

README



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FIELD CHECKING SYSTEM

A first look

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1.0 Getting Started

The purpose of this document is to provide a road map of where to go to find needed information among all the documentation that exists for the Field Checking System. Very little will be said about the Field Checking System itself: much has been said already in the documentation to be discussed below.

1.1 Something for EVERYONE to Read ...

Regardless of what the intended use of the Field Checking System may be, it is strongly recommended that the Software Requirement Specifications for Field Checking System, SKL Document #2100-12-001 be the first document perused. The Overview section explains why the Field Checking System was developed and its former use; the Operational Description provides a brief and general discussion of what the System does; the Hardware Description lists what equipment is required to make full use of the System; and the Operational Description gives an introduction to how to operate the System.

After reading this document, the material to read next will depend upon one's role with regard to the System: an Operator will require far less information than a System Maintainer. The following sections detail the documentation available for specific tasks.

This document is contained on the DOCUMENTATION floppy disks in the ./doc/fcsrq directory.

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2.0 So you want to be an OPERATOR ...

There is really only one other document that is required if your role is to be a User of the Field Checking System. The document entitled Operator's Manual for Field Checking System, SKL Document #2100-12-003 provides all the information needed to use the System. All aspects of the Field Checking System's use are detailed in the Operator's Manual.

One worthwhile point to make is that the Field Checking System was designed with the Airborne Data Acquisition System, build internally at Energy Mines and Resources, Ottawa, Canada, to be the principal supplier of data to the Field Checking System: therefore, many of the the System's functions exist for the Acquisition System. The format of the data input to the Field Checking System is especially tied to the Data Acquisition System. The point to be made is not that the Field Checking System is inflexible; rather that it may be helpful to read some of the documentation associated with the Data Acquisition System.

NOTE: It is assumed that the Field Checking System has been installed and all equipment has been configured, before attempting to use the System.

This document is contained on the DOCUMENTATION floppy disks in the ./doc/fcsop directory.

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3.0 Now That You've Got It, How do You INSTALL It?

The Field Checking System runs in the VENIX/86 Operating System environment. VENIX, a derivative of UNIX, was developed for micro/mini computer applications. If not familiar with UNIX your task will be more difficult: however, the VENIX/86 Installation and Introduction Manual should be helpful in getting started. This manual will certainly explain everything needed to get VENIX up and running on your computer.

Once you have VENIX up and running, the contents of the SOFTWARE disks can be 'tar'd to the mass storage device to create the Field Checking System. Also, the VENIX kernel needs to be modified to run the System. A copy of the modified kernel is provided on the SOFTWARE floppy disks. If you have problems getting the Field Checking System software to run, contact Software Kinetics Ltd at (613) 831-0888 for technical assistance.

REVIEW: the Field Checking System resides on floppy disks which are clearly marked: at the top of each label is the word "SOFTWARE". Simply 'tar' the contents of the disks onto the primary storage medium. Prior to installing the software, it will be necessary to create a user with home directory of /usr/emr. The name 'emr' can, of course, be changed to suit your organization. - The disks marked './emr' should be tar'd from within the /usr directory by the user group to be assigned the Field Checking System; the remaining software disks should be tar'd from within the /usr directory by the Super User since the software on these disks is used to create the modified VENIX kernel.

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4.0 System MAINTAINERS Have More Fun

Essentially, all the documentation is required to maintain the Field Checking System. As a Maintainer, the document to be read after the Software Requirements is Software Design Document for Field Checking System, SKL Document #2100-12-002. This document is contained on the DOCUMENTATION floppy disks in the ./doc/fcsdn directory.

The design description and dependency diagrams for all modules of the System are given in the Software Design as well as the algorithms for all modules; a list of constants, types, prompts and error/status messages defined for the System, and the hardware configurations of interface cards used by the equipment of the Field Checking System.

In the /usr/doc/misc directory are two documentation files which outline some additional aspects of the Field Checking System: the first, 'fcs.hdwr' provides a description of the hardware used to make up the System; and the second, 'misc.sftwr' describes some of the additional software provided which was developed during the design and implementation phases and used to assist the System Maintainer. Little documentation is provided regarding this software other than that contained in the aforementioned file.

A recommended reference manual for 'C' is The C Programming Language, Brian W. Kernigham and Dennis M. Ritchie. Published by Prentice-Hall, this book was written by the creator of 'C'.

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5.0 What a Job Keeping all the DOCUMENTATION Up-to-date ...

The documentation for the Field Checking System is provided on three media: (1) hard copy, (2) floppy disk and, ~~_____~~
~~magnetic tape~~. The hard copies include the SKL document numbers listed above as well as all the out-of-date documents. These superceded versions are being provided in the event of confusion with the current versions, as well as providing a means of reviewing the history of the development of the Field Checking System.

The current versions are contained on the two other media. On both, the format of the data is that generated by the 'tar' utility of VENIX. The floppy disks should be readable by any IBM-AT or compatible microcomputer. ~~_____~~
~~provided since it should be readable by any nine track tape with~~
~~_____~~

A note of explanation on the format of the documentation on the two media is in order. The hard copy versions were created using The FinalWord text-formating software which runs under VENIX/86. This is why the "@b{...}" and "@u{...}" constructs will be found mixed throughout the various documents when examined in their ascii format. Without The FinalWord, a final version of each document cannot be printed: however, VENIX/86 includes a text-formating program, 'nroff', which has many of the same features of The FinalWord. Conversion to 'nroff', or any other text-formating programs for that matter, is as simple as changing the FinalWord commands to those of the text-formating software being used. Note, however, that no formating is required to simply get a copy of the documentation: the only irritant will be the existence of The FinalWord commands mixed throughout the text.

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6.0 A Final Word

As with any complex system there is always a lot of documentation explaining the system. The same holds true for the Field Checking System. There is certainly enough available to evaluate the System's utility for an application and to use it in operation. If modifications are to be made to the System only, the documentation provided is sufficient. Assistance will be required if new or additional hardware is to added to the System and the VENIX kernel must be modified.

The Field Checking System was designed and implemented by

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If assistance is required, please contact Tony Moretto.

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A D D I T I O N A L N O T E S

As mentioned, the Field Checking System runs under the VENIX/86 Operating System environment. Version 2.1 was used for development. VENIX/86 includes a basic compiler, assembler, 'C' compiler, text-formating package and many other system utilities. In short, VENIX/86 is a complete package. A product of

VenturCom Inc.
215 First Street
Cambridge, MA
02142
617/661-1230

At one time, VENIX/86 was distributed in Canada by Software Kinetics Ltd., though this is no longer true. However, you may contact Tony Moretto of Software Kinetics Ltd. to obtain information regarding VENIX/86. A word of warning: VENIX/86 has since been replaced with VENIX System V and, as a result, it may be difficult to obtain VENIX/86. However, porting the Field Checking System to VENIX System V or any UNIX-like operating system would not be a major problem and might be more beneficial in the long run.

The documentation is contained on floppy disks marked "DOCUMENTATION". The hard copies of the documents were prepared at the offices of Software Kinetics Ltd on a laser printer using The FinalWord text-formating software package. However, to avoid having to purchase The FinalWord, all the major documentation has been converted from The FinalWord form to 'nroff' which is included with the VENIX/86 operating system. The corresponding 'nroff' files are all marked by the '.n' extension. To produce a copy of the documents, simply use 'nroff' as explained in the VENIX/86 User Manuals.

A special note is in order with regard to the Software Design document. Section Three of the document is actual 'built' by extracting the headers from each of the source codes modules. The extraction is performed by running the program, 'mks3' (or 'mks3.n' to create the 'nroff' version). This program is contained in the 'fcsdn' directory along with the remaining

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sections of the document. Prior to running mks3, be sure the source files are in the directory, '/usr/emr/source'.

NOTE: the document files have been converted from The FinalWord format to 'nroff' format. However, no hard copy version was produced to examine the 'nroff' files and, as a consequence, there may be discrepancies or bugs when a hard copy is produced using 'nroff'.

Also note that several pages of the Software Requirements Document and Operator's Manual consist of diagrams which have not been generated by a text-formating program but, rather, have been created through other means and inserted into the documents prior to publishing. In the case of the Operator's Manual, all the inserts were created by running the Field Checking System and getting copies of the 'screen' using the IBM-AT's <Print Screen> key. Many of the figures in the Requirements document were likewise created. However, there are many special diagrams in Specifications document that may only be reproduced by copying from the Software Kinetics Ltd. version. Either these diagrams should be copied in such a manner or the entire Software Requirement Specifications Document should be copied to obtain a second copy.

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The following shows the directory layout required to configure the Field Checking System (the /usr/connector directory is not required).

Directory structure of /
(excluding entries that begin with '.')

```

- b0 -----
- b1 -----
- bin -----
- dev -----
- etc -----
- f0 -----
- f1 -----
- lib -----
- tmp -----

- adm -----
- bin -----
- connector -----
- demo -----
- dict -----

- doc -----
- dos -----

- emr -----
- games -----
- guest -----
- help -----
- include -----
- lib -----
- lex -----
- tabset -----
- term -----

- fcsdn -----
- fcsop -----
- fcsrq -----
- misc -----

- display -----
- include -----
- object -----
- source -----
- tmp -----
- utilities -----
- versatec -----

- usr -----
```

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	-tmac-----	
	-uucp-----	
	-at-----	-past-----
-spool-----	-mail-----	
	-uucp-----	
	-uucppublic---	
-src-----		
-sys-----	-conf-----	
	-dev-----	
-tmp-----		