

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
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**ALACARTE INSTALLATION AND SYSTEM MANUAL**  
**Version 1.0**

Installation guide and programming reference for  
ALACARTE, an easily used menu interface cast in geologic terms  
that controls ARC/INFO, a commercial geographic information system

Todd T. Fitzgibbon

1991

Open-File Report 91-587 B

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### INTRODUCTION

ALACARTE is a menu-driven interface to ARC/INFO, a commercial Geographic Information System (GIS) software package from Environmental Systems Research Institute (ESRI, Redlands, California). ALACARTE is designed for use by geologists in making, analyzing, and plotting geologic maps and associated data sets, including detailed large-scale quadrangle maps. ALACARTE consists of more than 25,000 lines of code and 10,000 comment lines in 470 subroutines written in the ARC/INFO Macro Language (AML), a high-level interpreted language.

Version 1.0 of ALACARTE includes functions for creating, editing, and attributing geologic maps. Common geologic line and point symbols, sample maps and a twenty-one-screen demonstration routine are provided. Additional analytic and cartographic output functions will be addressed in future versions. This manual describes the technical aspects of ALACARTE, including hardware and software requirements, installation, and source code details. It can serve as a preliminary reference manual for programmers who wish to modify ALACARTE or understand its inner workings.

User documentation is in the report, **ALACARTE User Manual Version 1.0, USGS Open File Report 91-587 C, by Carl M. Wentworth and Todd T. Fitzgibbon**. The AML code is referenced as **ALACARTE User Interface - AML Code and Demonstration Maps, USGS Open File Report 91-587 A, by Todd T. Fitzgibbon and Carl M. Wentworth**. The report describes how to obtain a machine-readable version on tape or through anonymous ftp. The machine-readable version includes IslandWrite, Postscript and ASCII versions of the manuals. Also see OBTAINING THE ALACARTE EXECUTABLE CODE below. Copies of both these reports and additional copies of this manual may be obtained for the cost of reproduction from:

U.S. Geological Survey  
Books and Open-File Reports Section  
Federal Center  
P.O. Box 25425  
Denver, CO 80255  
(303) 236-7476

ALACARTE is designed by T.T. Fitzgibbon and C.M. Wentworth, with assistance from P.K. Showalter, and is written by Fitzgibbon with assistance from Showalter, P.H. Rice, D.L. Knifong, T.A. Lindquist, and others. Sample AML's and technical support from ESRI are greatly appreciated.

## **HARDWARE AND SOFTWARE REQUIREMENTS**

ALACARTE runs under ARC/INFO 5.0.1 on UNIX systems and Prime minicomputers. It was developed on and has been extensively used on Sun 3 and SPARC systems running SunOS 4.0 and 4.1. It has been tested on Data General Aviiion systems under DG/UX 4.32. It also runs on Prime minicomputers under the Primos operating system. It has been tested and extensively used on a Prime 9955 under Primos Revision 22. The same ALACARTE code runs on both UNIX and Prime systems.

ALACARTE can be modified to run on DEC VAX/VMS systems by changing the system-specific code that handles pathnames, as demonstrated with some VMS-specific code remaining from an early test version of ALACARTE. ALACARTE will not run under PCArc on IBM PC compatibles at this time because PCArc uses a different macro language, Simple Macro Language (SML). ALACARTE 1.0 has been partially tested under the ARC/INFO 6.0 preview release on the Sun SPARC platform and runs with some errors due to minor AML and command syntax differences between revisions 5.0.1 and 6.0.

ALACARTE, whenever possible, supports all peripheral hardware that is supported by ARC/INFO. ALACARTE can be accessed from workstation consoles and from terminals that support both graphic display and AML menus. These are the Tektronix terminals with model numbers of 4105 and above, and software packages that emulate them. Most digitizers are supported.

## **OBTAINING THE ALACARTE EXECUTABLE CODE**

A machine-readable copy of the ALACARTE executable code and associated files can be obtained by anonymous ftp over Internet or by sending the authors a tape which will be returned with the ALACARTE 1.0 distribution. The ALACARTE AML source code is not available on paper (hard-copy).

### **Anonymous ftp (UNIX)**

ALACARTE is available as a single x.xMB tar file through anonymous ftp by those sites connected to the Internet network. This procedure is recommended only for UNIX systems because the Primos UX\_TAPE command apparently can not extract files from a tar file but only from a magnetic tape. The ARC/INFO coverages, INFO files and symbols sets have been converted to ARC/INFO's system-independent ASCII export format, which is compatible with both UNIX and Prime systems. Import AML's are included in the ALACARTE tour and symbol directories. The ftp procedure is as follows:

log in to your UNIX system

*cd /tmp*

*ftp sierra.wr.usgs.gov*

Name: *anonymous*

Password:

*cd pub*

*get alacarte1.0.tar*

*quit*

go to a temporary directory to receive the tar file  
numeric address is 130.118.4.118

use anonymous as user name

enter your user name as password

This places the alacarte1.0.tar file on your system in the temporary directory. Follow the installation instructions in the UNIX section, INSTALLATION FROM FTP TAR FILE.

## User-supplied Tape

ALACARTE can also be obtained by sending a tape to the authors which will be returned with the ALACARTE 1.0 distribution. The acceptable tape types are:

UNIX:           1/4 inch QIC-24 format (60MB) cartridge, 3M DC600A or equivalent  
                  1/4 inch QIC-150 format (150MB) cartridge, 3M DC6150 or equivalent

Prime:           1/2 inch 9-track tape reel

Send the appropriate tape to:

ALACARTE  
c/o Todd Fitzgibbon  
U.S. Geological Survey  
345 Middlefield Rd. MS-975  
Menlo Park, CA 94025

Note that the authors can not supply tapes or paper copies of the ALACARTE manuals. The UNIX cartridge will contain a tar file of all ALACARTE directories and files in ARC/INFO UNIX format. It will be written on a Sun SPARC system. The Prime tape will contain a single Primos magsav logical unit of all ALACARTE directories and files in ARC/INFO Primos format. It will be written at 6250 bpi density with the Primos Rev. 22 magsav command. Coverages and related files supplied on the cartridge or tape do not require ARC/INFO import.

To install ALACARTE follow the instructions in the UNIX or Prime section, INSTALLATION FROM TAPE.

## REGISTERING YOUR SITE AND REPORTING BUGS

You can register your ALACARTE site in order to receive notification of updates, bug fixes, etc. Fill out the ALACARTE Registration Form in the Appendix and mail it to the authors at the address on the form, or fax it to the phone number on the form. An ASCII version of the form (reg.form in the ALACARTE doc directory) can be edited and emailed to:

tfitz@sierra.wr.usgs.gov

Software and documentation errors, enhancement requests and comments can be recorded on a copy of the ALACARTE Change Request Form located in the Appendix and mailed or faxed to the address or phone number, respectively, on the form. An ASCII version of the form (bugs.form in the ALACARTE doc directory) can be edited and emailed to the email address above. Bugs will be logged, prioritized, and fixed for inclusion in a future release.

## INSTALLING ALACARTE

Installation of ALACARTE on UNIX and Prime systems is simple. The same ALACARTE code runs on both systems. The UNIX format is provided on 1/4 inch cartridge tapes, the Prime format on 1/2 inch 9-track tapes. These tapes contain identical AML files and the same sample coverages and symbol sets, but in UNIX and Prime ARC/INFO formats, respectively. The AML files and sample coverages and symbol sets are also available as a tar file that can be downloaded over Internet by anonymous ftp. In this tar file, the coverages and symbol sets are in ARC/INFO export format.

ALACARTE should be installed in the ARC/INFO system directory, arcexe50, which requires system administrator privileges. The ALACARTE directory is copied to a menus directory under arcexe50. The ALACARTE.AML is then copied to the ARC ATOOL directory so that ALACARTE can be invoked from the ARC command line, and symbol sets and fonts are copied to appropriate directories. The ALACARTE.AML must be edited to indicate pathnames if they are not standard, and a system-specific AML, UNIX.AML or PRIME.AML, is optionally edited to specify syntax for system commands or local aliases or abbreviations. The exact installation procedure is different for UNIX and Prime systems and each is described below. Installation programs provided for each system perform most of these steps.

ALACARTE can, alternatively, be installed in a directory outside the arcexe50 directory, including in a user directory. In this case, a UNIX alias or Primos abbreviation must be created that invokes ARC/INFO and runs the ALACARTE.AML by specifying an absolute pathname to the ALACARTE program directory. On UNIX systems, add the following line to the .cshrc file in your home directory:

```
alias alc 'arc \&run /pathname_to_alacarte/alacarte/main/alacarte.aml'
```

On Prime systems add an abbreviation with the following command:

abbrev -add alc arc &run pathname\_to\_alacarte>alacarte>main>alacarte.aml

In both cases substitute the directory where alacarte is located for 'pathname\_to\_alacarte.' You can then type *alc* to start ARC/INFO and ALACARTE.

## Contents of the ALACARTE 1.0 Distribution

The ALACARTE files are organized into several subdirectories below the alacarte directory.

ALACARTE AML code directories contain AML files with a .aml extension and menu files with a .men (not .menu) extension:

Size (UNIX KB)	Size (Prime records)	Directory	Contents
359	156	main	startup and common routines
80	81	demo	routines to display 21 ALACARTE demonstration screens
212	96	setup	setup menu routines
941	429	edit	edit menu routines
26	16	plot	plot menu routines
0	0	mapx	empty dir for MAPX routines (unpublished software by A. C. Tarr, Golden, CO, USGS, see below)
2	3	analysis	analysis menu routines
50	39	general	general menu routines
73	59	conversn	conversion menu routines

Other directories:

598	468	symbols	geologic line and marker symbols and sample LUTs (in ARC/INFO UNIX format on the UNIX tar tape, in ARC/INFO Prime format on the magsav tape, exported in the ftp tar file)
1843	1123	tour	sample coverages for ALACARTE demo (in ARC/INFO UNIX format on the UNIX tar tape, in ARC/INFO Prime format on the magsav tape, exported in the ftp tar file)
23	39	tagmenus	templates for custom feature-tagging menus
73	42	help	help text files
21	11	utils	UNIX shell scripts related to ALACARTE
1250	512	doc	documentation, including IslandWrite, Postscript and ASCII versions of this manual and the ALACARTE User Manual.

	UNIX	Prime
Total size of tape:	4481 KB	2340 Prime records
Size of ftp tar file:	5733 KB	

MAPX is a preliminary ARCPLOT style sheet for geologic maps developed by A. C. Tarr. It uses a parameter file containing variable assignments appropriate to a given map and plot. The MAPX 2.0 beta version has been linked to and tested with ALACARTE, but had not been published at the time of this writing.

If disk space is problem, the demo, tour, util, and doc directories may be deleted. This is not recommended because the ALACARTE demo and the sample tour coverages would then be unavailable to users. Do not delete the symbols directory because it contains standard lookup tables.

## Installation on UNIX Systems

ALACARTE is provided in machine-readable form on a user-supplied 1/4 inch cartridge tape or in a tar file obtainable by anonymous ftp. Use of ALACARTE requires a copy of ARC/INFO on the system where ALACARTE is to be run. The ALACARTE distribution tapes are written on a Sun SPARC system and are known to be compatible with Sun tape drives (60 and 150MB formats) and Data General Aviiion drives (150MB format only). The distribution tape contains a single xxMB UNIX tar file. Loading the tape or ftp tar file with tar creates an alacarte subdirectory in the directory where tar is invoked, normally /arcexe50/menus. The installation procedures are slightly different for tape and ftp tar file.

### INSTALLATION FROM TAPE

Load and install ALACARTE with the following steps:

1. Extract the contents of the tape:

place cartridge in system's cartridge drive	
<i>su</i>	become root (superuser)
<i>cd /arcexe50</i>	go to ARC/INFO system directory
<i>mkdir menus</i>	OPTIONAL: create menus directory if one doesn't already exist
<i>cd menus</i>	
<i>tar xvf /dev/rst8</i>	substitute your local device file for /dev/rst8
remove the cartridge from the drive and retain it as a backup copy of ALACARTE.	



These steps will create the alacarte subdirectory in /arcexe50/menus and load the ALACARTE subdirectories and files below it.

2. */arcexe50/menus/alacarte/utls/install\_alc\_unix*

This executes a UNIX shell script that automatically performs several installation steps. It assumes alacarte was loaded into the /arcexe50/menus directory and that the arc command is in root's execution path. The script displays a message describing what it will do, then asks if you want to proceed before performing the installation steps described below. You must perform these steps manually, or edit the script appropriately, if your installation is not standard. A copy of the install\_alc\_unix script appears in the Appendix of this manual. The installation script performs the following steps.

```
cp /arcexe50/menus/alacarte/main/alacarte.aml /arcexe50/atool/arc/alacarte.aml
```

This puts the ALACARTE startup AML in the atool arc directory so that ALACARTE can be started from the ARC command line.

```
cp /arcexe50/menus/alacarte/symbols/fnt025 /arcexe50/igl63exe
cp /arcexe50/menus/alacarte/symbols/fnt039 /arcexe50/igl63exe
cp /arcexe50/menus/alacarte/symbols/alcgeol.mrk /arcexe50/symbols
cp /arcexe50/menus/alacarte/symbols/alcwrg.lin /arcexe50/symbols
```

This places ALACARTE's geologic line and point symbol sets and their associated fonts in the ARC/INFO system directories.

```
cd /arcexe50/alacarte/tour
arc externalall
```

This externalizes the demo coverages. Users can then copy the tour directory to their user area using an ALACARTE menu function so no user write access is required for this directory. A local copy of the tour directory is required to run the ALACARTE demo and is useful for its sample coverages. Users should delete their copy of tour when they are done with it because it requires almost xx MB of storage space and is easy to copy again.

3. *vi /arcexe50/atool/arc/alacarte.aml*

Optionally, edit the alacarte.aml. If you have ARC/INFO in /arcexe50 and load ALACARTE into /arcexe50/menus, then no changes to the commented installation block in the alacarte.aml are necessary. Otherwise follow the instructions in the installation block. A copy of the alacarte.aml is included in the Appendix of this manual.

#### 4. *vi /arcexe50/menus/alcarte/main/unix.aml*

You can edit the system-specific *unix.aml* that sets global variables for system commands such as for the system screen editor. You may wish to specify aliases, etc., here. Default values are present for each variable. A copy of the *unix.aml* appears in the Appendix of this manual.

Verify the installation by confirming that the subdirectories in the *alcarte* directory correspond with the list in Contents of the ALACARTE 1.0 Distribution (above). Execute *du* in the *alcarte* directory and confirm that the total directory size reported (in KB) is approximately 13,400 KB. Finally, invoke ALACARTE at the ARC command line from a user account. If all these tests are successful then ALACARTE is installed properly. If there is a problem, confirm that all installation steps were followed and that your system directory names are the same as the defaults (or that you substituted your own).

### INSTALLATION FROM FTP TAR FILE

You should have obtained the *alcarte.tar* file using the instructions in OBTAINING THE ALACARTE EXECUTABLE CODE above. Perform the following steps:

1. Extract the ALACARTE directories and files from the *alcarte1.0.tar* file into the ARC/INFO system area.

```
su                become root (superuser)
cd /arcexe50
mkdir menus      OPTIONAL: create menus dir if one doesn't already exist
cd menus
tar xvf /tmp/alcarte1.0.tar  assumes alcarte1.0.tar is in /tmp
```

These steps will create the *alcarte* subdirectory in */arcexe50/menus* and load the ALACARTE subdirectories and files below it. Next follow steps 2 through 4 in the UNIX INSTALLATION FROM TAPE section above to complete the installation.

### Installation on Prime Systems

ALACARTE is provided in machine-readable form on a user-supplied 1/2 inch 9-track tape. (Obtaining ALACARTE by anonymous ftp is recommended only for UNIX systems because the *Primos UX\_TAPE* command apparently can not extract files from a tar file but only from a magnetic tape.) Use of ALACARTE requires a copy of ARC/INFO on the system where ALACARTE is to be run. The ALACARTE distribution tapes are written on a Prime 9955 system under *Primos Revision 22* using *Rev. 22 magsav -na* at 6250bpi density. The distribution tape contains one xx record logical tape unit that contains the *alcarte* directory and its subdirectories and files. Loading the tape with *magrst* creates an ALACARTE subdirectory in the directory where the tape command is invoked.

## INSTALLATION FROM TAPE

Load and install ALACARTE with the following steps:

### 1. Restore the contents of the tape:

load the tape into your tape drive using 6250bpi density

log in as user who has all permissions in the arcexe50 and igl63exe directories

*attach arcexe50*

move to the ARC/INFO system directory

*create menus*

OPTIONAL: create menus directory if one doesn't already exist

*down menus*

move to the menus directory

*assign mt0*

assign the tape drive, substitute your tape drive for mt0 if different

*magrst*

invoke Rev. 22 magrst command and follow the dialog. The logical unit number is 1. Enter yes to load the entire tape contents.

*unassign mt0 -unload*

remove your tape from the drive and keep it as a backup copy of ALACARTE.

These steps will create the alacarte subdirectory in arcexe50>menus and load the ALACARTE subdirectories and files below it.

### 2. *r arcexe50>menus>alacarte>utils>install\_alc*

This executes a Prime CPL program that automatically performs several installation steps. It assumes that alacarte was loaded into the arcexe50>menus directory, that you can execute the arc command, and that the igl63exe directory is at the same level as arcexe50. The CPL displays a message describing what it will do, then asks if you want to proceed before performing the installation steps described below. You must perform these steps manually, or edit the CPL appropriately, if your installation is not standard. A copy of the CPL appears in the appendix of this manual. Install\_alc.cpl performs the following steps:

```
copy arcexe50>menus>alacarte>main>alacarte.aml arcexe50>atool>arc>alacarte.aml
```

This puts the ALACARTE startup AML in the atool arc directory so that ALACARTE can be started from the ARC command line.

```
copy arcexe50>menus>alacarte>symbols>fnt025 igl63exe>==
```

```
copy arcexe50>menus>alacarte>symbols>fnt039 igl63exe>==
```

```
copy arcexe50>menus>alacarte>symbols>alcgeol.mrk arcexe50>symbols>==
```

```
copy arcexe50>menus>alacarte>symbols>alcwrg.lines arcexe50>symbols>==
```

This places ALACARTE's geologic line and point symbol sets and their associated fonts in the ARC/INFO system directories. Note that igl63exe is here assumed to be a directory at the same level as arcexe50. It may be a subdirectory below arcexe50 at some installations, which then require modification of install\_alc.cpl.

```
cd arcexe50>menus>alacarte>tour
arc externalall
```

This externalizes the ALACARTE demo coverages. Users can then copy the tour directory to their user area using an ALACARTE menu function so no user write access is required for this directory. A local copy of the tour directory is required to run the ALACARTE demo and is useful for its sample coverages. Users should delete their copy of tour when they are done with it since it requires almost xx records of storage space and is easy to copy again.

### 3. *emacs arcexe50>atool>arc>alacarte.aml*

A commented installation block appears near the top of the alacarte.aml. You can also refer to the printout of alacarte.aml at the end of this manual. If you have ARC/INFO in arcexe50 and load ALACARTE into arcexe50>menus then no changes are necessary.

### 4. *emacs arcexe50>menus>alacarte>main>prime.aml*

You can edit the system-specific prime.aml that sets global variables for system commands such as for the system screen editor. You may wish to specify abbreviations, etc. here. Default values are present for each variable. A copy of the prime.aml appears at the end of this manual.

Verify the installation by confirming that the subdirectories in the alacarte directory correspond with the list in Contents of the ALACARTE 1.0 Distribution (above). Execute `ld` in the arcexe50>menus directory and confirm that the total directory size reported is approximately 8400 records. Finally, invoke ALACARTE at the ARC command line from a user account. If all these tests are successful then ALACARTE is installed properly. If there is a problem, confirm that all installation steps were followed and that your system directory names are the same as the defaults (or that you substituted your own).

## **ALACARTE PROGRAM REFERENCE**

ALACARTE is written entirely in ARC/INFO's Macro Language, AML. It comprises 470 subroutines and menus with over 25,000 lines of code plus 10,000 comment lines. ALACARTE development began at ARC/INFO Revision 4.0 and continued with Revision 5.0.1 on a Sun 3 and later SPARCstation running SunOS 4.1.

The ALACARTE code is organized into 8 directories. Startup and common code resides in the main directory which is always first in the &amllpath and &menupath. The directory containing code for the current secondary bar menus (edit, setup, etc.) is added to the paths upon selection by the user.

## Coding Practices

This preliminary section lists some ALACARTE AML coding practices that should be followed when new code is written.

.

Every aml sets &severity to a generalerror routine which calls errmsg.aml.

No hardwired &returns and &menus. Every aml should end in &return so that it returns to the routine that called it and so it is properly removed from the stack of open amls.

Every aml should include the standard header, header.doc (located in the doc directory). Header.doc is a modification of a standard header obtained from the Alaska ARC/INFO Users Group in Anchorage.

No tabs should be present anywhere in any aml or menu file because of an AML bug that prevents the immediately preceding character from being read by the AML interpreter.

Aml and menu files should contain no blank lines because, while lines beginning with a comment character, /\*, are stripped before code is interpreted, blank lines must be interpreted by AML, slowing execution. This limitation may not be true in future versions of ARC/INFO.

All menu files should have:

```
_MODIFIED <TAB>
```

on their first line to cause the ts timestamp utility to record the date of last modification (see UNIX Shell Scripts Related to ALACARTE below). This is the one exception to the no-tab rule.

Alcinit.aml in the main directory should initialize all global variables that need initialization and should additionally record all other global variables used in ALACARTE as comment lines. This file is not completely up to date.

Lines in aml and menu files should be no longer than 80 characters.

If an aml sets &messages &off, make sure that generalerror sets &messages &on. The next ALACARTE revision will make use of an exit routine as well as the error routine to accomplish this.

Restrict all aml and menu filenames to 8 characters starting with a letter, with at most a 3-character extension, composed of alphanumeric characters only, to permit ALACARTE files to be exchanged by MS-DOS disks. Filenames must be entirely lowercase on UNIX systems. Code file types include:

xxxxxxx.aml	aml
xxxxxxx.menu	menu
xxxxxxx.hlp	help text
xxxxxxx.ap	ARCEDIT AP background file

Report on the screen completion of all menu actions such as setting a switch, etc. This has not always been followed!

Put the most-used command at the top of pulldowns and popup menus to make it the 'default.' Not everywhere followed in ALACARTE 1.0.

ALACARTE menus have a standard appearance that assists users in navigating the menu system and which lets them better predict the consequence of selecting a menu item. These standards are as described in the ALACARTE User Manual's ALACARTE Operations section. ALACARTE code contains violations of these standards where old code has not yet been updated. Some of these concepts are described below:

Capitalization of menu items helps indicate the item's action:

ALL CAPS	go to another bar menu
Initial caps	open a subordinate menu (popup, pulldown), then return to current bar
all lower case	actually perform a function

Thus the user can always pick a menu item that is entirely capitalized or starts with a capital letter confident that the only action will be the display of another menu, either a stable bar, or a popup, or pulldown, respectively. Only a menu item in all lower case characters will execute a command or process.

The left-most menu item on a bar menu is the name of the menu enclosed in square brackets, for example, [Lines]. Selecting this item causes a pop-up command menu to appear that offers standard items including command-line access, etc..

The right-most item on a bar menu is the name of the menu immediately above the current bar menu, prefixed with a caret, for example, ^EDIT. Selecting this item causes a return to the named bar menu. The caret reinforces the idea that this item returns to a menu above in the menu hierarchy. If the menu is a standard one that is called from several other menus, the right-most item should be ^PREV (for previous).

Menu items that require prior selection of one or more map elements shall have (S) after the item

name, for example: delete(S). Menu items that require prior selection of one and only one map element shall have (S1) after the item name, for instance split(S1).

The group of menu functions that are displayed on the menu (including all pulldowns, etc.) at any given time should include the entire suite of related commands that might be used in consort. This is intended to keep the user informed of available possibilities and to minimize menu changing. This objective should be balanced with the complexity of the menu.

A menu should be of pulldown type if the map drawn on the screen must be observed or clicked on, in order that no part of the map is obscured by the menu. Not necessary for menus that disappear before the action is performed.

ALACARTE includes popup, matrix function menus that return a command to the calling routine. There are some limitations to this approach, including that the menus must not include any AML function calls themselves nor can they include more than one command on a menu item line. An example is draw.men, which calls callsel.aml and similar routines in order to get around these limitations. ARC/INFO Revision 5.0.1 form menus will replace these older menus.

## **AML Global Variables Used in ALACARTE**

Alcinit.aml documents with comment lines or initializes (where required) global variables used in ALACARTE, but is not up-to-date. In the future we will use ESRI's new procedure for returning values to a calling routine wherever appropriate. We are also in the process of renaming all ALACARTE variables to the form .alc\$varname to avoid conflicts with outside amls and menus called from ALACARTE. Refer to the file alcinit.aml in the ALACARTE main directory.

## **Special ALACARTE Files in Coverages**

Coverages created in ALACARTE may include several ASCII documentation and custom feature tagging menus. Each file has the filename extension .alc and is copied with copyalc.aml whenever an ARC/INFO function does not copy all files in the cover directory (for instance, the build menu calls copyalc.aml).

Templates for custom feature-tagging menus are in the ALACARTE tagmenus directory. The 'create tagging menus' item on the Prep Scans pulldown of the SETUP menu bar calls tagmenu.aml. This calls up the system editor to allow a user to enter codes into the matrix menu file. Up to 100 codes can be placed in each menu file, for a total of 300 codes for each feature type.

Polygon label tags:	area1.alc	area2.alc	area3.alc
Line tag modifiers:	lmod1.alc	lmod2.alc	lmod3.alc
Line type tags:	ltype1.alc	ltype2.alc	ltype3.alc

Point lineation type:	ptln1.alc	ptln2.alc	ptln3.alc
Point attitude type:	ptpl1.alc	ptpl2.alc	ptpl3.alc
Point stations type:	ptpt1.alc	ptpt2.alc	ptpt3.alc
Coverage setup file (snapping tols, etc.)	setup.alc		
Coverage projection file	proj1.alc, proj2.alc, etc., where proj1.alc is projection file for first projection operation.		

## ALACARTE Menus Related to Software Development

ALACARTE has several functions that are helpful for debugging AML code. Refer to Structure and Functions in the ALACARTE User Manual for menu locations and organization.

The SHOW bar menu, available from the Commands popup, provides show, &show, AML variable listing and setting, traceback, listing open files, and help and usage for AML directives and functions.

The 'run my aml or menu' item on the Command popup (click on the menu name at the left end of any menu bar) lets you reset &amllpath and &menupath and call your own aml or menu from within ALACARTE. The paths are restored when you return to ALACARTE.

The DEVICES bar menu, also available from the Commands popup, provides &messages, &echo, and &watch functions.

The Commands popup also provides access to the system, ARC/INFO, and ARCEDIT (in the EDIT menu system only) command lines, a system screen editor and a page list command.

## UNIX Shell Scripts Related to ALACARTE

The following UNIX C-shell scripts and the install\_alc.cpl Prime CPL are located in the ALACARTE utils directory.

hc	Hierarchical Chart lists all &run and &menu statements for a specified file. Usage is:           hc filename
sz	Size uses wc and grep to give total number of executable and comment lines, and number of amls and menu files in the directory where it is invoked. Usage is:           sz
ts	TimeStamp timestamps (records date in) all aml and menu files modified since last timestamp. Operates in the directory where it is invoked. See comments in the ts file in the utils dir for details. Assumes existance of empty file named



TIMESTAMP in the aml directory and use of standard ALACARTE header for aml and menu files.

Usage is:                   ts

- install\_alc\_unix      Installation script used in ALACARTE UNIX installation procedure.
  
- zapbu                 Uses UNIX find command to delete backup text files that end in % located in the directory (and its subdirectories) where invoked.
  
- ftp2test             Sample batch ftp script for copying ALACARTE around a heterogenous network. Must be edited.
  
- install\_alc.cpl      Installation CPL used in ALACARTE Prime installation procedure.

## ALACARTE Subroutine Chart

This hierarchical chart of the ALACARTE program shows the program calling structure. Subroutine files are located in one of eight AML subdirectories, with common and startup routine in the main directory, setup menu routines in the setup directory, an so on.

Notes:

1. (#) after a menu file name, where # is a number between 1 and 5, indicates that this is a standard popup menu. The subroutines called by that menu are listed at the end of the chart..
2. [] after a menu filename indicates that the menu is the function [menu] type. Otherwise all menus are &menu type.
3. /\* after a filename indicates that the file has been commented-out in the current code.
4. (sys dep) after a filename indicates that the file contains system-dependent code. Not everywhere noted.
5. *Every* aml also calls errmsg.aml.

The ALACARTE File Hierarchy:

```
alacarte.aml (sys dep)
  unix.aml (sys dep)
  prime.aml (sys dep)
  vax.aml (sys dep)
  alcversn.aml
  station.aml
    getterm.aml
      termhlp.aml
      fastdisk.aml
      setreom.aml
      fastmous.aml
      tek41xx.men
      tek42xx.men
      ws.men
    getdsply.aml
      dsplyopt.men[]
    getdig.aml
      dig.men[]
      digtty.men[]
      alchelp.aml
  tek41xx.men
  tek42xx.men
  ws.men
```

```
fastmous.aml
fastdisk.aml
alcinit.aml
main.aml
  main.men
    lmain.men[(5)
setup.aml
  setup.men
    lmain.men[(5)
  newmap.aml
    mapname.men
      wkspace.men
    derivmap.men
      alchelp.aml
    makebox.men
      alchelp.aml
    symbitm.men
      alchelp.aml
    makefats.aml
    copyalc.aml
      numproj.aml
      copyproj.aml
    rdsetup.aml
    svsetup.aml
    makebox.men
    makebox.aml
    tagbox.aml
    bell.aml
    preproj.men
    showproj.men
    blanksu.aml
    copyproj.aml
    prepdb.men
    prepsu.men
    quadtype.men
      alchelp.aml
    getlatln.men
      alchelp.aml
    quadtics.men
      alchelp.aml
    quadtics.aml
      dms2dec.aml
      fourtics.aml
      setlatln.aml
    suscale.men
      alchelp.aml
    gettics.aml
      getlatln.men
        alchelp.aml
```

dms2dec.aml  
suproj.men  
    alchelp.aml  
projprm.aml  
    conic2.aml  
        stdpara1.men  
            alchelp.aml  
        stdpara2.men  
            alchelp.aml  
        baselat.men  
            alchelp.aml  
        cenmerid.men  
            alchelp.aml  
        dms2dec.aml  
        dec2dnc.aml  
dnag.aml  
    baselat.men  
        alchelp.aml  
    dec2dnc.aml  
    dms2dec.aml  
oblique.aml  
    baselat.men  
        alchelp.aml  
    cenmerid.men  
        alchelp.aml  
    dec2dnc.aml  
    dms2dec.aml  
    scalfact.men  
        alchelp.aml  
    centrlaz.men  
        alchelp.aml  
plyconic.aml  
    baselat.men  
        alchelp.aml  
    cenmerid.men  
        alchelp.aml  
    dec2dnc.aml  
    dms2dec.aml  
state.aml  
    state.men  
        alchelp.aml  
transvers.aml  
    baselat.men  
        alchelp.aml  
    cenmerid.men  
        alchelp.aml  
    dec2dnc.aml  
    dms2dec.aml  
    scalfact.men

alchelp.aml

    utm.men  
    easting.men  
        alchelp.aml  
    snap.men  
        setsnap.aml  
        alchelp.aml  
    covtols.men  
        setsnap.aml  
        alchelp.aml  
    showprms.men  
        showproj.aml  
            bell.aml  
        showedsn.aml  
        showtols.aml  
    makeproj.aml  
    addtics.aml  
unitanno.aml  
    unitanno.men  
        alchelp.aml  
alchelp.aml  
preptics.aml  
    movetics.men  
    getbacks.men  
        symb.aml  
            symb.men  
    movetics.aml  
qsetup.aml  
    qsetup.men  
chgsetup.aml  
    chgsetup.men  
    rdsetup.aml  
        setupvar.aml  
    chgsu2.men  
    svsetup.aml  
cpsetup.aml  
    cpsetup.men  
    rdsetup.aml  
        setupvar.aml  
    svsetup.aml  
viewproj.aml  
    viewproj.men  
    numproj.aml  
    vwproj2.men  
        vwproj2.aml  
tagmenu.aml  
    tagmenu.men  
create.men

edit.aml

(note: rest of edit routines indented one too many)

startedt.men[]  
wkspace.aml  
newmap.men  
edmapnam.aml  
    mapcover.aml  
    rdsetup.aml  
        setupvar.aml  
    tols.aml  
    showsnap.aml  
register.men[]  
creatmap.men  
tols.aml  
alchelp.aml  
rdsetup.aml  
    setupvar.aml  
showsnap.aml  
dweninit.aml  
edit.men  
    ledit.men[(4)  
    edmapnm2.aml  
        mapcover.aml  
        rdsetup.aml  
        tols.aml  
            edsetsnp.aml  
            getunits.men  
            suscale.men  
        showsnap.aml  
    showmaps.aml  
    rmvedit.aml  
    creatmap.aml  
        creatmap.men  
        tols.aml  
        showsnap.aml  
    getbackc.aml  
        backcov.aml  
        symb.aml  
            symb.men[]  
    showback.aml  
    wkspace.aml  
    curwkspc.aml  
    descmap.aml  
    suscale.aml  
    getunits.men  
    tek41xx.men  
    tek42xx.men  
    ws.men  
    lines.aml  
        lines.men  
            ledit.men[(4)

```

digline.men
    ledit.men[](4)
    addline.aml
    tagline.aml
    digsel.aml
    seltgcol.aml
        tagline.aml
        symb.aml
            symb.men
    setlntyp.aml
    setlnmod.aml
    ltypestm.aml
        setlntyp.aml
        ltype1.alc[]
        ltype2.alc[]
        ltype3.alc[]
    lmodcstm.aml
        setlnmod.aml
        lmod.alc[]
        lmod2.alc[]
        lmod3.alc[]
    sellin.aml
        sellin.men
            setdwsymb.aml
                symb.aml
                    symb.men
            selhlp.men
            selbylen.aml
                selbylen.men
                getlen.aml
    tek41xx.men
    tek42xx.men
    ws.men
    savecont.aml
        svaudit.aml
    rstrsave.aml
    draw.men[](1)
    zoom.men[](2)
reshape.men
    ledit.men[](4)
    dashslid.aml
        mvinplc.aml
    mvinplc.aml
    dwvertex.aml
        symb.aml
            symb.men[]
    nodes.aml
        nodes.men
            ledit.men[](4)

```

nodecol.aml  
    symb.aml  
        symb.men  
nodesize.aml  
    getnum.aml  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
draw.men[(1)  
zoom.men[(2)  
get.men  
putbar.men  
    ledit.men[(4)  
    select.aml  
        select.men  
            setdwsym.aml  
                symb.aml  
                    symb.men  
            selhlp.men  
put.aml  
    put.men  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
sellin.aml  
    sellin.men  
        setdwsymb.aml  
            symb.aml  
                symb.men  
        selhlp.men  
    selbylen.aml  
        selbylen.men  
        getlen.aml  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
rstrsave.aml  
draw.men[(1)  
zoom.men[(2)  
showsnap.aml  
edsnap.men  
    edsetsanp.aml  
    setdeflt.aml



edsnap1.aml  
    edsetsnp.aml  
edsnap2.aml  
    edsetsnp.aml  
edsnap3.aml  
    edsetsnp.aml  
edsnap4.aml  
    edsetsnp.aml  
edsnap5.aml  
    edsetsnp.aml  
alchelp.aml  
chkscale.aml  
edlnsymb.men  
sellin.aml  
    sellin.men  
        setdwsymb.aml  
            symb.aml  
                symb.men  
    selhlp.men  
    selbylen.aml  
        selbylen.men  
        getlen.aml  
setitem.aml  
showuniq.aml  
calc.aml  
    calc.men  
    calc2.men  
moveit.aml  
    moveit.men  
    moveit2.men  
update.aml  
    update.men  
    update2.men  
change.aml  
    change1.men  
    change2.men  
    changopt.men  
cnnect.men  
rlateadd.men  
rlateres.men  
rlatesav.men  
dwlnsymb.aml  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
rstrsave.aml  
draw.men[(1)

```

                                zoom.men[](2)
points.aml
  points.men
    ledit.men[](4)
    ptpl.aml
      digptpl.men
        ledit.men[](4)
        addptpl.aml
        tagptpl.aml
          azlhstk.men
          azlhdipl.men
          azlhdtpl.men not called?
        striksel.aml
          qdstksel.men
          striksel.men
        dipsel.aml
          qddipsel.men
          dipsel.men
        ptplcstm.aml
          ptpl1.alc
          ptpl2.alc
          ptpl3.alc
        showptpl.aml
        mrkset.men
        ptpllut.men
        ptplitem.men
        ptplanno.men
        attfmt.men
        select.aml
          select.men
            setdwsym.aml
              symb.aml
                symb.men
            selhlp.men
          tek41xx.men
          tek42xx.men
          ws.men
          savecont.aml
            svaudit.aml
          rstrsave.aml
          draw.men[](1)
          zoom.men[](2)
        digptlin.men
          ledit.men[](4)
          addptlin.aml
          tagptpl.aml
            azlhstk.men
            azlhdipl.men

```

azlhatt.men not called?  
striksel.aml  
    qdstksel.men  
    striksel.men  
dipsel.aml  
    qddipsel.men  
    dipsel.men  
shptltag.aml  
ptlncstm.aml  
    ptln1.alc  
    ptln2.alc  
    ptln3.alc  
showptpl.aml  
mrkset.men  
ptpllut.men  
ptplitem.men  
ptplanno.men  
atffmt.men  
select.aml  
    select.men  
        setdwsym.aml  
            symb.aml  
                symb.men  
    selhlp.men  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
rstrsave.aml  
draw.men[(1)  
zoom.men[(2)  
digptpt.men  
    ledit.men[(4)  
    addptpt.aml  
    tagptpt.aml  
    select.aml  
        select.men  
            setdwsym.aml  
                symb.aml  
                    symb.men  
        selhlp.men  
    ptptcstm.aml  
        ptpt1.alc  
        ptpt2.alc  
        ptpt3.alc  
tek41xx.men  
tek42xx.men  
ws.men

```
savecont.aml
    svaudit.aml
rstrsave.aml
draw.men[(1)
zoom.men[(2)
digptsymb.men/*
pntmove.men
    ledit.men[(4)
    select.aml
        select.men
            setdwsym.aml
                symb.aml
                    symb.men
            selhlp.men
tek41xx.men
tek42xx.men
ws.men
savecont.aml
    svaudit.aml
rstrsave.aml
draw.men[(1)
zoom.men[(2)
get.men
putbar.men
    ledit.men[(4)
    select.men
        setdwsym.aml
            symb.aml
                symb.men
        selhlp.men
    put.aml
        put.men
    tek41xx.men
    tek42xx.men
    ws.men
    savecont.aml
        svaudit.aml
setitem.aml
showuniq.aml
select.aml
    select.men
        setdwsym.aml
            symb.aml
                symb.men
        selhlp.men
tek41xx.men
tek42xx.men
ws.men
savecont.aml
```

```

                                svaudit.aml
                                rstrsave.aml
                                draw.men[(1)
                                zoom.men[(2)
areas.aml
    areas.men
        ledit.men[(4)
        digareas.men
            ledit.men[(4)
            addlabel.aml
            taglabel.aml
            seltglab.aml
                taglabel.aml
                symb.aml
                    symb.men
areacstm.aml
    area1.alc
    area2.alc
    area3.alc
    addlabel.aml
select.aml
    select.men
        setdwsym.aml
            symb.aml
                symb.men
            selhlp.men
ap.aml
    ap.men
        apsymb.men
        apareas.aml
        draw.men[(1)
        tek41xx.men
        tek42xx.men
        ws.men
        savecont.aml
            svaudit.aml
            rstrsave.aml
            zoom.men[(2)
areamove.men
    ledit.men[(4)
    select.aml
        select.men
            setdwsym.aml
                symb.aml
                    symb.men
            selhlp.men
        tek41xx.men
        tek42xx.men
        ws.men

```

savecont.aml  
    svaudit.aml  
rstrsave.aml  
draw.men[(1)  
zoom.men[(2)  
get.men  
putbar.men  
    ledit.men[(4)  
    select.aml  
        select.men  
            setdwsym.aml  
                symb.aml  
                    symb.men  
            selhlp.men  
put.aml  
    put.men  
tek41xx.men  
tek42xx.men  
ws.men  
savecont.aml  
    svaudit.aml  
select.aml  
    select.men  
        setdwsym.aml  
            symb.aml  
                symb.men  
    selhlp.men  
setitem.aml  
showuniq.aml  
calc.aml  
    calc.men  
    calc2.men  
moveit.aml  
    moveit.men  
    moveit2.men  
update.aml  
    update.men  
    update2.men  
change.aml  
    change1.men  
    change2.men  
    changopt.men  
cnnect.men  
rlateadd.men  
rlateres.men  
rlatesav.men  
tek41xx.men  
tek42xx.men  
ws.men

```

savecont.aml
    svaudit.aml
rstrsave.aml
draw.men[](1)
zoom.men[](2)
anno.aml
    annoenv.men
        ansz.aml
        annooff.aml
        annoit.aml
        annover.aml
        alchelp.aml
    anno.men
        ledit.men[](4)
        diganno.men
            ledit.men[](4)
            annoenv.aml
                annoenv.men
                    ansz.aml
                    annooff.aml
                    annoit.aml
                    annover.aml
                    alchelp.aml
            shannoc.aml
                shannoc.men
                    alchelp.aml
        select.aml
            select.men
                setdwsym.aml
                    symb.aml
                        symb.men
                selhlp.men
        tek41xx.men
        tek42xx.men
        ws.men
        savecont.aml
            svaudit.aml
        draw.men[](1)
        zoom.men[](2)
    chganno.men
        ledit.men[](4)
        action.aml
        channo.aml
            chopt.men
            chngann1.men
            chngann2.men
        alchelp.aml
        annolevc.men
        annosizc.men

```

```

        setansz.aml
annosymc.men
shannoc.aml
        shannoc.men
                alchelp.aml
select.aml
        select.men
                setdwsym.aml
                        symb.aml
                                symb.men
                selhlp.men
tek41xx.men
tek42xx.men
ws.men
savecont.aml
        svaudit.aml
draw.men[](1)
zoom.men[](2)
get.men
putbar.men
        ledit.men[](4)
        select.aml
                select.men
                        setdwsym.aml
                                symb.aml
                                        symb.men
                        selhlp.men
put.aml
        put.men
tek41xx.men
tek42xx.men
ws.men
savecont.aml
        svaudit.aml
select.aml
        select.men
                setdwsym.aml
                        symb.aml
                                symb.men
                selhlp.men
draw.men[](1)
tek41xx.men
tek42xx.men
ws.men
savecont.aml
        svaudit.aml
zoom.men[](2)
tics.aml
        tics.men

```



```

                                ledit.men[](4)
                                movetics.aml
                                select.aml
                                    select.men
                                        setdwsym.aml
                                            symb.aml
                                                symb.men
                                            selhlp.men
                                        get.men
                                        draw.men[](1)
                                        zoom.men[](2)
                                savecont.aml
                                    svaudit.aml
                                    svsetup.aml
                                savesel.aml
                                savesymb.aml
                                setaudit.aml
                                showsave.aml
                                svsetup.aml
                                rdsetup.aml
                                usesetup.aml
                                    rdsetup.aml
                                    svsetup.aml
                                    showsnap.aml
                                draw.men[](1)
                                zoom.men[](2)
                                tek41xx.men

                                tek42xx.men
                                ws.men
                                savecont.aml
                                    svaudit.aml
                                rstrsave.aml
plot.aml
    plot.men
        lmain.men[](5)
        apcmds.aml
        callmapx.aml
            mapx.aml (unpublished software by A. C. Tarr, USGS, Golden, CO)
        editplot.men
        drawplot.aml
            drawplot.men
analysis.aml
    analysis.men
        lmain.men[](5)
        buffer.aml
            bufvar.men
            bufconst.men
        near.men

```

pntdist.men  
append.aml  
    append.men  
clip.men  
erase.men  
mapjoin.aml  
    mapjoin.men  
split.aml  
    split.men  
update.men  
dissolve.men  
eliminate.aml  
    eliminate.men  
resel.aml  
    resel.men  
identity.men  
intersect.men  
union.men  
conversn.aml  
    conversn.men  
    lmain.men[] (5)  
    transfm.men  
    project.aml  
        projfile.men  
        projcov.men  
    export.men  
    import.men  
    tapewr.men  
    taperd.men  
    assign.aml  
        assign.men  
        unassign.men  
    scitxlin.men  
    scitxpnt.men  
    scitxply.men  
    arcscitx.men  
    arcsci.aml  
        arcscinm.men  
        workspace.aml  
        arcsci.men  
        numluts.aml  
        lut.aml  
        wrcsci.aml  
        exsciprm.men  
        exscisun.men  
    pltscitx.men  
    scitxrd.men  
    scitxwr.men  
general.aml

general.men  
  lmain.men[](5)  
  copy.men  
  kill.men  
  create.men  
  additem.men  
    additem.aml  
  dropitem.men  
  creatlab.men  
  matchnodes.men  
  alcitems.aml  
    alcitems.men  
    alcitm1.men  
    alcitm2.men  
    alcitm3.men  
    alcitm4.men  
  addsvitm.men  
    addsvitm.aml  
  clean.aml  
    clean.men  
    copyalc.aml  
  build.men  
    copyalc.aml  
  copyalc.men  
    copyalc.aml  
  toleranc.men  
    tolchang.men  
    tollist.men  
  labelers.men  
  restorae.men  
  rename.men  
  chwksp.men

## Standard popup menus:

1. zoom.men[]
  - zmovrvw.aml
  - zoom36.aml
    - zoom36.men
  - zoom32.aml
    - zoom32.men
  - zmsel.aml
  - zmbnd.aml
  - zmtic.aml
  - zm2scale.aml
    - zm2scale.men
    - mapunits.men
  - oldframe.aml
  - savframe.aml
  - callpan.aml
    - pan.men
      - panul.aml
      - panu.aml
      - panur.aml
      - panl.aml
      - pan.aml
      - panr.aml
      - pandl.aml
      - pand.aml
      - pandr.aml
  - zoomout.aml
  - zoomin.aml
  - zmpan.aml
  - zmxxy.aml
  - calldraw.aml
    - draw.men[(2)]
2. draw.men[]
  - drawenv.aml
    - drawenv.men
  - setdwsym.aml
    - symb.aml
      - symb.men
  - callsel.aml
  - getsymb.aml
    - symb.aml
      - symb.men
  - callzoom.aml
    - zoom.men[(1)]
3. ptpldraw.men[]
  - drawenv.aml

drawenv.men  
callsel.aml  
ptplds.aml  
callzoom.aml  
zoom.men[(1)

4. ledit.men[]

syscmd.aml  
commands.aml  
listdir.aml  
arccmd.aml  
arccmds.aml  
aecmd.aml  
keybdcmds.aml  
wkspc.aml  
curwkspc.aml  
runaml.aml  
runaml.men  
editor.aml  
editor.men  
alchelp.aml  
pagelist.aml  
dfltdaln.aml  
fsdaline.aml  
devices.men  
showdev.aml  
getterm.aml  
getdisply.aml  
disoption.men  
getdig.aml  
dig.men  
dighlp.aml  
digtty.men[]  
diglinhlp.aml  
tek41xx.men  
tek42xx.men  
ws.men  
fastdisk.aml  
fastmous.aml  
dfltdaln.aml  
fsdaline.aml  
savestat.aml  
station.aml  
getterm.aml  
alchelp.aml  
fastdisk.aml  
setreom.aml (not on sun yet)  
fastmous.aml

tek41xx.men  
tek42xx.men  
ws.men  
getdsply.aml  
    dsplyopt.men[]  
getdig.aml  
    dig.men[]  
    digtty.men[]  
    alchelp.aml  
tek41xx.men  
tek42xx.men  
ws.men  
fastmous.aml  
fastdisk.aml

edaudit.men  
aeshow.men  
    edstatus.men  
    time.aml

5. lmain.men[]

    alchelp.aml  
  
    alcupdate.aml  
demo.aml  
    startdem.men  
        copytour.aml  
        screen1.aml  
        screen2.aml  
        screen3.aml  
        screen4.aml  
        screen5.aml  
        screen6.aml  
        screen7.aml  
        screen8.aml  
        screen9.aml  
        screen10.aml  
        screen11.aml  
        screen12.aml  
        screen13.aml  
        screen14.aml  
        screen15.aml  
        screen16.aml  
        screen17.aml  
        screen18.aml  
        screen19.aml  
  
syscmd.aml  
commands.aml  
listdir.aml  
arccmd.aml

```

arccmds.aml
workspace.aml
curwkspc.aml
runaml.aml
    runaml.men
editor.aml
    editor.men
        alchelp.aml
pagelist.aml
dfltdaln.aml
fsdaline.aml
devices.men
    showdev.aml
    getterm.aml
    getdisply.aml
        disoption.men
    getdig.aml
        dig.men
        dighlp.aml
        digtty.men[]
        diglinhlp.aml
    tek41xx.men
    tek42xx.men
    ws.men
    fastmouse.aml
    fastdisk.aml
    savestat.aml
    dfltdaln.aml
    fsdaline.aml
    station.aml
        getterm.aml
            alchelp.aml
            fastdisk.aml
            setreom.aml (not on sun yet)
            fastmous.aml
            tek41xx.men
            tek42xx.men
            ws.men
        getdsply.aml
            dsplyopt.men[]
        getdig.aml
            dig.men[]
            digtty.men[]
            alchelp.aml
    tek41xx.men
    tek42xx.men
    ws.men
    fastmous.aml
    fastdisk.aml

```

arcshow.men

time.aml



# THE TOUR DIRECTORY

The ALACARTE Tour directory contains ARC/INFO coverages and associated files used by the ALACARTE demo routine and tutorial and to provide sample geologic coverages for users. Users must copy the tour directory to their own area before starting the demo. The ALACARTE demo menu provides a tour copy function for this purpose and to start the demo.

## Description of Contents

These ARC/INFO coverages are co-registered layers for a portion of the Loma Prieta 7 1/2' quadrangle in California. The info directory contains coverage feature attribute tables, lookup tables, etc. Coverages and related files used by the ALACARTE demonstration are noted.

### Base coverages:

clp.index	Scanned index contours	Used by screen amls 1, 3
clp.inter	Scanned intermediate contours	Not used by demo
clp.cult	Scanned culture layer	Not used by demo
clp.hydro	Scanned hydrology layer	Used by screen amls 1, 3

### Geology coverages:

clp.geol	Geologic map	Used by screen amls 1-9, 17, 20, 21
clp.struc	Structure layer: oriented symbols, fold axes	Not used by demo
clp.anno	Annotation text	Used by screen aml 1
clp.paleo	Fossil sample layer	Used by screen aml 18
clp.att	Same as clp.struc	Used by screen amls 1, 20
clp.scan.17	17 lines/mm scan of author-drafted geologic map	Not used by demo

### Symbolsets and fonts:

alcgeol.mrk	Markerset of oriented structural symbols	Used by demo
alcwrg.lin	Lineset of standard geologic lines	Not used by demo
fnt025	Font used by alcwrg.lin	Not used by demo
fnt039	Font used by alcgeol.mrk	Used by demo
demo.txt	Text symbol set	Used by demo
demo.line	Lineset for demo	Used by demo
black.mrk	Markerset for demo	Used by demo

Tour INFO lookup tables:

colorlin.lut	Lookup table for demo	Used by demo
demoline.lut	Lookup table for demo	Used by demo
demopt.lut	Lookup table for demo	Used by demo
ptpl.lut	Lookup table for demo	Used by demo
demo2shade.lut	Lookup table for demo	Used by demo
yellowptpl.lut	Lookup table for demo	Used by demo
clp.struct.lut	Standard 1x oriented symbols lut for clp.struc layer	Not used by demo
clp.struct.lut2x	Standard 2x oriented symbols lut for clp.struc layer	Not used by demo
clp.att.lut	Standard 1x oriented symbols lut for clp.att layer	Not used by demo
clp.att.lut2x	Standard 2x oriented symbols lut for clp.att layer	Not used by demo

Other Files:

info	Info database directory
texport.aml	Tour export.aml
timport.aml	Tour import.aml
tdelete00.aml	Aml to delete tour export files (*.e00 files)
log	ARC/INFO workspace log

### Files Used by the ALACARTE Demo AMLs

Listed here are amls and ARC/EDIT ap background files located in the ALACARTE demo directory along with the tour coverages, symbol sets, fonts, and lookup tables that are used by each aml.

DEMO.AML CALLS SCREENXX.AML WHERE XX = 0 THROUGH 21

USES THE FOLLOWING FILES:

CLP.GEOL	DEMO2SHADE.LUT	PATCH9.AP
CLP.INDEX	DEMOLINE.LUT	PATCH10.AP
CLP.HYDRO	DEMO.LINE	DEMOPT.LUT
PATCH14.AP	CLP.ATT	COLORLIN.LUT
PATCH15.AP	CLP.ANNO	PTPL.LUT
PATCH18.AP	CLP.PALEO	BLACK.MRK
YELLOWPTPL.LUT	SCREEN15.AP	DEMO.TXT
FNT025	SCREEN17.AP	FNT039

SCREEN0.AML CALLS NONE, USES NONE

SCREEN1.AML	CLP.GEOL	COLOR.SHD	DEMO2SHADE.LUT
	CLP.INDEX	DEMOLINE.LUT	CLP.ANNO
	CLP.HYDRO	BLACK.MRK	DEMOPT.LUT

	CLP.ATT	DEMO.LINE	
SCREEN2.AML	CLP.GEOL DEMO.LINE	DEMO.TXT	DEMOLINE.LUT
SCREEN3.AML	CLP.INDEX CLP.HYDRO	PLOTTER.MRK	CLP.GEOL
SCREEN4.AML	CLP.GEOL		
SCREEN5.AML	CLP.GEOL		
SCREEN6.AML	CLP.GEOL	COLOR.LIN	COLORLIN.LUT
SCREEN7.AML	CLP.GEOL	COLOR.LIN	
SCREEN8.AML	CLP.GEOL	COLOR.LIN	COLORLIN.LUT
SCREEN9.AML	CLP.GEOL	COLORLIN.LUT	
SCREEN10.AML	PATCH10.AP		
SCREEN11.AML	PATCH10.AP		
SCREEN12.AML	PATCH10.AP		
SCREEN13.AML	PATCH10.AP		
SCREEN14.AML	COLOR.MRK	PATCH14.AP	
SCREEN15.AML	DEMO.TXT	SCREEN15.AP	PATCH15.AP
SCREEN16.AML	PLOTTER.TXT		
SCREEN17.AML	SCREEN17.AP		
SCREEN18.AML	PLOTTER.TXT	PATCH18.AP	COLOR.MRK
SCREEN19.AML	CALLS NONE, USES NONE		
SCREEN20.AML	CLP.GEOL CLP.ATT	PTPL.LUT YELLOWPTPL.LUT	PATCH18.AP
SCREEN21.AML	CLP.GEOL	PLOTTER.MRK	PLOTTER.LIN

## THE ALACARTE SYMBOLS DIRECTORY

The ALACARTE symbols directory contains standard ALACARTE symbol sets, fonts, and lookup tables used by ALACARTE routines. Do not delete any files from this directory even though some may have been loaded into the arcexe50 area.

### Symbolsets and fonts:

alcgeol.mrk	markerset of oriented structural symbols
alcwrg.lin	lineset of standard geologic lines
fnt025	font for alcwrg.lin
fnt039	font for alcgeol.mrk
cca.shd	Calcomp hardware shades 1-999
ccb.shd	Calcomp hardware shades 1001-1024
cca.lin	Calcomp pen numbers 1-999
ccb.lin	Calcomp pen numbers 1001-1024

### INFO Lookup Tables:

CCPTPL.LUT	Calcomp plotter version of ptpl.lut, uses color 3
DEMOLINE.LUT	Lookup table used by Alacarte demo
CCSTRUCTURE.LUT	Calcomp plotter version of ptpl.lut
ALCLINE.LUT	Line lookup table, refers to alcwrg.lin
PTPL.LUT	Point plane lookup table, refers to alcgeol.mrk
PTPL.LUT2X	Point plane lookup table, refers to alcgeol.mrk, draws symbols at twice normal size.
PTPL.LUT1X	Same as ptpl.lut, not used currently.
MARKERSET	Info template for markersets. Used to modify markersets in info.

### Other Files:

info	Info database directory
sexport.aml	Symbols export aml
simport.aml	Symbols import aml
sdele00.aml	Aml to delete symbols export files (*.e00 files)
log	ARC/INFO workspace log

## ALACARTE DATABASE DETAILS

ALACARTE uses character items to store most attribute information. This was chosen pending release of USGS coding and symbol standards and because character attributes are readable. ALACARTE will use this standard coding scheme in the future and will provide conversions from the current scheme. The characteristic feature attribute is placed in an item in the feature attribute table in the current ALACARTE version, rather than in a related table. An alternative for the standard ALACARTE item name for arc attributes, LTYPE, may be specified with the 'set lines item' on the Db pulldown on the LINES menu. Alternative attribute item names can also be specified for the other feature types from the Db pulldown on the respective feature menu.

### Arc Attributes

ARC attributes are stored in AAT item LTYPE, defined as 35 35 C. The attribute consists of two parts, the line type (contact, thrust, etc.) separated by a comma from the line modifier (inferred, queried, etc.) After these are each independently set on the digitize lines menu arcs can be added and automatically tagged, selected using the current line type and modifier, or selected arcs can be tagged with the current line type and modifier. Kinds of geologic lines are typically standard, thus permitting their listing in menu form. Those supported by ALACARTE are listed in the next section.

### STANDARD ATTRIBUTES FOR GEOLOGIC LINES

ALACARTE INFO Database Attributes and Corresponding Symbol Numbers and Menu Choices

INFO db attribute stored in LTYPE	alcwrg.lin Symbol no.	LINES/DIG menu Line Type <sup>4</sup>	LINES/DIG menu Line Modifier <sup>5</sup>
	--	no attribute	--
atten. fault, approx. located	20	attenuation	approx. located
atten. fault, certain	19	attenuation	certain
atten. fault, concealed	23	attenuation	concealed
atten. fault, concealed, queried	24 or 58 <sup>2</sup>	attenuation	concealed ?
atten. fault, inferred	21	attenuation	inferred
atten. fault, inferred, queried	22 or 57 <sup>2</sup>	attenuation	inferred ?
conglomeratic, marker	48	-- <sup>3</sup>	--
contact, approx. located	26	contact	approx. located
contact, certain	25	contact	certain
contact, concealed	29 or 44 <sup>1</sup>	contact	concealed
contact, concealed, queried	30	contact	concealed ?
contact, gradational	--	contact	gradational
contact, inferred	27	contact	inferred
contact, inferred, queried	28	contact	inferred ?
contact, scratch	29	contact	--

dike	39	--	--
dikelet	38	--	--
f.a., anticline, certain	31	anticline	certain
f.a., anticline, concealed	35 or 45 <sup>1</sup>	anticline	concealed
f.a., anticline, concealed, queried	36	anticline	concealed ?
f.a., anticline, inferred	33	anticline	inferred
f.a., anticline, inferred, queried	34	anticline	inferred ?
f.a., antiform, certain	31	antiform	certain
f.a., monocline, certain	31	monocline	certain
f.a., syncline, certain	31	syncline	certain
f.a., syncline, concealed	35 or 45 <sup>1</sup>	syncline	concealed
f.a., syncline, concealed, queried	36	syncline	concealed ?
f.a., syncline, inferred	33	syncline	inferred
f.a., syncline, inferred, queried	34	syncline	inferred ?
f.a., synform, certain	31	synform	certain
fault, approx. located	2	fault	approx. located
fault, certain	1	fault	certain
fault, concealed	5 or 43 <sup>1</sup>	fault	concealed
fault, concealed, queried	6	fault	concealed ?
fault, inferred	3	fault	inferred
fault, inferred, queried	4	fault	inferred ?
glacial moraine	46	--	--
glacier boundary	25	glacier bndry	none
glauconitic, marker	47	--	--
map boundary,	0	map boundary	none
map boundary, certain	0	map boundary	certain
map boundary, internal	0	map boundary	--
marker bed	42	--	--
normal fault, certain	1	normal	certain
normal fault, concealed	5	normal	concealed
normal fault, inferred	3	normal	inferred
normal fault, inferred, queried	4	normal	inferred ?
o.t. thrust fault, approx. located	14	--	--
o.t. thrust fault, certain	13	--	--
o.t. thrust fault, concealed	17	--	--
o.t. thrust fault, concealed, queried	18 or 56 <sup>2</sup>	--	--
o.t. thrust fault, inferred	15	--	--
o.t. thrust fault, inferred, queried	16 or 55 <sup>2</sup>	--	--
photo lineament	37	--	--
reverse fault, certain	1	reverse	certain
s.s. fault, certain	1	strike-slip	certain

s.s. fault, r.l., certain	1	dextral	certain
s.s. fault, r.l., concealed	5	dextral	concealed
s.s. fault, r.l., inferred	3	dextral	inferred
s.s. fault, r.l., inferred, queried	4	dextral	inferred ?
s.s. fault, l.l., certain	1	sinistral	certain
sag pond	41	--	--
scratch boundary, certain	29	scratch bndry	certain
thrust fault, approx. located	8	thrust	approx. located
thrust fault, certain	7	thrust	certain
thrust fault, concealed	11	thrust	concealed
thrust fault, concealed, queried	12 or 54 <sup>2</sup>	thrust	concealed ?
thrust fault, inferred	9	thrust	inferred
thrust fault, inferred, queried	10 or 53 <sup>2</sup>	thrust	inferred ?
topographic escarpment	40	--	--
water boundary, certain	25	water boundary	certain

#### Notes:

1. The lower numbered symbol defines dots as short dashes, the higher by true dots.
2. The lower numbered symbol has '?' up and teeth or barbs down (line left to right); the higher has '?' up and teeth or barbs up.
3. '--' means this line type and/or line modifier not on the ALACARTE LINES/DIG menu and must be entered as 'other' from the line type and/or line modifier pull-down menus. For Symbol no., '--' means the corresponding symbol is not available at this time.
4. The line type is chosen from the LINES/DIG C, F, A, or O pull-downs (for Contacts, Faults, fold Axes, and Other respectively).
5. The line modifier is chosen from the 'Mod' pull-down on the LINES/DIG menu.
6. This table includes entries for all attributes for which there is a symbol in the alcwrg.lin lineset, and at least the 'certain' example of each line type on the LINES/DIG line type pull-downs. The 'gradational' line modifier is shown with the 'contact' line type as an example. Other combinations are stored by ALACARTE in the same fashion as the ones shown; these may be used as models.
7. A fairly complete lookup table (LUT) for the above lines is ALCLINE.LUT in the info directory in ALACARTE's symbols directory (/arcexe50/alcarte/symbols:arc:alcline.lut).

## Polygon Label Attributes

Polygon label attributes are stored in PAT item PTYPE, defined as 35 35 C. Polygons typically represent geologic units on a geologic map. Because these are generally unique to a given map or region, no standard ALACARTE label attributes were defined. Users enter the geologic unit from the keyboard or select it from a custom tagging menu prepared during map setup.

## Point Attributes

Point labels are used to represent three types of features on a geologic map: points that represent points in space (sample localities), points that represent the location and orientation of lines in space (lineations), and points that represent the location and orientation of planes in space (bedding and other attitudes). ALACARTE has different digitize menus for each of these types. ALACARTE aml and menu filenames use the prefixes ptpt for points representing points, ptln for points representing lines, and ptpl for points representing planes. Lineations and attitudes are stored in the same coverage and use the same items.

### SAMPLE LOCALITIES

These use info item PTTYPE, defined 35 35 C, to record type of sample (e.g. chem, KAr, etc.) and SAMPNO, defined 35 35 C, to record individual sample numbers or other identifiers.

### ORIENTED STRUCTURE SYMBOLS

These also use info item PTTYPE, defined 35 35 C, to record type of feature (lineation, overturned bedding, etc.), STRIKE (3 3 I) to record attitude strike or lineation azimuth and DIP (3 3 I) to record attitude dip or lineation plunge. Strike is calculated from labelangle and stored in INFO in degrees clockwise from north such that the dip is on the left hand. Azimuth is recorded in degrees clockwise from north. Note that the azimuths determined for strike and bearing are derivatives of labelangle and therefore are duplications. (A routine to update STRIKE based on labelangle and vice versa should be created). The ALACARTE standard attributes for attitudes and lineations are listed below:

#### Standard Attitude Attributes

These are the attributes as stored in the PTTYPE item in INFO for structural attitudes. These are presented in the same form on the 'Pt tags' pulldown on the DIG PLANAR points bar. The corresponding symbolset and lookup table are alcgeol.mrk and PTPL.LUT, both in the ALACARTE symbols directory.

INFO db attribute stored in PTTYPE	alcgeol.mrk Symbol no.
bedding	1
approx bedding	7
ot bedding	2
bedding w/tops	6
ot bedding w/tops	10
flat bedding	4



vert bedding	3
vert bedding w/tops	11
crumpled bedding	9
foliation	5
foliation and bedding	8
vert foliation and bedding	12
horz foliation	14
inclined cleavage	13
inclined cleavage w/tops	31
joint	15
horz joint	21
vert joint	24
joint unmineralized	36
air photo attitude	32

### Standard Lineation Attributes

These are the attributes as stored in the PTTYPER item in INFO for lineations. These are presented in the same form on the 'Pt tags' pull-down on the DIG LINEAR points bar. The corresponding symbolset and lookup table are alcgeol.mrk and PTPL.LUT, both in the ALACARTE symbols directory. Symbol 33, an arrow, is the only symbol available for lineations in version 1.0. The lineation tag is stored in somewhat coded form in PTTYPER but is presented to the user in a more readable form on the menus.

INFO db attribute stored in PTTYPER	PLANAR DIG Pt tags menu
_l_lineation_i_	inclined lineation
_l_lineation_att_i_	inclined lineation at attitude
_l_lineation_h_	horizontal lineation
_l_lineation_v_	vertical lineation
_l_slick_i_n_	inclined slickenside, normal slip sense
_l_slick_i_r_	inclined slickenside, reverse slip sense
_l_slick_i_u_	inclined slickenside, unknown slip sense
_l_bdclvg_i_	bedding-cleavage intersection lineation
_l_antiline_i_	minor anticline
_l_syncline_i_	minor syncline
_l_fold_i_	minor inclined fold axis
_l_fold_h_	minor horizontal fold axis
_l_paleocurrent_i_	inclined paleocurrent
_l_faultdip_i_	dip of fault surface

## **Other Database Items**

ALACARTE optionally creates and uses two items, SEL (1 1 I) and SYMB (3 3 I) that are part of the feature attribute table. SEL is used to record which items are selected before a coverage is saved in ARCEDIT, in order to allow that selected set to be restored after the save. This is done by calculating SEL to 1 for selected items, then selecting for SEL = 1 to restore the set. Similarly, SYMB is used to record the symbol (\$SYMBOL) assigned to map elements for later restoration.

## **ALACARTE 1.0 STATUS**

ALACARTE 1.0 is a snapshot of an evolving program now in use by several dozen users and installed in preliminary form at over twenty USGS sites.

## **Future ALACARTE Development**

An ALACARTE Version 1.1 is planned that will incorporate bug fixes, minor but critical enhancements, revised manuals, and compatibility with both ARC/INFO Revisions 5.0.1 and 6.0.

A further revision of ALACARTE would require ARC/INFO Revision 6.0 and UNIX workstations running X-Windows. ALACARTE can be modified to support new ARC/INFO 6.0 capabilities, including multiple simultaneous menus using AML threads, and could include general and geologic-specific analytical routines in both vector and raster (GRID) domains. Semi-automated style-sheets for cartographic layout, plotting and publication of standard USGS geologic maps, and creation of comprehensive geologic symbols per pending USGS standards are a high priority. Terrain-modeling and extended SQL-based database functionality could also be included.

There are no plans to implement ALACARTE on systems other than those running UNIX and Primos.

## **ALACARTE Limitations**

Listed here are some of the broader limitations of ALACARTE.

Only selected functions of ARC, INFO, ARCEDIT, and ARCPLOT modules are supported.

TIN, NETWORK, COGO, RDBI, and Librarian are not supported at all.

ALACARTE includes specific support for several common USGS map projections. Map units of meters are specifically supported (though other map units are permitted with less support) and not all PROJECT options are available in setting up an ALACARTE map (but they are available from the PROJECT form menu).

ALACARTE uses a primitive character-based attributing scheme. This should change when pending USGS coding standards are published.

The ALACARTE help system is only partially implemented.

Some AML documentation headers are incompletely filled out or are no longer accurate.

The alcinit.aml does not document all global variables used in ALACARTE, and global variables have been overused in some instances and must be cleaned up.

ALACARTE runs only on UNIX and Prime systems.

### **Known Bug List**

To be written at the end of bug-fix week, 10/21/91.

## APPENDIX

### The ALACARTE.AML

```
/* *****  
/* PROJECT                ALACARTE  
/*  
/*          User-friendly interface to ARC/INFO for earth scientists  
/*          U.S. Geological Survey, Menlo Park, California  
/*          Todd T. Fitzgibbon  
/* *****  
/* PROGRAM                alacarte.aml  
/* PURPOSE                Initial routine for ALACARTE.  Sets up paths,calls  
/*                        routines to get device specifications,initialize  
/*                        global variables, call main.men  
/* AUTHOR                 Todd T. Fitzgibbon  
/* MODIFIED                28 Aug 90  
/* REQUIRES ARC/INFO     Rev. 5.0.1 or later  
/* HOSTS                  Sun, Prime  
/* CALLED BY              None  
/* CALLS                  station.aml  
/*                        unix.aml  
/*                        prime.aml  
/*                        vax.aml  
/*                        alcinit.aml  
/*                        main.men  
/* RETURNS  
/* ARGUMENTS              None  
/* INPUTS  
/* OUTPUTS  
/* STATUS  
/* COMMENTS  
/* *****  
/*  
&severity &error &routine generalerror  
/*  
/*  
/*  
/*  
/* *****  
/*  
/* TO INSTALL ALACARTE ON YOUR SYSTEM:  
/*  
/* 1. Remove the /* comment symbol from the left end of the line in the  
/*     appropriate section below.  Then specify the path to the alacarte dirs  
/*     on your system.  Make sure only one of the three path statements is
```

```

/*      uncommented.
/*
/*****
/*  Set path for UNIX
/*  Be sure to end path in a /
/*
&s .alc$path      /arcexe50/menus/alcarte/
/*
/*****
/*  Set path for PRIME
/*  Be sure to end path in a >
/*
/*&s .alc$path      arcexe50>menus>alcarte>
/*
/*****
/*  Set path for VAX  NOTE - VAX/VMS NOT SUPPORTED AT THIS TIME.
/*  Be sure to end path in a .
/*
/*&s .alc$path      disk$userdisk:[tfitz.alcarte.
/*
/*****
/*
/*
/*  2. Enter the location of the arcexe50 directory below. (Used to find stations
/*  and other arc and alacarte dirs).
/*
/*****
/*  Set path for UNIX
/*  Be sure to end path in a /
/*
&s .alc$arcpath      /arcexe50/
/*
/*****
/*  Set path for PRIME
/*  Be sure to end path in a >
/*
/*&s .alc$arcpath      arcexe50>
/*
/*****
/*  Set path for VAX  /* NOTE - VAX/VMS NOT CURRENTLY SUPPORTED.
/*  Be sure to end path in a .
/*
/*&s .alc$arcpath      disk$userdisk:[arcexe50.
/*
/*****
/*
/*
/*

```

```

/* 3. Change "arc" in the following line to the name of ARC on your system
/*   if it is different.  E.g., arc32, arc4, arc50, etc.
/*
/*
&setvar .arcname arc
/*
/*
/* 4. Change "5" in the following line to the overall version of ARC on your
/*   system.  This should be either 5 or 6 (not 4.03 or 5.0.1, etc.).
/*   NOTE: ARC 5 ONLY IS CURRENTLY SUPPORTED.
/*
&setvar .arcversion 5
/*
/*
/* 5. Remove the /* comment symbol from the left of the appropriate operating
/*   system type.  Systems currently available are prime and unix. Make sure
/*   only one of the three host types is uncommented.
/*
&s .alc$host unix
/*&s .alc$host prime
/*&s .alc$host vax    /* NOTE - VAX/VMS NOT CURRENTLY SUPPORTED.
/*
/*
/* 6. Optionally edit the file specified in step 5 above, either unix.aml or
/*   prime.aml, to specify local system commands such as for the system
/*   screen editor.  These files are located in the alacarte main subdirectory.
/*
/*   END OF INSTALLATION SECTION
/*
/******
/*
/*
/* This is the main loop that calls the menus
/*
&s .firsttime .true.
&s .alc$next main
&do &until %.alc$next% = quit
/*
/*   Set current paths
/*
&if %.alc$host% = vax &then
&do
&menupath [unquote %.alc$path%%.alc$next%']' ] [unquote %.alc$path%main']' ]
&amlpath [unquote %.alc$path%%.alc$next%']' ] [unquote %.alc$path%main']' ]
&end
&else
&do
&menupath %.alc$path%%.alc$next%   %.alc$path%main
&amlpath  %.alc$path%%.alc$next%   %.alc$path%main

```

```

&end
/*
&if %.firsttime% &then
&do
&run alcversn.aml
&run %.alc$host%.aml
&run alcinit.aml
&run station.aml
&s .firsttime .false.
&end
/*
&type Please pick a menu item with the %.menudevice%
&run %.alc$next%.aml
&end
/*
&type Leaving ALACARTE...
/*
quit /* return from main.men = quit from arc
/*
&return
/*
/*****
/*
/* Subroutines
/*
/*****
&routine generalerror
&severity &error &ignore
&severity &warning &ignore
&run errmsg.aml ALACARTE.AML
&return

```

# The UNIX.AML

```

/*****
/* PROJECT                ALACARTE
/*
/*           User-friendly interface to ARC/INFO for earth scientists
/*           U.S. Geological Survey, Menlo Park, California
/*           Todd T. Fitzgibbon
/*****
/* PROGRAM                unix.aml
/* PURPOSE                Sets system-dependent parameters
/* AUTHOR                 Todd T. Fitzgibbon
/* MODIFIED               28 Aug 90
/* REQUIRES ARC/INFO     Rev. 5.0 or later
/* HOSTS                  Sun
/* CALLED BY              alacarte.aml
/* CALLS                  None
/* RETURNS                See below
/* ARGUMENTS              None
/* INPUTS                 None
/* OUTPUTS                None
/* STATUS                  ok
/* COMMENTS
/*****
/*
&severity &error &routine generalerror
/*
/* The following are old forms of these variables, some still used
/* but to be replaced in the future.
/*
/* BE SURE TO MAKE ANY CHANGES TO BOTH VERSIONS OF VARIABLES, E.G. .DIR
/* AND .ALC$DIR
/*
&s .dir                ls
&s .dirsep              /
&s .sysreturn           exit
&s .del                 rm
&s .lst                 cat
&s .host                %.alc$host%
/* &s .copy              cp
&s .statsep             -
/*
/* The following are the new forms of the variables that should be used.
/* These should be unique to ALACARTE
/*
&s .alc$dir             ls
&s .alc$dirsep          /
&s .alc$sysreturn       exit

```



```

&s .alc$delete      rm
&s .alc$lst         cat
&s .alc$copy        cp
&s .alc$statsep     _
&s .alc$editor      vi
&s .alc$pagelist    more
&s .alc$wldcard     *
&s .alc$print       lpr
/*
&return
/*
/*****
/*
/*      Subroutines
/*
/*****
&routine generalerror
&severity &error &ignore
&severity &warning &ignore
&run errmsg.aml UNIX.AML
&return

```

## The PRIME.AML

```
/******  
/* PROJECT                ALACARTE  
/*  
/*          User-friendly interface to ARC/INFO for earth scientists  
/*          U.S. Geological Survey, Menlo Park, California  
/*          Todd T. Fitzgibbon  
/******  
/* PROGRAM                prime.aml  
/* PURPOSE                Sets system-dependent parameters  
/* AUTHOR                 Todd T. Fitzgibbon  
/* MODIFIED              04 Apr 90  
/* REQUIRES ARC/INFO     Rev. 5.0 or later  
/* HOSTS                  Prime  
/* CALLED BY              alacarte.aml  
/* CALLS                  None  
/* RETURNS                None  
/* ARGUMENTS              None  
/* INPUTS                 None  
/* OUTPUTS                None  
/* STATUS                  ok  
/* COMMENTS  
/******  
/*  
&severity &error &routine generalerror  
/*  
/* The following are old forms of these variables, some still used  
/* but to be replaced in the future.  
/*  
/* BE SURE TO MAKE ANY CHANGES TO BOTH VERSIONS OF VARIABLES, E.G. .DIR  
/* AND .ALC$DIR  
/*  
&s .dir          ld  
&s .dirsep       >  
&s .sysreturn    quit  
&s .del          delete  
&s .lst          slist  
&s .host         %.alc$host%  
/* &s .copy       copy  
&s .statsep      -  
/*  
/* The following are the new forms of the variables that should be used.  
/* They should be unique to ALACARTE  
/*  
&s .alc$dir      ld  
&s .alc$dirsep   >  
&s .alc$sysreturn quit
```

```

&s .alc$delete      delete
&s .alc$lst         slist
&s .alc$copy        copy
&s .alc$statsep     -
&s .alc$editor      emtab
&s .alc$pagelist    pl
&s .alc$wldcard     @
&s .alc$print       spool
/*
&return
/*
/*****
/*
/*      Subroutines
/*
/*****
&routine generalerror
&severity &error &ignore
&severity &warning &ignore
&run errmsg.aml PRIME.AML
&return

```

## The install\_alc\_unix Script

```
#!/bin/csh
#   install_alc_unix
#
echo ' '
echo ' ***   This script must be run by root (superuser).   ***'
echo ' '
echo It assumes that alacarte has been loaded into the /arcexe50/menus dir
echo and that the arc command is in root\'s execution path.
echo ' '
echo It performs the following steps:
echo ' '
echo 1. Copies the alacarte.aml to the /arcexe50/atool/arc directory.
echo This aml points to the ALACARTE code in /arcexe50/menus/alacarte and
echo permits any user to start ALACARTE by typing alacarte at the arc prompt.
echo ' '
echo 2. Copies two fonts, fnt025 and fnt039, to the /arcexe50/igl63exe dir, and
echo two arc symbol files to the /arcexe50/symbols dir.  These files provide
echo geologic line and point symbols.
echo ' '
echo 3. Externals coverages in the alacarte/tour directory.
echo ' '
echo -n " Enter YES to continue, NO to quit? "
set input_line = `head -1`
set ans = `echo $input_line | awk '{print substr($1,1,1)}' `
if ( $ans == "n" || $ans == "N" ) then
    echo "   Answer is NO, installation cancelled."
else if ( $ans == "y" || $ans == "Y" ) then
    echo "   Answer is Yes, installation proceeding..."
echo ' '
#
#           STEP 1
#
cp /arcexe50/menus/alacarte/main/alacarte.aml   /arcexe50/atool/arc/alacarte.aml
#
#           STEP 2
#
cp /arcexe50/menus/alacarte/symbols/fnt025      /arcexe50/igl63exe
cp /arcexe50/menus/alacarte/symbols/fnt039      /arcexe50/igl63exe
cp /arcexe50/menus/alacarte/symbols/alcgeol.mrk  /arcexe50/symbols
cp /arcexe50/menus/alacarte/symbols/alcwrg.lin  /arcexe50/symbols
#
#           STEP 3
#
cd /arcexe50/menus/alacarte/tour
arc externalall
#
```

```
#                               DONE
#
echo ' '
echo The install_alc_unix command has finished.
echo ' '
echo You may need to edit /arcexe50/atool/arc/alacarte.aml and
echo /arcexe50/menus/alacarte/main/unix.aml. See the installation
echo instructions in the ALACARTE Installation and System Manual.
echo ' '
else
    echo $input_line
    echo "    Answer not recognized, installation cancelled."
endif
exit
```

## The Prime install\_alc.cpl

```
/* install_alc.cpl for Primos
/*
type ' '
type ' *** You must have all permissions in the arcexe50 and ***'
type ' ***      igl63exe directories to run this cpl.      ***'
type ' '
type It assumes that alacarte has been loaded into the arcexe50>menus dir
type and that the arc command is in your execution path.
type ' '
type It performs the following steps:
type ' '
type 1. Copies the alacarte.aml to the arcexe50>atool>arc directory.
type This aml points to the ALACARTE code in arcexe50>menus>alacarte and
type permits any user to start ALACARTE by typing alacarte at the arc prompt.
type ' '
type 2. Copies two fonts, fnt025 and fnt039, to the igl63exe dir, and
type two arc symbol files to the arcexe50>symbols dir. These files provide
type geologic line and point symbols.
type ' '
type 3. Externals coverages in the alacarte>tour directory.
type ' '
&if ^ [query 'Enter YES to continue, NO to quit' .false. -tty] &then &return
type ' '
/*
/*          STEP 1
/*
copy arcexe50>menus>alacarte>main>alacarte.aml arcexe50>atool>arc>alacarte.aml
/*
/*          STEP 2
/*
copy arcexe50>menus>alacarte>symbols>fnt025      igl63exe>==
copy arcexe50>menus>alacarte>symbols>fnt039      igl63exe>==
copy arcexe50>menus>alacarte>symbols>alcgeol.mrk  arcexe50>symbols>==
copy arcexe50>menus>alacarte>symbols>alcwrg.lin  arcexe50>symbols>==
/*
/*          STEP 3
/*
attach arcexe50>menus>alacarte>tour
arc externalall
/*
/*          DONE
/*
type ' '
type The install_alc.cpl command has finished.
type ' '
type You may need to edit arcexe50>atool>arc>alacarte.aml and
```

```
type arcexe50>menus>alacarte>main>prime.aml. See the installation
type instructions in the ALACARTE Installation and System Manual.
type ' '
&return
```

## The HEADER.DOC Standard File Header

```
/* *****
/* PROJECT                ALACARTE
/*
/*          User-friendly interface to ARC/INFO for earth scientists
/*          U.S. Geological Survey, Menlo Park, California
/*          Todd T. Fitzgibbon
/* *****
/* PROGRAM                put aml name here
/* PURPOSE                briefly describe program purpose
/* AUTHOR                 name(s) of authors
/* MODIFIED               date of last mod, automatically updated with ts
                        util (see UNIX Shell Scripts Related to
                        ALACARTE in this manual)
/* REQUIRES ARC/INFO     Rev.  ARC Revision(s) the aml runs under
/* HOSTS                  Hosts the aml runs on, UNIX, Prime, etc.
/* CALLED BY              Names of amls or menus that call this one, or
                        several if a standard aml
/* CALLS                  Amls and menus called by this one
/* RETURNS                Values returned, typically give names of global
                        variables set in this routine
/* ARGUMENTS              &args arguments, if any, and possible values
/* INPUTS                 input files, coverages, info files
/* OUTPUTS                files, coverages, info files created or modified
/* STATUS                 completed, prototype, etc.
/* COMMENTS               description of operation, other requirements
/* *****
/*
&severity &error &routine generalerror
/*
/*
&return
/*
/* *****
/*          Subroutines
/*
/* *****
&routine generalerror
&severity &error &ignore
&severity &warning &ignore
&run errmsg.aml amlname.AML          <----- also put aml name here
&return
```



## How to Setup a GTCO Digipad 5 Digitizer for Sun ARC

### 1. Cable:

DB25 male GTCO J5 (port A)	-----	DB25 male Sun Serial Port
1	-----	1
2	-----	3
3	-----	2
4	-----	4
5	-----	5
6	-----	6
7	-----	7
8	-----	8
20	-----	20

### 2. Switches on GTCO controller:

Dip Switch	Switch	Setting	
S1	1	off	9600 baud
	2	off	"
	3	on	"
	4	on	"
	5	off	parity disabled
	6	off	NA
	7	off	1 stop bit
	8	on	8 bits
S2	1	on	format: key-pressed = first character
	2	on	space between coordinates
	3	on	CR
	4	on	LF
	5	on	high-res ASCII
	6	off	port A active
	7	off	port B active
	8	off	alarm disabled
S3	1	off	not used
	2	off	NA
	3	off	NA
	4	off	point/line mode

5	on	16 button cursor
6	off	inch scale
7	off	ASCII formats
8	off	no hardware flow control

3. ARC/INFO gtco digitizer file (arcexe50/digform/dig\_gtco) should look like:

```
'gtco'          GTCO digi-pad 5
1              Device driver #
'(A1,F5.3,1X,F5.3)' Format
F             Menu bar on
F             Single button mode off
73.0, 1.0, 0.0 X max, x scale, x offset
85.0, 1.0, 0.0 Y max, y scale, y offset
12           Key conversion table
'0' 0, '1' 1, '2' 2, '3' 3, '4' 4, '5' 5
'6' 6, '7' 7, '8' 8, '9' 9, ':' 10, ';' 12
-1           No initialization characters
-1           No shut down characters
```

4. Setup of Sun serial port:

Assuming the digitizer is attached to serial port b on the rear of a Sun 3/60 workstation, the /etc/ttytab file entry should appear as follows (this is unchanged from the default entry):

```
ttyb "/usr/etc/getty std.9600" unknown    off secure
```

If changes are made to the /etc/ttytab file, give the following command to make them current:

```
kill -1 1
```

5. Use the following ARC/INFO digitizer command:

```
digitizer gtco /dev/ttyb
```

where /dev/ttyb is the special device file for serial port b

## NOTES:

This setup assumes a 16-button cursor. If otherwise, change the setting of GTCO controller dip switch 3-5 to OFF for stylus or 4 or 5-button cursor. Modify the `dig_gtco` file as required (see ARC/INFO documentation).

Use the ARC/INFO *digtest* command to check out your digitizer.

If you hit the F-button on the digitizer cursor you will switch to line mode where coordinates are sent as long as a cursor button is depressed. The green light on the cursor will be ON in line mode. Line mode will cause unpredictable results in ARC/INFO. Press the F-key again to toggle back to point mode.

## ALACARTE Change Request Form

**From:**                      Date \_\_\_\_\_  
                                    Name \_\_\_\_\_  
                                    Organization \_\_\_\_\_  
                                    Email address \_\_\_\_\_  
                                    Address \_\_\_\_\_  
                                    \_\_\_\_\_  
                                    \_\_\_\_\_  
                                    \_\_\_\_\_  
                                    \_\_\_\_\_  
                                    Phone \_\_\_\_\_  
                                    FAX \_\_\_\_\_  
                                    System name \_\_\_\_\_  
                                    System type    Sun3   Sun4   Aviion   Prime   Other \_\_\_\_\_  
Operating system/revision \_\_\_\_\_  
                                    ARC/INFO revision \_\_\_\_\_  
                                    ALACARTE revision \_\_\_\_\_

What: **Bug**    **Enhancement**    **Documentation**    **Other** \_\_\_\_\_

(Note circumstances if bug: menu name, menu item being executed, any error messages displayed, etc.)

**Description (continue on rear or separate sheet if necessary):**

**Mail to:** ALACARTE, c/o Todd Fitzgibbon, U.S. Geological Survey, 345 Middlefield Rd. MS-975, Menlo Park, CA 94025, **or FAX to:** 415-329-4936 (FTS 459-4936)                      **or email to:** tfitz@sierra.wr.usgs.gov

Logs (for use by ALACARTE development team):

1. Changes made by:  
    Location of finished code:  
    Date completed:
2. Recorded on Structures & Functions: Y N N/A
3. Recorded on Hchart: Y N N/A
4. Recorded in system manual: Y N N/A
5. Recorded in user manual: Y N N/A

Request No. \_\_\_\_\_

Names of subroutines (or attach list):

6. Devalc updated by Fitzgibbon: Y N N/A  
    Date of update:

## ALACARTE Registration Form

**Purpose:** To register your copy of ALACARTE in order to receive notification of bug-fixes, additional documentation and new versions.

**Date:** \_\_\_\_\_

**System administrator:**

Name \_\_\_\_\_

Division/Branch/District/etc. \_\_\_\_\_

Email address \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

**System:**

Name (e.g. gismnl) \_\_\_\_\_

Manuf. & model (e.g. Sun 4/65) \_\_\_\_\_

OS and revision (e.g. SunOS 4.1) \_\_\_\_\_

Media (e.g. 1/4" 150MB cartridge) \_\_\_\_\_

Internet domain and address \_\_\_\_\_

**ARC/INFO:**

Revision \_\_\_\_\_

Modules \_\_\_\_\_  
\_\_\_\_\_

**ALACARTE:**

Revision \_\_\_\_\_

**Comments:**

**Mail to:**

**ALACARTE**

**c/o Todd Fitzgibbon**

**U.S. Geological Survey**

**345 Middlefield Rd. MS-975**

**Menlo Park, CA 94025**

**or FAX to:**

**FTS 459-4936**

**(415-329-4936)**

**or email to: [tfitz@sierra.wr.usgs.gov](mailto:tfitz@sierra.wr.usgs.gov)**

