a. Performance of the ERTS Data Collection System in a Total System Context

ERTS-A Proposal No: SR 210

b. GSFC ID No. of P.I.: IN 016

c. Problems: Because this investigation depends upon and lags the individual DCS investigations, any delays in those investigations causes a delay in this one. Therefore, the problem of getting acceptable Data Collection Platforms (DCP's) from the NASA Contractor to DCS P.I.'s is the main delay in this investigation.

d. Accomplishments: The delay in ERTS-1 launch and in implementing the DCS network has allowed a low-key approach in this investigation. Reporting forms for computerized analysis of DCP failures and incorrect data transmissions have been designed (copies attached) and made available to all NASA DCS P.I.'s at a joint meeting held at NASA-MTF in May 1972 (agenda and attendance list attached). Computer software for analysis of performance is being developed and first debugging efforts were made.

First reports of transmission performance are expected during the next reporting period. Software development will continue and should be essentially completed.

e. Results: Non-delivery of significant numbers of DCP's to DCS P.I.'s precludes any hard analysis of first results. However, a telephone canvas of P.I.'s shows that 10 DCP's in the U.S. and Canada are on-line and operating satisfactorily. Most problems to date, aside from a timer defect and Test Set defect (both being corrected by NASA Contractor), have been in the nature of "cockpit problems" by project personnel during installations. These were not unexpected and already are beginning to decrease as familiarization proceeds. The system works! (category 9b)

f. Reports: None

g. Changes: No changes are recommended at this time. As more DCP's come on-line a further assessment can be made.

h. Standing Order Forms: No changes.

i. Image Descriptor Forms: N/A

j. Data Request Forms: None

k. Status of DCP's: N/A

PERFORMANCE OF THE ERTS DATA COLLECTION
SYSTEM IN A TOTAL SYSTEM CONTEXT

James F. Daniel
U.S. Geological Survey, WRD
St. Louis, Missouri 63141

5 September 1972

Type I Progress Report for Period 1 July 1972 - 31 August 1972

Prepared for:

Goddard Space Flight Center
Greenbelt, Maryland 20771

Publication authorized by the Director, U.S. Geological Survey

ERTS - DCP

Results Coding Forms Explanation

J. F. Daniel
EROS Program

2

HEADER

Space

C - - Card number - always 1   1

PID - - Platform identification number (NASA furnished)   3-6

GRIL - - Ground radio interference location   8

             Code: 1 - - 0- 1 mile
                    2 - - 1- 5 miles
                    3 - - 5-20 miles
                    4 - - >20   miles
                    5 - - variable (taxis, etc.)

E - - Environment   11

           Code: 1 - - center city
                  2 - - sub-urban
                  3 - - rural
                  4 - - remote level
                  5 - - remote mountainous

NS - - Number of sensors   14-15

PERB - - Beginning date of report period   18-22

           Code: Day Year
                   XXX   XX

          May 5, 1972 = 12672

PERE - - Ending date of report period   25-29

           Code: See PERB

TRO - - Total number of readings obtained   32-36
         (this platform only)

INCORRECT READINGS OBTAINED
Card 3   Space

C - - Card number (begin with 3 - - See card 2)   1-2

    Code: 31,32,33.....30,3A,3B, etc.

   Same items as Card 2   3-78

INCORRECT READINGS OBTAINED
Card 2   Space

C - - Card number (begin with 2 for real time, 3 for   1-2
      mail or vice versa)

          Code: 21,22,23....20,2A,2B, etc.

PID - -   3-6

SID - - Sensor identification (investigator furnished)   7-8

DAY - - Code: See PERB, card 1   9-13

AM - - Total incorrect morning readings for DAY   14-16

PM - - Total incorrect evening readings for DAY   17-19

A - - Sensor status - morning   20

          Code: 0 - Go
                 1 - No Go

P - - Sensor status - evening   21

          Code: 0 - Go
                 1 - No Go

M - - Mode of data return from Goddard   22

          Code: 0 - Mail
                 1 - Hard wire teletype
                 2 - Hard wire computer access

Repeat cycle beginning DAY   23-36
                                                                  37-50
                                                                  51-64
                                                                  65-78

5

NO READINGS OBTAINED
Card 4   Space

C - - Card number (begin with 4 for real time, 5 for   1-2
      mail or vice-versa)

          Code: 41,42....4B etc.

PID - - Code: See PID Card 1   3-6

SID - - Code: See SID Card 2   7-8

DAY - - Code: See PERB, Card 1   9-13

D - - No readings this day in morning   14

          Code: 1

N - - No readings this day in evening   15

          Code: 1

A - - Code: See A - - Card 2   16

P - - Code: See P - - Card 2   17

M - - Code: See M - - Card 2   18

      Repeat cycle beginning DAY   19-28
                                                              29-38
                                                              39-48
                                                              49-58
                                                              59-68
                                                              69-78

NO READINGS OBTAINED
Card 5   Space

Begin sequence with 5 for alternate mode from card 4

Identical format of Card 4   1-78

FIELD TEST RESULTS
Card 6   Space

.C - - Card number   1-2

      Code: 61,62....6B, etc.

PID - -   3-6

FTD - - Test date   9-13

      Code: See PERB - Card 1

EU/G - - Entire electronic unit status   16

      Code: 0 - Go
             1 - No Go

EU/R - - Entire electronic unit replaced   18

      Code: 0 - No
             1 - Yes

XM/G,XM/R - - Transmitter card   21,23

      Codes: See EU/G,EU/R

PG/G,PG/R - - Programmer card   26,28

      Codes: See EU/G,EU/R

AM/G,AM/R - - Analog module   31,33

      Codes: See EU/G,EU/R

DM/G,DM/R - - Parallel digital module   36,38

      Codes: See EU/G,EU/R

AN/G,AN/R - - Antenna and leads   41,43

      Codes: See EU/G, EU/R

OT - - Special note transmitted with cards

      Code: 0 - No
             1 - Yes

One card for each field test conducted

8

IDENTIFICATION: _____

INFORMATION: _____ *HEADER*

Row 1: C

Row 2: 1

Row 3–4: PID (columns 3–6)

Row 5–6: GRIL (columns 8–11)

Row 7–8: E (column 11)

Row 9–10: NS (columns 14–15)

Row 11–12: PERB (columns 18–22)

Row 13–14: PERE (columns 25–29)

Row 15–16: TRO (columns 32–36)

9

IDENTIFICATION: _____

INFORMATION: *INCORRECT READINGS OBTAINED -- REAL TIME*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43

Content entries:
- Row 1: C ... DAY (cols 37-39)
- Row 3: PID (cols 3-5); AM (cols 42-43)
- Row 5: SID (cols 7-9)
- Row 7: DAY (cols 9-11)
- Row 9: AM (cols 14-15)
- Row 11: PM (cols 17-18)
- Row 13: A (col 20)
- Row 15: P (col 21)
- Row 17: M (col 22)
- Row 19: DAY (cols 23-25)
- Row 21: AM (cols 28-29)
- Row 23: PM (cols 31-32)
- Row 25: A (col 34)
- Row 27: P (col 35)
- Row 29: M (col 36)

0	= ZERO	Ø	= ALPHA O	1	= ONE	I	= ALPHA I	2	= TWO	Z	= ALPHA Z

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PROGRAMMER _____ DIVISION _____
LOCATION _____ PHONE _____

IDENTIFICATION: _____

INFORMATION: *NO READINGS OBTAINED -- REAL TIME & MAIL*

Row 1: C
Row 3: P I D
Row 5: S I D
Row 7: D A Y
Row 9: D
Row 11: N
Row 13: A
Row 15: P
Row 17: M
Row 19: D A Y
Row 21: D
Row 23: N
Row 25: A
Row 27: P
Row 29: M

0 = ZERO   Ø = ALPHA O   1 = ONE   I = ALPHA I   2 = TWO   Z = ALPHA Z

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PROGRAMMER _____ DIVISION _____

LOCATION _____ PHONE _____

NUMBER _____

PROJECT _____

IDENTIFICATION: _____

INFORMATION: *FIELD TEST RESULTS*

Coding grid entries:

- Row 1: C (col 1)
- Row 2: filled cells (cols 1–2)
- Row 3: P I D (cols 3–5)
- Row 4: filled cells (cols 3–6)
- Row 5: F T D (cols 9–11)
- Row 6: filled cells (cols 9–13); E U (cols 16–17)
- Row 7: G (col 16), R (col 18)
- Row 8: filled cells (cols 16, 18); X M (cols 21–22)
- Row 9: G (col 21), R (col 23)
- Row 10: filled cells (cols 21, 23); P G (cols 26–27)
- Row 11: G (col 26), R (col 28)
- Row 12: filled cells (cols 26, 28); A M (cols 31–32)
- Row 13: G (col 31), R (col 33)
- Row 14: filled cells (cols 31, 33); D M (cols 36–37)
- Row 15: G (col 36), R (col 38)
- Row 16: filled cells (cols 36, 38); A N (cols 41–42)
- Row 17: G (col 41), R (col 43)
- Row 18: filled cells (cols 41, 43); O T (cols 46–47)
- Row 19: filled cell (col 46)

United States Department of the Interior

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MISSISSIPPI TEST FACILITY
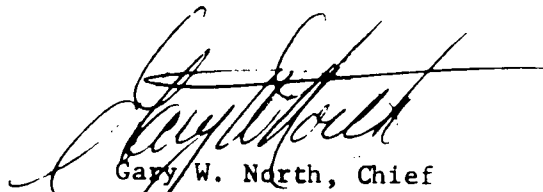BAY ST. LOUIS, MISSISSIPPI 39520

The EROS Program of the U. S. Geological Survey and NASA's Mississippi Test Facility (MTF) cordially invite you to attend an ERTS Data Collection System Users Meeting to be held on May 17 and 18, 1972 at the NASA Mississippi Test Facility in Bay St. Louis, Mississippi.

The purpose of this meeting is to acquaint the ERTS/DCS experimenters with how the system is to be used. Time will be spent on the ground, satellite and antenna systems. Data inputs and outputs will also be discussed. In addition, the meeting will provide an opportunity for the experimenters to get acquainted with each other. It is suggested that if you are unable to attend, that your alternate be capable of exploring the technical aspects of the Data Collection System as most of the discussion will be centered on those aspects of the system. Enclosed are the preliminary agenda and a map of the area.
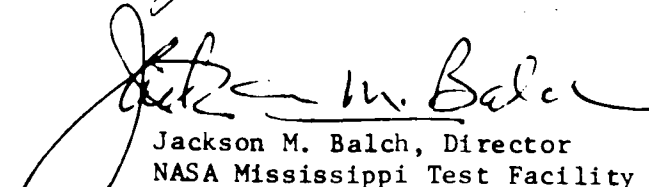
Experience with past conferences has shown that many people enjoy staying in New Orleans when they come to the MTF area. Consequently, we are allowing each attendee to secure his own accommodations. If you wish to stay closer to MTF, we suggest the Holiday Inn in Slidell, Louisiana (Tel. 504/643-9770) or the Ramada Inn in Waveland, Mississippi (Tel. 601/467-9261). Driving time from both of these motels is about 20 minutes and from New Orleans, 50 minutes. Badges and directions to the meeting room will be available at the South Reception Center located two miles north of the Bay St. Louis/ NASA exit off Interstate 10.

We sincerely hope that you will be able to attend this meeting and look forward to having you visit the Mississippi Test Facility. If you have any questions concerning the meeting or problems with travel or accommodations, please contact either the EROS Experiments & Evaluation Office (Tel. 601/ 688-3541) or NASA's Public Affairs Office (Tel. 601/688-3341). We would appreciate a telephone call confirming your plans for attending the meeting.

Sincerely,

Gary W. North, Chief
EROS Experiments & Evaluation Office

Jackson M. Balch, Director
NASA Mississippi Test Facility

Enclosures: 2

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CONFERENCE

INTERNATIONAL ERTS DATA COLLECTION SYSTEM USERS

Mississippi Test Facility
May 17-18, 1972

GUESTS	HOSTS
(See attached list)	Gary W. North
	U. S. Geological Survey
	Jackson M. Balch
	National Aeronautics and
	Space Administration

AM   WEDNESDAY, MAY 17

Time	Topic	Speaker
9:00	Introduction and Welcome	Gary North
		U.S.G.S.
		Jackson Balch
		NASA MTF
9:30	Purpose and Scope of Conference	James Daniel
		U.S.G.S.
— *ADD* *ERTS PROJECT STATUS*		*BILL SCULL, ERTS PROJ MANAGER NASA - GODDARD*
9:45	DCS Status and Schedule	Earle Painter
		NASA Goddard Space Flight Center
10:15	Coffee Break	
10:45	NASA Handling of DCS Data	Earle Painter
		NASA Goddard
		Jerald Klemmer
		General Electric Company
11:30	Lunch - Executive Dining Room	Mack Herring
		NASA MTF

PM   WEDNESDAY, MAY 17

1:00   Real Time Data Transmission   Earle Painter
                                                       NASA Goddard

1:30   User Data Processing

              USGS Delaware River Project   Richard Paulson
                                                       U.S.G.S.

              Corps of Engineers New England Project   Saul Cooper
                                                       USA C of E

2:30   Executive Session   James Daniel
                                                       U.S.G.S.

3:00   Tour of Facilities   Mack Herring
                                                       NASA MTF

AM   THURSDAY, MAY 18

8:30   DCP and Field Test Set Design   L. Meitin
                 and Operation   General Electric Company

                                                       G. Berger
                                                       General Electric Company

9:30   Sensor to DCP Interface   Duane Preble
                                                       U.S.G.S.

10:30   Coffee Break

10:45   Demonstration of Equipment   L. Meitin
                                                       General Electric Company

                                                       G. Berger
                                                       General Electric Company

AM   THURSDAY, MAY 18

11:45   Lunch - Executive Dining Room   Mack Herring
                                                          NASA MTF

PM

1:15   DCP Field Installation and Maintenance   Duane Preble
                                                          U. S. G. S.

2:15   Depot Maintenance and Logistics   Duane Preble
                                                          U. S. G. S.

2:45   DCS Implementation Services   William Wood
                                                          General Electric Company

3:30   Executive Session   James Daniels
                                                          U. S. G. S.

ATTENDEES
DATA COLLECTION SYSTEM USERS MEETING
MISSISSIPPI TEST FACILITY

May 17-18, 1972

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