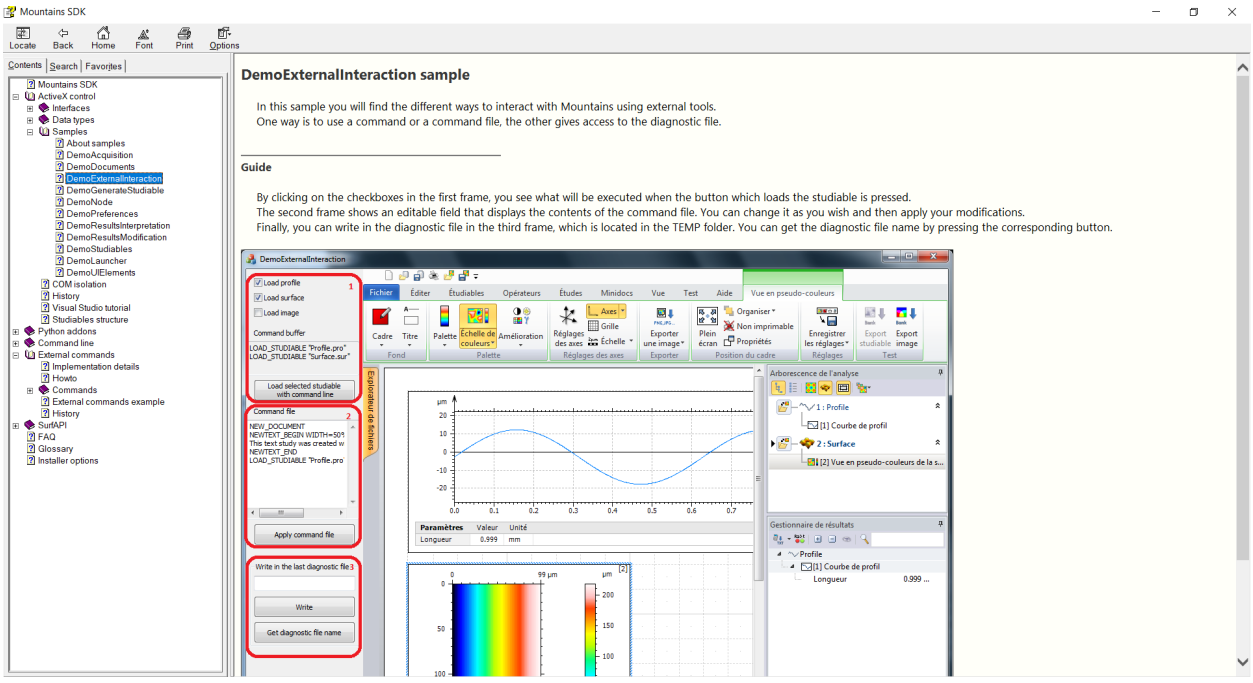
Mountains SDK

ActiveX control	How to use the application as a component within another software.
Python addons	How to write and integrate Python-based addons.
Command line	How to configure the application on start-up.
External commands	Allow external programs to pilot the application through a dedicated syntax.
SurfAPI	Library of functions to read/write Digital Surf file format used to store measurements.

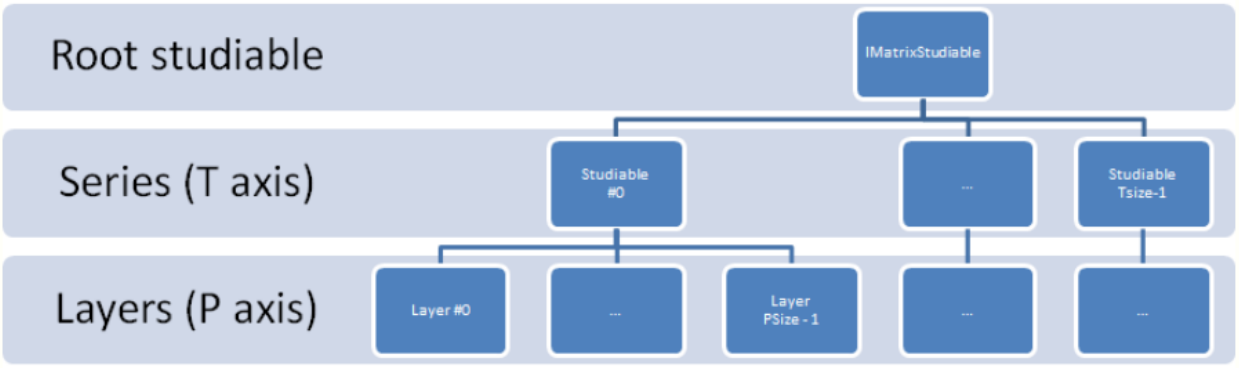
❑ **ActiveX control** ;

- Mountains version 8 requires Windows 7 or above OS with 64bit only
- Samples (with their source code) are available on demand. Contact: support@digitalsurf.fr



- Mountains can manage different studiables:
  - From a simple profile, to a surface, to a series of surfaces, and up to force volumes.

- All these different studiables store data in different ways, but most of them can be accessed through a single interface:
    - IMatrixStudiable



- Profiles and Surfaces can be directly accessed in root because they don't have any sub-studiable
    - T size, P size = 1

❑ **Python Addons** ; script can handle several types of studiable (profile, surface, etc ...).

- Features
    - Custom operators
        - which take a studiable as input and return a new studiable as output
    - Custom parameters
        - which are displayed in the table of parameters study like any other standard parameter
    - Custom reserves
        - Can have its own display and calculation of parameters
- Tips
    - The script files must be encoded and saved with utf8 encoding

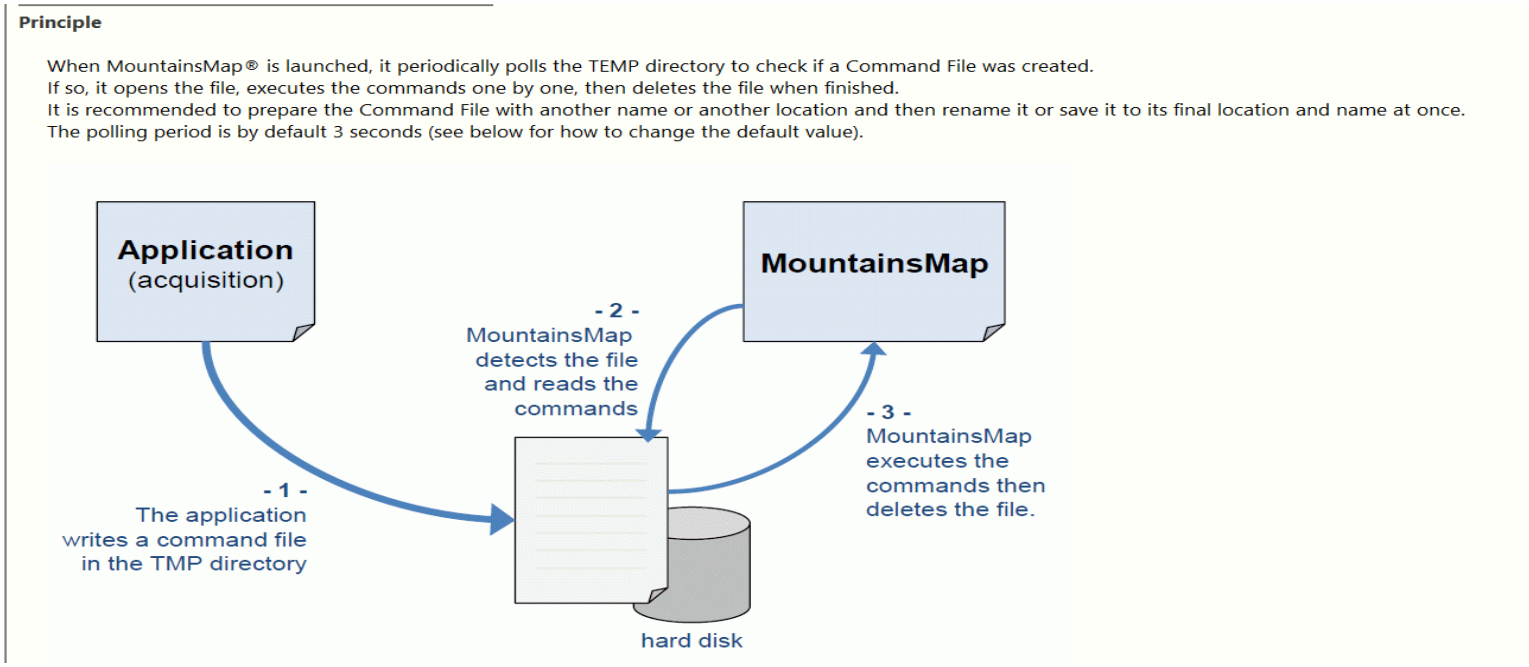
    - Python uses the indentation to determine the end of a code block (function, loop) - Don't mix the tab character and blank spaces for indentation
- The Python scripts are scanned, then executed, during the startup of the application
- Storing the python script in the location
    - "<*Mountains folder*>\Python\Lib\addon"

❑ **External commands** ;

- Allow an application to command MountainsMap using a dedicated syntax

★ Automate tasks such as loading a file and applying a template document on it.

★ It is particularly useful for acquisition programs that can automatically send newly measured files into MountainsMap



★ By default, Mountains polls every 3 seconds to see if a Command file is available

★ Once executed the file is destroyed by Mountains

HowTo

How to create a Command File:

1.Create a text file named "mountains.log"
2.Write commands into it
3.Save it in the TEMP directory

The TEMP directory location may vary depending on the Windows version and user settings.

Windows XP: `C:\Documents and Settings\<user name>\Local Settings\Temp`
Windows Vista or above operating system: `C:\Users\<user name>\AppData\Local\Temp`

Which commands are available?

NEW_DOCUMENT

will start with an empty document and, if necessary, will close the previous document.

LOAD_STUDIABLE <filename>

will load the file and display its image on the document.

Examples:

```
LOAD_STUDIABLE "myprofile.pro"
LOAD_STUDIABLE "c:\data\2001\may\sample5.sur"
```

APPLY_TEMPLATE <filename>

will apply a template document to the loaded data.

Example:

```
APPLY_TEMPLATE "c:\templates\step height.mnt"
```

List of available commands ...

★How to do this is described in the picture

★Once the execution of mountains.log text file the resulting log file should be in the same directory as depicted in the below picture

Result file

When all commands in the Command File have been executed, a status line is appended to the file named `volcanyon.log` located in the same directory as the log file.

The status line is

`LOG_FILE_OK ( YYYY.MM.DD hh:mm:ss )` if there was no error or

`LOG_FILE_ERROR ( YYYY.MM.DD hh:mm:ss )` if one command returned an error and aborted the execution of further commands.

❑ **Surf API** ;

- Module offering convenient functions to read/write files formatted in the SURF format
- Surf API is composed of
    - A "C" file to include in your source code, surfapi.h
    - A Win32 or x64 DLL (depending on which version of the application you installed), surfapi.dll

➔ Reference :-