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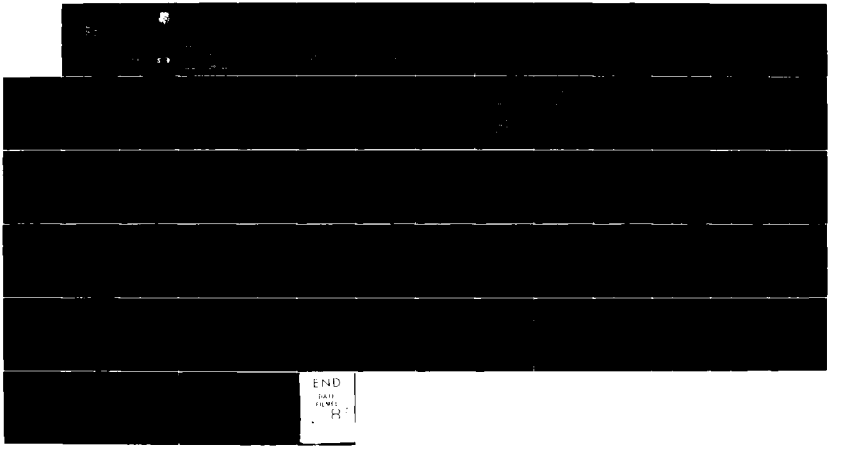

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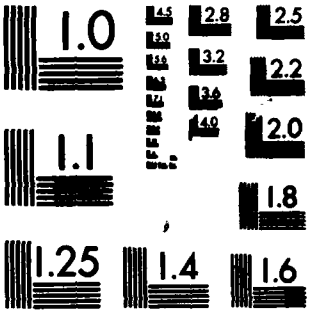

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Volume VIII
Part 19

INTEGRATED INFORMATION SUPPORT SYSTEM (IISS)
Volume VIII - User Interface Subsystem
Part 19 - Forms Driven Form Editor Unit Test Plan

General Electric Company
Production Resources Consulting
One River Road
Schenectady, New York 12345

Final Report for Period 22 September 1980 - 31 July 1985

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PREPARED FOR:

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This unit test plan establishes the methodology and procedures used to adequately test the capabilities of the computer program identified as the Forms Driven Form Editor (FDFE). The FDFE interfaces directly with users as an application which uses the FP via the Network Transaction Manager. Physical terminals are assumed to have video display, a textual keyboard, four cursor positioning keys or key sequences, a help key or key sequence, a message key, an entry key, a quit key and four other keys to be used by the FDFE for special processing.

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PREFACE

This unit test plan covers the work performed under Air Force Contract F33615-80-C-5155 (ICAM Project 6201). This contract is sponsored by the Materials Laboratory, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Gerald C. Shumaker, ICAM Program Manager, Manufacturing Technology Division, through Project Manager, Mr. David Judson. The Prime Contractor was Production Resources Consulting of the General Electric Company, Schenectady, New York, under the direction of Mr. Allan Rubenstein. The General Electric Project Manager was Mr. Myron Hurlbut of Industrial Automation Systems Department, Albany, New York.

Certain work aimed at improving Test Bed Technology has been performed by other contracts with Project 6201 performing integrating functions. This work consisted of enhancements to Test Bed software and establishment and operation of Test Bed hardware and communications for developers and other users. Documentation relating to the Test Bed from all of these contractors and projects have been integrated under Project 6201 for publication and treatment as an integrated set of documents. The particular contributors to each document are noted on the Report Documentation Page (DD1473). A listing and description of the entire project documentation system and how they are related is contained in document FTR620100001, Project Overview.

The subcontractors and their contributing activities were as follows:

TASK 4.2

Subcontractors	Role
Boeing Military Aircraft Company (BMAC)	Reviewer
D. Appleton Company (DACOM)	Responsible for IDEF support, state-of-the-art literature search
General Dynamics/ Ft. Worth	Responsible for factory view function and information models

Subcontractors	Role
Illinois Institute of Technology	Responsible for factory view function research (IITRI) and information models of small and medium-size business
North American Rockwell	Reviewer
Northrop Corporation	Responsible for factory view function and information models
Pritsker and Associates	Responsible for IDEF2 support
SofTech	Responsible for IDEF0 support

TASKS 4.3 - 4.9 (TEST BED)

Subcontractors	Role
Boeing Military Aircraft Company (BMAC)	Responsible for consultation on applications of the technology and on IBM computer technology.
Computer Technology Associates (CTA)	Assisted in the areas of communications systems, system design and integration methodology, and design of the Network Transaction Manager.
Control Data Corporation (CDC)	Responsible for the Common Data Model (CDM) implementation and part of the CDM design (shared with DACOM).
D. Appleton Company (DACOM)	Responsible for the overall CDM Subystem design integration and test plan, as well as part of the design of the CDM (shared with CDC). DACOM also developed the Integration Methodology and did the schema mappings for the Application Subsystems.

Subcontractors	Role
Digital Equipment Corporation (DEC)	Consulting and support of the performance testing and on DEC software and computer systems operation.
McDonnell Douglas Automation Company (McAuto)	Responsible for the support and enhancements to the Network Transaction Manager Subsystem during 1984/1985 period.
On-Line Software International (OSI)	Responsible for programming the Communications Subsystem on the IBM and for consulting on the IBM.
Rath and Strong Systems Products (RSSP) (In 1985 became McCormack & Dodge)	Responsible for assistance in the implementation and use of the MRP II package (PIOS) that they supplied.
SofTech, Inc.	Responsible for the design and implementation of the Network Transaction Manager (NTM) in 1981/1984 period.
Software Performance Engineering (SPE)	Responsible for directing the work on performance evaluation and analysis.
Structural Dynamics Research Corporation (SDRC)	Responsible for the User Interface and Virtual Terminal Interface Subsystems.

Subcontractors and other prime contractors under other projects who have contributed to Test Bed Technology, their contributing activities and responsible projects are as follows:

Subcontractors	Role
General Dynamics/ Ft. Worth	Responsible for factory view

Contractors	ICAM Project	Contributing Activities
Boeing Military Aircraft Company (BMAC)	1701, 2201, 2202	Enhancements for IBM node use. Technology Transfer to Integrated Sheet Metal Center (ISMC)
Control Data Corporation (CDC)	1502, 1701	IISS enhancements to Common Data Model Processor (CDMP)
D. Appleton Company (DACOM)	1502	IISS enhancements to Integration Methodology
General Electric	1502	Operation of the Test Bed and communications equipment.
Hughes Aircraft Company (HAC)	1701	Test Bed enhancements
Structural Dynamics Research Corporation (SDRC)	1502, 1701, 1703	IISS enhancements to User Interface/Virtual Terminal Interface (UI/VTI)
Systran	1502	Test Bed enhancements. Operation of Test Bed.

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FIGURES

SECTION 1

GENERAL

1.1 Purpose

This unit test plan establishes the methodology and procedures used to adequately test the capabilities of the computer program identified as the Forms Driven Form Editor known in this document as the FDFE. The FDFE is one configuration item of the Integrated Information Support System (IISS) User Interface (UI).

1.2 Project References

[1] Systran, ICAM Documentation Standards, IDS150120000C, 15 September 1983.

[2] Structural Dynamics Research Corporation, Form Editor User Manual, UM 620144400B, 1 November 1985.

[3] Structural Dynamics Research Corporation, Forms Driven Form Editor Development Specification, DS 620144402B, 1 November 1985.

[4] General Electric Company, System Design Specification, 7 February 1983.

[5] Structural Dynamics Research Corporation, Form Processor Unit Test Plan, UTP620144200 , 1 November 1985.

[6] Structural Dynamics Research Corporation, Application Interface Unit Test Plan, UTP620144700 , 1 November 1985.

[7] Structural Dynamics Research Corporation, Virtual Terminal Interface Unit Test Plan, UTP620144300 , 1 November 1985.

[8] Structural Dynamics Research Corporation, Forms Language Compiler Unit Test Plan, UTP620144401 , 1 November 1985.

[9] Structural Dynamics Research Corporation, User Interface Services Unit Test Plan, UTP620144100 , 1 November 1985.

[10] Structural Dynamics Research Corporation, Report Writer Unit Test Plan, UTP620144501 , 1 November 1985.

[11] Structural Dynamics Research Corporation, Rapid Application Generator Unit Test Plan, UTP620144502, 1 November 1985.

[12] Sturctural Dynamics Research Corporation, Text Editor Unit Test Plan, UTP620144600, 1 November 1985.

1.3 Terms and Abbreviations

American Standard Code for Information Interchange: (ASCII), the character set defined by ANSI X3.4 and used by most computer vendors.

Application Interface: (AI), subset of the IISS User Interface that consists of the callable routines that are linked with applications that use the Form Processor or Virtual Terminal. The AI enables applications to be hosted on computers other than the host of the User Interface.

Application Process: (AP), a cohesive unit of software that can be initiated as a unit to perform some function or functions.

Attribute: field characteristic such as blinking, highlighted, black, etc. and various other combinations. Background attributes are defined for forms or windows only. Foreground attributes are defined for items. Attributes may be permanent, i.e., they remain the same unless changed by the application program, or they may be temporary, i.e., they remain in effect until the window is redisplayed.

Device Drivers: (DD), software modules written to handle I/O for a specific kind of terminal. The modules map terminal specific commands and data to a neutral format. Device Drivers are part of the UI Virtual Terminal.

Display List: is similar to the open list, except that it contains only those forms that have been added to the screen and are currently displayed on the screen.

Extended Binary Coded Decimal Interchange Code: (EBCDIC), the character set used by a few computer vendors (notably IBM) instead of ASCII.

Field: two-dimensional space on a terminal screen.

Form: structured view which may be imposed on windows or other forms. A form is composed of fields. These fields may be defined as forms, items, and windows.

Form Definition: (FD), forms definition language after compilation. It is read at runtime by the Form Processor.

Forms Definition Language: (FDL), the language in which electronic forms are defined.

Forms Driven Form Editor: (FDFE), subset of the FE which consists of a forms driven application used to create Form Definition files interactively.

Form Editor: (FE), subset of the IISS User Interface that is used to create definitions of forms. The FE consists of the Forms Driven Form Editor and the Forms Language Compiler.

Form Hierarchy: a graphic representation of the way in which forms, items and windows are related to their parent form.

Forms Language Compiler: (FLAN), subset of the FE that consists of a batch process that accepts a series of forms definition language statements and produces form definition files as output.

Form Processor: (FP), subset of the IISS User Interface that consists of a set of callable execution time routines available to an application program for form processing.

Form Processor Text Editor: (FPTE), subset of the Form Processor that consists of software modules that provide text editing capabilities to all users of applications that use the Form Processor.

IISS Function Screen: the first screen that is displayed after logon. It allows the user to specify the function he wants to access and the device type and device name on which he is working.

Integrated Information Support System: (IISS), a test computing environment used to investigate, demonstrate and test the concepts of information management and information integration in the context of Aerospace Manufacturing. The IISS addresses the problems of integration of data resident on heterogeneous data bases supported by heterogeneous computers interconnected via a Local Area Network.

Item: non-decomposable area of a form in which hard-coded descriptive text may be placed and the only defined areas where user data may be input/output.

Message: descriptive text which may be returned in the standard message line on the terminal screen. They are used to warn of errors or provide other user information.

Message Line: a line on the terminal screen that is used to display messages.

Network Transaction Manager: (NTM), IISS subsystem that performs the coordination, communication and housekeeping functions required to integrate the Application Processes and System Services resident on the various hosts into a cohesive system.

Open List: a list of all the forms that have been and are currently open for an application process.

Operating System: (OS), software supplied with a computer which allows it to supervise its own operations and manage access to hardware facilities such as memory and peripherals.

Page: instance of forms in windows that are created whenever a form is added to a window.

Paging and Scrolling: a method which allows a form to contain more data than can be displayed with provisions for viewing any portion of the data buffer.

Physical Device: a hardware terminal.

Qualified Name: the name of a form, item or window preceded by the hierarchy path so that it is uniquely identified.

Subform: a form that is used within another form.

User Data: data which is either input by the user or output by the application programs to items.

User Interface: (UI), IISS subsystem that controls the user's terminal and interfaces with the rest of the system. The UI consists of two major subsystems: the User Interface Development System (UIDS) and the User Interface Management System (UIMS).

User Interface Development System: (UIDS), collection of IISS User Interface subsystems that are used by applications programmers as they develop IISS applications. The UIDS includes the Form Editor and the Application Generator.

User Interface Management System: (UIMS), the runtime UI. It consists of the Form Processor, Virtual Terminal, Application Interface, the User Interface Services and the Text Editor.

User Interface Monitor: (UIM), part of the Form Processor that handles messaging between the NTM and the UI. It also provides authorization checks and initiates applications.

User Interface Services: (UIS), subset of the IISS User Interface that consists of a package of routines that aid users in controlling their environment. It includes message management, change password, and application definition services.

User Interface/Virtual Terminal Interface: (UI/VTI), another name for the User Interface.

Virtual Terminal: (VT), subset of the IISS User Interface that performs the interfacing between different terminals and the UI. This is done by defining a specific set of terminal features and protocols which must be supported by the UI software which constitutes the virtual terminal definition. Specific terminals are then mapped against the virtual terminal software by specific software modules written for each type of real terminal supported.

Window: dynamic area of a terminal screen on which predefined forms may be placed at run time.

Window Manager: a facility which allows the following to be manipulated: size and location of windows, the device on which an application is running, the position of a form within a window. It is part of the Form Processor.

SECTION 2

DEVELOPMENT ACTIVITY

2.1 Statement of Pretest Activity

During system development, the computer programs were tested progressively. Functionality was incrementally tested and as bugs were discovered by this testing, the software was corrected.

Each form used by the FDFE was individually tested. This testing was conducted by the individual program developer in a manual mode. The developer would manually enter data onto the screen and observe the results. Any errors were noted by the developer and corrections to the program were then made after a testing session.

2.2 Pretest Activity Results

Each testing of the forms used in the FDFE application discoverd a few minor bugs which were then corrected and retesting proved successful. Testing included exceptional conditions and error conditions for data entered on the forms. The overall test results during development showed no major programming errors. Only minor bugs were discovered and corrected.

SECTION 3

SYSTEM DESCRIPTION

3.1 System Description

The FDFE interfaces directly with users as an application which uses the Form Processor (FP) - via the NTM. Physical terminals are assumed to have video display, a textual keyboard, four cursor positioning keys or key sequences, a help key or key sequence, a message key, an entry key, a quit key and four other keys to be used by the FDFE for special processing (see 5.3). The FDFE must interface with the following software tools: the Forms Processor (FP), the Forms Compiler (FLAN), C language runtime routines and forms storage management. It is used to create or modify FDL files and to create new FD files; it can also be used to delete existing FDL and FD files as well as to rename existing FDL files (see Figure 3-1).

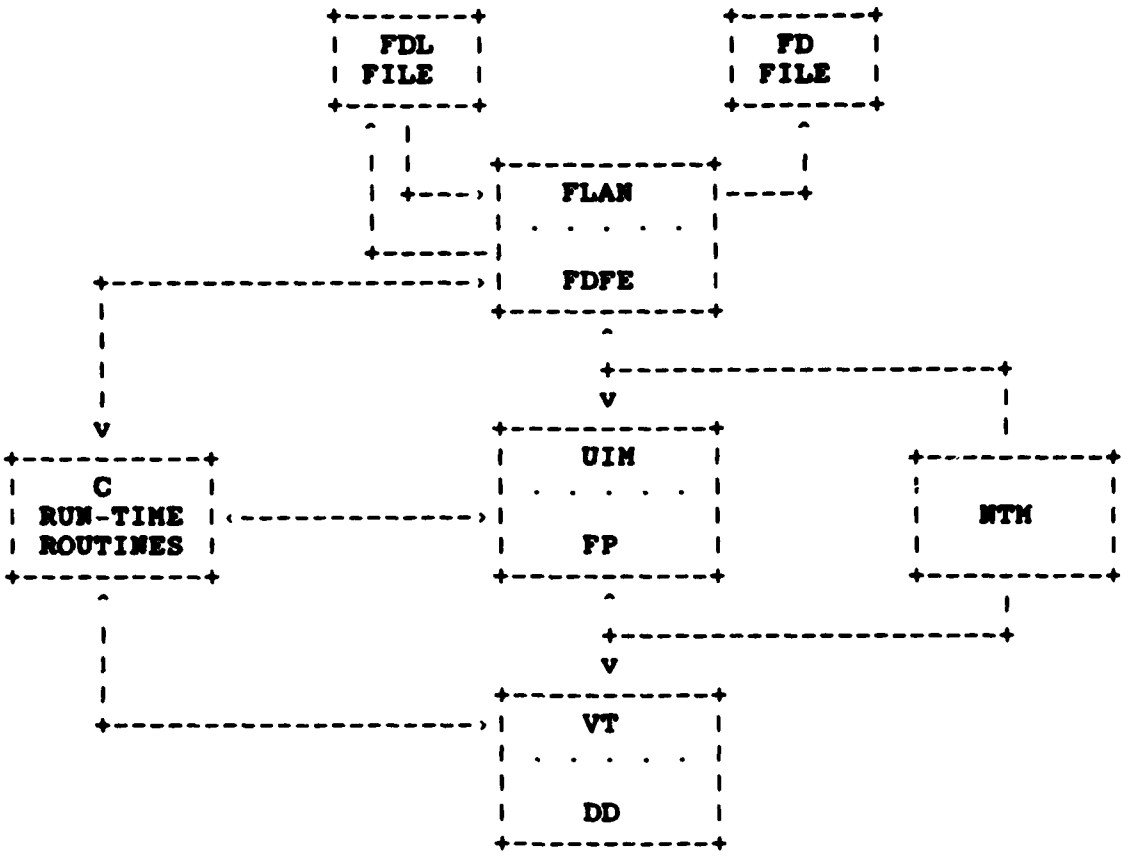

Figure 3-1 Interface Block Diagram

3.2 Testing Schedule

The execution of the FDFE is dependent upon the NTM subsystem of IISS and testing of the FDFE must be done only after the NTM has been successfully tested. Within the UI subsystem, the FDFE uses the FP, VT, AI and FLAN and must be tested only after they have been successfully tested.

3.3 First Location Testing

These tests of the FDFE require the following:

Equipment: Air Force VAX, terminal supported by the VT as listed in the the UI Terminal Operator Guide.

Support Software: The Integrated Information Support System,the Oracle database management system, and C run-time libraries.

Personnel: One integrator familiar with the UIS.

Training: FDFE manuals have been previously provided with the past release.

Deliverables: The FDFE subsystem of the UI.

Test Materials: This test is interactive and can be manually performed as outlined in this test plan. It also could be run as a script file if so desired (see below).

Security considerations: None.

3.4 Subsequent Location Testing

The requirements as listed above need to be met; however, in subsequent testing it may be advantageous to create a script file of the outlined tests and run this saving the output of the test for future comparisons.

SECTION 4

TEST SPECIFICATIONS AND EVALUATIONS

4.1 Test Specification

The following functionality of the FDFE is demonstrated by the test outlined in section 5:

1) List Form Language Sources (FDL files)
2) List Form Language Objects (FD files)
3) Insert a Form Language Source
   A) List Forms in Forms Language Source
   B) Insert Form into Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   C) Modify Form in Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   D) Select Form in Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   E) Drop a Form from Forms Language Source
   F) Write Forms Language Source
   G) Write and Compile Forms Language Source
   H) Exit and Write Forms Language Source
   I) Exit and Write and Compile Forms Language Source
   J) Exit No Save
4) Modify a Form Language Source
   A) List Forms in Forms Language Source
   B) Insert Form into Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   C) Modify Form in Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   D) Select Form in Forms Language Source
      a) Layout Edit mode
      b) Single Field Edit mode
      c) Form Edit mode
   E) Drop a Form from Forms Language Source

F) Write Forms Language Source
G) Write and Compile Forms Language Source
H) Exit and Write Forms Language Source
I) Exit and Write and Compile Forms Language Source
J) Exit No Save
5) Select a Form Language Source
A) List Forms in Forms Language Source
B) Select Form in Forms Language Source
a) Layout Edit mode
b) Single Field Edit mode
c) Form Edit mode
C) Exit No Save
6) Display Compiled Form Definition
7) Copy Form Language Source to New Form Language Source
8) Rename Form Language Source to New Form Language Source
9) Drop Form Language Source
10) Drop Form Language Object
11) Exit

Table 4-1 shows the direct correspondence between the test (the steps outlined in Section 5) and the functional requirements as listed in this section. These functions directly correspond to the detailed functional requirements of the Forms Driven Form Editor Development Specification. The '.' indicates the figures which illustrate the testing of the top level functions: insert, modify or select a forms language source file. The '*' indicates the figures which illustrate the testing of specific functions.

	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
1	*																									
2		*																								
3.A			.																							
3.B.a			.	*																						
3.B.b			.																							
3.B.c			.																							
3.C.a			.																							

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	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
3.C.b			.		*																					
3.C.c			.			*																				
3.D.a			.																							
3.D.b			.																							
3.D.c			.																							
3.E			.																							
3.F			.																							
3.G			.				*																			
3.H			.																							
3.I			.																							
3.J			.																							
4.A										.	*															
4.B.a										.				*												
4.B.b										.																
4.B.c										.																
4.C.a										.				*												
4.C.b										.					*											
4.C.c										.				*												
4.D.a										.																
4.D.b										.																
4.D.c										.																

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	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
4.E									.						*											
4.F									.																	
4.G									.						*											
4.H									.																	
4.I									.																	
4.J									.																	
5.A																.										
5.B.a																.		*								
5.B.b																.		*								
5.B.c																.	*									
5.C																.										
6								*													*					
7																						*				
8																								*		
9																								*		
10																									*	
11																										*

Table 4-1 Matrix mapping FDFE functions with test plan

Key for Table 1:

A = figures: 05-06
B = figures: 07-08
C = figures: 09-34
D = figures: 11-14
E = figures: 15-20
F = figures: 21-32
G = figures: 33-34
H = figures: 35-36
I = figures: 37-63
J = figures: 39-40
K = figures: 41-47
L = figures: 48-53
M = figures: 54-55
N = figures: 56-59
O = figures: 60-61
P = figures: 62-63
Q = figures: 64-76
R = figures: 66-70
S = figures: 71-74
T = figures: 75-76
U = figures: 77-78
V = figures: 79-80
W = figures: 81-82
X = figures: 83-84
Y = figures: 85-86
Z = figure: 87

4.2 Testing Methods and Constraints

The tests as outlined in Section 5 must be followed. The required input is stated for each test. This testing tests the normal mode of operation of these functions and does not completely exercise all the error combinations that a user of the FDFE might create by faulty entry of form field information. These tests have been done, however, through the normal testing done by the developer of these functions. IISSULIB and IISSSLIB should point to default directory. No additional constraints are placed on this unit test besides those listed in Section 3.2 and 3.3 of this unit test plan.

4.3 Test Progression

The progression of testing of the FDFE is fully outlined in Section 5 of this unit test plan. This progression should be followed exactly to insure the successful testing of this IISS configuration item.

4.4 Test Evaluation

The test results are evaluated by comparing the information returned on the various output screens to that specified as successful for the given test. As outlined below in section 5, each test of FDFE functionality provides an input screen with the required data entry specified and the resulting output for a successful test. To speed up this testing, scripting could be used. If scripting is used, the script file FDFEUTP.SCP and its release 2.0 test saved output FDFEUTP.SAV (Under IISS Configuration Management) should be copied to your test directory. To execute the scripting option type "-RFDFEUTP.SCP -SFDFEUTP.SAV" at the "Args" prompt. To compare the results with those obtained by SDRC, compare FDFETST.SAV with FDFEUTP.SAV using the command file DIFFILE.COM (Under IISS Configuration Management). The only differences found should be the date time stamps on the IISS Function Screen (figure 5-3).

SECTION 5

TEST SPECIFICATIONS AND EVALUATIONS

5.1 Test Description

A general desciption of this unit test was provided in Section 3.

5.2 Test Control

As outlined, this unit test is a manual test which may be done by anyone. The required input data for each function being tested, the resulting successful output and the order of the testing are completely specified below. The test control information is completely described in Section 4.4. Accurate observation of the resulting successful output must be made to ensure the unit test was done properly. As noted in Section 4.4 above scripting may be used instead of the manual test described below.

5.3 Test Procedures

To run the unit test plan in the VAX/VMS environment as outlined below, one must be logged on to an IISS account. The NTM must be up and running and the UI logical names IISSFLIB, IISSULIB, IISSSLIB and IISSMLIB must be set properly at the group level. IISSFLIB points to the directory containing system form definitions (.FD files). IISSULIB points to the directory containing the user's form definitions (.FD files). IISSSLIB points to the directory containing the user's form definition source files (.FDL files). IISSMLIB points to the directory containing error and help messages (.MSG files). To perform this test IISSULIB and IISSSLIB must be pointing to the default directory.

The test of the FDFE application consists of individually testing each function provided by the FDFE. The following keys are generally used to move within forms (using the VT100 terminal as an example): the ENTER key is used to activate all commands; the QUIT key is used to go back to previous activity without taking current action; the TAB key is used to move from field to field within the form; and the arrow keys are used to move within fields. In addition, ESC TAB is a reverse TAB. The only application defined function keys used by the FDFE are: the

function key (PF 15 on a VT100) which when in layout mode is used to transfer control to layout description mode and back again; the function key (PF 12 on a VT100) which when in layout mode is used to move fields around on a form; and two function keys which when in edit field mode or layout description mode are used to go to the previous and the next field on a form (PF 16 and PF 17 respectively on a VT100). See Figure 5-1 for VT100 keypad layout.

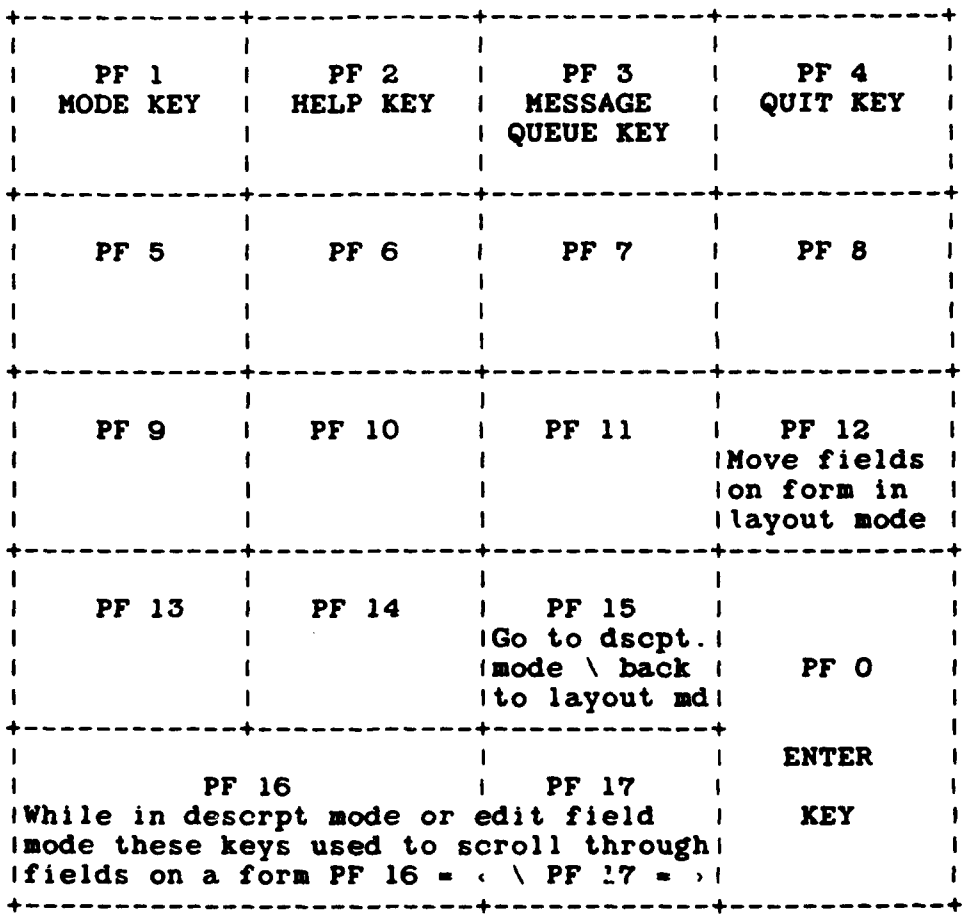


Figure 5-1 Keypad for VT100

The inputs and outputs for each testing are illustrated by examining the following forms.

5.3.1 Access to FDFE

Following entry of the system command "RUN VT100" which activates the User Interface the following form appears:

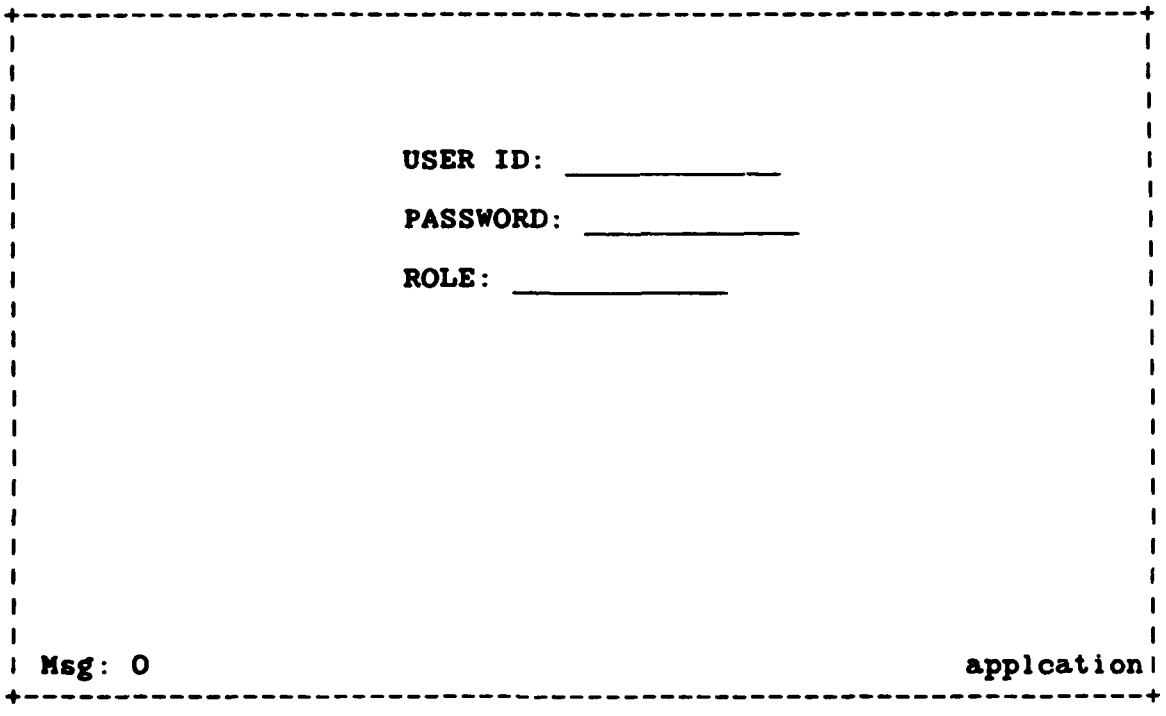


Figure 5-2 IISS Logon Screen

(1) USER ID is the identification name of the user, and is 1 to 10 alpha-numeric characters. USER ID is input as "MORENC".

(2) PASSWORD must be the password associated with the USER ID, and is 1 to 10 alpha-numeric characters. PASSWORD was input as "STANLEY".

(3) ROLE is any of the identifiers which are associated with the USER ID, and is 1 to 10 alpha-numeric characters. It will be checked against functions and applications which are selected by the user. ROLE is input as "MANAGER".

When this form is correctly completed and the ENTER key is pressed, the following form appears.

5.3.2 Choosing FDFE Function

The FDFE function is accessed through the following FORM:

```
+-------------------------------------------------------------+
|        I I S S  T E S T  B E D  V E R S I O N  2.0          |
|                                                             |
+-------------------------------------------------------------+
| DATE:__/__/__   TIME__:__:__   USER ID:_____   ROLE:_____   |
|                                                             |
| FUNCTION:_____ DEVICE TYPE:_____ DEVICE NAME:_____          |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
| Msg: 0                                          applcation  |
+-------------------------------------------------------------+
```

Figure 5-3 IISS Function Screen

When the form appears, the cursor is located on the line following FUNCTION. The items in the form are summarized below:

(1) DATE contains the current date. This may not be changed by the user.

(2) TIME contains the current time. This may not be changed by the user.

(3) USER ID is the user's identification that was entered in the previous form. This may not be changed by the user.

(4) ROLE is the currently active role and was entered in the previous form. This may be changed at any time.

(5) FUNCTION is the function the user desires to activate. In this case it is the FDFE which is activated by typing "SDFDFEZZZZ" into this field.

5.3.3 Testing the FDFE

For a detailed description of how to use the FDFE consult the FDFE User Manual. The following test plan consists of screens with input for the testing of a particular display, followed by the resulting screens. When the FDFE begins the following form is displayed.

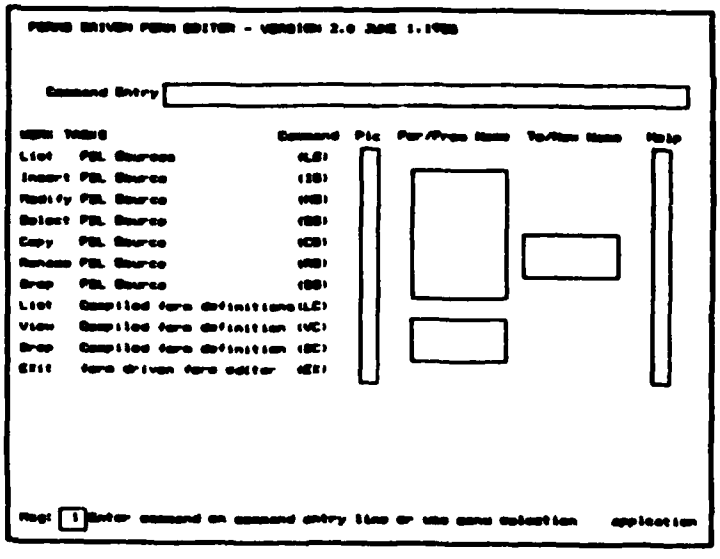


Figure 5-4 First FDFE Screen

To test listing FDL source files enter:

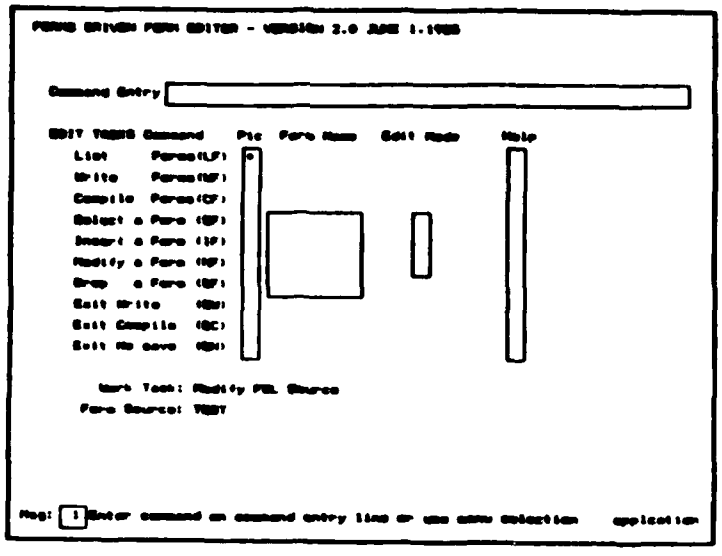


Figure 5-5 Test Screen 1

The result should be similar to the following depending on files currently in the default directory.

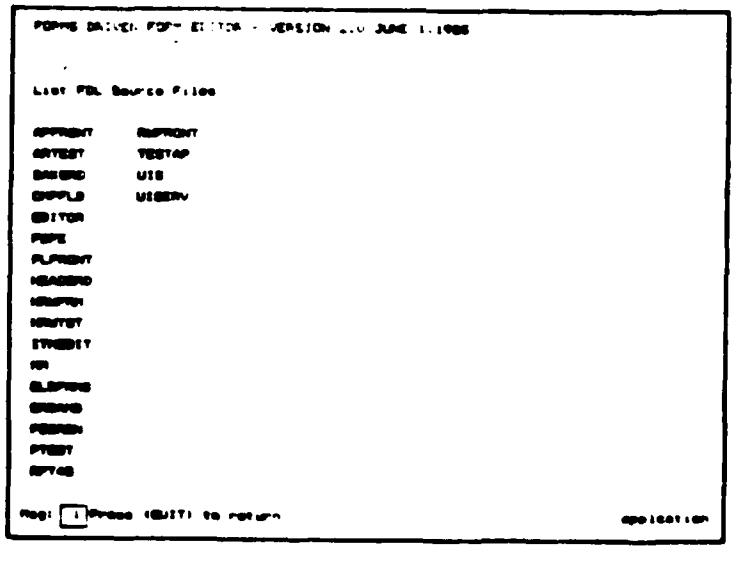


Figure 5-6 Test Screen 2

To return to work task menu screen press the QUIT key. To test listing FD object files enter:

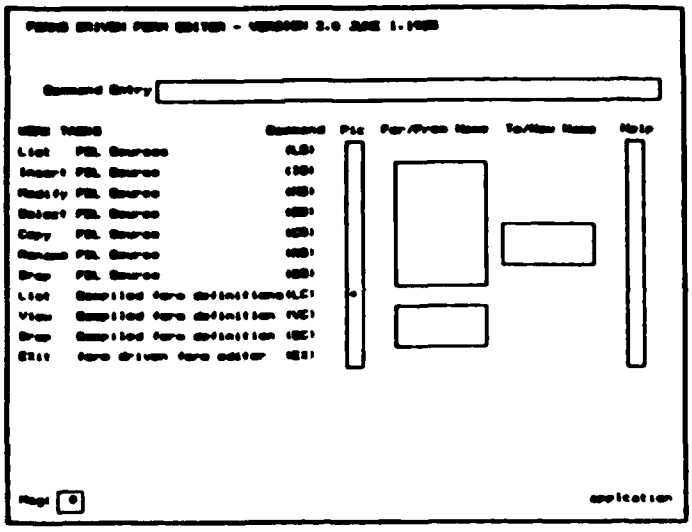


Figure 5-7 Test Screen 3

The result should be similar to the following depending on files currently in the default directory.

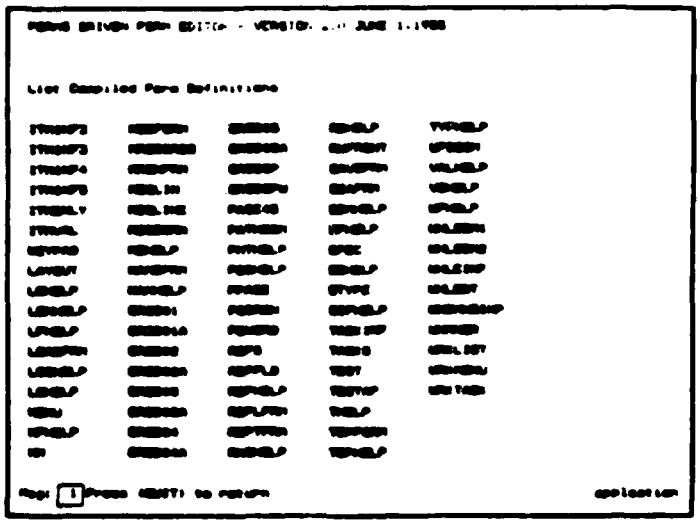


Figure 5-8 Test Screen 4

To return to work task menu screen press the QUIT key. To test inserting an FDL file enter:

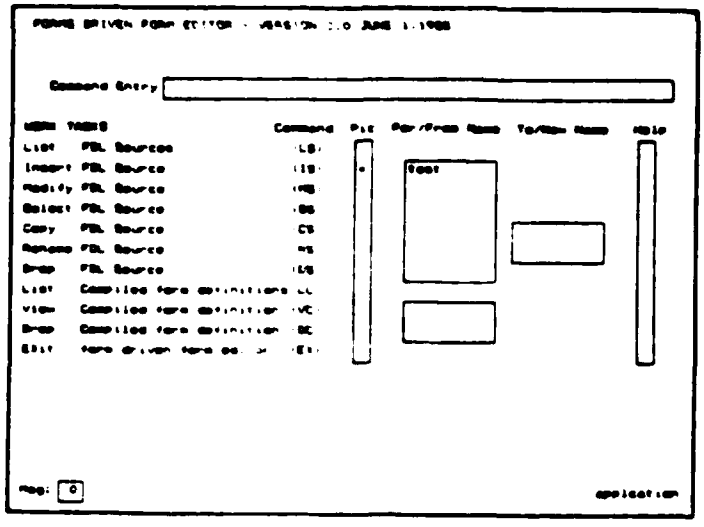


Figure 5-9 Test Screen 5

The result should be the same as the following.

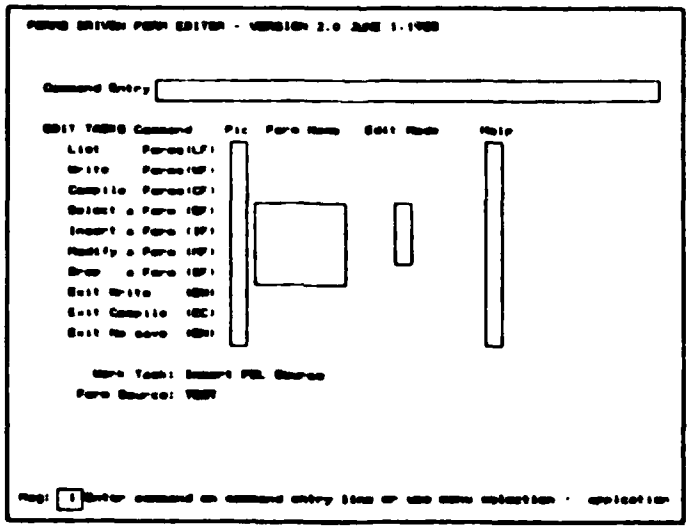


Figure 5-10 Test Screen 6

To test inserting a form into an FDL file enter:

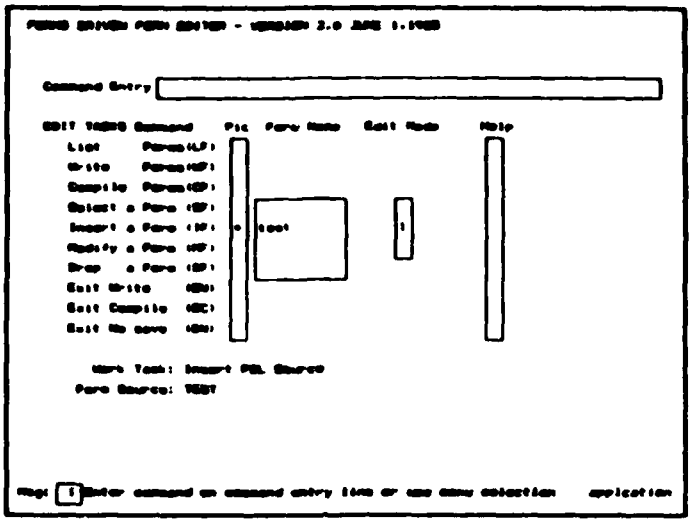


Figure 5-11 Test Screen 7

The following screen should appear.

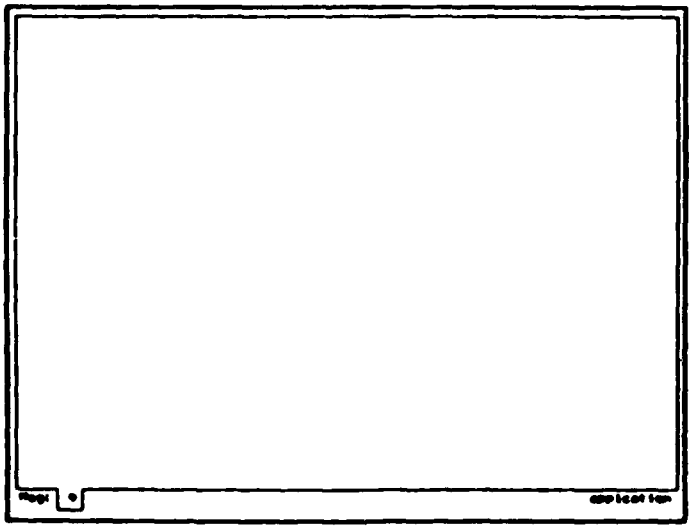


Figure 5-12 Test Screen 8

If the following is entered:

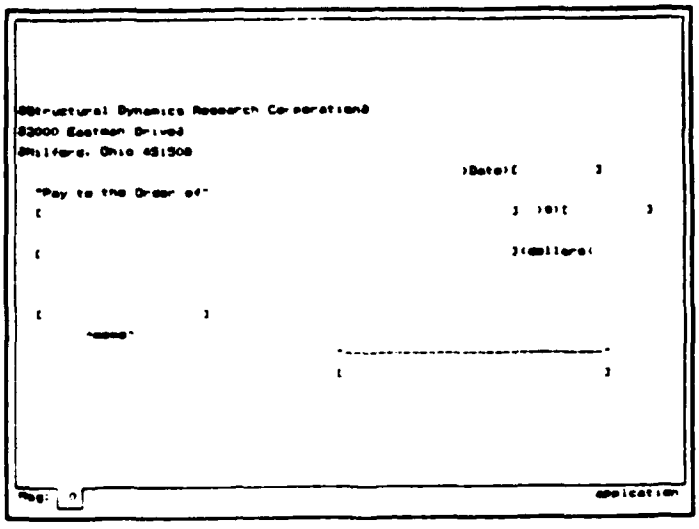


Figure 5-13 Test Screen 9

The following screen should appear.

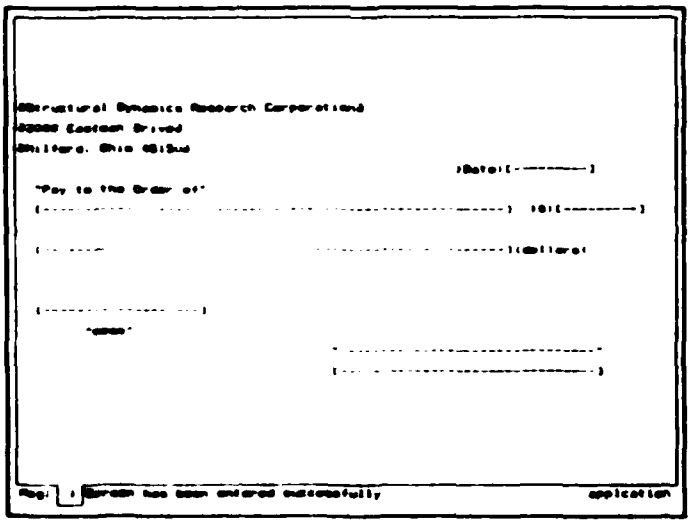


Figure 5-14 Test Screen 10

To return to edit task menu screen press the QUIT key. If the following is entered on the edit task menu screen:

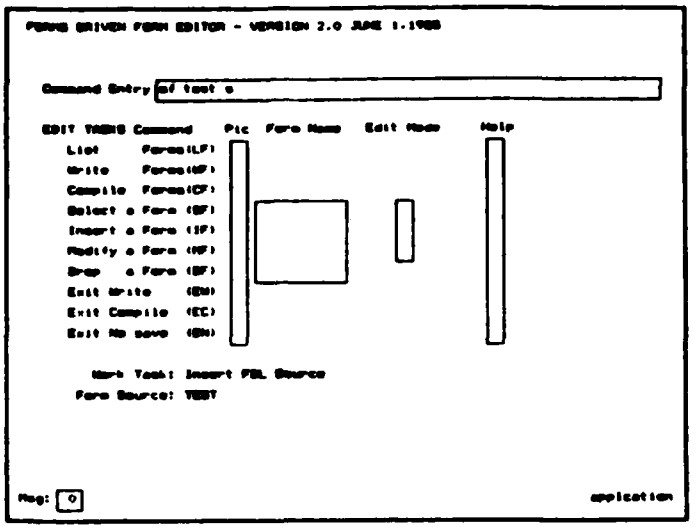


Figure 5-15 Test Screen 11

The following screen should appear.

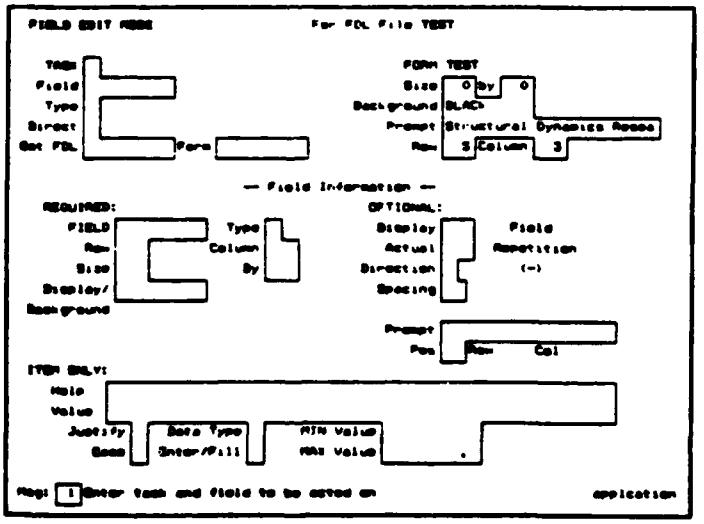


Figure 5-16 Test Screen 12

If the following is entered:

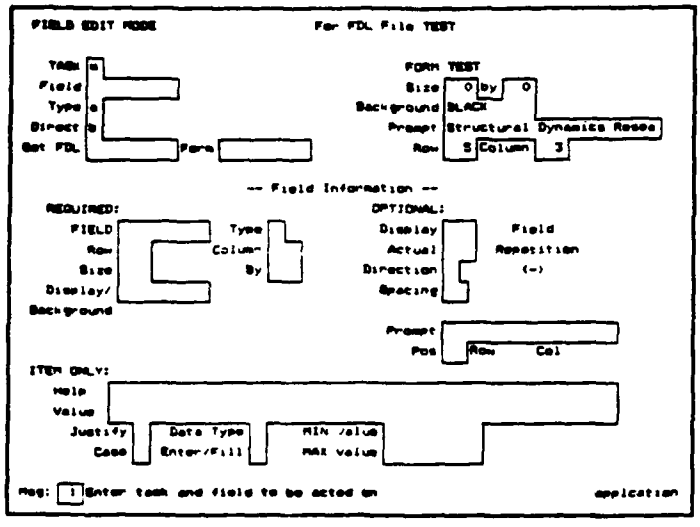


Figure 5-17 Test Screen 13

The following screen should appear.

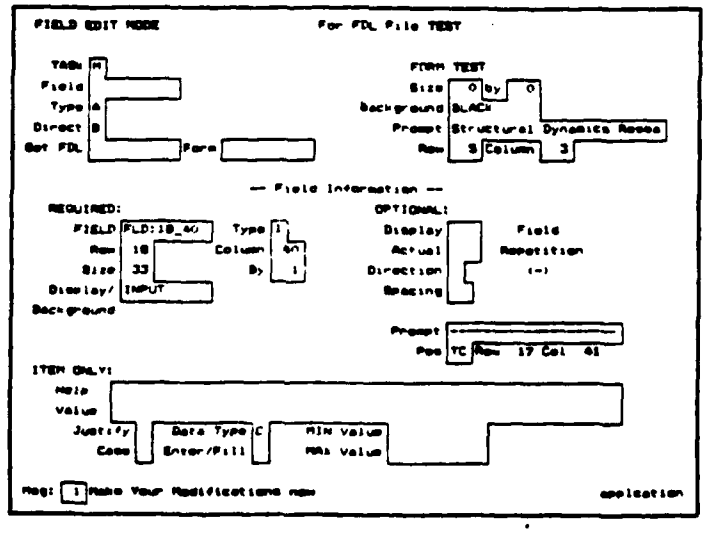


Figure 5-18 Test Screen 14

If the following is entered:

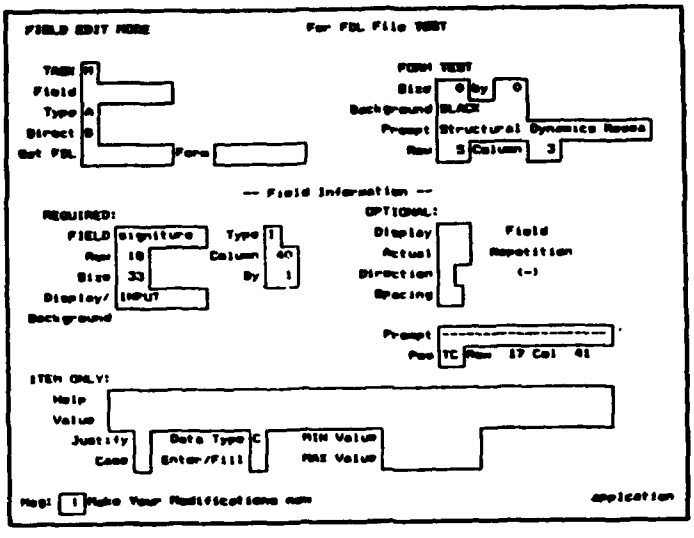


Figure 5-19 Test Screen 15

The following screen should appear.

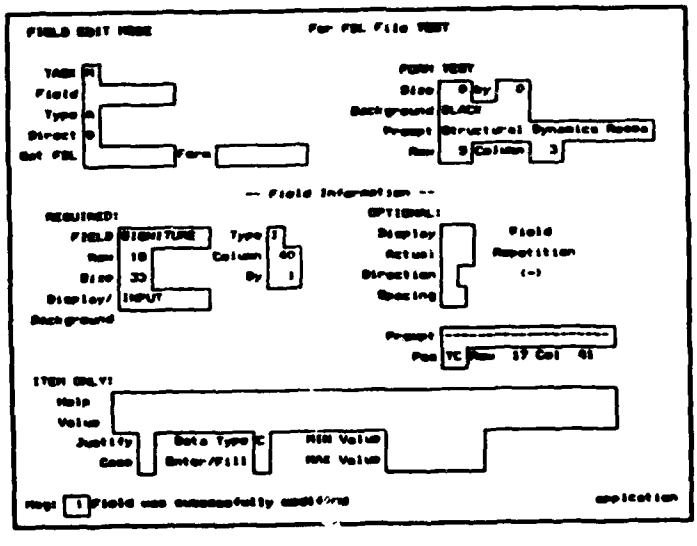


Figure 5-20 Test Screen 16

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

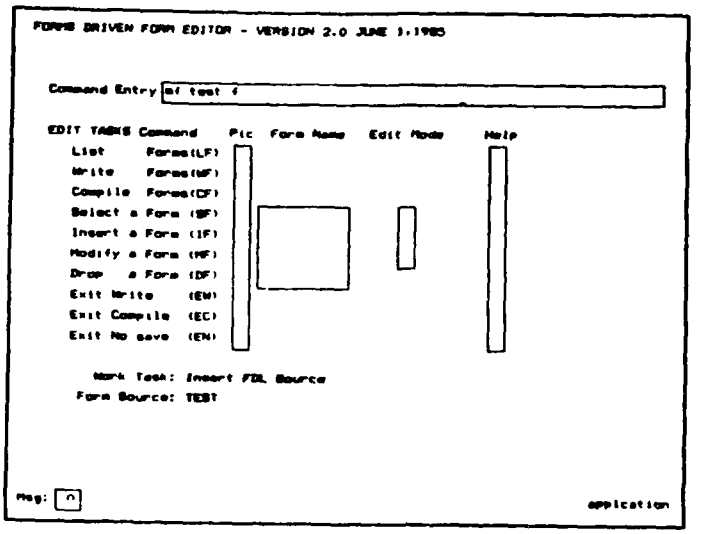


Figure 5-21 Test Screen 17

The following screen should appear.

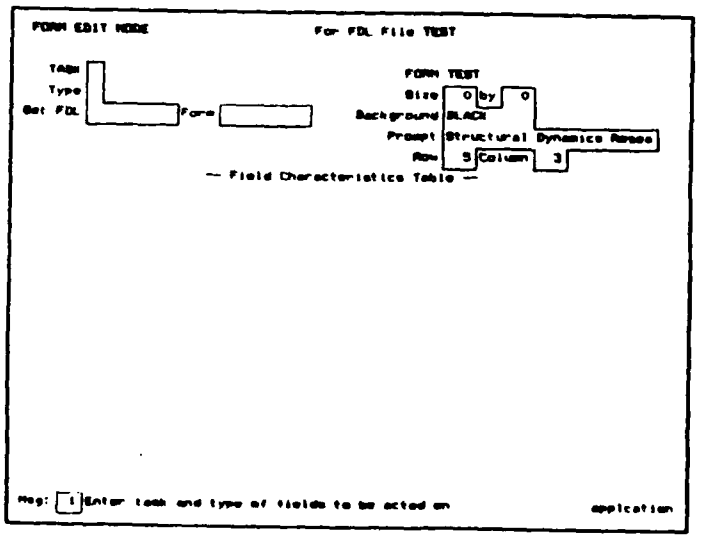


Figure 5-22 Test Screen 18

If the following is entered:

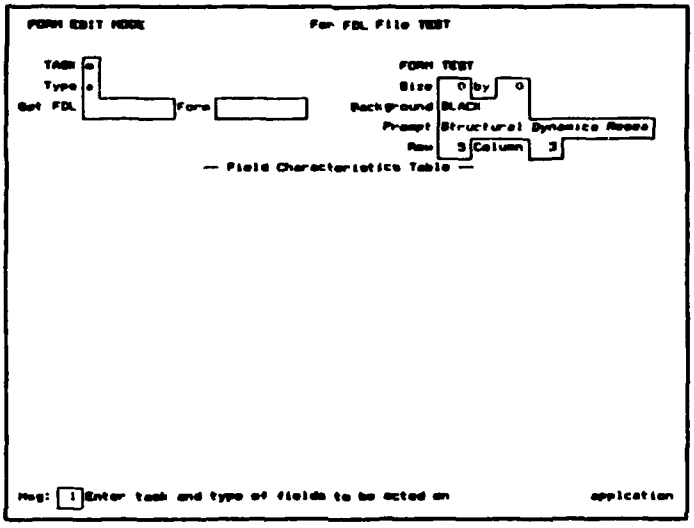


Figure 5-23 Test Screen 19

The following screen should appear.

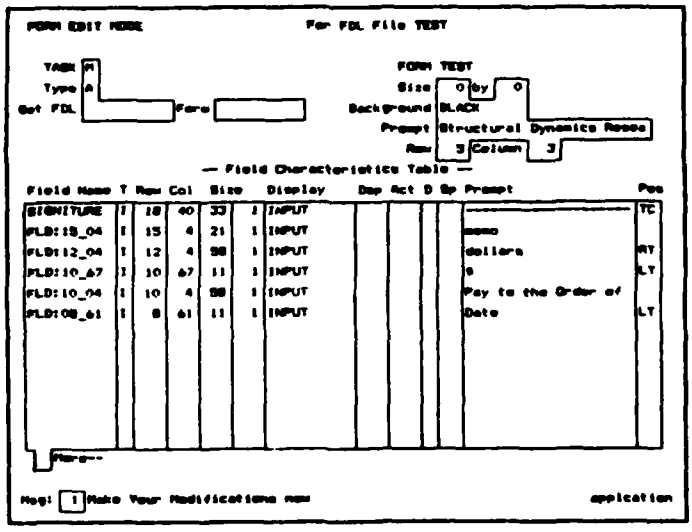


Figure 5-24 Test Screen 20

If the following is entered:

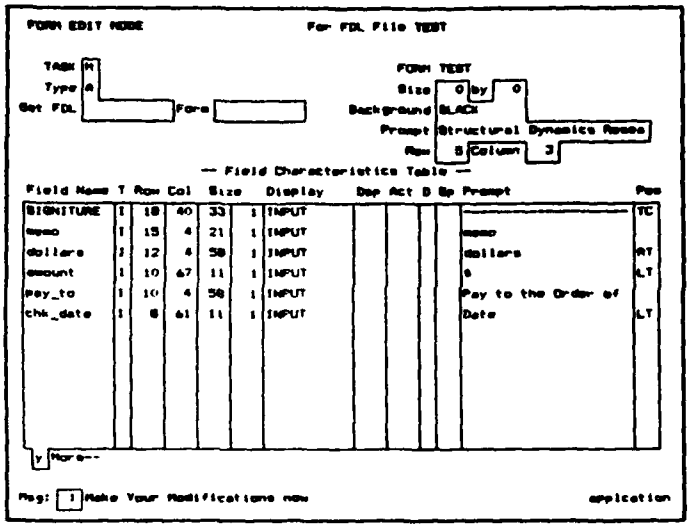


Figure 5-25 Test Screen 21

The following screen should appear.

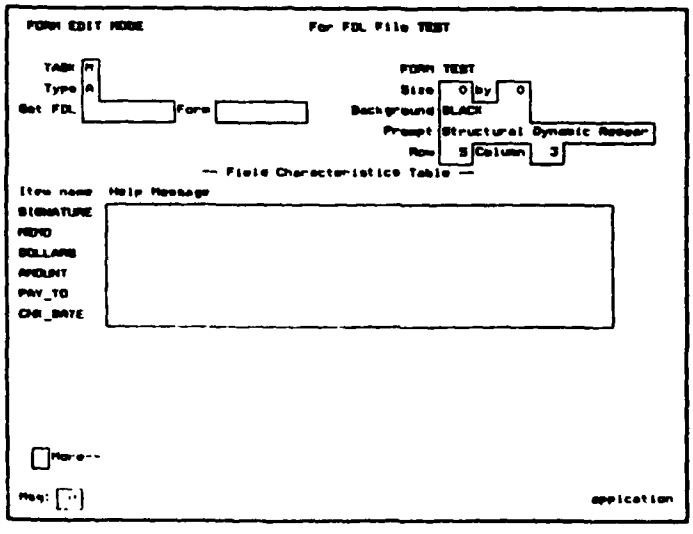


Figure 5-26 Test Screen 22

If the following is entered:

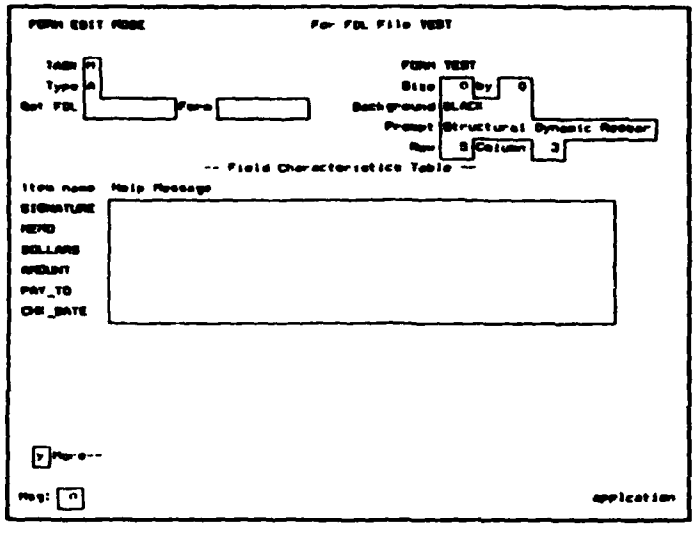


Figure 5-27 Test Screen 23

The following screen should appear.

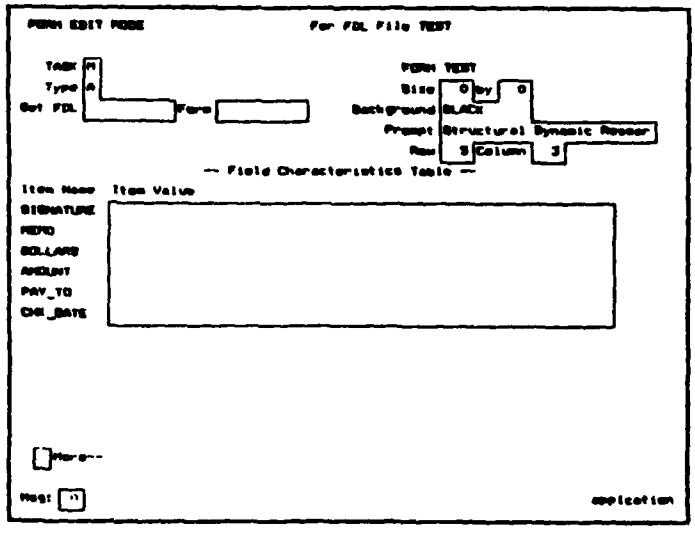


Figure 5-28 Test Screen 24

If the following is entered:

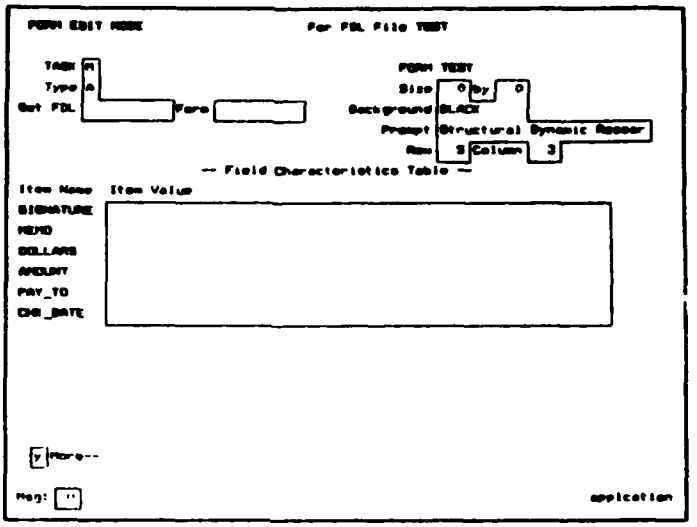


Figure 5-29 Test Screen 25

The following screen should appear.

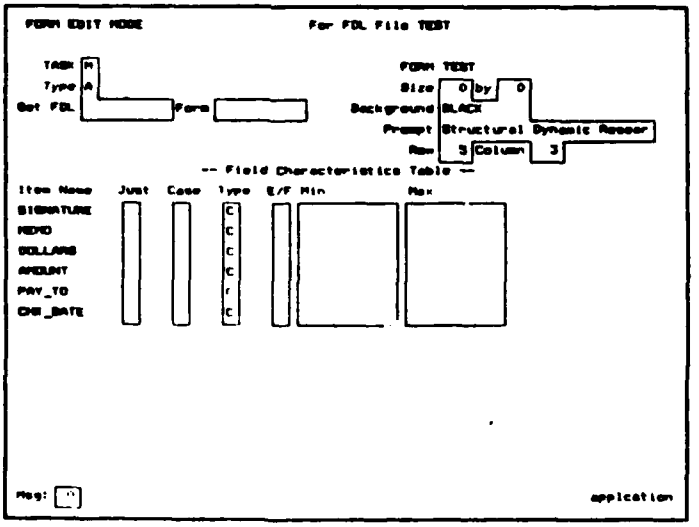


Figure 5-30 Test Screen 26

If the ‹ENTER› key is pressed the following screen will appear.

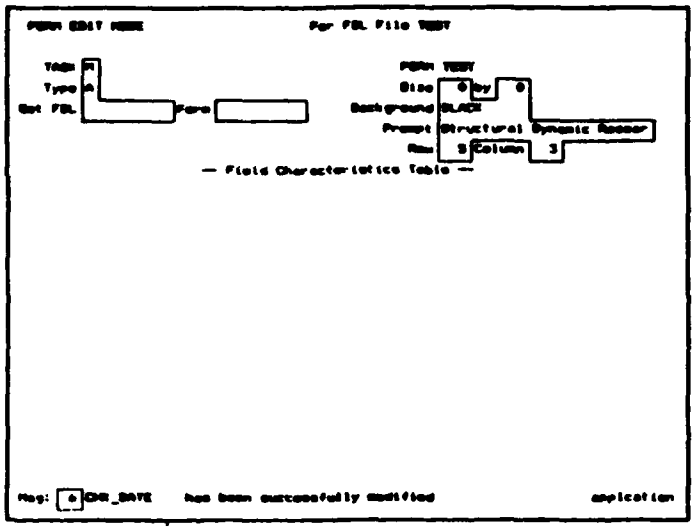


Figure 5-31 Test Screen 27

If the ‹MESSAGE› key is pressed the following screen should appear.

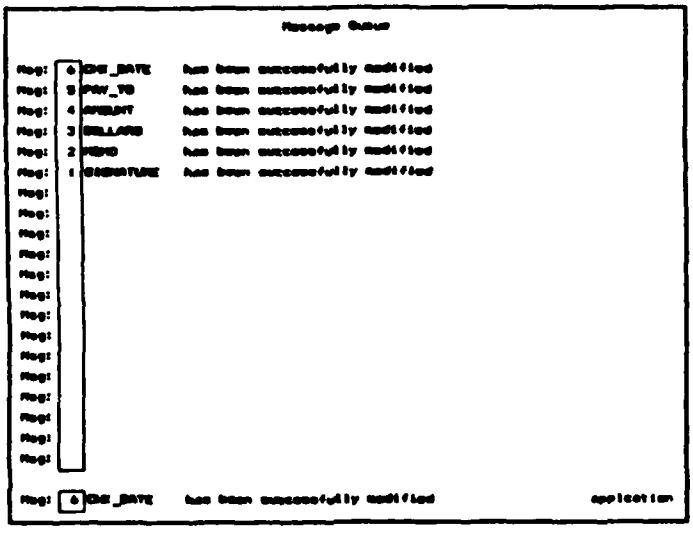


Figure 5-32 Test Screen 28

To return to form edit mode screen press the ‹QUIT› key. To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

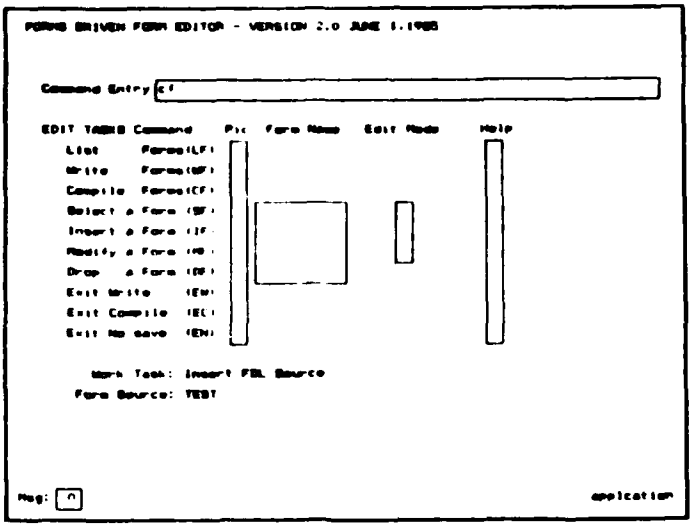


Figure 5-33 Test Screen 29

The following screen should appear.

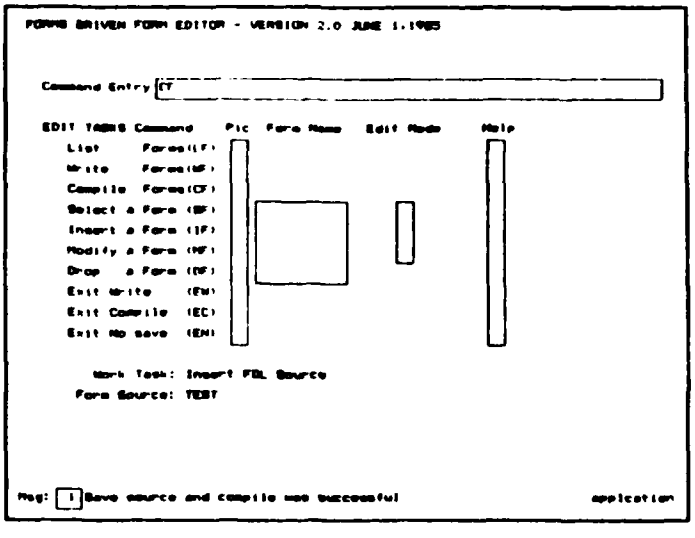


Figure 5-34 Test Screen 30

To return to work task menu screen press the QUIT key. To test viewing compiled FD files enter:

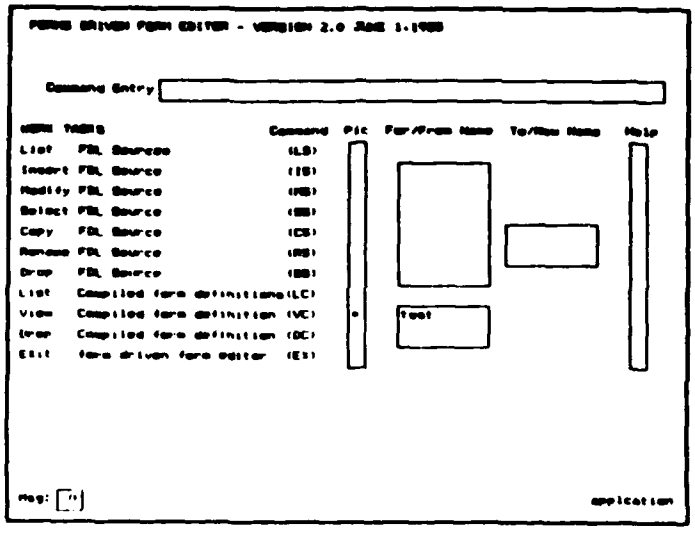


Figure 5-35 Test Screen 31

The result should be the same as the following.

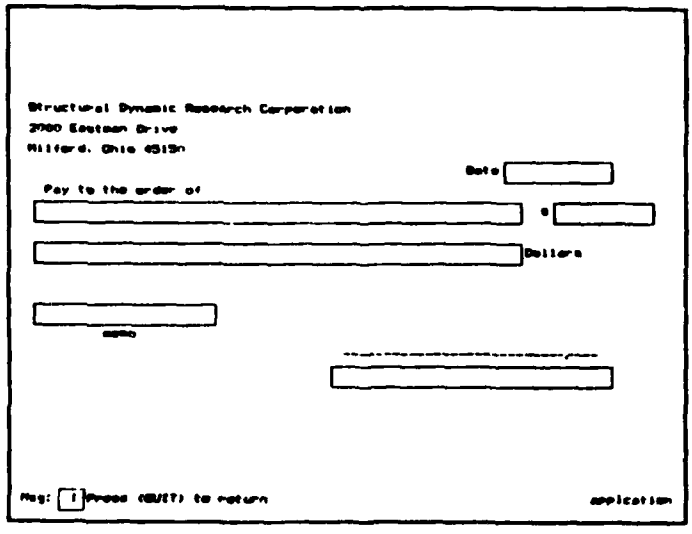


Figure 5-36 Test Screen 32

To return to work task menu screen press the ‹QUIT› key. To test modifying an FDL file enter:

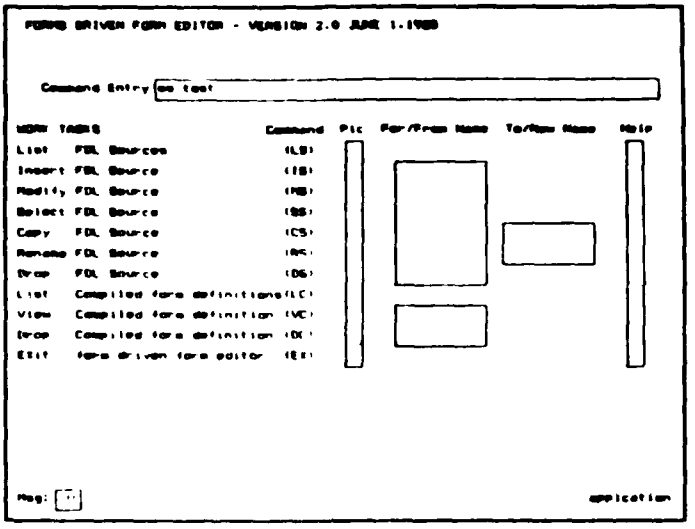


Figure 5-37 Test Screen 33

The result should be the same as the following.

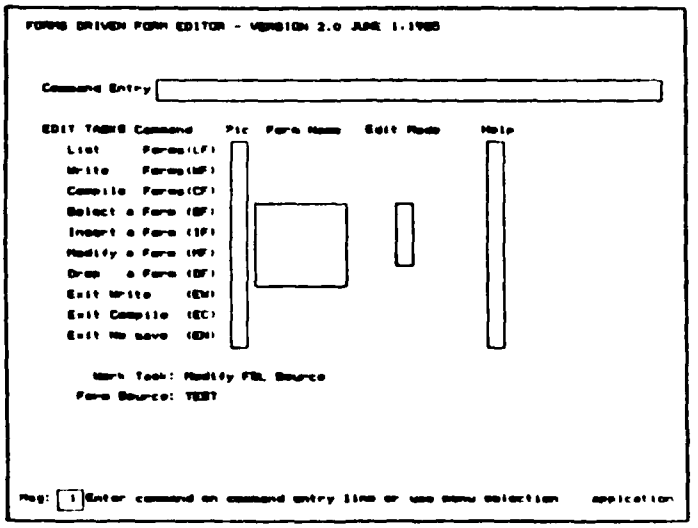


Figure 5-38 Test Screen 34

To test the list forms in FDL source file enter:

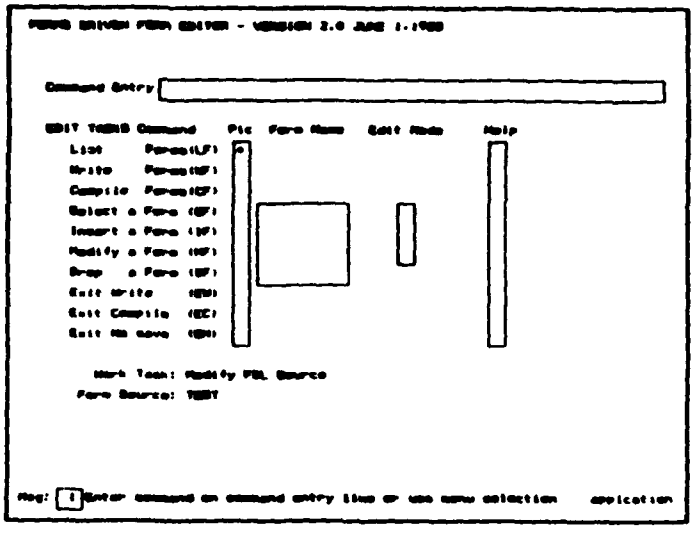


Figure 5-39 Test Screen 35

The following screen should appear.

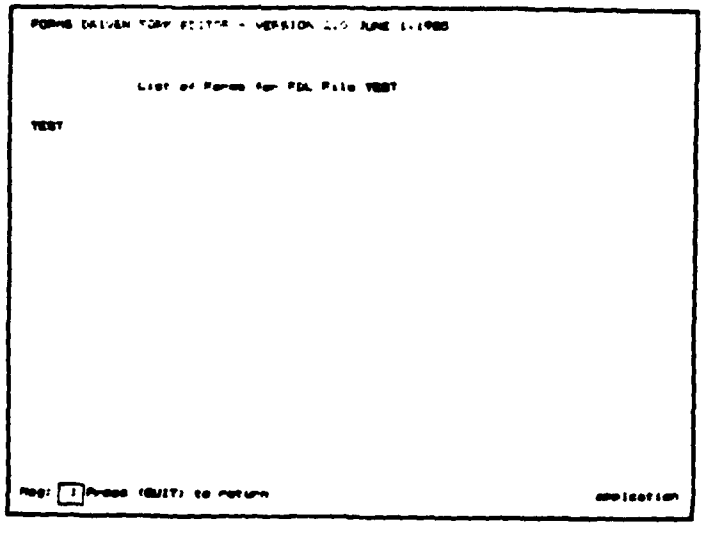


Figure 5-40 Test Screen 36

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

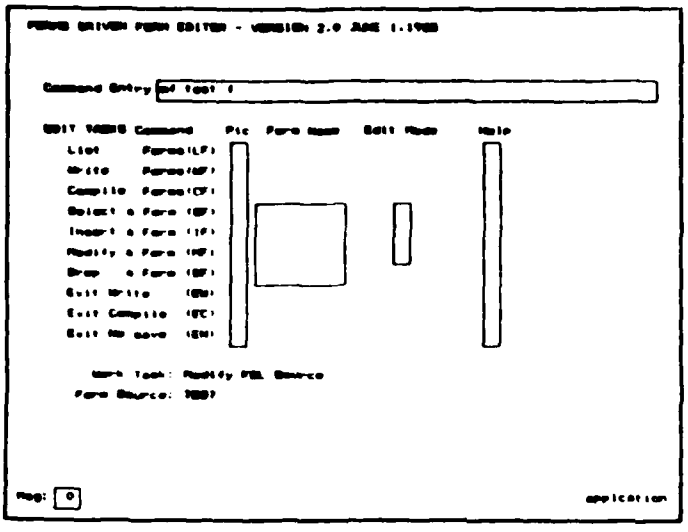


Figure 5-41 Test Screen 37

The following screen should appear.

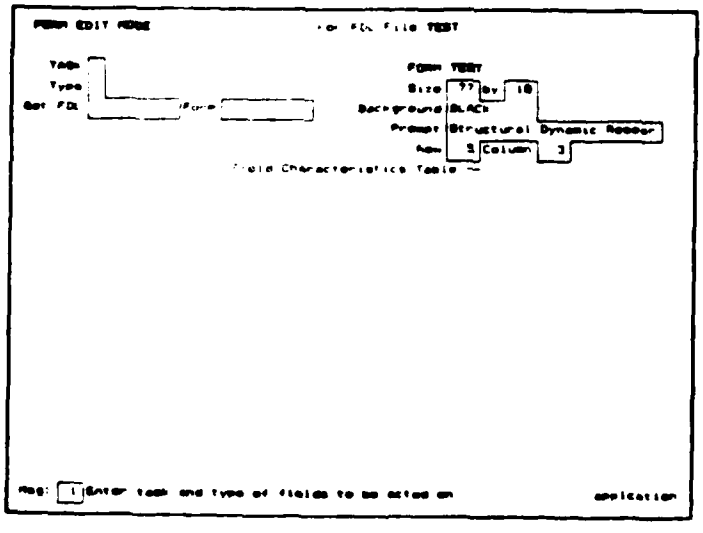


Figure 5-42 Test Screen 38

If the following is entered:

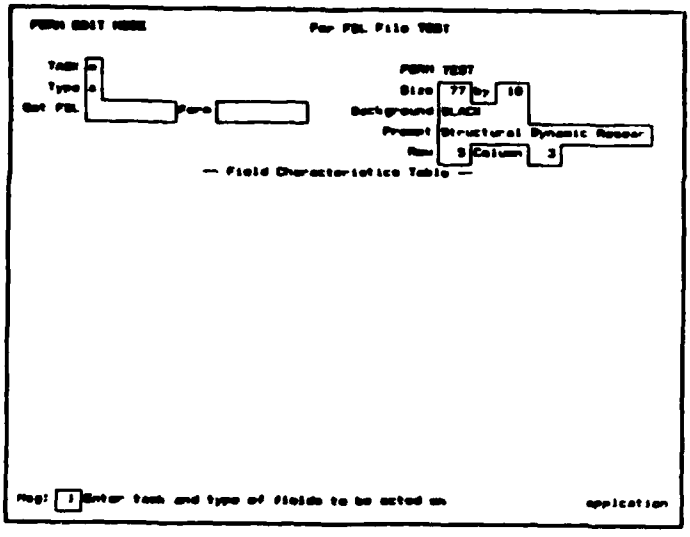


Figure 5-43 Test Screen 39

The following screen should appear.

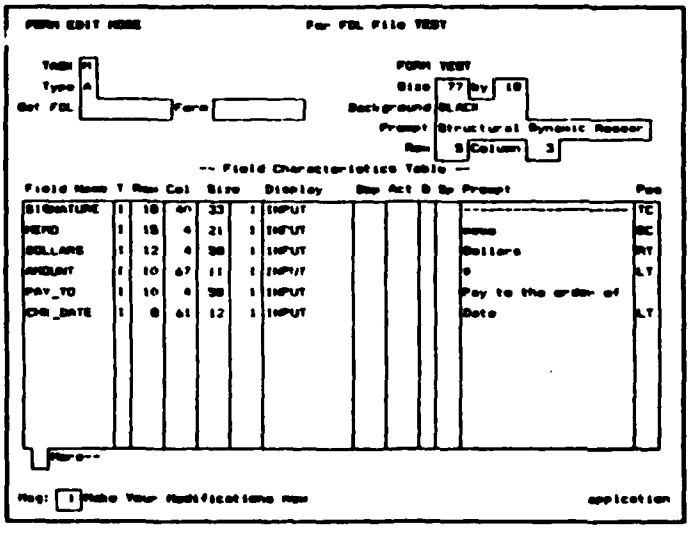


Figure 5-44 Test Screen 40

If the following is entered:

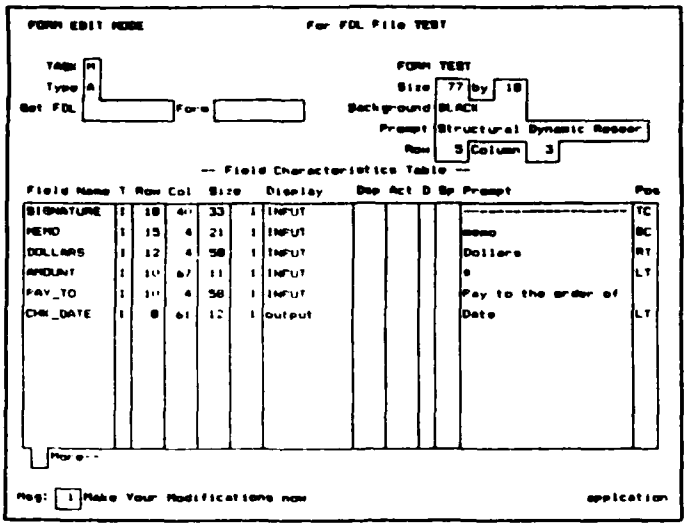


Figure 5-45 Test Screen 41

The following screen should appear.

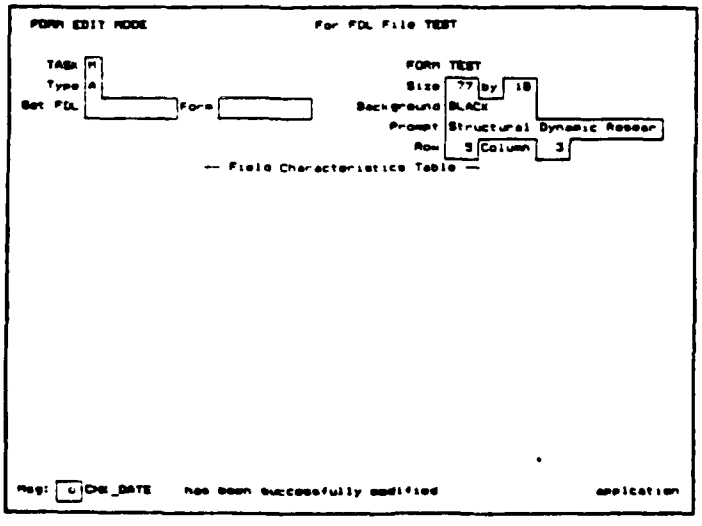


Figure 5-46 Test Screen 42

If the ‹MESSAGE› key is pressed the following screen should appear.

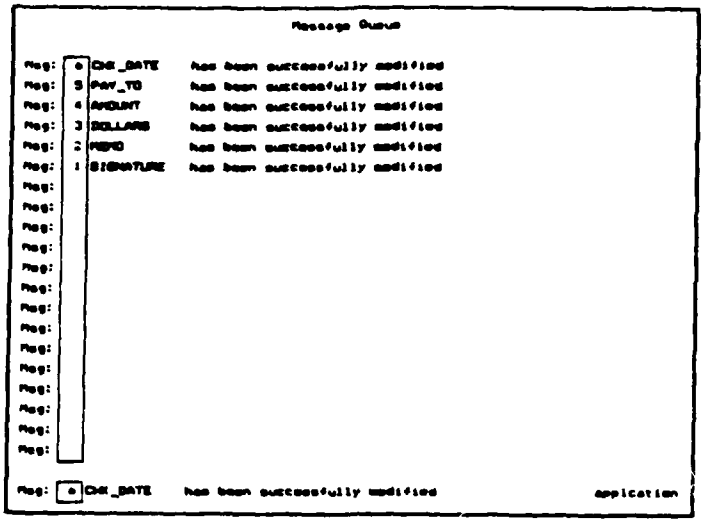


Figure 5-47 Test Screen 43

To return to form edit mode screen press the ‹QUIT› key. To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

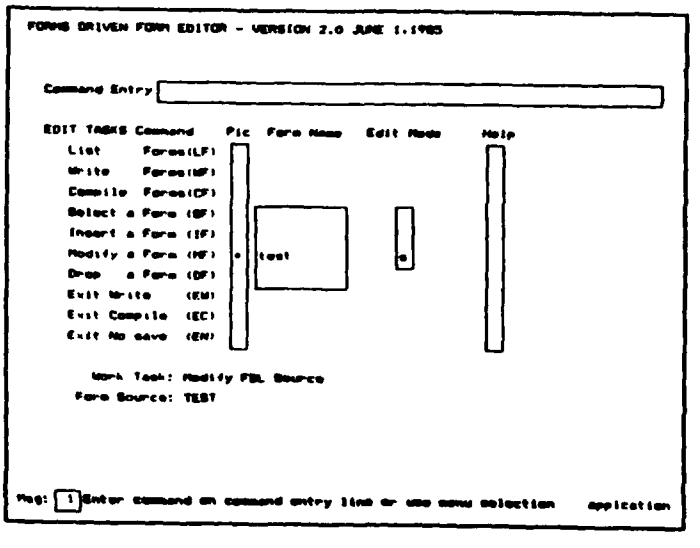


Figure 5-48 Test Screen 44

The following screen should appear.

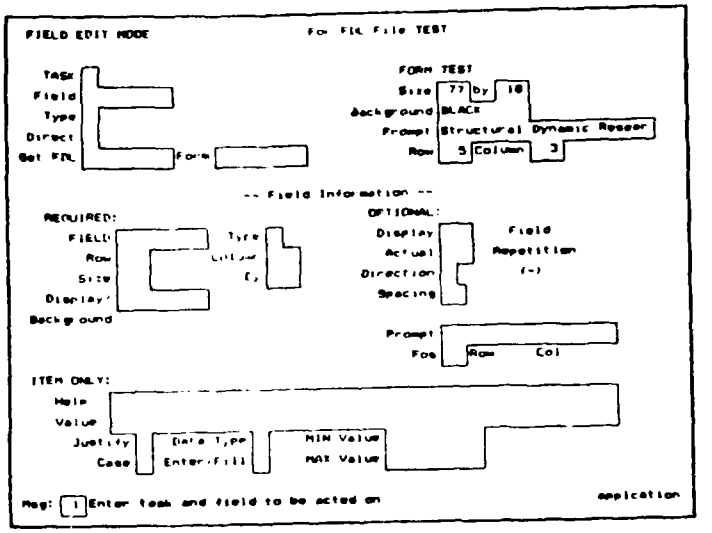


Figure 5-49 Test Screen 45

If the following is entered:

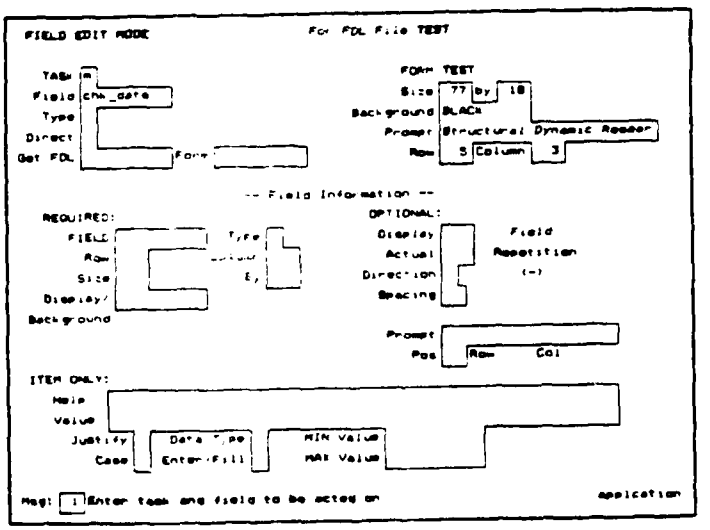


Figure 5-50 Test Screen 46

The following screen should appear.

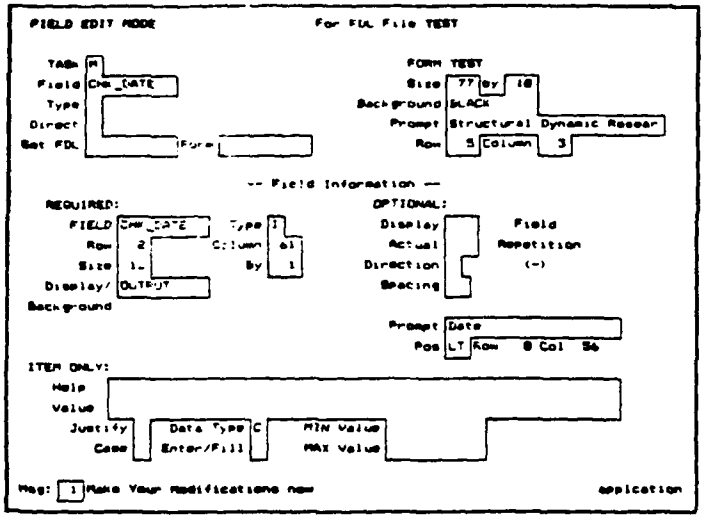


Figure 5-51 Test Screen 47

If the following is entered:

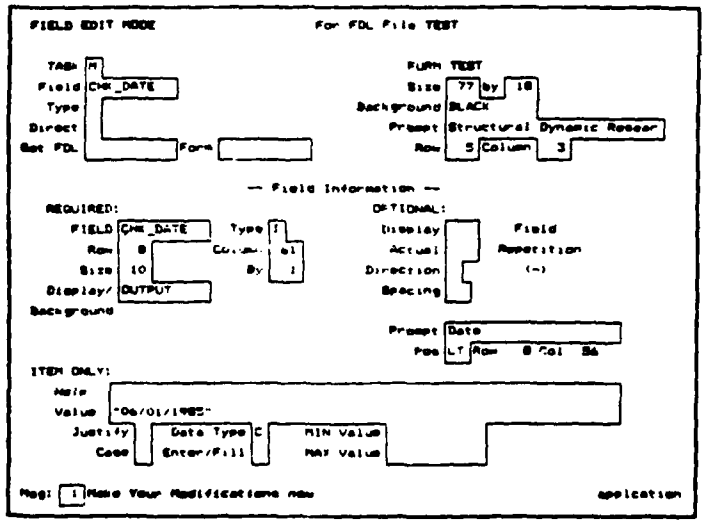


Figure 5-52 Test Screen 48

The following screen should appear.

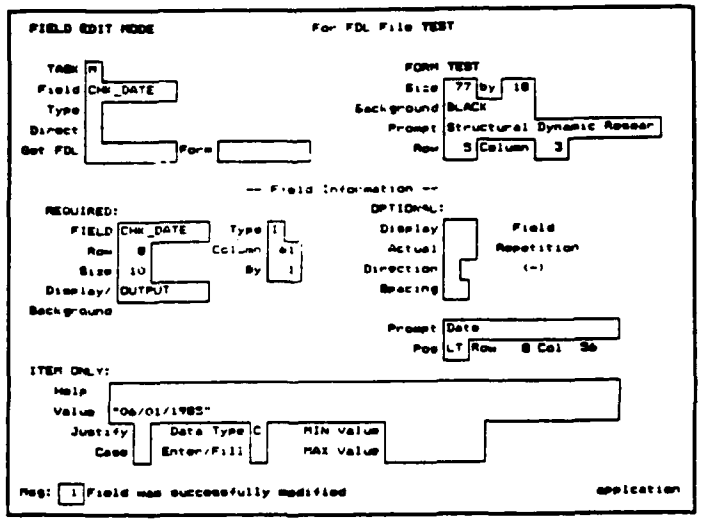


Figure 5-53 Test Screen 49

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

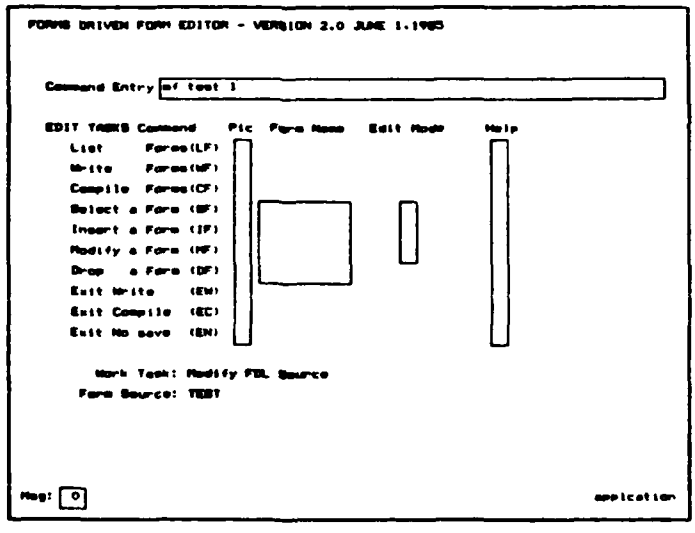


Figure 5-54 Test Screen 50

The following screen should appear.

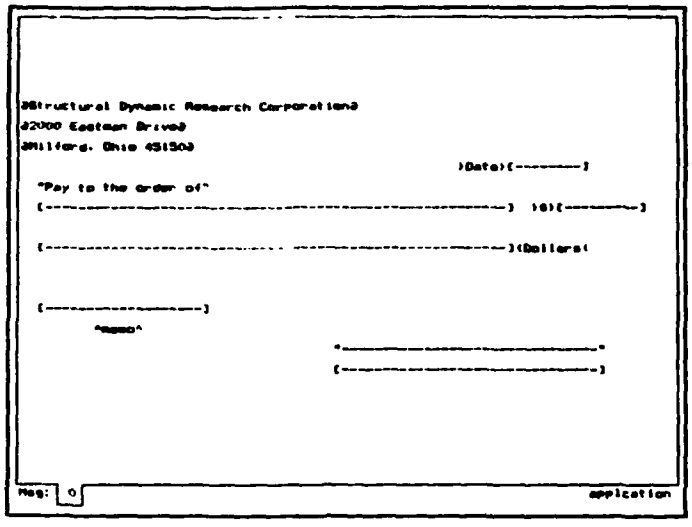


Figure 5-55 Test Screen 51

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

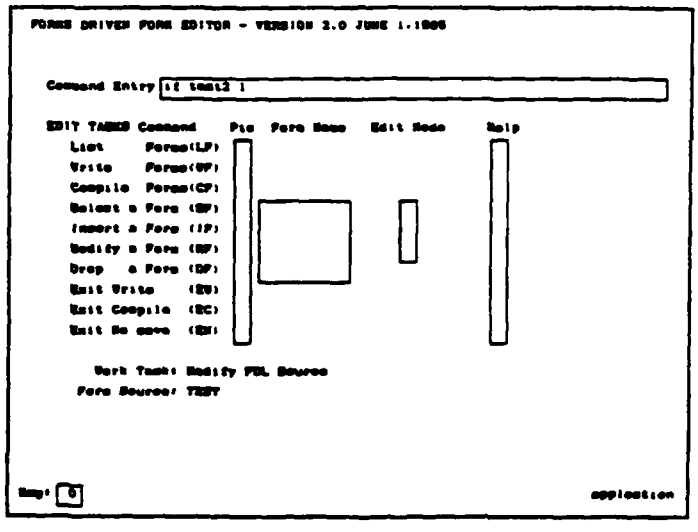


Figure 5-56 Test Screen 52

The following screen should appear.

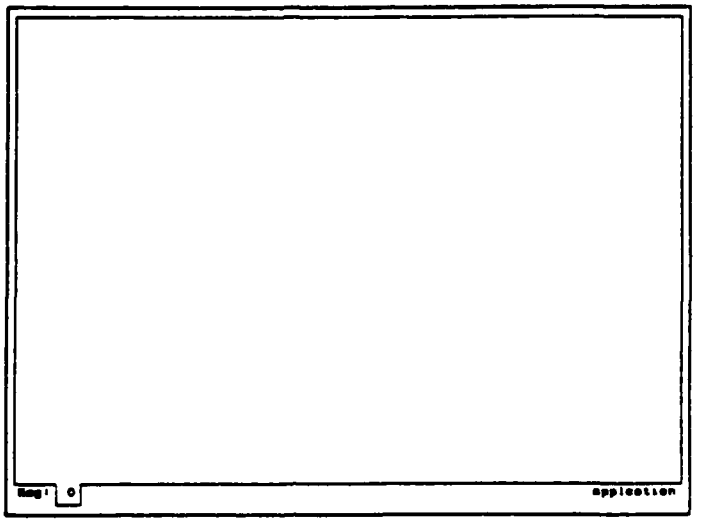


Figure 5-57 Test Screen 53

If the following is entered:

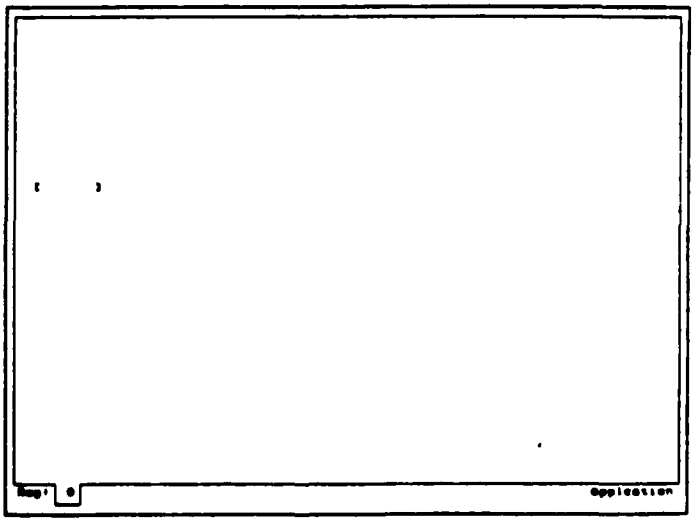


Figure 5-58 Test Screen 54

The following screen should appear.

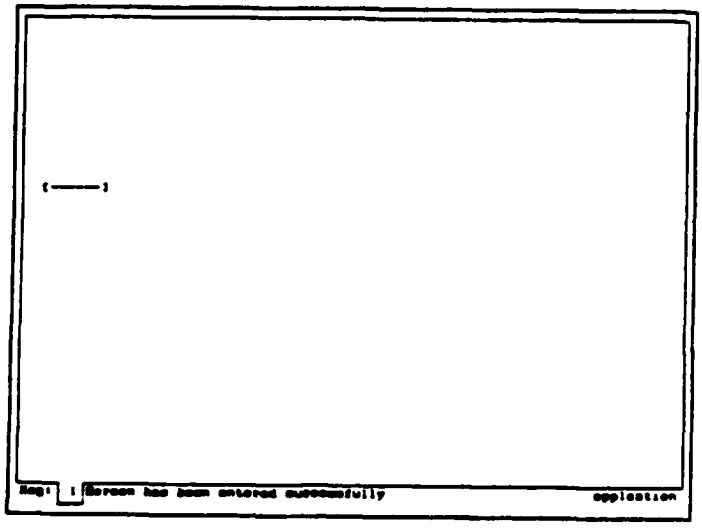


Figure 5-59 Test Screen 55

To return to edit task menu screen press the ‹QUIT› key. To test the ability to drop a form from an FDL file enter:

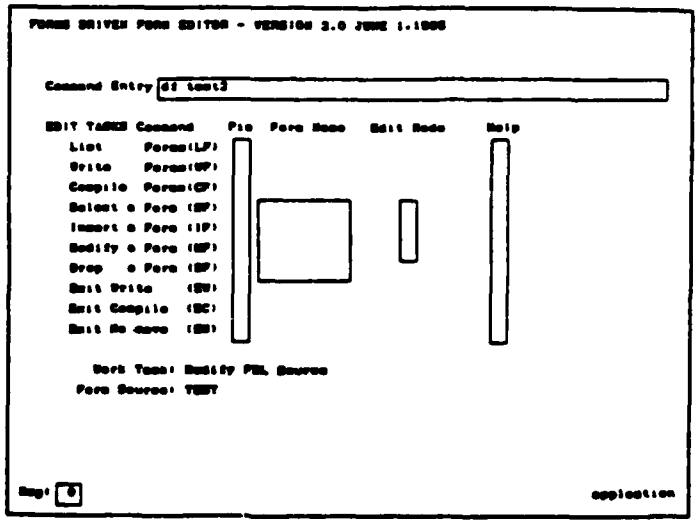


Figure 5-60 Test Screen 56

The following screen should appear.

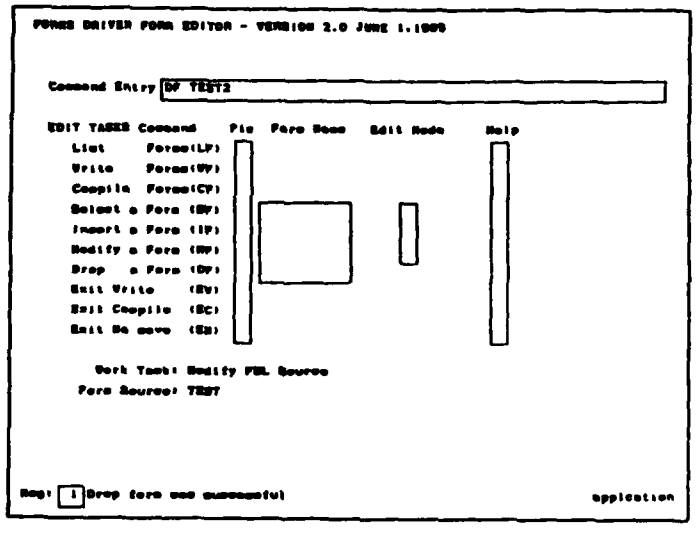


Figure 5-61 Test Screen 57

To test compiling and saving source file which was modified enter:

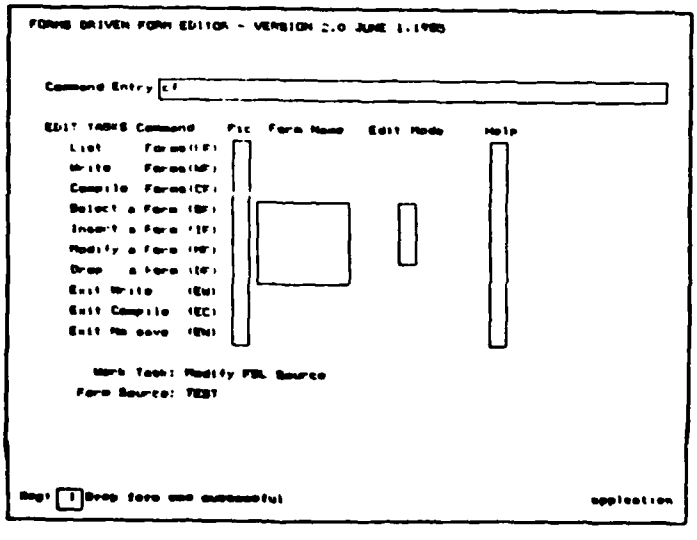


Figure 5-62 Test Screen 58

The following screen should appear.

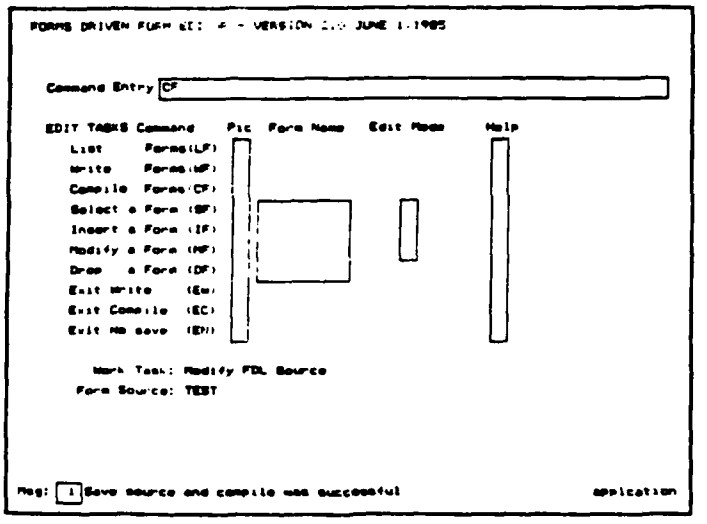


Figure 5-63 Test Screen 59

To return to work task menu screen press the ‹QUIT› key. To test selecting and FDL source file enter:

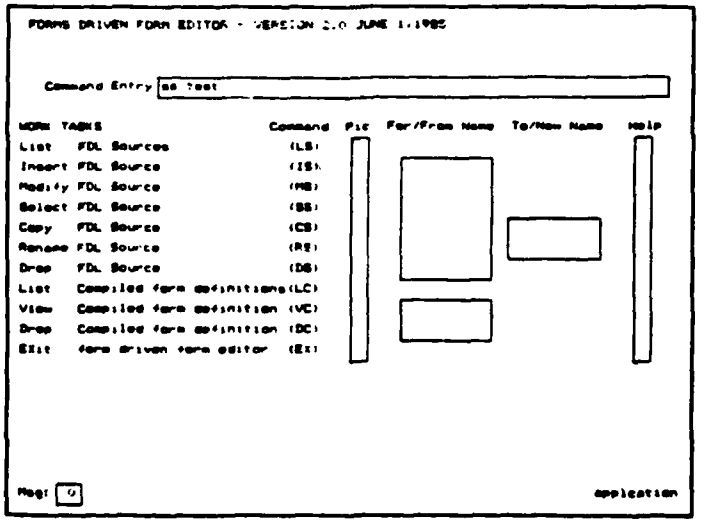


Figure 5-64 Test Screen 60

The result should be the same as the following.

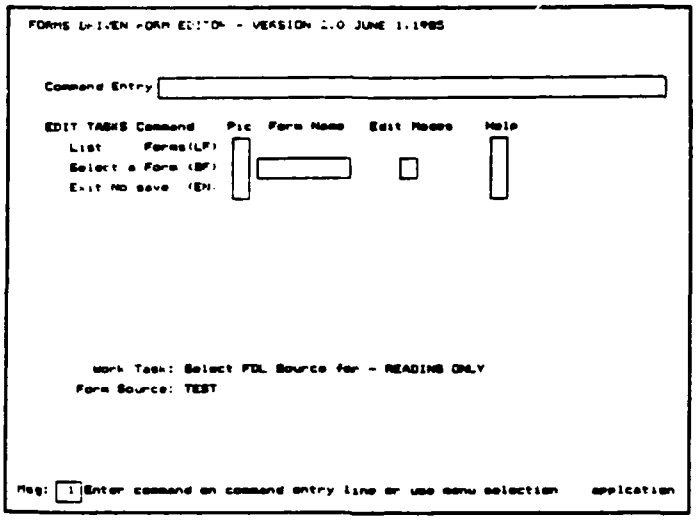


Figure 5-65 Test Screen 61

If the following is entered:

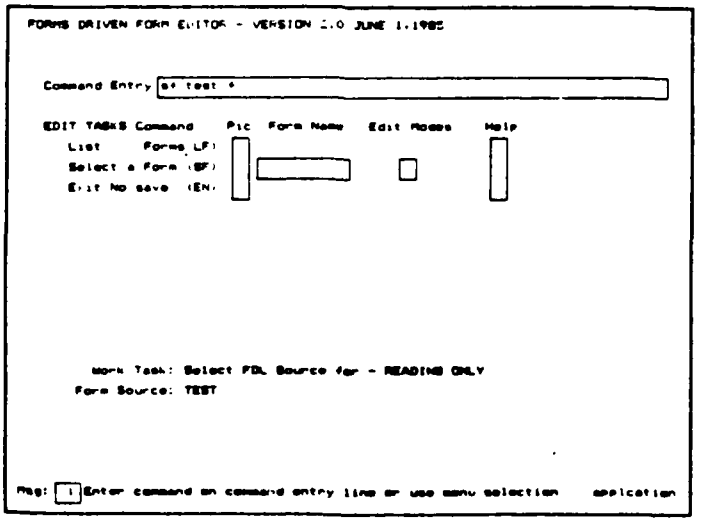


Figure 5-66 Test Screen 62

The following screen should appear.

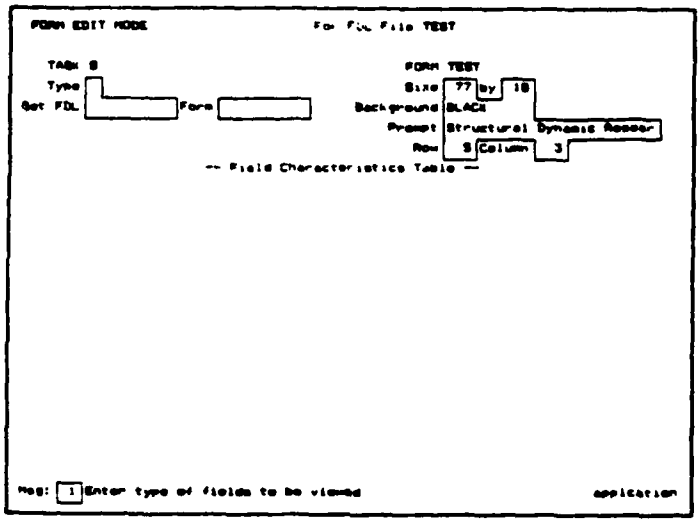


Figure 5-67 Test Screen 63

If the following is entered:

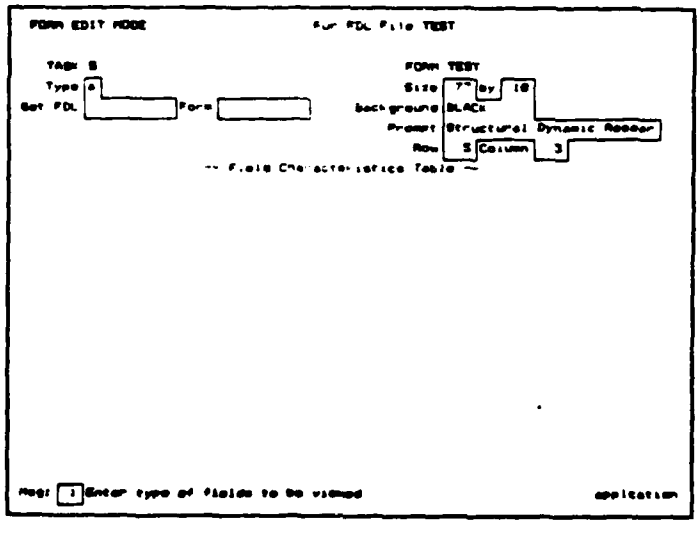


Figure 5-68 Test Screen 64

The following screen should appear.

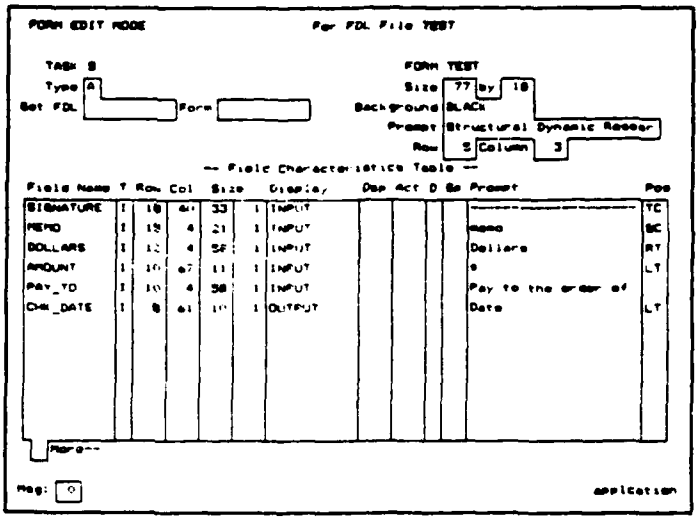


Figure 5-69 Test Screen 65

If the ‹ENTER› key is pressed the following screen will appear.

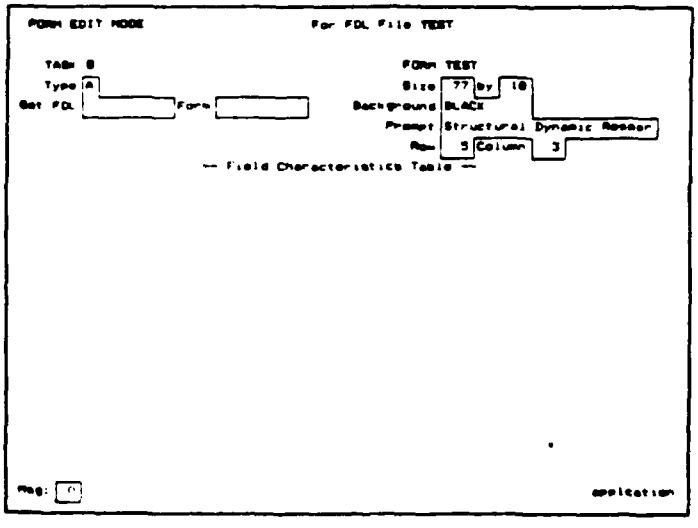


Figure 5-70 Test Screen 66

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

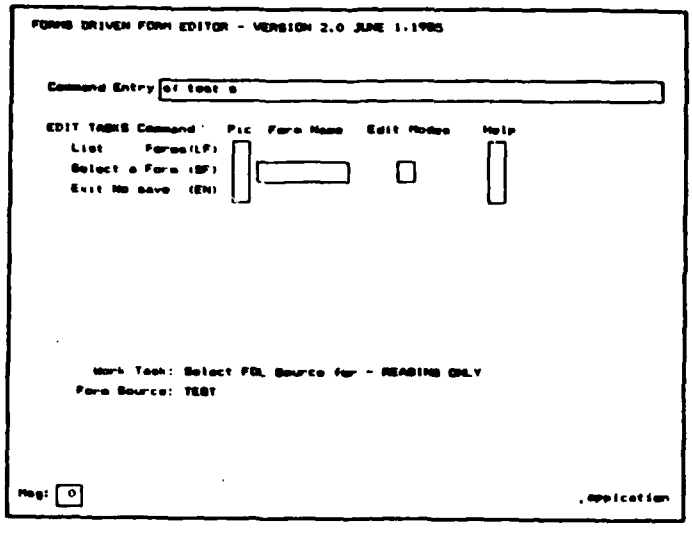


Figure 5-71 Test Screen 67

The following screen should appear.

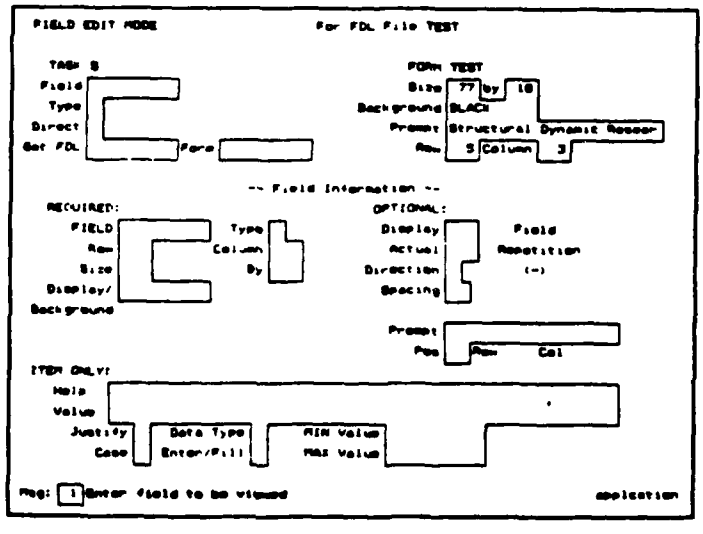


Figure 5-72 Test Screen 68

If the following is entered:

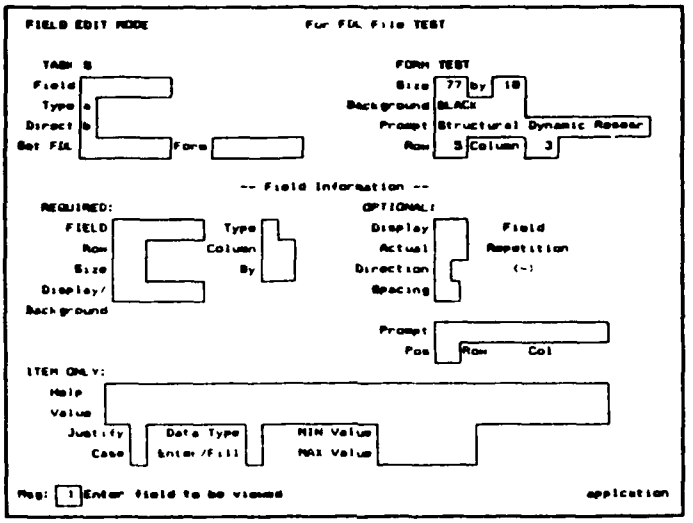


Figure 5-73 Test Screen 69

The following screen should appear.

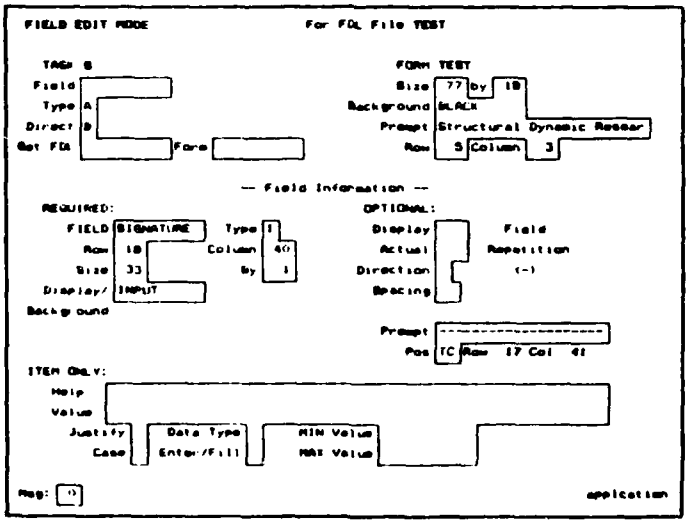


Figure 5-74 Test Screen 70

To return to edit task menu screen press the ‹QUIT› key. If the following is entered on the edit task menu screen:

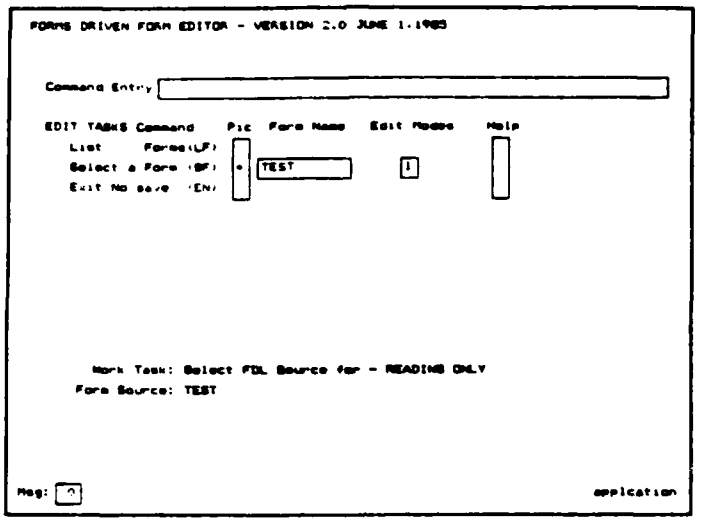


Figure 5-75 Test Screen 71

The following screen should appear.

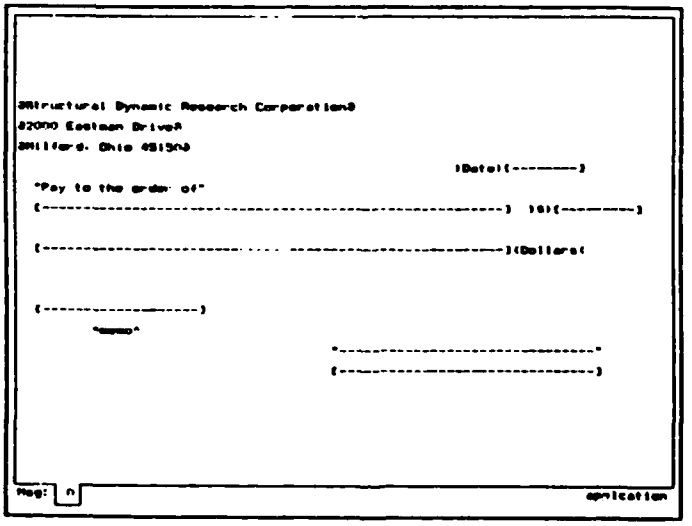


Figure 5-76 Test Screen 72

To return to edit task menu screen press the ‹QUIT› key. To return to work task menu screen press the ‹QUIT› key. To view the changes to the compiled FD file enter:

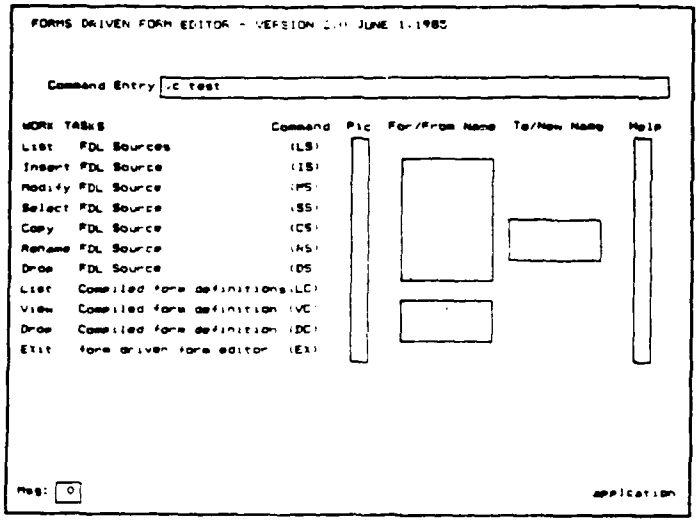


Figure 5-77 Test Screen 73

The result should be the same as the following.

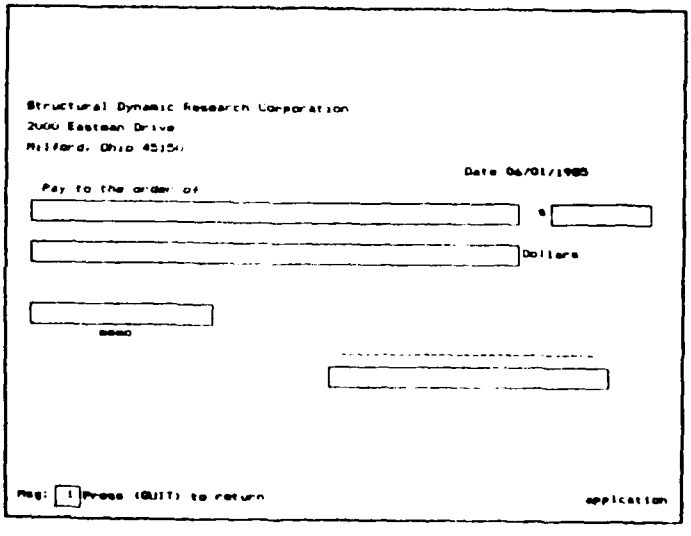


Figure 5-78 Test Screen 74

To return to work task menu screen press the ‹QUIT› key. To test copying one FDL file to another enter:

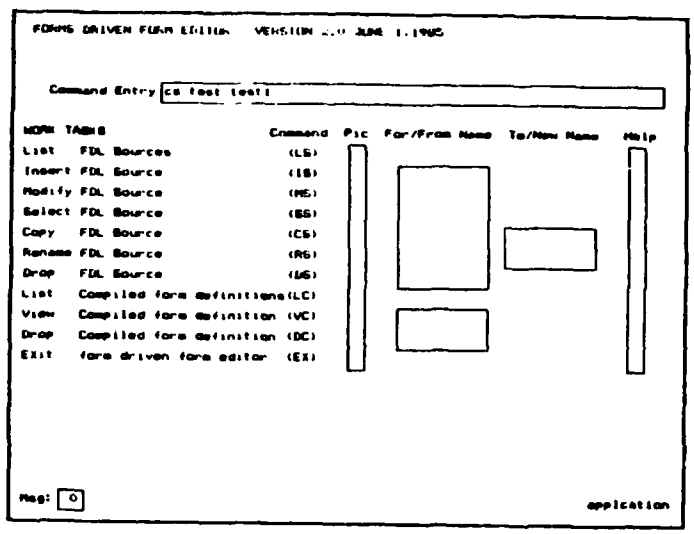


Figure 5-79 Test Screen 75

The result should be the same as the following.

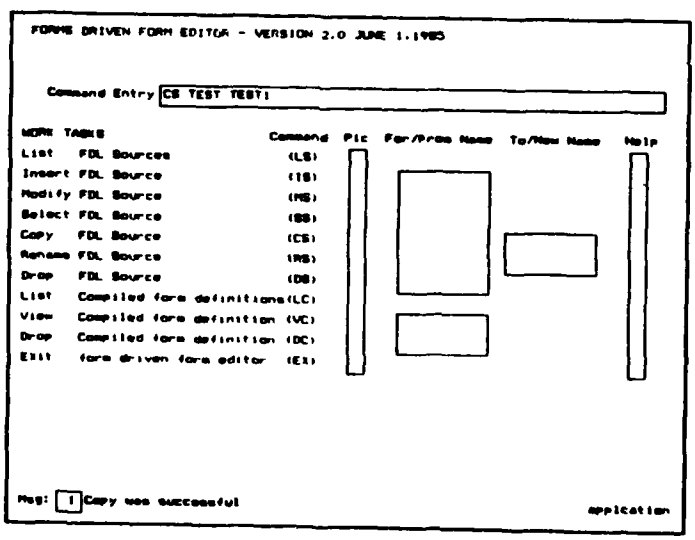


Figure 5-80 Test Screen 76

To test dropping an FDL file enter:

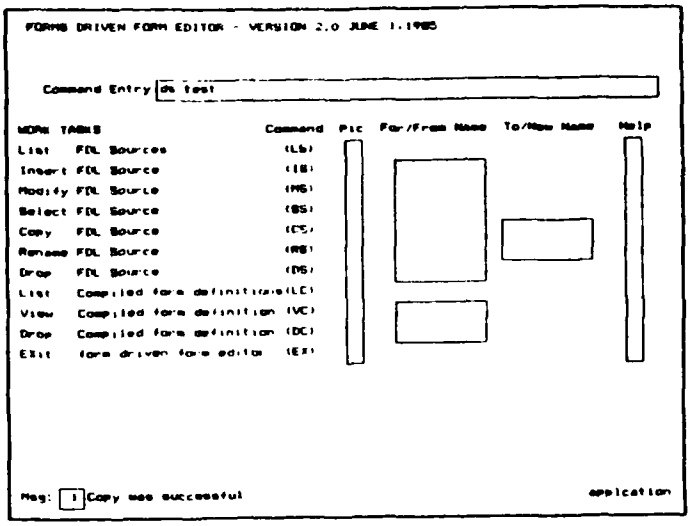


Figure 5-81 Test Screen 77

The result should be the same as the following.

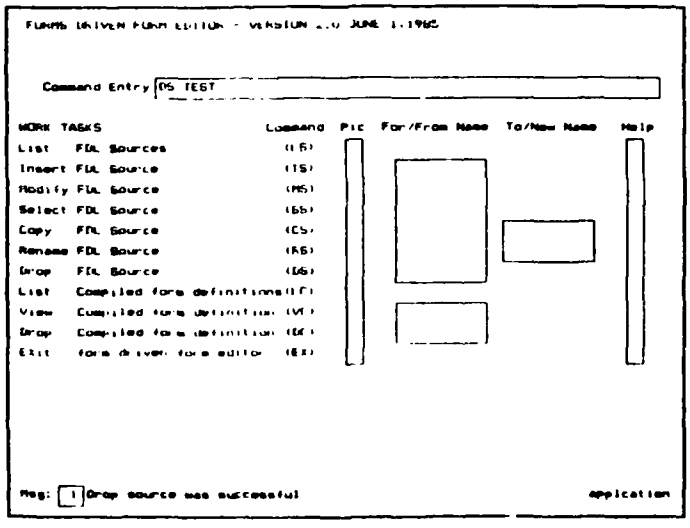


Figure 5-82 Test Screen 78

To test renaming an FDL file to another file enter:

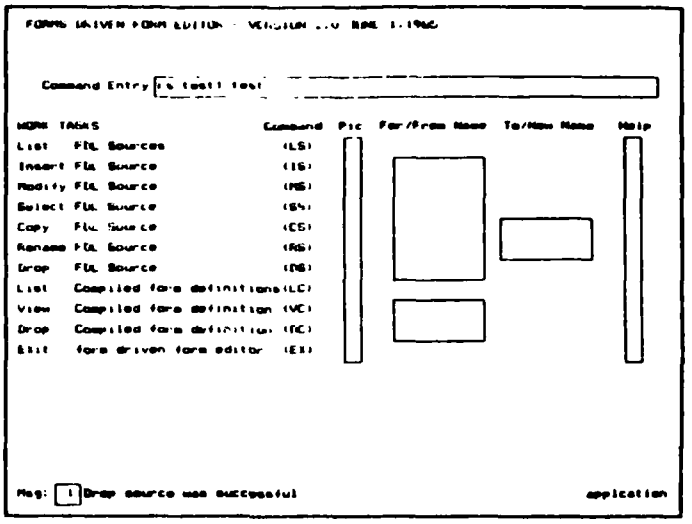


Figure 5-83 Test Screen 79

The result should be the same as the following.

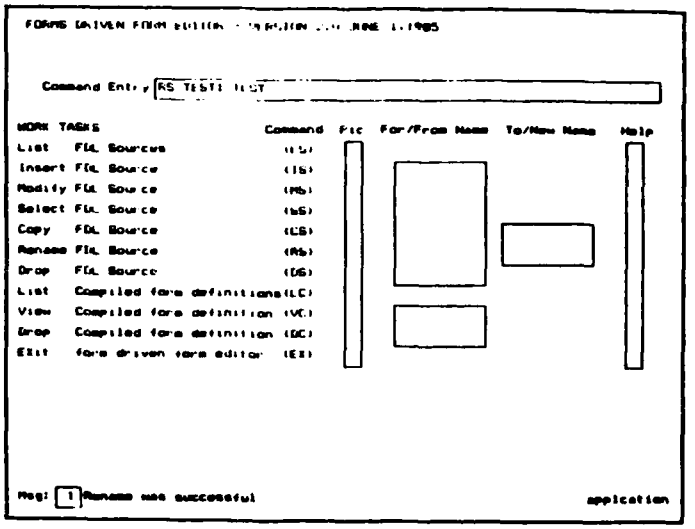


Figure 5-84 Test Screen 80

To test dropping an FD file enter:

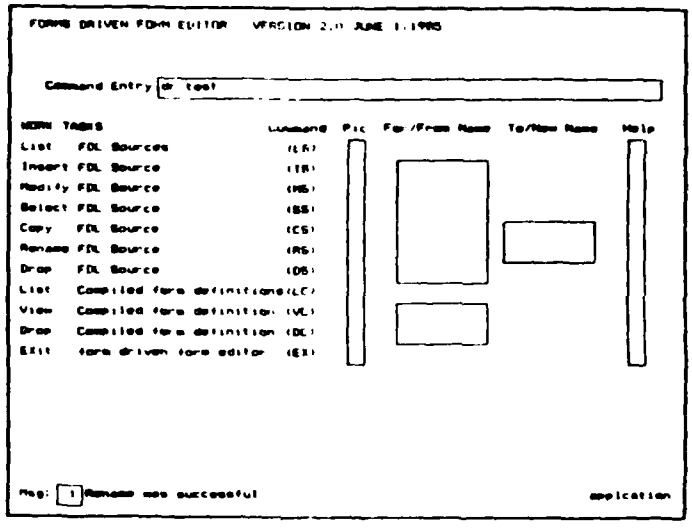


Figure 5-85 Test Screen 81

The result should be the same as the following.

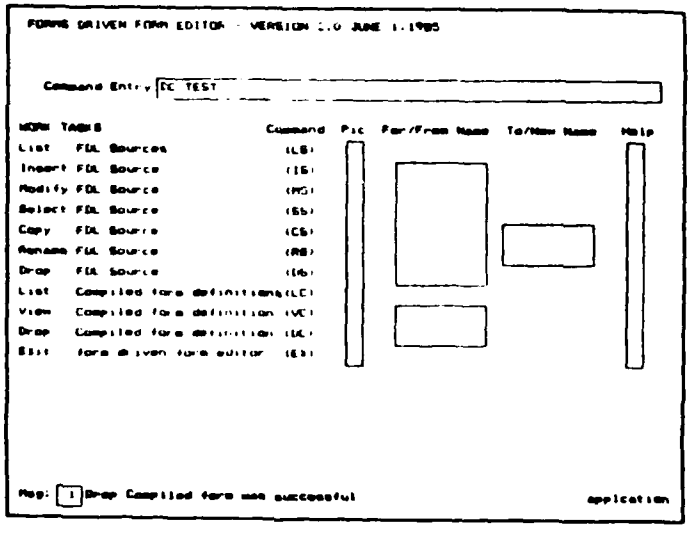


Figure 5-86 Test Screen 82

To exit the FDFE either press the ‹QUIT› key or enter:

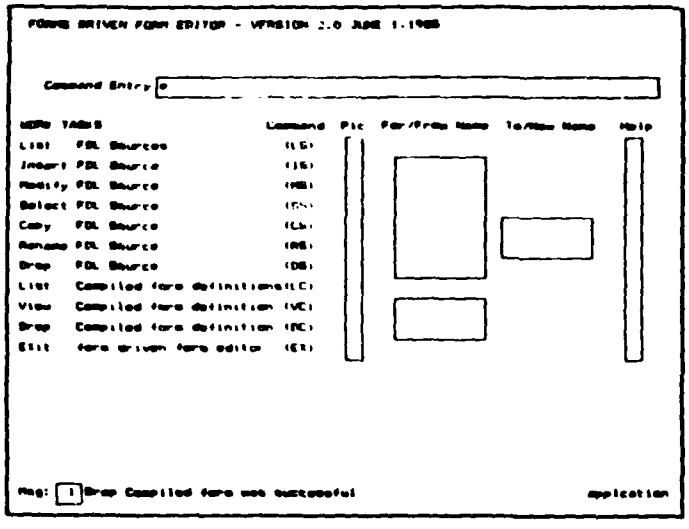
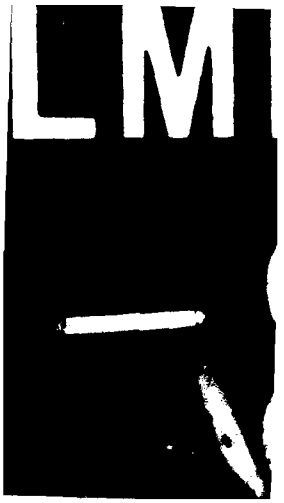


Figure 5-87 Test Screen 83

After exiting the FDFE, the IISS Function Screen (Figure 5-3) form appears, press the ‹QUIT› key once more to terminate the Unit Test of the FDFE.


LM