

[Tech Note 812](#)

Creating a Custom .NET Control in C# for Use in an Application Server Graphic

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Introduction

This *Tech Note* demonstrates creating a custom .NET client Control and then using it as an Application Server Graphic.

As a starting point for creating a .NET Client Control, a walkthrough from MSDN has been used: [Walkthrough: Authoring a Composite Control with Visual C#](#).

Next a property and an event was added to the custom client control. The complete solution is provided in VS 2008 and developed in C#.

After reading this *Tech Note*, you will be able to create your own custom control and use it in ArcestraA Graphic.

This *Tech Note* is presented in 2 parts:

- [.NET Custom Client Control Overview](#)
- [Using the Control in Application Server](#)

.NET Custom Client Control Overview

This custom control emulates a talking Alarm clock. Current Time is displayed in the GUI, and Alarm can be set or disabled.

You can the background and foreground color on the clock GUI. When the Alarm Set time equals the Current Time, a rectangle with the text **Alarm!** flashes and it speaks the wake up text defined by the AlarmText property.

You can disable the Alarm by clicking the **Disable Alarm** Button.

The Control's configurable Properties are:

- **ClockBackColor**: Background color of the clock.
- **ClockForeColor**: Foreground color of the clock.
- **AlarmSet**: Boolean – for Setting the Alarm clock
- **AlarmTime**: DateTime – for setting the Time for Alarm
- **AlarmText**: String – for setting up the Wake up text when Alarm goes ON.

The Control's configurable Events are:

- **talkingClockalarm**: This event is raised when Alarm Time is reached.

For a complete C# source code of the control with a Test Container project, download the [ctlClockLib.zip](#) file. Accessing the source code allows you to follow the MSDN walkthrough and see how a property and event is added.

Note: Use Visual Studio 2008 to review the source code.

Using the Control in Application Server

The Alarm Control UI looks like Figure 1 (below).

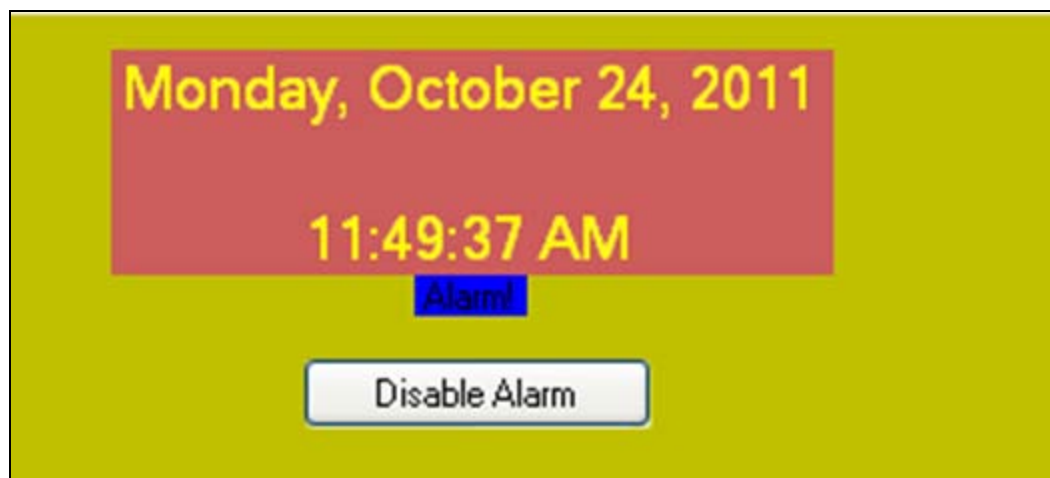


FIGURE 1: CUSTOM CLIENT CONTROL UI

Complete the following steps to set up the Control.

1. Import the Client Control dll by in the IDE by clicking **Galaxy -> Import -> Client Control**.

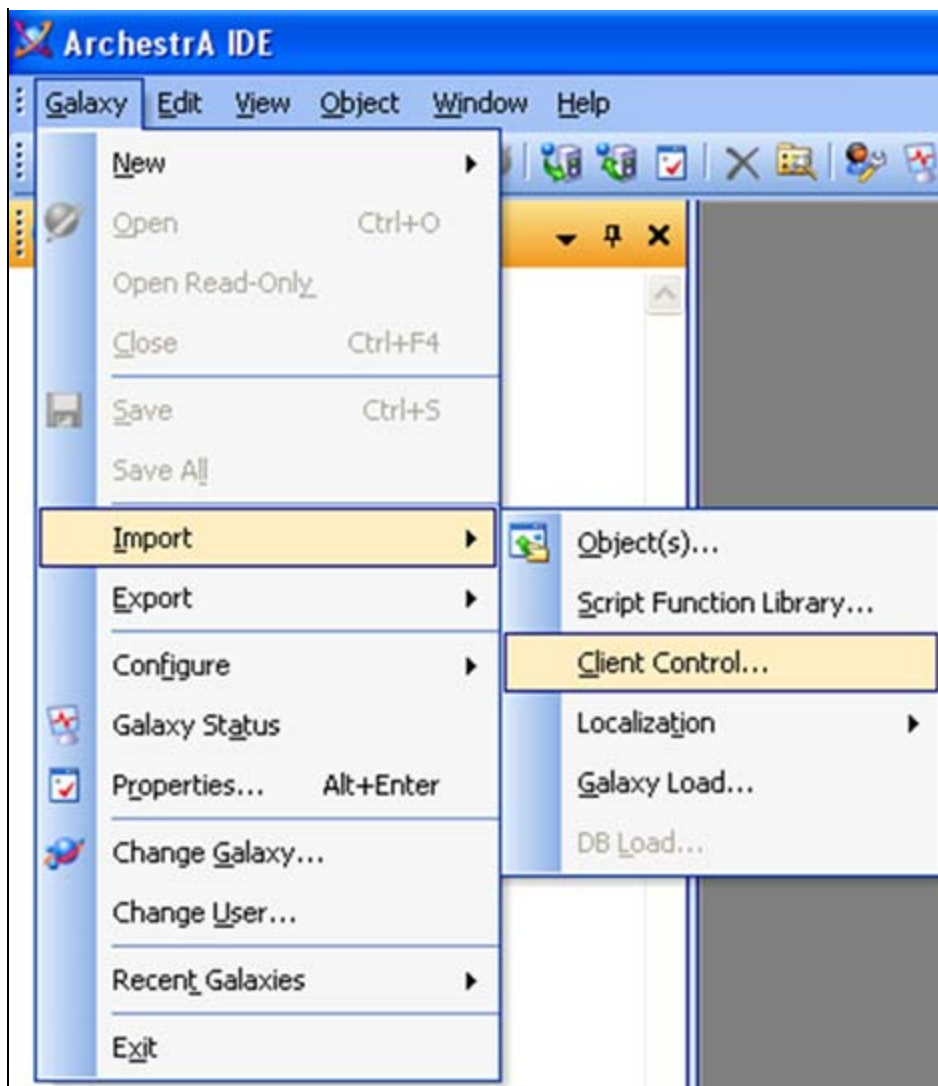


FIGURE 2: GALAXY > IMPORT > CLIENT CONTROL

2. Browse to the folder where you downloaded the DLL (Figure 3 below).

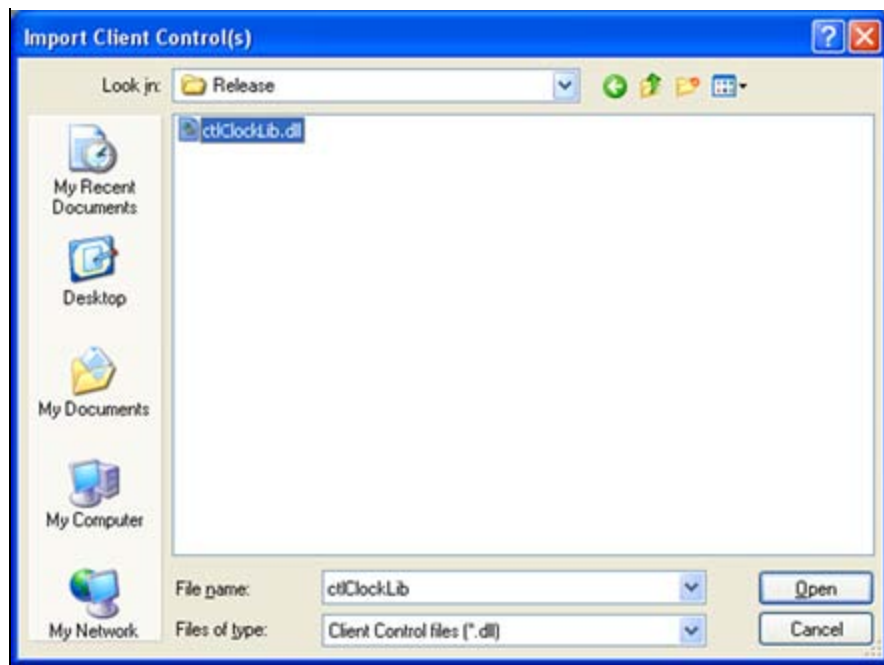


FIGURE 3: DLL LOCATION

3. The controls appear in the Graphic Toolbox (Figure 4 below).



FIGURE 4: CONTROLS IN GRAPHIC TOOLBOX

4. Open the IDE and Create a new Symbol in the Graphic Toolbox. Embed the **ctlAlarmClock** symbol in the Symbol Editor.
5. Add the following controls from the **Tools** panel:
 - **DateTimePicker**
 - **Button**
 - **TextBox**
 - **Text** (Figure 5 below)

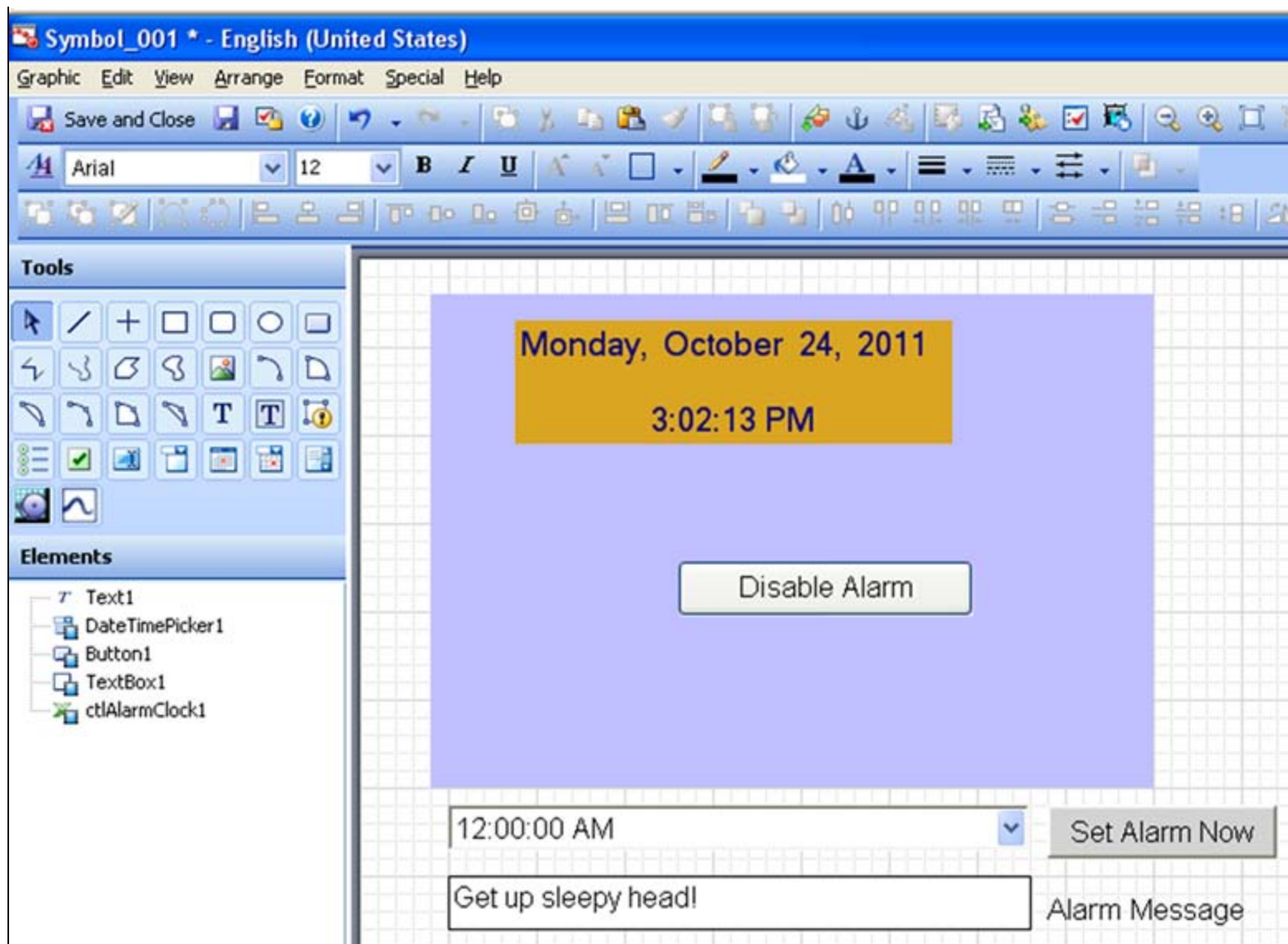


FIGURE 5: ADD CONTROLS TO THE ARCHESTRA SYMBOL

6. Select **ctlAlarmClock** and set up its properties (Figure 6 below).

Misc	
AlarmSet	False
AlarmText	Get up sleepy head
AlarmTime	
ClockBackColor	 Goldenrod
ClockForeColor	 Navy

FIGURE 6: CTLALARMCLOCK PROPERTIES

7. For the **DateTimePicker** control, set the Format Property to **Time**.
8. In the Symbol's **On Show** script, set the DateTimePicker Value to the current time (Figure 7 below).

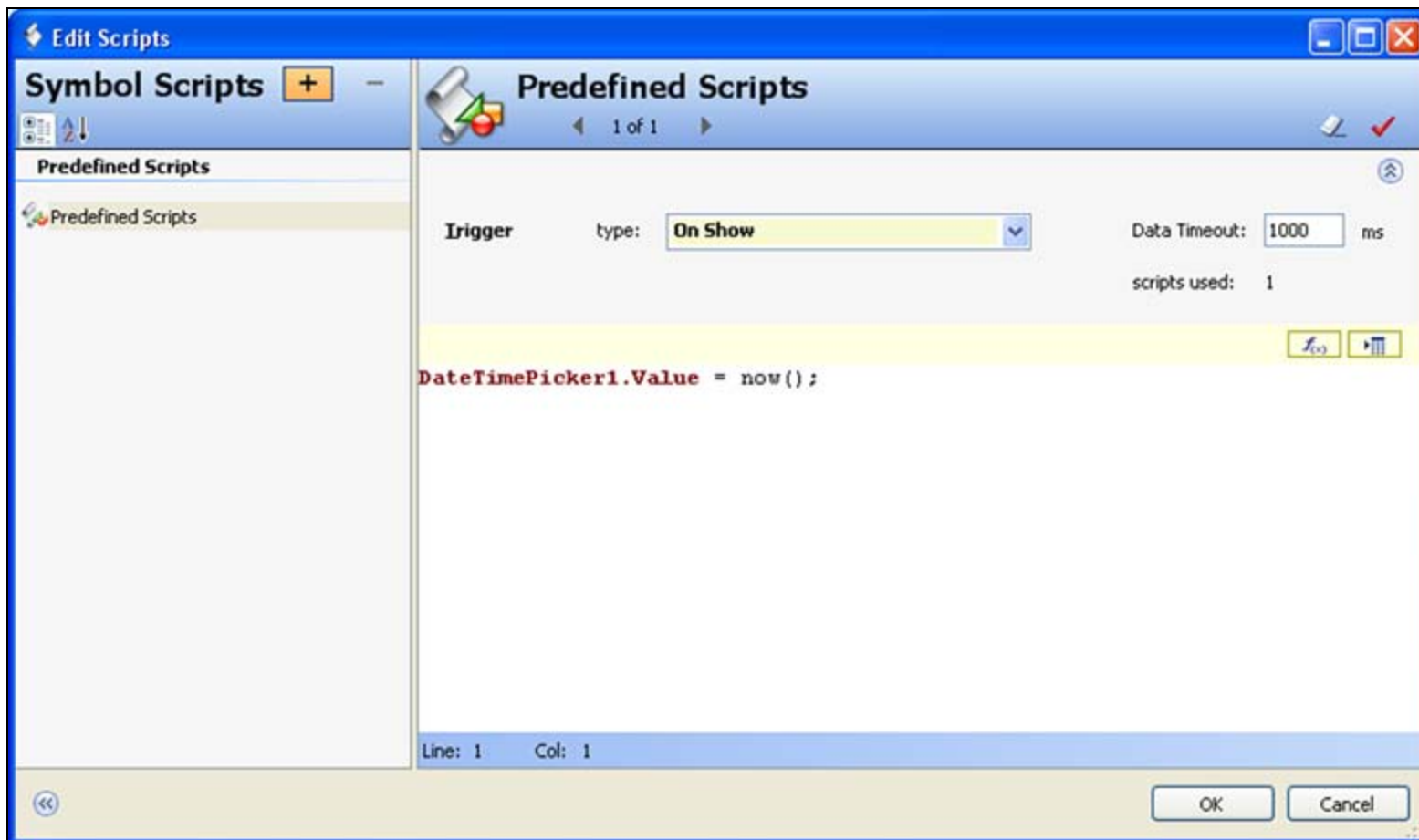


FIGURE 7: DATETIMEPICKER VALUE = NOW

9. On the **Button** control, set the Text property to **Set Alarm Now**.
10. Add a custom property to the Symbol called **cpAlmTextStr**. This is used to change the wake up alarm text.

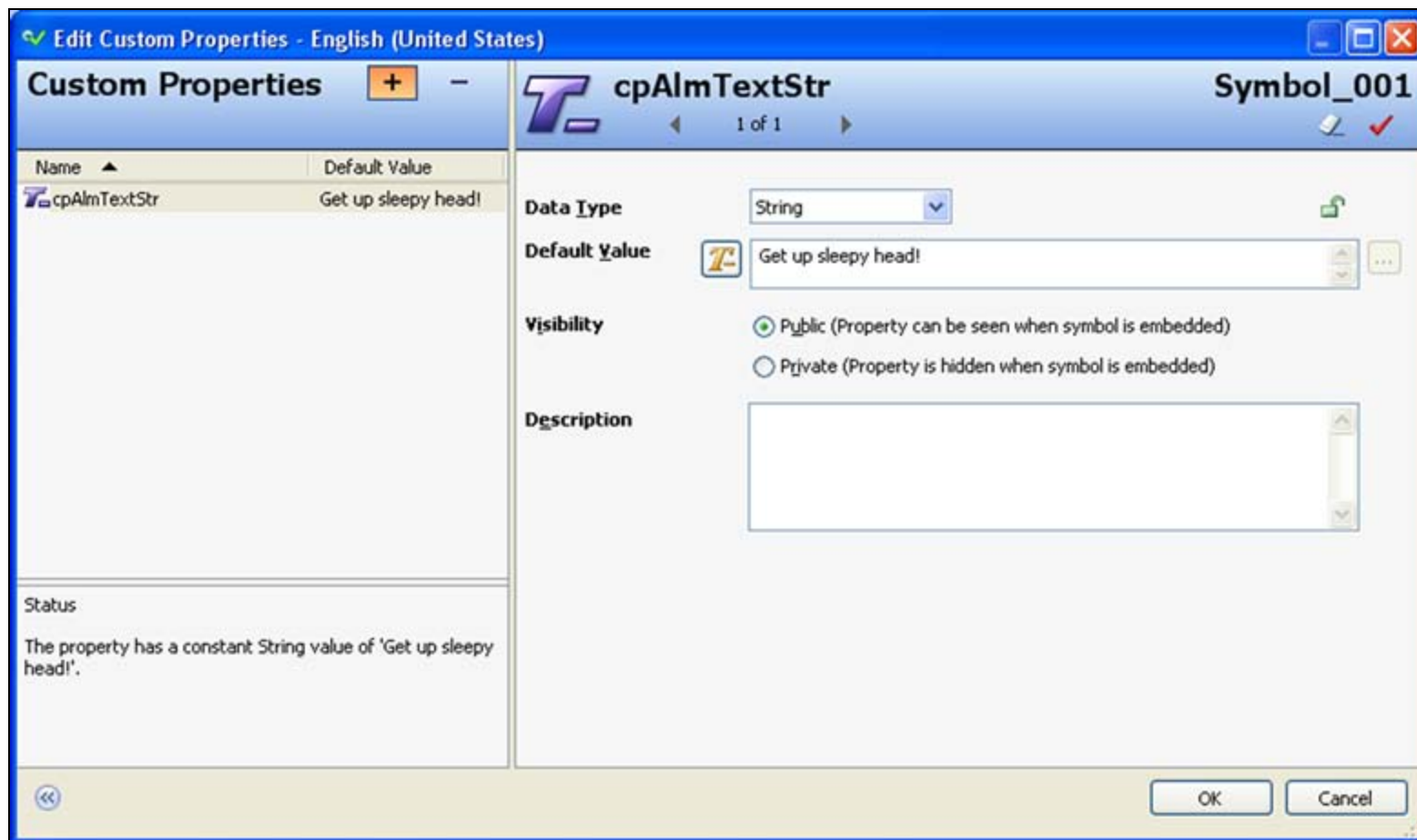


FIGURE 8: SET STRING VALUE FOR cpALMTEXTSTR

11. Add User Input animation to the TextBox (Figure 9 below).

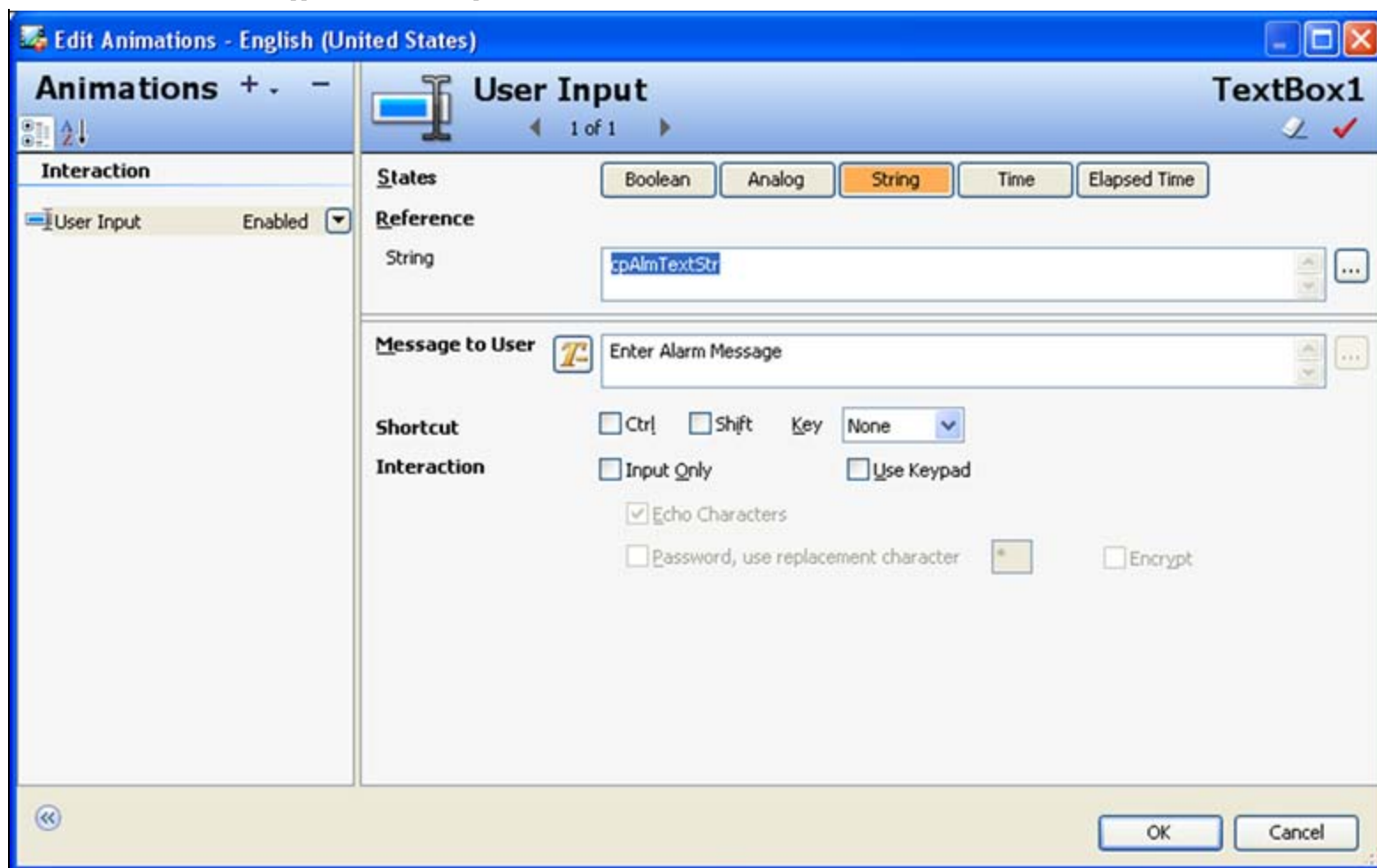


FIGURE 9: ADD USER INPUT ANIMATION

12. Change the the Text control label to **Alarm Message**.
13. On the Button Control, add an **Action Script** for **left Click / Key Down** and then do the following in the Script:
 - Set the AlarmTime for the Clock control to the time selected in the **DateTimePicker** control.
 - Set **AlarmText** to the custom property cpAlmTextStr.
 - Set the Alarm.

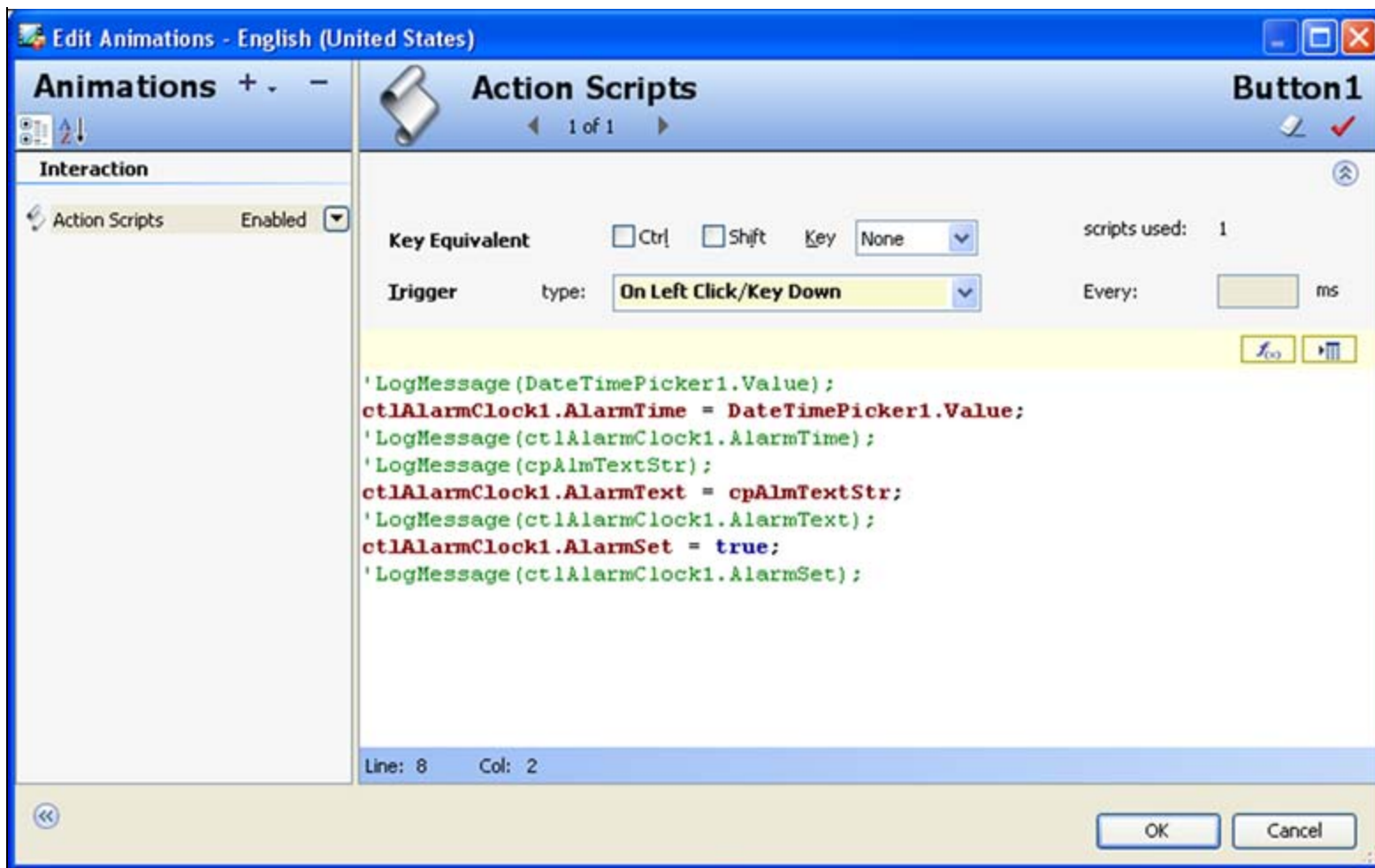


FIGURE 10: SET UP THE ACTION SCRIPT

14. To make use of the custom Event, log a message in the ArchestrA Logger as shown below:

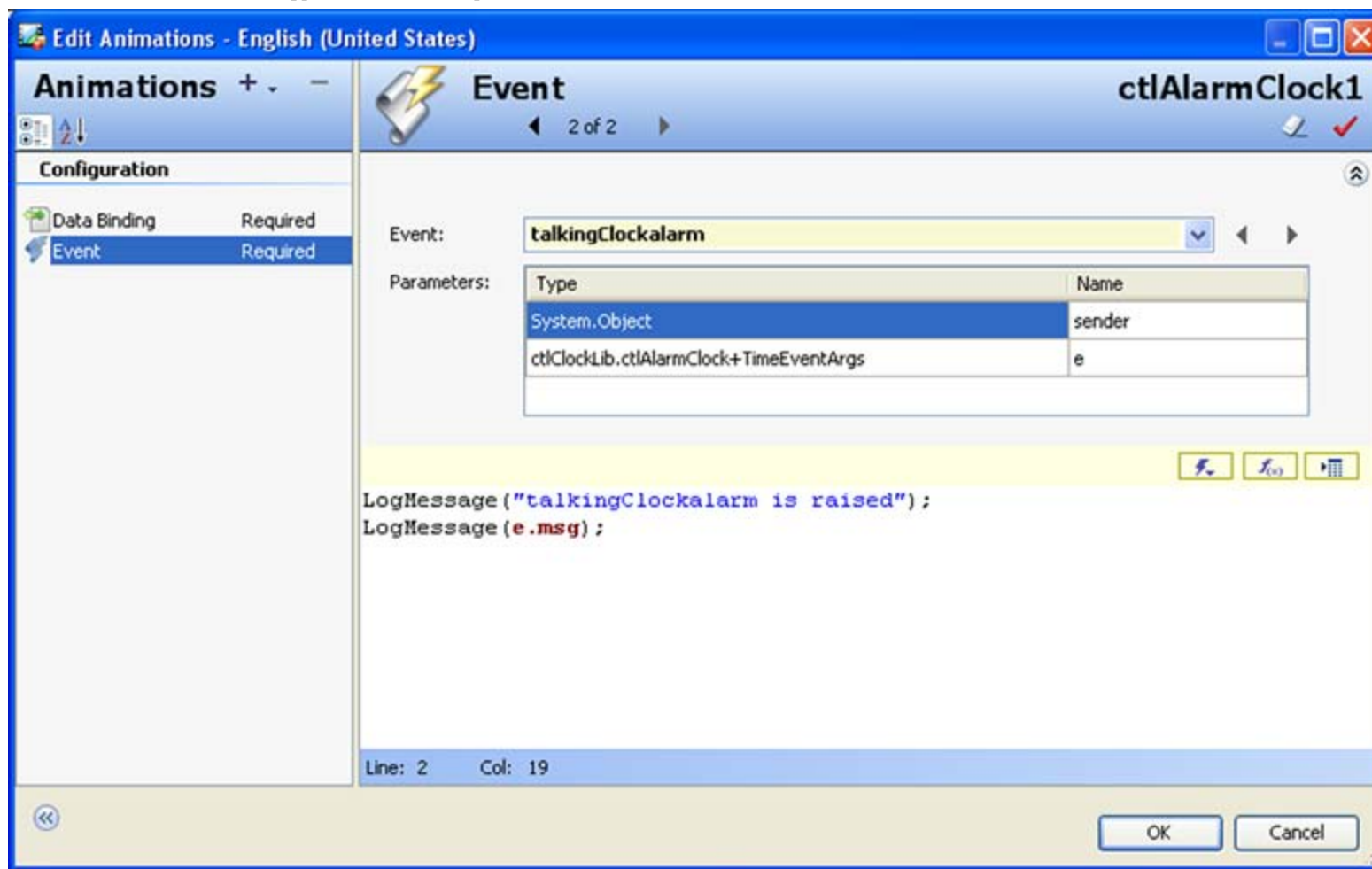


FIGURE 11: LOG MESSAGE EVENT

15. Save and close this Symbol. You can now use this Symbol on an Intouch Window.

Download the **IntouchViewApp** derived Template to look up the above configuration: [\\$IntouchViewApp_001.zip](#).

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