How to call Delphi code from scripts running in a TWebBrowser (part 1 of 6)

Contents, introduction and overview

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Introduction

When writing programs that use the *TWebBrowser* control as part of the user interface I've sometimes needed to respond to user interaction with the control. The official way to do this is to extend the web browser's *external* object, and this is the technique we will use in this article.

The *external* object is part of *TWebBrowser*'s document object model. The object enables interaction with the environment surrounding the browser control – in this case our program.

We can extend the *external* object by adding methods to it that are implemented in Delphi rather than in JavaScript or VBScript. We do this by creating a COM automation object that exposes the required methods and then notifying the *TWebBrowser* control that the COM object extends the *external* object. The new *external* object methods can then be called from JavaScript or VBScript running in the *TWebBrowser*. When these methods are called our Delphi code executes.

The rest of this article examines how to use Delphi to create and manipulate the *external* object.

Overview

The solution divides neatly into three main activities:

1. Extend the *external* object in Delphi by creating a COM automation object that exposes the required methods.
2. Register the extended *external* object with the browser control so that the object's methods can be called from within the control. We do this by implementing the *IDocHostUIHandler* interface and enabling the *TWebBrowser* control to use our implementation.
3. Call the methods of the extended *external* object from JavaScript running in the browser control.

The next sections discuss each of the above activities in turn. Finally a case study will be presented that puts the techniques we have learned into practise.

We make a start in the *next section* by discussing how to extend the *external* object.

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