NOTICE

THIS DOCUMENT HAS BEEN REPRODUCED FROM MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED IN THE INTEREST OF MAKING AVAILABLE AS MUCH INFORMATION AS POSSIBLE

TRANSFER OF INTERACTIVE REPORT EXTRACTED DATA (TIRED)
REQUIREMENTS SPECIFICATION

Job Order 71-983

AD 63-0997-1983-02

(E80-10219) TRANSFER OF INTERACTIVE REPORT   N80-27770
EXTRACTED DATA (TIRED) REQUIREMENTS
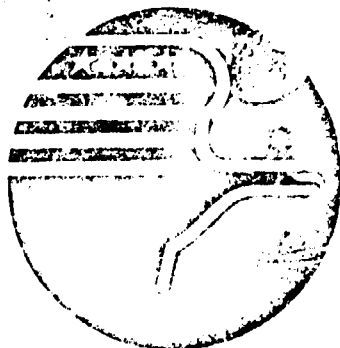SPECIFICATION (Lockheed Electronics Co.)
10 p HC A02/MF A01   CSCL 05B   Unclas
                                              G3/43 00219

Prepared By
Lockheed Electronics Company, Inc.
Aerospace Systems Division
Houston, Texas
Contract NAS 9-12200
For
EARTH OBSERVATIONS DIVISION

National Aeronautics and Space Administration
LYNDON B. JOHNSON SPACE CENTER
Houston, Texas
June 1976

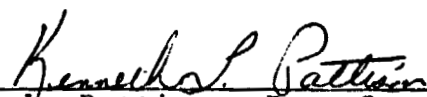LEC-8841

TRANSFER OF INTERACTIVE REPORT EXTRACTED DATA (TIRED)
REQUIREMENTS SPECIFICATION

Job Order 71-983
AD 63-0997-1983-02

Prepared By

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS

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1. SCOPE

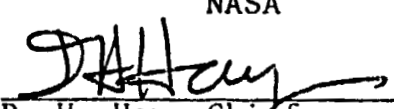This specification establishes the requirements for performance,
design, test and qualification of a computer program identified
as Transfer of Interactive Report Extracted Data (TIRED), which
will be an additional program (0016) within the CAS BATCH Sys-
tem. TIRED is used to provide the CAS BATCH REPORT GENERATOR
capability the necessary data as produced for the CAS Inter-
active Aggregation data base to generate the four IE reports.
This specification requires a computer program be generated to
achieve this objective.

This requirement was initiated by JSC/TF12.

2. APPLICABLE DOCUMENTS

The following documents, of the exact issue noted, constitutes
a part of this specification to the extent specified herein.
Where conflicting requirements exist, the requirements for
this specification shall govern.

Action Document	63-0997-1983-02
Job Order No.	71-983
Contract No.	NAS 9-12200
TIRF No.	76-0035
JSC 10009, Appendix E-3	
CAS BATCH SYSTEM Results Extract Program (Program 0005)	

3. REQUIREMENTS

3.1 SYSTEM DEFINITION

The CAS BATCH SYSTEM is operational on the PDP 11/45 computer
facility in Bldg. 17 of NASA JSC and currently runs under the

RSX-11D operating system.

3.2 DESIGN REQUIREMENTS

Design, programming, implementation, and documentation will
be in accordance with the Bldg. 17 FCMO management standards
and the specified Action Document.

3.3 PROCESSING DESCRIPTION

a. General Overview - The CAS Interactive System will be used
   for processing data and generating Applications Report Index
   Files (see LACIE CROP ASSESSMENT SUBSYSTEM SOFTWARE DOCUMENT,
   JSC 10009, Appendix E.3). These report index files will be
   made available to the CAS BATCH SYSTEM via a transfer pro-
   gram. The transfer program (TIRED) will select and reformat
   all available data required as input to the CAS BATCH EXTRACT
   PROGRAM (see LACIE BATCH SYSTEM PROGRAM, RESULTS EXTRACT
   PROGRAM # 0005).

b. Input File Processing

   1. Date Card - The date card will be the first input pro-
      cessed; if not, an appropriate error indicator will be
      generated and processing terminated. This card must
      contain for MMDDYY format dates within the range of
      '010175' to 123178'. If valid, these dates will be
      stored for later use. If not, an appropriate error
      indicator will be generated and processing terminated.
      (Note: The CAS analyst currently using this program
      is responsible for the generation of this input card.)

   2. With the exception of the validation processing men-
      tioned in (1) above, no additional data validation or
      data content checks on accessed data will be performed.

3. The CAS Interactive System report files (see attach-
   ·ment 1) to be accessed are:

ARIF.FC	Applications Report Index File
ARESPR.FC	Area Spring Report File
AREWIN.FC	Area Winter Report File
ARETOT.FC	Area Total Report File
YLDSPR.FC	Yield Spring Report File
YLDWIN.FC	Yield Winter Report File
PROSPR.FC	Production Spring Report File
PROWIN.FC	Production Winter Report File
PROTOT.FC	Production Total Report File

ALOCAT.CY.FC

Where: FC=country FIPS code

> (a) Concepts on Data Representation:
>   o AIRF.FC: contains all necessary index
>   tables establishing a base for retrieving
>   data records from other report files.
>
>   o ALOCATE.CY:FC: contains the number of
>   zones, region, strata, and substrata to
>   be processed.
>
>   o All other files: Each file contains the
>   following ten basic data items:
>   Region ID
>   Zone ID
>   Strata ID
>   Substrata ID
>   Estimates of:
>   Area
>   Yield
>   Production

4

Lower Confidence Limit
Upper Confidence Limit
Standard Error
Coefficient of Variation
Probability of 10% error

c. Output File Processing - The CAS BATCH SYSTEM output
   record (see attachment 2) will be generated in the follow-
   manner:

BATCH RECORD ELEMENT NAME	TRANSFER FROM	INTERACTIVE RECORD ELEMENT NAME
CONTROL KEY		
Country Code	ARIF FILE	Country Code
Region Code	Report File	Region Code (I,J,K,L)
Zone Code	Report File	Zone Code (I,J,K,L)
Strata Code	Report File	Strata Code (I,J,K,L)
AREA REPORT FILE(S)		
Area Estimate	Report File	Area Estimate (I,J,K,L)
Probability of ≤10% Error	Report File	Probability of ≤10% Error (I,J,K,L)
Coefficient of Variation	Report File	Coefficient of Variation (I,J,K,L)
Upper Confidence Limit	Report File	Upper Confidence Limit (I,J,K,L)
Lower Confidence Limit	Report File	Lower Confidence Limit (I,J,K,L)
No. of Segments Allocated		Not available
No. of Segments Used		in output file
No. of Strata Used		

YIELD REPORT FILES(S)

Yield Estimate	Report File	Yield Estimate (I,J,K,L)
Standard Error	Report File	Standard Deviation (I,J,K,L)
Probability of≤10% Error	Report File	Probability of ≤10% Error (I,J,K,L)
Coefficient of Variation	Report File	Coefficient of Variation (I,J,K,L)
Upper Confidence Limit	Report File	Upper Confidence Limit (I,J,K,L)
Lower Confidence Limit	Report File	Lower Confidence Limit (I,J,K,L)
Yield Date Range		Not available in output file

PRODUCTION REPORT FILES(S)

Production Estimate	Report File	Production Estimate (I,J,K,L)
Standard Error	Report File	Standard Deviation (I,J,K,L)
Probability of ≤10% Error	Report File	Probability of ≤10% Error (I,J,K,L)
Coefficient of Variation	Report File	Coefficient of Variation (I,J,K,L)
Upper Confidence Limit	Report File	Upper Confidence Limit (I,J,K,L)
Lower Confidence Limit	Report File	Lower Confidence Limit (I,J,K,L)

Where: I = country ID
        J = region ID
        K = zone ID
        L = strata ID

Note: A decision as to the values of those elements whose source
is identified as 'NOT AVAILABLE IN OUTPUT FILE', will be
made at a future date. During processing, no false zero
values will be generated. Output record values will be
arrived at either by direct transfer or by the arithmetic
process of addition.

4.   QUALITY ASSURANCE PROVISIONS

Verification of the performance of the software specified herein shall be demonstrated by an acceptance test plan.

5.   DOCUMENTATION

Documentation will consist of this Requirements Specification, as Acceptance Test Procedure, and a well annotated program listing to be delivered upon implementation.

KEYPUNCH TRANSMITTAL

THE RECORD LAYOUT FOR ALL RECORDS IN THE INTERACTIVE AGGREGATION FILES

THE FILES AND THE LEVELS WITHIN EACH FILE ARE BELOW

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
REG ID	SUB ID	ESTIMATE ID +	LOWER CONF. LIMIT		UPPER CONF. LIMIT		STAND. DEV		COEF. OF VARIAT.		PROB. OF < 100 ERR				**

ADDITIONAL DATA FROM SUBSTRATA RECORDS OF ALL 3 AREA FILES) N RECORDS

# EST SEG	# SEG	ALL
N		

FILES ⟶ 1) AREA PR 2) AREA TOT 3) AREA WIN 4) YLD SPR 5) YLD WIN 6) PROD SPR 7) PROD WIN 8) PROD TOT

LEVELS ⟶ a) REGION b) REGION c) REGION d) REGION e) REGION

⟶ a) ZONE b) ZONE c) ZONE d) ZONE

⟶ a) STRATA b) STRATA c) STRATA d) STRATA

⟶ a) SUBSTRATA b) SUBSTRATA c) STRATA d) SUBSTRATA e) STRATA

* ESTIMATE FOR AREA, YIELD, AND PRODUCTION

** IN ADDITION TO AGGR RECORD, THE WEATHER DATA RANGE IS NEEDED FOR THE TWO YIELD FILES

ATTACHMENT 1

SEE PARAGRAPH

DB NAME: _____

RECORD ID: RESULTS RECORD

DENSITY _____ BPI
INPUT _____ OUTPUT _____
CHECKPOINT: YES _____ NO __Y__

CORE RECORD LAYOUT

ORIGINAL PAGE IS
OF POOR QUALITY