

CARD LITE

CardLite – Administration Manual

DTA International Ltd

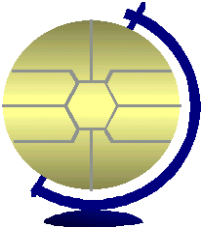
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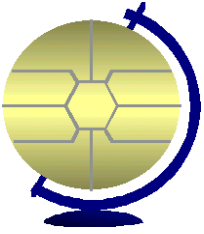
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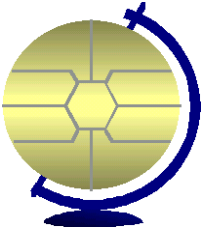
Introduction

Card Lite is an application which permits access to the Windows Desktop only when a valid smart or memory card is inserted. Passwords may be requested if required. There are no menus or other functions, so the Card Lite program is very useful for guarding a PC from use by anyone without the correct card, without restricting a bona fide card holder from using the PC. Additionally the Group numbers held on the card can be used to restrict a PC to use by a particular user or group of users.

Card Lite can be set up to log in an NT user using values stored on the card, so the name and password do not have to be remembered by the user. In addition values from the card can be *typed* into specified windows when they appear, allowing rapid form filling and similar activities.

Card Lite has a Time charging system. This uses time values put on the card by the **Card Administrator** program or through interaction with other programs, which have been set up to make charges or credits. Program names are held in the registry, together with a multiplier. If, say, Netscape were listed with a value of 5, then while Netscape is active on the Desktop the time gets used up 5 times as fast, and if other programs in the list are also running at the same time the multiplier is increased. A small moveable window, optionally located on the status bar, shows the current value on the card, with the time left. When time is running out this window will flash. The user has the option of withdrawing the card without closing the applications running, to enable more time units to be added to the card, or to request a credit to be added to the card by an administrator, if the system is networked. If this option is not chosen all active programs which are in the list will be terminated, and all other programs will be minimized. Different rating systems can be set for different groups if required. Note that a program value can be set to zero, so it isn't charged for but will still be closed down automatically. In a networked environment a message can be sent from the status bar icon to request more timeunits, and optionally other services (food and drink orders etc).

Applications can be set up to run when cards with a particular group number are inserted or removed. The username, group number, password, application user name and an application name can be used as parameters to these applications. Many other program features can be controlled from the system registry, including default comport, timings, prompts, positions and so on.



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Operation

CardLite is normally set to run automatically when a user logs in or starts up. Program Administration should have been run to set up the working parameters, and users should be issued with cards prepared by the Card Administration program. If a Supervisor card is inserted when CardLite is waiting for a card then it will exit.

Installation

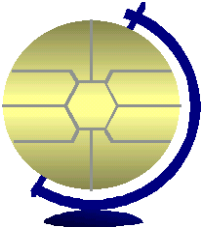
CardLite is installed from a CD, floppy disks or from a setup program held in a Zipped archive. Some of the administrative options should only be installed on the administrator's PC, such as Card Administration. In a large installation it may also be advisable to do the initial setup on the administrator's PC then save the registry branch [HKEY_CURRENT_USER \ Software \ cardlite] for direct transfer to the target PCs. On NT systems some additional operations are needed, and the instructions for this are in the file NTInstal.txt .

Card Administration

The Card Administration program is used to put values onto the card. The cards for each particular installation have a unique key, so cards from one Card Lite customer cannot be used on another customer's PCs. Cards may be set up with many bits of information.

The User name is used when the card is used with a password. It is also useful when logfiles are examined. The Timeunits are the 'currency' of the card, and are used to pay for computer or program usage. Chargeunits are used for special applications. The File Number and Group Number are used to tailor the behaviour of Card Lite when a card is inserted. The NT UserName, NT Password, Domain and Mailbox Alias are used

2	5	
3	6	
4	7	



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to log users into an NT session without entering their name and password explicitly at the keyboard. The seven parameter areas are for particular program usage. In order to write data to the card an Administrator or Supervisor card must be inserted at the beginning of the session. An optional program is available which allows the rapid crediting of cards with preset amounts.

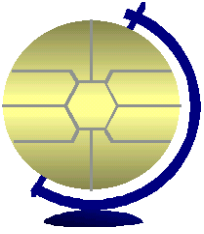
Program Administration

The Program Administration program is used to set up how Card Lite works. It has several screens. The initial screen allows the administrator to set up the

Option	Value
Comport	0
Caption1	Card Lite
Caption2	Welcome to
Caption3	Card Lite
Granularity	600
Prompt	Insert ID card
Warning Minutes	4
AutoGranularity	1000
AutoLoop	10
Service Menu	\\dta-w2000\e\myproj\cardliten5\registry.exe
Server Address	123.123.123.100
Workstation	52

default comport for the smart card device, whether passwords and charging are in effect, whether the PC is to conceal the fact it is using Card Lite at all and whether a user supplied image is displayed when the PC is in 'idle' mode. Normally Card Lite prevents the usage of system keys, such as Ctrl - Alt-Del and Ctrl-Tab, but this protection can be removed by using the Very Light Option or the No C-A-D option. Very Light is a special option whereby external program can use Card Lite to collect data from a smart card, but in all other respects it does nothing. No C-A-D allows a user to use system keys. The NT Reboot option and Autologon is used with an

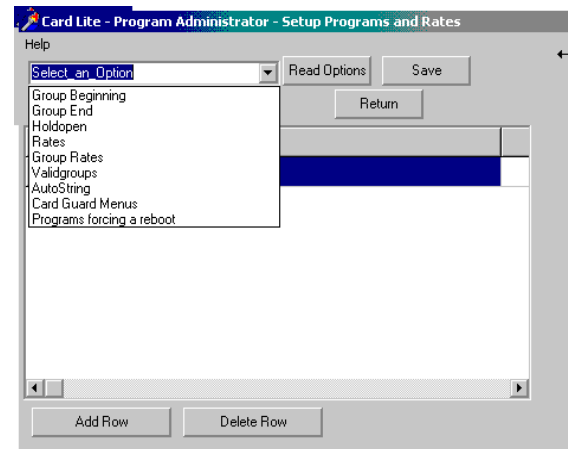
NT system to take information off the card to perform an NT login. The CardGuard option is used to make the Card Lite program behave like its predecessor Card Guard. The Hide Taskbar option hides the taskbar. The Gauge on Taskbar option controls whether the time/charge gauge is displayed on the main desktop or in the taskbar.



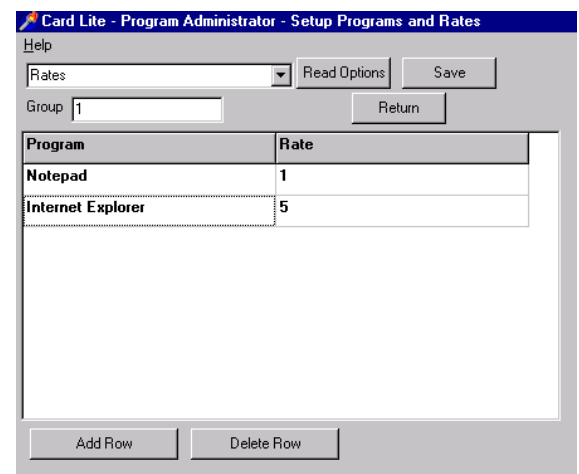
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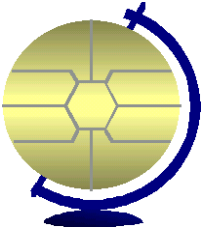
The three caption entries and the Prompt control what is displayed when Card Lite is in 'idle' mode. The granularity value is used to fine tune the speed of loading external programs . The Warning Minutes are the time given to a user when their units are about to expire. The Service Menu setting gives the full network path of a program to be used to handle user requests. The Server Address setting is used to tell the remote workstation s what the network address where the program servhand is running, and the Workstation setting is to provide a description of each remote workstation for the servhand operator to recognise it. The other two settings are for diagnostic use only.

The next screen is selected by clicking on the Options link at the top of the display. It allows the user to set up entries for actions to perform when a card with a particular group is inserted or removed, which programs to HoldOpen when a card is removed, rates for specific programs, rates for specific program when a selected group card is inserted (allowing different categories of user to pay different rates) A list of valid groups for this PC, definitions of which data to send when particular prompts are received , a section allowing Card Guard menus to be set up, and a list of programs which should cause the system to reboot if they are active when a card is withdrawn or the card runs out of timeunits.



The rates option has two fields: the Program and the Rate. The program part defines a unique string displayed by the running program on its top blue bar – only the unique part is necessary. The Rate part defines how many timeunits will be subtracted each minute from the card while that program is running. Where multiple rated programs are running simultaneously the rates are added together.






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These commands and options are available in the Help display. There is context sensitive help on the Options screen.

Information ✕

 Charging, if enabled, allows programs to be given a charging rate.

If Nopasswords is selected then passwords are not needed to use the system.

If Hiding is selected then the grey startup screen is not shown.

When Wallpaper is selected the startup screen shows a picture, clite.bmp.

The Very Light Option only registers when a smart card is inserted, but otherwise does not affect the system.

The No C-A-D option allows the System keys to work when a valid card is inserted.

The NTR reboot option enables the relogging in as the NT user whose UserAppName and UserAppPass are the NT login and password.

The AutoLogon option enables the typing of text into selected windows. This is used in conjunction with the AutoString option.

The CardGuard option forces Card Lite to behave as Card Guard.

The Hide Taskbar option hides the Taskbar during the CardGuard operation.

The Gauge on Taskbar option controls whether the time/charging gauge is on the taskbar or not.

The DoCAD option determines whether the CTRL-Alt-Del prevention is active during a session.

The Comport is the serial port the smart card reader is installed in.

The Caption1-3 texts relate to the Gauge display box.

Granularity is the number of milliseconds between checks for card removal in Card Guard.

The Prompt is the text of the request for the user to insert a smart card.

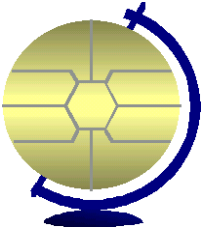
The Warning minutes are the time the charge gauge flashes before the session is terminated.

The AutoGranularity is the frequency in milliseconds that the system delays between looking for a window to insert details into, and the AutoLoop is the number of such delays to pause to allow the window to disappear.

The Service Menu is the full network name of a program to handle service requests from users.

The Server Address is the network address of the computer running servhand so each workstation can contact it.

The Workstation name is used to identify a workstation to servhand.



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Cardread – simple card reading program

Cardread is a utility supplied with the main cardlite suite. It sits in the background waiting for a valid smart card to be inserted in the card reader, and if it finds such a card it reads the details off the card and puts in into the registry in the Software/Cardlite area. When no card or an invalid card is inserted the values are set to NONE. This utility cannot be run at the same time as the other cardlite programs. A sample program readreg.exe is supplied as a basis for reading the registry data stored. The source file unita1.pas may also be of assistance.

Appendix 1 – Automatically initiating programs on card insertion

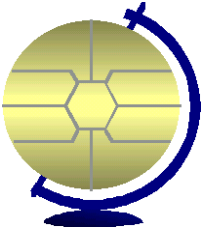
Using the Program Administration program it is possible to set up applications which will run when a card with a particular group is inserted. If the application takes parameters then values on the card can be substituted into those parameters as required. For example if the initial application is Microsoft Internet Explorer™ then the card values can be passed to an ASP file and placed in session variables for further use with the application, or placed in cookies and so on.

Parameters which can be passed in the call to the initial .asp file
Format is `http://page_address.asp?param1=%l¶m2=%g¶m3=%d` etc
etc

%u usernumber/card number
%l alias/mailbox
%d domain
%p NT password
%a userappname/NT Name
%g groupno
%1-%7 param 1 to param 7

Picking up the parameters in the asp file can be done as below:

```
<%@ LANGUAGE= "VBSCRIPT"%>  
<%  
qcnt=Request.QueryString("param1").count  
if qcnt > 0 then  
    Session("param1")=Request.QueryString("param1")(1)
```

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```
Response.Cookies("param1")=Session("param1")
Response.Cookies("param1").Expires = "January 1, 2038"
else
Session("param1")="NULL"
end if
%>
```

Then in an .asp file you can test if we are in a Card Lite session using code like the example below. If this is a non Card Lite instance then param1 will not be a session variable so the form field is empty. If param1 was not passed with the original call then it will be NULL and the form field will be empty. If it was passed then the default value of the field will be the name held in the session variable.

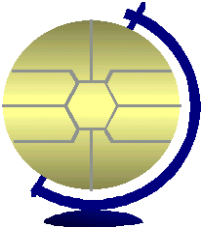
```
<% @ LANGUAGE=VBSCRIPT CODEPAGE = 1252 % >
```

...

```
<% if Session("param1") = False Then %>
newContent += "<input type='text' name= 'name'><BR>"
<% elseif Session("param1") = "NULL" Then %>
newContent += "<input type='text' name= 'name'><BR>"
<% else %>
newContent += "<input type='text' name= 'name'
value=<%=Session("param1")%> ><BR>"
<% End If %>
```

Appendix 2 - Typing into windows

It is also possible to set up a system whereby values can be *typed* into specified windows. A Registry key cardlite/AutoString holds strings denoting a unique value held in the Text Field of a window, and values indicating what text is to be typed into that window when it appear. For example if the string name is "Enter Network Password" (the quote characters are necessary), and the value is %d/%a%t%p then when a window with the words 'enter network password' in the title the following will be typed into that window bcc/Bill Smith<TAB>password<TAB><ENTER>, assuming bcc is the Domain value, Bill Smith the NT Name, and password the NT Password value. %t inserts a TAB character, and a TAB character and ENTER character are added at the end. This is controlled by the autologon registry setting in Program Administration.

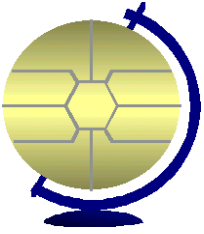


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Appendix 3 – Registry Values

Registry keys used by CardGuard, CardLite and GAUGE

[HKEY_CURRENT_USER\Software\cardlite]		
autologon	True/False	Typing into windows enabled when this is True
autogranularity	1000	1 second delay between looking for windows to type into
Autoloop	20	20 loops delay when window has been typed into successfully
Timeunits	0-9999	No of units on current card
Gauge	0-3	Controls working of charging gauge
Cardguard	True/False	If true then cardlite acts as CardGuard
Chargeunits	0-9999	No of charge units on current card
Username	Text	Name of current user
Caption 1/2/3	Text	Captions for welcome screen
KeepAppsOpen	0-1	If 1 then applications are not closed between cards
Mins	1-10	When timeunits below this value the gauge will flash
Gauget/l	0-nnnn	Position of gauge
Gaugetime	1-1000	Gauge timer
Pos	Top	Initial position of gauge window
KeepString	Text	Keep Applications open prompt
Charging	True/False	If True the charging is enabled
Hiding	True/False	If True the grey screen is absent
Nopasswords	True/False	If True the passwords are not used
Comport	1-4	Comport for serial readers
Gaugetime	1000	Granularity of gauge
Docad	0/1	If 1 keep the C-A-D stopper
Cserno	Nnnn	Current card serial no
Errormessage	Text	Text of error message
Exlog	True/False	If true then extended logging is set
Oneoffdebit	N	If set then the amount is immediately debited from the current card
Wallpaperon	True/False	If true and clite.bmp exists, clite.bmp replaces the grey screen
Prompt	Insert ID Card	Initial screen prompt
Promptop	264/nnn	If 264 the prompt is centred, else this is the top value
Promptleft	Nnn	If the top is not 264 then this is the prompt left value
logexplorer	True/False	If True then each page IE visits is logged to IELOGFILE.TXT
Servaddr	Nnn.nnn.nnn.nnn	Address of server to request services
Workstation	Text	Identifier of remote workstation
Servicemenu	Text	Program address to handle requests



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[HKEY_CURRENT_USER\Software\cardlite\Endgroup]	Process to run at end of group
Process name	

[HKEY_CURRENT_USER\Software\cardlite\holdopen]	processes to keep running at end
Process name	

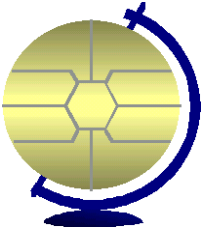
[HKEY_CURRENT_USER\Software\cardlite\group]	processes to run at session start
123456	notepad john.txt
125	\D:\Program Files\Plus!\Microsoft Internet\IEXPLORE.EXE\" http://aria/index.asp?xname=%1
1234	notepad

[HKEY_CURRENT_USER\Software\cardlite\Rates]	multiplier for registered apps
Netscape	5
Notepad	2
Defrate	1
Wordpad	0

[HKEY_CURRENT_USER\Software\cardlite\Rates\123]	Rates group for group number 123
Netscape	1

[HKEY_CURRENT_USER\Software\cardlite\AutoString]	
\ "ENTER NETWORK PASSWORD \ " = "%	%d/%a%t%p
\ "Enter System Password \ " = "%	%d/%a%t%p
\ "Enter Password \ " = "%	%t

[HKEY_CURRENT_USER\Software\cardlite\validgroup]	Group numbers here mean only cards with these groups will be valid
1	
2	
125	



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Appendix 4 – Logfile File Structure

Each card usage is recorded in the file logfile.txt.

Logfile.txt looks like the sample below.

```
Supervisor on at 20/05/98 15:24:19,ran Exit,off at 20/05/98 15:24:22
test1(4/0) on at 20/05/98 15:32:58,ran Netscape (NF),off at 20/05/98 15:33:04 (4/0)
{ The (4/0) at the beginning signifies charging is enabled and this is the time and charge
value. The (NF) signifies that No Funds were available to run Netscape . The (4/0) at the
end signifies the time and charge on the card at the end of session. }
test1(4/0) on at 20/05/98 15:33:06,ran Notepad,off at 20/05/98 15:34:12 (3/0)
{ Note one minute of time used }
Supervisor(100/100) on at 30/05/98 13:50:53,ran Exit ,off at 30/05/98 13:50:57 (100/100)
Supervisor on at 30/05/98 14:03:55,ran Exit,off at 30/05/98 14:04:00
```

```
{An extended version of the logfile may be created}
test1(4/0) on at 20/05/98 15:33:06,ran Notepad,off at 20/05/98 15:34:12 (3/0) 36068 1
{ the last two fields can then be easily extracted using supplied utilities and used to
produce a total of timeunits between specified dates, the penultimate field being a date
value (number of days since 31/12/1899)}
```