BACKUP SOLUTION 2005

The following guide is to advise both CSEs and the Service Centre staff on the new backup process that is being deployed on new Galileo Leased Equipment and for existing Galileo XP leased equipment that is having Retrospect removed.

Retrospect is no longer being deployed on Galileo Leased Equipment.

The following explains the way the new process occurs on the server each night. This solution is being retrofitted into our existing XP leased equipment sites with the aim to remove Retrospect from all agencies in the near future.

The files are available at http://support.galileo.com/gsc/backup.htm

These files are on the new equipment being shipped from HP since the 20th March 2005.

The backup process relies on the following 9 files in these locations:

1. C:\galileo\backup\atCommand - MON FRI.bat
2. C:\galileo\backup\atCommand - MON SAT.bat
3. C:\galileo\backup\atCommand - MON SUN.bat
4. C:\galileo\backup\Backup.bat
5. C:\galileo\backup\Cct_back.cmd
6. C:\galileo\backup\FolderList.bks
7. C:\galileo\backup\Lastlog.txt
8. C:\galileo\backup\Prompts.vbs
9. C:\galileo\backup\log\backup01.log

If converting a site from Retrospect visit the above mentioned site and select the "backup kit". As the file is small it can be run directly from the site.

The files will unzip themselves to the correct locations automatically.

New equipment, and converting sites, only require one step customisation during the installation.

If the agency operates MON to FRI, MON to SAT, or MON to SUN, double-click on the appropriate "atCommand bat" file in the Backup folder. This will set how often the backup is to occur.

Converting sites:
Removal of Retrospect via Add/Remove programs is required during a coversion.

Important changes:

With the new way of backing up some fundamental changes have occurred.

1. Tapes are still labelled, but any tape will work any day of the week.

2. If a tape is not in the machine or the machine is switched off at 11:30pm will automatically skip the backup, whereas Retrospect will "wait" for the missed event.

3. If, say an agent was operating Monday to Friday, the old procedure was to remove the "Friday" script from Retrospect, so that
   on Monday they put the Monday tape in
   on Tuesday they put the Tuesday tape in.. etc
   on Friday they put the Saturday Week 1or 2 or 3 tape in.

   Now, on Fridays, it will say to put the Friday tape in.
   Therefore some sites do not have a "Friday" tape. They can simply use a Saturday tape.

   These sites won't be prompted for a Saturday anymore.

4. There are no Week 1, Week 2 etc cycles. Agents can manually continue rotating their last backup of the week on these Saturday tapes if they want.

   Alternatively, they can change the label of one tape to Friday and call the others "spare" and save them if required.

5. One a machine is converted to the new process, the old tapes with the "retrospect format" will not be readable on the new machines.

6. Each day the log file of the previous nights backup will be open on screen. Agents cannot miss the last log file as they will need to close this daily.

So how does it all work

File 1 or 2 or 3
The AtCommand.BAT file will automatically remove any other schedules and insert one new one.
Care must be taken that "non Galileo" scheduled items are not erased. The AtCommand for MON
to FRI is reprinted here:

```
@ECHO OFF

REM ....Running this atcommand.bat deletes all current AT commands before recreating a new one.
REM ....This is the AT command which runs every day of the week, edit the active
REM ....command according to the days of the week that the backup should run. ( eg remove ,Su )
REM ....AT 12:10am /Interactive /Every:M,T,W,Th,F,S,Su C:\Galileo\Backup\backup.bat....

AT /d /y
AT 11:30pm /Interactive /Every:M,T,W,Th,F, C:\Galileo\Backup\backup.bat

AT

Echo.
Echo.
Echo. Check that the above command reflects the days that you want the backup to run
Echo. If not, edit atcommand.bat and run it again
Echo.
Echo.
Pause
```

Line 8   erases existing AT schedules.
Line 9   inserts the new schedule.
Line 11   displays the new s chedule
Line 15/16   display a prompt to ensure that the new displayed AT is correct.
Line 9   requests the operator closed the panel via the space bar, after confirming that the displayed schedule is
                correct.

Nightly at 11:30pm the schedule will run.

Each Night at 11:30pm

File 4.

The AT schedule calls on the BACKUP.BAT file which is reprinted here:

```
@echo off

start /wait c:\galileo\backup\cct_back.cmd

C:\WINDOWS\system32\ntbackup.exe backup "@C:\Galileo\backup\FolderList.bks" /d "Galileo Backup"
/v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um

cd "%UserProfile%\Local Settings\Application Data\Microsoft\Windows NT\NTBackup\data"

FOR /F "tokens=*" %%A IN ('DIR /B /OD') DO SET LastFile=%%~fA

copy "%LastFile%" C:\Galileo\backup\LastLog.txt

copy "%LastFile%" C:\Galileo\backup\Log\

start C:\Galileo\backup\LastLog.txt

start c:\Galileo\backup\Prompts.vbs
```

File 4

```
Line 3   start /wait c:\galileo\backup\cct_back.cmd
```

This line calls the CCT_BACK.CMD file.

Note: The second function on line 3 is to "**/wait**" until the CCT_BACK.CMD file finishes. Because of this wait step, sites without CCT can have this line included. All sites will therefore have identical backups irrespective of having CCT or not.

File 5

```
C:\Progra~1\Galile~1\CrossC~1\SERVER\DBbackup -y -x -c "UID=dev;PWD=dev" C:\Galileo\Database\Backup

exit
```

This file contains the request to replicate CCT database from the "live" location to the C:\Galileo\Database\Backup. At the end of the request an EXIT statement that closes this request and returns the focus to FILE 4; The BACKUP.BAT file.

WARNING:
If the site still has CCT 2.5, you must change the C:\Progra~1\Galile~1\CrossC~1\ back to C:\GALILEO\CCT
Failure to do this will let the backup process "believe" that the site does not have CCT and will continue without replication the database. Therefore never backing up CCT.

File 4

```
Line 5   C:\WINDOWS\system32\ntbackup.exe backup "@C:\Galileo\backup\FolderList.bks" /d "Galileo
         Backup" /v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um
```

Returning to BACKUP.BAT, the next line is run. It is displayed here over two lines, but is actually only one line with word wap switched on.

This line does 3 things so each is broken down as follows:

File 4

```
Line 5   C:\WINDOWS\system32\ntbackup.exe backup "@C:\Galileo\backup\FolderList.bks" /d "Galileo
         Backup" /v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um
```

```
C:\WINDOWS\system32\ntbackup.exe backup
```
This launches the NTBACKUP.EXE software that is part of the Microsoft operating system.

File 4

```
Line 5   C:\WINDOWS\system32\ntbackup.exe backup "@C:\Galileo\backup\FolderList.bks" /d "Galileo
         Backup" /v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um
```

```
"@C:\Galileo\backup\FolderList.bks"
```
This section of the line calls on another file which lists <u>what to backup</u>

File 6

```
C:\Galileo\Database\
C:\Users\
```

The FOLDERLIST.BKS file can be opened and viewed in NOTEPAD
C:\Galileo\Database is where the CCT database is replicated to.
C:\Users contains all S:\ common directory and Z:\UserX directories.

File 4

```
Line 5   C:\WINDOWS\system32\ntbackup.exe backup "@C:\Galileo\backup\FolderList.bks" /d "Galileo
         Backup" /v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um
```

```
/d "Galileo Backup" /v:yes /r:no /m copy /j "Galileo" /l:s /p "Travan" /um
```
These switches and settings control the NTBACKUP process. With these switches it becomes fully
automated and will complete without prompts, or user intervention.

The Actual backup to tape happens at this point of backup solution.

File 4

```
Line 7   cd "%UserProfile%\Local Settings\Application Data\Microsoft\Windows NT\NTBackup\data"
```

Now that backup tape has finished and the data is on the tape line 7 of the BACKUP.BAT file
comes into play.
NTBACKUP.EXE automatically creates a summary log file in different areas of the hard disk
depending on who is logged in at the time and what service packs are installed.
The function is the change to the appropriate directory.
CD is the DOS command to change directory.
%UserProfile% will select the appropriate users location which has the backup log in it.
It may be any of the following:
> c:\Documents and Settings\Administrator\
> c:\Documents and Settings\Network Service\
> c:\Documents and Settings\System Service\
> c:\Documents and Settings\User1\

Server 2003 operating system is different again.

All operating systems use the same extension:
```
Local Settings\Application Data\Microsoft\Windows NT\NTBackup\data"
```

Now the computer is in the location of the most recent backup log.

File 4

```
Line 8 FOR /F "tokens=*" %%A IN ('DIR /B /OD') DO SET LastFile=%%~fA
```

This line of the Backup.bat file "reads" the most recent log file created.

It then stores this information, in Memory, in a space called "LastFile"

The original of the backup log is left in the NTBACK location.

File 4

```
Line 10 copy "%LastFile%" C:\Galileo\backup\LastLog.txt
```

This "LastFile" information, which is in memory, then locates the LastLog.TXT file in the C:\GALILEO\BACKUP\ folder and, deleting the previous information, adds this LASTFILE information, to the LastLog.TXT file.
This is the 7th file in the installation. It is blank on installation and will be populated with the first cycle is completed.

The C:\GALILEO\BACKUP\LASTLOG.TXT file is only a copy of the backup log.

File 4

```
Line 12  copy "%LastFile%" C:\Galileo\backup\Log\
```

LastFile in memory also places a complete copy of the log file in the C:\Galileo\Backup\log\ folder.
This folder only retains the last 10 backups.
The naming convention is **BACKUP01** thru **BACKUP10**
The way to find the most recent file is not the name, but the date modified.
The 9th File installed during the installation is a blank copy of a file. This blank is required as part of the installation only. It will be replaced within 10 cycles.

File 4

```
Line 14  start C:\Galileo\backup\LastLog.txt
```

The Backup.Bat file now opens the Lastlog.txt file and displays this copy on screen for the travel agent staff to read in the morning.

File 4

```
Line 16  start c:\Galileo\backup\Prompts.vbs
```

A file called Prompts.VBS is now launched
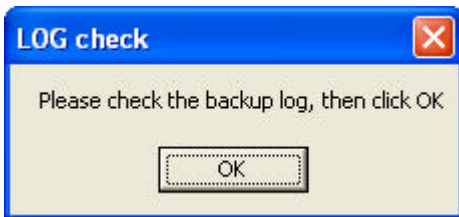This is the 8th File in the installation.

File 9

The Prompts.VBS file displays the following on screen.

Following is the Agent copy two page copy of what to check for each day including an example copy of the actual backup log.
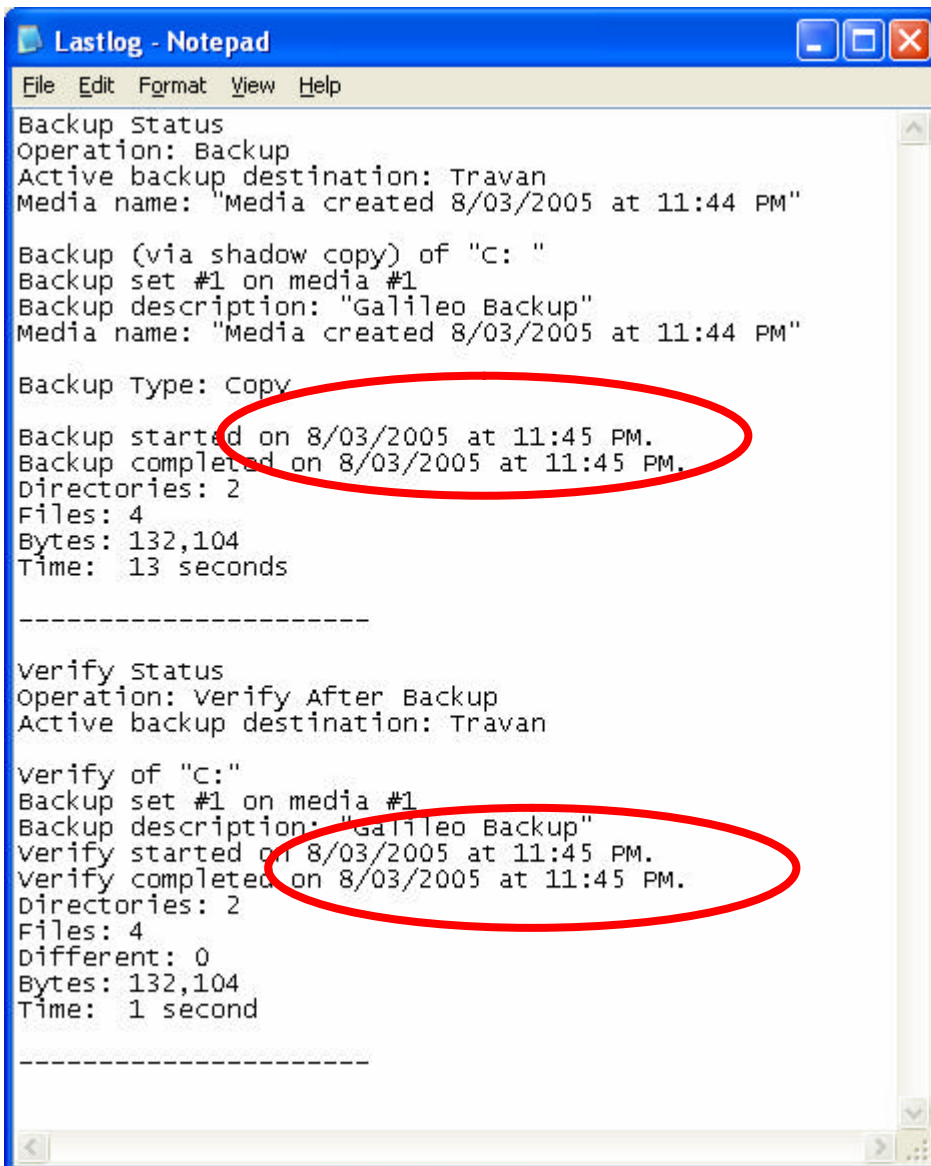
The backup process in the Galileo leased equipment is scheduled to commence at 11:30PM each day.

The next morning the following will display on screen.

The copy of the last automated back up log will also display on screen.

Ensure that last nights information appears in the backup and verification log.

Close the log file after confirming that the Start and Complete times were for last night.

Having then clicked OK on the Check Log a prompt will display reminding you to swap tapes.

Place the tape requested in the machine and return last nights tape to your safe.

Click OK on this screen to confirm that the new tape is in the machine.

The system will automatically reset itself for the next day.