

## Application Note

### Timestamped Line Output from Time Tagged Archives using STTP

**Recent SSR firmware versions have added a 'timestamped line' (TL) recording mode in addition to the raw and time-tagged archive modes. TL mode directly inserts timestamps into data as it is received, removing the need for post processing with STTP. It is intended as a simple solution for use in recording devices that produce text output (as opposed to 'binary'). Using STTP with a time-tagged archive may be preferred in some cases. See the SSR User's Manual for details.**

The SSR Time Tagged Parser (STTP) utility (since version 1.1) supports generation of simple timestamped line output from time-tagged archives. This application note describes the capability, which generally supersedes the Python script technique presented in application note AN001.

Many applications require time stamping of data from instruments that produce simple, line-oriented, text output. In some cases, the user would like to have a file that includes the output of the instrument with a timestamp prepended to each line. The SSR data loggers can be used for these applications.

When recording to a time tagged archive, the SSR associates all recorded bytes with the time they are received. As a result, all of the necessary information is available within the time tagged archive to associate time with larger groupings of data. That could be packets, or in the case of this application note, text lines. In this example, data recorded by the SSR is parsed by the updated STTP utility to generate timestamped lines. The steps for generating the desired output are:

- 1) Record data into a time tagged archive using the SSR data logger
- 2) Execute the SSR Time Tagged Parser (STTP) on the archive to generate the desired output.

The STTP parser, source code, and data files referenced in this application note are available in the archive *STTP.zip* on the SSR product pages at [www.slerj.com](http://www.slerj.com).

#### STEP 1

An instrument that produces line-oriented output measurements in the following format is recorded into a time tagged archive using the SSR-1. Each output line from the instrument corresponds to a data measurement, and measurements are made at 10Hz. The name of the time tagged archive file is *c1214736.dat*.

```
S D 0.0000134 kg  
S D 0.0000135 kg  
S D 0.0000135 kg  
S D 0.0000135 kg  
S D 0.0000136 kg  
...
```

## STEP 2

The STTP is a utility provided with the SSR data loggers to extract data from time tagged archives. STTP is a Windows™ console application that is executed from a command prompt. In this example, the command line used is:

```
sttp.exe -n test_out.txt -N "%m/%d/%Y %H:%M:%S." c1214736.dat
```

The output file contains the original lines with date and time prepended in the specified format.

```
02/03/2014 21:47:44.557 S D 0.0000134 kg  
02/03/2014 21:47:44.655 S D 0.0000135 kg  
02/03/2014 21:47:44.751 S D 0.0000135 kg  
02/03/2014 21:47:44.849 S D 0.0000135 kg  
02/03/2014 21:47:44.947 S D 0.0000136 kg  
...
```

Note that the format string is configurable and follows the convention of the standard C library function *strftime*. In fact, the string provided on the command line is passed directly to the *strftime* function in the parser. Additional details can be found in the *readme.txt* file in the *STTP.zip* archive.

## SUMMARY

When a line oriented data source is recorded into an SSR time tagged archive, timestamped line output can be generated using the STTP parser. If the time tagged archive is named *ttarchive.dat*, the following command will produce timestamped line output in the file *output.txt*:

```
sttp.exe -n output.txt ttarchive.dat
```

The STTP parser, source code, and data files referenced in this application note are available in the archive *STTP.zip* on the SSR product pages at [www.slerj.com](http://www.slerj.com).

<https://www.slerj.com/ssr-1.html>

<https://www.slerj.com/ssr-lc.html>

## REVISIONS

18 May 2019 – Added note referencing the timestamped line mode of recent SSR firmware versions.

19 Feb 2015 – Initial Revision