4.1.6 SERIAL LINKER

This **Linker** receives data from a number of popular external hardware scoreboard controllers. The external system provides information to **DataLink** by a physical **COM port** connection. (Section 4.3, Connecting External Devices, explains how to connect these devices so they can communicate with DataLink.)

DataLink supports popular external devices from several different manufacturers. The **Serial Linker** monitors the incoming data stream, and assigns specific values to unique DataLink key names. These values are then substituted for the corresponding key name entries in title pages. These special key names are listed by brand in Section 0.

Note: As the data supplied by various external systems differs, DataLink uses unique key names for each supported brand.

4.2 WORKING WITH KEYS AND VALUES

In this section we'll get into the details of working with DataLink for your live productions. We'll explain how to add DataLink **key names** to your title pages, and how these may be used in various ways. The quickest way to become familiar with DataLink is to dive right in and try it out.

4.2.1 TXT LINKER

As discussed back in Section 4.1, DataLink's **TXT Linker** pulls data from ASCII text files (.txt) residing in a specific (constantly monitored) folder. As this is arguably the simplest source available to DataLink, let's use it to demonstrate a few basics before continuing.

This monitored folder location varies depending on your operating system. The simplest way to find it is to use a shortcut in the Windows™ **Start menu**. Click **Start**, then the **Programs** link, and locate the NewTek>LiveText>DataLink folder. Click the folder *icon* inside that labeled **Open File Observer Folder**.

By default, this folder contains just a file named *example.txt*.

1. Double-click the text file icon to open it in your default text editor.

To supply usable values for **DataLink**, text files should contain nothing other than *key-value pairs*, arranged in the following format:

[key] = [value]

Key names from the file(s) will be available as **DataLink** entries in your **LiveText** title pages. The value you enter beside the key name in the text file is the actual information that will be shown when the page is displayed on output.

The sample file currently contains just two key-value pairs, as follows:

city = San Antonio
temperature = 98°

Note: Keys and values may contain punctuation and spaces.

2. Launch LiveText, if it's not already running. Note that you can move back and forth between the text editor (with the sample file loaded) and the **LiveText** window by pressing **Alt + Tab** on your keyboard.

3. Click the **Text** [T] tool button, click somewhere on the empty **Canvas**, and type "The current temperature is:"

4. Left-click outside that text object (to complete it), then move over to the right a bit and press the right mouse button. This will open a drop-down menu (Figure 49).

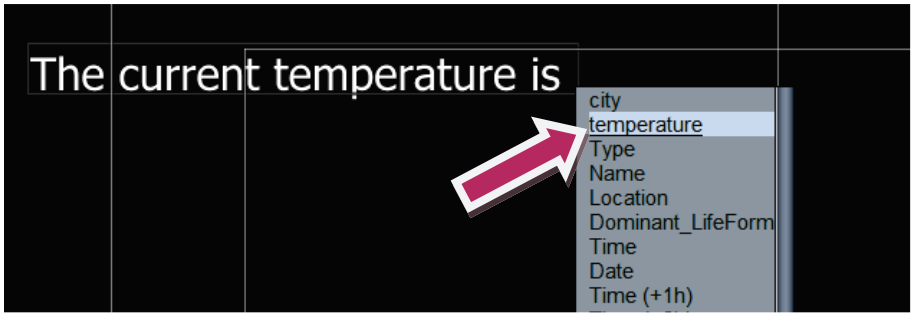

Figure 49

5. Select **temperature** from the list, and release the mouse button.

6. A new object is created containing the text % **temperature** %. This is how a DataLink key appears on the canvas in Text Edit mode (bracketed between percentage signs).

The keyword “temperature” was listed in the menu because it has been defined in *example.txt*, as we noted previously. Likewise, a value is assigned to “temperature” in that ASCII text file. Let’s see how LiveText displays that value.

Figure 50

7. Click the **Select** (Arrow) button in LiveText’s tool panel. The “temperature” key is immediately replaced by “98°”, the value currently assigned to that key in the text file.

8. Press **Alt + Tab** on your keyboard to switch back to the text editor. (If necessary, move it a bit to one side on the screen so you can see”2.0“on the LiveText canvas.)

9. Change the value assigned to “temperature” in the text file to “75°”, then pull down the **File** menu (in the text editor) and select **Save**.

As soon as you save the change to the text file, **LiveText** refreshes its display as well.

10. On a new line (below the “temperature = 75°” line in the text file), type:

    business = NewTek

11. Re-save the text file.

12. Now, click the **Text** [T] tool in **LiveText**. Right-click on the canvas, and notice that a new item appears in the drop-down menu options – “business”.

Let’s try something slightly different.

13. Press **Alt + Tab** to bring the text editor forward again, and delete all of the text in the file (don’t save the file, though).

14. Enter a new line of text as follows (enter your personal name for *your name*):
    My Name = *your name*

15. Select **Save As** from the **File** menu, and save the file using the file name *Names.txt*, then right-click on the canvas again – notice that "My Name" appears in the menu option list, even though it's in a different text file. **TXT Linker** watches for changes in *all* suitable files located in the observed folder.

Experiment with **TXT Linker** a bit more:

- Try applying a **Style** to DataLink key objects.

- Click the **Layers** tab, and double-click on a **DataLink** object name. Notice that this allows you to type in a custom name for the object. Press **Enter** on the keyboard to complete the operation; naming the layer does not modify the object on the canvas.

- Type a sentence in a new text object, then right-click *between* words in the sentence to *insert* a DataLink key into it – right in the middle of another text object (or select the characters of a word, and repeat the exercise to *replace* them with a DataLink key.

Let's briefly consider one (slightly more elaborate example) using the **TXT Linker:**

Suppose you regularly produce a half-time show featuring interviews with 8 to 10 different guests. You *could* create a **LiveText** project with 10 pages, and manually modify each page before every episode.

Or, you could prepare the pages *once*, and let **DataLink** update them all for you automatically every time! To do that, you could proceed as follows:

1. Prepare a simple text file similar to this one:

   guest1 = Bill E. Bob

   guest2 = Sam Houston
   guest3 = Dorothy Lamour
   … etc.

2. Go to the **Add Pages** drop-down menu in **LiveText**, and select a nice-looking lower third template (or make your own if you prefer).

3. Where the guest's name should appear, place the **DataLink** key "%guest1%".

Note: You may find it faster at times to directly type the key name on the canvas (between percentage signs) rather than using the drop-down menu. Either method will work just fine.

4. Clone the page as many times as necessary

5. Click the *second* thumbnail (no need to edit the first one) in the **Pages** column at right to select it for modification, and click the **[T]** button (to activate text entry).

6. Click in the DataLink key field on the **canvas**, and replace %guest1% with %guest2% Note that

7. Click the next page, and change the key to %guest3%, and so-on, until all done.

That's all you need to do. Before each episode, have your production assistant take a few moments to update the *guest.txt* file content, and the hard part is done. Afterward, simply load the **LiveText** project you created – each successive page automatically displays the correct name in sequence when displayed.

The other **DataLink** modules (**Serial Linker, Database Linker and Network Linker**) reference different data sources, but the process of creating title pages with DataLink key names is exactly the same as we have reviewed above.

Let's go on to consider the **Serial Linker**. Unlike the other two modules, **DataLink** depends on an external hardware connection to supply values for these keys. In the next section, we'll explain how to connect these external devices.

4.3 CONNECTING EXTERNAL DEVICES

THE STEPS IN THIS SECTION ARE MANDATORY IF YOUR INSTALLATION REQUIRES DATA FROM AN EXTERNAL HARDWARE SCOREBOARD CONTROLLER.

Naturally, for **DataLink** to communicate with an external data source, that equipment must be connected to the **LiveText** host system and powered up. As well, DataLink must be configured to find and use the connection. We'll discuss how to make and configure connections under this heading.