC OCR
[{{
] }}
! ??
> .gt.
< .lt.
({
) }
H

DO NOT TYPE BELOW THIS LINE

EFF-100 (9/76)

FIGURE 2.   EXAMPLE OCR INPUT FORM

(FULL SIZE FORM IS 11" X 11")

The Facility's keyers began experimental (duplicate) keying of document resumes submitted by the Clearinghouses. Training was a minor effort since the keyers were proficient typists and thoroughly acquainted with the input data to be keyed. The major training requirements involved the use of special characters, control characters, and correction procedures (more about these later in this report).

The OCR Scanner (a Compuscan Model 170 OCR Page Reader) required some testing and modifications. The scanner operates through a mini-computer to convert data on the typed OCR Forms to magnetic tape records. The minicomputer software provides rather powerful capability for special character translation, substitution, and deletion. The particular scanner used had been set up to process Perry OCR type font and had never been operated on the OCR-A type font selected for the ERIC operation. This required some testing and adjustment of the scanner. The problems encountered included:—

- The vertical bars in the OCR-A font extended outside the normal character boundaries of the Perry font, causing the scanner occasionally to pick up a character from the wrong line of text.

- The hyphen and the underscore characters occurred at the same vertical position, and, thus, could not be distinguished by the scanner.

- The OCR-A character set did not include all the ERIC characters, so special substitutions had to be developed. These can be seen in Figure 3, the ERIC/OCR Character Set.

The significance of the image quality of the characters on the typed OCR forms soon became obvious. Preliminary tests of resumes scanned through the OCR system indicated a very high (4% to 6%) error rate introduced by the scanner identifying semicolons as commas. Additionally, there was a tendency to replace a "t" (lower case) with a "c" (lower case). By adjusting ("fine tuning") the typewriter and changing from the IBM OCR ribbon to an IBM film ribbon, the maximum semicolon error rate of 6% (320 out of 5,184 characters keyed) was reduced to 0.13% (4 out of 3,028 characters).

After spending considerable time with a special hardware consultant from New Jersey adjusting the scanner, the error rate was substantially reduced. One of the pages keyed before the typewriter was adjusted originally showed an error rate of 4%. Scanning the same sheet after an initial adjustment of the scanner produced 8 errors out of 2,197 characters for an error rate of 0.36%. After further adjustment of the typewriter, ten (10) pages containing exclusively semicolons (19,631 characters) had only one character misread by the scanner. Visual examination of that character showed that it was in fact somewhat deficient.

1. ALPHABETIC (52): A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
   a b c d e f g h i j k l m n o p q r s t u v w x y z

2. NUMERIC (10): 1 2 3 4 5 6 7 8 9 0

3. SPECIAL CHARACTERS (25):

EXACT EQUIVALENTS:

	ERIC	OCR		ERIC	OCR
AMPERSAND	&	&	HYPHEN	-	-
APOSTROPHE	'	'	PERCENT SIGN	%	%
ASTERISK	*	*	PERIOD	.	.
BLANK, SPACE			PLUS SIGN	+	+
COLON	:	:	QUESTION MARK	?	?
COMMA	,	,	QUOTATION MARK	"	"
DASH	--	--	SEMICOLON	;	;
DOLLAR SIGN	$	$	SLASH, VIRGULE	/	/
EQUAL SIGN	=	=			

SPECIAL SUBSTITUTIONS:

	ERIC	OCR		ERIC	OCR
BRACKET (LEFT)	[	{{	LESS THAN	<	.lt.
BRACKET (RIGHT)	]	}}	PARENTHESIS (LEFT)	(	{
EXCLAMATION POINT	!	??	PARENTHESIS (RIGHT)	)	}
GREATER THAN	>	.gt.	POUND SIGN	#	H

4. OCR CONTROL CHARACTERS (3):

DOUBLE COLON :: Used only between Field Keyword and Field text.
"BLOB" ▮ Overstrike on character(s) to be deleted.
"HOOK" ♪ Deletes preceding character (one), word (two),
or line (three).

5. NOT PRESENTLY USED:

"FORK"
VERTICAL BAR
UNDERLINE

FIGURE 3. ERIC/OCR CHARACTER SET

16 16

Similar results were found with the problem of the "t's" being recognized as "c's". Seven pages, containing 20,951 "t's" produced 216 "c's" in error (1.03%) before the scanner was adjusted. After the scanner adjustment, no errors were experienced in processing three pages containing 8431 t's.

The conclusions were that careful adjustment of the typewriter and use of the proper type of ribbon are very critical factors in controlling the image quality and that image quality must be maintained at a very high level to assure satisfactory error rates on the scanner. Poor quality images are discernible via careful visual examination of the typed forms. Furthermore, proper adjustment of the scanner itself is also critical, even when high image quality is maintained.

The sensitivity of the scanner to poor registration of characters on the OCR Forms was also checked. A series of pages were keyed and scanned to check the capability of processing skewed lines. Pages with every line skewed up or down one entire space (0.2 inch) caused the machine to halt after about five lines. Pages with every line skewed up or down one half space (0.1 inch) were processed with no problems, every line being properly scanned. Pages with some straight lines and some skewed lines were also scanned properly.

Thus, it was concluded that character and line registration are not critical factors. The Compuscan 170 tracks each line individually, and, as a result is able to cope very well with skewed lines and with characters that are out of line with each other.

The mainframe computer system required only very minor modification since the tape from the scanner processed by the mainframe system was already converted to the proper character set. As much as possible, all the special character substitutions and translations were set up to be performed by the scanner's minicomputer rather than by the mainframe system.

The only significant problem experienced with the scanner had to do with the tape drive. The scanner system occasionally produced tapes that could not be read by the mainframe system because of input/output errors, data checks, etc. These types of problems are not uncommon in minicomputer applications, but are not related to OCR processes per se.

Tests conducted regarding various extraneous marks on OCR pages showed that the scanner is apparently sensitive mainly to carbon based inks and marks. Pencils (blue and black), ball points, and some markers are picked up (i.e. 'seen' by the scanner) and disrupt accurate character recognition. Colored pencils and most felt tip pens were completely ignored — even if the typed character were completely obliterated by the extraneous markings. This aspect of scanner performance is probably a function of the specific light source and light detector used in the scanner.

The ERIC/OCR application required the design of a special 11" x 11" typing form, an example of which can be seen in Figure 2. The scanner locates the initial character to be scanned at a fixed location relative to the upper left hand corner of the form. A box is provided on the form so that the first typed character can be located at this fixed location. It is relatively important that this box be consistently located from one form to another to avoid scanning difficulties such as missing the first line of text. Accurate printing of the forms is necessary to assure this consistency. Extending the top and left border lines to bleed off the edge of the form makes it possible to scan the top and left edges of a stack of forms to see whether the registration of the printing is consistent throughout the entire stack of forms.

2. OCR Keying at the First Four Clearinghouses

We chose to work first with the four Clearinghouses in the Washington. D.C. area to simplify the liaison required for working out training procedures and identifying and solving problems associated with decentralized keying.

Initially the ERIC Facility staff conducted a training session for keyers/typists, editors/proofreaders, and supervisors/managers at each of the four Clearinghouses. The trainees generally were very receptive, especially considering that the conversion to OCR was a considerable imposition on them, with the benefits (such as lower cost, and better schedules) accruing to the total system and only indirectly to the Clearinghouses. The keyers and editors readily learned the concepts of OCR keying and follow-on correction in a two to four hour training session.

Each Clearinghouse submitted duplicate inputs (regular and OCR) for a period of several weeks while they settled into the OCR routine. This allowed assurance that the new OCR input would work prior to discontinuing the old mode of input.

In parallel with the conduct of the initial training sessions, the ERIC Facility staff developed and assembled the OCR Keying Manual (included as Appendix A to this report) incorporating the results of the experiences of the Facility and the four local Clearinghouses in adopting OCR keying procedures. The local Clearinghouses reviewed and commented on the draft Manual before it was finalized for use by the remaining Clearinghouses.

3. OCR Keying at the Remaining Twelve Clearinghouses

The initiation of OCR keying at the twelve non-local Clearinghouses was accomplished a few Clearinghouses at a time so that the Facility staff could devote sufficient attention to each one during the early transition period. The conversion of each Clearinghouse involved the following steps:

- The first step was to acquire a suitable typewriter and the correct type ball for OCR-A font. Because of delays

in the delivery of new typewriters, many of the Clearinghouses used ordinary 10-pitch Selectric typewriters that were already available during the training and initial keying periods. Normal typewriters are usually set for 6 lines per inch (instead of the required 5 lines per inch to provide more white space between lines). It was found that OCR forms typed double space (or 3 lines per inch) could be satisfactorily scanned, but that each document resume then usually required two pages because of the more open spacing.

- The keying manual was forwarded to each Clearinghouse for their review prior to the initial training session.

- An on-site training session of 2 to 4 hours duration was held at each Clearinghouse for typists, editors, and managers.

- With the ERIC Facility staff still on-site, typists performed experimental keying on actual input document resumes and the editors reviewed them.

- The ERIC Facility staff (still on-site) reviewed the keying, the editing, the marking of corrections, and the correction keying processes, providing on-the-spot commentary, advice, and critiques.

- For several weeks thereafter each Clearinghouse submitted to the ERIC Facility a number of test OCR document resumes along with and in parallel to the normal input forms.

- The test document resumes were scanned, computer processed, and reviewed by both the computer staff and the editorial staff of the ERIC Facility. Feedback on the test results was accomplished via telephone to avoid delays.

- When the tests for a Clearinghouse proved acceptable, it was instructed to submit all input in OCR form and to discontinue the previous type of input preparation from that point on.

- The ERIC Facility computer and editorial staff maintained a very thorough surveillance of the first few full OCR input shipments to assure that the transition to OCR had been successfully accomplished.

4. The Completed OCR Data Entry System

Figure 4 displays the process flow diagram of the completed ERIC/OCR Data Entry System. It indicates the functions performed by the Clearinghouses, by the ERIC Facility, and by subcontractors. Also indicated on flow diagram are the points at which quantitative data on the system have been collected. This quantitative data is presented and analysed in the next section of this report.

FIGURE 4
PROCESS FLOW DIAGRAM OF ERIC OCR
DATA ENTRY SYSTEM
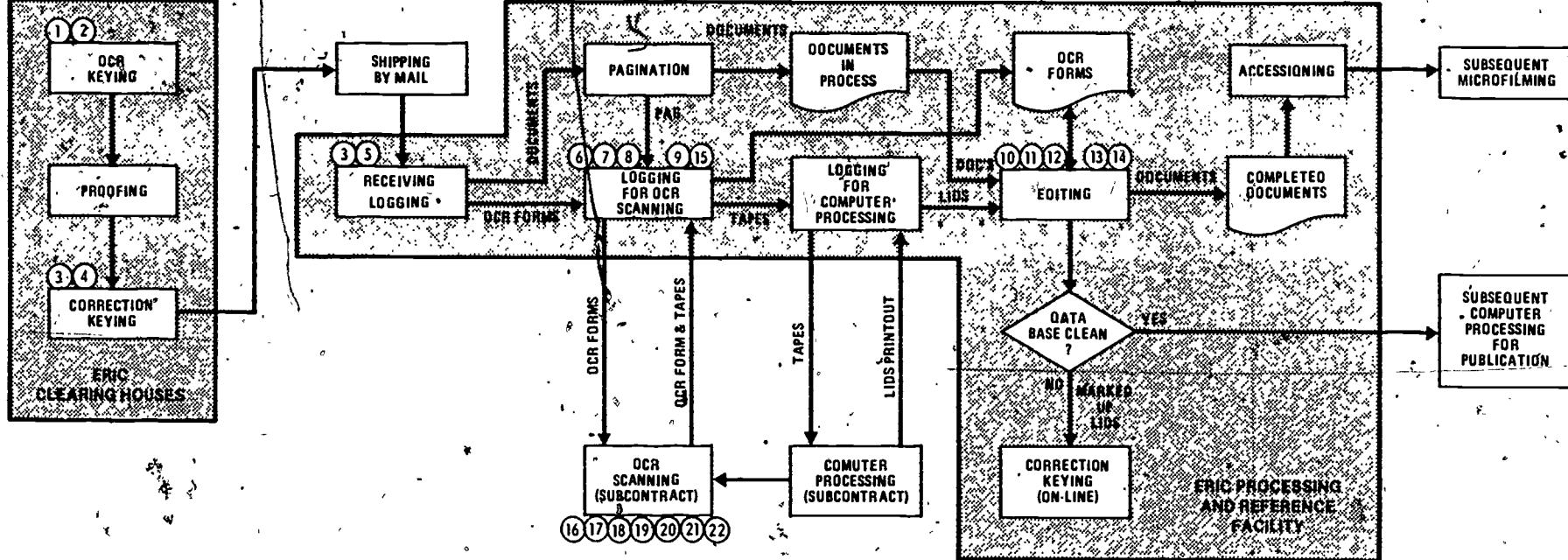
○ INDICATES DATA ELEMENTS
BEING GATHERED AT VARIOUS
POINTS IN THE SYSTEM

20

21

III. DATA COLLECTION

A. TYPES OF DATA COLLECTED

Quantifiable data elements were monitored during the start up period and transition to steady-state operation of the OCR data entry system. These data elements are:

1. Number of Document Resumes Keyed
2. Number of Document Resumes Keyed per Hour
3. Number of Document Resumes Corrected by Clearinghouses
4. Number of Document Resumes Corrected by Clearinghouses per Hour
5. Number of Correction Lines Keyed by Clearinghouse
6. Number of Character Erasures (Blobs) (2)
7. Number of Character Deletions (Hooks) (2)
8. Number of Word Deletions (Double Hooks) (2)
9. Number of Line Deletions (Triple Hooks) (2)
10. Number of Content Errors Found on OCR Forms by Editors
11. Number of Keying Errors Found on OCR Forms by Editors
12. Number of Scanning Errors Found on OCR Forms by Editors
13. Number of Document Resumes Corrected by ERIC Facility
14. Number of Correction Lines Keyed by the ERIC Facility
15. Number of Document Resumes Scanned for OCR
16. Number of Sheets (of OCR Forms) Scanned for OCR
17. Number of Sheets (of OCR Forms) Scanned per Hour
18. Number of Characters Scanned for OCR
19. Number of Characters Scanned per Hour
20. Numbers of Lines of Text Scanned for OCR
21. Number of Lines of Text Scanned per Hour
22. Number of Scanning Hours

The points in the OCR data entry process flow chart (Figure 2) at which these data were monitored and collected are indicated in Figure 2 by encircled numbers that correspond to the above numbers.

Data elements ①, ②, ③, and ④ were monitored by the Clearinghouses and the data were recorded on Form A (See Figure 5).

Data elements ①, ③, ⑤, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪, ⑫, ⑬ and ⑭ were monitored by the ERIC Facility and the data were recorded on Form 13 (See Figure 6).

Data elements ⑮, ⑯, ⑰, ⑱, ⑲, ⑳, ㉑ and ㉒ were monitored by the ERIC Facility and the OCR Scanning subcontractor and the data were recorded on Form C (See Figure 7).

_____

(2) See Figure 3, ERIC/OCR character set, for examples of blobs and hooks used to effect corrections on the OCR forms.

ERIC PROCESSING & REFERENCE FACILITY - NSF OCR
IMPLEMENTATION UDY

OCR KEYING LOG

Clearinghouse_____ Issue_____ Week_____

DATE	START TIME (2)	STOP TIME (4)	TYPEWRITER ID.	TYPIST	NEW RESUMES TYPED (1)	RESUMES CORRECTED (3)	COMMENTS, PROBLEMS

FIGURE 5
DATA COLLECTION
FORM A

OCR RESUME TRACKING FORM

Clearinghouse: _____   Number of Resumes: _____

Issue: _____   Number of Correction Pages: _____

Week: _____   Total Number Pages: _____

OPERATION	DATE	COMMENTS

1. Receiving/Logging In
   # Resumes Corrected ●——(3)
   # Correction Lines ●——(5)		

2. Pagination		
3. Key Pagination		

4. Scanning
   # of character erasures ●——(6)
     (♩)
   # of character deletions ●——(7)
     (♩)
   # of word deletions ●——(8)
     (♩♩)
   # of line deletions ●——(9)
     (♩♩♩)		

5. LIDS		

6. Editing
   # of content errors ●——(10)
   # of keying errors ●——(11)
   # of Scanner errors ●——(12)		

7. Source Codes		
8. Identifier Check		FIGURE 6 DATA COLLECTION FORM B
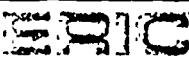
9. Key Corrections
   # Resumes corrected ●——(13)
   # correction lines ●——(14)		

OPTICAL CHARACTER RECOGNITION - SCANNER LOG SHEET

Date Transmitted to Automatic Composition _____

Date Due Back to ORI _____   Date Returned to ORI _____

Issue ● _____   Batch _____

REPORT RESUMES - INITIAL INPUT

CE _____	JC _____
CG _____	PS _____
CS _____	RC _____
EA _____	SE _____
EC _____	SO _____
FL _____	SP _____
HE _____	TM _____
IR _____	UD _____
Total Resumes ● ⟨15⟩	Other _____

CORRECTIONS _____

THESAURUS DJF'S _____

SOURCE CODES _____

Special Instructions: _____

```
┌─────────────────────────┐
│      FIGURE 7           │
│   DATA COLLECTION       │
│      FORM C             │
└─────────────────────────┘
```

Output Tape _____   Sheets Transmitted _____

Sheets Scanned ● ⟨16⟩   Start Time ● ⟨17⟩ ⟨19⟩

Characters Output ● ⟨18⟩   Stop Time ● ⟨21⟩

Lines Output ● ⟨20⟩   Elapsed Time ● ⟨22⟩

Sent By: _____

B. NUMERICAL DATA COLLECTED

Appendix B consists of the data sheets summarizing all of the data collected. The data elements are labeled VAR01 through VAR22. The data were collected on a weekly basis and are so presented in Appendix B starting with the week of (week starting) July 26, 1976 and ending with the week of March 21, 1977. This is the period during which the Clearinghouses initiated and completed their conversions to OCR keying.

The first sheet of Appendix B presents a summary of aggregated data representing data entry statistics for the entire ERIC network. Data elements ① through ⑭ have been aggregated across the 16 Clearinghouses. Each following page of Appendix B presents these 14 data elements for one of the individual Clearinghouses. Data elements ⑮ through ㉒ , having to do with the OCR scanning process, apply only to the total network since the scanning is done centrally by the ERIC Facility scanning subcontractor, and, thus, are not represented on the data sheets for individual Clearinghouses.

The data sheets for the individual Clearinghouses require a few points of clarification:

● The Clearinghouses are identified by a series of codes, AA through PP. These codes have been applied to honor our original agreement that the Clearinghouses would remain anonymous in our report. The ERIC Facility will be glad to identify for any Clearinghouse (upon request) which data set applies to that Clearinghouse. Otherwise, complete anonymity will be maintained.

● The months on the data sheets are itemized by numbers, which are interpreted as follows:

     Month 1 = July 1976
     Month 2 = August 1976
     Month 3 = September 1976
     Month 4 = October 1976
     Month 5 = November 1976
     Month 6 = December 1976
     Month 7 = January 1977
     Month 8 = February 1977
     Month 9 = March 1977

Each week is also represented by a number which represents the calendar date of the Monday starting that week.

- In the data sets proper, a missing piece of data is represented by a string of "8's" (e.g. "88888.0").
  A zero data point is represented by the typical "0.0".

C. NORMALIZED DATA

Certain comparisons among the Clearinghouses become much more meaningful if the data are normalized to represent units per document resume processed. This is true because there is a wide variation among the Clearinghouses in the volume of documents processed per unit of time.

For this reason, we have calculated the data appearing in Appendix C. Data elements (5) through (14) (which are labeled NOR05 through NOR14) have been normalized by dividing each data element VAR05 through VAR14 (see Appendix B) by VAR01 (also in Appendix B).

The two data elements RHR (hours keying resumes), and CHR (hours keying corrections) have been used only to calculate the aggregated data elements VAR02 and VAR04 in Appendix B.

Other than as noted above, the notations applied in Appendix C are completely parallel to those in Appendix B.

IV. DATA ANALYSIS

A. ANALYSIS OF KEYING DATA

The most useful and interesting data elements pertaining to the OCR keying operation (the normalized data elements) can be summarized as follows for the entire ERIC network (aggregated over all 16 Clearinghouses):

DATA ELEMENT	NAME	AVERAGE VALUE	STANDARD DEVIATION
VAR02	Number of Document Resumes Keyed per Hour	4.67	2.38
VAR04	Number of Document Resumes Corrected by CH's per Hour	24.44	20.38
NOR05	Number of Correction Lines Keyed by CH's per Resume	2.28	1.59
NOR06	Number of Character Erasures (Blobs) Used per Resume	11.83	9.02
NOR07	Number of Character Deletions (Hooks) Used per Resume	0.18	0.61
NOR08	Number of Word Deletions (Double Hooks) Used per Resume	0.50	0.55
NOR09	Number of Line Deletions (Triple Hooks) Used per Resume	0.27	0.25
NOR10	Number of Content Errors per Resume	0.88	0.59
NOR11	Number of Keying Errors per Resume	0.30	0.32
NOR12	Number of Scanning Errors per Resume	0.05	0.14
NOR14	Number of Correction Lines Keyed by the ERIC Facility per Resume	2.41	1.69

The raw data (Appendix B) and the normalized raw data (Appendic C) were processed through the Statistical Package for the Social Sciences (the SPSS software) to generate:

- Means (Average values)
- Standard Deviations
- Pierson Correlations

which are displayed as Appendix D to this report. The first page of Appendix D presents these calculations for the data aggregated across all 16 Clearinghouses (and is the source of the averages and standard deviation tabulated above). Each following page of Appendix A presents the same calculations for one of the 16 Clearinghouses. In each case the Pierson Correlations were run for VAR02 and VAR04 against against NOR05 through NOR14.

An examination of the means (averages), standard deviations, and correlations displayed in Appendix D brings to light some interesting observations:

1. The standard deviations for all the variables is large compared to the means, indicating a wide variation in keying rates, use of control characters, keying errors, etc.

2. The data aggregated over the 16 Clearinghouses shows that the Clearinghouses keyed an average of 2.28 correction lines per resume (NOR05), and the ERIC Facility keyed an average of 2.41 correction lines per resumt (NOR14). It appears that the line by line correction keying load is split roughly 50-50 between the decentralized sources and the central editing organization.

3. Of the four methods of correction keying:

   - Blobs   – NOR6 – 11.83 per resume (average)
   - Hooks   – NOR7 – 0.18 per resume (average)
   - Double Hooks – NOR8 – 0.50 per resume (average)
   - Triple Hooks – NOR09 – 0.27 per resume (average),

   the use of the blob would appear to be the preference of the average typist by a very large margin.

4. On the average, the types of errors found in the resumes by the ERIC Facility editors were:

   - Content errors – NOR10 – 0.88 per resume
   - Keying errors   – NOR11 – 0.30 per resume
   - Scanning errors – NOR12 – 0.05 per resume.

The low scanning error rate is very impressive. ORI feels, however, that the low rate is a direct result of maintaining very tight control over proper scanner adjustment and over the image quality of the typed OCR fourms. Loose control would undoubtedly lead to a much higher scanning error rate.

5. About 64% (VAR13 divided by VAR01) of all the resumes keyed required some type of correction by the ERIC Facility.

6. An inherent question that prevailed during the study was whether there was any significant correlation between keying speed (VAR02) or correction speed (VAR04) and the quality of the keying performance in terms of character deletions, content errors, keying errors, etc. Several observations are pertinent here:

   • The correlations for the entire system (page 1 of Appendix D) show essentially no correlations (coefficients less than 0.1) between the keying rate (VAR02) and:

     - NOR07 Number of character deletions per resume
     - NOR08 Number of word deletions per resume

   • Similarly there were essentially no correlations between the correction keying rate (VAR04) and:

     - NOR07 Number of character deletions per resume
     - NOR08 Number of word deletions per resume
     - NOR11 Number of keying errors per resume found by the editors
     - NOR12 Number of scanning errors per resume

   • There were only moderate positive correlations (coefficients greater than 0.45) between the keying rate (VAR02) and:

     - NOR06 Number of character erasures per resume.
     - NOR13 Number of resumes corrected by the ERIC Facility

7. Data for several individual Clearinghouses also offer some observations relevant the the question of speed vs. quality:

   • Clearinghouse EE was above the system averages for keying rate (VAR02) and correction rate (VAR04), but below the system averages for:

     - NOR06 Number of character erasures per resume
     - NOR07 Number of character deletions per resume
     - NOR11 Number of keying error found by the editors per resume

   • Clearinghouse JJ was below the system average for all the normalized variables (NOR05 through NOR14) indicating a consistently high quality of performance. Unfortunately we do not have any keying rates for this Clearinghouse against which to compare.

- Clearinghouse AA showed a rather strong position. correlation (0.7682 coefficient) between the keying rate (VAR02) and the number of resumes corrected by the ERIC Facility.

- Clearinghouse DD showed strong positive correlations. (greater than 0.7) between the keying rate (VAR02) and:

  - NOR06   Number of character erasures per resume
  - NOR08   Number of word deletions per resume
  - NOR13   Number of resumes corrected by the ERIC Facility
  - NOR14   Number of correction lines keyed by the ERIC Facility

- Clearinghouse EE showed a strong _negative_ correlation (-0.7099) between the keying rate (VAR02) and the number of keying errors per resume (NOR11)---the slower the keying rate, the greater the number of errors!

- Clearinghouse MM showed positive correlations (over 0.7) between both the keying rate (VAR02) and the correction rate (VAR04) and the number of correction lines keyed per resume (NOR05).

8. The variety and the diversity of the observations in items 6 and 7 (above) suggest that the relationship between keying rate and keying quality is probably a very individualized phenomenon, varying considerably from one keyer to another.

B. ANALYSIS OF SCANNING DATA

This discussion will deal with scanning data collected from the week starting 27 December 1976 to the week starting 21 March 1977. Page 1 of Appendix B shows that this is the period during which we have complete scanning data which can be summarized as follows (aggregated over the entire 13 week period):

DATA ELEMENT	NAME	VALUE
VAR15	Number of Document Resumes Scanned	3,951
VAR16	Number of Sheets Scanned	4,792

DATA ELEMENT	NAME	VALUE
VAR17	Number of Sheets Scanned per Hour	76.6
VAR18	Number of characters scanned (Thousands)	7,060
VAR19	Number of characters scanned per Hour (Thousands)	111.5
VAR20	Number of lines scanned (Thousands)	125.8
VAR21	Number of lines scanned per Hour (Thousands)	2.0
VAR22	Number of scanning hours	57.9

Several interesting statistics can be calculated from this basic data:

- Average sheets per resume $\dfrac{4,792\ (\text{VAR16})}{3,951\ (\text{VAR15})} = 1.21$

- Average characters per resume (thousands) $\dfrac{7,060\ (\text{VAR18})}{3,951\ (\text{VAR15})} = 1.79$

- Average characters per line $\dfrac{7,060\ (\text{VAR18})}{125.8\ (\text{VAR20})} = 56.1$

This also permits us to calculate the average error rate of the scanner in terms of scanning errors per thousand characters scanned as follows:

$$1,790 \frac{\text{characters (VAR18)}}{\text{resume}\ \ (\text{VAR15})} \div 0.05 \frac{\text{errors}}{\text{resume}}\ (\text{NOR12}) = 35,800 \frac{\text{characters}}{\text{error}} =$$

$$35.8 \frac{\text{thousands of characters}}{\text{error}}$$

and, taking the inverse of this number provides the scanning error rate of

0.03 scanning errors per thousand characters scanned.

C. COST/SAVINGS ANALYSIS

The following tabulation provides basic data entry cost information over a three year period --- one year prior to, one year during, and one year following the ERIC conversion to OCR.

Fiscal Year	Annual Data Entry Costs	Annual Volume of Resumes Entered	Unit Cost per Resume
Nov. 1974 - Nov. 1975	$31,050	15,341	$2.024
Nov. 1975 - Nov. 1976	$30,875	15,633	$1.975
Nov. 1976 - Nov. 1977	$20,857	15,265	$1.366

These are the costs incurred by the ERIC Facility and do not include data entry costs of the Clearinghouses. However, the Clearinghouse costs do not enter into the cost/savings analysis. This is true because the data entry keying costs incurred by the Clearinghouses prior to the OCR conversion are essentially a stand-off with the costs subsequent to the OCR conversion.

The fiscal year Nov. 1975 - Nov. 1976 (the transition year) cannot be considered a typical year for purposes of this analysis since:

- Data entry during this fiscal year included a considerable amount of parallel (duplicate) keying by the ERIC facility during the experimental start-up phase. (Actually, the duplicate keying costs have been included in the estimate of the design and implementation costs discussed below.)

- Some of the OCR keying was done centrally by the ERIC Facility before the entire OCR keying load was assumed by the Clearinghouses.

Both of these factors make the costs for this year's data entry artificially too high to be considered a typical pre-OCR year. Thus, we will drop the 1976 fiscal year from this analysis and consider the fiscal year 1975 (Nov. 1974 - Nov. 1975) the typical pre-OCR year with an average unit cost of $2.024 per resume for data entry.

Further, we will consider the fiscal year 1977 a typical year for data entry via OCR yielding an average unit cost of $1.366 per resume

for data entry.

The design and implementation costs involved in the conversion to OCR can be summarized as follows.:

Direct Labor	$ 22,022.64
Travel	445.20
Supplies	784.19
Computer Processing	4,652.73
Data Preparation	1,080.35
Printing/Duplication	932.44
Courier Service	1,299.51
Duplicate Keying (1976)	4,459.95
	$ 35,677.01 (A)

All of the costs discussed above are representative of contract dollars loaded with overhead, G&A, and fee. With these costs in hand, and assuming a typical 15,000 resumes to be entered per year, the following simple payout calculation is possible.

- Typical pre-OCR annual data entry cost escalated by 8% to account for inflation between 1975 to 1977 is:

    15,000 resumes @ $2.024 X (1.08). = $ 32,788.80 (B)

- Typical OCR annual data entry cost is:

    15,000 resumes @ $1.366   =   20,490.00 (C)

- Typical annual savings resulting from conversion to OCR (A-B) is: =   12,298.80 (D)

- Payout period to recover
$20,403.30 $= \dfrac{A}{D}$ =   2.90 years

V. ANALYSIS OF QUALITATIVE FACTORS

Many of the aspects of making a transition to and operating an OCR data entry system are not amenable to characterization through the collection and analysis of quantified data as in the preceding sections of this report. This section of the report is included to provide the intelligence gained during this study regarding such qualitative factors as:

- The Keying Device
- The Keying Process
- Shipping OCR Forms via Mail
- Pre-editing of OCR Forms Prior to Scanning
- OCR Scanning
- Post-Editing of OCR Scanner Output

A. THE KEYING DEVICE

The OCR keying was performed using IBM Selectric II typewriters, the specifications for which have been set forth in a previous section of this report. Much of the valuable intelligence gained about both the OCR keying device and the OCR keying process is well documented in the ERIC OCR Keying Manual attached to this report as Appendix A. The manual will provide general reference material to back up the highlights presented in this and the following sections of this report.

1. Procurement of the OCR Typewriters

Procurement of the OCR Typewriters entailed unforeseen and surprisingly long lead times which resulted in extensive delays in the implementation of the OCR data entry system. Orders were placed for the typewriters for the Clearinghouses on April 30, 1976. Actual deliveries of the machines ranged from September 14, 1976 to October 18, 1976, the longest deliveries requiring nearly six months from the placement of the purchase orders. Responsibility for these exorbitant lead times lay partly with the Government Agency involved and partly with IBM. The point is that the procurement of typewriters cannot be assumed to be routine. Careful and continuous liaison with all the involved agencies is absolutely necessary if untoward delays are to be avoided.

2. Maintenance of OCR Typewriters

Two aspects of maintenance are critical to a successful OCR keying operation. The first is cleanliness, which can best be achieved by the typist as described in the OCR Keying Manual. The second maintenance routine that proved to be absolutely essential was to have each OCR typewriter thoroughly cleaned and carefully adjusted by an IBM service technician at least once every three months. Standard,

service contracts should be negotiated to assure that such servicing of the machines occurs on a routine basis.

3. Continued Operation of OCR Typewriters

The OCR Keying Manual points up two crucial points that can be taken care of by the typist in operational OCR keying. The first has to do with critical adjustments of the machine which include:

- The Dual-pitch lever (dual-pitch typewriters only), located on the top, far left, behind the platen, should always be set to 10 pitch (lever pushed away from the keyboard).

- The Multiple Copy Control, located on the top left, behind the platen, should be set at "A" (closet position to the keyboard).

- The Impression Control, small vertical lever located immediately to the right of the typing element, should be set for the greatest striking force, number 5 (the position closest to the keyboard).

- The Line Space Lever, located on the top right, behind the platen, must be set for single spacing (lever pulled toward the keyboard), unless specifically instructed otherwise.

The second point is that the quality of the typed character images is very sensitive to the type of ribbon used in the typewriter. The typist should be certain that the ribbon used for OCR keying complies with the recommendations cited in the OCR Keying Manual. Obtaining and consistently using the proper ribbons was problematic for some of the Clearinghouses. Some of them initially assumed the attitude that "a ribbon is a ribbon is a ribbon" so that any ribbon that fit the machine was used. Hard evidence of degraded image quality (and OCR scanning) was sometimes necessary to revise this attitude. Some experienced difficulties with purchasing departments that insisted on providing "lowest bid" ribbons. Occasionally, these "off-brands" would work satisfactorily, but more typically, the resulting image quality would be sufficiently degraded to significantly affect the accuracy of character recognition. The affect may be hard to detect and control because of the frequency with which ribbons are changed. IBM's TECH III ribbon will provide adequate image quality some of the time but not all of the time. As a result, it is quite strongly recommended that only the following ribbons be used for the Compuscan 170:

- Selectrics: IBM 3121 Black Film, 235 ft.
                  (Reorder #1136108)
                  (Will type about thirty Resumes each)

37

• Selectric II's: ~~IBM Film Cartridge~~ Ribbon, Black, 405 ft.
  (Reorder #1136390)
  (Will type about six █ Resumes each)

In summary, cleanliness and careful adjustment of the typewriters, plus use of the correct type of ribbon are factors that are critical to a successful OCR scanning operation. At least, this is true when the scanning is to be done on a Compuscan Model 170 OCR Page Reader. It was determined empirically during this study that the Compuscan 170 is very sensitive to the quality of the images of the keyed characters but is <u>not</u> highly sensitive to the registration or alignment of the typed text being scanned. This may not be the case, however; with other scanners, whose critical sensitivities may similarly have to be determined experimentally in their particular applications.

B. <u>THE KEYING PROCESS</u>

Given the proper equipment, the actual OCR keying process varies from normal typing in only two basic ways:

• The use of the OCR character set which is illustrated in Figure 4. There are eight types of ERIC characters that required the substitution of special OCR characters. These are:

  1. Left Bracket
  2. Right Bracket
  3. Exclamation Point
  4. Greater Than Symbol
  5. Less Than Symbol
  6. Left Parenthesis
  7. Right Parenthesis
  8. Pound Sign.

In addition the typist must learn the proper use of three control characters:

  1. The double colon, which is used only between the Field Keyword and the Field text.
  2. The "blob" which is used to overstrike characters to be deleted.
  3. The "hook" which is used to delete a preceding character (one hook), or to delete a preceding word (double hook), or to delete a preceding line (triple hook).

• The use of special forms which are illustrated in Figure 3. The main considerations in the use of the form are:

  1. to assure that the form is squarely aligned in the machine.

2. to assure that the first typed character falls within the box in the upper lefthand corner of the form.
3. to type each form completely without removing it from the machine.
4. to assure that all the text typed on the form lies within the four margins.

Specific instructions for the typing of each ERIC data element are included in the ERIC OCR Keying Manual (Appendix A). These procedures would, of course, vary from one data base to another.

Training new typists proved to involve very little difficulty. A pre-view of the OCR Keying Manual and one day's on-the-job-training was sufficient in most cases. In fact, for some typists, reading and following the Manual was all that was required.

Several quality control checks can be performed by the typist that will greatly reduce the number of problems to be experienced in the scanning process. These check points are as follows:

- Are there any broken or smeared characters. Is each character completely black? Check lower case "d's", "g's", "t's", semicolons, and "Blobs".

- Are all lines parallel to each other and to the page?

- Are there five lines to the inch? If the spacing measures about three lines to the inch, the typewriter may be incorrectly set for a space and a half.

- Are there ten characters to the inch horizontally? If a dual pitch typewriter is set at 12 pitch, the scanner cannot recognize the different characters.

This line is typed at ten (10) pitch.

This line is typed at twelve (12) pitch.

- Are the characters uniformly spaced? Not overlapping each other, like this?

- Is each line straight and not waving?

- Are the correct control characters and special characters being used?

- Are there any unacceptable pen or pencil marks?

Some Clearinghouses experimented with having the OCR keying performed by people who were not proficient typists --- document analysts, for example. This proved to be unworkable, partly because of one aspect of the correction routines involved. If a keying error is caught immediately by the typist, correction can be accomplished on a character-by-character, or a word-by-word basis (blobs, single hooks, or double hooks). However, in the case of an error caught after the entire form has been typed, a complete line must be rekeyed. A person who may average one error in one hundred characters is likely to produce an error in every other line of input keying and, thence, have to correct every other line of correction keying, etc. This obviously can lead to a tremendous volume of correction keying to produce clean input. We concluded that the combination of OCR keying with a line-by-line correction system will not work satisfactorily with keyers who are not proficient typists.

The use of staples (e.g. to fasten together multi-page document resumes) should be avoided. Staples in OCR Forms could seriously damage the scanner's read head.

C. SHIPPING OCR FORMS VIA MAIL

Care must be taken in the mailing of OCR Forms to the central Facility to assure no damage occurs to the forms in terms of dirt, physical damage such as bending or crunching, or water damage that might cause stains or distortion. For the ERIC OCR data entry system we found it necessary to design a special cardboard carton in which to ship the OCR Forms. These cartons are supplied to the Clearinghouses by the ERIC Facility. Appendix D is a letter to all the Clearinghouses providing instructions for assembling the OCR Forms shipping cartons.

For a time, during the initial shipments, the Clearinghouses were mailing the OCR Forms separately from the documents from which the forms were generated. Thus the documents and the OCR Forms often would arrive at the ERIC Facility at different times, often on different days. This separation of the two shipments often caused logging-in problems and some delays in processing at the Facility. Thus, it was subsequently recommended that the OCR Forms in their cartons be included in the packages of documents so that they would arrive at the Facility together.

D. PRE-EDITING OF FORMS PRIOR TO SCANNING

The experience of the editorial staff at the ERIC Facility proved eventually that there was little to be gained by pre-editing the OCR Forms prior to the scanning operation. Some errors can indeed be caught at a pre-editing stage. However, the additional processing routines required did not justify the elimination of the errors prior to scanning. So, as the OCR system matured, it proved more efficient to scan the OCR Forms as received from the Clearinghouses without review, and thence to catch all the errors through editing of computer proof listings subsequent to OCR scanning.

E. OCR SCANNING

  1. Reliability

       The Compuscan Model 170 OCR Page Reader has proven to be an
  extremely reliable machine. The original design of the OCR data
  entry system included provision for a back up machine---a
  similar scanner located at the Government Printing Office. It
  has never been necessary to use the back up machine. There have
  been several down-time occurrences on the scanner, but none of
  them has resulted in a delay so extensive that it could not be
  absorbed by minor schedule revisions. Actually, final agreement
  with GPO for back up services was never reached---back up is
  still not available and tested.

  2. Accuracy

       The scanner is also very accurate. A look at the summary
  data sheet for the total system (Appendix B) will show that of
  the total errors (content, keying, and scanning errors) (VAR10,
  VAR11, and VAR12) only 4.0% can be attributed to the scanner.
  The error rate in terms of errors per thousand characters scanned
  is 0.03%; as calculated in the previous section of this report.

  3. Availability/Turnaround

       The actual scanning of the OCR forms is normally performed
  during the nighttime hours. This results in a very satisfactory
  turnaround situtation. Barring any unusual circumstances, OCR
  forms delivered to the scanning subcontractor by close of business
  on one day will be scanned that night, and a magnetic tape
  containing the scanned data will be returned the following
  morning. This typically involves (for ERIC)   sheets and
            characters per day.

F. POST EDITING OF OCR SCANNER OUTPUT

     As previously noted, pre-editing of the OCR forms prior to scanning
was eventually discontinued in favor of catching all errors during the
post-editing activity. Post-editing is accomplished using a computer
proof listing generated by the ERIC Line Image Data Set (LIDS) software
package. The LIDS package permits corrections to be made to the data
base on a line-by-line basis. At the post-editing stage, three forms of
data are available to the editors:

  ● The original documents which were cataloged, abstracted, and
    indexed to produce the data to be input to the data base,

  ● The OCR forms on which the input data was originally keyed, and

  ● The LIDS printouts.

Editorial experience has shown that it is not necessary to review the OCR forms. Post-editing is accomplished through review of the LIDS printouts with reference, where required, to the original documents for verification of the data.

One of the difficulties inherent in a decentralized data entry system is the lag time between the point at which the data is keyed and the point at which the data is edited (in our case by the ERIC Facility). If problems develop in keying (such as wrong ribbon, maladjusted typewriter, etc.) there may be several weeks worth of defective data "in the pipeline" before it is detected.

VI. CONCLUSIONS/OBSERVATIONS/RECOMMENDATIONS

The objectives of this study were twofold --- to provide evaluative intelligence about the OCR process for possible EPC data entry applications and to provide guidelines based on experience regarding the implementation and operation of an OCR data entry system. This section of the report presents our conclusions, observations, and/or recommendations specifically related to these two objectives.

A. OCR AS AN EPC DATA ENTRY SYSTEM

1. Conclusion: The ERIC/OCR Data Entry System has proven to be completely successful in terms of the reliability, accuracy, efficiency, and costs of the system.

2. Conclusion: The success of the ERIC/OCR Data Entry system has hinged quite critically on achieving a consistently high image quality on the typed OCR forms. The high image quality in turn is a result of:

   - carefully maintained and adjusted typewriters
   - use of the proper ribbons in the typewriters
   - careful keying performed in close accordance with the ERIC/OCR Keying Manual.

3. Conclusion: Control of the image quality in the ERIC/OCR data entry system has been feasible because the keying function has been performed by a closed, relatively small, and reasonably constant community of keyers. Training and quality control among a controlled group of keyers has been easy to achieve.

   Similar quality control in an EPC environment would be much more difficult to achieve because of the much more diverse nature of the EPC community of keyers --- diverse functions (authors, editors, coordinators, etc.), diverse locations, situated in diverse types of organizations, having diverse motivations, etc.

4. Conclusion: OCR has functioned successfully in the ERIC environment partly because the data input to the ERIC data base is almost completely devoid of any special notation requirements such as mathematical or chemical, or other specialized technical notation that would be prevalent in many EPC applications.

5. Observation: Attendance at the OCR Users Annual Conference, 1976, yielded observations, pertinent to the future potential of OCR in text processing systems. The main thrust of the OCR industry is to develop machinery for "document" processing, where a document is typically considered to be a small transaction page requiring only one or two lines of OCR scanning. A typical example would be a credit card slip. Development of page readers for text processing is proceeding at a much slower pace. Text scanning calls for much higher

accuracy when measured in terms of errors(misread characters) per unit of characters scanned. Scanning processes for credit card applications, checks, etc. can be more easily controlled through the use of accuracy controls such as check digits, redundant reading, and other similar control devices. Thus, the success of OCR text processing applications will probably continue to be quite dependent on the ingenuity, and diligence of the users themselves in working with the page reading machinery available.

In general, the great majority of problems experienced in OCR applications center around the three areas:

- Inaccuracies or inconsistencies in the registration of printing on the forms used for the keying;

- Inaccuracies in the registration of the characters typed on the forms, and

- The use of inappropriate inks to generate the characters to be OCR scanned.

6. **Recommendation**: OCR should not be seriously considered for EPC data entry applications (or other very diverse and decentralized keying applications) unless specific methodologies can be designed and established for:

- all input keying to be done on a standardized form.
- consistent quality control of character images on the keyed OCR forms.
- coping with requirements for specialized notation.

B. **GUIDELINES FOR IMPLEMENTATION AND OPERATION OF OCR DATA ENTRY SYSTEMS**

1. **Recommendation**: Purchase new or high quality used typewriters built to the proper specifications required by the specific OCR scanning hardware to be used. If all other aspects are suitable, satisfactory field modification of the ratchet is possible to obtain correct lines per inch.

2. **Recommendation**: Do not consider the procurement of scanners or typewriters to be routine. Exercise constant follow-up to avoid untoward procurement delays.

3. **Recommendation**: Establish routine service contracts to assure careful cleaning and adjustment of typewriters by a factory representative at least every three months.

4. **Recommendation**: Determine (experimentally if necessary) the most suitable typewriter ribbon to optimize OCR scanner accuracy, and, afterward do not permit substitution of less satisfactory types.

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5. Recommendation: Design a standard form on which to do OCR keying. Preferably the form should be designed such that only one page is required to house each input unit record.

6. Recommendation: Carefully select a printer who can guarantee a very high consistency of registration of the printed images on the keying forms. This is important to assure that the scanner will be able to correctly locate the first character to be scanned on each form. Regular monitoring of registration quality will be required.

7. Recommendation: Be sure to adequately protect the keying forms (both before and after keying) from various types of damage such as dirt, stains, extraneous markings, staples or staple holes, crunching, binding, or other deformations, all of which may adversely affect the scanning accuracy. If shipping of the forms will be required, a specially designed shipping carton may be required to assure adequate protection from the elements and from rough handling.

8. Recommendation: Employ proficient typists to do OCR keying. This is especially important in systems where corrections must made on a line-by-line(rather than a character-by-character)basis, wherein inexperienced typists will find it necessary to produce large volumes of correction keying to arrive at a clean input record.

9. Recommendation: Provide keyers with a written keying manual preferably in advance of any training sessions. With a keying manual in hand, most keyers and editors will require no more than one 2 to 4 hour on-the-job training session in order to satisfactorily initiate OCR keying activities.

10. Recommendation: Plan on an adequate period of experimental keying and scanning. The objective will be to identify the specific idiosyncrasies of the specific scanner to be used. For example, in the ERIC application, we found the scanner to be very sensitive to image quality, and not so sensitive to character registration on the typed from. Suitable adjustments in the input processes could thus be effected. Each brand of scanner, and perhaps each individual machine may have specific idiosyncrasies in response to which the system will have to be fine tuned.

11. Recommendation: Recruit an expert consultant to assist in careful adjustment of the scanner to achieve optimum recognition of the characters in the particular OCR type font to be used.

12. Recommendation: If the OCR application at hand involves a conversion from a previous mode of data entry, plan on a period of parallel (duplicate) input during which testing and evaluation can proceed. This will assure the adequacy of the OCR data entry system before the previous system is abandoned.

13. Recommendation: Maintain careful and continuous scrutiny of the quality of OCR keying and provide suitable feedback to the keyers.

APPENDIX A

ERIC OCR KEYING MANUAL

O C R   K E Y I N G   M A N U A L

JUNE 1976

PREPARED BY:

ERIC | PROCESSING AND REFERENCE FACILITY

4833 Rugby Avenue, Suite 303

Bethesda, Maryland 20014

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I.   <u>OPTICAL CHARACTER RECOGNITION (OCR)</u>

I.A   <u>Introduction to the Basic Process</u>

Optical Character Recognition (OCR) is the process whereby
typewritten information is optically read (recognized) by an
electromechanical device (OCR scanner) designed to convert typewritten
data into a machine-readable form. After this information is in
machine-readable form (i.e., on magnetic tape), it can then be
processed by a computer system for any given application, e.g., in
ERIC's case for editing and production of RIE.

I.B   <u>Equipment Required</u>

The OCR process requires specialized equipment both in
order to prepare the data for entry to the system and to read the
data and convert it to machine-readable form.

I.B.1   <u>Keying Equipment</u>

ERIC data keyed for OCR input must be typed so as to
have the following characteristics:

o   ANSI OCR-A Type Font (IBM Element #170, OCR-A).

o   Ten (10) pitch (character per inch) horizontal spacing.

o   No more than five (5) lines per inch vertical spacing.

The preferred typewriter to achieve this is either
an IBM Selectric typewriter, Model #721, or an IBM Selectric II,
Model 873, both with the following specifications:

o   Ten (10 pitch horizontal spacing (Dual/Pitch Selectric
    set at ten pitch is acceptable).

o   Five (5) lines per inch vertical spacing, achieved by a
    45-tooth platen ratchet, in lieu of the standard 54-tooth
    (6 lines per inch) ratchet.

o   Although not necessary, it may be useful to have the #170
    Printing and Publishing OCR #1 keyboard, which will match
    the #170 Typing Element.

The 45-tooth ratchet can be installed in the field
by an IBM service technician on ten pitch or Dual Pitch Selectrics,
for about $25. In an emergency, or on a temporary basis, a ten
pitch or Dual Pitch Selectric with six line per inch spacing

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may be used, provided it is set to double space (giving three
(3) lines per inch). Contact the ERIC Facility before using
such a typewriter.

I.B.2   Scanning Equipment

Scanning equipment is required only at the central
location involved in preparing the data for computer processing
and is not required at the various sites involved in keying the
data. The ERIC Facility currently uses the Compuscan 170 Scanner,
which has the necessary upper-lower case capability required by ERIC.

I.C   ERIC As An OCR Application

The primary objective of data entry operations is to get
the data into machine-readable form quickly and accurately with as
few keystrokes as possible.

Under the old arrangement, the ERIC Clearinghouses were
keying the data once on standard typewriters and, after editing,
the ERIC Facility was re-keying the data a second time on paper
tape (via Flexowriters) in order to get it in machine-readable form.

It became clear that if the Clearinghouses could utilize
that initial keying to get the data in machine-readable form, the
ERIC network would save one entire keying process and would have
achieved the "Source Data Automation" ideal of single-keying.

There are many devices which, if placed in the Clearing-
houses, would permit them to key the ERIC data in machine-readable
form. The problem was one of cost, however. The necessity of
having sixteen such devices limited the options considerably. A
comprehensive data input study performed by the ERIC Facility indicated
that a decentralized OCR operation, with the Clearinghouses equipped
with typewriters that could be used for regular work as well as the
OCR work, offered the greatest potential benefits for the least cost.

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II. <u>KEYING FOR OCR</u>

II.A   <u>Typewriter Adjustments</u>

Several adjustments to the Selectric are crucial to the successful production of OCR-readable Resumes. The typist should develop the habit of checking the following controls and adjustments before starting to type any OCR data (refer to Operating Instructions Booklet furnished with the Selectric for exact locations):

o The Dual-pitch lever (dual-pitch typewriters only), located on the top, far left, behind the platen, should always be set to 10 pitch (lever pushed away from the keyboard).

o The Multiple Copy Control, located on the top left, behind the platen, should be set at "A" (closest position to the keyboard).

o The correct typing element (ANSI OCR-A, #170) is properly set in the machine.

o The Impression Control, small vertical lever located immediately to the right of the typing element, should be set for the greatest striking force, number 5 (the position closest to the keyboard).

o The Line Space Lever, located on the top right, behind the platen, must be set for single spacing (lever pulled toward the keyboard), unless specifically instructed otherwise.

Other adjustments, such as Tabs and Margins, can be set according to the preference of the typist.

II.B   <u>Typewriter Maintenance</u>

The only maintenance of the Selectric that the typist needs to do is keep it clean, particularly those areas that come in contact with the ribbon or paper. The typing element should be regularly cleaned, either with the special brush furnished with the machine, or with a sheet form type cleaner. The platen and paper rollers should be kept clean of all foreign material, such as Snopake or Ko-Rec-Type, etc. <u>Each Selectric should be cleaned and adjusted at least once every three months by an IBM service technician.</u>

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II.C   __Keying Supplies/Forms__

II.C.1   __Ribbons__)

         The ribbon used seriously affects the image quality of the typed Resumes. The Clearinghouses are responsible for providing high-quality, one-time-use black film ribbons for their typewriters. Suitable ribbons are available from IBM or other suppliers, such as Columbia. Recommended are the following:

      o   Selectrics: IBM 3121 Black Film, 235 ft.
                                  (Reorder #1136108)
                                  (Will type about thirty Resumes each)

      o   Selectric II's: IBM Film Cartridge Ribbon, Black, 405 ft.
                                  (Reorder #1136390)
                                  (Will type about sixty Resumes each)

__Do not use__ IBM OCR, IBM Tech III, or any kind of fabric ribbons. If there are any questions as to the acceptability of a specific ribbon, contact the Facility. Ribbons should not be used if more than two years old.

II.C.2   __Forms__

         A special 11" x 11" ERIC Report Resume OCR Form (EFF-100) has been designed specifically for OCR typing (see Figure II-1, page 5), and is referred to here as the OCR Resume Form. It completely replaces the old $8\frac{1}{2}$" x 11" resume forms (EFF-26). Since the new form is designed and printed specifically to be processed by the OCR scanner, it is very important that only this form be used. When your supply runs low, contact the ERIC Facility in plenty of time to have additional forms shipped to you. Use and submit to the Facility only the original form, not Xerox copies. A Xerox copy of each Resume should be retained by the Clearinghouse.

II.C.3   __Pens/Pencils__

         Handwritten notations and corrections can be written on the OCR Resume Form for later correction. Since the OCR scanner is "blind" to certain colors, corrections may be written directly on the OCR Resume Form (even over typed text), using any of the following:

      o   Non-photo blue pencils (such as Eagle number 740 1/2)
      o   Red pencils (such as Eagle number 744, Scarlet Red)
      o   Red ball point pens (such as BIC) if not used to
           completely obliterate a letter
      o   Blue Fiber tip pens (such as Flair)
      o   Red Fiber tip pens (such as Flair or Pilot Fineliner)

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FIGURE II-1 ERIC Report Resume Processing Form (EFF-100)

Do not use any type of black or green pen or pencil, or blue ball point pen anywhere on the OCR Resume Form. Do not use any form of eraser on the OCR Resume Form. If in doubt about a specific pen or pencil, mark and send a sample page to the ERIC Facility.

II.C.4   Storage

Since the OCR Resume Forms must be processed by a mechanical scanner, the sheets must be stored flat so that they will not become curved or wrinkled. A storage area with uniform temperature and humidity for both OCR Resume Forms and ribbons will reduce problems.

II.D   Keying Process

II.D.1   Image Quality

Two crucial factors determine the success the OCR scanner will have in correctly recognizing all characters typed. Of greatest importance is the quality of the character image. Next most important is the alignment of the characters on the page, both with respect to each other, and in relation to the edges of the page.

Each character should be as black and dense as possible. All parts should be consistently darkened and have sharp edges, providing good contrast against a clean background. Experience at the Facility has shown the semicolon and the "Blob" to be good gauges of the image quality a given typewriter is providing. Refer to Figure II-2, page 7, for examples of both well-formed and poorly-formed characters. Periodically examine individual characters produced by each typewriter in detail to detect potential problems. A low power magnifying glass will help identify deficiencies. Loss of parts of a character (such as the upper portion of the semicolon) can be caused by misadjustment of the typewriter or use of the wrong ribbon. Items to check on the typewriter are covered under "Type-writer Adjustments" (Section II.A, page 3), and include the Multiple Copy Control (set as close to the keyboard as possible) and the Impression Control (set at #5). Use only film ribbons, and never reuse them. If these adjustments do not produce satisfactory results, have the machine checked by an IBM service technician, paying particular attention to the distance between the element and the platen (set for minimum "free flight").

II.D.2   Form Alignment

Since the scanner is a mechanical device, the typed characters must be uniformly spaced, both vertically and horizontally. With the proper adjustments, the IBM Selectric will produce excellent

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eography; *Soci
ti on; Populati
ructional Mater

Programs; * Scho
nti; Language In
Support; Langua

FIGURE 11-2 Enlargement of Acceptable and Unacceptable Type
(Enlarged Five Times)

results. After inserting a single OCR Resume Form in the typewriter, move the page so that the first character of the Resume will be entered in the box at the upper left corner of the form. Adjust the sheet from left to right by releasing the platen pressure (Paper Release Lever to the far right, behind the platen). If necessary, set the sliding page guide (on the left side, behind the platen) to help align each page. To check that the page is square in the machine, roll the page up so that the left (or right) edges can be lined up. For vertical adjustments, press in the left platen knob, which disengages the ratchet. If lines tend to be skewed, be sure that the sheet is correctly aligned and the Paper Release Lever is pushed back. Pages with skewed lines (like this one) should be entirely retyped.

Once the first character has been typed, <u>do not try to adjust the page</u>, either horizontally, or vertically, even if the first character is not exactly in the box. If the first character is not within one-half space of being in the box, throw the page away and try a new one.

Type each Resume completely before removing it from the typewriter. Do not take a page out of the typewriter and then re-insert it for further typing. The only time this is permissible is to make corrections to the very first line, containing the Clearinghouse Number.

II.D.3 <u>Margins</u>

The scanner will examine only the area of the OCR Resume Form that is inside the outer red box (see Figure II-1, page 5). Therefore, it is extremely important that any text to be read be within those lines. Setting the first character to be typed in the alignment box will ensure that no Resume text will be above the top line. Setting the left margin at that point should prevent any part of the Resume from being typed to the left of the scan area. It is the typist's responsibility to see that no part of the Resume is typed to the right of the scan area, or below the bottom line. When in doubt, always type a shorter line. <u>Do not hyphenate words at the end of a line.</u>

Occasionally, it may be necessary to use more than one page for an individual Resume. Rather than crowd the bottom of the page, start a new page. The second page should carry the Clearinghouse number, the Keyword of the Field continued (usually it will be the Abstract), and the line number that the continuation should start with. See Section IV.B, page 29 and Figure IV-3 page 38, for an example of such an "overflow" page.

After "seeing" three blank lines in a row, the scanner ignores the remainder of the page. Therefore, any part of a Resume typed following more than two blank lines will not be

picked up. Similarly, the scanner ends a line after encountering three consecutive spaces. If it helps proofreading, one blank line may be left between certain Fields, such as immediately preceding the Abstract. However, enter the blank line by hitting an extra carriage return, rather than by using the platen knobs (using the platen knobs makes it too easy to roll up one and a half or two and a half spaces).

II.D.4   Non-OCR Information on Form

In addition to the regular Resume data, it is necessary to collect some information that will <u>not</u> be recognized by the OCR scanner. The spaces at the top of the form above the scanning area can either be typed or completed by hand (using an acceptable pen or pencil). These spaces identify the typist (initials are sufficient), the typewriter (if you only have one OCR typewriter, this can be left blank), and the date the resume is typed, so that any problems may be readily identified and corrected.

II.D.5   Character Set

The character set used by ERIC for OCR is shown in Figure II-3, page 10, along with the handling of some special characters. In typing and proofing, be sure that the letters "el" (l) and "oh" (o) and the numbers one (1) and zero (0) are used properly. Some ERIC characters (such as brackets), do not have an exact OCR equivalent; they require two typed OCR characters (two braces ({{) for each bracket ([), etc.). These should always be typed without intervening "blobs" or deletion symbols. A shortened version of the character set is also printed on the back of each OCR Resume Form. For a fuller explanation of the use of the control characters, see Sections III.A.5, page 14, and IV, "Correction Procedures, page 32.

II.D.6   Quality Control

A brief check of each Resume for type quality will substantially reduce problems. A Resume that cannot be scanned may as well not have been typed. Some particular items to watch out for include:

o Broken or smeared characters. Is each character completely black? Check lower case "d's", "g's", "t's", semicolons, and "Blobs".

o Are all lines parallel to each other and to the page?

o Are there five lines to the inch? If the spacing measures about three lines to the inch, the typewriter may be incorrectly set for a space and a half.

1. ALPHABETIC (52): A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
   a b c d e f g h i j k l m n o p q r s t u v w x y z

2. NUMERIC (10): 1 2 3 4 5 6 7 8 9 0

3. SPECIAL CHARACTERS (25):

EXACT EQUIVALENTS:

	ERIC	OCR		ERIC	OCR
AMPERSAND	&	&	HYPHEN	-	-
APOSTROPHE	'	'	PERCENT SIGN	%	%
ASTERISK	*	*	PERIOD	.	.
BLANK, SPACE			PLUS SIGN	+	+
COLON	:	:	QUESTION MARK	?	?
COMMA	,	,	QUOTATION MARK	"	"
DASH	--	--	SEMICOLON	;	;
DOLLAR SIGN	$	$	SLASH, VIRGULE	/	/
EQUAL SIGN	=	=			

SPECIAL SUBSTITUTIONS:

	ERIC	OCR		ERIC	OCR
BRACKET (LEFT)	[	{{	LESS THAN	<	.lt.
BRACKET (RIGHT)	].	}}	PARENTHESIS (LEFT)	(	{
EXCLAMATION POINT	!	??	PARENTHESIS (RIGHT)	)	}
GREATER THAN	>	.gt.	POUND SIGN	#	H

4. OCR CONTROL CHARACTERS (3):

DOUBLE COLON	::	Used only between Field Keyword and Field text.
"BLOB"	■	Overstrike on character(s) to be deleted.
"HOOK"	ʃ	Deletes preceding character (one), word (two), or line (three).

5. NOT PRESENTLY USED:

"FORK"	Ψ
VERTICAL BAR	|
UNDERLINE	———

FIGURE II-3 ERIC CHARACTER SET

(Representation of ERIC Characters
Using OCR-A (IBM Typing Element 170)
Character Set)

o Are there ten characters to the inch horizontally?
   If a dual pitch typewriter is set at 12 pitch, the
   scanner cannot recognize the different characters.

This line is typed at ten {10} pitch.

This line is typed at twelve {12} pitch.

---

o Are the characters uniformly spaced? Not overlapping
   each other, like this?

o Is each line straight and not waving?

o Are the correct control characters and special
   characters being used?

o Are there any unacceptable pen or pencil marks?

III. THE ERIC APPLICATION OF OCR - RIE RESUME PREPARATION

III.A Definitions.

III.A.1 Resume

A complete surrogate record or "Information Group" for a document, including cataloging data, indexing data, and an annotation or abstract describing the item in succinct narrative form. All new Resumes entering the ERIC system are identified by the Keyword " CH::", followed by the eight character Clearinghouse Accession Number, as follows:

```
CH::CE123456
```

The computer system considers a Resume to consist of all Fields following the identifying CH:: and preceding the next CH::.

III.A.2 Field

An element of data within a Resume, e.g., Title Field, Contract Number Field, etc. ERIC provides for 26 possible data fields, though not all are typed by the Clearinghouse or would be appropriate for any given Resume. Each Field within a Resume must be identified by its own unique Keyword immediately preceding the actual data, e.g.,

```
TITLE::Career Education for Women.
```

All typed text following a Keyword, up to the next valid Keyword, is included in that Field.

III.A.3 Subfield

Certain Fields may be subdivided, either into different kinds of subelements or into more than one instance of the same type of data. For example, the Personal Author Field may be subdivided into two personal authors, the Contract Number Field into more than one contract number, etc.

```
AUTH::Smith, John D.; Johnson, Jane
CONT::OEC-0-3-0371; NIE-C-73-0001
```

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Likewise, the Journal Citation Field is subdivided between the journal name and the related "location" data (volume/number/date/inclusive pagination), e.g.,

```
JNL::Journal of Health and Human Behavior; v7 n3
p1221-34 Sep 5 1966;
```

Note that subfields within a Field are always separated or "delimited" by a semicolon followed by a blank.

III.A.4   Delimiter

Within the ERIC system, the semicolon is used as the standard delimiter to separate subfields. However, in fields where subfields are not permitted (i.e., the Title and Abstract fields), the semicolon may be routinely used as regular punctuation.

III.A.5   Keyword

A Keyword is a means for identifying/indicating/tagging the nature of the data that immediately follows it. There are two types of Keywords: the Group Keyword CH:: identifies an entire Resume or Information Group comprised of many fields; a simple Keyword identifies a single Field of data within a Resume. Every Field of data within a Resume must be preceded by its appropriate Keyword, e.g.,

```
TITLE::, AUTH::, REPNO::,
```

III.B   Resume Organization

The computer system used to process Resume data after it has been scanned considers a Resume to be a group of Fields (and corrections, when present). Each Field is generally processed independently, and consists of a Keyword (such as ABST, followed by a double colon ::, and the text of the Field. Keywords (and the ::) should be typed without intervening "blobs". If an error is made typing the Keyword, delete the line (using "blobs" or three "hooks"), and type the Keyword on a new line.

The computer program depends on the presence of the Clearinghouse Number Field (CH::) to identify the start of a Resume (or corrections to a Resume). Pay particular attention to the Clearinghouse Number Field, both in typing, and in proofreading. If there are any errors in the format or content of the Clearinghouse Number Field, the entire Resume will be ignored; or it may overlay the previous Resume.

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The Clearinghouse Number must always be the first Field
of a Resume. The order of all other Fields within the Resume does
not matter. However, it may be easier to proofread if Fields are
generally typed in the same order from Resume to Resume. If a Field
is accidentally omitted, it may be typed either at the end of the
Resume, or added as a correction on a separate sheet. If the same
Field is typed more than once for a Resume, the computer program
will retain only the last occurrence of that Field, and will drop
anything typed earlier. Each Field must be typed at the start of
a line. Do not put more than one Field on a line. The list of
Field Keywords printed on each OCR Resume Form has seven Fields
marked as mandatory: CH, LEVEL, PAGE, TITLE, PUBTYPE, DESC,
AND ABST. These should be present on every Resume, but not
necessarily in that order.

III.C   Examples of Specific Field Formats

Figure III-1, page 16, shows a completed OCR Resume Form
and utilizes a hypothetical example so that every possible Field
could be exemplified. Obviously, a real-life document would not be
likely to carry both a contract number and grant number. Other
similar artificialities may be detected in the hypothetical example.
The discussion in this section of the OCR Keying Manual illustrates
the way each Field should appear on a finished OCR Resume Form and
cites any specific rules that must be observed. Figure
III-1, page 16 shows the proper physical location of each Field
relative to the boundaries of the form. Each Field starts with
a Keyword followed by a double colon (e.g., CONT::). Although
most Fields should be typed in the same format used for non-OCR
input, the following changes have been made to accommodate OCR
typing:

o The addition of a Document Availability Level Field,
   LEVEL::.

o A change in the format for entering Source Codes and Names.

o Not entering the pagination as the first part of the
   Note Field.

o The addition of a new Field for pagination, PAGE::.

o Never entering the EDRS Price Field (this data will
   be calculated based on the data in the Page and Level
   Fields, and inserted by the computer program).

Keyword   ALIGN FIRST CHARACTER IN BOX

CH   CH::CE123456
PA   PA::56
PDAT   PDAT::{{Sep 73}}
LEVEL   LEVEL::3
AUTH   AUTH::Smith, J. D., Ed.; Johnson, Jane W., Ed.
TITLE   TITLE::Career Education for Women.
INST   INST::RUF13615=Central State Univ., Wilberforce, Ohio.; = Ohio Free Univ., Cleveland.
SPON   SPON::BBB06621=National Inst. of Education (DHEW), Washington, D.C.; =Office of
CONT   Educational Research (DHEW), Washington, D.C.
GR   CONT::NIE-C-73-0001
SN   GR::OEG-4-6-000516-0969
REPNO   BN::V300174L
PUBTYPE   REPNO::CU-2081; CU-2082-S
NOTE   PUBTYPE::R
AVAIL   NOTE::Paper presented at the National Conference on Career Education (3rd, Chicago,
JNL   Illinois, May 15-17, 1973)
PAGE   AVAIL::Campus Bookstore, 123 College Ave., Chicago, Illinois 60690 ($0.75)
DESC   JNL::Journal of Health and Human Behavior; v7 n3 p1221-34 Sep 5 1973
IDEN   PAGE::1295.
ABST   DESC::*Career Opportunities; *Career Planning; Careers; *Demand Occupations; *Employment
          Opportunities; Females; Labor Force; Labor Market; *Manpower Needs; Occupational
          Aspiration; Occupational Guidance; Occupations; Vocational Counseling; *Working Women
          IDEN::Consortium of States; *National Occupational Competency Testing Institute; Illinois

          ABST::Women's opportunities for employment will be directly related to their level of
          skills and experience but also to the labor market demands through the remainder of the
          decade. The number of workers needed for all major occupational categories is expected
          to increase by about one fifth between 1970 and 1980, but the growth rate will vary by
MANDATORY occupational group. Professional and technical workers are expected to have the highest
DATA FIELDS predicted rate (39%), followed by service workers (35%), clerical workers
ARE IN BOLD (11%), sales workers (14%), craftsmen and foremen (20%), managers and administrators
TYPE   (15%), and operatives (11%). This publication contains a brief discussion and employment
          information concerning occupations for professional and technical workers, managers and
          administrators, skilled tradesmen, sales workers, clerical workers, and service workers.
          In order for women to take advantage of increased labor market demands employer attitudes
          toward working women need to change and women must (1) receive better career planning
          and counseling, (2) change their career aspirations, and (3) fully utilize the sources
          of legal protection and assistance which are available to them. (Author/SB)

DO NOT TYPE BELOW THIS LINE

EFF-900 (1/76)

FIGURE III-1.   Completed Resume Form.

III.C.1 **Clearinghouse Accession Number (CH::)**

Every Resume _must_ start with a Clearinghouse Accession
Number. It is the first mandatory Field. Type the number without
spaces as shown below:

```
..CH::EC123456
```

III.C.2 **Program Area Code (.PA::)**

For OE or NIE funded reports, the Program Area Code
Field may carry one of the two-digit numerical codes listed in
the ERIC Processing Manual (Figure 5-5, page 152); for example:

```
PA::5b
```

III.C.3 **Publication Date (PDAT::)**

Type the publication date of the document one of
the following forms:

```
PDAT::5Sep75
PDAT::15Sep75
PDAT::Sep75
PDAT::75
```

No other variations are permissible. Do not leave blanks or supply
zeros for missing information. Use only the following three-character
abbreviations for the months:

```
Jan, Feb, Mar, Apr, May, Jun,

Jul, Aug, Sep, Oct, Nov, Dec...
```

If the publication date is determined by the cataloger by inference
or from information not in the document, enclose the supplied date
in square brackets (double braces) as follows:

```
PDAT::{{5Sep75}}
```

Do not use entries such as: 1973, Win 73, Spr 73, etc. If no
date is determinable, do not type the Field.

III.C.4   Level of Availability (LEVEL::)

Determine the correct level of availability
according to the guidelines in the ERIC Processing Manual
(Section 5.3.6, page 153), then type the proper single digit
arabic number (1, 2, or 3) in this Field, as follows:

```
LEVEL::1
LEVEL::3
```

This is a mandatory field and may not be omitted.

III.C.5   Personal Author (AUTH::)

Type personal authors according to the rules in the
ERIC Processing Manual (Section 5.3.7, page 158-161). The rules
governing personal author entries can be exemplified as follows:

SINGLE AUTHOR

```
AUTH::Smith, John D.
AUTH::Smith, J. D.
AUTH::Smith, J. David
```

TWO AUTHORS

```
AUTH::Smith, John D.; Johnson, Jane
```

THREE OR MORE AUTHORS

```
AUTH::Smith, John D.; And Others
```

EDITOR ENTRIES

```
AUTH::Smith, John D., Ed.
AUTH::Smith, J. D., Ed.; Johnson, J., Ed.
```

Document Title (TITLE::)

Select the appropriate title, in accordance with
the guidelines in the ERIC Processing Manual (Section 5.3.8,
pages 161-166). Type the Title (up to 500 characters) in this
Field, as in the following example:

```
TITLE::Career Education for Women.
```

Titles should always end with a punctuation mark.(period, question
mark, or exclamation point): If no title can be found and one is
fabricated by the cataloger, enclose the entry in square brackets
(double braces ({{), as follows:

```
TITLE::{{Career Education for Women.}}
```

For examples illustrating other variations such as subtitles,
report statements, series titles, multi-volume titles, foreign
language titles, conference proceedings, papers, speeches and
congressional documents, refer to the ERIC Processing Manual
noted above. This is a mandatory Field and may not be omitted.

Institution/Corporate Author (INST::)

The ERIC Processing Manual (Section 5.3.9, pages 166-168)
describes the use of the ERIC Source Directory in conjunction with
selecting the corporate author (institution) for the document.
A Source Code and a Source Name should be identified for each
institution associated with a document. After the keyword INST::
type the Source Code, followed by an equal sign (=), and then
the Source Name, e.g.,

```
INST::RUF13615 = Central State Univ., Wilberforce, Ohio.
```

If the institution is not listed in the Source Directory, or if
the correct Source Code cannot be identified, the Source Name
should still be entered, preceded by an equal sign, as follows:

```
INST::=Office of Educational Research (DHEW),
Washington, D.C.
```

This format will alert the editors at the ERIC Facility that a new Source Code may be needed.

Up to four different institutions may be typed by separating each combination of Source Code (if one exists), equal sign, and Source Name, by a semicolon and a space, as follows:

```
INST::RUF13615=Central State Univ., Wilberforce, Ohio.; =
Office of Educational Research (DHEW), Washington, D.C.
```

Keep in mind that the Keyword INST:: should only be typed once for the entire group of institutions.

III.C.8   Sponsoring Agency(ies) (SPON::)

Up to four different sponsoring agencies can be entered in the same format described above for institutions. That is, the combination of Source Code (if one exists), an equal sign, and the Source Name, should be entered for each agency. For example:

```
SPON::BBB06621=National Institute of Education (DHEW),
Washington, D.C.; =Office of Educational Research (DHEW),
Washington, D.C.
```

III.C.9   Contract Number (CONT::)

Type contract numbers entered in this Field as follows:

```
CONT::NIE-C-73-0001
```

Two or more contract numbers are separated by a semicolon and a space, as follows:

```
CONT::NIE-C-73001; RQ-9871-2A
```

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III.C.10   Grant Number (GR::)

Type grant numbers in this Field using the same
guidelines specified above for contract numbers, e.g.,

```
GR::OEG-4-6-000516-0969
```

III.C.11   Project Control Number (BN::)

This Field is reserved exclusively for Office of
Education Project Control Numbers, and for any NIE Project Control
Numbers that may be developed in the future. No other numbers are
permitted in this Field. Entries will usually be of the following
form:

```
BN::V3001741
```

III.C.12   Report Number(s) (REPNO::)

Type report numbers matching as closely as possible
to the form appearing on the report. The SLA Dictionary of Report
Series Codes will be helpful in determining the correct form for
report numbers. (See Appendix E of the ERIC Processing Manual
for the introduction to this publication.) If the number appears
in both a short form and more explicit form, the short form should
be entered into this Field. A typical report number entry would
be:

```
REPNO::CU-2081-S
```

Wherever a space appears in the report number in the document,
insert a hyphen to assure uniformity in machine sorting. Up
to four report numbers may be typed, separating each by a semi-
colon and blank, as follows:

```
REPNO::CU-2081-S; VRA-412-T-63
```

Type report numbers in sequential series as follows:

```
REPNO::S-4934; S-404; S-405; S-496
```

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Do not use the formats:

```
REPNO::S493 thru S-496
REPNO::S493-496
```

III.C.13   Publication Type (PUBTYPE::)

Publication type is entered as a single alpha character representing the proper type according to the ERIC Processing Manual (Figure 5-6, page 178). A typical entry would be:

```
PUBTYPE::R
```

This is a mandatory Field and must always be present.

III.C.14   Descriptive Note (NOTE::)

Entries in the Note Field provide miscellaneous information extending the description of the document, and are added only when appropriate. The ERIC Processing Manual (starting on page 180) provides guidelines for descriptive notes concerning papers, speeches, reprints, dissertations, theses, foreign, language, copyrighted pages, analytics, and marginal legibility. Do not abbreviate state names, as follows:

```
NOTE::Paper presented at the National Conference on Career
Education (3rd, Chicago, Illinois, May 15-17, 1973)
```

The pagination should not be entered in the Note Field, but should be entered in the Page Field for Level III documents only. The computer system will automatically insert the pagination in the Note Field.

III.C.15   Availability (AVAIL::)

Entries in this Field will conform to the following rules:

RULE 1 - When completed, this Field MUST contain all of the following information, when applicable and available:

o Full Name of the source of the document.
Extraneous phrases such as, "Subsidiary of..."
should be omitted.

o Complete Address, including street number or
Post Office box number. Do not abbreviate
state names.

o Catalog, Stock or Order Number, when appropriate.

o Price of the document.

RULE 2 - DO NOT use leading phrases, such as "Available from...",
or "Hard Copy Available from...". The computer system
inserts the phrase "Available from..." in all RIE
Availability Field entries.

RULE 3 - DO NOT USE THE CENT (¢) SIGN: IT IS NOT IN THE ERIC
CHARACTER SET! Translate prices quoted in cents to
dollars; e.g., 75¢ should be typed as $0.75. Prices
quoted in foreign currencies should not be abbreviated
and may use only characters appearing in the ERIC
character set.

Documents announced as Level 1 should show
alternate availability if known. Documents processed at Level 2
should always cite any non-EDRS availability of hard copy.
Documents processed at Level 3 must cite a source where the user
can obtain the document. Availability is a mandatory Field for
Level 3 documents.

If availability is from Federal Government agencies,
city, state, and zip code are generally adequate. However, for
commercial, state, and private organizations, a street address or
P. O. box number are required. The ERIC Processing Manual (starting
on page 185) provides guidelines relating to discounts, analytics,
loans, supporting documentation, and audiovisual materials.

An example of a typical entry in this field is:

```
AVAIL::National Technical Information Service,
Springfield, Virginia ,22161
.(AD-741-409;-MF $0.95; HC $3.00)
```

III.C.16   Journal Citation (JNL::)

The format of data in the Journal Citation Field
should be journal title (unabbreviated) in the first subfield;

followed by a semicolon and a space. The second subfield contains
the volume number, issue number, inclusive pagination, and date,
in that order. Note that the inclusive pagination statement may
drop repetitive digits in the figure for the last page. The
other data should appear as shown in the samples. Abbreviate
months of the year using the standard 3-character representations:
Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Other
common abbreviations are as follows:

volume - v	Spring - Spr	
number - n	Summer - Sum	
page(s) - p	Fall - Fall	
	Winter - Win	

A sample entry appears as follows:

```
JNL::Journal of Health and Human Behavior; v7 n3
p1221-34 Sept 5 1966
```

III.C.17   Pagination (PAGE::)

        This Field will be omitted by the ERIC Clearinghouse
except for Level 3 documents, for which it is mandatory. The
Field will be added to the Resume by the ERIC Facility for Level 1
and Level 2 documents. Do not leave a space on the OCR Resume
Form for subsequent addition of this Field for Level 1 and Level 2
documents. For Level 3 documents, type the number of pages
without punctuation (period, commas, or p's) as follows:

```
PAGE::1295
```

III.C.18   Descriptors (DESC::)

        Entries in this Field will be made in accordance
with the following example:

```
DESC::*Career Opportunities; *Career Planning;
Careers; *Demand Occupations; Employment
Opportunities; Females; Labor Force; Labor
Market; *Manpower Needs; Occupational Aspiration;
Occupational Guidance; Occupations; Vocational
Counseling; *Working Women
```

Precede major Descriptors by an asterisk as shown above. Separate
Descriptors with a semicolon and a space. No particular order is
required and major Descriptors need not precede minors. Type only
valid ERIC Descriptors in this Field. Type Descriptors with the
first letter of each word capitalized. Acronym Descriptors are
entered in all upper case, e.g., FLES. Do not capitalize
articles, prepositions, and conjunctions in Descriptors unless
they appear as the first word.

Spacing of multi-word Descriptors must conform
precisely to that in the ERIC _Thesaurus_. This is a mandatory
Field and may not be omitted.

III.C.19   Identifiers (IDEN::)

Type Identifiers in accordance with the following.
rules:

RULE 1 - Identifier entries cannot exceed 50 characters
          (including spaces).

RULE 2 - Do not use special characters (except parentheses).

RULE 3 - If an acronym is entered, the spelled out version
          should also be entered (when available).

RULE 4 - No more than two Identifiers may be asterisked as
          major terms.

There is no requirement for any particular order.
Rules for capitalization and spacing are identical to those for
Descriptors, described above. A sample Identifier Field is as
follows:

IDEN::Consortium of States; *National
Occupational Competency Testing Institute;
Illinois

III.C.20   Abstract (ABST::).

The following rules govern the typing of
Abstracts:

RULE 1 - Do not hyphenate at the end of a line.

RULE 2 - Do not exceed the word limit of 200 words (1400
          characters).

(Abstracts that are only slightly longer than the
limitation will generally not be modified, but those
considerably longer than 200 words may be shortened
by Facility editors.)

RULE 3 - Do not use the underline, superscripts, subscripts,
or a double colon.

RULE 4 - Do not enter non-abstract data, specifically:

     o Related document references (see the
       ERIC Processing Manual, sections 5.3.17
       and 5.3.18, pages 181-182).

     o Marginal legibility information (include
       in Note Field).

An example of an Abstract entry can be seen in.
Figure III-1, page   .

RULE 5 - Lists, such as those used to enumerate parts of a
document, should be entered with arabic numbers
enclosed in left and right parentheses, i.e.,
{1}...{2}...{3}...(See last four lines of
Abstract, Figure III-1, page 16).

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IV.   RIE OCR RESUME CORRECTION PROCEDURES

Due to the sensitivity of the OCR scanner, the normal techniques available to correct typing errors and make changes may not be used. Specifically, do not use on the OCR Resume Forms:

o Cover up liquids, such as Snopake.

o Correction paper, such as Ko-Rec-Type.

o Cover up tape.

o Erasers.

o Correction mechanisms available on IBM Correcting Selectric Typewriters.

Instead, two procedures have been designed to allow corrections. The first, consisting of two special OCR control characters recognized by the scanner, will allow for the immediate deletion of (effectively "erasing") individual characters, words, or lines, if typed while the page is still in the typewriter. The second method is processed by the computer system after all OCR Resume Forms have been scanned, and allows for the replacement or correction of entire Fields, or specific lines within a Field. These corrections may be typed either on the original OCR Resume Form, or on a follow-on correction page.

IV.A   Immediate Changes (Change Requirements Noticed at Time of Keying)

IV.A.1   Character Erase "Blob"

The OCR scanner ignores all occurrences of the "blob", without leaving an intervening blank. It can be overstruck on as many characters as necessary to be deleted. To delete, or "erase" a character, backspace to the error and type the "blob" over the character(s) to be deleted.

EXAMPLE:

```
Input   - A▮n e▮x▮am▮▮p▮l▮e  ▮of▮ t▮h▮e
          c▮h▮a▮r▮a▮c▮t▮e▮r  era▮se.

Output  - An example of the
          character erase.
```

Sometimes an incorrect word will be at the very end of a line and there is no space to type the word over or use the word deletion. In such an instance, simply backspace, overstrike the faulty word and continue with the correct word on the next line.

EXAMPLE:

```
                                              End of
                                              Line
    An example of the character eraxe|                (Line 1)

    An example of the character ▮▮▮▮▮|                (Line 1)
    erase                                             (Line 2)
```

Note that it is necessary to erase the entire word "eraxe" and not just the mis-keyed "x". Do not put a "blob" between or within a Keyword, the double colon following each Keyword, or any of the multi-character substitutions:
({{, }}, .gt., .lt., or ??).

IV.A.2   Character/Word/Line Editing (ʃ "Hook")

            This control character is called the "hook". A single "hook" deletes the immediately preceding character.

EXAMPLE:

```
    Input   - Exampxʃle of sindʃgle letterrʃ deletion

    Output  - Example of single letter deletion
```

Two "hooks" delete the immediately preceding word (back to, but not including, the last blank, or back to the start of the line, whichever is first).

EXAMPLE:

```
    Input   - Example of workʃʃ word deletion
    Output  - Example of word deletion

    Input   - AUTH::Smothʃʃ AUTH::Smith
    Output  - AUTH::Smith
```

Three "hooks" delete the entire line.

EXAMPLE:

Input - This line would be deleted, for example.♪♪♪
Output -

IV.8 **Follow-On Changes (Change Requirements Noticed During Post-Keying Edit)**

IV.B.1 **Same Page/Separate Page**

In the ERIC computer system, any Resume coming through that is identified by the same Clearinghouse Number as a previous Resume will replace the old Resume to the extent that they overlap fields. That is to say, any Field within a Resume that is keyed a second time will replace the first occurrence of that Field. A Field that is not replaced remains unchanged. Therefore, to make any changes while the OCR Resume Form is still in the typewriter, simply re-type the Field. This can be done anywhere on the same page, without regard for sequence. See Figure IV-1, page 30, for examples of same-page corrections.

If a change requirement (except for Clearinghouse Number) is not noticed until after the OCR Resume Form has been removed from the typewriter, it is possible to type the correction(s) on a separate page. Do not put the form back in the typewriter to make the correction. Instead, using a separate OCR Resume Form, type the Clearinghouse number to specify the resume to which the correction pertains, followed by the necessary Field corrections. See Figure IV-2, page 31 for examples of follow-on corrections. Corrections to more than one Resume may be typed on the same correction page, provided each correction is properly identified by a Clearinghouse Number.

IV.B.2 **Correcting an Entire Field**

Correction needs detected after proofing or review can be made by re-typing the entire Field (or Fields) that require change. Note:. To delete an entire Field that has already been

Keyword | ALIGN FIRST CHARACTER IN BOX

CH — CH::CE123456
PA — PA::56
PDAT — PDAT::{{Sep73}}
LEVEL — LEVEL::3
AUTH — AUTH::Smith, J. D., Ed.; Johnson, Jane W., Ed.
TITLE — TITLE::Career Education for Women.
INST — INST::RUF13615=Central State Univ., Wilberforce, Ohio.; = Ohio Free Univ., Cleveland.
SPON — SPON::88806621=National Inst. of Education (DHEW), Washington, D.C.; =Office of
CONT — Educational Research (DHEW), Washington, D.C.
GR — CONT::NIE-C-73-0001
BN — GR::OEG-446-000316-0969
REPNO — BN::V300174L
PUBTYPE — REPNO::CU-2083; CU-2062-S
NOTE — PUBTYPE::E
AVAIL — NOTE::Paper presented at the National Conference on Career Education (3rd, Chicago,
JNL — Illinois, May 15-17, 1973)
PAGE — AVAIL::Campus Bookstore, 123 College Ave., Chicago, Illinois - 60690 (*0.75)
DESC — JNL::Journal of Health and Human Behavior; v7 n3 p1221-34 Sep 5 1973
IDEN — PAGE::1295
ABST — DESC::*Career Opportunities; *Career Planning; Careers; *Demand Occupations; *Employment
Opportunities; Females; Labor Force; Labor Market; *Manpower Needs; Occupational
Aspiration; Occupational Guidance; Occupations; Vocational Counseling; *Working Women
IDEN::Consortium of States; *National Occupational Competency Testing Institute; Illinois

ABST::Women's opportunities for employment will be directly related to their level of
skills and experience but also to the labor market demands through the remainder of the
decade. The number of workers needed for all major occupational categories is expected
to increase by about one fifth between 1970 and 1980, but the growth rate will vary by
occupational group. Professional and technical workers are expected to have the highest
predicted rate (39%) followed by service workers (35%), clerical workers
(16%), sales workers (34%), craftsmen and foremen (20%), managers and administrators
(15%), and operatives (11%). This publication contains a brief discussion and employment
information concerning occupations for professional and technical workers, managers and
administrators, skilled tradesmen, sales workers, clerical workers, and service workers.
In order for women to take advantage of increased labor market demands employer attitudes
toward working women need to change and woman must (1) receive better career planning
and counseling, (2) change their career aspirations, and (3) fully utilize the sources
of legal protection and assistance which are available to them. (Author/SB)

MANDATORY DATA FIELDS ARE IN BOLD TYPE

PUBTYPE::R

DESC::lines::2::2::Opportunities; Females; Labor Force; Labor Market; Manpower Needs; DC
Occupational
ABST::lines::6::6::predicted rate (39%), followed by service workers (35%), clerical
workers

DO NOT TYPE BELOW THIS LINE

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FIGURE IV-1   Resume - Sampe Page Corrections.

ERIC Acc. No

ERIC Report Resume OCR Form   Date 6/2/76   Prepared By 4T   Typewriter ID No. 2

Keyword   ALIGN FIRST CHARACTER IN BOX

CH
PA
PDAT
LEVEL
AUTH
TITLE
INST
SPON
CONT
GR
EN
REPNO
PUBTYPE

CH::CE123456
INST::RUF13615=Central State Univ., Wilberforce, Ohio.; = Ohio Free Univ., Cleveland,
BN::V300174L
AVAIL::Campus Bookstore: 123 College Ave., Chicago, Illinois 60690 ($0.75)
ABST::lines::13::13::and counseling, (2) change their career aspirations, and (3) fully
utilize the sources
ABST::lines::10::10::administrators, skilled tradesmen, sales workers, clerical workers,
and service workers.
ABST::line::6::7::predicted rate (39%), followed by service workers (35%), clerical ████
workers (36%), sales workers (14%), craftsmen and foremen (20%), managers and
administrators

ERIC Acc. No.

ERIC Report Resume OCR Form   Date 6/2/76   Prepared By AT   Typewriter ID No. 2

Keyword   ALIGN FIRST CHARACTER IN BOX

CH
PA
PDAT
LEVEL
AUTH
TITLE
INST
SPON
CONT
GR
EN
REPNO
PUBTYPE
NOTE
AVAIL
JNL
PAGE
DESC
IDEN
ABST

CH::CE123456
PA::56
PDAT::{{{Sep73}}}
LEVEL::3
AUTH::Smith, J. D., Ed.; Johnson, Jane W., Ed.
TITLE::Career Education for Women.
INST::RUF13615=Central State Univ., Wilberforce, Ohio.; = Ohio Free Univ., Cleveland
SPON::88806621=National Inst. of Education (DHEW), Washington, D.C.; Office of
Educational Research (DHEW), Washington, D.C.
CONT::NIC-C-73-0001
GR::OEG-4-6-000516-0969
BN::V300174L
REPNO::CU-2082-S; CU-2081-S
PUBTYPE::R
NOTE::Paper presented at the National Conference on Career Education (3rd, Chicago,
Illinois, May 15-17, 1973)
AVAIL::Campus Bookstore, 123 College Ave., Chicago, Illinois 60690 (0.75)
JNL::Journal of Health and Human Behavior; v7 n3 p1221-34 Sep 5 1973
PAGE::1295
DESC::*Career Opportunities; *Career Planning; Careers; *Demand Occupations; *Employment
Opportunities; Females; Labor Force; Labor Market; *Manpower Needs; Occupational
Aspiration; Occupational Guidance; Occupations; Vocational Counseling; *Working Women
IDEN::Consortium of States; *National Occupational Competency Testing Institute; Illinois

ABST::Women's opportunities for employment will be directly related to their level of
skill and experience but also to the labor market demands through the remainder of the
decade. The number of workers needed for all major occupational categories is expected,
to increase by about one fifth between 1970 and 1980, but the growth rate will vary by
occupational group. Professional and technical workers are expected to have the highest
predicted rate (39%), followed by service workers (35%), clerical workers
(36%), sales workers (24%), craftsmen and foremen (20%), managers and administrators
(15%) and operatives (11%). This publication contains a brief discussion and employment
information concerning occupations for professional and technical workers, managers and
administrators, skilled trades, sales workers, clerical workers, and service workers.
In order for women to take advantage of increased labor market demands employer attitudes
toward working women need to change and women must (1) receive better career planning
and counseling, (2) change their career aspirations, and (4) fully utilize the sources
of legal protection and assistance which are available to them. (Author/SB)

MANDATORY
DATA FIELDS
ARE IN BOLD
TYPE

DO NOT TYPE BELOW THIS LINE

FIGURE IV-2 Resume - Separate Page Corrections.

typed, retype the Field Keyword with no text following, i.e.,

                        AVAIL::

will delete the Availability Field.

IV.B.3   Corrections By Line Within A Field

          Some Fields are usually several lines long and
re-typing them in their entirety would be a considerable burden,
not to mention leaving the way open for creating new errors where
none existed before. This is especially true of the Abstract
Field. In addition to entire Field corrections, the ERIC system
provides for making follow-on corrections to individual lines
within a Field. Correcting by line avoids re-typing the entire
Field. If the change is typed on a different OCR Resume Form,
type the Clearinghouse Number, followed by any Field, or line
within Field corrections. Line corrections are specified by typing
after the Field Keyword ::lines::, the number of the first
line to be changed, ::, the number of the last line to be changed,
:: (without any intervening blanks), and the replacement text
(on as many new lines as necessary.

EXAMPLES:

```
                         Same Page Change

Changing 1 line:
TITLE::lines::2::2::And the Arts

Changing more than one line:
ABST::lines::6::7::predicted rate {39%}, clerical
workers {16%, sales workers {14%}, managers and
administrators
```

Note that when only one line is to be changed, still type "lines"
and type the line number twice (first and last lines). In both
cases above, the re-typed data containing any number of lines
replaces the range of lines indicated, i.e., in the first example,
the second line of the Title will be replaced; in the second
example, lines 6 and 7 of the abstract will be replaced by three
lines, starting with "predicted rate..." and ending with
"administrators". See Figure IV-1, page 30, and Figure IV-3,
page 33, for other examples of line corrections.

IV.B.3.a   Order of Line Corrections

          When making more than one change by line in
the same Field (as when changing an Abstract) changes should be
made from the bottom up (highest group of line numbers first) in
order to avoid line re-numbering problems. If done from the top
down, the first change made can affect later line numbers in
effect, invalidating later changes. See Figure IV-2, page 29

ERIC Acc No

ERIC Report Resume OCR Form   Date 1/4/76   Prepared By AT   Typewriter ID No 2

Keyword   ALIGN FIRST CHARACTER IN BOX

CH
PA
PDAT
LEVEL
AUTH

CH::CE123456
ABST::lines::5::5::occupational groups. Professional and technical workers are
expected to have the highest

ERIC Acc. No.

ERIC Report Resume OCR Form   Date 8/4/76   Prepared By AT   Typewriter ID No. 2

Keyword   ALIGN FIRST CHARACTER IN BOX

CH
PA
PDAT
LEVEL
AUTH
TITLE

CH::CE123456
ABST::lines::12::12::toward working women need to change and women must (1) receive
better career planning and counseling, (2) change their career aspirations, and (3)
fully utilize the sources of legal protection and assistance which are available to
them. (Author/SB)

ERIC Acc. No.

ERIC Report Resume OCR Form   Date 6/4/76   Prepared B. AT   Typewriter ID No 2

Keyword   ALIGN FIRST CHARACTER IN BOX

CH   CH::CE123456
PA   PA::5b
PDAT   PDAT::{{Sep73}}
LEVEL   LEVEL::3
AUTH   AUTH::Smith, J.D., Ed.; Johnson, Jane W., Ed.
TITLE   TITL::Career Education for women???
INST   TITLE::Career Education for Women
SPON   INST::RUP13615=Central State Univ., Wilberforce, Ohio; = Ohio Free Univ., Cleveland
CONT   SPON::BBBOL42=National Inst. of Education (DHEW), Washington, D.C.; =Office of
GR.   Educational Research (DHEW), Washington, D.C.
BN   CONT::NIE-C-73-0001
REPNO   GR::OEG-4-6-000516-0969
PUBTYPE   BN::V30014L
NOTE,   REPNO::CU-2081; CU-2082-S
AVAIL   PUBTYPE::R
JNL   NOTE::Paper presented at the National Conference Career Education (3ed.???
PAGE   NOTE::Paper presented at the National Conference on Career Education (3rd, Chicago,
DESC   Illinois, May 15-17, 1973:
IDEN   AVAIL::Campus Bookstore, 123 College Ave., Chicago, Illinois 60690 ($0.75)
ABST   JNL::Journal of Health and Human Behavior; v7 n3 p1221-34 Sep 5 1973
            PAGE::1295
            DESC::=Career Opportunities; =Career Planning; Careers; =Demand Occupations???
            DESC::=Career Opportunities; =Career Planning; Careers; =Demand Occupations; =Employment
            Opportunities; Females; Labor Force; Labor Market; =Manpower Needs; Occupational
            Aspiration; Occupational Guidance; Occupations; Vocational Counseling; =Working Women
            IDEN::Consortium of States; =National Occupational Competency Testing Institute;
            Illinois

MANDATORY   ABST::Women's opportunities for employment will be directly related to their level of
DATA FIELDS skills and experience but also to the labor market demands through the remainder of the
ARE IN BOLD decade. The number of workers needed for all major occupational categories is expected???
TYPE   decade. The number of workers needed for all major occupational categories is expected
            to increase by about one fifth between 1970 and 1980, but the growth rate will vary by
            occupational groups: Professional and technical workers are expected to have the highest
            predicted rate (39%), followed by service workers (35%); clerical workers
            (16%); sales workers (14%), craftsmen and foremen (20%); managers and administrators
            (15%), and operatives (12%). This publication contains a brief discussion and employment
            information concerning occupations for professional and technical???
            information concerning occupations for professional and technical workers, managers and
            administrators, skilled tradesmen, sales workers???
            administrators, skilled tradesmen, sales workers, clerical workers, and service workers.
            In order for women to take advantage of increased labor market demands employer attd???.
            In order for women to take advantage of increased labor market demands employer attitudes

DO NOT TYPE BELOW THIS LINE

ERIC-100 (1/76)

FIGURE IV-3 Multiple Page Resume.

IV.B.3.b.   Counting Lines

                    For the purpose of line corrections, it is
necessary to take into account any deleted lines or lines added
by earlier corrections. Do not count lines deleted by three
hooks (♪♪♪) or lines that would be completely blank (such as a line
that is completely "Blobbed" out). Include any new lines that
are inserted through corrections (if entered before the current
correction). For example, two lines will frequently replace one
line, which will affect the line numbers of all succeeding lines.

IV.C   Proofreading

                    After a Resume is typed and removed from the typewriter,
it should be proofread for typographical, cataloging, or editorial
errors. Corrections may be marked anywhere (including over the
typewritten text) with red or blue pencils, red ball point pens,
or red or blue Flair pens. Do not mark anywhere on the OCR Resume
Form with regular black or green pencils or pens. Do not try to
make any erasures on the OCR Resume Form. See Section PI.D.6,
Quality Control, page 9, for other items to check while proofreading.

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V. HANDLING AND SHIPPING OCR FORMS AND DOCUMENTS

The somewhat sensitive nature of the OCR scanning process dictates that the OCR Resume Forms be kept clean and undamaged physically in order to minimize scanning errors. To accomplish this requires a certain amount of special care in the handling and shipping of the forms by the Clearinghouses. Although this Manual is intended primarily as a keying manual, certain guidelines are provided in this section on storage, logging, packing, and shipping. Eventually, when all procedures have been stabilized, these guidelines will be integrated into the ERIC Processing Manual.

V.A   Logging

The special packaging requirements for the OCR Resume Forms (discussed below) will at times necessitate the shipment of OCR Resume Forms in a container separate from their associated documents. For this reason, it will now be standard practice to prepare duplicate log sheets for each shipment, one to accompany the OCR Resume Forms and one to accompany the documents. The following procedure will be typical:

> When the log sheet for a batch of documents has been prepared in accordance with the ERIC Processing Manual (Section 4.4.2, page 132) an extra Xerox copy will be made by the Clearinghouse. The two log sheets will be packed and shipped, one with the OCR Resume Forms and one with the documents. When received at the ERIC Facility, the log sheets will be checked against the OCR Resume Forms and against the documents.

In all other respects, the logging operation will remain as described in the ERIC Processing Manual.

V.B   Packing

V.B.1   OCR Resume Forms

The ERIC Facility will provide to each Clearinghouse a supply of cardboard cartons for the packing of OCR Resumes. These will be special 12" x 12" cartons, and will accommodate up to approximately 50 OCR Resume Forms. The OCR Resume Forms and the Resume Log Sheet should be packed in these cartons and sealed as tightly as possible to prevent shifting or water damage. When space permits, the carton(s) of OCR Resume Forms should then be packed in the same box as the documents to which they correspond to facilitate arrival of Resumes and corresponding documents at the ERIC Facility simultaneously. When space does not permit combined packaging, the cartons of Resumes may be shipped separately.

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V.B.2   <u>Documents</u>

The <u>ERIC Processing Manual</u> (Section 4.4.3., page 132) will continue to apply to the packing of documents. Recent experience with damaged cartons leads to the recommendation that cardboard cartons with separate covers should be avoided. The type of carton with cover flaps integrally attached to the body of the carton is preferable because of the increased structural integrity. As noted above, it will always be preferable to pack the carton of associated OCR Resume Forms in the same carton with the documents if space permits.

V.C   <u>Wrapping, Labeling, and Addressing</u>

The <u>ERIC Processing Manual</u> (Sections 4.4.4 and 4.4.5, page 135) will continue to apply to these operations with no modifications.

V.D   <u>Shipping Method and Schedule</u>

The <u>ERIC Processing Manual</u> (Sections 4.4.4 and 4.4.7, pages 134 and 135) will continue to apply to these operations with no modifications.

V.E   <u>Storage of OCR Resume Forms</u>

To prevent soiling and physical damage, OCR Resume Forms should be stored in the cartons in which they are shipped to the Clearinghouses until they are ready to be used. The storage areas should be clean and dry.

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APPENDIX B

NUMERICAL DATA COLLECTED

APPENDIX B

NUMERICAL DATA COLLECTED

DATA ELEMENT	WEEK STARTING 1976																								1977									
	July	August					September				October				November					December				January					February				March		
	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14	21	28	7	14	21
1. Number of Document Resumes Keyed (VAR01)	216	252	271	210	236	233	233	286	262	225	224	240	244	257	277	310	286	235	207	269	259	296	140	238	300	243	281	224	---						
2. Number of Document Resumes Keyed per hour (VAR02)	---	---	---	---	---	5.2	5.0	4.6	4.3	4.5	4.1	4.4	4.5	4.6	3.7	4.4	4.3	3.9	4.0	3.6	3.9	6.2	4.4	5.4	5.4	6.3	4.6	4.5	---						.1
3. Number of Document Resumes Corrected by Clearinghouse (VAR03)	129	126	164	115	138	166	155	175	191	128	121	155	131	140	159	175	195	105	121	171	162	132	79	144	153	136	153	131	---						
4. Number of Document Resumes Corrected by Clearinghouses per hour (VAR04)					---	26	21	18	17	15	26	31	22	32	15		18	47	24	14	14	23	25	34	18	20	15	21	---						
5. Number of Correction Lines Keyed by Clearinghouse (VAR05)	530	466	466	504	525	567	476	741	602	410	474	558	515	552	759	663	740	460	496	811	667	566	302	600	715	574	619	493	---						
6. Number of Character Erasures (Blobs) (VAR06)	2,685	2,992	2,759	2,745	3,487	3,182	2,758	3,694	3,536	3,200	2,709	2,855	2,697	3,061	3,417	3,321	3,501	2,252	2,542	3,001	2,075	2,435	2,012	2,613	2,493	2,931	3,102	---						
7. Number of Character Deletions (Hooks) (VAR07)	0	11	5	8	10				8	11	4	14	50	77		7	16	22	9	66	91	89		84	107	84	101	---						
8. Number of Word Deletions (Double Hooks) (VAR08)	86	87	121	115	130	157	123	91	175	154	152	135	152	140	124	191	139	121	130	156	200	162	33	110	100	115	137	---						
9. Number of Line Deletions (Triple Hooks) (VAR09)	59	60	49	34	51	64	67	95	75	71	74	78	71	97	74	81	63	69	59	85	41	83	30	33	60	61	74	---						
10. Number of Content Errors Found on OCR Forms by Editors (VAR10)	242	246	255	249	240	291	154	202	221	212	200	200	200	215	252	300	301	164	147	179	241	214	101	204	231	174	240	187	---						
11. Number of Keying Errors Found on OCR Forms by Editors (VAR11)	34	43	79	52	60	20	50	94	47	106	61	44	62	61	60	124	164	64	51	76	54	46	27	90	83	83	92	82	---						
12. Number of Scanning Errors Found on OCR Forms by Editors (VAR12)	21	5	21	20	14	14	20	3	2	4	2	21	4	13	6	11	12	12	1	9	5	1	1	11	43	3	4	3	---						
13. Number of Document Resumes Corrected by ERIC Facility (VAR13)	165	177	200	152	144	309	121	195	151	160	121	144	162	158	107	217	211	147	116	143	171	147	71	155	202	130	194	150	---						
14. Number of Correction Lines Keyed by the ERIC Facility (VAR14)	518	633	625	604	592	727	291	793	460	615	501	402	672	561	610	693	749	571	501	458	605	438	210	610	608	686	99	---						
15. Number of Document Resumes Scanned for OCR (VAR15)	665	294	376	619	321	360	422	468	447	201	309	98	452	224	204	361	131	429	455	90	338	247	317	235	391	269	345	107	494	280	141	456	325	284	
16. Number of Sheets (of OCR Forms) Scanned for OCR (VAR16)	669	321	443	784	415	451	572	604	593	261	416	130	533	283	254	445	161	437	537	105	390	301	393	275	464	325	426	127	605	316	175	546	349	340	371
17. Number of Sheets (of OCR Forms) Scanned per Hour (VAR17)																							60.2	81.1	78.3	71.4	76.3	61.4	77.4	69.6	75.4	77.3	81.7		76.9
18. Number of Characters Scanned for OCR (Thousands) (VAR18)	1,260	483	625	1,009	556	562	670	806	781	380	520	190	802	378	327	637	227	730	312	185	597	932	559	365	682	478	605	200	935	509	222	859	537	514	545
19. Number of Characters Scanned per Hour (Thousands) (VAR19)	95						---	---	---															144	108	110	105	109	96	120	105	108	122	174	116
20. Number of Lines of Text Scanned for OCR (Thousands) (VAR20)	21.92	7.7	11.04	17.83	9.76	10.1	11.72	14.28	13.2	6.6	9.4	2.9	14.2	6.9	6.0	11.2	4.0	12.9	14.2	2.6	10.4	7.7	9.9	6.6	12.1	8.6	10.9	3.5	16.8	8.9	4.0	15.0	10.4	9.0	9.7
21. Number of Lines of Text Scanned per Hour (Thousands) (VAR21)	---	---	---	---	---																		2.0	1.95	1.96	1.89	1.96	1.60	2.15	1.84	2.1	2.12	2.19		2.09
22. Number of Scanning Hours (VAR22)	---	---	---	---	---										---	---	---	---	---				4.9	9.39	6.48	4.55	5.55	2.07	7.02	4.83	2.05	7.06	4.75		4.7

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OC3 STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

TITLE CHDATA (CREATION DATE = 01/25/78) OCB CLEARINGHOUSE DATA
SUBFILE AA

CASE-N	CB	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13
1	AA	2.	1.	26.	51.	88888.0	15.	88888.0	47.	467.	0.	19.	22.	50.	8.	3.	34.
2	AA	2.	2.	52.	88888.0	12.	88888.0	34.	613.	0.	12.	17.	78.	15.	0.	42.
3	AA	2.	9.	48.	88888.0	22.	88888.0	6.	341.	0.	8.	9.	68.	17.	0.	37.
4	AA	2.	16.	29.	88888.0	11.	88888.0	19.	271.	0.	8.	2.	40.	19.	1.	26.
5	AA	2.	23.	33.	88888.0	8.	88888.0	26.	350.	0.	7.	11.	-57.	16.	0.	26.
6	A3	2.	30.	29.	8.9	2.	12.0	7.	200.	3.	9.	8.	29.	8.	2.	27.
7	AA	3.	6.	23.	7.9	1.	6.0	8.	217.	0.	10.	9.	23.	1.	4.	16.
8	AA	3.	13.	33.	5.6	9.	14.0	33.	362.	0.	24.	17.	29.	6.	0.	19.
9	AA	3.	20.	26.	6.6	5.	17.0	7.	257.	0.	7.	5.	33.	9.	0.	22.
10	AA	3.	27.	27.	6.8	13.	33.0	23.	413.	0.	10.	18.	35.	5.	0.	8.
11	AA	4.	4.	16.	6.4	5.	20.0	14.	214.	0.	1.	4.	7.	2.	0.	11.
12	AA	4.	11.	8.	88888.0	2.	88888.0	5.	238.	0.	4.	5.	5.	4.	3.	5.
13	AA	4.	18.	16.	7.7	3.	7.8	31.	150.	0.	1.	3.	12.	1.	1.	2.
14	AA	4.	25.	8.	4.8	3.	30.0	8.	195.	0.	1.	2.	11.	1.	0.	5.
15	AA	5.	1.	25.	5.4	9.	15.0	25.	417.	0.	1.	7.	13.	10.	88888.	16.
16	AA	5.	8.	26.	5.8	10.	4.0	26.	602.	1.	1.	5.	25.	17.	0.	16.
17	AA	5.	15.	21.	5.7	10.	6.0	34.	484.	0.	0.	3.	16.	6.	1.	12.
18	AA	5.	22.	7.	4.7	3.	30.0	9.	176.	0.	0.	3.	-3.	3.	0.	7.
19	AA	5.	29.	9.	6.8	3.	11.0	13.	190.	0.	0.	2.	10.	4.	0.	7.
20	AA	6.	6.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	7.
21	AA	6.	13.	14.	5.1	10.	6.0	34.	353.	0.	0.	0.	14.	7.	0.	11.
22	AA	6.	20.	11.	8.5	4.	8.6	32.	280.	0.	2.	2.	13.	0.	0.	9.
23	AA	6.	27.	9.	5.6	6.	8.6	19.	219.	0.	0.	2.	12.	8.	0.	8.
24	AA	7.	3.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	7.
25	AA	7.	10.	28.	6.2	9.	9.6	31.	651.	1.	0.	2.	32.	5.	10.	23.
26	AA	7.	19.	36.	5.7	9.	7.2	38.	705.	0.	0.	12.	38.	16.	2.	29.
27	AA	7.	24.	28.	6.0	18.	6.0	42.	680.	0.	0.	4.	33.	3.	0.	19.
28	AK	7.	31.	24.	6.7	12.	88888.0	42.	88888.	88888.	88888.	88888.	24.	13.	0.	16.
29	AA	8.	7.	88888.	88886.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
30	AA	8.	14.	88888.	5.6	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
31	AA	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
32	AA	8.	28.	88888.	5.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
33	AA	9.	7.	88888.	5.7	88888.	7.2	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
34	AA	9.	14.	88888.	7.1	88888.	2.2	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.
35	AA	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89999.

CR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   BB

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR14
				88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89383.	85...
1	BB	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	0.	89383.	15.
2	BB	2.	2.	88888.	88888.0	22.	88888.0	56.	103.	0.	40.	3.	25.	10.	0.	24.	60.
3	BB	2.	9.	30.	88888.0		88888.0	36.	81.	0.	47.	4.	53.	11.	0.	22.	04.
4	BB	2.	16.	30.	88888.0	9.	88888.0	69.	132.	0.	46.	4.	50.	7.	0.	23.	23.
5	BB	2.	23.	30.	88888.0	19.	88888.0	91.	129.	0.	66.	7.	35.	14.	0.	21.	895..
6	BB	2.	30.	30.	3.6	24.	88888.0	88888.	88888.	88888.	88888.	4.	26.	7.	89888.	88383.	60.
7	BB	3.	6.	88888.	3.6	17.	16.0	68.	122.	0.	47.	4.	25.	7.	0.	21.	61.
8	BB	3.	13.	25.	1.7	25.	13.0	79.	103.	0.	77.	16.	25.	5.	0.	17.	42.
9	BB	3.	20.	32.	3.0	25.	9.0	38.	200.	0.	58.	9.	25.	2.	0.	19.	63.
10	BB	3.	27.	25.	3.0	14.	21.0	87.	251.	0.	70.	6.	16.	5.	88888.	19.	60.
11	BB	4.	4.	30000	2.8	11.	40.0	33.	134.	0.	52.	13.	20.	5.	0.	15.	41.
12	BB	4.	11.	30.	2.6	18.	12.0	54.	164.	0.	66.	11.	18.	0.	0.	18.	43.
13	BB	4.	18.	30.	2.4	13.	88888.0	47.	193.	0.	50.	7.	18.	7.	88888.	17.	44.
14	BB	4.	25.	30.	2.6	22.	13.0	94.	163.	0.	68.	6.	26.	7.	0.	24.	
15	BB	5.	1.	29.	88888.0	21.	88888.0	85.	149.	0.	60.	6.	38.	15.	1.	20.	933..
16	BB	5.	8.	30.	88888.0	20.	88888.0	76.	189.	0.	67.	6.	33.	5.	0.	13.	
17	BB	5.	15.	30.	88888.0	12.	88888.0	45.	136.	0.	39.	6.	9.	4.	88889.	13.	
18	BB	5.	22.	30000	88888.0	29.	88888.0	113.	202.	1.	65.	5.	13.	4.	88888.	12.	545..
19	BB	5.	29.	34.	88888.0	5.	88888.0	17.	74.	0.	50.	7.	13.	5.	3.	12.	
20	BB	6.	6.	30.	88888.0	8.	88888.0	23.	88888.	88888.	88888.	88888.	18.	0.	0.	10.	
21	BB	6.	13.	38.	88888.0	6.	88888.0	22.	100.	0.	44.	10.	25.	2.	0.		93..
22	BB	6.	20.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83533.	91..
23	BB	6.	27.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83588.	83558.	91..
24	BB	7.	3.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83888.	83558.	91..
25	BB	7.	10.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89888.	83388.	91..
26	BB	7.	17.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88868.	88888.	89688.	88388.	91..
27	BB	7.	24.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88688.	88333.	91..
28	BB	7.	31.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88688.	86333.	88333.	51..	
29	BB	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88688.	83659.	8X..5		
30	BB	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88388.	88888.	68388.	83659.	35..		
31	BB	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88683.	94..		
32	BB	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	89888.	95..		
33	BB	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	68668.	85..		
34	BB	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	83333.			
35	BB	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.				

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CCB STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   CC

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VA
1	CC	1.	26.	12.	88888.0	3.	88888.0	10.	190.	0.	0.	0.	9.	1.	1.	9.	
2	CC	2.	10.	10.	88888.0	8.	88888.0	24.		0.	1.		10.	1.	2.	3.	
3	CC	2.	9.	10.	88888.0	6.	88888.0	21.	187.	0.	1.	7.	12.	1.	9.	10.	
4	CC	2.	16.	10.	88888.0	10.	88888.0	20.	240.	0.	1.	1.	14.	5.	16.	10.	
5	CC	2.	23.	12.	88888.0	10.	88888.0	55.	305.	0.	7.	0.	12.	7.	9.	9.	
6	CC	2.	30.	7.	88888.0	6.	88888.0	40.	182.	0.	2.	0.	4.	6.	0.	6.	
7	CC	3.	6.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	6.	
8	CC	3.	13.	14.	88888.0	12.	88888.0	46.	348.	0.	1.	0.	53.	22.	1.	32.	
9	CC	3.	20.	13.	88888.0	31.	88888.0	128.	372.	0.	5.	1.	88888.	68888	88888.	88888.	
10	CC	3.	27.	12.	88888.0	11.	88888.0	43.	388.	0.	5.	6.	10.	2.	0.	6.	
11	CC	4.	10.	8.	8.0	0.	24.0	44.	311.	0.	1.	4.	8.	5.	88888.	6.	
12	CC	4.	11.	0.	0.0	0.	4.0	0.	0.	0.	0.	0.	0.	0.		6.	
13	CC	4.	18.	20.	88888.0	15.	88888.0	78.	425.	0.	14.	3.	34.	7.	0.	20.	
14	CC	4.	25.	19.	88888.0	17.	88888.0	104.	455.	0.	2.	15.	39.	10.	1.	14.	
15	CC	5.	1.	14.	88888.0	14.	88888.0	68.	232.	0.	1.	8.	22.	8.	2.	11.	
16	CC	5.	8.	18000	88888.0	14.	88888.0	60.	684.	0.	12.	11.	24.	15.	1.	13.	
17	CC	5.	15.	17.	88888.0	17.	88888.0	87.	371.	0.	2.	5.	20.	9.	0.	12.	
18	CC	5.	22.	10.	88888.0	8.	88888.0	39.	283.	0.	2.	2.	2.	2.	0.	14.	
19	CC	5.	29.	15.	88888.0	15.	88888.0	54.	363.	0.	5.	3.	21.	11.	0.	13.	
20	CC	6.	6.	12.	88888.0	11.	88888.0	72.	403.	0.	4.	13.	13.	7.	88888.	9.	
21	CC	6.	13.	12.	88888.0	11.	88888.0	45.	258.	0.	6.	5.	16.	2.	0.	9.	
22	CC	6.	20.	9.	88888.0	6.	88888.0	31.	170.	0.	2.	7.	15.	2.	0.	7.	
23	CC	6.	27.	7.	88888.0	6.	88888.0	27.	110.	0.	2.	3.	10.	3.	0.	7.	
24	CC	7.	3.	11.	88888.0	13.	88888.0	72.	250.	0.	1.	9.	15.	6.	1.		
25	CC	7.	10.	12.	88888.0	7.	88888.0	43.	170.	1.	9.	83.	33.	19.	1.	21.	
26	CC	7.	17.	12.	88888.0	6.	88888.0	23.	165.	0.	2.	7.	88888.	88888.	88888.	88888.	
27	CC	7.	24.	11.	88888.01	9.	88888.0	32.	126.	0.	5.	0.	12.	1.	0.	8.	
28	CC	7.	31.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
29	CC	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	CC	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88838.	88888.	
31	CC	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	CC	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	68888.	88888.	
33	CC	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	CC	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	CC	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

(CREATION DATE = 01/25/78) OCR CLEARINGHOUSE DATA

FILE CBDATA

CASE-N	CB	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13
							88888.	88888.	88888.	88888.	88888.	88888.	66888.	88888.	88888.	88888.
							88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
1	DD	1.	26.	88888.	88888.0	88888.	88888.0	88888.	58.	0.	0.	5.	1.	12.	0.	8.
2	DD	2.	2.	88888.	88888.0	88888.	88888.0	13.	89.	0.	7.	8.	16.	2.	0.	8.
3	DD	2.	9.	12.	88888.0	3.	88888.0	20.	195.	0.	5.	0.	17.	3.	0.	6.
4	DD	2.	16.	13.	88888.0	4.	88888.0	13.	123.	0.	1.	16.	12.	2.	0.	12.
5	DD	2.	23.	11.	88888.0	3.	35.0	0.	0.	0.	7.	2.	18.	1.	0.	7.
6	DD	2.	30.	12.	6.3	0.	0.0	61.	360.	0.	5.	6.	2.	4.	0.	14.
7	DD	3.	6.	0.	0.0	16.	38.0	13.	171.	0.	4.	6.	0.	2.	0.	11.
8	DD	3.	13.	23.	5.8	6.	51.0	88888.	0.	0.	9.	9.	20.	1.	0.	11.
9	DD	3.	20.	10.	6.7	88888.	0.0	0.	360.	0.	5.	8.	12.	2.	0.	11.
10	DD	3.	27.	12.	5.7	0.	0.0	25.	120.	0.	6.	3.	10.	3.	0.	11.
11	DD	4.	4.	0.	0.0	5.	45.0	21.	112.	0.	3.	14.	9.	5.	0.	11.
12	DD	4.	11.	17.	6.1	6.	88888.0	90000.	135.	0.	7.	9.	8.	7.	0.	11.
13	DD	4.	18.	16.	7.3	3.	40.0	13.	168.	0.	4.	5.	9.	0.	0.	10.
14	DD	4.	25.	12.	88888.0	4.	6.0	35.	45.	0.	0.	0.	11.	11.	0.	11.
15	DD	5.	1.	15.	9.3	9.	0.0	50.	0.	0.	6.	11.	8.	7.	0.	7.
16	DD	5.	15.	15.	7.3	12.	88888.0	74.	309.	0.	3.	11.	1.	1.	0.	7.
17	DD	5.	14.	0.	88888.0	0.	0.0	74.	140.	0.	0.	11.	6.	0.	0.	7.
18	DD	5.	22.	22.	0.0	15.	88888.0	27.	128.	0.	0.	5.	8.	0.	1.	7.
19	DD	5.	29.	22.	88888.0	10.	88888.0	21.	112.	0.	6.	0.	6.	0.	7.	7.
20	DD	6.	6.	12.	88888.0	6.	88888.0	0.	0.	0.	7.	7.	6.	4.	7.	3.
21	DD	6.	13.	12.	88888.0	5.	0.0	22.	99.	0.	2.	0.	0.	0.	0.	
22	DD	6.	20.	0.	0.0	7.	88888.0	16.	83.	0.	4.	0.	0.	3.	0.	88888.
23	DD	6.	27.	15.	88888.0	4.	88888.0	9.	92.	88888.	88888.	88888.	7.	0.	0.	88888.
24	DD	7.	3.	44.	88888.0		88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
25	DD	7.	10.	13.	88888.0	88888.	88888.0	17.	88888.	88888.	88888.	88888.	86888.	88888.	89888.	88888.
26	DD	7.	17.	88888.	88888.0	5.	88888.0	88888.	88888.	88888.	88888.	86888.	88888.	89888.	88888.	
27	DD	7.	24.	16.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88868.	88888.	
28	DD	7.	31.	88888.	88888.0	88888.	888.0.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
29	DD	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	DD	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	66888.	88888.	
31	DD	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	DD	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.						
33	DD	9.	7.	86888.	88888.0	88888.	88888.0	88888.	88888.	88888.						
34	DD	9.	14.	88888.	88888.0	88888.	88888.0									
35	DD	9.	21.	88888.	88888.0											

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STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SAMPLE   EE

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13
1	EE	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
2	EE	2.	2.	28.	88888.0	15.	88888.0	53.	15.	0.	12.	1.	46.	2.	0.	21.
3	EE	2.	9.	30.	88888.0	16.	88888.0	33.	101.	0.	9.	1.	16.	1.	0.	11.
4	EE	2.	16.	23.	88868.0	14.	88888.0	46.	13000.	0.	10.	1.	21.	1.	0.	16.
5	EE	2.	23.	15.	88868.0	9.	88888.0	31.	140.	0.	10.	2.	10.	3.	0.	8.
6	EE	2.	30.	25.	88888.0	15.	88888.0	36.	157.	0.	16.	9.	23.	4.	2.	-18.
7	EE	3.	6.	24.	88888.0	19.	88888.0	45.	179.	0.	18.	9.	4.	0.	0.	4.
8	EE	3.	13.	17.	11.6	10.	120.0	32.	89.	0.	11.	0.	8.	0.	0.	1.
9	EE	3.	20.	12.	6.3	6.	18.0	16.	.96.	0.	12.	0.	4.	88886.	68888.	2.
10	EE	3.	27.	15.	6.2	9.	28.0	22.	208.	0.	8.	1.	5.	6.	0.	6.
11	EE	4.	4.	30.	8.7	17.	34.0	54.	201.	0.	11.	8.	11.	1.	0.	6.
12	EE	4.	11.	18.	7.2	15.	48.0	48.	109.	0.	8.	3.	9.	1.	0.	9.
13	EE	4.	18.	13.	8.2	7.	21.0	25.	164.	0.	12.	5.	15.	1.	0.	9.
14	EE	4.	25.	12.	9.0	4.	90.0	13.	96.	0.	9.	0.	7.	0.	0.	1.
15	EE	5.	1.	25.	88888.0	12.	88888.0	43.	216.	0.	10.	6.	24.	11.	0.	12.
16	EE	5.	8.	26.	88888.0	15.	88888.0	50.	161.	0.	15.	7.	88888.	88888.	88888.	15.
17	EE	5.	15.	27.	88888.0	11.	88888.0	35.	206.	0.	6.	5.	19.	5.	0.	14.
18	EE	5.	22.	18.	88888.0	6.	88888.0	17.	150.	0.	11.	6.	17.	0.	0.	13.
19	EE	5.	29.	19.	88888.0	5.	88888.0	22.	84.	0.	2.	5.	12.	0.	0.	10.
20	EE	6.	6.	11.	88888.0	4.	88888.0	16.	62.	0.	3.	1.	5.	1.	0.	6.
21	EE	6.	13.	16.	88888.0	10.	88888.0	34.	145.	0.	8.	5.	38.	9.	88888.	28.
22	EE	6.	20.	27.	88888.0	9.	88888.0	30.	178.	0.	7.	8.	88888.	88888.	88888.	88888.
23	EE	6.	27.	14.	86688.0	9.	88888.0	46.	107.	0.	5.	2.	2.	3.	1.	5.
24	EE	7.	3.	18.	88888.0	10.	88888.0	35.	92.	0.	7.	3.	10.	5.	0.	9.
25	EE	7.	10.	16.	88888.0	3.	88888.0	13.	89.	0.	3.	0.	14.	1.	0.	14.
26	EE	7.	17.	29.	88888.0	13.	88888.0	48.	171.	0.	15.	3.	10.	2.	68888.	6.
27	EE	7.	24.	30.	88888.0	11.	88888.0	36.	168.	0.	28.	5.	29.	-5.	88888.	29.
28	EE	7.	31.	21.	88888.0	7.	88888.0	28.	88888.	88888.	88888.	88888.	11.	2.	0.	11.
29	EE	8.	7.	88886.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
30	EE	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
31	EE	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
32	EE	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
33	EE	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
34	EE	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
35	EE	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.

JRS STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CPDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   PP

CASE-N	:CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR..
1	PP	1.	26.	38.	88888.0	30.	88888.0	136.	820.	0.	2.	14.	42.	4.	8.	20.	
2	PP	2.	2.0	37.	88888.0	21.	88888.0	80.	947.	0.	1.	0.	24.	6.	1.	21.	
3	PP	2.	9.	33.	88888.0	22.	88888.0.	83.	822.	0.	0.	0.	17.	3.	0.	13.	
4	PP	2.	16.	38.	88888.0	25.	88888.0	62.	1158.	0.	1.	0.	14.	12.	0.	19.	
5	PP	2.	23.	29.	88888.0	22.	88888.0	109.	1023.	0.	0.	0.	6.	8.	2.	9.	
6	PP	2.	30.	37.	88888.0	22.	88888.0	60.	894.	0.	2.	0.	10.	10.	0.	16.	
7	PP	3.	6.	32.	4.0	24.	23.0	68.	785.	0.	0.	2.	20.	7.	0.	21.	
8	PP	3.	13.	33.	5.0	18.	16.0	72.	821.	0.	0.	1.	9.	11.	0.	14.	
9	PP	3.	20.	26.	4.2	12.	18.0	35.	722.	0.	0.	5.	5.	4.	88838.	7.	
10	PP	3.	27.	17.	5.5	10.	13.0	34.	297.	0.	0.	2.	13.	3.	0.	10.	
11	PP	4.	4.	25.	4.3	16.	29.0	61.	645.	0.	0.	7.	21.	15.	88888.	11.	
12	PP	4.	17.	35.	4.8	26.	31.0	94.	808.	0.	0.	18.	9.	4.	0.	11.	
13	PP	4.	18.	29.	5.2	29.	63.0	118.	773.	0.	0.	6.	4.	5.	88888.	7.	
14	PP	4.	25.	22.	5.1	88888.	20.0	88888.	531.	0.	1.	13.	15.	3.	0.	13.	
15	PP	5.	1.	21.	5.0	11.	36.0	30.	456.	0.	1.	6.	7.	2.	0.	8.	
16	PP	5.	8.	27.	5.0	17.	23.0	73.	582.	0.	0.	8.	22.	14.	2.	21.	
17	PP	5.	15.	23.	4.5	18.	26.0	39.	527.	0.	0.	-2.	10.	7.	0.	13.	
18	PP	5.	22.	25.	4.9	13.	54.0	47.	359.	0.	2.	5.	5.	4.	0.	8.	
19	PP	5.	29.	14.	5.1	10.	36.0	40.	282.	0.	1.	3.	12.	0.	0.	9.	
20	PP	6.	6.	34.	4.2	25.	27.0	102.	976.	0.	1.	8.	11.	2.	2.	11.	
21	PP	6.	13.	32.	5.0	24.	23.0	102.	88888.	88888.	88888.	88888.	4.	2.	88998.	4.	
22	PP	6.	20.	35.	6.6	18.	41.0	60.	859.	0.	2.	5.	10.	5.	88899.	13.	
23	PP	6.	27.	41.	5.7	31.	47.0	113.	940.	0.	0.	1.	30.	7.	0.	19.	
24	PP	7.	3.	33.	5.7	22.	38.0	82.	958.	0.	1.	4.	5.	5.	0.	8.	
25	PP	7.	10.	32.	88888.0	21.	88888.0	105.	461.	0.	0.	7.	15.	12.	0.	21.	
26	PP	7.	17.	30.	7.4	20.	60.0	72.	768.	0.	0.	5.	7.	8.	0.	21.	
27	PP	7.	24.	28.	9.1	19.	40.0	71.	588.	0.	0.	1.	15.	6.	0.	12.	
28	PP	7.	31.	25.	6.7	13.	85.0	44.	88888.	88888.	88888.	88888.	12.	5.	0.	17.	
29	PP	8.	7.	88888.	8.4	88888.	41.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83889.	88888.	
30	PP	8.	14.	88888.	5.5	88888.	37.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88999.	88888.	
31	PP	8.	21.	88888.	7.0	88888.	49.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	PP	8.	28.	88888.	9.0	88888.	75.0	88888.	88888.	88888.	88888.	88888.	88888.	88638.	88856.	88885.	
33	PP	9.	7.	88888.	8.1	88888.	32.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88938.	88883.	
34	PP	9.	14.	88888.	6.1	88888.	34.0	88888.	88888.	88888.	88888.	88888.	88888.	88988.	88888.	88999.	
35	PP	9.	24.	7.	88888.0	107.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCB CLEARINGHOUSE DATA
SUBFILE   GG

-CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	V...
1	GG	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88988.	88888.	
2	GG	2.	2.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
3	GG	2.	9.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
4	GG	2.	16.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
5	GG	2.	23.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
6	GG	2.	30.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
7	GG	3.	6.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
8	GG	3.	13.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
9	GG	3.	20.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
10	GG	3.	27.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
11	GG	4.	4.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
12	GG	4.	11.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
13	GG	4.	18.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
14	GG	4.	25.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
15	GG	5.	1.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
16	GG	5.	8.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
17	GG	5.	15.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
18	GG	5.	22.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
19	GG	5.	29.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
20	GG	6.	6.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
21	GG	6.	13.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
22	GG	6.	20.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
23	GG	6.	27.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
24	GG	7.	3.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
25	GG	7.	10.	7.	88888.0	3.	88888.0	10.	8.	0.	0.	0.	12.	5.	0.	7.	
26	GG	7.	17.	1.	88888.0	88888.	88888.0	88888.	2.	0.	0.	0.	4.	3.	88888.	1.	
27	GG	7.	24.	17.	88888.0	88888.	88888.0	88888.	56.	0.	3.	8.	10.	10.	88888.	12.	
28	GG	7.	31.	11.	88888.0	3.	88888.0	8.	88888.	88888.	88888.	88888.	10.	5.	83888.	8.	
29	GG	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83888.	88888.	
30	GG	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83888.	88888.	
31	GG	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	GG	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
33	GG	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	GG	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	GG	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

IE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
FILE   HH

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR14
1	HH	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
2	HH	2.	2.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
3	HH	2.	9.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
4	HH	2.	16.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
5	HH	2.	23.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
6	HH	2.	30.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
7	HH	3.	6.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
8	HH	3.	13.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
9	HH	3.	20.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
10	HH	3.	27.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
11	HH	4.	4.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
12	HH	4.	11.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
13	HH	4.	18.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
14	HH	4.	25.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
15	HH	5.	1.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
16	HH	5.	8.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
17	HH	5.	15.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
18	HH	5.	22.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
19	HH	5.	29.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
20	HH	6.	6.	15.	3.1	13.	6.0	72.	123.	36.	24.	6.	10.	4.	0.	9.	
21	HH	6.	13.	19.	88888.0	19.	88888.0	86.	458.	68.	30.	0.	18.	3.	0.	13.	
22	HH	6.	20.	12.	88888.0	12.	88888.0	52.	95.	55.	38.	0.	13.	3.	0.	8.	
23	HH	6.	27.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	
24	HH	7.	3.	18.	88888.0	15.	88888.0	69.	181.	70.	42.	3.	16.	10.	0.	15.	
25	HH	7.	10.	15.	88888.0	14.	88888.0	87.	176.	70.	31.	3.	6.	2.	6.	10.	
26	HH	7.	17.	12.	88888.0	13.	88888.0	66.	181.	51.	31.	0.	2.	7.	0.	0.	
27	HH	7.	24.	11.	88888.0	9.	88888.0	47.	189.	32.	22.	1.	6.	1.	0.	4.	
28	HH	7.	31.	17.	88888.0	14.	88888.0	47.	88888.	88888.	88888.	88888.	9.	4.	0.	9.	
29	HH	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
30	HH	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
31	HH	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
32	HH	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
33	HH	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
34	HH	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
35	HH	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.

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STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE CPDATA (CREATION DATE = 01/25/78) QCR CLEARINGHOUSE DATA
CPFILE II

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VA
1	II	1.	26.	25.	88888.0	21.	88888.0	86.	393.	0.	33.	6.	18.	9.	1.	15.	
2	II	2.	2.	14.	88888.0	12.	88888.0	66.	285.	0.	17.	6.	14.	6.	1.		
3	II	2.	9.	25.	88888.0	21.	88888.0	148.	478.	0.	30.	13.	67.	23.	1.	24.	
4	II	2.	16.	11.	88888.0	18.	88888.0	75.	322.	0.	13.	9.	20.	19.	1.	11.	
5	II	2.	23.	30.	88888.0	20.	88888.0	76.	614.	0.	24.	13.	34.	9.	3.	22.	
6	II	2.	30.	20.	2.8	26.	88888.0	90.	486.	0.	26.	6.	18.	10.	0.	15.	
7	II	3.	6.	17.	3.9	17.	88888.0	55.	304.	0.	18.	2.	4.	8.	0.	4.	
8	II	3.	13.	15.	4.6	8.	32.0	41.	169.	2.	9.	6.	12.	5.	0.	13.	
9	II	3.	20.	24.	5.0	23.	36.0	51.	339.	4.	25.	13.	30.	7.	2.	19.	
10	II	3.	27.	21.	88888.0	19.	88888.0	94.	371.	4.	28.	5.	39.	22.	4.	21.	
11	II	4.	4.	20.	88888.0	7.	88888.0	71.	335.	0.	22.	16.	53.	10.	1.	17.	
12	II	4.	11.	19.	88888.0	19.	88888.0	72.	232.	0.	7.	10.	20.	7.	15.	16.	
13	II	4.	18.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	
14	II	4.	25.	35.	88888.0	21.	88888.0	70.	380.	0.	19.	24.	28.	17.	4.	24.	
15	II	5.	1.	21.	88888.0	5.	88888.0	107.	568.	0.	26.	41.	18.	6.	1.	14.	
16	II	5.	8.	23.	88888.0	10.	88888.0	28.	261.	6.	25.	5.	68.	9.	4.	22.	
17	II	5.	15.	26.	88888.0	22.	88888.0	91.	1075.	4.	17.	11.	54.	24.	6.	23.	
18	II	5.	22.	22.	88888.0	88888.	88888.0	41.	200.	1.	19.	15.	11.	10.	5.		
19	II	5.	29.	21.	88888.0	10.	88888.0	29.	225.	2.	19.	9.	8.	1.	88888.	7.	
20	II	6.	6.	23.	88888.0	20.	88888.0	58.	292.	0.	32.	16.	17.	9.	2.	15.	
21	II	6.	13.	24.	88888.0	2.	88888.0	26.	256.	2.	32.	13.	30.	3.	1.	18.	
22	II	6.	20.	17.	88888.0	3.	88888.0	28.	187.	3.	21.	11.	8.	0.	0.	10.	
23	II	6.	27.	13.	88888.0	8.	88888.0	27.	357.	1.	8.	7.	10.	1.	88888.	8.	
24	II	7.	3.	10.	88888.0	88888.	88888.0	88888.	253.	0.	2.	0.	10.	7.	1.	9.	
25	II	7.	10.	19.	88888.0	9.	88888.0	41.	200.	1.	16.	10.	9.	0.	0.	11.	
26	II	7.	17.	6.	88888.0	2.	88888.0	41.	118.	0.	5.	7.	4.	6.	0.		
27	II	7.	24.	7.	88888.0	3.	88888.0	27.	118.	0.	5.	7.	3.	12.	0.	7.	
28	II	7.	31.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
29	II	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	II	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
31	II	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	II	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
33	II	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	II	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	II	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

CR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
CFILE JJ

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR14
1	JJ	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
2	JJ	2.	2.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
3	JJ	2.	9.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	9.
4	JJ	2.	16.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.
5	JJ	2.	23.	17.	88888.0	7.	88888.0	25.	106.	0.	5.	10.	8.	1.	0.	6.	
6	JJ	2.	30.	18.	88888.0	88888.	88888.0	88888.	78.	0.	1.	6.	14.	2.	0.	9.	
7	JJ	3.	6.	34.	88888.0	18.	88888.0	40.	223.	0.	18.	11.	1.	3.	2.	5.	
8	JJ	3.	13.	22.	88888.0	5.	88888.0	13.	88.	0.	17.	7.	17.	0.	0.	13.	
9	JJ	3.	20.	25.	88888.0	7.	88888.0	17.	53.	0.	7.	5.	13.	3.	88888.	13.	
10	JJ	3.	27.	20.	88888.0	2.	88888.0	4.	43.	0.	5.	4.	14.	3.	0.	11.	31.
11	JJ	4.	4.	18.	88888.0	3.	88888.0	8.	60.	0.	7.	2.	13.	88888.	88888.	9.	
12	JJ	4.	11.	21.	88888.0	5.	88888.0	14.	58.	0.	10.	1.	17.	0.	0.	9.	
13	JJ	4.	18.	17.	88888.0	3.	88888.0	6.	49.	1.	5.	2.	7.	15.	0.	15.	
14	JJ	4.	25.	16.	88888.0	3.	88888.0	11.	52.	0.	4.	4.	5.	88888.	88888.	4.	
15	JJ	5.	1.	15.	88888.0	1.	88888.0	6.	29.	0.	6.	1.	2.	2.	88888.	4.	
16	JJ	5.	8.	21.	88888.0	5.	88888.0	19.	43.	0.	6.	3.	8.	3.	0.	6.	
17	JJ	5.	15.	18.	88888.0	2.	88888.0	6.	44.	0.	8.	1.	14.	2.	1.	12.	
18	JJ	5.	22.	14.	88888.0	1.	88888.0	3.	36.	0.	4.	1.	7.	1.	1.	7.	
19	JJ	5.	29.	16.	88888.0	3.	88888.0	7.	42.	0.	6.	0.	16.	1.	0.	11.	
20	JJ	6.	6.	19.	88888.0	13.	88888.0	40.	54.	0.	6.	1.	2.	11.	0.	10.	
21	JJ	6.	13.	14.	88888.0	3.	88888.0	8.	22.	0.	4.	0.	9.	0.	0.	8.	
22	JJ	6.	20.	15.	88888.0	2.	88888.0	6.	29.	0.	6.	1.	13.	0.	0.	13.	
23	JJ	6.	27.	33.	88888.0	6.	88888.0	18.	87.	0.	8.	6.	16.	0.	0.	11.	
24	JJ	7.	3.	14.	88888.0	3.	88888.0	9.	35.	0.	1.	1.	7.	1.	0.	6.	
25	JJ	7.	10.	17.	88888.0	4.	88888.0	11.	37.	0.	3.	2.	9.	3.	0.	9.	
26	JJ	7.	17.	10.	88888.0	1.	88888.0	4.	13.	0.	4.	0.	5.	0.	0.	5.	
27	JJ	7.	24.	21.	88888.0	1.	88888.0	3.	45.	0.	4.	0.	1.	23.	0.	21.	
28	JJ	7.	31.	29.	88888.0	6.	88888.0	24.	88888.	88888.	88888.	88888.	27.	25.	0.	29.	
29	JJ	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	JJ	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
31	JJ	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	JJ	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
33	JJ	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	JJ	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	JJ	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

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'? STUCY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

‖LE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
.:FILE   KK

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	
1	KK	1.	26.	16.	88888.0	7.	88888.0	20.	209.	0.	0.	0.	15.	3.	0.	9.	
2	KK	2.	2.	16.	88888.0	7.	88888.0	24.	180.	0.	0.	0.	29.	7.	0.	15.	
3	KK	2.	9.	16.	88888.0	9.	88888.0	32.	134.	0.	5.	5.	32.	2.	1.	14.	
4	KK	2.	16.	16.	88888.0	13.	8868..0	60.	108.	0.	10.	5.	12.	6.	C.	12.	
5	KK	2.	23.	16.	88888.0	13..	88888.0	39.	71.	1.	6.	0.	13.	1.	C.	3.	
6	KK	2.	30.	16.	88888.0	9.	88888.0	25.	171.	0.	7.	1.	27.	7.	C.	12.	
7	KF	3.	6.	16.	88888.0	11.	88888.0	22.	74.	1.	18.	3.	3.	1.	0.	4.	
8	KK	3.	13.	15.	2.6	12.	5.0	53.	289.	0.	7.	1.	20.	4.	C.	10.	
9	KK	3.	20.	17.	2.6	4.	88888.0	10.	91.	0.	10.	1.	12.	4.	C.	13.	
10	KK	3.	27.	16.	2.7	10.	88888.0	38.	78.	4.	12.	3.	16.	4.	88888.	14.	
11	KK	4.	4.	16.	2.0	4.	88888.0	12.	116.	0.	14.	4.	10.	0.	0.	6.	
12	FK	4.	11.	16.	2.4	8.	88888.0	17.	61.	0.	13.	4.	37.	2.	0.	14.	
13	KF	4.	18.	16.	3.3	10.	88898.0	43.	7.	C.	15.	8.	6.	4.	0.	9.	
14	KK	4.	25.	14.	2.8	7.	88888.0	23.	46.	0.	4.	1.	12.	3.	1.	9.	
15	KK	5.	1.	16.	1.8	8.	88888.0	38.	137.	0.	14.	6.	7.	2.	88888.	7.	
16	KK	5.	8.	16.	4.3	9.	11.0	31.	23.	0.	13.	6.	5.	3.	C.	7.	
17	KK	5.	15.	16.	2.7	4.	12.0	14.	52.	0.	3.	0.	8.	3.	2.	9.	
18	KK	5.	22.	13.	88888.0	2.	88888.0	16.	56.	0.	8.	2.	4.	3.	2.	9.	
19	KK	5.	29.	10.	1.7	2.	88888.0	8.	158.	0.	5.	0.	45.	4.	C.	6.	
20	FK	6.	6.	19.	5.1	7.	88888.0	37.	133.	0.	10.	1.	6.	3.	88868.	9.	
21	FK	6.	13.	16.	2.9	8.	16.0	42.	106.	C.	8.	3.	7.	5.	C.	7.	
22	KK	6.	20.	16.	88888.0	4.	88888.0	18.	102.	0.	4.	4.	5.	2.	88988.	7.	
23	FK	6.	27.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	2.	
24	KK	7.	3.	25.	88888.0	10.	88888.0	41.	177.	0.	13.	0.	35.	5.	6.	21.	
25	KK	7.	10.	23.	88888.0	5.	88888.0	42.	103.	0.	6.	3.	21.	10.	11.	21.	
26	KK	7.	17.	16.	6.4	0.	88888.0	27.	78.	0.	6.	2.	15.	3.	C.	11.	
27	KK	7.	24.	16.	4.0	3.	88888.0	15.	62.	0.	7.	3.	25.	10.	1.	16.	
28	KK	7.	31.	16.	4.0	1.	8.5	12.	88888.	88888.	88888.	88888.	9.	88888.	88888.		
29	KK	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88988.	88995.		
30	KK	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88988.	68885.	63865.		
31	KK	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88858.	63885.	63885.		
32	KK	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	83858.	68886.			
33	KK	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	68895.	88888.	39558.			
34	KK	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	83888.	86888.			
35	KK	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88889.	88889.	66855.			

IE STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE 'LL

CASE-N	.CH	MONTH	WEEK	VAR01	VARC2	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR1
1	LL	1.	26.	55.	88888.0	35.	88888.0	152.	402.	0.	25.	5.	83.	5.	2.	51.	151.
2	LL	2.	2.	49.	88888.0	18.	88888.0	69.	283.	0.	22.	12.	7.	0.	0.	48.	12.
3	LL	2.	9.	20.	88888.0	15.	88888.0	73.	177.	0.	7.	1.	38.	4.	0.	20.	
4	LL	2.	16.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88988.	88888.	88888.	8888.
5	LL	2.	23.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88886.	88888.	888.
6	LL	2.	30.	28.	88888.0	15.	88888.0	53.	76.	0.	11.	7.	57.	7.	2.	27.	
7	LL	3.	6.	40.	88888.0	25.	88888.0	102.	117.	0.	17.	9.	54.	7.	13.	3.	1.
8	LL	3.	13.	35.	88888.0	29.	88888.0	154.	254.	0.	23.	23.	41.	14.	20.	2.	1.
9	LL	3.	20.	43.	88888.0	37.	88888.0	140.	512.	0.	9.	11.	31.	6.	88888.	23.	
10	LL	3.	27.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.		
11	LL	4.	4.	24.	88886.0	26.	88888.0	76.	62.	1.	3.	4.	35.	14.	-1.	18.	
12	LL	4.	11.	24.	88888.0	17.	88888.0	56.	56.	1.	2.	1.	28.	5.	0.	18.	
13	LL	4.	18.	25.	88888.0	13.	88888.0	68.	57.	1.	0.	10.	22.	-9.	8.	18.	
14	LL	4.	25.	27.	88888.0	25.	88888.0	93.	19.	5.	4.	4.	26.	2.	3.	15.	
15	LL	5.	1.	26.	88888.0	26.	88888.0	140.	74.	6.	5.	3.	32.	4.	0.	24.	51.
16	LL	5.	8.	27.	88888.0	15.	88888.0	57.	69.	5.	6.	4.	39.	11.	1.	23.	1.
17	LL	5.	15.	37.	88888.0	37.	88888.0	150.	22.	3.	4.	4.	66.	10.	1.	21.	6.
18	LL	5.	22.	52.	88888.0	28.	88888.0	105.	71.	7.	8.	3.	76.	22.	7.	25.	1.
19	LL	5.	29.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.		
20	LL	6.	6.	37.	88888.0	35.	88888.0	150.	80.	8.	8.	6.	49.	8.	3.	3.	
21	LL	6.	13.	37.	88888.0	37.	88888.0	139.	88888.	88888.	88888.	88888.	52.	13.	3.	28.	1.
22	LL	6.	20.	77.	88888.0	50.	88888.0	233.	90.	6.	21.	19.	70.	17.	3.	53.	1.
23	LL	6.	27.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.		
24	LL	7.	3.	48.	88888.0	32.	88888.0	116.	98.	8.	9.	5.	63.	19.	1.	37.	11.
25	LL	7.	10.	44.	88888.0	43.	88888.0	171.	7.	25.	15.	5.	57.	7.	88888.	31.	1.
26	LL	7.	17.	30.	88888.0	25.	88888.0	103.	64.	20.	22.	5.	49.	13.	0.	28.	6.
27	LL	7.	24.	45.	88888.0	40.	88888.0	155.	200.	49.	35.	8.	49.	7.	2.	28.	8.
28	LL	7.	31.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
29	LL	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
30	LL	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
31	LL	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
32	LL	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
33	LL	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
34	LL	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.
35	LL	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	888.

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STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

2 CHDATA (CREATION DATE = 01/25/78) OCR CLEARINGHOUSE DATA
FILE NH

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13
1	HH	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83898.	88395.
2	HH	2.	2.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83898.	88898.
3	HH	2.	9.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	89898.	66398.
4	HH	2.	16.	88888.	88888.0	88888.	88888.0	88888.	88868.	88888.	88888.	88888.	20.	88888.	89888.	83535.
5	HE	2.	23.	88888.	88888.0	88888.	86888.0	88888.	88868.	0.	3.	3.	20.	12.	2.	88889.
6	HH	2.	30.	14.	6.7	14.	88888.0	57.	265.	0.	3.	2.	15.	17.	0.	13.
7	HH	3.	6.	14.	7.6	15.	19.0	56.	367.	0.	0.	2.	25.	12.	1.	12.
8	HH	3.	13.	13.	88888.0	10.	88888.0	41.	379.	0.	2.	2.	16.	2.	88888.	11.
9	HH	3.	20.	14.	4.9	10.	24.0	30.	289.	0.	1.	7.	18.	28.	0.	16.
10	HH	3.	27.	20.	88888.0	15.	88888.0	49.	618.	0.	0.	0.	0.	0.	0.	15.
11	HH	4.	4.	0.	0.0	0.	0.0	0.	0.	0.	0.	1.	12.	13.	0.	13.
12	HH	4.	11.	20.	7.1	16.	24.0	57.	294.	0.	1.	4.	17.	3.	88888.	13.
13	HS	4.	18.	20.	5.4	7.	88888.0	23.	363.	0.	4.	7.	13.	9.	0.	13.
14	HH	4.	25.	20.	5.0	12.	88888.0	55.	373.	0.	3.	6.	20.	10.	2.	16.
15	HH	5.	1.	20.	4.4	10.	9.6	33.	291.	0.	3.	14.	21.	8.	2.	13.
16	HH	5.	8.	20.	2.9	10.	88888.0	40.	295.	0.	5.	11.	27.	20.	89886.	13.
17	HH	5.	15.	20.	5.6	10.	20.0	42.	240.	0.	0.	10.	88888.	88888.	89868.	88855.
18	HH	5.	22.	15.	88888.0	8.	88888.0	29.	326.	0.	3.	16.	19.	4.	0.	11.
19	HE	5.	29.	15.	88888.0	12.	88888.0	60.	353.	0.	0.	5.	6.	6.	1.	7.
20	HH	6.	6.	10.	88888.0	7.	88888.0	36.	121.	1.	0.	7.	11.	8.	88888.	9.
21	HH	6.	13.	10.	88888.0	8.	86988.0	43.	185.	0.	1.	5.	10.	5.	0.	8.
22	HH	6.	20.	10.	4.3	6.	18.0	29.	125.	0.	2.	5.	1.	2.	0.	9.
23	HH	6.	27.	10.	5.7	5.	15.0	17.	88.	0.	0.	9.	8.	6.	89898.	9.
24	HH	7.	3.	10.	6.0	8.	32.0	35.	115.	0.	6.	9.	6.	9.	0.	13.
25	HS	7.	10.	12.	88888.0	10.	88888.0	56.	271.	0.	6.	12.	8.	13.	0.	13.
26	HH	7.	17.	15.	88888.0	13.	88888.0	52.	219.	0.	2.	11.	5.	5.	0.	12.
27	HH	7.	24.	15.	88888.0	10.	88888.0	45.	251.	0.	2.	14.	11.	88888.	83888.	88885.
28	HH	7.	31.	18.	88888.0	13.	88888.0	57.	88888.	88888.	88888.	88888.	88888.	88888.	83888.	88883.
29	HH	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83888.	88853.
30	HH	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83868.	85838.
31	HH	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88858.
32	HH	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	83388.	83333.
33	HH	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	63388.	88338.
34	HH	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	63388.	89534.
35	HH	9.	21.	88868.	88888.0	88888.										

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S STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

LE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
FILE   NN

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR14
1	NN	1.	26	11.	88888.0	7.	88888.0	31.	178.	0.	7.	11.	24.	0.	2.	8.	
2	NN	2.	2.	17.	88888.0	9.	88888.0	39.	188.	0.	3.	15.	17.	2.	1.	12.	
3	NN	2.	9.	23.	88888.0	7.	88888.0	44.	180.	0.	1.	5.	13.	7.	0.	11.	
4	NN	2.	16.	10.	88888.0	1.	88888.0	3.	118.	0.	5.	2.	9.	0.	0.	7.	
5	NN	2.	23.	14.	88888.0	6.	88888.0	16.	.317.	0.	3.	3.	13.	2.	0.	8.	
6	NN	2.	30.	14.	4.5	6.	34.0	14.	102.	0.	1.	11.	14.	6.	0.	9.	
7	NN	3.	6.	7.	5.2	4.	40.0	13.	200.	0.	2.	8.	9.	3.	0.	5.	
8	NN	3.	13.	13.	6.0	8.	42.0	26.	154.	0.	0.	8.	17.	2.	0.	11.	
9	NN	3.	20.	12.	6.4	7.	88888.0	16.	203.	0.	7.	3.	20.	1.	88888.	9.	
10	NN	3.	27.	11.	5.8	3.	88888.0	7.	158.	0.	7.	5.	8.	6.	0.	8.	
11	NN	4.	4.	12.	7.5	2.	48.0	3.	212.	0.	4.	6.	10.	3.	0.	7.	
12	NN	4.	11.	10.	7.0	4.	18.0	13.	192.	0.	8.	2.	9.	3.	1.	7.	
13	NN	4.	18.	14.	6.7	3.	20.0	10.	193.	0.	8.	1.	13.	0.	0.	9.	
14	NN	4.	25.	7.	6.2	5.	60.0	14.	280.	0.	5.	8.	12.	4.	0.	5.	
15	NN	5.	1.	17.	4.6	5.	13.0	2.	386.	0.	10.	3.	28.	10.	0.	15.	
16	NN	5.	8.	29.	88888.0	17.	88888.0	71.	48.	0.	23.	14.	2.	155	1.	12.	
17	NN	5.	15.	4.	88888.0	2.	88888.0	4.	19.	0.	0.	1.	2.	0.	0.	2.	
18	NN	5.	22.	15.	88888.0	7.	88888.0	27.	254.	0.	3.	1.	18.	7.	0.	11.	
19	NN	5.	29.	5.	88888.0	3.	88888.0	9.	83.	0.	0.	0.	4.	3.	0.	11.	
20	NN	6.	6.	13.	4.6	8.	48.0	39.	342.	0.	0.	5.	27.	9.	0.	11.	
21	NN	6.	13.	6.	4.0	2.	40.0	11.	107.	0.	0.	3.	4.	88888.	88888.	4.	
22	NN	6.	20.	2.	4.0	1.	88888.0	2.	54.	0.	0.	1.	0.	0.	0.	0.	
23	NN	6.	27.	-6.	88888.0	3.	88888.0	18.	53.	0.	0.	2.	12.	2.	88888.	6.	
24	NN	7.	3.	11.	4.9	5.	25.0	21.	148.	0.	1.	4.	14.	14.	1.	10.	
25	NN	7.	10.	6.	4.9	2.	36.0	8.	77.	0.	1.	4.	0.	3.	1.	3.	
26	NN	7.	17.	8.	5.6	4.	48.0	18.	124.	0.	1.	3.	12.	2.	1.	5.	
27	NN	7.	24.	26.	3.4	14.	45.0	60.	467.	0.	4.	13.	45.	7.	0.	21.	
28	NN	7.	31.	22.	4.2	9.	27.0	45.	88888.	88888.	88888.	88888.	88888.	11.	1.	19.	
29	NN	8.	7.	88888.	4.9	88888.	42.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	NN	8.	14.	88888.	4.1	88888.	37.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
31	NN	8.	21.	88888.	5.6	88888.	60.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	NN	8.	28.	88888.	4.8	88888.	21.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
33	NN	9.	7.	88888.	7.0	88888.	24.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	NN	9.	14.	88888.	9.9	88888.	36.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	NN	9.	21.	88888.	5.1	88888.	36.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

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IE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
L-FILE   00

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR1.
1	00	1.	26.	8.	88888.0	11.	88888.0	56.	26.	0.	0.	1.	6.	4.	0.	7.	25.
2	00	2.	2.	14.	88888.0	11.	88888.0	39.	217.	2.	12.	7.	-21.	9.	0.	10.	
3	00	2.	9.	9.	88888.0	11.	88888.0	50.	113.	1.	6.	3.	10.	2.	3.	7.	27.
4	00	2.	16.	15.	88888.0	10.	88888.0	30.	197.	1.	7.	1.	21.	2.	2.	11.	27.
5	00	2.	23.	14.	88888.0	11.	88888.0	39.	158.	0.	3.	4.	21.	2.	0.	10.	
6	00	2.	30.	19.	88888.0	18.	88888.0	64.	226.	2.	0.	7.	10.	0.	1.	10.	
7	00	3.	6.	12.	88888.0	13.	88888.0	49.	189.	1.	1.	6.	13.	0.	0.	10.	
8	00	3.	13.	14.	88888.0	13.	88888.0	74.	194.	3.	1.	6.	8.	-6.	1.	10.	
9	00	3.	20.	14.	88888.0	11.	88888.0	38.	246.	7.	4.	2.	20.	2.	0.	12.	
10	00	3.	27.	14.	88888.0	14.	88888.0	48.	146.	3.	5.	2.	10.	3.	0.	9.	
11	00	4.	4.	8.	88888.0	6.	88888.0	21.	243.	2.	2.	8.	3.	1.	88888.	9.	
12	00	4.	11.	16.	88888.0	14.	88888.0	78.	232.	9.	9.	7.	15.	3.	88888.	3.	
13	00	4.	18.	13.	88888.0	10.	88868.0	38.	88.	20.	8.	8.	15.	7.	1.	12.	
14	00	4.	25.	20.	88888.0	20.	88888.0	84.	343.	43.	12.	11.	8.	5.	0.	10.	
15	00	5.	1.	17.	88888.0	23.	88888.0	104.	230.	19.	16.	7.	26.	4.	3.	12.	
16	00	5.	8.	17.	88888.0	14.	88888.0	55.	202.	31.	5.	2.	15.	6.	1.	12.	
17	00	5.	15.	18.	88888.0	17.	88888.0	68.	266.	28.	9.	2.	12.	9.	0.	13.	
18	00	5.	22.	15.	88888.0	13.	88888.0	61.	141.	6.	7.	14.	4.	7.	0.	6.	388
19	00	5.	29.	10.	88888.0	7.	88888.0	29.	197.	2.	7.	3.	7.	6.	0.	8.	
20	00	6.	6.	5.	88888.0	4.	88888.0	23.	169.	2.	5.	3.	5.	1.	0.	4.	1.
21	00	6.	13.	2.	88888.0	2.	88888.0	7.	32.	0.	2.	0.	88888.	88888.	88888.	2.	
22	00	6.	20.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	2.	
23	00	6.	27.	0.	0.0	0.	0.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	
24	00	7.	3.	10.	88888.0	9.	88888.0	72.	170.	2.	11.	5.	6.	5.	1.	7.	
25	00	7.	10.	10.	88888.0	8.	88888.0	35.	135.	2.	5.	1.	6.	5.	2.	5.	
26	00	7.	17.	10.	88688.0	9.	88888.0	45.	124.	6.	3.	11.	6.	0.	8.		
27	00	7.	24.	11.	88888.0	10.	88888.0	41.	162.	7.	11.	2.	6.	2.	0.	5.	
28	00	7.	31.	10.	88888.0	36.	88888.0	112.	88888.	88888.	88888.	88888.	22.	3.	2.	10.	
29	00	8.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
30	00	8.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
31	00	8.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
32	00	8.	28.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
33	00	9.	7.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
34	00	9.	14.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
35	00	9.	21.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	

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C? STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

ILE CHEATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
U3PILE PP

CASE-N	CH	MONTH	WEEK	VAR01	VAR02	VAR03	VARC4	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10	VAR11	VAR12	VAR13	VAR
1	PP	1.	26.	88888.	88888.0	88888.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.	
2	PP	2.	2.	15.	88888.0	11.	88888.0	38.	68.	9.	7.	1.	88888.	88888.	88888.	88888.	
3	PP	2.	9.	15.	88888.0	10.	88888.0	32.	65.	4.	8.	1.	45.	3.	4.	88888.	
4	PP	2.	16.	15.	88888.0	6.	88888.0	13.	31.	7.	6.	1.	29.	2.	0.	21.	
5	PP	2.	23.	15.	88888.0	9.	88888.0	27.	76.	15.	14.	0.	7.	1.	0.	12.	
6	PP	2.	30.	14.	88888.0	6.	88888.0	17.	93.	0.	12.	1.	20.	2.	3.	5.	
7	PP	3.	6.	14.	5.0	8.	88888.0	18.	65.	6.	18.	6.	8.	0.	1.	7.	
8	PP	3.	13.	14.	6.2	8.	88888.0	29.	63.	3.	21.	6.	6.	0.	1.	6.	
9	PP	3.	20.	14.	3.7	7.	88888.0	22.	76.	2.	23.	7.	10.	3.	0.	6.	
10	PP	3.	27.	15.	4.9	8.	88888.0	18.	60.	0.	11.	3.	13.	19.	0.	15.	
11	PP	4.	4.	15.	3.2	7.	88888.0	23.	59.	1.	17.	5.	13.	5.	0.	11.	
12	PP	4.	11.	15.	7.8	13.	88888.0	44.	81.	4.	13.	4.	88888.	88888.	88888.	88888.	
13	PP	4.	18.	15.	4.6	7.	88888.0	20.	44.	28.	17.	2.	25.	3.	0.	13.	
14	PP	4.	25.	15.	3.8	7.	88888.0	21.	6.	29.	19.	1.	11.	88888.	88888.	8.	
15	PP	5.	1.	15.	3.7	11.	88888.0	37.	83.	13.	11.	2.	18.	1.	88888.	11.	
16	PP	5.	8.	15.	3.3	11.	88888.0	38.	34.	34.	15.	3.	19.	3.	1.	11.	
17	PP	5.	15.	15.	3.0	13.	88888.0	52.	41.	31.	14.	7.	11.	7.	0.	10.	
18	PP	5.	22.	15.		7.	88888.0	21.	64.	8.	11.	2.	8.	1.	0.	7.	
19	PP	5.	29.	15.	6.9	9.	88888.0	38.	54.	4.	11.	2.	10.	1.	88888.	10.	
20	PP	6.	6.	15.	2.1	9.	88888.0	35.	32.	19.	8.	2.	7.	3.	0.	6.	
21	PP	6.	13.	15.	2.9	12.	88888.0	40.	25.	20.	9.	4.	14.	1.	0.	10.	
22	PP	6.	20.	15.	88888.0	6.	88888.0	22.	54.	16.	9.	5.	21.	4.	0.	12.	
23	PP	6.	27.	15.	2.3	5.	88888.0	17.	51.	0.	10.	1.	8.	1.	88888.	6.	
24	PP	7.	3.	15.	5.0	8.	88888.0	26.	42.	6.	7.	3.	9.	2.	2.	9.	
25	PP	7.	10.	15.	4.3	11.	88888.0	46.	25.	5.	10.	10.	4.	2.	0.	6.	
26	PP	7.	17.	15.	88888.0	8.	88888.0	28.	57.	6.	12.	5.	9.	1.	0.	4.	
27	PP	7.	24.	15.	3.0	10.	88888.0	45.	71.	15.	11.	6.	3.	0.	1.	4.	
28	PP	7.	31.	15.	2.5	12.	11.0	57.	88888.	88888.	88888.	88888.	3.	88888.	88888.		
29	PP	8.	7.	88888.	2.0	88888.	13.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
30	PP	8.	14.	88888.	2.1	88888.	20.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
31	PP	8.	21.	88888.	2.5	88888.	24.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
32	PP	8.	28.	88888.	88888.0	88888.	10.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
33	PP	9.	7.	88888.	1.9	88888.	12.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
34	PP	9.	14.	88888.	3.0	88888.	24.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		
35	PP	9.	21.	88888.	88888.0	24.	88888.0	88888.	88888.	88888.	88888.	88888.	88888.	88888.	88888.		

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APPENDIX C

DATA NORMALIZED PER DOCUMENT RESUME

APPENDIX C
DATA NORMALIZED PER DOCUMENT RESUME

DATA ELEMENT	WEEK STARTING 1976																										1977							
	July	August					September				October				November				December				January					February				March		
	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14	21	28	7	14	21
1. Number of Document Resumes Keyed																																			
2. Number of Document Resumes Keyed per hour																																			
3. Number of Document Resumes Corrected by Clearinghouses																																			
4. Number of Document Resumes Corrected by Clearinghouses per hour																																			
5. Number of Correction Lines Keyed by Clearinghouse (NOR05)																													---	---	---			---	---
6. Number of Character Erasures (Blobs) (NOR06)																													---	---	---			---	---
7. Number of Character Deletions (Hooks) (NOR07)																													---	---	---			---	---
8. Number of Word Deletions (Double Hooks) (NOR08)																													---	---	---			---	---
9. Number of Line Deletions (Triple Hooks) (NOR09)																													---	---	---			---	---
10. Number of Content Errors Found on OCR Forms by Editors (NOR10)																													---	---	---			---	---
11. Number of Keying Errors Found on OCR Forms by Editors (NOR11)																														---	---			---	---
12. Number of Scanning Errors Found on OCR Forms by Editors (NOR12)																													---	---	---			---	---
13. Number of Document Resumes Corrected by ERIC Facility (NOR13)																													---	---	---			---	---
14. Number of Correction Lines Keyed by the ERIC Facility (NOR14)																													---	---	---	---		---	---
15. Number of Document Resumes Scanned for OCR																																			
16. Number of sheets (of OCR Forms) Scanned for OCR																																			
17. Number of sheets (of OCR Forms) Scanned per Hour																																			
18. Number of Characters Scanned for OCR																																			
19. Number of Characters Scanned per Hour																																			
20. Numbers of Lines of Text Scanned for OCR																																			
21. Number of Lines of Text Scanned per Hour																																			
22. Number of Scanning Hours																																			

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OCR STODY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   AA

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RAR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	AA	1.	26.	0.92	9.16	0.0	0.37	88888.00	88888.00	0.43	0.98	0.16	0.06	0.67	1.92
2	AA.	2.	2.	0.65	11.79	0.0	0.23	88888.00	88888.00	0.33	1.50	0.29	0.0	0.81	3.38
3	AA	2.	9.	1.27	7.10	0.0	0.17	88888.00	88888.00	0.19	1.42	0.35	0.06	0.77	3.17
4	AA	2.	16.	0.66	9.34	0.0	0.28	88888.00	88888.00	0.07	1.38	0.66	0.03	0.90	3.41
5	AA	2.	23.	0.79	10.61	0.0	0.21	88888.00	88888.00	0.33	1.73	0.48	0.0	0.85	3.73
6	AA	2.	30.	0.24	6.90	0.10	0.31	3.26	0.17	0.28	1.00	0.28	0.07	0.83	2.34
7	AA	3.	6.	0.35	9.43	0.0	0.43	2.91	0.17	0.39	1.00	0.04	0.17	0.70	2.09
8	AA	3.	13.	1.00	10.97	0.0	0.73	5.89	0.64	0.52	0.88	0.18	0.0	0.58	1.67
9	AA	3.	20.	0.27	9.88	0.0	0.27	3.94	0.29	0.19	1.27	0.35	0.0	0.85	2.92
10	AA	3.	27.	0.85	15.30	0.0	0.37	3.97	0.39	0.67	1.30	0.19	0.0	0.74	3.52
11	AA	4.	4.	0.88	13.38	0.0	0.06	2.50	0.25	0.25	0.44	0.13	0.0	0.50	1.19
12	AA	4.	11.	0.63	29.75	0.0	0.50	88888.00	88888.00	0.63	0.50	0.13	0.38	0.63	1.38
13	AA	4.	18.	0.69	9.38	0.0	0.06	2.08	0.38	0.19	0.75	0.06	0.06	0.44	1.38
14	AA	4.	25.	1.00	24.38	0.0	0.13	1.67	0.10	0.25	1.38	0.13	0.0	0.63	2.25
15	AA	5.	1.	1.00	16.68	0.0	0.04	4.63	0.60	0.28	0.52	0.40	88888.00	0.64	1.68
16	AA	5.	8.	1.00	23.15	0.04	0.04	4.48	2.50	0.19	0.96	0.65	0.0	0.85	2.69
17	AA	5.	15.	1.62	23.05	0.0	0.0	3.68	1.67	0.14	0.76	0.29	0.05	0.57	88888.00
18	AA	5.	22.	1.29	25.14	0.0	0.0	1.49	0.10	0.43	0.43	0.43	0.0	0.57	1.71
19	AA	5.	29.	1.44	21.11	0.0	0.0	1.32	0.27	0.22	1.11	0.44	0.0	0.78	2.67
20	AA	6.	6.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	AA	6.	13.	2.43	25.21	0.0	0.0	2.75	1.67	0.0	1.00	0.50	0.0	0.79	2.64
22	AA	6.	20.	1.09	25.45	0.0	0.0	1.29	0.47	0.18	1.18	0.0	0.0	0.73	2.27
23	AA	6.	27.	2.11	24.33	0.0	0.0	1.61	0.70	0.22	1.33	0.89	0.0	0.89	3.33
24	AA	7.	3.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	AA	7.	10.	1.11	23.25	0.04	0.04	4.52	0.94	0.07	1.14	0.18	0.36	0.82	2.82
26	AA	7.	17.	1.06	19.58	0.0	0.0	6.32	1.25	0.33	1.06	0.44	0.06	0.81	4.83
27	AA	7.	24.	1.50	24.29	0.0	0.0	4.67	2.33	0.14	1.18	0.11	0.0	0.68	88888.00
28	AA	7.	31.	1.75	88888.00	88888.00	88888.00	3.58	88888.00	88888.00	1.00	0.54	0.0	0.79	88888.00
29	AA	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	AA	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	AA	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	AA	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	AA	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	AA	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	AA	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE CHDATA (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE BB

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	BB	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	BB	2.	2.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	0.10	0.83	0.33	0.0	0.80	3.83
3	BB	2.	9.	1.87	3.43	0.0	1.33	88888.00	88888.00	0.13	1.77	0.37	-0.0	0.73	3.30
4	BB	2.	16.	1.20	2.70	0.0	1.57	88888.00	88888.00	0.13	1.67	0.23	0.0	0.77	3.27
5	BB	2.	23.	2.30	4.40	0.0	1.53	88888.00	88888.00	0.23	1.17	0.47	0.0	0.70	2.77
6	BB	2.	30.	3.03	4.30	0.0	2.20	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
7	BB	3.	6.	88888.00	88888.00	88888.00	1.88	14.71	1.06	0.16	1.04	0.28	0.0	0.84	2.36
8	BB	3.	13.	2.72	4.88	0.0	2.41	10.67	1.92	0.50	0.78	0.16	0.0	0.53	1.31
9	BB	3.	20.	2.47	3.22	0.0	2.32	8.33	1.56	0.36	1.00	0.08	0.0	0.60	2.92
10	BB	3.	27.	1.52	8.00	0.0	0.00	10.71	0.86	0.00	0.00	0.00	88888.00	0.00	0.00
11	BB	4.	4.	0.00	0.01	0.0	1.73	11.54	0.27	0.43	0.67	0.10	0.0	0.47	1.27
12	BB	4.	11.	1.10	4.47	0.0	2.20	12.50	1.50	0.37	0.60	0.17	0.0	0.50	1.37
13	BB	4.	18.	1.80	5.47	0.0	1.67	88888.00	88888.00	0.23	0.60	0.23	0.0	0.60	1.50
14	BB	4.	25.	1.57	6.43	0.0	2.34	11.15	1.69	0.17	0.90	0.24	88888.00	0.59	2.34
15	BB	5.	1.	3.24	5.62	0.0	2.34	88888.00	88888.00	0.20	1.27	0.50	0.0	0.80	2.73
16	BB	5.	8.	2.83	4.97	0.0	2.00	88888.00	88888.00	0.20	1.10	0.17	0.03	0.67	88888.00
17	BB	5.	15.	2.53	6.30	0.0	2.23	88888.00	88888.00	0.43	0.64	0.29	0.14	0.64	3.57
18	BB	5.	22.	3.21	9.71	0.0	2.79	88888.00	88888.00	0.00	0.00	0.00	88888.00	0.00	0.00
19	BB	5.	29.	0.00	0.01	0.00	1.47	88888.00	88888.00	0.21	0.38	0.15	88888.00	0.35	88888.00
20	BB	6.	6.	0.50	2.18	0.0	88888.00	88888.00	88888.00	88888.00	0.60	0.0	0.10	-0.43	1.17
21	BB	6.	13.	0.77	88888.00	88888.00	88888.00	88888.00	88888.00	0.26	0.66	0.05	0.0	0.50	1.26
22	BB	6.	20.	0.58	2.63	0.0	1.16	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
23	BB	6.	27.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
24	BB	7.	3.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
25	BB	7.	10.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
26	BB	7.	17.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
27	BB	7.	24.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
28	BB	7.	31.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
29	BB	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	BB	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	BB	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	BB	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	BB	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	BB	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	BB	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   CC

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	CC	1.	26.	0.83	15.83	0.0	0.0	88888.00	88888.00	0.0	0.75	0.08	0.08	0.75	2.08
2	CC	2.	2.	2.40	19.60	0.0	0.10	88888.00	88888.00	0.10	1.00	0.10	0.20	0.80	2.40
3	CC	2.	9.	2.10	18.70	0.0	0.20	88888.00	88888.00	0.70	1.20	0.10	0.90	1.00	4.50
4	CC	2.	16.	2.00	24.00	0.0	0.10	88888.00	88888.00	0.10	1.40	0.50	1.60	0.90	6.00
5	CC	2.	23.	4.58	25.42	0.0	0.58	88888.00	88888.00	0.0	1.00	0.58	0.75	0.75	4.83
6	CC	2.	30.	5.71	26.00	0.0	0.29	88888.00	88888.00	0.0	0.57	0.86	0.0	0.86	2.71
7	CC	3.	6.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	CC	3.	13.	3.29	24.86	0.0	0.07	88888.00	88888.00	0.0	3.79	1.57	0.07	2.29	9.29
9	CC	3.	20.	9.85	28.62	0.0	0.38	88888.00	88888.00	0.08	88888.00	88888.00	88888.00	88888.00	88888.00
10	CC	3.	27.	3.58	32.33	0.0	0.42	88888.00	88888.00	0.50	0.83	0.17	0.0	0.50	2.17
11	CC	4.	4.	4.40	31.10	0.0	0.10	1.25	0.42	0.40	0.80	0.50	88888.00	0.60	2.30
12	CC	4.	11.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	CC	4.	18.	3.90	21.25	0.0	0.70	88888.00	88888.00	0.15	1.70	0.35	0.0	1.00	4.85
14	CC	4.	25.	5.47	23.95	0.0	0.11	88888.00	88888.00	0.79	2.05	0.53	0.05	0.95	4.11
15	CC	5.	1.	4.86	16.57	0.0	0.07	88888.00	88888.00	0.57	1.57	0.57	0.14	0.79	3.43
16	CC	5.	8.	0.00	0.04	0.0	0.00	88888.00	88888.00	0.00	0.00	0.00	0.00	0.00	0.01
17	CC	5.	15.	5.12	21.82	0.0	0.12	88888.00	88888.00	0.29	1.18	0.53	0.0	0.71	88888.00
18	CC	5.	22.	3.90	28.30	0.0	0.90	88888.00	88888.00	0.20	0.20	0.20	0.0	1.40	3.30
19	CC	5.	29.	8.60	24.20	0.0	0.33	88888.00	88888.00	0.20	1.40	0.73	0.0	0.87	3.53
20	CC	6.	6.	9.33	33.58	0.0	0.33	88888.00	88888.00	1.08	1.08	0.58	88888.00	0.58	2.75
21	CC	6.	13.	3.75	21.50	0.0	0.50	88888.00	88888.00	0.42	1.33	0.17	0.0	0.75	2.50
22	CC	6.	20.	3.44	18.89	0.0	0.22	88888.00	88888.00	0.78	1.67	0.22	0.0	1.00	3.33
23	CC	6.	27.	3.86	15.71	0.0	0.29	88888.00	88888.00	0.43	1.43	0.43	0.0	1.00	3.29
24	CC	7.	3.	6.55	22.73	0.0	0.64	88888.00	88888.00	1.00	1.36	0.55	0.09	0.73	3.27
25	CC	7.	10.	3.58	14.17	0.08	0.75	88888.00	88888.00	0.25	2.75	1.58	0.08	1.75	88888.00
26	CC	7.	17.	1.92	13.75	0.0	0.17	88888.00	88888.00	0.33	88888.00	88888.00	88888.00	88888.00	88888.00
27	CC	7.	24.	2.91	11.45	0.0	0.45	88888.00	88888.00	0.0	1.09	0.09	0.0	0.73	88888.00
28	CC	7.	31.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
29	CC	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	CC	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	CC	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	CC	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	CC	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	CC	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	CC	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE ·CHDATA (CREATION DATE = 01/25/78) OCR CLEARINGHOUSE DATA
SUBFILE DD

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	DD	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	DD	2.	2.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
3	DD	2.	9.	1.08	4.83	0.0	0.42	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
4	DD	2.	16.	1.54	6.85	0.0	0.54	88888.00	88888.00	0.08	1.00	0.0	0.0	0.67	2.17
5	DD	2.	23.	1.18	17.73	0.0	0.45	88888.00	88888.00	0.62	1.23	0.15	0.0	0.62	2.08
6	DD	2.	30.	1.08	10.25	0.0	0.08	1.90	0.09	0.36	1.55	0.27	0.0	0.82	1.64
7	DD	3.	6.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.17	0.0	0.67	2.33
8	DD	3.	13.	2.65	15.65	0.0	0.30	3.97	0.42	0.70	0.78	0.17	0.0	0.0	0.0
9	DD	3.	20.	1.30	17.10	0.0	0.50	1.49	0.12	0.20	0.20	0.10	0.0	0.52	-1.57
10	DD	3.	27.	88888.00	19.00	0.0	0.33	2.11	88888.00	0.50	0.50	0.33	0.0	0.20	0.70
11	DD	4.	4.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	1.58
12	DD	4.	11.	1.47	21.18	0.0	0.53	2.79	88888.00	0.53	1.18	0.12	0.06	0.82	1.29
13	DD	4.	18.	1.31	7.50	0.0	0.31	2.19	0.13	0.50	0.75	0.13	0.06	0.69	1.81
14	DD	4.	25.	7500.00	9.33	0.0	0.50	88888.00	88888.00	0.0	0.83	0.0	0.08	0.50	2.67
15	DD	5.	1.	0.87	9.00	0.0	0.40	1.61	0.10	0.20	0.60	0.20	0.0	0.73	1.87
16	DD	5.	8.	2.33	11.20	0.07	0.47	2.05	1.50	0.20	0.93	0.33	0.0	0.73	2.67
17	DD	5.	15.	3.57	3.21	0.0	0.29	88888.00	88888.00	0.36	0.64	0.50	0.0	0.79	2.43
18	DD	5.	22.	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	DD	5.	29.	3.36	14.05	0.0	0.27	88888.00	88888.00	0.50	0.45	0.50	0.05	0.45	3.50
20	DD	6.	6.	3.36	6.36	0.0	0.14	88888.00	88888.00	0.50	0.36	0.32	0.0	0.50	1.50
21	DD	6.	13.	2.25	10.67	0.0	0.0	88888.00	88888.00	0.08	0.90	0.08	0.17	0.58	1.42
22	DD	6.	20.	1.75	9.33	0.0	0.50	88888.00	88888.00	0.42	0.67	0.0	0.17	0.58	1.43
23	DD	6.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	DD	7.	3.	1.47	6.60	0.0	0.47	88888.00	88888.00	0.33	0.40	0.20	0.07	0.47	1.27
25	DD	7.	10.	0.36	1.89	0.0	0.05	88888.00	88888.00	0.02	0.16	0.0	0.09	0.16	0.52
26	DD	7.	17.	0.69	7.08	0.0	0.31	88888.00	88888.00	0.0	0.23	0.0	0.0	0.23	0.54
27	DD	7.	24.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
28	DD	7.	31.	1.06	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.38	88888.00
29	DD	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.44	0.0	0.0	88888.00	88888.00
30	DD	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	DD	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	DD	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	DD	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	DD	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	DD	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE CHDATA (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE ZE

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	ZE	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	ZE	2.	2.	1.89	0.54	0.0	0.43	88888.00	88888.00	0.04	1.64	0.07	0.0	0.75	2.57
3	ZE	2.	9.	.1.10	3.37	0.0	0.30	88888.00	88888.00	0.03	0.53	0.03	0.0	0.37	0.93
4	ZE	2.	16.	2.00	565.22	0.0	0.43	88888.00	88888.00	0.04	0.91	0.04	0.0	0.70	1.96
5	ZE	2.	23.	2.07	9.33	0.0	0.67	88888.00	88888.00	0.13	0.67	0.20	0.0	0.53	1.47
6	ZE	2.	30.	1.44	6.28	0.0	0.64	88888.00	88888.00	0.36	0.92	0.16	0.08	0.72	2.04
7	ZE	3.	6.	1.88	7.46	0.0	0.75	88888.00	88888.00	0.38	0.17	0.0	0.0	0.17	0.33
8	ZE	3.	13.	1.88	5.24	0.0	0.65	1.47	0.08	0.0	0.47	0.0	0.0	0.29	0.76
9	ZE	3.	20.	1.33	8.00	0.0	1.00	1.90	0.33	0.0	0.33	88888.00	88888.00	0.17	0.50
10	ZE	3.	27.	1.47	13.87	0.0	0.53	2.42	0.32	0.07	0.33	0.40	0.0	0.40	1.47
11	ZE	4.	4.	1.80	6.70	0.0	0.37	3.45	0.50	0.27	0.37	0.03	0.0	0.27	0.73
12	ZE	4.	11.	2.67	6.06	0.0	0.44	2.50	0.31	0.17	0.50	0.06	0.0	0.50	0.61
13	ZE	4.	18.	1.92	12.62	0.0	0.92	1.59	0.33	0.38	1.15	0.08	0.0	0.69	2.15
14	ZE	4.	25.	1.08	8.00	0.0	0.75	1.33	0.04	0.0	0.58	0.0	0.0	0.67	1.42
15	ZE	5.	1.	1.72	8.64	0.0	0.40	88888.00	88888.00	0.24	0.96	0.44	0.0	0.72	2.36
16	ZE	5.	8.	1.92	6.19	0.0	0.58	88888.00	88888.00	0.27	88888.00	88888.00	88888.00	0.58	2.58
17	ZE	5.	15.	1.30	7.63	0.0	0.22	88888.00	88888.00	0.19	0.70	0.19	0.0	0.52	88888.00
18	ZE	5.	22.	0.94	8.33	0.0	0.61	88888.00	88888.00	0.33	0.94	0.0	0.0	0.72	1.89
19	ZE	5.	29.	1.16	4.42	0.0	0.11	88888.00	88888.00	0.26	0.63	0.0	0.0	0.53	1.16
20	ZE	6.	6.	1.45	5.64	0.0	0.27	88888.00	88888.00	0.09	0.45	0.09	0.0	0.55	1.18
21	ZE	6.	13.	2.13	9.06	0.0	0.50	88888.00	88888.00	0.31	2.38	0.56	88888.00	1.75	5.38
22	ZE	6.	20.	1.11	6.59	0.0	0.26	88888.00	88888.00	0.30	88888.00	88888.00	88888.00	88888.00	88888.00
23	ZE	6.	27.	3.29	7.64	0.0	0.36	88888.00	88888.00	0.14	0.14	0.21	0.07	0.36	0.79
24	ZE	7.	3.	1.94	5.11	0.0	0.39	88888.00	88888.00	0.17	0.56	0.28	0.0	0.50	1.44
25	ZE	7.	10.	0.81	5.56	0.0	0.19	88888.00	88888.00	0.0	0.88	0.06	0.0	0.88	3.31
26	ZE	7.	17.	1.66	5.90	0.0	0.52	88888.00	88888.00	0.10	0.34	0.07	88888.00	0.21	4.76
27	ZE	7.	24.	1.20	5.60	0.0	0.93	88888.00	88888.00	0.17	0.97	0.17	88888.00	0.97	88888.00
28	ZE	7.	31.	1.33	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.52	0.10	0.0	0.52	88888.00
29	ZE	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	ZE	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	ZE	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	ZE	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	ZE	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	ZE	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	ZE	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   -OCR CLEARINGHOUSE DATA
SUBFILE   PP

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	PP	1.	26.	3.58	21.58	0.0	0.05	88888.00	88888.00	0.37	1.11	0.11	0.21	0.58	2.45
2	PP	2.	2.	2.16	25.59	0.0	0.03	88888.00	88888.00	0.0	0.65	0.16	0.03	0.57	1.57
3	PP	2.	9.	2.52	24.91	0.0	0.0	88888.00	88888.00	0.0	0.52	0.09	0.0	0.39	1.03
4	PP	2.	16.	1.63	30.47	0.0	0.03	88888.00	88888.00	0.0	0.37	0.32	0.0	0.47	1.21
5	PP	2.	23.	3.76	35.28	0.0	0.0	88888.00	88888.00	0.0	0.21	0.28	0.07	0.28	0.93
6	PP	2.	30.	1.62	24.16	0.0	0.05	88888.00	88888.00	0.0	0.27	0.27	0.0	0.43	1.14
7	PP	3.	6.	2.13	24.53	0.0	0.0	8.00	1.04	0.06	0.63	0.22	0.0	0.66	1.56
8	PP	3.	13.	2.18	24.88	0.0	0.0	6.60	1.13	0.03	0.27	0.33	0.0	0.42	1.09
9	PP	3.	20.	1.35	27.77	0.0	0.0	6.19	0.67	0.19	0.19	0.15	88888.00	0.27	0.62
10	PP	3.	27.	2.00	17.47	0.0	0.0	3.09	0.77	0.12	0.76	0.18	0.0	0.59	1.53
11	PP	4.	4.	2.44	25.80	0.0	0.0	5.81	0.55	0.28	0.84	0.60	88888.00	0.44	2.24
12	PP	4.	11.	2.69	23.09	0.0	0.0	7.29	0.84	0.51	0.26	0.11	0.0	0.31	0.71
13	PP	4.	18.	4.07	26.66	0.0	0.0	5.58	0.46	0.21	0.14	0.17	88888.00	0.24	0.62
14	PP	4.	25.	88888.00	24.14	0.0	0.05	4.31	89888.00	0.59	0.68	0.14	0.0	0.59	1.50
15	PP	5.	1.	1.43	21.71	0.0	0.05	4.20	0.31	0.29	0.33	0.10	0.0	0.38	0.86
16	PP	5.	8.	2.70	21.56	0.0	0.0	5.40	0.74	0.30	0.81	0.52	0.07	0.78	2.48
17	PP	5.	15.	1.70	22.91	0.0	0.0	5.11	0.69	0.09	0.43	0.30	0.0	0.57	88888.00
18	PP	5.	22.	1.88	14.36	0.0	0.08	5.10	0.24	0.20	0.20	0.16	0.0	0.32	0.68
19	PP	5.	29.	2.86	20.14	0.0	0.07	2.75	0.28	0.21	0.86	0.0	0.0	0.64	1.86
20	PP	6.	6.	3.00	28.71	0.0	0.03	8.10	0.93	0.24	0.32	0.06	0.06	0.32	0.79
21	PP	6.	13.	3.19	88888.00	88888.00	88888.00	6.40	1.04	88888.00	0.13	0.06	88888.00	0.13	0.31
22	PP	6.	20.	1.71	24.54	0.0	0.06	5.30	0.44	0.14	0.29	0.14	88888.00	0.37	0.80
23	PP	6.	27.	2.76	22.93	0.0	0.0	7.19	0.66	0.02	0.73	0.17	0.0	0.44	1.46
24	PP	7.	3.	2.48	29.03	0.0	0.03	5.79	0.58	0.12	0.15	0.15	0.0	0.24	0.61
25	PP	7.	10.	3.28	14.41	0.0	0.0	88888.00	88888.00	0.22	0.47	0.38	0.0	0.66	1.78
26	PP	7.	17.	2.40	25.60	0.0	0.03	4.05	0.33	0.17	0.23	0.27	0.0	0.33	0.93
27	PP	7.	24.	2.54	21.00	0.0	0.0	3.08	0.47	0.04	0.54	0.21	0.0	0.43	1.39
28	PP	7.	31.	1.76	88888.00	88888.00	88888.00	3.73	0.15	88888.00	0.48	0.20	0.0	0.40	88888.00
29	PP	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	PP	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	PP	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	PP	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	PP	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	PP	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	PP	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE GG

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	GG	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	GG	2.	2.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
3	GG	2.	9.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
4	GG	2.	16.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
5	GG	2.	23.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
6	GG	2.	30.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
7	GG	3.	6.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
8	GG	3.	13.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
9	GG	3.	20.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
10	GG	3.	27.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
11	GG	4.	4.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
12	GG	4.	11.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
13	GG	4.	18.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
14	GG	4.	25.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
15	GG	5.	1.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
16	GG	5.	8.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
17	GG	5.	15.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
18	GG	5.	22.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
19	GG	5.	29.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
20	GG	6.	6.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
21	GG	6.	13.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
22	GG	6.	20.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
23	GG	6.	27.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
24	GG	7.	3.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
25	GG	7.	10.	1.43	1.14	0.0	0.0	88888.00	88888.00	0.0	1.71	0.71	0.0	1.00	4.29
26	GG	7.	17.	88888.00	2.00	0.0	0.0	88888.00	88888.00	0.0	4.00	3.00	88888.00	1.00	8.00
27	GG	7.	24.	88888.00	3.29	0.0	0.18	88888.00	88888.00	0.18	0.47	0.59	88888.00	0.71	2.35
28	GG	7.	31.	0.73	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.91	0.45	88888.00	0.73	88888.00
29	GG	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	GG	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	GG	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	GG	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	GG	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	GG	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	GG	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   HH

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	HH	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	HH	2.	2.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
3	HH	2.	9.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
4	HH	2.	16.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
5	HH	2.	23.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
6	HH	2.	30.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
7	HH	3.	6.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
8	HH	3.	13.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
9	HH	3.	20.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
10	HH	3.	27.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
11	HH	4.	4.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
12	HH	4.	11.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
13	HU	4.	18.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00
14	HH	4.	25.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
15	HH	5.	1.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
16	HH	5.	8.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
17	HH	5.	15.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
18	HH	5.	22.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
19	HH	5.	29.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
20	HH	6.	6.	4.80	8.20	2.40	1.60	4.84	2.17	0.40	0.67	0.27	0.0	0.60	2.00
21	HH	6.	13.	4.53	24.11	3.58	1.58	88888.00	88888.00	0.0	0.95	0.16	0.0	0.68	1.89
22	HH	6.	20.	4.33	7.92	4.58	3.17	88888.00	88888.00	0.0	1.08	0.25	0.0	0.67	2.00
23	HH	6.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	HH	7.	3.	3.83	10.06	3.89	2.33	88888.00	88888.00	0.17	C.89	0.56	0.0	0.83	2.44
25	HH	7.	10.	5.80	11.73	4.67	2.07	88888.00	88888.00	0.20	0.40	0.13	0.40	0.67	4.73
26	HH	7.	17.	5.50	15.08	4.25	2.58	88888.00	88888.00	0.0	0.17	0.58	0.0	0.50	1.58
27	HH	7.	24.	4.27	17.18	2.91	2.00	88888.00	88888.00	0.09	0.55	0.09	0.0	0.36	88888.00
28	HH	7.	31.	2.76	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.53	0.24	0.0	0.53	88888.00
29	HH	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	HH	8.	14.	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	HH	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	HH	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	HH	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.0C	88888.00	88888.00	88888.00	88888.00	88888.00
34	HH	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	HH	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   II

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	II	1.	26.	3.44	15.72	0.0	1.32	88888.00	88888.00	0.24	0.72	0.36	0.04	0.60	2.08
2	II	2.	2.	4.71	20.36	0.0	1.21	88888.00	88888.00	0.43	1.00	0.43	0.07	0.0	2.93
3	II	2.	9.	5.92	19.12	0.0	1.20	88888.00	88888.00	0.52	2.68	0.92	0.04	0.96	6.04
4	II	2.	16.	6.82	29.27	0.0	1.18	88888.00	88888.00	0.82	1.82	1.73	0.09	1.00	6.27
5	II	2.	23.	2.53	20.47	0.0	0.80	88888.00	88888.00	0.43	1.13	0.30	0.10	0.73	3.37
6	II	2.	30.	4.50	24.30	0.0	1.30	7.14	88888.00	0.30	0.90	0.50	0.0	0.75	2.80
7	II	3.	6.	3.24	17.88	0.0	1.06	4.36	88888.00	0.12	0.24	0.47	0.0	0.24	1.24
8	II	3.	13.	2.73	11.27	0.13	0.60	3.26	0.25	0.40	0.80	0.33	0.0	0.87	8.60
9	II	3.	20.	2.13	14.13	0.17	1.04	4.80	0.64	0.46	1.25	0.29	0.08	0.75	3.67
10	II	3.	27.	4.48	17.67	0.19	1.33	88888.00	88888.00	0.24	1.86	1.05	0.19	1.00	4.57
11	II	4.	4.	3.55	16.75	0.0	1.10	88888.00	88888.00	0.80	2.65	0.50	0.05	0.85	5.30
12	II	4.	11.	3.79	12.21	0.0	0.37	88888.00	88888.00	0.53	1.05	0.37	0.79	0.84	4.21
13	II	4.	18.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	II	4.	25.	2.00	10.86	0.0	0.54	88888.00	88888.00	0.69	0.80	0.49	0.11	0.83	3.86
15	II	5.	1.	5.10	27.05	0.0	1.24	88888.00	88888.00	0.52	0.86	0.29	0.05	0.67	4.71
16	II	5.	8.	1.22	11.35	0.26	1.09	88888.00	88888.00	0.22	2.96	0.39	0.17	0.96	6.09
17	II	5.	15.	3.50	41.35	0.15	0.65	88888.00	88888.00	0.42	2.08	0.92	0.23	0.85	88888.00
18	II	5.	22.	1.86	9.09	0.05	0.86	88888.00	88888.00	0.68	0.50	0.45	0.23	0.64	4.14
19	II	5.	29.	1.38	10.71	0.10	0.90	88888.00	88888.00	0.43	0.38	0.05	88888.00	0.33	0.86
20	II	6.	6.	2.52	12.70	0.0	1.39	88888.00	88888.00	0.70	0.74	0.39	0.09	0.65	2.74
21	II	6.	13.	1.08	10.67	0.08	1.33	88888.00	88888.00	0.54	1.25	0.13	0.04	0.75	3.42
22	II	6.	20.	1.65	11.00	0.18	1.24	88888.00	88888.00	0.65	0.47	0.35	0.0	0.59	1.59
23	II	6.	27.	2.08	27.46	0.08	0.62	88888.00	88888.00	0.54	0.77	0.08	88888.00	0.62	1.46
24	II	7.	3.	88888.00	25.30	0.0	0.20	88888.00	88888.00	0.0	1.00	0.70	0.10	0.90	6.90
25	II	7.	10.	2.16	10.53	0.16	0.84	88888.00	88888.00	0.53	0.47	0.0	0.32	0.58	88888.00
26	II	7.	17.	6.83	19.67	0.0	0.83	88888.00	88888.00	1.17	0.67	1.00	0.0	0.83	3.17
27	II	7.	24.	3.86	16.86	0.0	0.71	86888.00	88888.00	1.00	0.43	1.7	0.0	1.00	88888.00
28	II	7.	31.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
29	II	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	II	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	II	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88999.00
32	II	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00
33	II	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00
34	II	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00
35	II	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00	88888.00	88889.00

OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE JJ

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	JJ	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	JJ	2.	2.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	89888.00	88888.00	88888.00	88888.00	88888.00	88888.00
3	JJ	2.	9.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
4	JJ	2.	16.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
5	JJ	2.	23.	1.47	6.24	0.0	0.29	88888.00	88888.00	0.59	0.47	0.06	0.0	0.35	0.88
6	JJ	2.	30.	88888.00	4.33	0.0	0.06	88888.00	88889.00	0.33	0.78	0.11	0.0	0.50	1.50
7	JJ	3.	6.	1.18	6.56	0.0	0.53	88888.00	88888.00	0.32	0.03	0.09	0.06	0.15	0.38
8	JJ	3.	13.	0.59	4.00	0.0	0.77	88888.00	88888.00	0.32	0.77	0.0	0.0	0.68	1.77
9	JJ	3.	20.	0.68	2.12	0.0	0.28	88988.00	88898.00	0.20	0.52	0.12	88888.00	0.52	1.24
10	JJ	3.	27.	0.20	2.15	0.0	0.25	88888.00	88888.00	0.20	0.70	0.15	0.0	0.55	1.55
11	JJ	4.	4.	0.44	3.33	0.0	0.39	88888.00	88888.00	0.11	0.72	88888.00	88888.00	0.50	1.22
12	JJ	4.	11.	0.67	2.76	0.0	0.48	88888.00	88888.00	0.05	0.81	0.0	0.0	0.43	2.57
13	JJ	4.	18.	0.35	2.88	0.06	0.29	88888.00	88888.00	0.12	0.41	0.88	0.0	0.88	4.41
14	JJ	4.	25.	0.69	3.25	0.0	0.26	88888.00	98888.00	0.25	0.31	88888.00	88888.00	0.25	0.56
15	JJ	5.	1.	0.40	1.93	0.0	0.40	88888.00	88888.00	0.07	0.13	0.13	88888.00	0.27	0.67
16	JJ	5.	8.	0.90	2.05	0.0	0.29	88888.00	88888.00	0.05	0.38	0.14	0.0	0.29	88888.00
17	JJ	5.	15.	0.33	2.44	0.0	0.44	88888.00	88888.00	0.06	0.78	0.11	0.06	0.67	88888.00
18	JJ	5.	22.	0.21	2.57	0.0	0.29	88888.00	88888.00	0.0	0.50	0.07	0.07	0.50	3.50
19	JJ	5.	29.	0.44	2.63	0.0	0.38	88888.00	88888.00	0.0	1.00	0.06	0.0	0.69	1.88
20	JJ	6.	6.	2.11	2.84	0.0	0.32	88888.00	88888.00	0.05	0.11	0.58	0.0	0.53	1.26
21	JJ	6.	13.	0.57	1.57	0.0	0.29	88888.00	88888.00	0.0	0.64	0.0	0.0	0.57	1.21
22	JJ	6.	20.	0.40	1.93	0.0	0.40	88888.00	88888.00	0.07	0.87	0.0	0.0	0.87	1.73
23	JJ	6.	27.	0.55	2.64	0.0	0.24	88888.00	88888.00	0.18	0.48	0.0	0.0	0.33	0.94
24	JJ	7.	3.	0.64	2.50	0.0	0.07	88888.00	88888.00	0.07	0.50	0.21	0.0	0.43	1.36
25	JJ	7.	10.	0.65	2.18	0.0	0.18	88888.00	88888.00	0.12	0.53	0.18	0.0	0.33	1.47
26	JJ	7.	17.	0.40	1.30	0.0	0.40	88888.00	88888.00	0.0	0.50	0.0	0.0	0.50	1.10
27	JJ	7.	24.	0.14	2.14	0.0	0.19	88888.00	88888.00	0.0	0.05	1.10	0.0	1.00	88888.00
28	JJ	7.	31.	0.83	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.93	0.86	0.0	1.00	88888.00
29	JJ	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	JJ	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	JJ	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	JJ	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	JJ	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	JJ	9.	14.	88888.00	88888.00	88888.00	88888.00	89888.00	88888.00	89888.00	98888.00	88888.00	88888.00	88888.00	88888.00
35	JJ	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	89888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   KK

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	KK	1.	26.	1.25	13.06	0.0	0.0	.88888.00	88888.00	0.0	0.94	0.19	0.0	0.56	1.75
2	KK	2.	2.	1.50	11.25	0.0	0.0	88888.00	88888.00	0.0	1.81	0.13	0.0	0.94	3.00
3	KK	2.	9.	2.00	8.38	0.0	0.31	88888.00	88888.00	0.31	2.00	0.13	0.06	0.88	3.25
4	KK	2.	16.	3.75	6.75	0.0	0.63	88888.00	88888.00	0.31	0.75	0.38	0.0	0.75	3.00
5	KK	2.	23.	2.44	4.44	0.06	0.38	88888.00	88888.00	0.0	0.81	0.06	0.0	0.50	1.44
6	KK	2.	30.	1.56	10.69	0.0	0.44	88888.00	88988.00	0.06	1.69	0.44	0.0	0.75	3.81
7	KK	3.	6.	1.38	4.63	0.06	1.13	88888.00	88888.00	0.19	0.19	0.06	0.0	0.25	0.50
8	KK	3.	13.	3.53	19.27	0.0	0.47	5.77	2.40	0.07	1.33	0.27	0.0	0.67	2.40
9	KK	3.	20.	0.59	5.35	0.0	0.59	6.54	88888.00	0.06	0.71	0.24	0.0	0.76	1.94
10	KK	3.	27.	2.38	4.88	0.25	0.75	5.93	88888.00	0.19	1.00	0.25	88888.00	0.88	2.88
11	KK	4.	4.	0.75	7.25	0.0	0.88	8.00	88888.00	0.25	0.63	0.0	0.0	0.38	1.25
12	KK	4.	11.	1.06	3.81	0.0	0.81	6.67	88888.00	0.25	2.31	0.13	0.0	0.88	3.94
13	KK	4.	18.	2.69	0.44	0.0	0.94	4.85	88888.00	0.50	0.38	0.25	0.0	0.56	1.13
14	KK	4.	25.	1.64	3.29	0.0	0.29	5.00	88888.00	0.07	0.86	0.21	0.07	0.64	2.21
15	KK	5.	1.	2.38	8.56	0.0	0.88	8.89	88888.00	0.38	0.44	0.13	88888.00	0.38	1.00
16	KK	5.	8.	1.94	1.44	0.0	0.81	3.72	0.82	0.0	0.31	0.19	0.0	0.44	1.00
17	KK	5.	15.	0.88	3.25	0.0	0.19	5.93	0.33	0.0	0.50	0.19	0.13	0.56	88888.00
18	KK	5.	22.	1.23	4.31	0.0	0.62	88888.00	88888.00	0.15	0.31	0.23	0.15	0.69	1.38
19	KK	5.	29.	0.80	15.80	0.0	0.50	5.88	88888.00	0.0	0.50	0.40	0.0	0.60	1.70
20	KK	6.	6.	1.95	7.00	0.0	0.53	3.73	88888.00	0.05	0.32	0.16	88888.00	0.47	0.84
21	KK	6.	13.	2.63	6.63	0.0	0.50	5.52	0.50	0.19	0.44	0.31	0.0	0.44	1.25
22	KK	6.	20.	1.13	6.38	0.0	0.25	88888.00	88888.00	0.25	0.31	0.13	88888.00	0.44	0.94
23	KK	6.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	KK	7.	3.	1.64	7.08	0.0	0.52	88888.00	88888.00	0.0	1.40	0.20	0.24	0.84	3.20
25	KK	7.	10.	1.83	4.48	0.0	0.26	88888.00	88888.00	0.13	0.91	0.43	0.48	0.91	5.26
26	KK	7.	17.	1.69	4.88	0.0	0.38	2.50	88888.00	0.13	0.94	0.19	0.0	0.81	2.06
27	KK	7.	24.	0.94	3.88	0.0	0.44	4.00	88888.00	0.19	1.56	0.63	0.06	1.00	88888.00
28	KK	7.	31.	0.75	88888.00	88888.00	88888.00	4.00	0.12	88888.00	0.56	88888.00	88888.00	0.56	88888.00
29	KK	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	KK	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	KK	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	KK	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88883.00
33	KK	9.	7.	88888.00	88888.00	88888.00	88888.00	98888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00
34	KK	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00
35	KK	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	86888.00	89898.00

OCR STUDY - PEARSON CORRELATION OF CLEARINGHOUSE DATA

FILE CHDATA (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE LL

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	LL	1.	26.	2.76	7.31	0.0	0.45	88888.00	88888.00	0.09	1.51	0.09	0.04	0.93	2.75
2	LL	2.	2.	1.41	5.78	0.0	0.45	88888.00	88888.00	0.24	0.14	0.0	0.0	0.98	2.53
3	LL	2.	9.	3.65	8.85	0.0	0.35	88888.00	88888.00	0.05	1.90	0.20	0.0	1.00	3.35
4	LL	2.	16.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
5	LL	2.	23.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
6	LL	2.	30.	1.89	2.71	0.0	0.39	88888.00	88888.00	0.25	2.04	0.25	0.07	0.96	3.13
7	LL	3.	6.	2.55	2.92	0.0	0.42	88888.00	88888.00	0.22	1.35	0.17	0.32	0.82	3.13
8	LL	3.	13.	4.40	7.26	0.0	0.66	88888.00	88888.00	0.66	1.17	0.40	0.0	0.83	3.97
9	LL	3.	20.	3.26	11.91	0.0	0.21	88888.00	88888.00	0.26	0.72	0.14	88888.00	0.53	1.49
10	LL	3.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	LL	4.	4.	3.17	2.58	0.04	0.13	88888.00	88888.00	0.17	1.46	0.58	0.04	0.79	3.33
12	LL	4.	11.	2.33	2.33	0.04	0.08	88888.00	88888.00	0.04	1.17	0.21	0.0	0.75	1.75
13	LL	4.	18.	2.72	2.28	0.04	0.0	88888.00	88888.00	0.40	0.88	0.36	0.08	0.76	7.60
14	LL	4.	25.	3.44	0.70	0.19	0.15	88888.00	88888.00	0.15	0.96	0.07	0.11	0.56	1.89
15	LL	5.	1.	5.38	2.85	0.23	0.19	88888.00	88888.00	0.12	1.23	0.15	0.0	0.92	2.35
16	LL	5.	8.	2.11	2.56	0.19	0.22	88888.00	88888.00	0.15	1.44	0.41	0.04	0.85	3.96
17	LL	5.	15.	4.05	0.59	0.08	0.11	88888.00	88888.00	0.11	1.78	0.27	0.03	0.84	88888.00
18	LL	5.	22.	2.02	1.37	0.13	0.15	88888.00	88888.00	0.06	1.46	0.42	0.13	0.87	3.48
19	LL	5.	29.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	LL	6.	6.	4.05	2.16	0.22	0.22	88888.00	88888.00	0.16	1.32	0.22	0.08	0.81	2.00
21	LL	6.	13.	3.76	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	1.41	0.35	0.08	0.76	4.08
22	LL	6.	20.	3.03	1.17	0.08	0.27	88888.00	88888.00	0.25	0.91	0.22	0.04	0.69	2.03
23	LL	6.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LL	7.	3.	2.42	2.04	0.17	0.19	88888.00	88888.00	0.10	1.31	0.40	0.02	0.77	2.73
25	LL	7.	10.	3.89	0.16	0.57	0.34	88888.00	88888.00	0.11	1.30	0.16	88888.00	0.70	2.84
26	LL	7.	17.	3.43	2.13	0.67	0.73	88888.00	88888.00	0.17	1.63	0.43	0.0	0.93	3.20
27	LL	7.	24.	3.44	4.44	1.09	0.78	88888.00	88888.00	0.18	1.09	0.16	0.04	0.62	88888.00
28	LL	7.	31.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
29	LL	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	LL	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	LL	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	LL	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	LL	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	LL	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	LL	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CBDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE .HH

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	HH	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	HH	2.	2.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
3	HH	2.	9.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
4	HH	2.	16.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
5	HH	2.	23.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
6	HH	2.	30.	4.07	18.93	0.0	0.21	2.09	88888.00	0.21	1.43	0.86	0.14	0.93	4.57
7	HH	3.	6.	4.00	26.21	0.0	0.21	1.84	0.79	0.14	1.07	1.21	0.0	0.86	5.71
8	HH	3.	13.	3.15	29.15	0.0	0.0	88888.00	88888.00	0.15	-1.92	0.92	0.08	0.08	4.31
9	HH	3.	20.	2.14	20.64	0.0	0.14	2.86	0.42	0.14	1.14	0.14	88888.00	0.79	88888.00
10	HH	3.	27.	2.45	30.90	0.0	0.05	89888.00	88888.00	0.35	0.90	1.40	0.0	0.90	4.10
11	HH	4.	4.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	HH	4.	11.	2.85	14.70	0.0	0.0	2.82	0.67	0.05	0.60	0.65	0.0	0.75	2.35
13	HH	4.	18.	1.15	18.15	0.0	0.05	3.70	88888.00	0.20	0.85	0.15	88888.00	0.65	1.65
14	HH	4.	25.	2.75	18.65	0.0	0.20	4.00	88888.00	0.35	0.65	0.45	0.0	0.50	1.85
15	HH	5.	1.	1.65	14.55	0.0	0.15	4.55	0.83	0.30	1.00	0.50	0.10	0.80	2.65
16	HH	5.	8.	2.00	14.75	0.0	0.15	6.90	88888.00	0.70	1.05	0.40	0.05	0.65	2.40
17	HH	5.	15.	2.10	12.00	0.0	0.25	3.57	0.50	0.55	1.35	1.00	88888.00	1.50	5.75
18	HH	5.	22.	1.93	21.73	0.0	0.0	88888.00	88888.00	0.67	88888.00	88888.00	88888.00	88888.00	88888.00
19	HH	5.	29.	4.00	23.53	0.0	0.20	88888.00	88888.00	1.07	1.27	0.27	0.0	0.73	2.47
20	HH	6.	6.	3.60	12.10	0.0	0.0	88888.00	88888.00	0.50	0.60	0.60	0.10	0.70	4.80
21	HH	6.	13.	4.30	18.50	0.10	0.10	88888.00	88888.00	0.70	-1.10	0.80	88888.00	0.90	4.10
22	HH	6.	20.	2.90	12.50	0.0	0.20	2.33	0.33	0.50	1.00	0.50	0.0	0.80	2.40
23	HH	6.	27.	1.70	8.80	0.0	0.0	1.75	0.33	0.60	0.10	0.20	0.0	0.20	0.60
24	HH	7.	3.	3.50	11.50	0.0	0.20	1.67	0.25	0.90	0.80	0.60	0.10	0.90	3.10
25	HH	7.	10.	4.67	22.58	0.0	0.50	88888.00	88888.00	0.75	0.50	0.75	88888.00	0.75	2.00
26	HH	7.	17.	3.47	14.60	0.0	0.33	88888.00	88888.00	0.80	0.53	0.87	0.0	0.87	6.13
27	HH	7.	24.	3.00	16.73	0.0	0.13	88888.00	88888.00	0.73	0.33	0.33	0.0	0.53	1.33
28	HH	7.	31.	3.17	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	0.78	0.61	0.0	0.72	88888.00
29	HH	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	HH	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	HH	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	HH	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	HH	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	HH	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	HH	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

OCR STUCY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   NN

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	NN	1.	26.	2.82	16.18	0.0	0.64	88888.00	88888.00	1.00	2.18	0.0	0.18	0.73	4.18
2	NN	2.	2.	2.29	11.06	0.0	0.18	88888.00	88888.00	0.88	1.00	0.12	0.06	0.71	2.24
3	NN	2.	9.	1.91	7.83	0.0	0.04	88888.00	88888.00	0.22	0.57	0.30	0.0	0.48	1.91
4	NN	2.	16.	0.30	11.80	0.0	0.50	88888.00	88888.00	0.20	0.90	0.0	0.0	0.70	1.70
5	NN	2.	23.	1.14	22.64	0.0	0.21	88888.00	88888.00	0.21	0.93	0.14	0.0	0.57	1.86
6	NN	2.	30.	1.00	7.29	0.0	0.07	3.11	0.18	0.79	1.00	0.43	0.0	0.64	3.79
7	NN	3.	6.	1.86	28.57	0.0	0.29	1.35	0.10	1.14	1.29	0.43	0.0	0.71	2.86
8	NN	3.	13.	2.00	11.85	0.0	0.0	2.17	0.19	0.46	1.31	0.15	0.0	0.85	2.62
9	NN	3.	20.	1.33	16.92	0.0	0.58	1.88	88888.00	0.25	1.67	0.08	88888.00	0.75	2.67
10	NN	3.	27.	0.64	14.36	0.0	0.64	1.90	88888.00	0.45	0.73	0.55	0.0	0.73	2.27
11	NN	4.	4.	0.25	17.67	0.0	0.33	1.60	0.04	0.50	0.83	0.25	0.0	0.58	7.83
12	NN	4.	11.	1.30	19.20	0.0	0.80	1.43	0.22	0.20	0.90	0.30	0.10	0.70	2.20
13	NN	4.	18.	0.71	13.79	0.0	0.57	2.09	0.15	0.07	0.93	0.0	0.0	0.64	1.93
14	NN	4.	25.	2.00	40.00	0.0	0.71	1.13	0.08	1.14	1.71	0.57	0.0	0.71	3.43
15	NN	5.	1.	1.24	22.71	0.0	0.59	3.70	0.38	0.18	1.65	0.59	0.0	0.8	2.65
16	NN	5.	8.	2.45	1.66	0.0	0.79	88888.00	88888.00	0.48	0.07	0.52	0.03	0.4	1.34
17	NN	5.	15.	1.00	4.75	0.0	0.0	88888.00	88888.00	0.25	0.50	0.0	0.0	0.50	88888.00
18	NN	5.	22.	1.80	16.93	0.0	0.20	88888.00	88888.00	0.07	1.20	0.47	0.0	0.73	3.20
19	NN	5.	29.	1.80	16.60	0.0	0.0	88888.00	88888.00	0.0	0.80	0.60	0.0	0.80	3.00
20	NN	6.	6.	3.00	26.31	0.0	0.0	2.83	0.17	0.38	2.08	0.69	0.0	0.85	5.23
21	NN	6.	13.	1.83	17.83	0.0	0.0	1.50	0.05	0.50	0.67	88888.00	88888.00	0.67	1.33
22	NN	6.	20.	1.00	27.00	0.0	0.0	0.50	88888.00	0.50	0.0	0.0	0.0	0.0	88888.00
23	NN	6.	27.	3.00	8.83	0.0	0.0	88888.00	88888.00	0.33	2.00	0.33	88888.00	1.00	9.83
24	NN	7.	3.	1.91	13.45	0.0	0.09	2.24	0.20	0.36	1.27	1.27	0.09	0.91	8.09
25	NN	7.	10.	1.33	12.83	0.0	0.17	1.22	0.06	0.67	0.0	0.50	0.17	0.50	3.17
26	NN	7.	17.	2.25	15.50	0.0	0.13	1.43	0.08	0.38	1.50	0.25	0.13	0.63	2.63
27	NN	7.	24.	2.31	17.96	0.0	0.15	7.65	0.31	0.50	1.73	0.27	0.0	0.81	88888.00
28	NN	7.	31.	2.05	88888.00	88888.00	88888.00	5.24	0.33	88888.00	1.55	0.50	0.05	0.82	88888.00
29	NN	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	NN	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	NN	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88889.00
32	NN	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	NN	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	NN	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	NN	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   00

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	00	1.	26.	7.00	3.25	0.0	0.0	88888.00	88888.00	0.13	0.75	0.50	0.50	0.88	3.13
2	00	2.	2.	2.79	15.50	0.14	0.86	88888.00	88888.00	0.50	1.50	0.64	0.0	0.71	3.71
3	00	2.	9.	5.56	12.56	0.11	0.67	88888.00	88888.00	0.33	1.11	0.22	0.33	0.78	3.00
4	00	2.	16.	2.00	13.13	0.07	0.47	88888.00	88888.00	0.07	1.40	0.33	0.13	0.73	3.13
5	00	2.	23.	2.79	11.29	0.0	0.21	88888.00	88888.00	0.29	1.50	0.14	0.0	0.71	3.21
6	00	2.	30.	3.37	11.89	0.11	0.0	88888.00	88888.00	0.37	0.53	0.0	0.05	0.53	1.37
7	00	3.	6.	4.08	15.75	0.08	0.08	88888.00	88888.00	0.50	1.08	0.25	0.0	0.83	0.0
8	00	3.	13.	5.29	13.86	0.21	0.07	88888.00	88888.00	0.43	0.57	0.43	0.07	0.50	1.64
9	00	3.	20.	2.71	17.57	0.50	0.29	88888.00	88888.00	0.14	1.43	0.14	0.0	0.86	2.71
10	00	3.	27.	3.43	10.43	0.21	0.36	88888.00	88888.00	0.14	0.71	0.14	88888.00	0.64	1.64
11	00	4.	4.	2.63	30.38	0.25	0.25	88888.00	88888.00	1.00	0.38	0.13	88888.00	0.38	0.88
12	00	4.	11.	4.88	14.50	0.56	0.56	88888.00	88888.00	0.44	0.94	0.19	0.06	0.75	1.81
13	00	4.	18.	2.92	6.77	1.54	0.62	88888.00	88888.00	0.62	1.15	0.54	0.0	0.77	3.08
14	00	4.	25.	4.20	17.15	2.15	0.60	88888.00	88888.00	0.55	0.40	0.25	0.15	0.50	1.50
15	00	5.	1.	5.78	12.78	1.06	0.89	88888.00	88888.00	0.39	1.44	0.22	0.06	0.89	2.89
16	00	5.	8.	3.24	11.88	1.82	0.29	88888.00	88888.00	0.12	0.88	0.35	0.0	0.71	3.29
17	00	5.	15.	3.78	14.78	1.56	0.50	88888.00	88888.00	0.11	0.67	0.50	0.0	0.72	88888.00
18	00	5.	22.	4.07	9.40	0.40	0.47	88888.00	88888.00	0.93	0.27	0.47	0.0	0.40	1.33
19	00	5.	29.	2.90	19.70	0.20	0.70	88888.00	88888.00	0.30	0.70	0.60	0.0	0.80	13.00
20	00	6.	6.	4.60	33.80	0.60	1.00	88888.00	88888.00	0.60	1.00	0.20	0.0	0.80	2.00
21	00	6.	13.	3.50	16.00	0.0	1.00	88888.00	88888.00	0.0	88888.00	88888.00	88888.00	1.00	2.00
22	00	6.	20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	00	6.	27.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	00	7.	3.	7.20	17.00	0.20	1.10	88888.00	88888.00	0.50	0.60	0.50	0.10	0.70	2.20
25	00	7.	10.	3.50	13.50	0.20	0.50	88888.00	88888.00	0.10	0.60	0.50	0.20	0.80	2.60
26	00	7.	17.	4.50	17.40	0.60	0.70	88888.00	88888.00	0.30	1.10	0.60	0.0	0.80	2.40
27	00	7.	24.	3.73	14.73	0.64	1.00	88888.00	88888.00	0.18	0.55	0.18	0.0	0.45	88888.00
28	00	7.	31.	11.20	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	2.20	0.30	0.20	1.00	88888.00
29	00	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	00	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
31	00	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	00	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	00	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	00	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	00	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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OCR STUDY - PEARSON CORRELATION ON CLEARINGHOUSE DATA

FILE CHDATA (CREATION DATE = 01/25/78) OCR CLEARINGHOUSE DATA
SUBFILE PP

CASE-N	CH	MONTH	WEEK	NOR05	NOR06	NOR07	NOR08	RHR	CHR	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
1	PP	1.	26.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
2	PP	2.	2.	2.53	4.53	0.60	0.47	88888.00	88888.00	0.07	88888.00	88888.00	88888.00	88888.00	88888.00
3	PP	2.	9.	2.13	4.33	0.27	0.53	88888.00	88898.00	0.07	3.00	0.20	0.27	1.40	5.60
4	PP	2.	16.	0.87	2.07	0.47	0.40	88888.00	88H88.00	0.07	1.93	0.13	0.0	0.80	3.13
5	PP	2.	23.	1.80	5.07	1.00	0.93	88888.00	88888.00	0.0	0.47	0.07	0.0	0.33	2.40
6	PP	2.	30.	1.21	6.64	0.0	0.86	88888.00	88888.00	0.07	1.43	0.14	0.21	0.79	3.21
7	PP	3.	6.	1.29	4.64	0.43	1.29	2.80	88888.00	0.43	0.57	0.0	0.07	0.50	1.29
8	PP	3.	13.	2.07	4.50	0.21	1.00	2.09	88888.00	0.43	0.43	0.0	0.0	0.43	0.93
9	PP	3.	20.	1.57	5.43	0.14	1.64	3.78	88888.00	0.50	0.71	0.21	0.0	0.64	1.93
10	PP	3.	27.	1.20	4.00	0.0	0.73	3.06	88888.00	0.20	0.87	1.27	0.0	1.00	3.40
11	PP	4.	4.	1.53	3.93	0.07	1.13	4.69	86888.00	0.33	0.87	0.33	0.0	0.73	2.60
12	PP	4.	11.	2.93	5.40	0.27	0.87	1.92	88388.00	0.27	88888.00	88888.00	88888.00	88888.00	88888.00
13	PP	4.	18.	1.33	2.93	1.87	1.13	3.26	88888.00	0.13	1.67	0.20	0.0	1.20	3.67
14	PP	4.	25.	1.40	0.40	1.93	1.27	3.95	88888.00	0.07	0.73	88888.00	88888.00	0.53	1.40
15	PP	5.	1.	2.47	5.53	0.87	0.73	4.05	88888.00	0.13	1.20	0.07	88888.00	0.73	2.27
16	PP	5.	8.	2.53	2.27	2.27	1.00	4.55	88888.00	0.20	1.27	0.20	0.07	0.73	2.67
17	PP	5.	15.	3.47	2.73	2.07	0.93	3.75	88888.00	0.47	0.73	0.47	0.0	0.67	88998.00
18	PP	5.	22.	1.40	4.27	0.53	0.73	3.41	88888.00	0.13	0.53	0.07	0.0	0.47	1.20
19	PP	5.	29.	2.53	3.60	0.27	0.73	2.17	88888.00	0.13	0.67	0.13	88888.00	0.67	1.47
20	PP	6.	6.	2.33	2.13	1.27	0.53	7.14	88888.00	0.13	0.47	0.20	0.0	0.40	1.27
21	PP	6.	13.	2.67	1.67	1.73	0.60	5.17	88888.00	0.27	0.93	0.07	0.0	0.67	2.07
22	PP	6.	20.	1.47	3.60	1.07	0.60	88888.00	88888.00	0.33	1.40	0.27	0.0	0.80	1.20
23	PP	6.	27.	1.13	3.40	0.0	0.67	6.52	88888.00	0.07	0.53	0.07	88888.00	0.40	1.00
24	PP	7.	3.	1.73	2.80	0.40	0.47	3.00	88888.00	0.20	0.60	0.13	0.0	0.60	1.60
25	PP	7.	10.	3.07	1.67	0.33	0.67	3.49	88888.00	0.67	0.27	0.13	0.13	0.47	2.33
26	PP	7.	17.	1.87	3.80	0.40	0.80	88888.00	88898.00	0.33	0.60	0.07	0.0	0.40	1.07
27	PP	7.	24.	3.00	4.73	1.00	0.73	5.00	88888.00	0.40	0.20	0.0	0.07	0.27	88888.00
28	PP	7.	31.	3.80	88888.00	88888.00	88888.00	6.00	1.09	88888.00	0.53	0.20	88888.00	0.53	88888.00
29	PP	8.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
30	PP	8.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	98888.00	88888.00	88888.00
31	PP	8.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88898.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
32	PP	8.	28.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
33	PP	9.	7.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
34	PP	9.	14.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00
35	PP	9.	21.	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00	88888.00

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APPENDIX.D

DATA CORRELLATIONS

FILE   CHDATA   (CREATION DATE = 01/29/78)   CCR CLEARINGHOUSE DATA
SUBFILE   AA   BB   CC   DD   EE   FF   GG   HH   II   JJ
          KK   LL   MM   NN   OO   PP

VARIABLE	CASES	MEAN	STD DEV
VARO2	175	4.6720	2.3784
VARO4	131	24.4374	20.3803
NORO5	371	2.2773	1.5931
NORO6	362	11.8288	9.0210
NORO7	362	0.1787	0.6131
NORO8	362	0.5027	0.5510
NORO9	362	0.2711	0.2466
NOR10	369	0.8759	0.5947
NOR11	363	0.3037	0.3224
NOR12	322	0.0518	0.1382
NOR13	371	0.6343	0.2831
NOR14	330	2.4076	1.6906

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	NORO5	NORO6	NORO7	NORO8	NORO9	NOR10	NOR11	NOR12	NOR13	NOR14
VARO2	0.2871	0.4821	-0.0948	-0.0675	0.2544	0.3588	0.2500	0.1526	0.4816	0.3425
	(150)	(146)	(146)	(146)	(146)	(151)	(147)	(127)	(151)	(136)
	S=0.001	S=0.001	S=0.128	S=0.209	S=0.001	S=0.001	S=0.001	S=0.043	S=0.001	S=0.001
VARO4	0.3386	0.3486	-0.0825	0.0418	0.3122	0.1840	0.0604	-0.0507	0.1983	0.1820
	(109)	(105)	(105)	(105)	(105)	(110)	(107)	(95)	(110)	(109)
	S=0.001	S=0.001	S=0.201	S=0.336	S=0.001	S=0.027	S=0.268	S=0.313	S=0.019	S=0.035

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

FILE   CDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   AA

VARIABLE	CASES	MEAN	STD DEV
VAR02	26	5.7808	2.0153
VAR04	23	11.3565	9.2424
NOR05	28	0.9850	0.5754
NOR06	27	15.8746	8.3589
NOR07	27	0.0066	0.0217
NOR08	27	0.1568	0.1940
NOR09	27	0.2563	0.1738
NOR10	28	0.9709	0.4236
NOR11	28	0.2958	0.2267
NOR12	27	0.0480	0.0998
NOR13	28	0.6703	0.2237
NOR14	25	2.3599	1.1181

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.2215	0.3593	0.3216	0.2933	0.4213	0.6847	0.1330	0.2229	0.7682	0.5466
	(22)	(21)	(21)	(21)	(21)	(22)	(22)	(21)	(22)	(19)
	S=0.161	S=0.055	S=0.078	S=0.098	S=0.029	S=0.001	S=0.278	S=0.166	S=0.001	S=0.008
VAR04	0.0532	0.2471	-0.0855	0.2793	0.6808	0.2781	0.0242	-0.1643	0.2487	0.2217
	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(20)	(21)	(19)
	S=0.409	S=0.140	S=0.356	S=0.110	S=0.001	S=0.111	S=0.459	S=0.244	S=0.138	S=0.181

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/29/78)   OCR CLEARINGHOUSE DATA
SUBFILE   DB

VARIABLE	CASES	MEAN	STD DEV
VAR02	8	2.7125	0.5489
VAR04	7	17.7143	10.5153
NOR05	19	2.1005	0.9817
NOR06	18	5.2116	2.0970
NOR07	18	0.0019	0.0079
NOR08	18	1.9629	0.4398
NOR09	18	0.2494	0.1175
NOR10	19	0.8755	0.3066
NOR11	19	0.2163	0.1329
NOR12	15	0.0184	0.0435
NOR13	19	0.5993	0.1503
NOR14	17	2.2983	0.9663

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	-0.1919	0.2487	99.0000	0.6278	0.5418	-0.2964	-0.7329	99.0000	-0.7170	0.0596
	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(5)	(7)	(7)
	S=0.340	S=0.295	S=*****	S=0.066	S=0.105	S=0.259	S=0.030	S=*****	S=0.035	S=0.449
VAR04	-0.4235	-0.2039	99.0000	-0.7335	0.1913	-0.4184	-0.2734	99.0000	-0.3384	-0.3277
	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(5)	(7)	(7)
	S=0.172	S=0.331	S=*****	S=0.030	S=0.341	S=0.175	S=0.277	S=*****	S=0.229	S=0.237

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/29/78)   OCR CLEARINGHOUSE DATA
SUBFILE -CC

VARIABLE	CASES	MEAN	STD DEV
VAR02	3	2.6667	4.6188
VAR04	3	8.0CC0	13.8564
NOR05	27	3.8618	2.2852
NOR06	27	21.1975	8.8527
NOR07	27	0.0031	0.0160
NOR08	27	0.3143	0.2581
NOR09	27	0.3327	0.3258
NOR10	26	1.2596	0.8012
NOR11	25	0.4730	0.4182
NOR12	23	0.1752	0.3885
NOR13	25	0.8675	0.4601
NOR14	22	3.5216	2.0596

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	1.0000 (3) S=0.001	1.0000 (3) S=0.001	99.0000 (3) S=*****	1.0000 (3) S=0.C01	1.0000 (3) S=0.001	1.0000 (3) S=0.001	1.0000 (3) S=0.001	99.0000 (2) S=*****	1.0000 (3) S=0.001	1.0000 (3) S=0.001
VAR04	1.0000 (3) S=0.001	1.0000 (3) S=0.001	99.0000 (3) S=*****	1.0000 (3) S=0.C01	1.0000 (3) S=0.001	1.0000 (3) S=0.001	1.0000 (3) S=0.00	9.0000 (2) S=*****	1.0000 (3) S=0.001	1.0000 (3) S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/29/78)   OCR CLEARINGHOUSE DATA
SUBFILE   DD

VARIABLE	CASES	MEAN	STD DEV
VAR02	12	4.5417	3.4833
VAR04	10	21.5000	21.8797
NOR05	24	1.3940	1.0681
NOR06	24	8.7002	6.3099
NOR07	24	0.0028	0.0136
NOR08	24	0.2856	0.1998
NOR09	24	0.2542	0.2351
NOR10	25	0.5671	0.4312
NOR11	25	0.1524	0.1553
NOR12	25	0.0296	0.0511
NOR13	25	0.4675	0.2733
NOR14	24	1.4531	0.9536

- - - - - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.7475	0.7382	0.2494	0.8403	0.5710	0.7747	0.7613	0.2917	0.8890	0.8716
	(11)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)
	S=0.004	S=0.003	S=0.217	S=0.001	S=0.026	S=0.002	S=0.002	S=0.179	S=0.001	S=0.001
VAR04	0.5550	0.8099	-0.2489	0.6862	0.6212	0.5564	0.4305	0.3774	0.6225	0.5404
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
	S=0.048	S=0.002	S=0.244	S=0.014	S=0.028	S=0.047	S=0.107	S=0.141	S=0.027	S=0.051

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/29/78) . CCR CLEARINGHOUSE DATA
SUBFILE   EE

VARIABLE	CASES	MEAN	STD DEV
VAR02	7	8.1714	1.8732
VAR04	7	51.2857	38.9389
NOR05	27	1.6479	0.5427
NOR06	26	6.9008	2.6471
NOR07	26	0.0	0.0
NOR08	26	0.5083	0.2351
NOR09	26	0.1706	0.1284
NOR10	25	0.7225	0.4815
NOR11	24	0.1349	0.1515
NOR12	21	0.0072	0.0228
NOR13	26	0.5772	0.3188
NOR14	23	1.8169	1.2806

- - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.0658	-0.5289	99.0000	-0.1099	-0.0825	0.1716	-0.7099	99.0000	0.0596	-0.0259
	(7)	(7)	(7)	(7)	(7)	(7)	(6)	(6)	(7)	(7)
	S=0.444	S=0.111	S=*****	S=0.407	S=0.430	S=0.356	S=0.057	S=*****	S=0.450	S=0.478
VAR04	-0.0447	-0.5647	99.0000	-0.1429	-0.5154	-0.1017	-0.5148	99.0000	0.0834	-0.1652
	(7)	(7)	(7)	(7)	(7)	(7)	(6)	(6)	(7)	(7)
	S=0.462	S=0.093	S=*****	S=0.380	S=0.118	S=0.444	S=0.148	S=*****	S=0.429	S=0.162

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

163

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   FF

VARIABLE	CASES	MEAN	STD DEV
VAR02	27	5.8185	1.4796
VAR04	27	37.6296	17.6573
NOR05	27	2.4371	0.7213
NOR06	26	23.9700	4.5607
NOR07	26	0.0	0.0
NOR08	26	0.0213	0.0263
NOR09	26	0.1689	0.1569
NOR10	28	0.4593	0.2642
NOR11	28	0.2088	0.1337
NOR12	23	0.0191	0.0478
NOR13	28	0.4376	0.1548
NOR14	26	1.2367	0.5845

- - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.0072	-0.1435	99.0000	0.0682	-0.2890	-0.0382	-0.0492	-0.2510	-0.1073	-0.0349
	(20)	(19)	(19)	(19)	(19)	(21)	(21)	(16)	(21)	(19)
	S=0.488	S=0.279	S=*****	S=0.391	S=0.115	S=0.435	S=0.416	S=0.174	S=0.322	S=0.444
VAR04	0.1225	-0.0490	99.0000	0.3436	-0.1326	-0.2248	-0.1074	-0.2330	-0.3093	-0.2763
	(20)	(19)	(19)	(19)	(19)	(21)	(21)	(16)	(21)	(19)
	S=0.303	S=0.421	S=*****	S=0.075	S=0.294	S=0.164	S=0.322	S=0.193	S=0.086	S=0.126

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

164

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   GG

VARIABLE	CASES	MEAN	STD DEV
VAR02	0	***************	***************
VAR04	0	***************	***************
NOR05	2	1.0779	0.4959
NOR06	3	2.1457	1.0830
NOR07	3	0.0	0.0
NOR08	3	0.0588	0.1019
NOR09	3	0.0588	0.1019
NOR10	4	1.7735	1.5712
NOR11	4	1.1893	1.2118
NOR12	1	0.0	***************
NOR13	4	0.8583	0.1639
NOR14	3	4.8796	2.8700

- - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****
VAR04	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****	99.0000 (0) S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

165

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   IIII

VARIABLE	CASES	MEAN	STD DEV
VAR02	2	1.5500	2.1920
VAR04	2	3.0000	4.2426
NOR05	9	3.9812	1.7372
NOR06	8	11.7845	1.1862
NOR07	8	3.2846	1.5442
NOR08	8	1.9161	0.9333
NOR09	8	0.1072	0.1435
NOR10	9	0.5809	0.3596
NOR11	9	0.2526	0.1988
NOR12	9	0.0444	0.1333
NOR13	9	0.5382	0.2416
NOR14	7	2.1056	1.4013

-----------------P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S ------------

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	99.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****
VAR04	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****	99.0000 (2) S=*****	1.0000 (2) S=*****	1.0000 (2) S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

132

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   II

VARIABLE	CASES	MEAN	STD DEV
VAR02	5	3.2600	2.0045
VAR04	3	22.6667	19.7315
NOR05	26	3.1950	1.7455
NOR06	27	17.1746	8.2609
NOR07	27	0.0571	0.0798
NOR08	27	0.9249	0.3694
NOR09	27	0.4947	0.2790
NOR10	27	1.0913	0.7691
NOR11	27	0.5258	0.4463
NOR12	25	0.1118	0.1649
NOR13	27	0.6953	0.2745
NOR14	24	3.7498	2.0805

- - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.5540	0.5540	0.7042	0.6546	0.8232	0.7302	0.6425	0.4853	0.7458	0.6574
	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	S=0.166	S=0.166	S=0.092	S=0.115	S=0.043	S=0.081	S=0.121	S=0.204	S=0.074	S=0.114
VAR04	0.9508	0.9959	0.9961	0.9446	0.9999	0.9659	0.9767	0.5852	0.9746	0.7584
	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
	S=0.100	S=0.029	S=0.028	S=0.106	S=0.005	S=0.083	S=0.069	S=0.301	S=0.072	S=0.226

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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168   169

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   JJ

VARIABLE	CASES	MEAN	STD DEV
VAR02	0	**************	**************
VAR04	0	**************	**************
NOR05	23	0.6453	0.4421
NOR06	23	2.8848	1.3127
NOR07	23	0.0026	0.0123
NOR08	23	0.3245	0.1517
NOR09	23	0.1369	0.1464
NOR10	24	0.5386	0.2754
NOR11	22	0.2209	0.3222
NOR12	20	0.0093	0.0229
NOR13	24	0.5406	0.2278
NOR14	20	1.4607	0.9615

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****
VAR04	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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170

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE KK

VARIABLE	CASES	MEAN	STD DEV
VAR02	17	3.0176	1.4531
VAR04	6	8.7500	5.6369
NOR05	28	1.6525	0.8680
NOR06	27	6.5605	4.4048
NOR07	27	0.0139	0.0500
NOR08	27	0.4982	0.2940
NOR09	27	0.1378	0.1355
NOR10	28	0.8534	0.5922
NOR11	27	0.2181	0.1423
NOR12	23	0.0519	0.1121
NOR13	28	0.6261	0.2329
NOR14	25	2.0452	1.2427

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.2673	-0.1107	-0.0462	0.1122	-0.0047	-0.1231	0.2781	0.0507	0.4612	0.1295
	(17)	(16)	(16)	(16)	(16)	(17)	(16)	(13)	(17)	(14)
	S=0.150	S=0.342	S=0.432	S=0.340	S=0.493	S=0.319	S=0.149	S=0.435	S=0.031	S=0.330
VAR04	0.3440	-0.0611	99.0000	0.5358	0.5328	0.0287	0.7476	0.2839	0.5060	0.2811
	(6)	(5)	(5)	(5)	(5)	(6)	(5)	(5)	(6)	(4)
	S=0.252	S=0.461	S=******	S=0.176	S=0.178	S=0.478	S=0.073	S=0.322	S=0.153	S=0.350

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   LL

VARIABLE	CASES	MEAN	STD DEV
VAR02	3	0.0	0.0
VAR04	3	0.0	0.0
NOR05	25	2.7669	1.3632
NOR06	24	3.0879	3.0633
NOR07	24	0.1552	0.2643
NOR08	24	0.2708	0.2248
NOR09	24	0.1638	0.1429
NOR10	25	1.1275	0.5739
NOR11	25	0.2267	0.1593
NOR12	23	0.0492	0.0721
NOR13	25	0.7073	0.2925
NOR14	23	2.7028	1.6243

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	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000
	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****
VAR04	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000
	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   .(A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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174

FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   KM

VARIABLE	CASES	MEAN	STD DEV
VAR02	13	5.0462	1.9645
VAR04	9	17.9556	9.1961
NOR05	23	2.8066	1.1211
NOR06	22	17.3283	6.9725
NOR07	22	0.0045	0.0213
NOR08	22	0.1404	0.1273
NOR09	22	0.4714	0.2988
NOR10	22	0.8626	0.4439
NOR11	22	0.6007	0.3573
NOR12	17	0.0335	0.0498
NOR13	22	0.7047	0.3162
NOR14	20	3.1138	1.7407

----------------P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S----------------

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	0.7707	0.6926	99.0000	0.3009	0.0532	0.4330	0.6634	0.1691	0.5478	0.6127
	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(10)	(13)	(12)
	S=0.001	S=0.004	S=*****	S=0.159	S=0.431	S=0.070	S=0.007	S=0.320	S=0.026	S=0.017
VAR04	0.7967	0.5211	99.0000	0.4232	0.4876	0.4965	0.4053	0.2674	0.5922	0.4448
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(7)	(9)	(8)
	S=0.005	S=0.075	S=*****	S=0.128	S=0.092	S=0.087	S=0.140	S=0.281	S=0.046	S=0.106

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   NN

VARIABLE	CASES	MEAN	STD DEV
VAR02	25	5.4760	1.4134
VAR04	22	36.3636	12.8194
NOR05	28	1.6615	0.7507
NOR06	27	16.3524	8.0371
NOR07	27	0.0	0.0
NOR08	27	0.2846	0.2813
NOR09	27	0.4490	0.3122
NOR10	28	1.1053	0.5957
NOR11	27	0.3450	0.2858
NOR12	25	0.0321	0.0561
NOR13	28	0.6788	0.1908
NOR14	24	3.1645	1.7409

- - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	-0.4618	-0.0220	99.0000	0.6221	-0.1609	-0.0218	-0.2663	0.0466	0.0639	0.1007
	(18)	(17)	(17)	(17)	(17)	(18)	(17)	(16)	(18)	(15)
	S=0.027	S=0.467	S=*****	S=0.004	S=0.269	S=0.466	S=0.151	S=0.432	S=0.401	S=0.360
VAR04	0.3871	0.4065	99.0000	-0.3402	0.6203	0.2223	-0.0959	-0.1647	-0.2269	0.1700
	(15)	(14)	(14)	(14)	(14)	(15)	(14)	(14)	(15)	(13)
	S=0.077	S=0.075	S=*****	S=0.117	S=0.009	S=0.213	S=0.372	S=0.287	S=0.208	S=0.290

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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FILE   CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE   OO

VARIABLE	CASES	MEAN	STD DEV
VAR02	2	0.0	0.0
VAR04	2	0.0	0.0
NOR05	28	3.9863	2.1648
NOR06	27	13.8884	7.2348
NOR07	27	0.4893	0.6066
NOR08	27	0.4881	0.3471
NOR09	27	0.3344	0.2637
NOR10	27	0.8688	0.5059
NOR11	27	0.3085	0.1950
NOR12	25	0.0744	0.1238
NOR13	28	0.6657	0.2480
NOR14	25	2.5014	2.4326

- - - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****
VAR04	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (2) S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

FILE - CHDATA   (CREATION DATE = 01/25/78)   OCR CLEARINGHOUSE DATA
SUBFILE - PP.

VARIABLE	CASES	MEAN	STD DEV
VAR02	25	3.8240	1.5859
VAR04	7	16.2857	6.1837
NOR05	27	2.0497	0.7787
NOR06	26	3.6954	1.4521
NOR07	26	0.7328	0.6842
NOR08	26	0.8251	0.2936
NOR09	26	0.2344	0.1700
NOR10	25	0.9044	0.6174
NOR11	24	0.1927	0.2535
NOR12	20	0.0410	0.0779
NOR13	25	0.6463	0.2642
NOR14	22	2.1587	1.1369

- - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - -

	NOR05	NOR06	NOR07	NOR08	NOR09	NOR10	NOR11	NOR12	NOR13	NOR14
VAR02	-0.0389	0.3570	-0.3373	0.0755	0.1099	-0.0004	0.0575	-0.0441	0.2104	-0.0667
	(20)	(19)	(19)	(19)	(19)	(19)	(18)	(14)	(19)	(16)
	S=0.435	S=0.067	S=0.079	S=0.379	S=0.327	S=0.499	S=0.410	S=0.441	S=0.194	S=0.403
VAR04	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000	99.0000
	(1)	(0)	(0)	(0)	(0)	(1)	(1)	(0)	(1)	(0)
	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****	S=*****

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

APPENDIX E

INSTRUCTIONS FOR ASSEMBLING THE

OCR FORMS SHIPPING CARTON

June 29, 1976

TO: All ERIC Clearinghouses

FROM: Patrick D. Brown, Assistant Director, PB
           Computer and Management Information Systems
   ERIC Processing and Reference Facility.

SUBJECT: Assembly Instructions for OCR Forms Shipping Container

Recently, each of the clearinghouses was sent a supply of cardboard shipping containers to be used for the transmittal of OCR resume forms from the clearinghouses to the Facility.. This carton has been specially designed for the containment and shipping of the ERIC OCR Resume Forms. When used, in conjunction with the supplied cardboard inserts, this shipping container will adequately protect the forms from damage during transit and handling.

To assemble the shipping carton, the flaps marked A and B in Example 1 are to be folded inward at the four creases on each flap to form a square, as illustrated in Example 2. Next, fold the flaps marked C and D at the two creases on each flap to form the other two sides and the top of the carton.
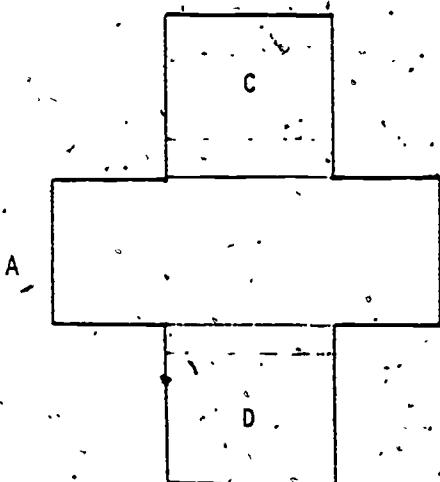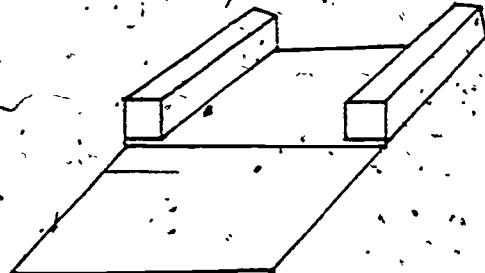
EXAMPLE 1   EXAMPLE - 2

After assembling the basic container, and before placing the OCR forms in the container, place the 11" square cardboard insert in the container. This insert will prevent the OCR forms from slipping underneath the folded edges of the container. Next, place the OCR forms squarely in the container taking special care that none of the edges of the OCR forms are extended as this will result in the forms being bent or damaged.

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After placing the OCR forms in the container, the excess space between the OCR forms and the top of the container can be displaced by either placing an 11" square insert on top of the OCR forms, if the maximum number of OCR forms (approximately 125) are being shipped, or by inserting one of the supplied cardboard springpads on top of the forms.   The springpad is designed to firmly hold the forms in place and is to be used when the excess space betwen the OCR forms and the top of the box cannot be displaced by a <u>single</u> 11" square cardboard insert.

The following example illustrates what the cardboard springpad will look like when properly folded.   This springpad will automatically adjust to fill all of the excess space in the container while securely holding the OCR forms in place.

TOP

FOLDED SPRINGPAD