Advanced Tracker Technologies Inc.

Synel Direct Pre-Trieval

Setup and Operation

Overview

This document details the setup and operation instructions for the Synel direct-communications pre-trieval software. There is no information on either network setup within the clock or device programming. Please refer to the manufacturer documentation for your particular device model for instructions on how to setup the networking setting for the device and programming.

System Requirements

Windows 2000, XP, or 2003.
.NET Framework 2.0

The Synel Direct Pre-Trieval is not capable of posting or forcing calculations for any of the scans it processes. The application merely polls scans from the Synel device(s) and makes them available for All The Goodies to post and calculate.

Installation

The installation process requires nothing more than downloading the current version from the Advanced Tracker website and running it. Typically, installation packages will require a password which can be provided by your Advanced Tracker representative.

Setup

To access the Synel Pre-Trieval setup mode, create a shortcut to the main application executable (Synel.Exe) and append the word SETUP to the 'Target' value. For example:

```
"C:\Program Files\Advanced Tracker\Retrieval\Synel.exe" setup
```

There are two items which can be setup within the Synel Pre-trieval; Clocks and Post Retrieve Applications.

Clocks

The Clocks are the physical data collection devices which contain information on the connection details, where the collected swipes need to go and also how the application should parse the details from the information packets that the clock sends.

Name
Allows for a unique identifier for the terminal.

Time Offset
Can be set to skew the date and time on a terminal when the server running the Pre-trieval and the terminal reside in different time zones.

Address
The IP address for the terminal.

ID
The terminal ID, which is used when multiple terminals are daisy-chained together on the same IP address.

Port
The TCP port used to communicate with the terminal.

Auto Update Date And Time
Will set the date and time on the terminal when connected.

Enable This Clock
Toggle to enable or disable the terminal.

The next section details where the collected swipes will go. The two main options are MS Access 2000 / 97 or SQL Server 2000 / 2005.

> **MS Access 2000 / 97**
> When using Access as the database backend, you will be required to Browse to the folder on the network which contains the .MDB files for Employee Tracker. The Labor Tracker (LTP) setting should only be used when that application requires transactions from the Synel device.
>
> **SQL Server 2000 / 2005**
> When SQL Server is the database backend, there are a couple of fields to fill in. The Server is the instance name of the SQL Server on the network. You must also select either Windows or SQL Server Authentication. When using SQL Server Authentication, you must supply the SQL Server User ID and Password to use when connecting. The last item required is the Prefix for the data tables within the [Advanced Tracker] database.

The last section on the right side allows for entering or adjusting how the application will parse the packets which come from the terminal. A packet is broken into a Header and one or more Detail parts. Here's an example of a full packet and how it should be setup:

```
28023419112007A100  1234111418
```

First, we need to find the Header, which contains, among other things, the date of the scanning action at the terminal. The header is this part of the packet above:

```
280234 19112007
```

The length of the header is 14 characters and the date of the transaction is November 19, 2007. We can find that date in the bold area on the header above. Therefore the header portion of the clock setup would be:

```
Header                      Length = 14
Day          Start = 7      Length = 2
Month        Start = 9      Length = 2
Year         Start = 11     Length = 4
```

Now to find and parse the detail which contains the type of scan (IN or OUT), the badge of the employee and the time the scan occurred. There can be multiple details on a single packet, but they should all have the same characteristics so only 1 needs to be analyzed to get the information necessary to parse it. Here is the detail from our example:

```
A100  1234111418
```

Here we see the detail is 16 characters long. The first character can be discarded. The `100` denoted the type of scan, which can be `100` or `200` to denote a functionless scan, `201` to denote an explicit IN scan or `202` to denote an explicit OUT scan. The badge begins immediately after the scan type and may be padded with spaces if the scanned badge is shorter than the expected badge length. When padded badges are parsed out, the leading spaces get removed. So in this example the badge value is `1234`. Following

the badge is the time of day at which the scan occurred. We're only interested in the hour and minute values, which is `11:14 AM` in this example. There fore, our completed setup would be:

```
Detail                          Length = 16
Badge          Start = 5        Length = 6
Hour           Start = 11       Length = 2
Minute         Start = 13       Length = 2
```

Post Retrieve Applications

Post Retrieve Applications are child processes which will be called upon completion of polling and parsing of any setup terminals. The setup for a Post Retrieve Application requires three items: The Path is the full path and name of the application to call; the Working Directory is the folder which should be default when the application executes, and Arguments / Parameters can be filled in with any necessary command line parameters the application may require. This field can be left blank if none are to be used.

Operations

The Operation menu contains two sub-menu items; 'Poll" and "Run Post Retrieve Applications". These allow you to test the polling of the terminals and also test the execution of any setup Post Retrieve Applications.

Execution

Once the clocks and any post-retrieve activities have been setup, the entire process can be kicked off by simply executing the Synel Direct Pre-Trieval executable (Synel.Exe). This will poll all the clocks setup, then automatically call the post-retrieval application(s). The Synel.Exe can also be setup within Windows Task Scheduler for timed-execution.