AN-111: Commissioning Procedures

This document covers two recommended procedures for commissioning a site with a minimum of effort using the CIT software. These procedures assume the commissioning will be done in a staging area at your facility, not in the field. The procedures also assume you start with a spreadsheet which contains the identifying meter location data with each row containing all the information about that apartment. A spreadsheet of this template and directions can be found in our Resource Center under Tehama AN-111A Import Template 2104.csv.

Spreadsheet Data

At a minimum, each row of the spreadsheet you start with should have at least the Apartment #, and probably the Building #. The spreadsheet file then must be saved in a CSV (Comma Separated Values) format in order to be used by the CIT.

You can optionally add a number of extra pieces of information to each row including:

Meter type (Water/Gas/Electric)
Meter Style (Hot/Cold/Other)
Units (Gallons/liters/KWatt_hours/ccf/cf/minutes)
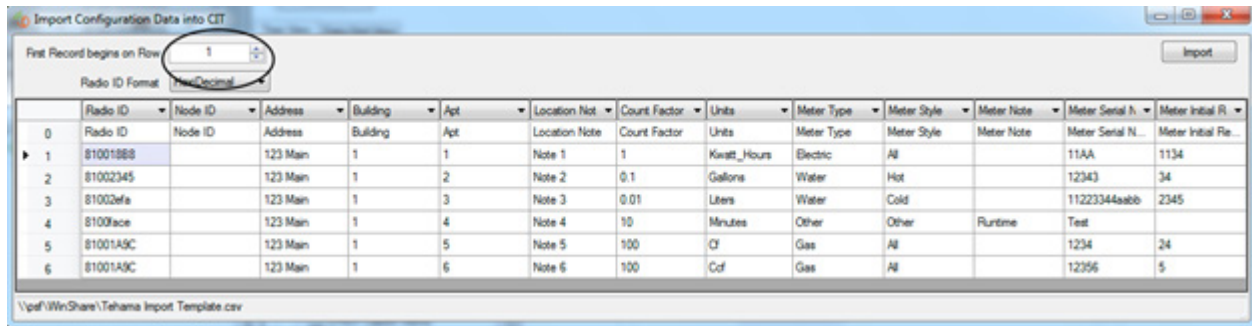Meter Note (can be used for Meter model for example)
Count factor
Meter Initial Reading

For most of these items, the values will be identical for every unit, so it is an easy task to copy and paste the common data to all rows.

The following can be used as a header template for your spreadsheet file. If you use these row headings, the CTI will automatically configure the column mapping.

Radio ID,Node ID,Address,Building,Apt,Location Note,Count Factor,Units,Meter Type,Meter Style,Meter Note,Meter Serial Number,Meter Initial Reading

When you import, the setup will look like the image below. Make sure the first record row starts at 1. You can click anywhere in Row 1 to easily set this.

AN-111: Commissioning Procedures

Adding the RadioID

At this point the spreadsheet contains everything but the association link between the apartment and the Tehama MDT RadioID. There are two options from this point to capture this data point and commission the MDT. The first involves importing the spreadsheet/CSV file into the CIT, then dragging and dropping un-commissioned MDTs to the selected row. The second involves using a bar code scanner to read each MDT's RadioID directly into a spreadsheet cell.

Drag and Drop Method

In this method, the spreadsheet/CSV file into which you have entered all information other than the RadioID is imported into the CIT. You are left then with a list of apartments in the Configuration Data -> Node View tab. To this table you will add MDTs as you power them up and they communicate with the DCAP.

Procedure:

- Start by powering up the DCAP and connecting to it with the CIT. Add the DCAP setup information like Site name, time zone, and Daily Report email recipients. Don't enter any Alert email recipients at this time as false alerts could be generated during this process.

- Next, power up a group of MDT units (we suggest seven which corresponds to one row in our shipping box). Give these about a minute to sync up to the network and report into the DCAP. Then, in the CIT, click on the *Get Monitor Data from DCAP* button (⬇) to verify that the MDTs can connect to the DCAP. From the Select Timespan window, choose the Last Hour to get the most recent data.

- The seven units will appear in the Network Topology area with yellow triangle symbols. These yellow symbols indicate they are un-commissioned.

- Click and Drag an MDT from the Network Topology window over to the RadioID cell of the apartment you wish to associate with this unit. The symbol for that MDT will change to a green circle. Set aside the commissioned MDT, label it as per your standard procedures (i.e. the apartment number) and turn it off.

- Repeat for the remaining MDTs that were first powered up.

- At some point before you finish the first group, you should turn on another group of MDTs and give them time to report in to the DCAP while you finish the first group. After doing this a few times you will learn the optimal time to turn on the next group of units.

- When you have completed the first group and the next group has had time to report in, click on the *Get Latest Monitor Data* button (⬇) to update the CIT with the new un-commissioned units.

- Continue this process until all the MDTs have been commissioned.

- The last step can be to commission the Repeaters, though this can be done in the field since the number of Repeaters needed and their locations won't be known until after the site is installed.

- Enter the Alert email recipients at this time.

- DON'T FORGET to save the data TO THE DCAP!

- Complete the Final Steps section below.

Note that the check box above the Network Topology view, "Show only Un-commissioned Units" should be checked during the commissioning step. Checking this option hides all the commissioned (green circle) MDTs from the topology view, so you only see those units waiting to be commissioned. No need to scroll through the list to find the new yellow triangle units.

Summary Highlights:

Commission seven or so MTDs at a time.

Do Repeaters last, if at all before going to the field.

Don't enter alert emails until the end

Bar Code Scanning

The alternative method to dragging and dropping is to add the RadioID to the spreadsheet before importing the CSV file into the CIT. The RadioID can be hand typed into each row, however it is very easy to make mistakes this way, which will lead to much frustration out in the field. Therefore Tehama is putting a simple Code-128 bar code on the outside label of all units shipped after April 1st, 2013. This type of bar code is easily read by inexpensive hand-held USB scanners. Most of these act like keyboards by entering the scanned data directly into the active spreadsheet cell. One bar code scanner that we have tested is the TaoTronics TT-BS003 or TT-BS005, available for about $40 on Amazon.com, though most every inexpensive scanner can read this bar code format.

This method offers a couple of advantages over the drag and drop method. One advantage is that the spreadsheet file becomes a complete record of the site commissioning information. Another advantage is that the MDTs need not be turned on and off as you commission the DCAP. This can save time, although some may want to verify operation of all components of their AMR system before deployment in the field.

Procedure:

- With your spreadsheet open, navigate to the RadioID cell for the apartment unit you are commissioning.

- Scan the MDT's bar code to accurately enter the RadioID into the spreadsheet. Set aside the commissioned MDT and label it as per your standard procedures (i.e. the apartment number). Note that labeling for each MDT can be pre-printed using the data in the spreadsheet file.

- Repeat the above step until all the units are commissioned

- Save the spreadsheet file as a CSV, and import it into the CIT. With this one import the Site is nearly 100% commissioned. Just follow the next steps and the job is done.

Final Steps

Regardless of the method used, a few remaining steps are still needed to fully commission the DCAP. All are done from the DCAP View tab.

- Enable the daily report and alarms. This is most easily done using the Quick Set buttons above the email recipient lists.

- Enter the email addresses for both Daily Report and Alert recipients.

- Upload the ReportGen script, especially if you have a custom one for your company.

- And finally, DON'T FORGET to save the data TO THE DCAP!