

Reporting: Web Services as Data Source

Susan Philipose

Case Study

- Need to access an XML field in a table
- XML field is an XML file, say with all details of a 911 CALL.
- Create a Report with fields from XML file

Technology

- Visual Studio 2003
- SQL Server 2005
- Crystal Reports 2008

Three Step Solution

Solution - SQL

1. Wrote a SQL Script using Open XML which will convert the xml format to a document representation.

Solution – Web Services

- Wrote a Web Service that create a DB Connection, use this stored procedure and access the XML file.
- Input Parameter for Web Service is the Identifier for the XML File

Sample code

```
<WebMethod()> _
Public Function GetCallType(ByVal IdentifierKey As Integer) As Integer
    Dim oConn As SqlConnection
    oConn = New SqlConnection("packet size=4096;user id=sa;pwd=!Password1;data source=P]
    oConn.Open()
    Dim oCommand As SqlCommand
    oCommand = New SqlCommand("getxml", oConn)
    oCommand.CommandType = CommandType.StoredProcedure
    Dim oParam As SqlParameter
    oParam = New SqlParameter("@identifier_key", IdentifierKey)
    oCommand.Parameters.Add(oParam)
    Dim iResult = System.Convert.ToInt32(oCommand.ExecuteScalar())
    oConn.Close()
    'Nature = "Test"
    Return iResult
End Function
```

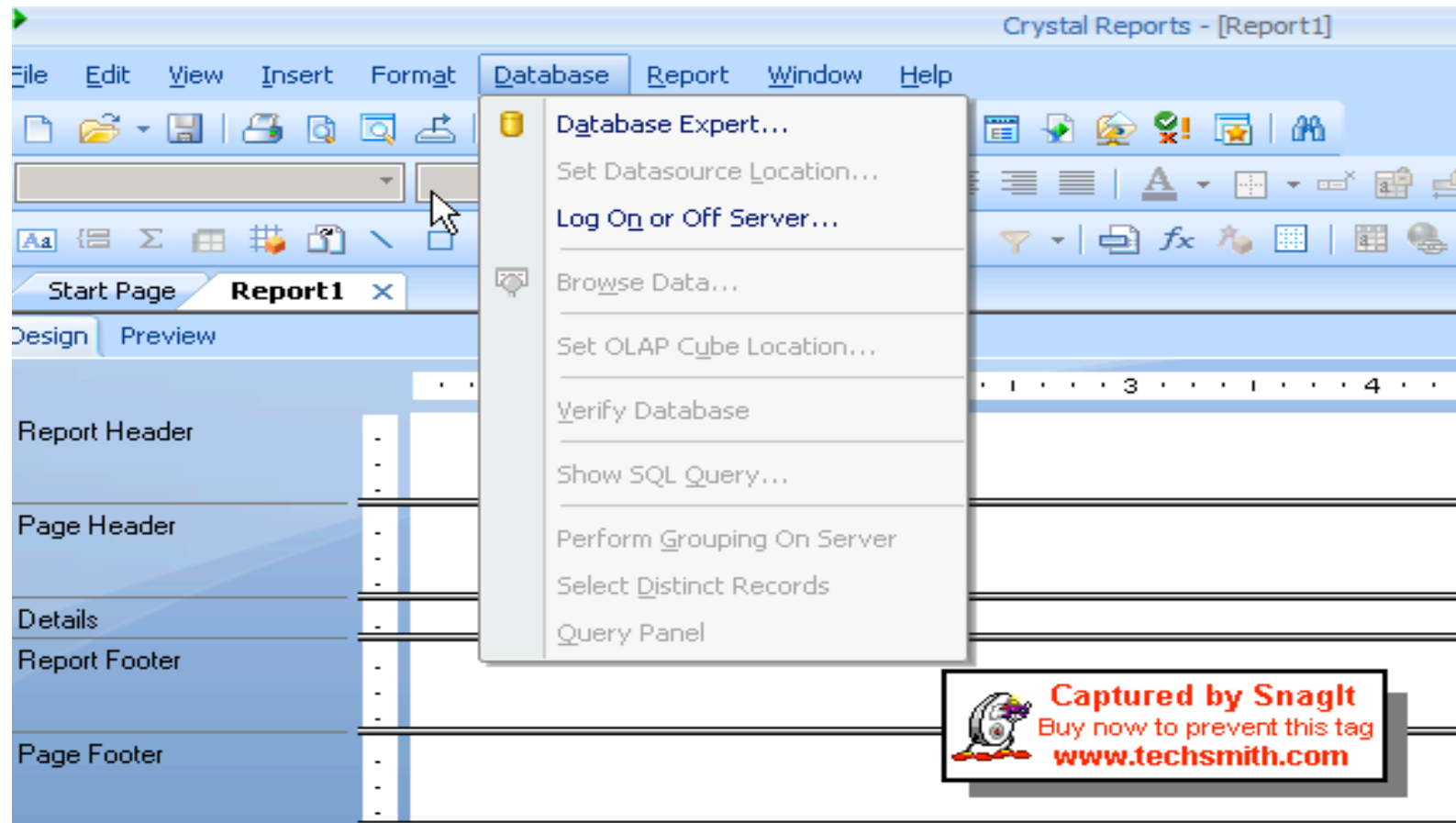
Solution – Crystal Reports

- Use the Web Service as Data Source
- Displays the result in Report

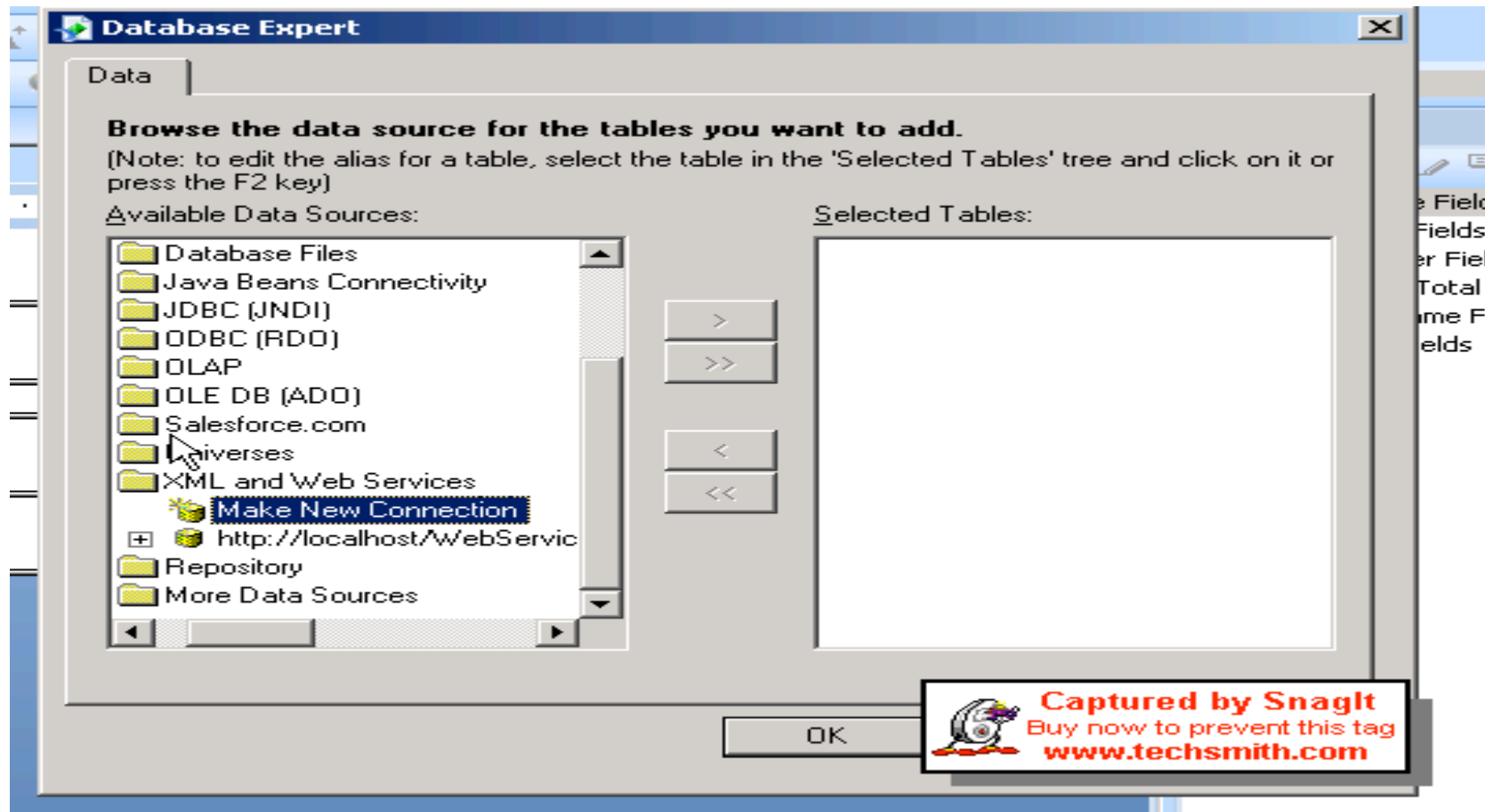
Disadvantages of this approach

- Can Access only one field at a time.
- Have to make DB connection call each time to access the file
- Crystal cannot access multiple fields at a time.

Crystal Reports : Step -1



Step-2



Step-3

XML and Web Services

XML (data source) type and location
Specify your XML (data source) type and enter the XML file name

Use Local Data Source:

Local XML File:

Use HTTP(S) Data Source:

HTTP(S) XML URL:

Specify Schema File:

Validate XML:

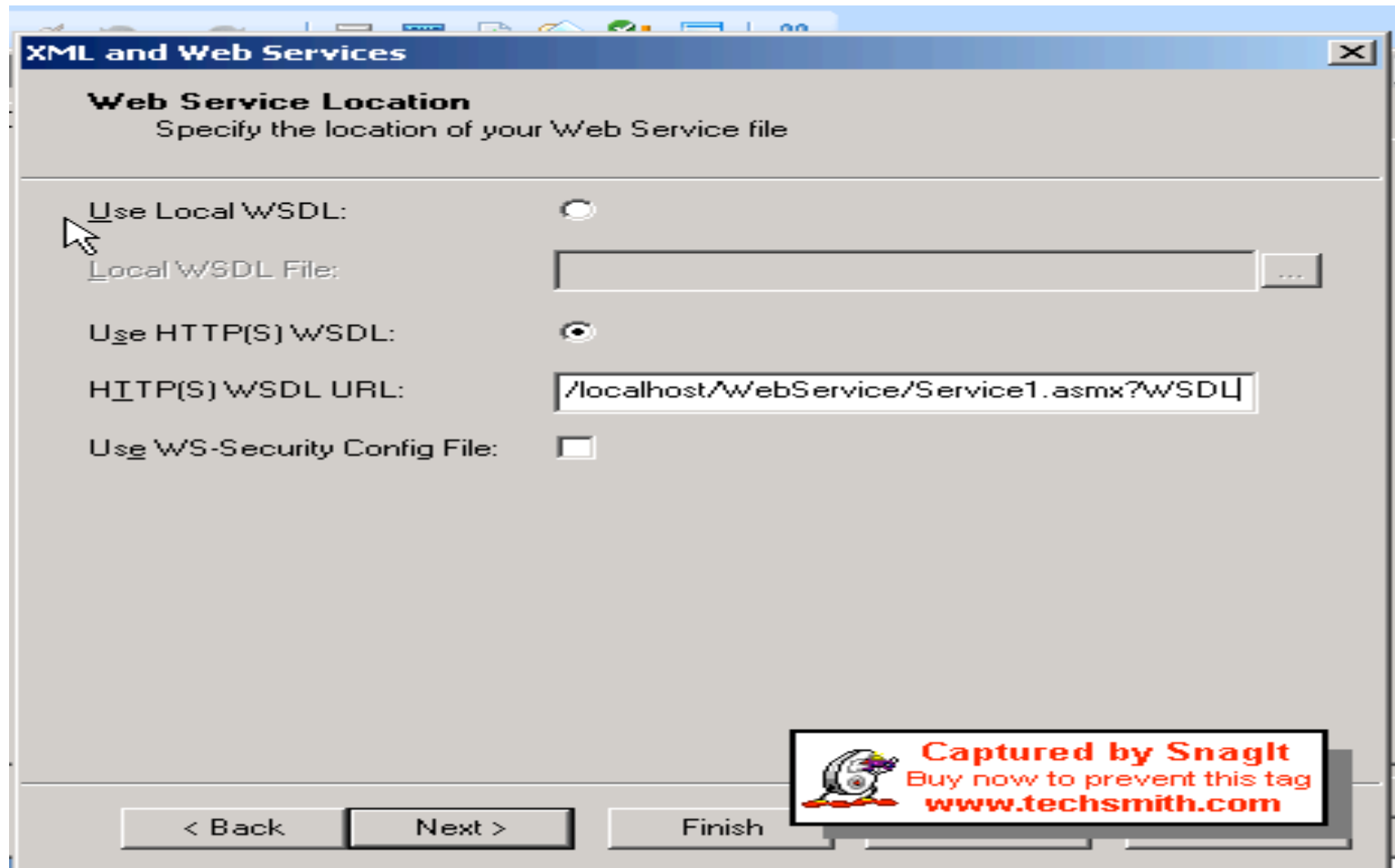
Convert Multi-Occurs To Table:

Use Web Service Data Source:

< Back Next > Finish

Captured by SnagIt
Buy now to prevent this tag
www.techsmith.com

Step-4



The screenshot shows a Windows-style dialog box titled "XML and Web Services" with a close button in the top right corner. The main heading is "Web Service Location" with the instruction "Specify the location of your Web Service file".

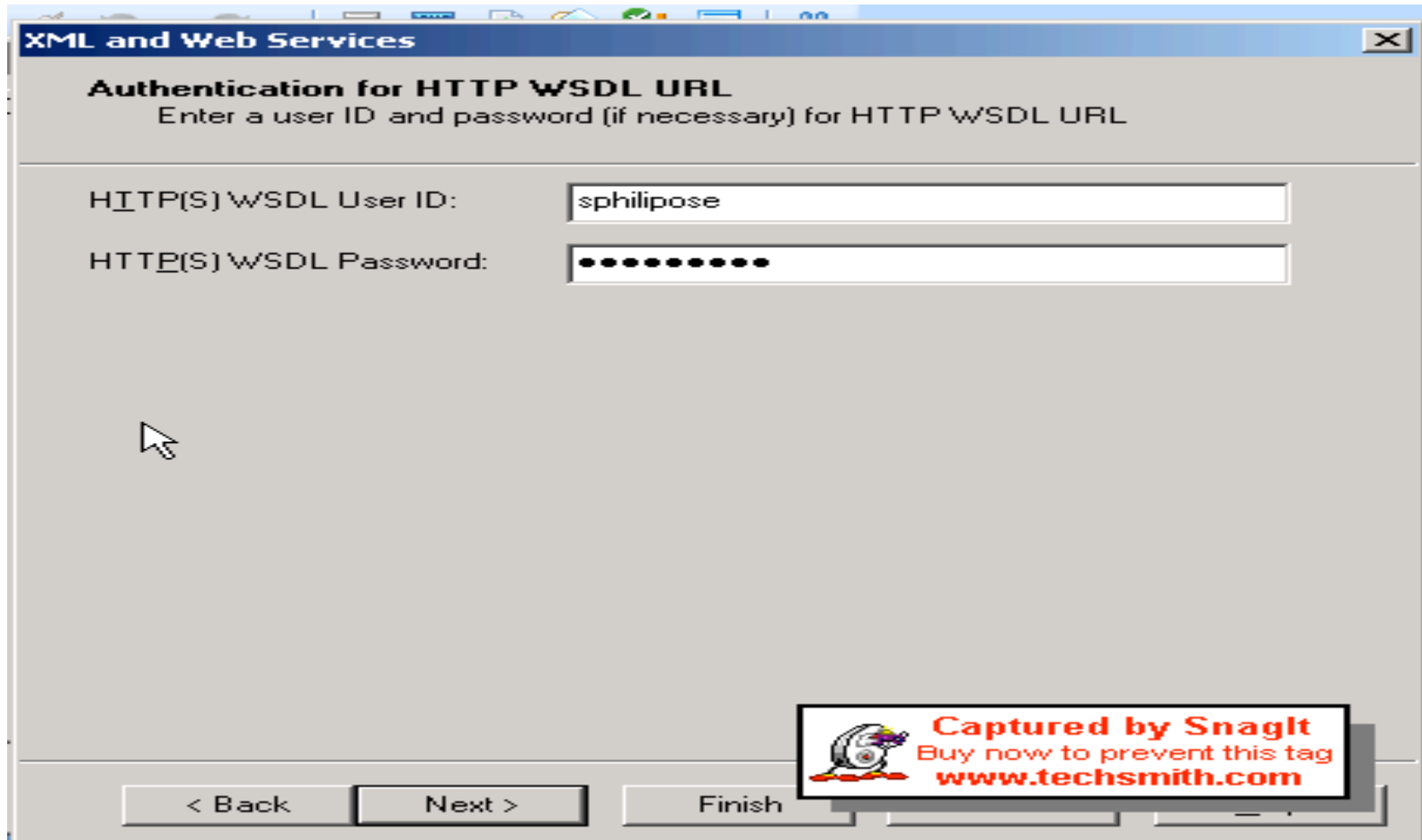
There are four options for selecting the Web Service file location:

- Use Local WSDL:** This option is currently unselected (radio button). A mouse cursor is pointing at the radio button. Below it is a text box labeled "Local WSDL File:" with an empty field and a browse button ("...").
- Use HTTP(S) WSDL:** This option is currently selected (radio button). Below it is a text box labeled "HTTP(S) WSDL URL:" containing the text `/localhost/WebService/Service1.asmx?WSDL`.
- Use WS-Security Config File:** This option is currently unselected (checkbox).

At the bottom of the dialog, there are three buttons: "< Back", "Next >", and "Finish".

A watermark is present in the bottom right corner of the dialog box, featuring a logo and the text: "Captured by Snagit Buy now to prevent this tag www.techsmith.com".

Step-5



The image shows a screenshot of a Windows-style dialog box titled "XML and Web Services". The dialog has a blue title bar with a close button (X) in the top right corner. Below the title bar, the text "Authentication for HTTP WSDL URL" is displayed in bold, followed by the instruction "Enter a user ID and password (if necessary) for HTTP WSDL URL".

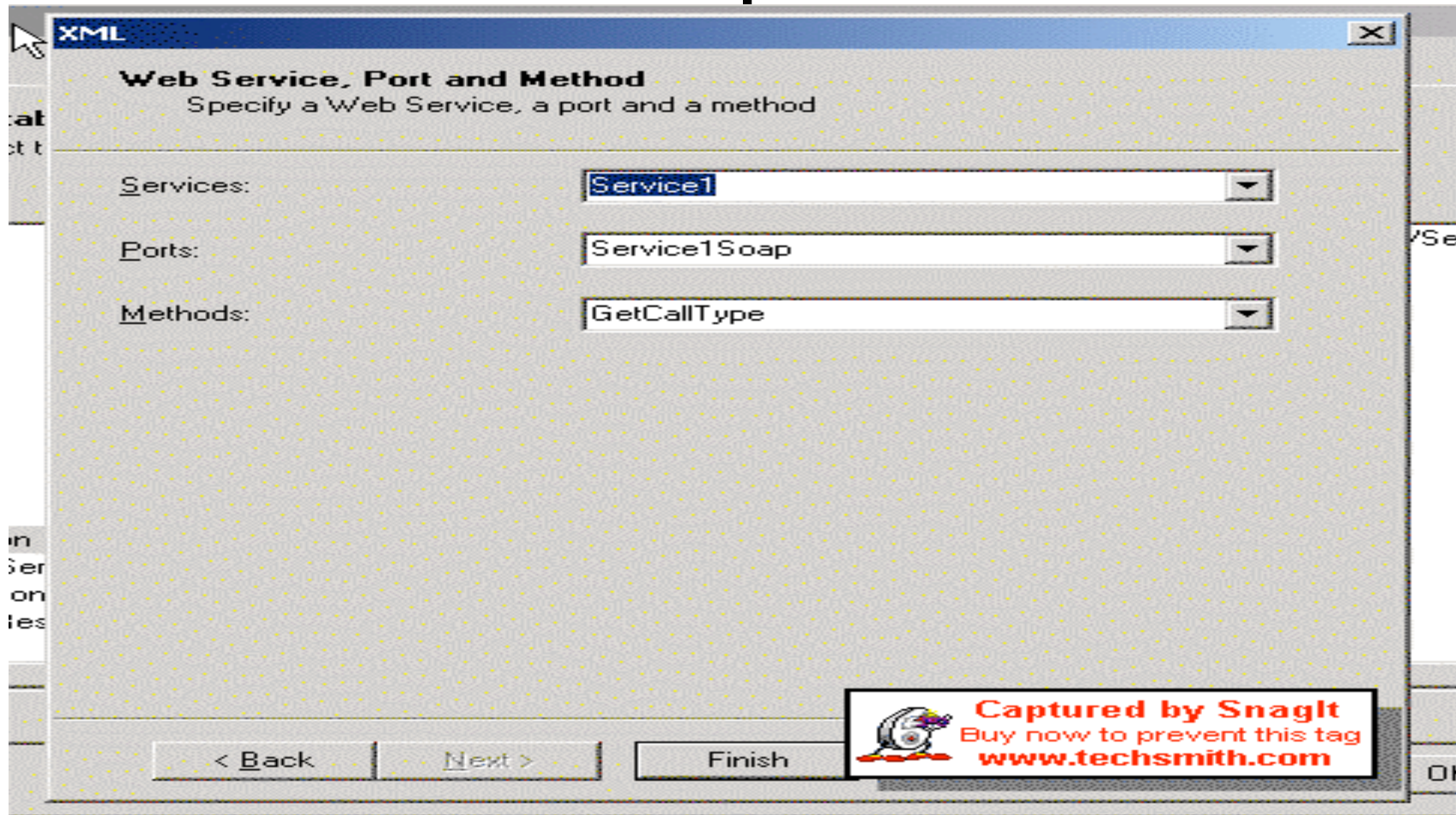
There are two input fields:

- The first field is labeled "HTTP(S) WSDL User ID:" and contains the text "sphilipose".
- The second field is labeled "HTTP(S) WSDL Password:" and contains ten black dots, indicating a masked password.

At the bottom of the dialog, there are three buttons: "< Back", "Next >", and "Finish". A mouse cursor is visible over the left side of the dialog area.

In the bottom right corner, there is a watermark for "SnagIt" with the text "Captured by SnagIt", "Buy now to prevent this tag", and the website "www.techsmith.com".

Step-6



The screenshot shows a dialog box titled "XML" with the subtitle "Web Service, Port and Method". Below the subtitle is the instruction "Specify a Web Service, a port and a method". The dialog contains three dropdown menus: "Services:" with "Service1" selected, "Ports:" with "Service1 Soap" selected, and "Methods:" with "GetCallType" selected. At the bottom, there are three buttons: "< Back", "Next >", and "Finish". A watermark for "SnagIt" is visible in the bottom right corner.

XML

Web Service, Port and Method
Specify a Web Service, a port and a method

Services: Service1

Ports: Service1 Soap

Methods: GetCallType

< Back Next > Finish

Captured by SnagIt
Buy now to prevent this tag
www.techsmith.com

Step-7

The screenshot displays the Crystal Reports design grid for a report named 'Report1'. The grid is organized into sections: Report Header, Page Header, Details, Report Footer, and Page Footer. The Details section contains two rows, each with a field named 'GetCallTypeResult'. The Field Explorer on the right side of the window shows the following structure:

- Database Fields
 - GetCallTypeResponse
 - GetCallTypeResult
- Formula Fields
- Parameter Fields
- Running Total Fields
- Group Name Fields
- Special Fields

A watermark in the bottom right corner reads: 'Captured by SnagIt Buy now to prevent this tag www.techsmith.com'.