

SOFTWARE RELEASE NOTICE

FOR

PRODUCT: IDEAS 2

VERSION: 2ma

HARDWARE

2200 VP, SVP, MVP, LVP

Part Number: 195-2209-3/5/9

Software Release Notice: 2ma

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VS/2200/PC Software Support

1.0 RELEASE ABSTRACT

IDEAS (Inquiry Data Entry Access System) Release 2 is a software tool for application development. IDEAS is designed to run on the 2200 BASIC-2 Operating System. This version of IDEAS is a maintenance release designed to correct some existing anomalies in the system.

2.0 PREREQUISITES AND DEPENDENCIES

2.1 Hardware: No change. Hardware requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

2.2 Software: No change. Software requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

3.0 RESTRICTIONS AND SPECIAL CONSIDERATIONS

**** conditions to regenerate program ****

*** other 'warnings' that need to be 'prominently documented' ***

4.0 ENHANCEMENTS

***** use Ed T. memo 11 Oct 83 all of section three (3) *****

*** note: there are references to other memos that document the enhancements.

5.0 PROBLEMS CORRECTED

The following list is a brief description of the reported problems that have been corrected since the distributed version 2.1. Each problem has an identification of the form 5.nn.cc.ss with nn as the number in this report section five, cc as the Chapter number, and ss as the Section number. The Chapter and Section numbers correspond to the IDEAS Release 2 User manual. The Chapter number and name are reported here for easy reference. A note of form (ref: -problem number-, -program(s) affected-) appears after each problem description,

Chapter 1: Overview of IDEAS Release 2

5.01-01.05 Installing release 2.1 to new platter in global mode causes IDS2PU12 to stop at line 1500 with error P55. (ref: RD-919, IDS2PU12)

Chapter 2 Using IDEAS Release 2

5.02-02.02 Program IDS2P004 stops with error P38 because function FNU is missing. (ref: F204903, IDS2xxxx)

5.03-02.03 If global partition is between 12.5K and 13K, then the sequential subroutines are not loaded properly when running an application. (ref: RD-944, IDS2PIX9)

5.04-02.03 Exiting report using LOAD P/F (Pass/Fail) option will leave the printer hogged. (ref: F003254, IDS2SUB1)

Chapter 3: Data file utilities

5.05-03.02 If data file and control file are on different disks then using convert to TC file will not recognize names entered under record selection. (ref: RD-927, IDS2PU05)

5.06-03.02 With type four (4) data files, records after the first block are not saved or retrieved properly. (ref: RD-930, IDS2SUB3)

5.07-03.02 When the Key-Index-Entry (KIE) length evenly divides 240, a fatal error can result when a key bucket is almost full in an IDEAS data file. (ref: RD-945, IDS2SUB3)

5.08-03.02 Insertion of a new record in one partition occurring simultaneously with the deletion of a record in another partition which also hashes to the same bucket will sometimes result in a valid key insertion but a blank record in the file. (ref: MC-009, IDS2xxxx)

5.0 PROBLEMS CORRECTED (continued)

- 5.09-03.02 Insertion of new records into a file while another partition is running the sorting/selection module in preparation for a report or batch program will sometimes result in missed records in the report. (ref: MC-010, IDS2xxxx)
- 5.10-03.02 Deleting records from a file while another partition is running the sorting/selection module in preparation for a report or batch program will sometimes result in extraneous records in the report. (ref: MC-011, IDS2xxxx)
- 5.11-03.05 Batch program documentation incorrectly reports the field type. (ref: RD-917, IDS2PR39)

Chapter 4: Screen utilities

- 5.12-04.01 Language specification for decimal alignment not correct. (ref: F205921, IDS2xxxx)
- 5.13-04.02 When printing documentation for a screen, if the printer is not available and you cancel, then the printer is left hogged. (ref: RD-946, IDS2PS10 and IDS2SUB3)

Chapter 5: Screen edit utilities

- 5.xx-05.02 If a screen is supposed to display all fields at load time and the operator has just returned from a HELP screen, the fields are not displayed. (ref: RD-883, IDS2SUB1)
- 5.xx-05.02 The cursor flashes on and off between characters as it is repositioned during field entry. (ref: RD-925, IDS2SUB1)
- 5.xx-05.03 Documentation for table lookup/replace will sometimes print in expanded form and the program hangs in a loop. (ref: IN-???, IDS2xxxx)
- 5.xx-05.03 A space is an illegal character for a type one (1) screen field but is valid for a type zero (0). (ref: RD-922, IDS2SUB1)
- 5.xx-05.03 Screen mask field editor does not allow a new name which is the combination of two adjacent field names formed by the last part of one file and the first part of the next field. (ref: F002953, IDS2PS07)

- 5.xx-05.04 Using indirect for a report, the field names are not loaded properly at the end of the file. (ref: RD-942, IDS2PRX4 and IDS2PBX7)
- 5.xx-05.04 Syntax error in generated code for COPY functions. (ref: F205609, IDS2PP15)
- 5.xx-05.05 When operator uses blank as maximum value for a report range selection, system displays: "Maximum must be greater than minimum". Users manual, page 6-25, states that blank maximum value is acceptable. (ref: F003253, IDS2PR26)
- Chapter 6: Reports
- 5.xx-06.02 Program generator protect/rem/debug field problems. (ref: F205613, IDS2PP01)
- 5.xx-06.05 During print processing, program IDS2PRX2 stops at line 1010 with error P57. (ref: F005976, IDS2PRX2)
- 5.xx-06.05 Reports printed ten (10) times the number of 'before' lines requested. (ref: MM-001, IDS2PRX2)
- 5.xx-06.06 Report documentation for operations stops with error P37 at line 1520 in program IDS2PR36. (ref: IN-???, IDS2xxxx)
- 5.xx-06.07 Page level operations did not execute for the first record in a report. (ref: MM-004, IDS2PRX3)
- 5.xx-06.09 When the second of three data files on a report is deleted, the last five characters of the first file's ID and the last character of the line count are deleted. (ref: F003252, IDS2PR01)
- 5.xx-06.09 Under some circumstances, invalid range test code could be generated. (ref: NR-003, IDS2PP11)
- 5.xx-06.10 Under some circumstances, an infinite loop could result during program generation which caused garbage to be written all over the disk. (ref: NR-002, IDS2PP03)
- 5.xx-06.10 When compiling a program, if the existing program file is too small, IDEAS2 hangs in an infinite loop while trying to scratch and rename the old program file name. (ref: IN-???, IDS2xxxx)
- 5.xx-06.11 Report does not display name of unopened file when error message is displayed. (ref: F205614, IDS2PBX1)

- 5.xx-06.11 Severe data file damage could result in files permitting duplicate keys if a new record is saved which caused a bucket overflow and the key was a duplicate that spanned a block boundary. (ref: NR-007, IDS2SUB1)
- 5.xx-06.11 The Security module can be entered without using the menu password by entering Other Utilities (FN '14), exit to menu (FN '31), and pressing execute (or FN '00). (ref: F004764, IDS2xxxx)
- 5.xx-06.11 Report program skips one, two, or three records when it nears the record number 215. (ref: F005824, IDS2???? and IDS2xxxx)
- 5.xx-06.11 If generated code contained a HEX(FE) at byte 239 in the buffer then program IDS2PR19 stops with error P57. (ref: RD-926, IDS2PR19)
- 5.xx-06.11 During select/sort processing, program IDS2PBX8 stops with error A01. (ref: F205447, IDS2PBX8)
- 5.xx-06.11 Data file has records with keys pointing to blank data. The data file could be applicatio data or system (edit specification file) data. The conditions for duplication are unknown. (ref: F006772, IDS2xxxx)
- 5.xx-06.11 After sorting, two (2) records are not reported. The records are always the same and are from a type two (2) file with a key of nine (9) bytes. The key has two fields with the first part numeric and the second part alphanumeric. When the sort/report is requested with the alphanumeric field followed by the numeric field, all records are reported. (ref: F007054, IDS2PBX7 AND IDS2PRX4)
- 5.xx-06.11 In a report, the first line of the second page is printed at the bottom of the first page, and so on throughout the report. (ref: RD-920, IDS2PRX4)
- 5.xx-06.11 If, while sorting via an alternate file, someone on another terminal deletes a record from the primary file, then a bad pointer in the alternate file can result and cause an error P34 at line 497 in the subroutine module. (ref: RD-921, IDS2PBX4)
- 5.xx-06.12 In a generated report program the last sector is generated without a HEX(FF) and causes an error D88 when the program is loaded. (ref: RD-907, IDS2PP06 and IDS2PR19)

end of chapter 6 REPORTS

Chapter 7: Menus

5.xx-07.04 Report documentation 'spilled over' page boundaries. (ref: NR-005, IDS2PR52)

5.xx-07.04 Report documentation does not print operation name when first record of Pass/Fail is missing. (ref: NR-006, IDS2PR36)

Chapter 8: Start programs

5.xx-08.03 Report will not print with: 1) no run time modifiable range, 2) no run time logical selections, 3) uses complete file, and 4) logical on single digit (type zero). (ref: F004991, IDS2PBX0)

5.xx-08.03 In an IDEAS2 START program with several alternate key files to opened under the 'N' (not used) option, the program stops with error P56 at line @418 statement four::: IF Fl\$(V)=" " THEN 419. (ref: F005921, IDS2xxxx)

Chapter 9: Interactive program generation

5.xx-09.02 When a required field is left blank, program stops with error P56. (ref: F205642, IDS2xxxx)

Chapter 10: Batch program generation

5.xx-10.03 If the "Copy a Batch Program" utility fails and the operator presses cancel to return to the menu, then in some cases a subsequent "Batch Program Revision" can cause sectors 25 to 33 of the disk to be overwritten. (ref: RD-940, IDS2PR23)

Chapter 11: IDEAS SUPPLEMENTARY UTILITIES

5.xx-11.02 When alternate key file is used as the file name, the protect all records utility stops with error P57 at line @211 after the system displays: "ERROR MESSAGE: DO YOU WANT PRIMARY FILE?". (ref: F002408, IDS2xxxx)

- 5.xx-11.06 When using convert to TC file, if the last IDEAS record just caused a TC sector to be written then this last TC sector will be overwritten with control characters and spaces and the record is lost. (ref: RD-935, IDS2PU06)
- 5.xx-11.06 Using data with more than one alternate key file, the IDEAS-to-TC utility will stop with error P57. (ref: RD-938, IDS2PU14)
- 5.xx-11.06 Using data with field type five (5) or six (6), the IDEAS-to-TC utility will skip keys that start with numerics and find the first record with a key with alpha characters. (ref: RD-941, IDS2PU05)
- 5.xx-11.06 When converting an IDEAS2 file to TC format, if the data file and control file are on different disks, then the field names entered under the record selection criteria are not recognized. (ref: RD-927, IDS2PU05)
- 5.xx-11.06 Conversion to TC format will sometimes miss records. (ref: RD-934 and RD-936, IDS2PU06)
- 5.xx-11.06 Sometimes blank records are moved to the TC file, which causes the TC record count to be larger than the IDEAS file record count. With the larger record count, problems are encountered when the records are moved from the TC file back to the IDEAS file. (ref: RD-936, IDS2PU06)
- 5.xx-11.07 The TC-to-IDEAS utility does not check for the IDEAS becoming full. (ref: RD-943, IDS2PU08)
- 5.xx-11.07 When records are moved from a TC file to a type three (3) file (duplicate keys allowed), only the first of set of records with duplicate keys are moved. (ref: RD-934, IDS2PU08)
- 5.xx-11.07 When records are moved from a TC file to an IDEAS file and you choose the option to not overwrite existing records, the existing records are left protected. (ref: RD-939, IDS2939 and IDS2PU08)
- 5.xx-11.07 Conversion from TC file to IDEAS2 file will stop with error P56 if there is more than one alternate key file. (ref: RD-938, IDS2PU14)

- 5.xx-11.07 In TC files with non-concatenated records, the protect byte from the next record trails the record instead of blank padding. (ref: RD-947, IDS2PU06)
- 5.xx-11.09 If an edit file has been reallocated and initialized then the edit file can not be accessed. (ref: RD-924, IDS2PS12)
- 5.xx-11.09 Up and Down arrows are not working in the Expand an Edit utility. (ref: F205453, IDS2xxxx)
- 5.xx-11.11 Using local subroutines, utility Key File Recovery stops at line 15 with error P55. (ref: F006666, IDS2PU88)
- 5.xx-11.11 Key file recovery utility did not blank out erased records or overflow records that were moved to their home bucket. These non-blank records caused duplicate records in a file which did not allow duplicate records. (ref: NR-008, IDS2PU89)
- 5.xx-11.13 Data file dump utility fails when file has 249 fields. (ref: F205453, IDS2xxxx)
- 5.xx-11.13 The file dump utility stops with P34 in program IDS2PU20. (ref: RD-906, IDS2PU17)
- 5.xx-11.15 List cross reference utility will miss some field names which are shorter than length eight. (ref: RD-929, IDS2PU23, IDS2PU25, and IDS2PU26)

6.0 KNOWN ANOMALIES

None

7.0 MEDIA COMMENTS

8.0 SOFTWARE INSTALLATION

***** describe using IDS2MOVE *****

***** note need for doing 'something' with START programs ****

9.0 REFERENCES

None



MEMO TO: NEIL ARONSON
STEVE BERGMANN
WENDY MacGOWN
DORIS ODEN

FROM: STAN NEUMANN

DATE: SEPTEMBER 20, 1983

SUBJECT: IDEAS DOCUMENTATION

Attached are the documents describing IDEAS 2.2
that should have been distributed with the
software itself.

Attachments

0390C

To: Jude Skowron
IDEAS Group

From: Ed Thibeault

Date: July 15, 1983

Subject: Report/Batch Program Queue Structure

Release 2.2 of IDEAS provides a powerful new feature, program queue management and execution for report and batch programs. This permits reports and batch programs to be executed in either background or foreground mode and either individually or in sequence.

1. QUEUE FILE

The queue manager requires a queue file on the IDEAS system utility platter. This file is NOT present normally, and must be specified by the user or developer if the queue feature is to be implemented. It may be specified by adding the module "IDS2PQ00" to an application menu and running the module.

The screen will then prompt the user to specify the number of possible entries in the queue (1-249.) When the number has been specified and accepted, this module will create the queue file on the utility platter and run in monitor mode.

The queue file consists of:

- a. A sequence sector where the first 249 bytes represent the binary value of the job numbers to be run in sequence. If less than 249 jobs are specified for the queue size, the remaining bytes are HEX(FF).
 - Byte 250 is HEX(FF)
 - Byte 251 is the number of possible jobs in the queue.
 - Byte 252 is the number of jobs currently in the queue.
 - Byte 253 is the number of jobs available for processing.
 - Byte 254 is the number of jobs currently in process.
 - Byte 255 is the number of jobs completed or terminated, but preserved in the queue for informational purposes.
 - Byte 256 is reserved.

- b. A status sector consisting of a status byte for each possible job in the queue, followed by all HEX(FF)'s. The status values represent:
 - HEX(00) is an available job slot.
 - HEX(01) is a job currently being specified.
 - HEX(02) is a job available for processing.
 - HEX(03) is a job currently in process.
 - HEX(04) is a complete job that was specified to remain in the queue.
 - HEX(05) and greater is a job that was terminated by the queue manager.
- c. 1 to 63 descriptive sectors, each containing descriptive information for up to 4 job queue entries.
- d. 1 to 249 specification sectors, each containing the range, logic, sort, disk, and printer specifications for a job queue entry.

2. ADDING A JOB TO THE QUEUE

If the queue file is present, IDS2PBX3 (after all range, logic, sort, printer, and disk specifications are completed) will present an operator with the option of executing a job (report or batch) immediately (in foreground mode) or adding it to the queue for later processing.

This option is not presented if:

- a. There is no queue file present.
- b. The job is a report specified for the screen.
- c. The program has been specified in debug mode.

If queue entry is selected, the user then has the option of specifying if the job may be run at any station, or at the specifying station only.

Finally, the user may select to have the job remain in the queue after normal completion, so that he may be informed that it has been processed. If this option is not selected, the queue entry will be deleted from the queue after normal completion.

3. QUEUE MANAGEMENT

Module IDS2PQ00 must be run from an application, rather than from the development system, for queue management. This module (in addition to setting up the queue file as previously described) permits the user to:

- a. View all entries in the queue.
- b. Move an entry in the queue (change the order of execution.)
- c. Execute a particular job (regardless of queue position.)
- d. Delete a queue entry.
- e. Enter background mode and process all available queue entries in sequence.

4. OPERATION

The queue manager (IDS2PQ00) may be run directly from an IDEAS application menu or indirectly from any application. It requires a START module to have been executed that opens any files that are used in any of the programs that may be in the queue. When run from a non-IDEAS application, it should be run in background mode. This will be explained in more detail later.

In foreground mode, a screen is displayed showing the status of the queue in general and up to 10 queue entries at a time. At the top of the screen the following are displayed:

- a. The number of possible entries in the queue.
- b. The number of current entries.
- c. The number of jobs currently available to process.
- d. The number of jobs currently in process.
- e. The number of jobs terminated or completed, but held in the queue.

For each job entry displayed, a status is listed. The status may be any of the following:

- a. In queue update by UUU at station ##
Shown when another station is specifying a queue entry. UUU is the user ID of the operator specifying the queue entry and ## is the station at which the specification is being made.
- b. Ready for processing at any station
(or) Ready for processing at station ##
This implies that the job has been specified and is available to be run at any time either at any station or only at the station where the queue entry was made, depending on the option selected by the operator who made the entry.
- c. Now running PROGNAME at station ##
If another station is processing a job in the queue, this shows the station number and the actual module being run at the time.
- d. Completed: Notify UUU at station ##
If the operator specified that the job be held in the queue after completion, this message will be shown upon completion and the job must be deleted from the queue by an operator. If the hold option was not selected, the job will be deleted from the queue automatically and this message will not appear.

- e. Waiting for printer at address PPPUUU @##
If the specified printer for a report is not available, this message will appear when the job attempts to print, showing the printer address and user ID and station number of the operator who specified the job.

The remaining status messages are all for jobs that have terminated abnormally. If this occurs, the appropriate message appears and the job must be deleted from the queue by an operator, regardless of the hold option originally selected. Each termination message includes the user ID and station number of the operator who specified the job so that the operator may be informed of the abnormal termination.

- f. Terminated: File "FILENAME" not open UUU @##
The job could not be run because one or more of its associated data files had not been opened by the START module.
- g. Terminated: Control file not found UUU @##
The control file for one of the associated data files is not found.
- h. Terminated: Work buffer too small UUU @##
The work buffer size set in the START module is of insufficient size to handle the job.
- i. Terminated: Rec. buffer too small UUU @##
The record buffer size set in the START module is of insufficient size to handle the job.
- j. Terminated: No records found UUU @##
No records were found that met the selection specifications.
- k. Terminated: No sort disk available UUU @##
No disk is available for the sort file.
- l. Terminated: Sort address not valid UUU @##
The specified address for the sort file is not one of the devices specified in the START module.
- m. Terminated: Sort file is too small UUU @##
The sort file is of insufficient to hold all of the records selected.
- n. Terminated: Insufficient memory UUU @##
The memory in the running partition is insufficient for the application being run.

Subject: IDEAS Release 2.2 - Differences from Release 2.1

This memo documents the changes from release 2.1 to 2.2 of IDEAS and may help to serve as a guide to the development of a test plan for the final release. Although I indicate those items which I consider to have been thoroughly tested, I still believe strongly in a testing process independent of the development group as the best assurance for a quality product.

1. The following bugs in release 2.1 have been fixed:

1.01 (#883) If a screen is supposed to display all fields at load, when returning from a HELP screen, it fails to display fields.

The original manner in which a return from a HELP screen was implemented was that fields would be displayed from the first field to the field where the cursor was positioned when the HELP screen was called. This prevented fields beyond the cursor, which had been previously shown in the case of either a "display all fields at load" situation or an edit mode condition, from reappearing after a HELP screen invocation. In addition, the "display all fields at load" condition shows pseudo-blanks for all blank fields when the screen first loaded. When returning from a HELP screen, these fields first showed up as pseudo-blanks and were then blanked out.

The HELP screen return sequence in IDS2SUB1 has been modified so as to properly display all fields on the screen (not just those up to the current cursor position.) In addition, if the "display all fields at load" option has been selected for the screen, any blank fields will be left as pseudo-blanks as in the original screen display condition. In this case, the change has also resulted in a 50% saving of time as the field display is implemented only once while it was being used twice in the past.

This has been tested.

1.02 (#906) File dump utility crashed with an ERR P34.

Fixed in module IDS2PU17. This may be difficult to test as the circumstances under which it occurred are unknown other than the fact that the problem file was actually sent to Lowell so that the problem could be seen. Since the fix was made and apparently solved the problem, I assume that we can consider the condition fully tested.

1.03 (#907) ERR D88 occurred when loading a generated report program because the last sector of the program was generated without a HEX(FF). Although not reported, this situation could also occur in a generated interactive or batch program as well as a report.

This has been fixed in IDS2PP06 and IDS2PR19 and tested.

1.10 (#917) Batch program documentation misprints the field type.

This has been corrected in module IDS2PR39 and tested.

NB: It should be noted and prominently documented that the very act of simply modifying a field specification on an existing batch or report program may actually change the field number order (because fields are automatically sorted by type, with the lowest field types occurring first in the list.) Should any field types be changed, the program MUST BE REGENERATED! Merely rewriting the control file without regenerating the program will result in fatal, non-fatal but obvious, or subtle errors at application execution time, depending how the field was changed. This possibility was introduced with the option to save the control file without program regeneration. Prior to the introduction of that option, the automatic regeneration of the program would have taken any such changes into account. It is a little late to worry about modifications to the code to detect such change, but we should warn the user prominently.

1.11 (#919) Installing release 2.1 to new platter in global mode causes IDS2PU12 to crash at line 1500 with an ERR P55.

This has been fixed and tested.

1.12 (#920) Fix added to release 2.1 caused first line of second page on report to print at the bottom of page 1, etc.

Reported fixed in IDS2PRX4, but not tested.

1.13 (#921) If, while sorting via an alternate file, someone on another terminal deletes a record from the primary file, a bad pointer in the alternate file can result, causing a P34 error at line 497 in the subroutine module.

Believed to be fixed in IDS2PBX4, but not tested.

1.14 (#922) A space is an illegal character for a type 1 screen field (at run time) but is not illegal for a type 0 field.

The keystroke validation portion of IDS2SUB1 has been totally rewritten to take international considerations into account. This has been fixed as part of the rewrite. It has been tested, but additional testing of all field types would not be unreasonable.

1.15 (#924) If edit file has been reallocated and initialized it can no longer be accessed afterwards.

Fixed in IDS2PS12 and tested.

1.16 (#925) The cursor flashes on and off between characters as it is repositioned during field entry.

This has been fixed in the rewrite of the keystroke handler in IDS2SUB1 and tested.

1.17 (#926) An ERR P57 could occur in IDS2PR19 if the generated code contained a HEX(FE) at byte 239 in the buffer.

Fixed and tested.

1.18 (#927) Convert to TC file - if data file and control file are on different disks, names entered under record selection are not recognized.

Fixed and tested in IDS2PL05.

1.19 (#929) List cross reference utility can miss some field names because it does a MAT SEARCH = X\$ instead of STR(X\$,8).

Fixed in IDS2PL23, IDS2PU25, and IDS2PL26 and tested.

1.20 (#930) Type 4 data files. Records beyond the first block are not saved nor retrieved properly.

Fixed in IDS2SUB3 and tested.

1.21 (#934) When bringing records back from a TC file to a type 3 file only the first of a set of records with duplicate keys gets moved.

Fixed in IDS2PU08 and tested.

1.22 (#935) When making a TC file, if the last IDEAS record has just caused a TC sector to be written, then this last TC sector will be overwritten with control characters and spaces, losing the record.

Fixed in IDS2PU06 and tested.

1.23 (#936) Sometimes completely blank records are moved to the TC file, which causes the TC record count to be larger than the IDEAS file records count, and causes problems moving records from the TC file back to the IDEAS file.

Fixed in IDS2PU06 and tested.

1.24 (#938) Conversion from TC will crash with an ERR P57 if there is more than one alternate file.

Fixed in IDS2PL14 and tested.

1.25 (#939) When moving records from a TC file to an IDEAS file if one chooses the option to choose to not overwrite some existing records then those records will be left protected in the IDEAS file.

Fixed in IDS2PL08 and tested.

1.26 (#940) If "Copy Batch Program" fails and one must cancel, in some cases a subsequent "Batch Program Revision" can cause sectors 25-33 of the disk index to be overwritten.

Fixed in IDS2PR23 and tested.

1.27 (#941) The IDEAS-to-TC utility did a FIND FIRST > HEX(00), which caused SLB8 to skip keys a field type 5 or 6 which start with numerics and find the first record with a key with alpha characters.

Fixed in IDS2PU05 and tested.

1.28 (#942) Indirects in reports: at end of file, field names are not being loaded properly for indirect operations. After end of file is reached, E9\$ and EO\$ are equal, so IDEAS thinks it has the field names already. Therefore, it does not load them properly.

Although not reported, this same problem will occur with batch programs.

Fixed in IDS2PRX4 and IDS2PBX7 and tested.

1.29 (#943) When moving records back from a TC file, IDEAS does not check to see if the IDEAS file is full.

Fixed in IDS2PU08 and tested.

1.30 (#944) If global partition is between 12.5K and 13K, sequential subroutines are not loaded properly when running an application.

Fixed in IDS2PIX9 and tested.

1.31 (#945) Fatal error can result when a bucket is almost full in an IDEAS data file if the KIE length divides evenly into 240.

Fixed in IDS2SLB3 and tested.

1.32 (#946) When printing documentation for a screen, if printer is not available and you cancel, printer is left hogged.

Fixed in IDS2PS10 & IDS2SLB3 and tested.

1.33 (#947) In TC files with non-concatenated records, the protect byte from the next record trails the record, rather blank padding.

Fixed in IDS2PU06 and tested.

2. Additional data file bugs (not listed in the formal bug list)

The two problems listed below have been fixed, but subjected to only minimal limited testing.

2.01 Insertion of a new record in one partition, occurring simultaneously with the deletion of a record in another partition which coincidentally falls into the same bucket may result in a valid key insertion but a blank record in the file.

2.02 Insertion of new records into a file while another partition was running the sorting/selection module in preparation for a report or batch program may result in "missed" records in the report. Similarly, deletions might result in extraneous records in the report.

The 2 previous problem solutions should be subjected to additional testing, but it should be noted that the problems are difficult to duplicate, due to the delicate timing and hashing considerations inherent in the problem.

3. Enhancements:

3.01 2236MXE Date and Time functions:

3.01.01 If a 2236MXE is present on the system and has been present with a valid date, the system date entry screen will not appear at start-up time for either an application or the development system. Instead, the IDEAS system date will default to the MXE's date.

3.01.02 In the development system, the user may go to the system date entry screen from the main menu to change it. In an application, the developer would have to provide this function, if necessary. There is no provision, under IDEAS, to set or change the date or time on the MXE board.

3.01.03 The MXE date and time functions are limited to copying the current values into alpha or numeric fields and are incorporated into the COPY pass/fail action specification. The specifications for the source of the item to be copied are "TIME@MXE", "DATE@MXE" and "DATE*MXE". The destination field should be at least 6 bytes in length.

3.01.03 It should be noted that the MXE date format is not supported for date validation and conversion functions under IDEAS (and to do so would exceed our 14K limit.) For this reason, 2 date formats have been provided in the copy specification and only 1 time format, since IDEAS does not validate time. The second date format is the "standard" MMDDYY format which may then be used in date validation and conversion pass/fail actions permitted by IDEAS.

TIME@MXE yields time in HHMMSS format.

DATE@MXE yields date in YYMMDD format (standard MXE)

DATE*MXE yields date in MMDDYY format (modified MXE)

3.01.04 If an MXE is not present, or if a date or time has not been set in the MXE, the data copied will be invalid, but no error condition will result directly from the copy function. It is possible that application errors could result from this condition, so it is the developer's responsibility to provide data integrity tests if valid dates and times are critical to the application.

3.02 Report/Batch Program Stacker

A means by which reports and/or batch programs may be enqueued for consecutive processing on the same or another station has been provided. Detailed documentation for this enhancement is available in a prior memorandum.

3.03 File to File Data Copy

A utility has been added to permit data to be copied from 1 file to another on a field by field basis to facilitate the preservation of existing data when a file needs to be restructured (fields added, etc.) Detailed documentation for this enhancement is available in prior memorandum.

3.04 Debugger

A facility has been provided whereby the developer may enter into debug mode and step through generated program modules during the testing process. Detailed documentation for this enhancement is available from Alan Tschetter.

3.05 Support for additional characters

To support the international market, IDEAS now supports the entire 2200 character set (conditionally.) Although detailed documentation for this enhancement is available in a prior memorandum, some points are probably worthy of mention here.

3.05.01 The language specification module (IDS2LSPC) should not be provided with the released package. Its use should be limited to Wang personnel to set up systems for translation to foreign languages. Its use by a customer could easily result in scrambled data leading to severe supporter set support, the language specification module also permits specification of the currency symbol, system date format, and decimal alignment character.

THE IDEAS II DEBUGGER

Since IDEAS is practically a programming language and in most cases eliminates the need for BASIC coding, we have provided debugging facilities. What one must do to use the debugger is to first generate "debuggable" programs, either interactive, report, or batch.

This is done on the main specification screen using SF key '1 for interactive programs and SF key '8 for reports and batch programs. One chooses either "R" (generate remarks), "D" (generate debuggable code), "B" (generate both remarks and debuggable code) or "N" (generate neither remarks nor debuggable code).

What generating debuggable code actually does is to insert BASIC statements of the form GOSUB' 70(A,B,C) in front of the code for each pass/fail action. For interactive programs "A" is the field number; for reports or batch programs it is the operation number. "B" is the edit sequence number and "C" is the pass/fail action number. Debuggable code is always generated with memory optimized, even if the user chooses to optimize load time.

When one runs a debuggable program the module "IDS2PDB1" is overlaid at lines 3300-3499 and execution begins at line 3305. This module scans the edit file and displays all edits associated with the interactive program's screen, the report, or the batch program, for the purpose of setting break points. For interactive programs this first display will appear immediately when the program is run; for reports and batch programs it will appear after the selection and sorting.

Edits are displayed in the same order as they occur in the edit file; that is, alphabetically by field or operation name. Each screen that appears displays one edit, identified by its field or operation name plus its sequence number, with its (up to 50) pass/fail actions. The screen explains how to use SF keys to page through the edits and pass/fail action to set (up to six) break points. On the DW keyboard North, South, East, and West are active as well as '5, '6, '12, and '13.

When the selection of break points is complete and EXEC is pressed the module "IDS2PDB2" (which contains '70) is overlaid at lines 3300...3499 and the application will run normally up to a break point. Then the debugger information screen will be displayed. The following list describes this screen, from top to bottom:

1. On line one the screen, report, or batch program name is displayed, along with the field or operation number, the edit sequence number, the pass/fail action number, and the current pass/fail state. The current pass/fail state can be changed using SF key '8.
2. On lines three and four flags 0 to 9 and A to Z are displayed. They can be changed using SF key '10.
3. Lines six to sixteen are used to select and display field contents and @TSTFLD contents. As the screen explains, fields are selected by using SF keys '4, '5, '6, '7, '21, '22 to move the pointer arrow. SF key '0 will display the contents of the selected field. SF key '1 plus the @TSTFLD number are used to display the contents of an @TSTFLD. CRT control codes (i.e., HEX(03)) are translated to periods.
4. Line eighteen displays the last function key entered, whether the system error messages are on or off, the old pass/fail state, and the next sequence number. The old pass/fail state can be changed with SF key '9.

5. Line nineteen displays the number of the last system error message which occurred, and the next transaction number. The last system error message itself is displayed on line twenty.

6. Line twenty one displays the contents of @SYSBUF0, which may, of course, be blank. CRT control codes (i.e., HEX(03)) are translated to periods.

7. Lines twenty three and twenty four give directions for using the screen; The idea behind changing flags or pass/fail states in debugger mode in IDEAS is similar to changing a variable in HALT/STEP mode in BASIC to see the effect.

If one now presses EXEC control will return to the application. If it is an interactive program its screen will be redisplayed with the cursor correctly positioned. Reports and batch programs will simply continue processing normally. However, in all cases, the debugger screen will be redisplayed from now on at every pass/fail action. This corresponds to HALT/STEP mode in BASIC.

On the other hand, if one uses CONTINUE, the application will process normally until the next break point or until completion.

One may also use '15 to return to the first debugger screen to set new breaks points and reenter the application.

For reports and batch programs, the set of defined operations is executed once for each record in the sequence file. Therefore, the debugger will be displayed at the chosen break points once for each of these records. Thus one would normally process only enough records to successfully complete the debugging.

If an interactive program displaying a subscreen is to be debugged, the main screen will not be redisplayed after returning from the debugger; only the subscreen will be displayed.

If a debuggable program loads another program the debug flag will still be on, so the screen used for scanning edits and choosing break point will be displayed. To continue with normal processing simply press EXEC.

Debugging must be done in the development environment. Specifically this means that the edit file must exist on the system platter and must contain the edits associated with whatever program is being debugged.

The debugger requires the following 16 modules, of which the first two are completely new and the remaining 14 are slightly modified to generate or process debuggable code:

IDS2PDB1, IDS2PDB2, IDS2PP01, IDS2PP02, IDS2PP06, IDS2PP13, IDS2PR01,
IDS2PR17, IDS2PR19, IDS2PPX0, IDS2PRX3, IDS2PRX4, IDS2PBX6, IDS2PBX7,
IDS2sP00, IDS2sR00

The debugger uses the following four flags:

F6\$(61) "P" for interactive program, "R" for report, "B" for batch program
F6\$(62) '70 will always display debugger information screen if flag is "Y"
F6\$(63) IDS2PPX0 or IDS2PRX3 will load IDS2PDB1 if flag is "Y"
F6\$(64) IDS2PPX0 will redisplay users screen after debugging if flag is "Y"

The debugger commons no new variables, but it does use the non IDEAS variables G1, G2, G3, G4, G5, and G6, which means that any user exits using these six variables should be temporarily changed while debugging. Other than this, user exits are compatible with debuggable code.

Subject: Utility to copy data from file to file

Now resident on is a utility to permit data in commonly named fields to be copied from one file to another. The purpose of this utility is to allow the developer to preserve existing data when a file requires redesign. The utility consists of one program (IDS2PF22) and one screen (IDS2sF22).

If a file requires redesign, the following steps should be taken.

1. Make a back-up copy of the old file, its control file, and any alternate key files associated with it (and their control files.)
2. Create a new control file using the "Copy Control File" utility.
3. Scratch and rename the existing data file (on each volume if a multi-volume file) using the same name as used for the new control file.
4. Edit the original file, adding, deleting, and modifying any desired fields.
5. Step through the remainder of the file specification modules.
6. Step through the file specification modules for any associated alternate key files. Note that it may be necessary to scratch and rename an alternate key file if the alternate key size or number of records in the primary file has been increased.
7. Initialize the primary and any alternate key files.
8. Create a START module (or revise an existing one) to open the file, its alternates, and the original file (under its new name), and to load a menu which permits access to program "IDS2PF22". Only the file containing the original data must be specified for sequential processing. The others may be specified for random access only, if desired.
9. Run the application and select IDS2PF22 from the menu.
10. Enter the new file name for the file containing the original data.

12. Step through the inconsistencies (if any) displayed for verification.
13. Copy the data from file to file.
14. Revise any screens, and revise and recompile any interactive, batch, or report programs which may be affected by changes in the data file.
15. Revise any START modules which open the file, editing the file in the the START module file specifications to ensure proper buffer sizes.

The utility permits modification of field sizes, types, etc., but certain cautions should be pointed out.

1. Only fields whose name appears in both files will be copied. Fields in the new file without a corresponding name in the original file will be left blank.
2. Alpha fields whose character set becomes more restricted will have any non-valid characters replaced with blanks, with the exception that any non-accented lower case letters from a type 7 field will be replaced with the corresponding upper case letter in a new field of type 4, 5, or 6.
3. New unsigned numeric fields which were originally signed will contain the absolute value of the original number.
4. New numeric fields which were originally alpha will contain the original value only if the original alpha string consisted of a valid numeric representation as seen by BASIC-2. (ie., for international versions, no commas in place of decimal points in the alpha string.) Otherwise, the new value will be zero.
5. New numeric fields which are too small to accommodate the value in the original field will contain a zero.
6. New numeric fields containing fewer decimal positions than the original field will have their values rounded to the appropriate number of decimals.
7. New alpha fields which are of a lesser length than the original field will have characters truncated from the right.

for the new file will be properly copied so as to avoid blank and/or illegal duplicate keys.

Program module IDS2FP22 currently required 14.5K plus buffers (compressed) and will run in neither a 14K partition (with global) nor probably in a 28K local environment. It may be split into 2 modules if necessary, but its use should be of such infrequency that the partition size should not be a compelling factor. Also, since we cannot predict the buffer requirements for any given application, it may require a larger than 14K partition for some files even if we split it into separate modules.

SOFTWARE RELEASE NOTICE

FOR

PRODUCT: IDEAS 2

VERSION: 2.3

HARDWARE

2200 VP, SVP, MVP, LVP

Part Number: 195-2209-3/5/9

Software Release Notice: 2.3

Date: December 5, 1984

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VS/2200/PC Software Support

0544d/dgf

1.0 RELEASE ABSTRACT

IDEAS (Inquiry Data Entry Access System) Release 2 is a software tool for application development. IDEAS is designed to run on the 2200 BASIC-2 Operating System. This software notice describes release 2.3 of IDEAS 2 which is a general release designed to correct some existing anomalies in the system. The problems corrected include ALL reported problems since the last official release 2.1. An addendum to the IDEAS users manual is reproduced in section 4 (enhancements). The addendum was prepared by R&D but not distributed. So, we are including the addendum with this release for completeness.

2.0 PREREQUISITES AND DEPENDENCIES

2.1 Hardware: No change. Hardware requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

2.2 Software: No change. Software requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

3.0 RESTRICTIONS AND SPECIAL CONSIDERATIONS

No restrictions.

4.0 ENHANCEMENTS

IDEAS 2.1 had been enhanced with Pre-release 2.2 which was not officially released. The enhancements include:

1. Date and time functions.
2. A report/batch program stacker.
3. File to file copy utility.
4. A debugger facility.

and

The addendum to Product Number 700-8872, 2200 IDEAS Release 2 User Manual, describing the enhancements is enclosed as appendix I.

5.0 PROBLEMS CORRECTED

The following list is a brief description of the reported problems that have been corrected since the distributed version 2.1. Each problem has an identification of the form 5.nn.cc.ss with nn as the number in this report section five, cc as the Chapter number, and ss as the Section number. The Chapter and Section numbers correspond to the IDEAS Release 2 User manual. The Chapter number and name are reported here for easy reference. A note of form (ref: -problem number-, -program(s) affected-) appears after each problem description. When a correction involved many programs, the affected program is reported as IDS2xxxx instead of the actual program names.

Chapter 1: Overview of IDEAS Release 2

5.01-01.05 Installing release 2.1 to new platter in global mode causes IDS2PU12 to stop at line 1500 with error P55. (ref: RD-919, IDS2PU12)

Chapter 2 Using IDEAS Release 2

5.02-02.02 Program IDS2P004 stops with error P38 because function FNJ is missing. (ref: F204903, IDS2xxxx)

5.03-02.03 If global partition is between 12.5K and 13K, then the sequential subroutines are not loaded properly when running an application. (ref: RD-944, IDS2PIX9)

5.04-02.03 Exiting report using LOAD P/F (Pass/Fail) option will leave the printer hogged. (ref: F003254, IDS2SUB1)

Chapter 3: Data file utilities

5.05-03.02 If data file and control file are on different disks then using convert to TC file will not recognize names entered under record selection. (ref: RD-927, IDS2PU05)

5.06-03.02 With type four (4) data files, records after the first block are not saved or retrieved properly. (ref: RD-930, IDS2SUB3)

5.07-03.02 When the Key-Index-Entry (KIE) length evenly divides 240, a fatal error can result when a key bucket is almost full in an IDEAS data file. (ref: RD-945, IDS2SUB3)

- 5.08-03.02 Insertion of a new record in one partition occurring simultaneously with the deletion of a record in another partition which also hashes to the same bucket will sometimes result in a valid key insertion but a blank record in the file. (ref: RD9009, IDS2xxxx)
- 5.09-03.02 Insertion of new records into a file while another partition is running the sorting/selection module in preparation for a report or batch program will sometimes result in missed records in the report. (ref: RD9010, IDS2xxxx)
- 5.10-03.02 Deleting records from a file while another partition is running the sorting/selection module in preparation for a report or batch program will sometimes result in extraneous records in the report. (ref: RD9011, IDS2xxxx)
- 5.11-03.05 Batch program documentation incorrectly reports the field type. (ref: RD-917, IDS2PR39)

Chapter 4: Screen utilities

- 5.12-04.01 Language specification for decimal alignment not correct. (ref: F205921, IDS2xxxx)
- 5.13-04.02 When printing documentation for a screen, if the printer is not available and you cancel, then the printer is left hogged. (ref: RD-946, IDS2PS10 and IDS2SUB3)

Chapter 5: Screen edit utilities

- 5.14-05.02 If a screen is supposed to display all fields at load time and the operator has just returned from a HELP screen, the fields are not displayed. (ref: RD-883, IDS2SUB1)
- 5.15-05.02 The cursor flashes on and off between characters as it is repositioned during field entry. (ref: RD-925, IDS2SUB1)
- 5.16-05.03 Documentation for table lookup/replace will sometimes print in expanded form and the program hangs in a loop. (ref: RD9012, IDS2xxxx)
- 5.17-05.03 A space is an illegal character for a type one (1) screen field but is valid for a type zero (0). (ref: RD-922, IDS2SUB1)
- 5.18-05.03 Screen mask field editor does not allow a new name which is the combination of two adjacent field names formed by the last part of one file and the first part of the next field. (ref: F002953, IDS2PS07)

- 5.19-05.04 Using indirect for a report, the field names are not loaded properly at the end of the file. (ref: ED-942, IDS2PRX4 and IDS2PBX7)
- 5.20-05.04 Syntax error in generated code for COPY functions. (ref: F205609, IDS2PP15)
- 5.21-05.05 When operator uses blank as maximum value for a report range selection, system displays: "Maximum must be greater than minimum". Users manual, page 6-25, states that blank maximum value is acceptable. (ref: F003253, IDS2PR26)

Chapter 6: Reports

- 5.22-06.02 Program generator protect/rem/debug field problems. (ref: F205613, IDS2PP01)
- 5.23-06.05 During print processing, program IDS2PRX2 stops at line 1010 with error P57. (ref: F005976, IDS2PRX2)
- 5.24-06.05 Reports printed ten (10) times the number of 'before' lines requested. (ref: RD9001, IDS2PRX2)
- 5.24-06.06 Report documentation for operations stops with error P37 at line 1520 in program IDS2PR36. (ref: RD9013, IDS2xxxx)
- 5.25-06.07 Page level operations did not execute for the first record in a report. (ref: RD9004, IDS2PRX3)
- 5.26-06.09 When the second of three data files on a report is deleted, the last five characters of the first file's ID and the last character of the line count are deleted. (ref: F003252, IDS2PR01)
- 5.27-06.09 Under some circumstances, invalid range test code could be generated. (ref: RD9003, IDS2PP11)
- 5.28-06.11 Report does not display name of unopened file when error message is displayed. (ref: F205614, IDS2PBX1)



- 5.29-06.11 . Severe data file damage could result in files permitting duplicate keys if a new record is saved which caused a bucket overflow and the key was a duplicate that spanned a block boundary. (ref: RD9007, IDS2SUB1)
- 5.30-06.11 The Security module can be entered without using the menu password by entering Other Utilities (FN '14), exit to menu (FN '31), and pressing execute (or FN '00). (ref: F004764, IDS2xxxx)
- 5.31-06.11 If generated code contained a HEX(FE) at byte 239 in the buffer then program IDS2PR19 stops with error P57. (ref: RD-926, IDS2PR19)
- 5.32-06.11 During select/sort processing, program IDS2PBX8 stops with error A01. (ref: F205447, IDS2PBX8)
- 5.33-06.11 Report program skips one, two, or three records when it nears the record number 215. (ref: F005824, IDS2PBX7 and IDS2PRX4)
- 5.34-06.11 After sorting, two (2) records are not reported. The records are always the same and are from a type two (2) file with a key of nine (9) bytes. The key has two fields with the first part numeric and the second part alphanumeric. When the sort/report is requested with the alphanumeric field followed by the numeric field, all records are reported. (ref: F007054, IDS2PBX7 AND IDS2PRX4)
- 5.35-06.11 In a report, the first line of the second page is printed at the bottom of the first page, and so on throughout the report. (ref: RD-920, IDS2PRX4)
- 5.36-06.11 If, while sorting via an alternate file, someone on another terminal deletes a record from the primary file, then a bad pointer in the alternate file can result and cause an error P34 at line 497 in the subroutine module. (ref: RD-921, IDS2PBX4)
- 5.37-06.11 Data file has records with keys pointing to blank data. The data file could be applicatio data or system (edit specification file) data. The conditions for duplication are unknown. (ref: F006772, IDS2xxxx)
- 5.38-06.12 In a generated report program the last sector is generated without a HEX(FF) and causes an error D88 when the program is loaded. (ref: RD-907, IDS2PP06 and IDS2PR19)

Chapter 7: Menus

- 5.39-07.04 Report documentation 'spilled over' page boundaries. (ref: RD9005, IDS2PR52)
- 5.40-07.04 Report documentation does not print operation name when first record of Pass/Fail is missing. (ref: RD9006, IDS2PR36)

Chapter 8: Start programs

- 5.41-08.03 Report will not print with: 1) no run time modifiable range, 2) no run time logical selections, 3) uses complete file, and 4) logical on single digit (type zero). (ref: F004991, IDS2PBX0)
- 5.42-08.03 In an IDEAS2 START program with several alternate key files to opened under the 'N' (not used) option. Using global programs, the system stops with error P56 at line @418. Using local programs, the system stops with error P56 at line 1017 in program IDS2PIX7. (ref: F005921, IDS2SUB1 and IDS2PIX7)

Chapter 9: Interactive program generation

- 5.43-09.02 When a required field is left blank, program stops with error P56. (ref: F205642, IDS2xxxx)
- 5.44-09.03 When compiling a program, if the existing program file is too small, IDEAS2 hangs in an infinite loop while trying to scratch and rename the old program file name. The loop will cause garbage (scratched program space) to be written until the disk's index is full. (ref: RD9002, IDS2PP03)

Chapter 10: Batch program generation

- 5.45-10.03 If the "Copy a Batch Program" utility fails and the operator presses cancel to return to the menu, then in some cases a subsequent "Batch Program Revision" can cause sectors 25 to 33 of the disk to be overwritten. (ref: RD-940, IDS2PR23)

Chapter 11: IDEAS SUPPLEMENTARY UTILITIES

- 5.46-11.02 When alternate key file is used as the file name, the protect all records utility stops with error P57 at line @211 after the system displays: "ERROR MESSAGE: DO YOU WANT PRIMARY FILE?". (ref: F002408, IDS2xxxx)
- 5.47-11.06 When using convert to TC file, if the last IDEAS record just caused a TC sector to be written then this last TC sector will be overwritten with control characters and spaces and the record is lost. (ref: RD-935, IDS2PU06)
- 5.48-11.06 Using data with more than one alternate key file, the IDEAS-to-TC utility will stop with error P57. (ref: RD-938, IDS2PU14)
- 5.49-11.06 Using data with field type five (5) or six (6), the IDEAS-to-TC utility will skip keys that start with numerics and find the first record with a key with alpha characters. (ref: RD-941, IDS2PU05)
- 5.50-11.06 When converting an IDEAS2 file to TC format, if the data file and control file are on different disks, then the field names entered under the record selection criteria are not recognized. (ref: RD-927, IDS2PU05)
- 5.51-11.06 Conversion to TC format will sometimes miss records. (ref: RD-934 and RD-936, IDS2PU06)
- 5.52-11.06 Sometimes blank records are moved to the TC file, which causes the TC record count to be larger than the IDEAS file record count. With the larger record count, problems are encountered when the records are moved from the TC file back to the IDEAS file. (ref: RD-936, IDS2PU06)
- 5.53-11.07 The TC-to-IDEAS utility does not check for the IDEAS becoming full. (ref: RD-943, IDS2PU08)
- 5.54-11.07 When records are moved from a TC file to a type three (3) file (duplicate keys allowed), only the first of set of records with duplicate keys are moved. (ref: RD-934, IDS2PU08)
- 5.55-11.07 When records are moved from a TC file to an IDEAS file and you choose the option to not overwrite existing records, the existing records are left protected. (ref: RD-939, IDS2939 and IDS2PU08)

- 5.56-11.07 Conversion from TC file to IDEAS2 file will stop with error P56 if there is more than one alternate key file. (ref: RD-938, IDS2PU14)
- 5.57-11.07 In TC files with non-concatenated records, the protect byte from the next record trails the record instead of blank padding. (ref: RD-947, IDS2PU06)
- 5.58-11.09 If an edit file has been reallocated and initialized then the edit file can not be accessed. (ref: RD-924, IDS2PS12)
- 5.59-11.09 Up and Down arrows are not working in the Expand an Edit utility. (ref: F205453, IDS2xxxx)
- 5.60-11.11 Using local subroutines, utility Key File Recovery stops at line 15 with error P55. (ref: F006666, IDS2PU88)
- 5.61-11.11 Key file recovery utility did not blank out erased records or overflow records that were moved to their home bucket. These non-blank records caused duplicate records in a file which did not allow duplicate records. (ref: RD9008, IDS2PU89)
- 5.62-11.13 Data file dump utility fails when file has 249 fields. (ref: F205453, IDS2xxxx)
- 5.63-11.13 The file dump utility stops with P34 in program IDS2PU20. (ref: RD-906, IDS2PU17)
- 5.64-11.15 List cross reference utility will miss some field names which are shorter than length eight. (ref: RD-929, IDS2PU23, IDS2PU25, and IDS2PU26)
- 5.65-11.15 List cross reference utility will miss some file names when the field attributes required three or more sectors of disk storage. (ref: F007364, IDS2PU23)
- 5.66-11.15 List cross reference utility does not report a field name which has 'no references' and the line should have been reported at the page break. (ref: F007387, IDS2PU25)

6.0 KNOWN ANOMALIES

None

7.0 MEDIA CONTENTS

Diskettes contain the complete IDEAS 2.3 system with installation program (IDS2MOVE) on diskette one. The Single Sided Single Density diskettes are numbered one (1) thru seven (7). The Double Sided Double Density diskettes are numbered one (1) and two (2).

The distributed system will have the release message 'Release 2.3'. The field testing system (for Critical accounts) will have the message 'Release 2pa'.

8.0 SOFTWARE INSTALLATION

Using either Single or Double density diskettes, mount diskette number one in your diskette drive. With 'ddd' as the drive address, perform: 1. SELECT DISK ddd, 2) LOAD RUN "IDS2MOVE", and 3) follow diskette loading instructions as the installation program asks for each diskette. When the installation of moving the programs is finished, the operator will be asked to allocate space for the security and edit specification files. The last step of allocating space will be done only when the system is being installed the first time, that is, if the files already exist then the operator will not be asked to allocate space for the files.

If something goes wrong (disk upside down, skipped a diskette, etc.) during the installation then start again at step one. That is, you can 're-install' as many times as needed to move the new programs onto the system.

The amount of file space for security and edit specifications can not be changed during installation. After the number is entered, the installation does not allow a change. Therefore, if the installer wants different size for the files, the system utilities will have to be used. Also, if the system already has these files then the installation program will not ask for the sizes and the existing files will not be affected.

9.0 REFERENCES

None

Enclosure: Appendix I Users manual addendum Release 2.1 Enhancements

APPENDIX I

2200 Users manual addendum

This appendix describes the enhancements that have been made to Wang's 2200 IDEAS 2 software. The users manual (product number 700-8872) with IDEAS release 2.1 was released in August 1983. This addendum was prepared for release 2.2 and has not changed during the testing and evaluation which resulted in release 2.3.

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CAUTIONS:

It is imperative that the following modules are never compressed or renumbered:

IDS2GLOB
IDS2GLBL
IDS2LOCL
IDS2SLDR
IDS2SUB1

Your program **MUST BE REGENERATED** if you change any field types. Rewriting the control file without regenerating the program results in fatal, non-fatal but obvious, or subtle errors when the application is executed depending on how the field has been changed.

NOTE:

International systems will generally require 14.5K global memory. If the entire character set is specified and the sort order is modified, it might possibly require 15K.

2236MXE DATE AND TIME FUNCTIONS

If your system contains a 2236MXE that has been preset with a valid date, the system date entry screen will not appear at start-up time for either an application or the development system. Instead, the IDEAS system date will default to the MXE date.

When using the development system, you can go to the system date entry screen from the main menu to change the date. However, you would have to provide this function for an application. IDEAS makes no provision to set or change the date or time on the MXE board.

You can use the MXE date and time functions only to copy the current values into alpha or numeric fields which are then incorporated into the COPY pass/fail action specification. The destination field must be at least six bytes long.

Since IDEAS does not support the MXE date format for date validation and conversion functions, two date formats have been provided in the copy specification:

DATE@MXE presents date in YYYYMMDD format (standard MXE)
DATE*MXE presents date in MMDDYY format (modified MXE)

IDEAS supports only DATE*MXE, the standard MXE format, in date validation and conversion pass/fail actions. Since IDEAS does not support time validation at all, only one time format has been provided in the copy specification:

TIME@MXE presents time in HHMMSS format

If a date or time has not been set in your MXE, or if your system does not contain a 2236MXE, data incorporated into the COPY pass/fail action specification is invalid. However, no error condition results directly from the copy function. Application errors could, however, result from this condition. It is your responsibility to provide data integrity tests if valid dates and times are critical to your application.

THE DEBUGGER

IDEAS now provides debugging capabilities for interactive, batch, and/or report programs. In order to operate, the debugger requires the following modules. The first two, IDS2PDB1 and IDS2PDB2, are new. The remaining modules have been modified to process debuggable code.

IDS2PDB1, IDS2PDB2, IDS2PP01, IDS2PP02, IDS2PP06, IDS2PP13, IDS2PRO1, IDS2PR17, IDS2PR19, IDS2PPX0, IDS2PRX3, IDS2PRX4, IDS2PBX6, IDS2PBX7, IDS2sP00, IDS2sR00

To use the debugging capabilities, you must classify your programs as debuggable on either the Interactive Program Specification Screen (Figure 1-1), the Batch Program Main Specification Screen (Figure 1-2), or the Report Specification Screen (Figure 1-3).

Press FN 01 on the interactive specification screen and/or FN 08 on the batch or report specification screens. This enables you to enter one of the four available options (RDBN).

- . R - generates remarks
- . D - generates debuggable code
- . B - generates both remarks and debuggable code
- . N - generates neither remarks nor debuggable code

IDEAS Interactive Program Generator - Program Specification Module Release 2.2					
Program MAILPROG -			Rev # / / by		
Files used:	Name	Description	Length	Begin	End
Screen mask =	-	-			
Data file 1 =	-	-			
Data file 2 =	-	-			
Data file 3 =	-	-			
Data file 4 =	-	-			
Data file 5 =	-	-			
Data file 6 =	-	-			
Data file 7 =	-	-			
Version	Edit/Document Privilege	Execution Privilege	FN'0 Protect?	N	
Application	User class / ID 0 /	User class/ID 0/	FN'1 REM/DBG?	N	
Function	Password " "	Password " "	FN'2 Mem/Load	M	
Mem/Load: FN'2: Optimize for load time (I) or memory (M)					
REM/DBG: Rems (R), de-bug code (D), both (B), neither (N)					
FN'3 - FN'6: Generate edits for standard program types					
Touch FN'15 for more information regarding these options					

Figure 1-1

IDEAS Batch Program Generator - Main Specification Screen		Release-2.2																											
Module Name BATCHPRO Description		Revision number Last Revised 10/27/83 DSO																											
Version Application Function	Edit & Document Privilege User class User ID Password	Execution Privilege User class User ID Password																											
<table border="1"> <thead> <tr> <th colspan="3">Data files to be used in the module</th> </tr> <tr> <th>FN</th> <th>File</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>01</td><td></td><td></td></tr> <tr><td>02</td><td></td><td></td></tr> <tr><td>03</td><td></td><td></td></tr> <tr><td>04</td><td></td><td></td></tr> <tr><td>05</td><td></td><td></td></tr> <tr><td>06</td><td></td><td></td></tr> <tr><td>07</td><td></td><td></td></tr> </tbody> </table>		Data files to be used in the module			FN	File	Description	01			02			03			04			05			06			07			Current record selection: Range User modifiable Logic User modifiable Sort User modifiable by:
Data files to be used in the module																													
FN	File	Description																											
01																													
02																													
03																													
04																													
05																													
06																													
07																													
08 REMs/De-bug (RDBN) N	Number of files 0 Work buffer 1750 Record buffer 256	Number of fields 0 Number of operations 0																											
10 Program protection N																													

Figure 1-2

IDEAS Report Generator - Main Specification Screen		Release 2.2																											
Module Name MAILREPT Description		Revision number Last revised 10/27/83 DSO																											
Version Application Function	Edit & Document Privilege User class User ID Password	Execution Privilege User class User ID Password																											
<table border="1"> <thead> <tr> <th colspan="3">Data files to be used in the module</th> </tr> <tr> <th>FN</th> <th>File</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>01</td><td></td><td></td></tr> <tr><td>02</td><td></td><td></td></tr> <tr><td>03</td><td></td><td></td></tr> <tr><td>04</td><td></td><td></td></tr> <tr><td>05</td><td></td><td></td></tr> <tr><td>06</td><td></td><td></td></tr> <tr><td>07</td><td></td><td></td></tr> </tbody> </table>		Data files to be used in the module			FN	File	Description	01			02			03			04			05			06			07			Current record selection: Range User modifiable Logic User modifiable Sort User modifiable by:
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09 No. of lines/page 55																													
10 Program protection N																													

Figure 1-3

When you run your debuggable program, each edit associated with it is displayed on a separate Debugger Break Point Specification Screen (Figure 1-4) in the same order as it occurs in the edit file. The first screen appears at runtime for interactive programs and, after the selection and sorting operations for batch and report programs. Each screen contains one edit, identified by its field/ operation name and sequence number, along with its pass/fail actions (up to 50). Press:

- . FN 00 to display the next edit screen.
- . FN 05, 06, 12, and/or 13 to select a pass/fail action. (Cursor keys north, south, east, and west are active as well on the DW keyboard.)
- . FN 10 to set the break point (you can set up to 6).

IDEAS DE-BUGGER		Screen:	DS SCRN	Station number 1	CPU ID 0
Use '0 for next edit, '5, '6, '12, '13 to select and '10 to set a break point.					
Field	ACCEPT?				
Sequence number 17 - Pass/fails only					
1	18	35			
2	19	36			
3	20	37			
4	21	38			
5	22	39			
6	23	40			
7	24	41			
8	25	42			
9	26	43			
10	27	44			
11	28	45			
12	29	46			
13	30	47			
14	31	48			
15	32	49			
16	33	50			
17	34				
Use EXEC to run application up to break point. You may set up to 6 break points					

Figure 1-4

When your application is running, the Debugger Information Screen (Figure 1-5) appears at each break point. Press:

- . FN 08 to change the current pass/fail state on Line 1.
- . FN 10 to change flags on Lines 3 and 4.
- . FN 04, 05, 06, 07, 21, and/or 22 to select the field whose contents you want to display.

- . FN 00 to display the contents of the selected field.
- . FN 01 to select @TSTFLD.
- . Numeric key ?? (where ?? equals the number of the field opposite which @TSTFLD is located) to display the contents of @TSTFLD.
- . FN 09 to change the old pass/fail state on Line-18.
- . EXEC to perform the next step of the application. For interactive programs, the screen will appear with the cursor located at the first character position of the first field. Batch and report programs, will continue to process normally. In all cases, the debugger screen appears at every pass/fail action. (This action is analogous to the HALT/STEP function in BASIC-2.)
- . CONT to return control to the application to continue processing until the next break point or until completion.
- . FN 15 to redisplay the first debugger screen and set new break points; then, reenter the application.

DE-BUGGER Screen: DS SCRNM Field: @ACCEPT? Seq#: 17 P/F#: 1 P/F State: P	
Flags 0 1 2 3 4 5 6 7 8 9 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	
N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N	
Fields 7	Field contents (Use 'SF '4,'5,'6,'7,'21,'22 to select a field)
1 FIELD001	Use '0 to display a field
2 FIELD002	
3 FIELD003	
4 @ACCEPT?	
5	
6	@TSTFLD contents (Use SF '1)
7	
8	
9	
10	
Last function key 0 Error Message on Y Old P/F state P Next seq# 0	
Last system err msg is below. It is #15 Next transaction number 6	
Error Msg. #15: Specified record not found in file	
@SYSBUFO =	
'8 - change current P/F state, '9 - change old P/F state, '10 - change a flag	
EXEC: application CONTINUE: run until next break point '15: set new breaks	

Figure 1-5

NOTES:

Since the set of defined operations for reports and batch programs is executed once for each record in the sequence file, the debugger information screen appears at the selected break points for each record. Therefore, you should process only enough records to successfully complete debugging.

If a debuggable interactive program displays a subscreen, the main screen does not appear after returning from the debugger; only the subscreen appears.

If a debuggable program loads another program, the debug flag is still on. Therefore, the Debugger Break Point Specification Screen appears. Press EXEC to continue normal processing.

When a program is being debugged, the file containing its respective edits must exist on the system platter.

REPORT AND BATCH PROGRAM QUEUE MANAGEMENT UTILITY

Report and batch program queue management is a powerful new feature of IDEAS. This function enables you to execute reports and batch programs in either background or foreground mode and either individually or in sequence.

Before using the queue management feature, a queue file must be created. First add the module IDS2PQ00 to your application menu, then run it. The module creates the queue file on the IDEAS system utility platter, and the Report & Batch Program Queue Management Screen (Figure 2-1) is displayed on your monitor.

IDEAS System Utility - Report & Batch Program Queue Management		Release 2.2
Program queue status on device D22	No. of jobs available to process	0
No. of jobs permitted in queue 10	No. of jobs currently in process	0
No. of jobs currently in queue 0	No. of jobs completed / terminated	0

Queue Entries		
Job	Description	Status

There are no jobs in the queue. Wait, or touch FN'31 to Cancel

Figure 2-1

To add a job to the queue, perform the following steps:

1. Select a batch or report program from your application menu.
2. Step through the range specification, selection logic, and sort specification screens, making any changes where necessary.
3. After you accept the sort specification screen, your monitor should display a screen that resembles the one in Figure 2-2.

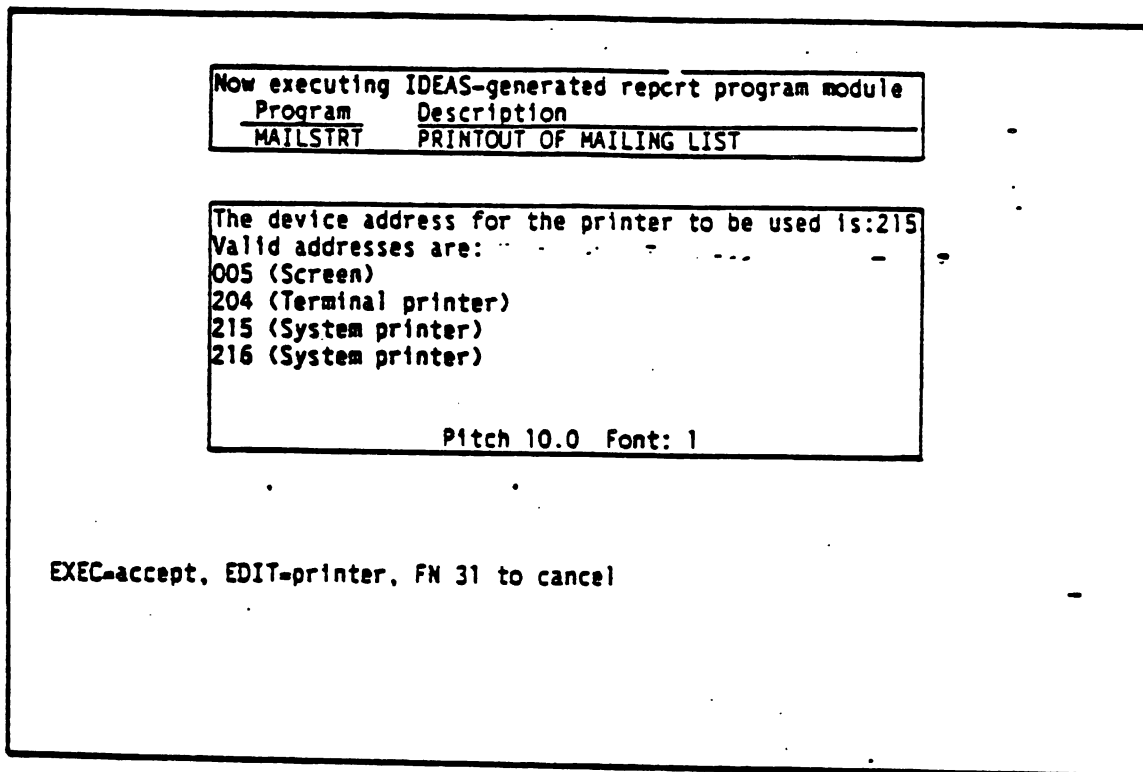


Figure 2-2

5. Enter the printer and/or disk specifications and press EXEC. An option appears at the bottom of your screen to either execute the program immediately or add it to the queue for later processing.

NOTE:

The option described in Step 5 above is not displayed if:

- . you did not create a queue file,
- . you routed a report to the screen, and/or
- . you selected a program in debug mode.

6. Press FN '0 to enter the program into the queue. The next option appears at the bottom of the screen.
7. Press EXEC to permit program execution from any workstation, or press FN '0 to require program execution from the workstation at which you are currently working. The last available option prior to the job being queued is displayed.

8. Press EXEC to delete the queue entry after normal completion, or press FN '0 to retain the queue entry, after normal completion, along with a message stating that the job has been processed. Your application menu appears on the screen.

After you select the queue management option from your applications menu and the queue management screen (Figure 2-3), containing all your job entries and their status, is displayed on your monitor, press:

- . FN '4 - to select the last entry in the queue.
- . FN '5 or the space bar - to select the entry following the currently highlighted entry.
- . FN '6 or BACKSPACE - to select the entry preceding the currently highlighted entry.
- . FN '7 - to select the first entry in the queue.
- . EXEC - to process the selected entry only.
- . SHIFT + FN '5 - to move a selected entry down one position in the queue.

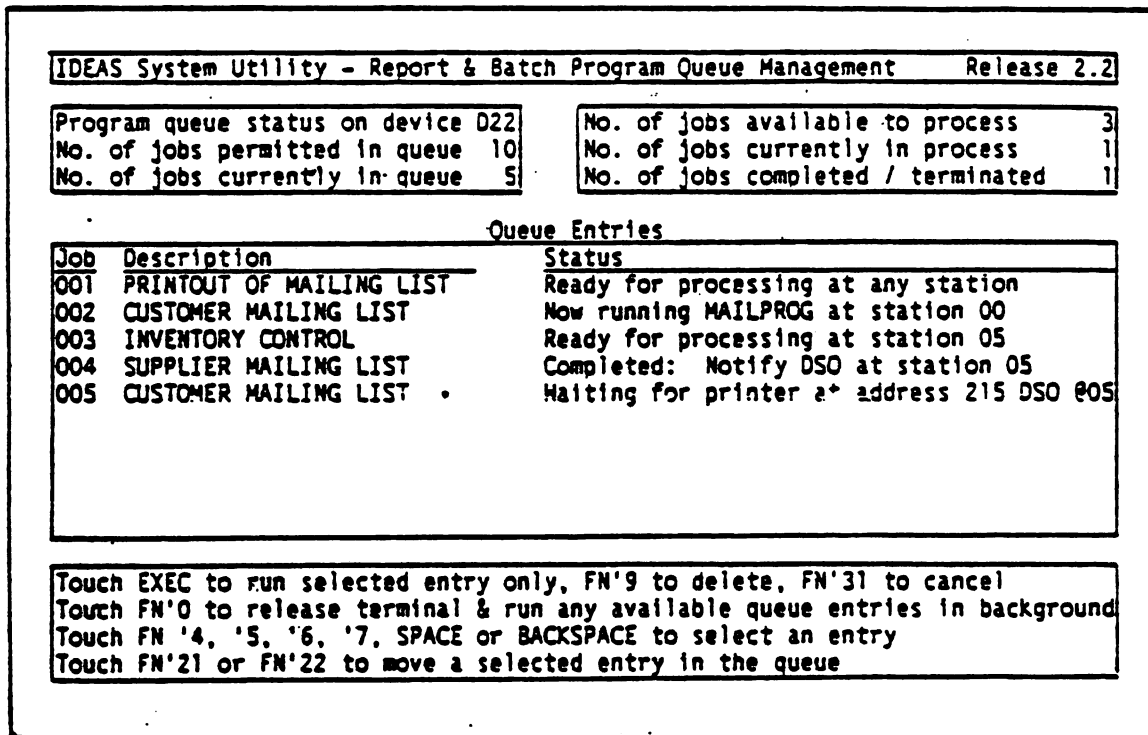


Figure 2-3

- SHIFT + FN '6 - to move a selected entry up one position in the queue.
- FN '9 - to delete a selected queue entry.
- FN '0 - to release your workstation and sequentially process all queue entries in background mode.
- FN 31 - to return to your applications menu.

When one of the following status messages appears next to a queue entry, it indicates that the respective program was terminated abnormally. Each message is followed by the user ID (UUU) and the number of the terminal from which the queue entry was submitted (@##).

Messages

Explanations

Terminated: File "FILENAME"
not open UUU @##

The START module did not open the necessary file(s).

Terminated: Control file not
found UUU @##

The control file for one of the data files could not be found.

Terminated: Work buffer too
small UUU @##

The work buffer size set in the START module is too small for the job.

Terminated: Rec. buffer too
small UUU @##

the record buffer size set in the START module is too small for the job.

Terminated: No records
found UUU @##

No records could be found that met the selection specifications.

Terminated: No sort disk
available UUU @##

There is no disk available for the sort file.

Terminated: Sort address
not valid UUU @##

The specified sort file address is not one of the devices specified in the START module.

Terminated: Sort file is
too small UUU @##

The sort file size is too small to accommodate all the selected records.

Terminated: Insufficient
memory UUU @##

The memory in the running partition is insufficient for the current job.

NOTE:

Whenever an abnormal termination message appears next to one of your queue entries, you must delete the respective entry from the queue.

REDESIGN FILE AND COPY DATA UTILITY

IDEAS now provides the Redesign File and Copy Data Utility which enables you to redesign a file while saving the existing data. It requires two modules: IDS2PF23 (a program module), and IDS2sF23 (a screen module).

Before using the Redesign File and Copy Data Utility, perform the following steps: (The use of file names A/a and B/b in the following steps is for the purpose of clarity only.)

1. Make a backup copy of the current file and its control file, and any of its alternate key files and their control files. (Backup copies protect the original data in case of an error and are not referred to anywhere else in this document.)
2. Create a new control file (e.g., Control File b) using the Copy Control File Utility.
3. Using the ISS Alter Disk Index utility, rename the current data file (e.g., Data File A) using the upper case form of the name you used for the new control file (e.g., rename Data File A to Data File B). Repeat this step on each volume, if you are working with a multi-volume file. (Remember that the different volumes of a multi-volume file will be on different platters.)
4. Redesign the original control file (Control File a) by adding, deleting, and modifying fields as necessary.
5. Step through the remainder of the file specification modules, including the initialization of File A and its alternates, if any.
6. Step through the file specification modules for any associated alternate key files, and initialize them.

NOTE:

If you have increased the alternate key size or number of records in your primary file, it may be necessary for you to scratch and eliminate (by saving some junk file in its place) one or more alternate key files (NOT control files). The initialization mentioned in Step 6 above will then recreate the alternate file.

7. Create a new or revise a current START module to open both File A and its alternates, if any, and File B which contains the original data. The START module must also load a menu which contains an entry for access to Module IDS2PF23. Specify File B for sequential processing. If desired, you can specify the other files for random access.

To use the Redesign File and Copy Data Utility, perform the following steps:

1. Run the application and select IDS2PF23 from the menu. -
2. When the Copy Existing Data to Redesigned File Screen appears (Figure 3-1), enter the name of the file which contains the original data (B) in the first field.
3. Enter the name of the redesigned file (A) in the second field.
4. Step through the inconsistencies, if any, that are displayed in the bottom portion of your screen.
5. Press EXEC to copy the data from file to file.

IDEAS System Utility - Copy Original Data to Redesigned File		Release 2.2
Copy data from renamed file	()
	Number of fields in each old record	
	Number of existing records in file	
to redesigned file	()
	Number of fields in each new record	
	Number of possible records in file	
	Number of common fields to be copied	
Inconsistencies:	1. Field	in file will not be copied ()
	2. Field	in file will be left blank ()
	3. Field	will be changed in the copy process ()
	From:	
	To:	

Figure 3-1

When the copy data operation is complete, revise all screens and interactive, batch, or report programs that were affected by changes in the data file. Also, recompile the interactive, batch, and report programs. Revise the START module which opens the file, editing the file specifications to ensure proper buffer sizes.

NOTES:

Only those fields whose name appears in both files are copied. Fields in the destination file (A) without a corresponding name in the source file (B) are left blank.

Invalid characters in alpha fields whose character set has become more restricted are replaced with blanks. There is one exception: all non-accented lowercase letters from a Type 7 field are replaced with the corresponding uppercase letter in a new field of Type 4, 5, or 6.

Unsigned numeric fields that were originally signed are given the absolute value of the original number.

Numeric fields that were originally alpha fields are assigned the original value only if that value consisted of a valid numeric representation as seen by BASIC-2. Otherwise, the new assigned value is zero.

Numeric fields that are too small to accommodate the original value are assigned the value zero.

Values in numeric fields that contain fewer decimal positions than the original value are rounded to the appropriate position.

Alpha fields that are shorter than the original field are right-truncated.

Make sure that the key field(s) for the new file is correctly copied to avoid blank and/or illegal duplicate keys.

Module IDS2FP23 currently requires 14.5K plus buffers (compressed) and does not run in a 14K partition (with a separate global partition) or a 28K partition (local mode).

CUSTOMER SOFTWARE RELEASE NOTICE

PRODUCT: 2200 IDEAS 2

RELEASE 2.05.00

Part Number: 195-2209-3/5/9

CSRN #: 714-9107

First edition - June 1986

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- 4.0 ENHANCEMENTS AND FUNCTIONAL REVISIONS
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1.0 RELEASE ABSTRACT

IDEAS (Inquiry Data Entry Access System) Release 2 is a software tool for application development. IDEAS is designed to run on the 2200 BASIC-2 Operating System. This software notice describes release 2.05.00 of IDEAS 2 which is a general release designed to correct existing conditions in the system. The problems corrected include all reported conditions since the last official release, 2.04.00.

2.0 SYSTEM REQUIREMENTS

2.1 Hardware: No change. Hardware requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

2.2 Software: No change. Software requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

3.0 RESTRICTIONS

The Generalized Printer Driver released with 2200 OS 2.6.2 for the PC printers is not supported with this release. IDEAS uses \$GIO statements for all printer output, consequently bypassing the printer driver table.

The Report/Batch stacker released in 2.04.00 is no longer supported. The code added to the report modules which interfaces with the queue maintenance module increased the memory requirements for reports, causing A01 errors (Memory overflow) in many existing reports.

4.0 ENHANCEMENTS AND FUNCTIONAL REVISIONS

The KEY FILE DUMP utility displays the last disk sector accessed as it displays each record in the file. The utility has also been modified so that it no longer locks out the keyboard while each set of ten records is displayed on the screen, allowing a user to scan the file more quickly.

Select a report, enter a range, cancel. Selecting a different report no longer results in a P59 (Illegal redimension) error.

When cancelling from a menu by using the space bar and RETURN key, and no password was established for this selection, a password is no longer requested.

First byte of record is no longer missing when the key is dumped to printer.

Extra page headings are no longer printed at end of each report page .

When you specify an "If error number XXX" in operand 2 of a P/F edit, the condition now prints on the IDEAS documentation.

Reports now perform page level operations when either page level headers or page level footers are defined.

The "Read a Record from a Data File" edit no longer allows a key specification (F/C) to be omitted for access options 1 and 2.

Report documentation screen headings for "Lines per page" and "Number of line formats" are now displayed properly.

When deleting a report, report name is scratched and renamed properly.

When entering printer dump of file, headings on display are now correct.

P59 error when exiting from key file dump utility was eliminated.

Com Clear now appears properly on report documentation.

Report documentation now shows the correct flag test used to determine if an operation is to be performed.

When an IDEAS application is executed, the security screen appears and the user ID and password have to be entered. If the application is selected by mistake, the user can now cancel out of the screen.

The date function now picks up the MXE system date in YYMMDD format, which is the format used by the @CLOC utility.

IDEAS2 multi-volume files no longer cause bad records when the volumes are on different platters.

Report range selection now works correctly when defaults are used.

Report totals now print properly at top of form.

Random extra page ejection between report pages has been corrected.

A01 error no longer occurs in reports which worked in release 2.1.

Extra lines no longer print after the end of a report.

The message "Now opening data file number" no longer appears at the top of the screen when an application START program which doesn't open any files is run.

Pass/Fail spec "B I HEX(41) FIELDNAME" no longer causes an extra colon to appear between statements in a generated program, causing an S24 error at runtime.

When using constants in the math calculations edit, decimals are no longer truncated.

A P57 (illegal STR argument) error would occur when the amount of free space in an index block was greater than or equal to the packed key length, and less than or equal to the KIE length (Packed key length + pointer length). During sequential search of the file, if the record is not found in the bucket, IDEAS tries to read the free space as a valid KIE. IDEAS now checks for the end of the block before reading the KIE.

Defining a line type in the report Line Format and Field editor, inadvertently pressing the "West" key would cause the alarm to sound and the screen to hang, causing all changes made in that editing session to be lost. This has been corrected.

Debugger no longer clears the work buffer when a program is loaded via a "load" Pass/Fail spec.

Release All Records utility now properly releases records in volumes 2-8 when the file on any of those volumes starts on the sector directly after the catalog index.

5.0 SPECIAL CONDITIONS:

To use IDEAS most effectively, you must use special procedures for certain conditions. This section describes these conditions and special procedures.

CATEGORY: IDEAS2 REPORT EXECUTION

CONDITION: When executing an IDEAS2-generated report, detail level operations are performed before headers print, on the first page only. This becomes a problem when output is directed from a user exit to a printer via a print or \$GIO statement, rather than using the IDEAS2 report driver.

PROCEDURE: Return all output from user exits to a report field, which can then be printed out on a detail line.

6.0 MEDIA CONTENTS

Diskettes contain the complete IDEAS 2.05.00 system with installation program IDS2MOVE on diskette one. The Single Sided Single Density diskettes are numbered one (1) thru seven (7). The seventh diskette contains library screens used in the IDEAS2 Familiarization Guide. The Double Sided Double Density diskettes are numbered one (1) and two (2). The library screens reside on the second diskette.

The distributed system will have the release message 'Release 2.5'.

7.0 SOFTWARE INSTALLATION

A 32K memory partition is required to run the IDEAS2 installation program. Using either single or double density diskettes, perform the following steps: 1) Mount the installation diskette in your diskette drive, 2) SELECT the address where the disk resides, 3) LOAD RUN "IDS2MOVE". 4) Enter the source and destination disk addresses, the copy/verify option, and the IDEAS1 conversion option, and 5) load the appropriate diskettes as prompted by the installation program. If this is a new installation, the operator will be asked to allocate space for the security and edit specification files. For a re-installation, the 'Installation Complete' message will be displayed. If a system problem occurs during the installation procedure, you must reload the first diskette and repeat the entire installation procedure.

Installing Release 2.05.00 onto an existing IDEAS2 platter will not affect the existing security or edit specification files. Existing applications and data files will also be unaffected.

8.0 REFERENCES

2200 IDEAS Release 2 User Manual 700-6872 August 1983

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data. The text also mentions that regular audits are necessary to identify any discrepancies or errors in the accounting process.

Furthermore, it highlights the role of technology in modern accounting. The use of software can significantly reduce the risk of human error and streamline the workflow. However, it also notes that proper training and security measures are essential to protect the integrity of the financial data.

In conclusion, the document stresses that a robust accounting system is fundamental for the long-term success of any business. It provides a clear framework for how to implement and maintain such a system effectively.

The second section of the document focuses on the legal and ethical aspects of accounting. It outlines the various regulations and standards that accountants must adhere to, such as the Generally Accepted Accounting Principles (GAAP). Compliance with these standards is not only a legal requirement but also a key factor in building trust with stakeholders.

Ethical considerations are also discussed in detail. Accountants are often in a position where they must make difficult choices between what is profitable and what is right. The document provides guidance on how to navigate these situations, emphasizing the importance of integrity and honesty in all professional dealings.

It also touches upon the responsibilities of accountants to the public. As trusted professionals, they have a duty to provide accurate and unbiased information that can help individuals and organizations make informed decisions. This responsibility extends beyond the immediate client and into the broader community.

The final part of the document addresses the future of accounting. It explores emerging trends such as artificial intelligence, blockchain, and data analytics. While these technologies offer exciting opportunities to enhance the efficiency and accuracy of accounting, they also present new challenges. For example, the integration of AI requires a shift in the skill set of accountants, moving from traditional bookkeeping to more analytical and strategic roles.

The document concludes by encouraging accountants to embrace change and continue their professional development. The field is constantly evolving, and staying current with the latest trends and technologies is essential for success in the future. It ends with a reaffirmation of the core values of the profession: accuracy, integrity, and service.

TECHNICAL SERVICE BULLETIN
SECTION: Software General

Paul:
FYI
Greg

NUMBER: SWG 6057 REPLACES: _____ DATE: 06/10/86 PAGE 1 OF 5
MATRIX ID. 4306 PRODUCT/RELEASE# 2200 IDEAS 2.05.00
TITLE: IDEAS 2.05.00 release announcement

PURPOSE:

The purpose of this TSB is to announce the availability of release 2.05.00 of the 2200 IDEAS package. The new release fixes many reported problems. The following information is taken from the SRN for 2.05.00 (SRN # 0814).

1.0 RELEASE ABSTRACT

IDEAS (Inquiry Data Entry Access System) Release 2 is a software tool for application development. IDEAS is designed to run on the 2200 BASIC-2 Operating System. This software notice describes release 2.05.00 of IDEAS 2 which is a general release designed to correct existing anomalies in the system. The problems corrected include all reported problems since the last official release, 2.04.00.

2.0 PREREQUISITES AND DEPENDENCIES

2.1 Hardware: No change. Hardware requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

2.2 Software: No change. Software requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

3.0 RESTRICTIONS AND SPECIAL CONSIDERATIONS

The Generalized Printer Driver released with 2200 OS 2.6.2 for the PC printers is not supported with this release. IDEAS uses \$GIO statements for all printer output, consequently bypassing the printer driver table.

The Report/Batch stacker released in 2.04.00 is no longer supported. The code added to the report modules which interfaces with the queue maintenance module increased the memory requirements for reports, causing A01 errors (Memory overflow) in many existing reports.

GROUP: VS/2200 Software Support MAIL STOP: 0115

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TECHNICAL SERVICE BULLETIN
SECTION: SoftWare General

NUMBER: SWG 6057 REPLACES: _____ DATE: 06/10/86 PAGE 2 OF 5
MATRIX ID. 4306 PRODUCT/RELEASE# 2200 IDEAS 2.05.00
TITLE: IDEAS 2.05.00 release announcement (cont.)

4.0 ENHANCEMENTS

The KEY FILE DUMP utility displays the last disk sector accessed as it displays each record in the file. The utility has also been modified so that it no longer locks out the keyboard while each set of ten records is displayed on the screen, allowing a user to scan the file more quickly.

5.0 PROBLEMS CORRECTED

- F008125 Select a report, enter a range, cancel. Selecting a different report results in a P59 (Illegal redimension) error.
- F008128 When cancelling from a menu by using the space bar, and RETURN key, a password is requested to cancel the menu, even though a password was not established for this selection.
- F008132 First byte of record is missing when key is dumped to printer.
- F008133 Extra page headings printed at end of each report page .
- F008135 When you specify an "If error number XXX" in operand 2 of a P/F edit, the condition does not print on the IDEAS documentation.
- F008136 Reports only perform page level operations when page level footers are defined.
- F008139 The "Read a Record from a Data File" edit allows a key specification (F/C) to be omitted for access options 1 and 2.
- F008148 Report documentation screen headings missing for "Lines per page" and "Number of line formats".
- F008149 When deleting a report, report name is scratched, but not renamed as in screens.

GROUP: VS/2200 Software Support MAIL STOP: 0115

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TECHNICAL SERVICE BULLETIN
SECTION: SoftWare General

NUMBER: SWG 6057 REPLACES: _____ DATE: 06/10/86 PAGE 3 OF 5
MATRIX ID. 4306 PRODUCT/RELEASE# 2200 IDEAS 2.05.00
TITLE: IDEAS 2.05.00 release announcement (cont.)

4.0 PROBLEMS CORRECTED (CONT.)

- F008151 When entering printer dump of file, headings on display are incorrect.
- F008154 P59 error when exiting from key file dump utility.
- F008157 Com Clear does not show up on report documentation.
- F008159 Report documentation does not show the correct flag test used to determine if an operation is to be performed.
- F008164 When an IDEAS application is executed, the security screen appears and the user ID and password have to be entered. If the application was selected by mistake, the user cannot cancel out of the screen, they have to enter the user ID wrong three (3) times to get the start program failure module to execute.
- F008165 Date function does not pick up MXE system date in YYMMDD format, which is the format used by the @CLOC utility. The date function now uses YYMMDD as a standard format.
- F008753 IDEAS2 multi-volume files cause bad records when the volumes are on different platters. Records are created which show up in two (2) places on a sequential processing application. Deleting the record leaves a 'phantom' copy of the bad record on the file (i.e. can't delete it).
- F008866 Report range selection not working correctly when defaults are used.
- F009989 Report totals do not print at top of form.
- F009990 Random extra page ejection between report pages.
- F009991 A01 error in reports which worked before release 2.4 was installed.

GROUP: VS/2200 Software Support MAIL STOP: 0115

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TECHNICAL SERVICE BULLETIN
SECTION: SoftWare General

NUMBER: SWG 6057 REPLACES: _____ DATE: 06/10/86 PAGE 4 OF 5
MATRIX ID. 4306 PRODUCT/RELEASE# 2200 IDEAS 2.05.00
TITLE: IDEAS 2.05.00 release announcement (cont.)

4.0 PROBLEMS CORRECTED (CONT.)

- F009992 "Junk" lines print after end of report.
- F009993 The message "Now opening data file number" appears at top of screen when an application START program which doesn't open any files is run.
- F010136 Pass/Fail spec "B I HEX(41) FIELDNAME" causes an extra colon to appear between statements in a generated program, causing an S24 error at runtime.
- F010522 When using constants in the math calculations edit, decimals are truncated. They were allowed in previous releases.
- F010840 Application crashes with P57 when accessing data file. This problem occurs when the amount of free space in an index block is greater than or equal to the packed key length, and is less than or equal to the KIE length (Packed key length + pointer length). During sequential search of the file, if the record is not found in the bucket, IDEAS tries to read the free space as a valid KIE.
- F010520 Defining a line type in the report Line Format and Field editor, inadvertently pressing the "West" key causes the alarm to sound and the screen to hang. All changes made in that editing session are lost.
- F010838 Debugger clears the work buffer when a program is loaded via a "load" Pass/Fail spec.
- F010839 Release All Records utility does not release records in volumes 2-8 if the file on any of those volumes starts on the sector directly after the catalog index.

GROUP: VS/2200 Software Support MAIL STOP: 0115

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WANG Laboratories, Inc.

TECHNICAL SERVICE BULLETIN
SECTION: Software General

NUMBER: SWG 6057 REPLACES: _____ DATE: 06/10/86 PAGE 5 OF 5
MATRIX ID. 4306 PRODUCT/RELEASE# 2200 IDEAS 2.05.00
TITLE: IDEAS 2.05.00 release announcement (cont.)

6.0 KNOWN ANOMALIES

F008134 Detail level operations are performed before headers print, on the first page only. This becomes a problem when output is directed from a user exit to a printer via a print or \$GIO statement, rather than using the IDEAS2 report driver. To avoid this problem, output from a user exit should be returned to a report field, which is then printed out on a detail line.

7.0 MEDIA CONTENTS

Diskettes contain the complete IDEAS 2.05.00 system with installation program IDS2MOVE on diskette one. The Single Sided Single Density diskettes are numbered one (1) thru seven (7). The seventh diskette contains library screens used in the IDEAS2 Familiarization Guide. The Double Sided Double Density diskettes are numbered one (1) and two (2). The library screens reside on the second diskette. The distributed system will have the release message 'Release 2.5'.

8.0 SOFTWARE INSTALLATION

A 32K memory partition is required to run the IDEAS2 installation program. Using either single or double density diskettes, perform the following steps: 1) Mount the installation diskette in your diskette drive, 2) SELECT the address where the disk resides, 3) LOAD RUN "IDS2MOVE". 4) Enter the source and destination disk addresses, the copy/verify option, and the IDEAS1 conversion option, and 5) load the appropriate diskettes as prompted by the installation program. If this is a new installation, the operator will be asked to allocate space for the security and edit specification files. For a re-installation, the 'Installation Complete' message will be displayed. If a system problem occurs during the installation procedure, you must reload the first diskette and repeat the entire installation procedure.

Installing Release 2.05.00 onto an existing IDEAS2 platter will not affect the existing security or edit specification files. Existing applications and data files will also be unaffected.

GROUP: VS/2200 Software Support MAIL STOP: 0115

COMPANY CONFIDENTIAL
WANG Laboratories, Inc.

MEMORANDUM

TO: Sheila Mitchell
Greg Turnquist

CC: Mary Bowker

FROM: Paul Morin

DATE: June 11, 1986

SUBJECT: IDEAS2 Release 2.5

RECEIVED

JUN 11 1986

MARY M. BOWKER

As requested for the last week (June 5, through June 11) I have been exercising the new IDEAS2 release 2.5, in hopes of uncovering any problems that may have resulted during the maintenance of the product.

Because IDEAS2 generates the code based on the different parameters and edit specifications prescribed by the developer, it was decided that the best way to determine the dependability of the fixes associated with this release would be to simply develop as many applications as possible, utilizing as many features of IDEAS2 both independently and interactively.

The individual problems that were cited in the "PROBEs" had been extensively tested on an individual basis. The object of this session is to determine if the said fixes have been destructive to any other part of the software.

I developed several applications emphasizing interaction between files, disk and edit specifications. In all cases the software generated and executed the code successfully and to spec. I also tested the report generator to include variations on output using different level breaks and edit specifications (as requested by Greg Turnquist), again the software performed with no problem. With the exception of a couple of modifications to the IDEAS2 menu (which Greg fixed immediately) there were no noticeable incidences.

The only area that has not been heavily scrutinized is integration, that is if the release 2.5 will have problems with the applications generated by earlier releases. It is my opinion that because the fixes were not major design changes to the software that this is not a likely problem. In addition the software has gone out to different beta sites, and they have not experienced any major integration problems.

Therefore I have a high level of confidence that the new IDEAS2 release 2.5 is sound software and that we should not expect any negative feedback with this release.

0257Y

*While, Hey, Paul
Maybe WASEA has
made me over-sensitive
But I think we need
to know more about
this. Comments
please MMB.*

CUSTOMER SOFTWARE RELEASE NOTICE

PRODUCT: 2200 IDEAS 2

RELEASE 2.05.00

Part Number: 195-2209-3/5/9

CSRN #: 714-9107

First edition - June 1986

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CONTENTS:

- 1.0 RELEASE ABSTRACT**
- 2.0 SYSTEM REQUIREMENTS**
- 3.0 RESTRICTIONS**
- 4.0 ENHANCEMENTS AND FUNCTIONAL REVISIONS**
- 5.0 SPECIAL CONDITIONS**
- 6.0 MEDIA CONTENTS**
- 7.0 SOFTWARE INSTALLATION**
- 8.0 REFERENCES**

Reports now perform page level operations when either page level headers or page level footers are defined.

The "Read a Record from a Data File" edit no longer allows a key specification (F/C) to be omitted for access options 1 and 2.

Report documentation screen headings for "Lines per page" and "Number of line formats" are now displayed properly.

When deleting a report, report name is scratched and renamed properly.

When entering printer dump of file, headings on display are now correct.

P59 error when exiting from key file dump utility was eliminated.

Com Clear now appears properly on report documentation.

Report documentation now shows the correct flag test used to determine if an operation is to be performed.

When an IDEAS application is executed, the security screen appears and the user ID and password have to be entered. If the application is selected by mistake, the user can now cancel out of the screen.

The date function now picks up the MXE system date in YYMMDD format, which is the format used by the @CLOC utility.

IDEAS2 multi-volume files no longer cause bad records when the volumes are on different platters.

Report range selection now works correctly when defaults are used.

Report totals now print properly at top of form.

Random extra page ejection between report pages has been corrected.

A01 error no longer occurs in reports which worked in release 2.1.

Extra lines no longer print after the end of a report.

The message "Now opening data file number" no longer appears at the top of the screen when an application START program which doesn't open any files is run.

Pass/Fail spec "B I HEX(41) FIELDNAME" no longer causes an extra colon to appear between statements in a generated program, causing an S24 error at runtime.

When using constants in the math calculations edit, decimals are no longer truncated.

7.0 SOFTWARE INSTALLATION

A 32K memory partition is required to run the IDEAS2 installation program. Using either single or double density diskettes, perform the following steps: 1) Mount the installation diskette in your diskette drive, 2) SELECT the address where the disk resides, 3) LOAD RUN "IDS2MOVE". 4) Enter the source and destination disk addresses, the copy/verify option, and the IDEAS1 conversion option, and 5) load the appropriate diskettes as prompted by the installation program. If this is a new installation, the operator will be asked to allocate space for the security and edit specification files. For a re-installation, the 'Installation Complete' message will be displayed. If a system problem occurs during the installation procedure, you must reload the first diskette and repeat the entire installation procedure.

Installing Release 2.05.00 onto an existing IDEAS2 platter will not affect the existing security or edit specification files. Existing applications and data files will also be unaffected.

8.0 REFERENCES

2200 IDEAS Release 2 User Manual 700-6872 August 1983

SOFTWARE RELEASE NOTICE

PRODUCT: 2200 IDEAS 2.05.00

HARDWARE: 2200 VP, SVP, MVP, LVP, MicroVP

Part Number: 195-2209-3/5/9

Software Release Notice: 0814

Date: June 10, 1986

CONTENTS:

- 1.0 RELEASE ABSTRACT
- 2.0 PREREQUISITES AND DEPENDENCIES
- 3.0 RESTRICTIONS AND SPECIAL CONSIDERATIONS
- 4.0 ENHANCEMENTS
- 5.0 PROBLEMS CORRECTED
- 6.0 KNOWN ANOMALIES
- 7.0 MEDIA CONTENTS
- 8.0 SOFTWARE INSTALLATION
- 9.0 REFERENCES

1.0 RELEASE ABSTRACT

IDEAS (Inquiry Data Entry Access System) Release 2 is a software tool for application development. IDEAS is designed to run on the 2200 BASIC-2 Operating System. This software notice describes release 2.05.00 of IDEAS 2 which is a general release designed to correct existing anomalies in the system. The problems corrected include all reported problems since the last official release, 2.04.00.

2.0 PREREQUISITES AND DEPENDENCIES

2.1 Hardware: No change. Hardware requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

2.2 Software: No change. Software requirements are the same as described on page 1-7, table 1-1 of IDEAS Release 2 users manual.

3.0 RESTRICTIONS AND SPECIAL CONSIDERATIONS

The Generalized Printer Driver released with 2200 OS 2.6.2 for the PC printers is not supported with this release. IDEAS uses \$GIO statements for all printer output, consequently bypassing the printer driver table.

The Report/Batch stacker released in 2.04.00 is no longer supported. The code added to the report modules which interfaces with the queue maintenance module increased the memory requirements for reports, causing A01 errors (Memory overflow) in many existing reports.

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The KEY FILE DUMP utility displays the last disk sector accessed as it displays each record in the file. The utility has also been modified so that it no longer locks out the keyboard while each set of ten records is displayed on the screen, allowing a user to scan the file more quickly.

5.0 PROBLEMS CORRECTED

F008125 Select a report, enter a range, cancel. Selecting a different report results in a P59 (Illegal redimension) error.

F008128 When cancelling from a menu by using the space bar, and RETURN key, a password is requested to cancel the menu, even though a password was not established for this selection.

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- F008165 Date function does not pick up MXE system date in YYMMDD format, which is the format used by the @CLOC utility. The date function now uses YYMMDD as a standard format.
- F008753 IDEAS2 multi-volume files cause bad records when the volumes are on different platters. Records are created which show up in two (2) places on a sequential processing application. Deleting the record leaves a 'phantom' copy of the bad record on the file (i.e. can't delete it).
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- F010136 Pass/Fail spec "B I HEX(41) FIELDNAME" causes an extra colon to appear between statements in a generated program, causing an S24 error at runtime.
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- F010520 Defining a line type in the report Line Format and Field editor, inadvertently pressing the "West" key causes the alarm to sound and the screen to hang. All changes made in that editing session are lost.
- F010838 Debugger clears the work buffer when a program is loaded via a "load" Pass/Fail spec.
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The distributed system will have the release message 'Release 2.5'.

8.0 SOFTWARE INSTALLATION

A 32K memory partition is required to run the IDEAS2 installation program. Using either single or double density diskettes, perform the following steps: 1) Mount the installation diskette in your diskette drive, 2) SELECT the address where the disk resides, 3) LOAD RUN "IDS2MOVE". 4) Enter the source and destination disk addresses, the copy/verify option, and the IDEAS1 conversion option, and 5) load the appropriate diskettes as prompted by the installation program. If this is a new installation, the operator will be asked to allocate space for the security and edit specification files. For a re-installation, the 'Installation Complete' message will be displayed. If a system problem occurs during the installation procedure, you must reload the first diskette and repeat the entire installation procedure.

Installing Release 2.05.00 onto an existing IDEAS2 platter will not affect the existing security or edit specification files. Existing applications and data files will also be unaffected.

9.0 REFERENCES

2200 IDEAS Release 2 User Manual 700-6872 August 1983

COMPANY CONFIDENTIAL

TESTING/EVALUATION

Software Product: 2200 IDEAS 2

Version: 2.05.00

Testing Organization: VSSS

Results:

The product has been tested by Wang staff and at two customer sites with no reported problems. Each individual fix has been tested, as well as the system as a whole. All problems have been corrected with version 2.05.00, except for P3 Probe F008134, which can be circumvented using a procedure outlined in the SRN. VSSS recommends that IDEAS 2.05.00 be released as a general release.