

Format Files and HTML Files

In **newsletter Vol. 01, No. 03** the flexibility of using format files to export data in a variety of formats was described.

Format files are created using the Format Manager software – it is installed automatically with SKI-Pro. If you have never used the Format Manager or wish to learn more about the Format Manager, then read the manual **Getting Started with the Format Manager** – this teaches you how to create a format file step by step.

Hundreds of System 500 users are using format files to export data from both SKI-Pro and directly from the sensor in hundreds of different formats. These include GSI formats, Geodimeter formats, Sokkia formats, Zeiss formats, a whole variety of formats to export data into specific CAD packages and baseline adjustment software.

Many users also create “report style” formats – where data is exported into a format which is then used as a record of the completed survey.

But have you ever considered producing an **HTML** file using a format file...

HTML Files

HTML (HyperText Markup Language) are text documents interpreted by web browsers (such as **Netscape** and **Internet Explorer**). When you log onto any web site, what you are doing is downloading an HTML file which is then “read” and displayed by the web browser software.

What makes HTML documents functional are the codes that are inserted throughout the text, which in turn tell a computer's web

browser software how the document should appear and behave on the screen.

All the clever graphics, links to other web sites, background pictures, fancy text and tables and all the other features associated with web sites are simply contained within the HTML text document.

There is not space in this newsletter to describe how HTML works - a useful introduction to HTML language can be found on this site -

www.sunsite.ust.hk/edweb/html01.html.

It is worth a visit to this site to get a basic understanding of HTML before you start to create your own “HTML format files”.

HTML documents are normally created automatically using an HTML editor. (A simple HTML editor – **Front-Page Express** – can be downloaded by clicking [here](#) – this may be useful for you to further understand how HTML works. A small tutorial on how to use Front Page Express can be found on this site -

www.esc14.net/esc14/howto/web_fpexpress.html)

Alternatively, HTML documents may be typed in using a simple text editor – this is how it is possible to make a format file which produces a HTML format. Simply create a format file which reproduces the required HTML format.

Decide What You Want

Before writing the format file, we first need to decide what data we want to export and how we want our completed survey to look in the web browser.

Our surveyor wishes to export the following from SKI-Pro:

Project details: Name and date.

Co-ordinate system details: Co-ordinate system name, transformation, ellipsoid and projection name.

Transformation details: Points used in the transformation computation, residuals of the transformation and the match type. He wishes this data to appear in a table format.

Point information: Point Ids, co-ordinates, code and code description. This data must also appear in a table format.

Our surveyor also wants background wallpaper and his company logo to appear in the top right-hand corner next to the Swiss flying flag. He wants a link to Leica Technical Support in the document and also a “return to top” link at the bottom of the document. He also wants the data to be presented in “nice” colours.

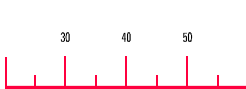
Additionally he wants to be able to directly download the surveyed data and format file by clicking on a link in this document.

Is all this possible from a format file? Tables, links to web sites, downloading data, company logos, background wallpaper, flying flags and nice colours? All from a format file? Yes it is!! Continue below.

Create the HTML Document

Before starting to create the format file sketch out on a piece of paper how you wish the data to be presented.

Once the idea is clear in your head it is then easiest to



first create a “dummy” HTML document using a text editor. This helps to plan how the data should look and how the HTML document will look and ultimately makes the format file easier to create.

For this relatively simple HTML document we can consider it in several stages. If you have no understanding of HTML it is very much recommended that you now read the link given earlier.

Text Styles: The following HTML code sets up the text styles to be used in our document. The size of text and colour is defined – one text style is also underlined.

```
<html>
<style type="text/css">
<!--
h4 {font size:20pt; color:#000088;
text-decoration:underline}
h5 {font size:12pt; color:#006400}
h6 {font size:12pt; color:#000088}
#h5 {font size:12pt; color:#006400}
#h6 {font size:12pt; color:#000088}
/-->
</style>
```

Wallpaper, Company Logo and link to Leica Technical Support: The next thing to do is to create the links to the wallpaper, flying flag and company logo. You can create your own wallpaper in any simple graphics package (such as Paint Shop Pro) and most people have their company logo in electronic format. The flying flag is a .gif graphic freely available on the internet.

Note, the wallpaper, flag and logo are simply links within the HTML document. This HTML document assumes that these graphics will be found in the same directory as from where the HTML document will be stored.

Also in this section is the hyperlink to Leica Technical Support. Of course, you could

have a link to any other web page – your company home page for example.

```
<BODY background="background.gif">
<IMG align=right
alt=Leica Logo src="leica.gif">
<IMG align=right src="flag.gif">
<p>
<a href="http://www.leica-geosystems.com
/support/index.htm">
Click here to contact Leica Support</a>
```

Job and Co-ordinate System Information: We now need to think about the actual survey data. The following HTML code prints the job and co-ordinate system information. Note how the different text styles are used.

```
<h4>Job Information</h4>
<span id="H6">Job Name: </span>
<span id="H5">Sample RT</span><p>
<span id="h6">Date: </span>
<span id="h5">27:06:2001</span>
```

Also, you should now start to be thinking about the export variables to use within the format file – we need to use **Job Name, Co-ordinate System Name** etc.

Transformation Information and Point Information: We need the transformation and point information to appear in tables.

Once more, refer to a book or web sites to fully understand how tables can very easily be created in HTML and how data is presented within these tables.

The HTML code below shows only a section of the whole HTML document relating to the transformation information.

```
<h4>Transformation Information</h4>
<table border>
<colgroup width=200 span=6 align=left>
<tr>
<th><h6>System A Point ID</th>
<th><h6>System B Point Id</th>
<th><h6>Residual E</th>
<th><h6>Residual N</th>
<th><h6>Residual H</th>
<th><h6>Match Type</th>
</tr>
```

Again, you should be thinking about what export variables should be used and how the format file should be created.

Create the Format File

Now we have created the HTML document we need to make a format file such that when the format file is used, this same HTML document is produced.

This needs careful consideration, because you must ensure that the different sections of the HTML document are created by the correct sections of the format file.

For example, the text style definitions and the wallpaper, company logo and link to Leica technical support should only appear once at the top of the document. This means this section must be written into the **Header** section of the format file.

The table header information must appear only once, immediately above the actual surveyed data – this section must be written into the **Fixpoint Header Block** section of the format file.

The actual surveyed data - the point ID, co-ordinate and code information - must be repeated for each point. This section must be written into the **Fixpoint Export Format String** section of the format file.

It is difficult and would be confusing to describe here how to create the format file. All that needs to be remembered are the basic principles of format files – they are a mix of text and export variables with headers, block headers and footers. It is described below how you can download this format file.

Access the Web Page.

Click [here](#) to access the final HTML document. From this document you can also click to download the data and format file used to create this HTML document. You will also download the company logo, flying flag and wallpaper graphic files.

Import the downloaded data into SKI-Pro (ensure to also import the attached co-ordinate system) and then export using custom ASCII export. Select to export the data using the downloaded format file and you will create the HTML document.

Ensure that the company logo, flying flag and wallpaper are in the same directory as the HTML document. Open the HTML document with any internet browser and see the results.

Note, you will need to use SKI-Pro V2.0 or above to completely reproduce this document. In earlier SKI-Pro versions, the co-ordinate system information is not supported. Also the co-ordinate system information is not supported on the sensor. You can still use this format file on the sensor or earlier versions of SKI-Pro – however, the co-ordinate system information will simply be missing.

Some Advice

If you start to experiment with creating HTML documents from format files, then take your time.

Learn a little about the HTML format, and carefully plan exactly what you need and how to achieve it.

It will certainly be an iterative procedure to get the results you want – but once the format file is complete, you simply use it over and over again.

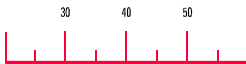
If you do not have a web browser, or are reading this newsletter as a printed document, then at the end of this newsletter is a screen shot of the final HTML document produced with the format file.

Remember

- Format files are extremely flexible and can be used to create a whole variety of formats.
- It is possible to create HTML documents using format files.
- HTML means **HyperText Markup Language**. HTML documents are text documents read and interpreted by web browsers.
- Take time to learn a little about the HTML format.
- HTML documents can contain different fonts, colours and styles, tables and links to graphics and other web pages.
- Plan carefully as to what you want and how to achieve it.
- The possibilities are endless...

Ideas for Future Newsletters...

If you have any ideas or wishes for topics that you would like to be discussed in a future newsletter, please contact your local selling unit or representative. These ideas can then be passed to Heerbrugg. Thank you.



Screen shot of the HTML document created with the format file

- yes it really was created with a format file!

[Click here to contact Leica Support](#)

[Click here to download the survey data, the format file and graphics](#)



Job Information

Job Name: Sample RT
Date: 07:02:2002

Coordinate System Information

Coordinate System Name: Hbg example
Transformation Name: Hbg example
Ellipsoid: Bessel (Flattening - 299.152813, Semi major axis - 6377397.155000)
Projection: Swiss

Transformation Information

System A Point ID	System B Point Id	Residual E	Residual N	Residual H	Match Type
B313	B313	-0.013	-0.009	-0.006	1
B215	B215	0.006	-0.002	0.003	1
TP214	TP214	0.008	0.014	0.002	1
B218	B218	-0.008	0.013	-0.006	1
TP306	TP306	0.008	-0.016	0.007	1

Point Information

Point ID	Easting	Northing	Height	Code	Code Description
9001	766852.457	251156.287	463.633	EB	EDGE OF BITUMEN
9002	766848.239	251157.309	463.720	EB	EDGE OF BITUMEN
9003	766843.530	251159.280	463.841	EB	EDGE OF BITTIMEN