

Commonwealth Data Systems, Inc

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**CIS Demonstration System
Development
Notes**

Prepared

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CIS Demo System Development Notes

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DEMO SYSTEM - OVERVIEW

This CIS demo system was designed to import, parse and save CompuServe Information System (CIS) messages from the PDOXDOS.msg file normally produced by TapCis. Other message formats can easily be imported and parsed as well, by making whatever modifications are required. Also, at least one CIS member's name does not parse out properly; interested parties may want to refine or redesign the parser.

The CIS demo system is under development. This is a Draft Development Note set and is intended to offer background information on the system. As a Draft Note set, the scope of this document is limited to the following topics:

- o General system overview
- o Producing a prototype report, namely: Message Report
- o Brief event processing discussion.
- o To-Do item list.

The demo system is intended to function as an invitation to Paradox developers to work in Paradox 4.0; but is not what we consider a complete system. This document and the related application assume the audience has a working knowledge and application development skills at the Paradox 3.5 level at least. Obvious and not so obvious features and functions were omitted to encourage developers to modify the system. All we ask is that our, and contributing, and future authors names be

kept intact. This system is offered with no warranty, assurance of reliability or usefulness for any particular purpose.

The CIS Demo System offers the following functionality:

- o Import an ascii text file into a Paradox table (PdoxDos.msg into t\\Bordb_in).
- o Parse ascii text into Paradox fields, load Blob field with text of CIS messages.
- o Production of a report based upon saved query criteria. This may be extended to apply any selected criteria set to any defined report.
- o Generation of query criteria sets, from query criteria category picklists in pop-up dialog picklists.
- o Revision of saved query criteria sets.
- o Once created, a report may be printed, previewed or viewed in table form (browsed).

Among the Paradox 4.0 Application Language (PAL) constructs included for demonstration in this system are:

- o Paradox 4.0 errorproc and error documentation.
- o Picklist Dialog Boxes.
- o Ok/Cancel informative message dialog box utility, autosizing.
- o Slide-bar percentage complete dialog box.
- o Table workspace management utility to track all tables on the workspace.
- o Wait Workspace waitprocs with menu selection and other events.
- o Nested Waitprocs for saved criteria set selection and edits.
- o Paradox 3.5 style Wait Table for browsing report answer table.
- o Global and local dynarrays.
- o Various PAL commands and syntax new to 4.0

CIS Demo SYSTEM - Introduction

The CIS Demo system is not a fully normalized, Multi-User Paradox 4.0 RDBMS application. To simplify the application, only single table queries and edits are used. Interested parties may normalize this application as they see fit.

Object Oriented Design (OOD) methodology produced this application, which is written in structured, modular, proceduralized Paradox Application Language (PAL) modules and optimized into one library. Data tables are kept in the "D" subdirectory, temporary files and tables in the "T" subdirectory, source code in the "S" subdirectory and libraries in the "L" subdirectory. This exemplifies a directory management approach commonly known as Relative Directory Addressing (RDA). An in depth discussion of RDA is beyond the scope of this document.

Contributing authors are credited with work at the beginning of each program to which they contributed, to the best of our ability to do so. We extend our deepest thanks and appreciation to these authors and others without whom the Paradox Development community would be a difficult and trying place. This application is our way of attempting to return some small part of the assistance we have received to the Paradox Development community.

To re-create the main library, play the "Make.sc" script from the Cis_App subdirectory. It creates the library and runs the four files which contain all programs in this application.

CIS Demo System - Initial Data Load

To load the initial, dummy, set of CIS messages, simply select "Import" from the main menu and the application will load the dummy messages and archive the original file. To load your messages, from any CIS forum, simply copy your TapCis *.msg file into the \\tap5 directory and rename it "PdoxDos.msg"

Messages identified as duplicates by the parser are saved into the d\\Cis_Dup table.

CIS Demo System - REPORTS

The application currently offers a single report as discussed in the Overview. It is intended that upon review of this report, the reader will add additional reports to this system. To facilitate later revisions, all reports are based on the standard Paradox Report Form layouts. Some of the features of the current **draft** reporting subsystem are:

- o Reproducibility of reports. This entails the ability to save any given report specification and reproduce the report with it at a later date. It is also possible to exercise this feature within a greater methodology to yield pattern identification and trend analysis; work on this extraordinarily potent aspect of the system is left to the reader.

- o Selection of report specification criteria from a list of existing data set elements. This ensures that reports actually include all of the desired records regardless of data set inconsistencies such as misspellings and capitalization variations. It also eliminates the requirement that users know how their data behaves.

Report specification criteria is a common data processing term which in this context can be defined as the criteria that defines the subset of data upon which any given report is to be produced. Some reports never use less than the full set of data. Other reports will seldom if ever be run against the full set of data.

The report selection criteria menus consist of the following series of events:

1. "Settings" is selected from the Report Menu.
2. The saved criteria table ("d\\crit_set") appears on the screen in formview.
3. The criteria set may be edited either by menu selection or by double right-clicking the mouse button. To use a given criteria set, simply move to it either by using the up and down arrow keys or by clicking on it with the mouse, and select "Use and Exit" from the drop down menu or double left-click the mouse.

No direct edits are permitted except to the Name field; all other query criteria are produced from dialog box picklists.

CIS Demo System - EVENTS

Two approaches to return values within waitprocs are included in this system. One defines the variables AcceptEvent, RejectEvent and RejectEventExit and utilizes them to control event return values. The second defines a single variable EventRetval to which the return values are assigned as desired. In one case in a nested waitproc, rejecteventexit is used although eventretval is defined; this was done to emphasize the nested nature of the waitproc.

An exhaustive discussion of Paradox 4.0 event driven programming is beyond the scope of this document. Efforts to convey the minimal event handling included in this application ballooned into impossible scope. We can only direct the reader to the source code in the file s\\critset3.sc and references such as the Paradox Programmer's Guide and Paradox 4.0 Developer's Guide. Also, excellent training is available although we only train upon special requests from clients for whom we have developed large scale applications.

It is our experience that the best way to debug event driven PAL in 4.0 is by strategic placement of debug statements within the case elements in the eventproc, whether a dialog proc or a waitproc.

CIS Demo System - To-Do Item list

The following items are among those left to the developer to do in the interest of keeping this system as simple as possible:

- o Normalization of CIS_MSG table.
- o Addition of Message text criteria category.
- o Addition of CIS_MSG browse, edit waitproc.
- o Addition of context cross references.
- o Addition of threads as a criteria category.
- o Addition of cascaded dialog boxes to control query logic; all queries are done with "or" between selected criteria.
- o Refinement of the message parser.
- o Double columns in picklist dialog boxes so selected criteria always appear in a separate column.
- o Extensions to the d\\crit_set table so that an unlimited number of query criteria may be selected.
- o Revision of first, last and middle initial fields into a single name field, and use of a single name field in the criteria selection subsystem.
- o Integration with external utils; at present this application is only a research tool.
- o Addition of other reports.

