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## Data Entry Panels

Chapter 5 examines procedures for constructing the *Data Entry* panel that is the *runtime* form for a Verification Task Project – and a Verify task’s processing dialog. It also looks at ways to modify a panel’s content and format.

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***Important!*** This chapter does not always use the *1040EZ* training application for all examples. Often, the chapter uses a new but fictional application to present the start-to-stop sequence involved in defining, testing and implementing a *Data Entry* panel.

## Introduction

Most (but not all!) Verification task operations take place within a *Data Entry* panel that rests inside the *Batch Pilot Window*. The panel displays data and images drawn from a single *source* page; the window lists the contents of the batch as a series of documents and pages.

The operator uses navigation tools of the panel to move from field to field within a page—and the window’s tools to move from page to page, and document to document - until verification of the batch is complete.

Here is a basic example:

M Q S W

Front Page

Survey ID

Anchor :

Questionnaire ID

Question 1  ▼

Question 2  ▼

Question 3  ▼

Question 4  ▼

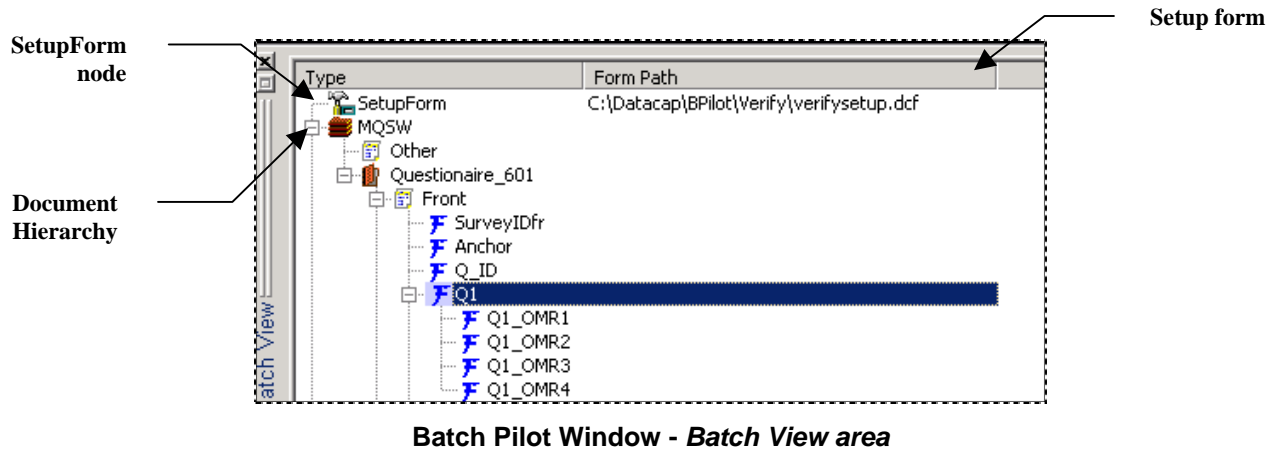
**MQSW Application – Data Entry Panel**

- ✓ A *Data Entry* form may have other roles. Alternative configurations of the form used by the *Taskmaster for Invoices* application help an operator construct new Vendor Records and invoice “fingerprints”.

## How to Construct a Data Entry Panel

A Task Project *requires* a Document Hierarchy (Chapter 4).

After the Verification Task Project's structure is in place inside the *Batch Pilot Window*, select **Setup Tree** from the window's **View** menu. The Document Hierarchy will appear below the Setup Tree's *SetupForm* node in the **Batch View** area in the bottom left-hand corner:



- ✓ **Very important!** In the example above, a *setup* form is “bound” to the *SetupForm* node. However, unlike Task Projects for most tasks, the **Batch** object of the Document Hierarchy (*MQSW*, in this case) does not yet have a *runtime* form.

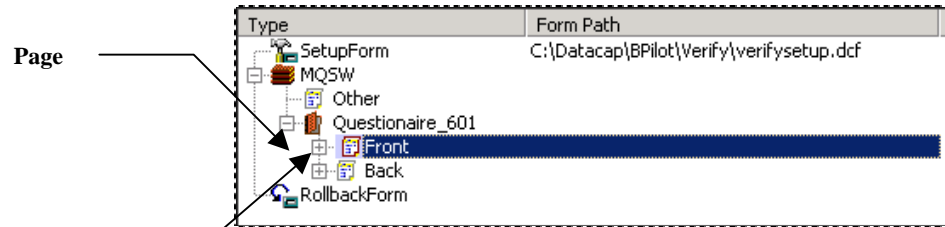
This is because:

- A new **Data Entry** panel – rather than a **stock** form - will be the project's *runtime* form;
- The **Data Entry** panel will be linked to a specific **Page** object of the Document Hierarchy rather than to the **Batch** object, because the panel processes individual pages rather than contents of the entire batch;
- The panel has not yet been generated.

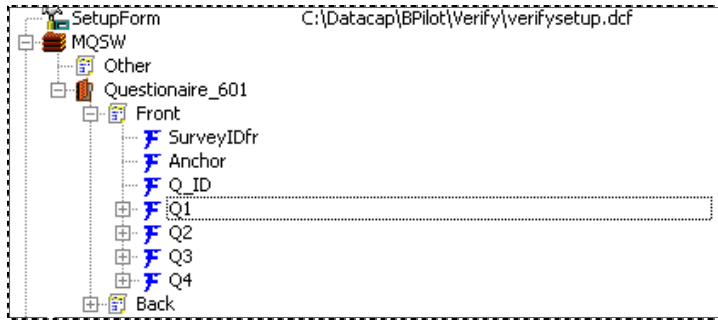
Take a closer look at the levels of the sample *MQSW* hierarchy:

- ◆ At this early stage, no forms are bound to any objects of the Document Hierarchy.
- ◆ *Questionnaire\_601* is a **Document** object with two **Page** objects: *Front* and *Back*. However, only the fields of the *Front* page have data that is subject to verification.

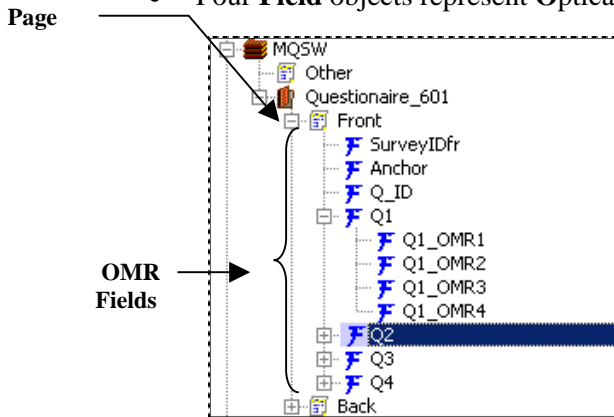
## How to Construct a Data Entry Panel



- The *Front* page has seven **Field** objects:



- Four **Field** objects represent **Optical Mark Recognition (OMR)** fields.



- Each OMR field has values of a pre-defined **Dictionary** assigned to its checkbox options (*Q1\_OMR1* – *Q1\_OMR4*.)

## Autoform

*Batch Pilot* uses an *Autoform* utility that responds to the Document Hierarchy's structure and content as it produces a **Data Entry** panel for the Verify task's Task Project – and, therefore, for the project's Verify task.

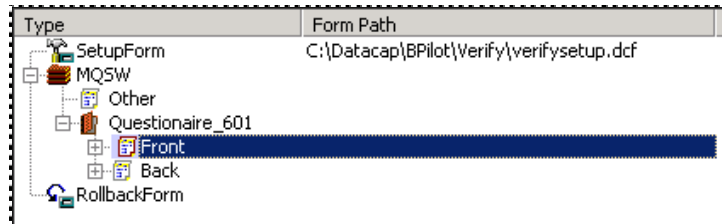
- ✓ However, *Autoform* can solicit information about the structure, contents and properties of a **Page** object only when it prepares a **Data Entry** panel (see the next page).

In the example on the previous page, *Autoform* will put together a panel with seven **field pairs** – each pair made up of a **snippet** field and a **Data Edit** field - for the *Front* page. Each pair will be accompanied by a **label**.

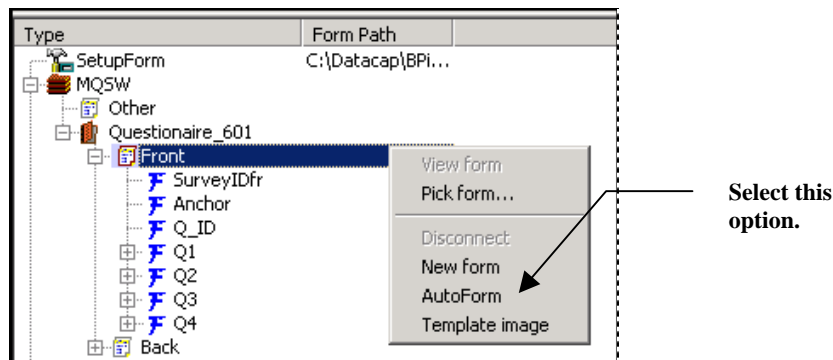
The Data Edit members of the OMR field pairs will be drop-down lists containing the four values of the pre-defined dictionary: *Excellent*, *Good*, *Fair* and *Poor* – along with a *Blank* option.

To put together a **Data Entry** panel with *Autoform*, take these steps (using *MQSW* as an example):

Step	Action
1.	Open the Verify Task Project (.bpp) you previously defined (Chapter 4).
2.	Select <b>Setup Tree</b> from the <i>Batch Pilot Window's View</i> menu.
3.	Expand the Task Project's Document Hierarchy.
4.	Highlight the <b>Page</b> object with fields that are to be part of the <b>Data Entry</b> panel ( <i>Front</i> , in the example below).



- 5. Right-click on the highlighted listing.



### How to Use Autoform to Generate a Data Entry Panel (continued)

- | Step | Action   |
|------|--|
| 6.   | Select <b>Autoform</b> from the options.   |
| 7.   | <b>Batch Pilot Window's</b> Data Area, in its <i>Design</i> mode (Chapter 2).  |
| 8.   | Un-toggle the <b>View</b> menu's <b>Design</b> option for a look at the new <b>Data Entry</b> panel in its <i>Operating</i> mode. (In this example, clicking on a drop-down list field – <i>Q1</i> , for example – reveals the field's five options.)  |
| 9.   | The <b>Data Entry</b> panel is a new Datacap form ( <b>dcf</b> ). Use the <b>File</b> menu's <b>Save Form</b> item to save the form to the <b>Verify</b> folder of your application's <b>Process</b> directory. <b>Alert!</b> This form is not a <b>stock</b> form and does not belong with other <b>stock</b> forms in the <b>BPilot</b> directory. Instead, place the form in an application folder. |
| 10.  | Close the Verify Task Project.   |

SurveyIDfr :

Anchor :

Q\_ID :

Q1 :  ▼

Q2 :  ▼

Q3 :  ▼

Q4 :  ▼

Front Page Data Entry Panel – *Design mode*

SurveyIDfr :

Anchor :

Q\_ID :

Q1 :    
blank  
Excellent  
Good  
Fair  
Poor

Q2 :

Q3 :

Q4 :

**Front Page Data Entry Panel – *Operating mode***

- ✓ Why not practice with the *Autoform* utility as you learn how to construct new *Data Entry* panels? The section on Page 14 shows you how to set up additional panels for the *1040EZ* training application.

### Configuring the Data Entry Panel

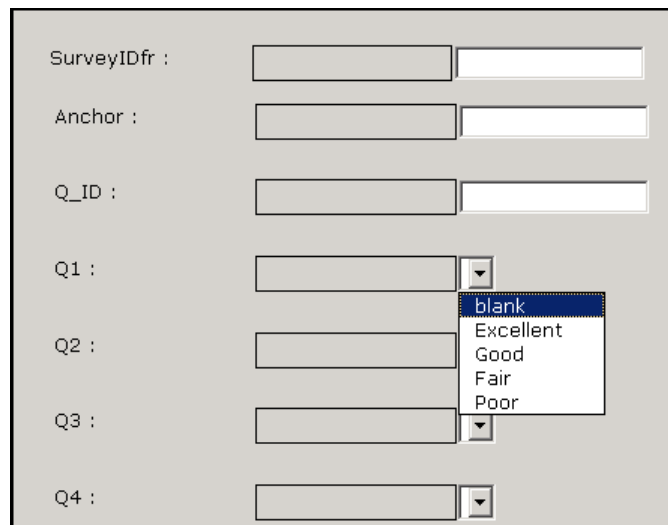
- ✓ A new **Data Entry** panel needs additional attention before an operator can use it effectively. In the example below:

The labels do not clearly identify fields on an *MQSW* questionnaire.

The **snippets** do not yet display images of values in their fields.

It is difficult to discern how effectively the **Data Edit** fields will display their recognized data.

The panel lacks an obvious tool to display the full image of the current *Front* page – the **source** page that is currently being processed by the Verify task.



The screenshot shows a data entry panel with the following elements:

- SurveyIDfr : [text input] [text input]
- Anchor : [text input] [text input]
- Q\_ID : [text input] [text input]
- Q1 : [text input] [dropdown menu]
- Q2 : [text input]
- Q3 : [text input] [dropdown menu]
- Q4 : [text input] [dropdown menu]

The dropdown menu for Q1 is open, displaying the following options: blank, Excellent, Good, Fair, and Poor.

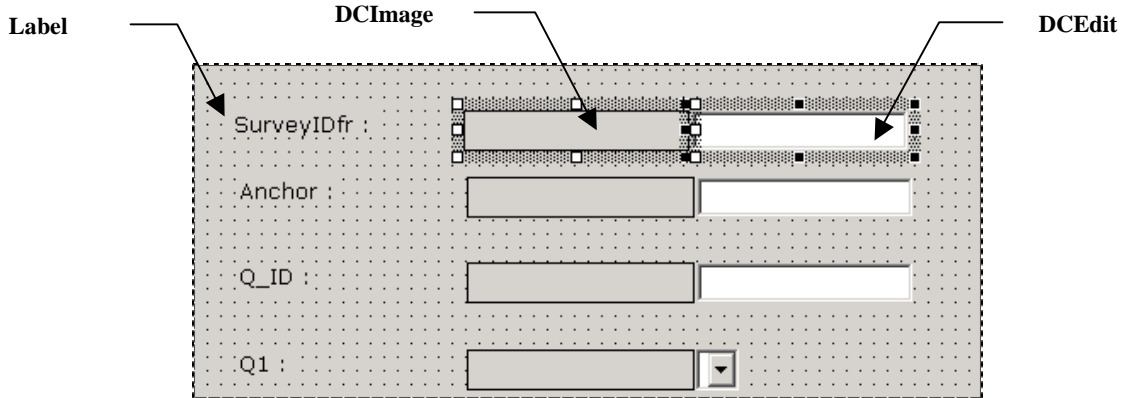
**Front Page Data Entry Panel – Operating mode**

Most of your modification efforts will involve reviewing key properties of the panel's controls to be sure they have been set up accurately.

To begin, access your new **Data Entry** panel in *Design* mode:

- ◆ In the *Batch Pilot* workshop, open the Verify Task Project (.bpp);
- ◆ Select **Setup Tree** from the *Batch Pilot Window's View* menu.
- ◆ Right-click on the **Page** object that is the basis for the panel.
- ◆ Select **View form** from the options.





MQSW Panel – Four Field Pairs

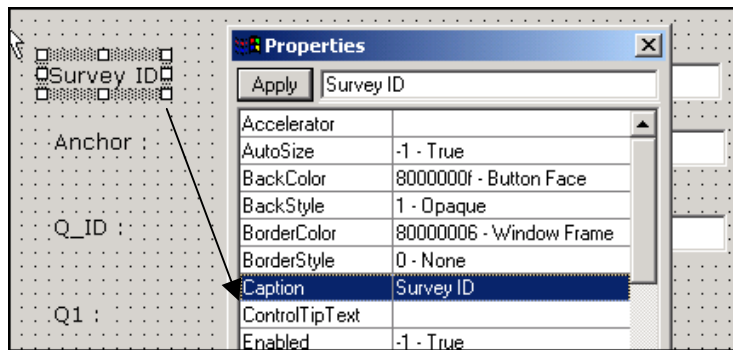
## Panel Controls and Properties

A *Data Entry* panel consists of controls.

The illustration above shows three controls for each of four field pairs associated with four **Field** objects of the Document Hierarchy. *Autoform* generates the controls; assigns their properties; and provides them with code.

Each group has a **label** control, a **DCImage** control, and a **DCEdit** control. To view the properties of a control, right-click on it and select **Properties** from the list of options.

To enhance the panel's clarity, you may want to modify one or more values that *Autoform* has assigned to the **Caption** properties of the **Label** controls.

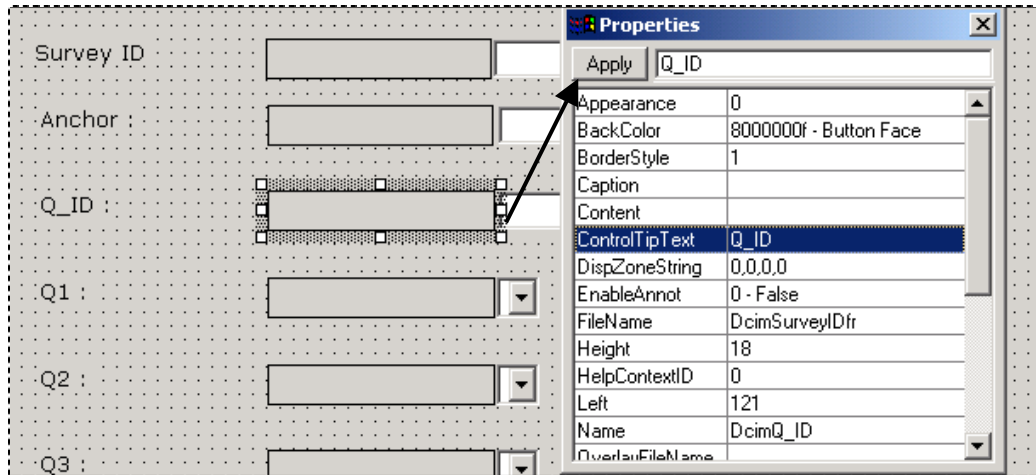


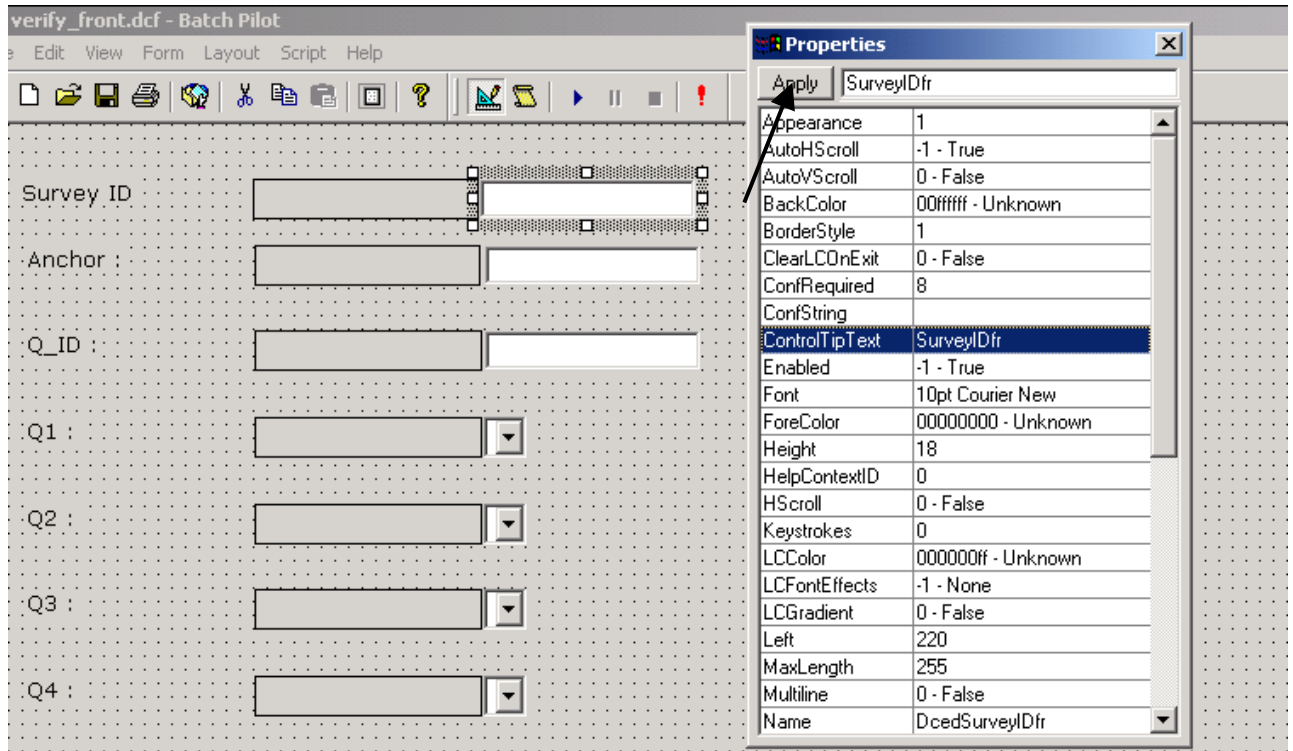
Label Control – *Caption* property

## Configuring the Data Entry Panel

A snippet's image resides within a **DCImage** control. **Required** properties of this control include:

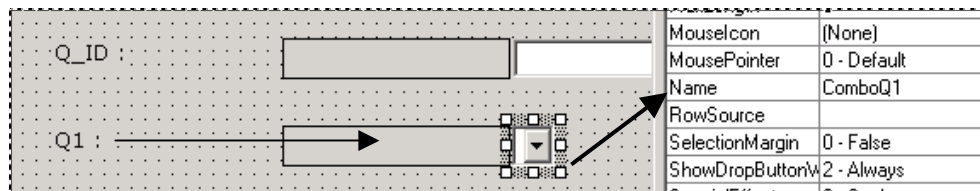
- **ControlTipText:** the **Field** object's ID (*Q\_ID*, in this case).
- **File Name:** a value assigned by *Autoform* to the overall image of the fingerprint that represents this page. **Alert!** This is the **File Name** value for *all DCImage* controls except the first, which is blank.
- **Name:** the **DCImage** designation (*Dcim*) combined with the **Field** object's ID (*Q\_ID*).





The interactive **DCEdit** control will hold a field’s *recognized* value – the value that is subject to change by an operator.

- **ControlTipText** indicates the **Field** object’s ID (*SurveyIDfr*, in this case). (Note the change in the control’s label!).
- **Name** links the type of control to the **Field** object’s ID – *DcedSurveyID*, in the example above but *ComboQ1* below:



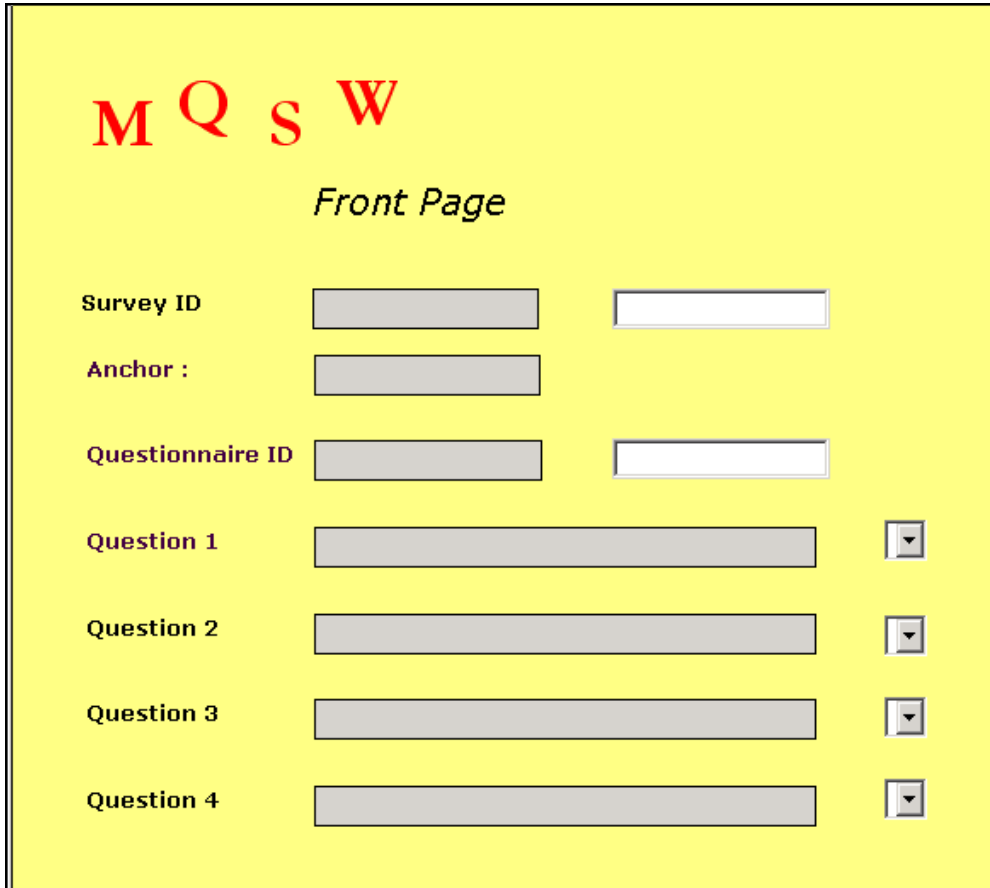
- ✓ Each control, of course, has other properties that may deserve your attention. One example: the **ConfRequired** property of a **DCEdit** control is a minimum Confidence Rating for values in the field. If the field’s *recognized* data is below this level, the Verify task usually changes the field’s background color to alert the operator to a problem.

And there may be other fields you’d like to add – fields that are *not* represented by **Field** objects of the Document Hierarchy...fields for an operator’s comments or notes, perhaps. Page 18 shows you how to add and remove fields from a *Data Entry* panel.

## Configuring the Data Entry Panel

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The panel for the *MQSW* application's *Front* page ended up looking like this:



**Data Entry Panel – MQSW Front Page**

When the Verify task actually runs, images will appear in the snippet fields on the left. *Recognized* data will appear in the **Survey ID** and **Questionnaire ID** Data Edit fields – and the operator will select an option from the drop-down lists for the **Question** fields.

The operator can also use tools of the *Batch Pilot Window* to expand and magnify a snippet's image or to review the full image of the current page.

## Tab Order Properties

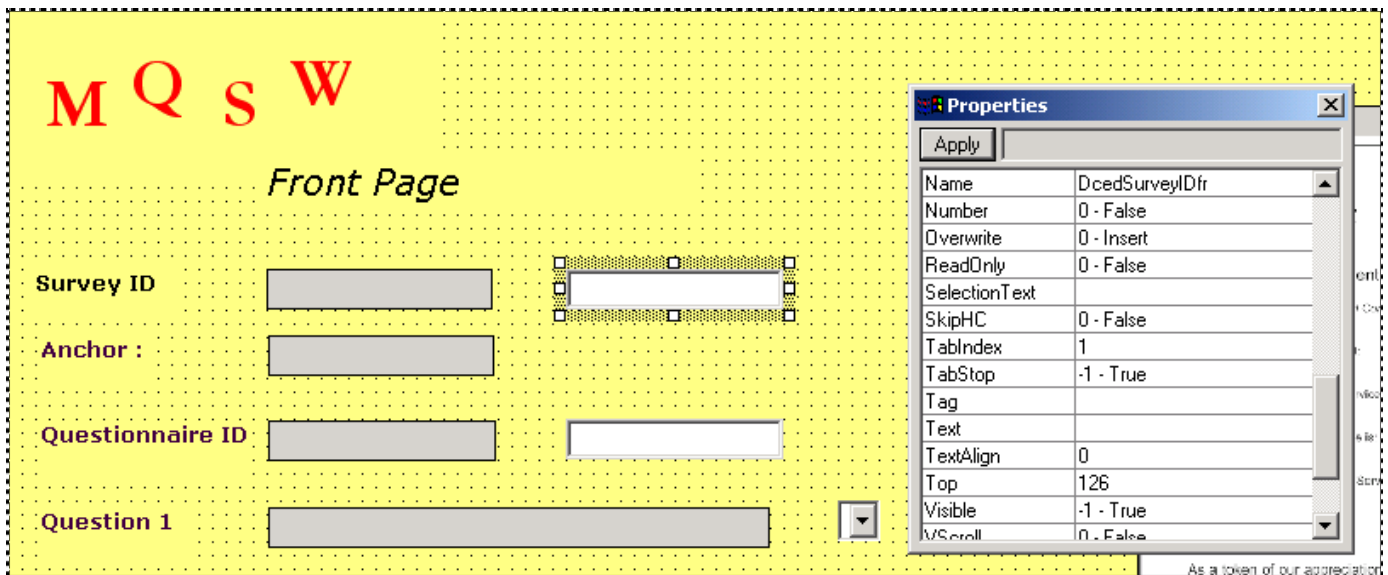
An operator can tab quickly from one Data Edit field to the next. Two properties (illustrated below) determine the tabbing order:

**TabStop** indicates whether or not a field can participate.

**TabIndex** specifies a field's relative placement in the tabbing sequence.

In this example, *-1 - True* is the **TabStop** value for each field, including the first *Survey ID* field and the four *Question* fields.

- ✓ However, when the panel's designer removed the Data Edit field for the **Anchor** Field object – leaving only the image! – the **TabIndex** order was thrown off, and tests of the panel indicated that an operator could *not* tab from the *Survey ID* to *Questionnaire ID*.



MQSW Front Page

To remedy the problem, the designer checked the **TabIndex** property of each field in the sequence to be sure that the field had a lower value than the field that was to follow. She then right-clicked on the panel itself and selected **Tab Order** to confirm the sequence of the **Dcredit** and **ComboBox** controls.

## Practicing with Autoform

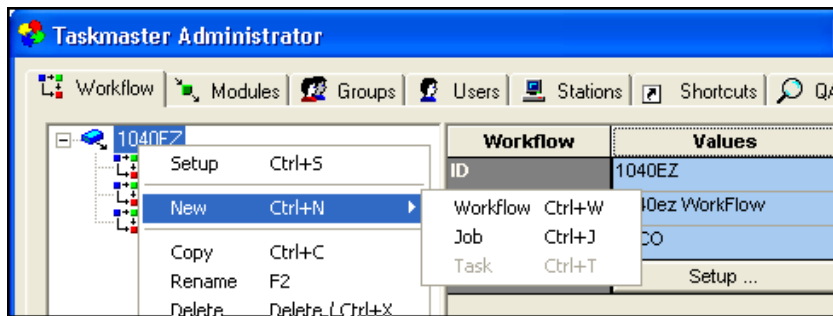
The *1040EZ* training application is nearly indestructible, so you can practice with *Autoform* over and over again until you are comfortable with its mechanics and results – a set of new **Data Entry** panels.

- ✓ As a preliminary step when constructing a practice panel, you first have to set up a second, practice *1040EZ* Document Hierarchy with just a few objects. Be sure that you don't delete the existing file: **1040EZ/xml**.

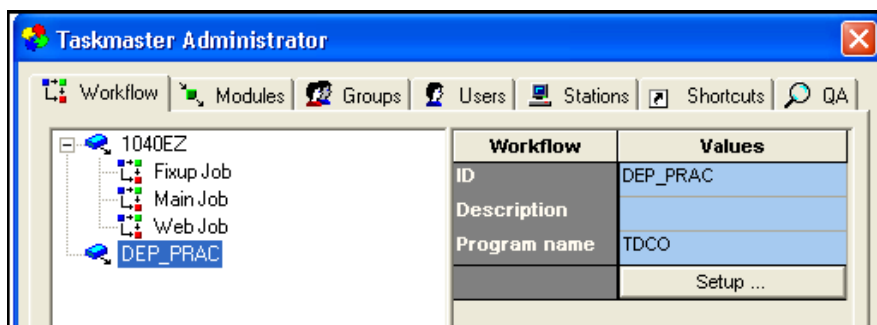
To define the new Document Hierarchy:

Step	Action
------	--------

1. Open the *Workflow* tab of the *1040EZ Taskmaster Administrator*.
2. Right-click on the application's Workflow ID (*1040EZ* in this case).

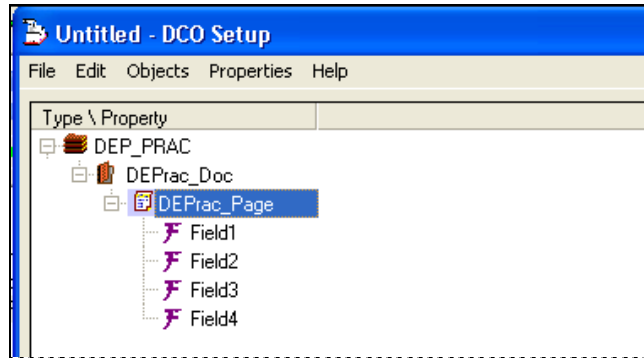


3. Select **New** and **Workflow**.
4. Enter an ID for the new workflow.
5. On the right, select *TDCO* as the **Program Name**. Press the Apply button and the Done button at the bottom of the tab.

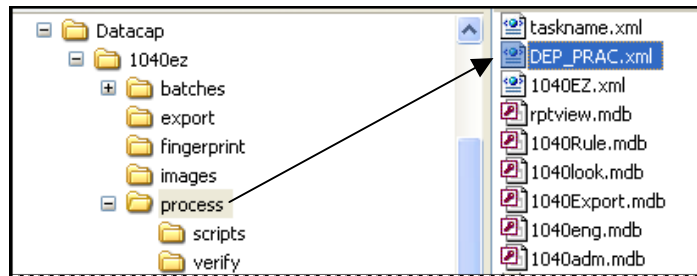


### To Establish the New Document Hierarchy (continued)

- | Step | Action   |
|------|--|
| 6.   | Highlight the new Workflow ID and click on the Setup button on the right: this will open the <i>Document Hierarchy Setup</i> window. First, the window will list only the <b>Batch</b> object: <i>DEP_PRAC</i> , in the example. |



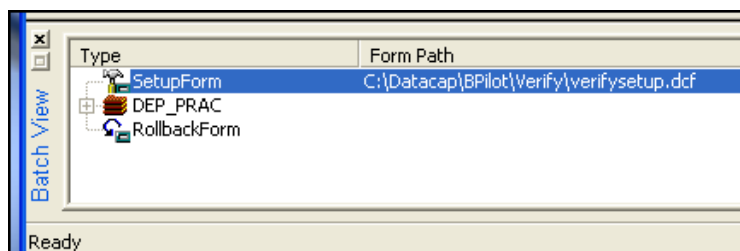
- Right-click on an object at any level to add objects at the next level: Chapter 3 of the *Guide to Taskmaster Rules* describes all features of this window.
- Save the new Document Hierarchy as an XML file in the *1040EZ* application's **Process** directory.



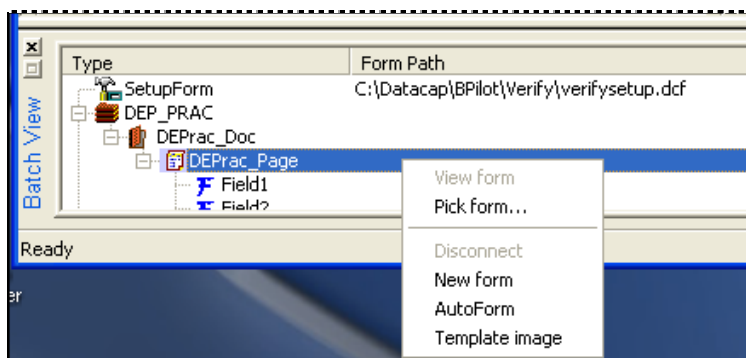
Continued on the next page →

Once the practice Document Hierarchy file in place, producing the *Data Entry* panel is straightforward:

- Select **New Project** from the *Batch Pilot Window's* **File** menu. When *Batch Pilot* asks you to identify the new Task Project's Document Hierarchy file (.xml), locate and select the practice Document Hierarchy.
- Select **Save Project as...** from the **File** menu to save the Task Project file (.bpp) in the application's **Process** directory.
- Close, and open, the practice Task Project.
- In the **Batch View** area, bind a **stock** form such as **verifysetup.dcf** to the *SetupForm*.



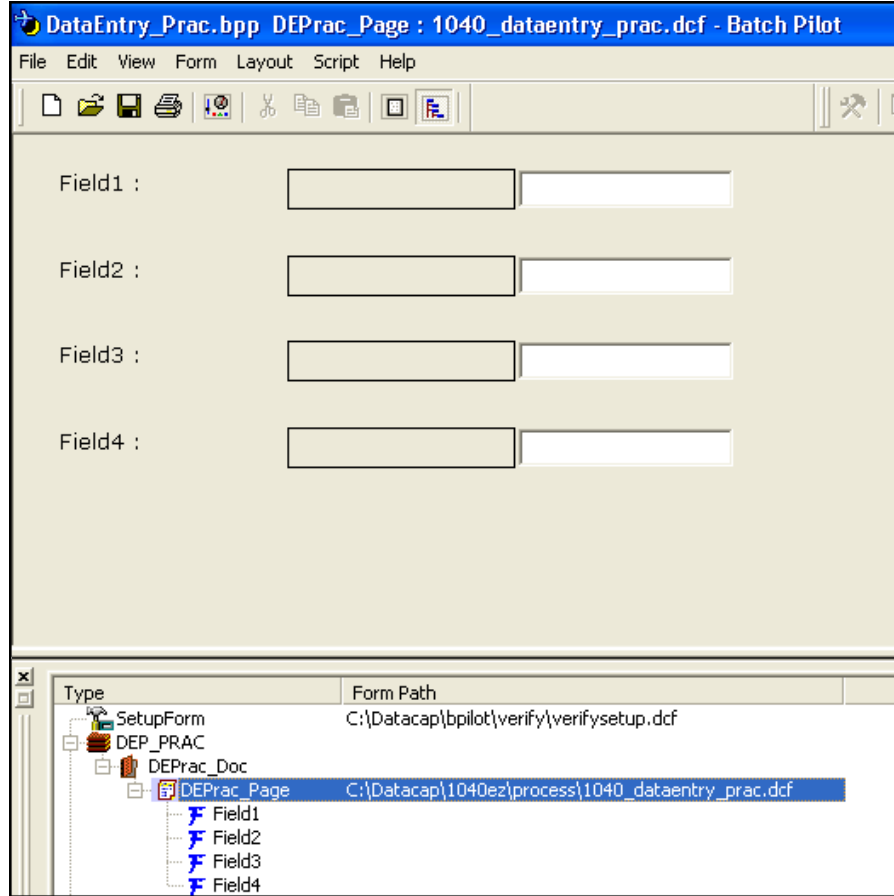
- Open the Document Hierarchy within the **Batch View** area. Right-click on the *DEPrac\_Page Page* object and select the **Autoform** option.



- Pause for an instant while *Autoform* assembles and presents you with a new *Data Entry* panel consisting of four field pairs – a snippet and a Data Edit field for each **Field** object in the practice Document Hierarchy.
- Select **Save Form** from the window's **File** menu to save the *Data Entry* panel as a Datacap Form (.dcf) in the *1040EZ* application's **Process** directory. **Remember!** This is the application's form, not a **stock** form.
- Close and open the Task Project (.bpp).
- In the **Batch View** area, open the Document Hierarchy. Right-click on the *DEPrac\_Page Page* object – and select **View Form**. When the *Data Entry* panel appears, un-toggle the **Design** item in the *Batch Pilot Window's* **Form** menu for an un-hampered look at the panel and its fields.



- Note, carefully, the information in the window's **Title** bar.



**Data Entry Panel: 1040\_dataentry\_prac**

- ✓ Take advantage of this procedure to practice producing a variety of new *Data Entry* panels.

## How to Add Fields to a Data Entry Panel

This section describes the steps you take to add a field pair – a snippet and a Data Edit field – to a Data Entry panel. Page 21 shows you how to add special-purpose fields such as OMR, drop-down list and database lookup fields.

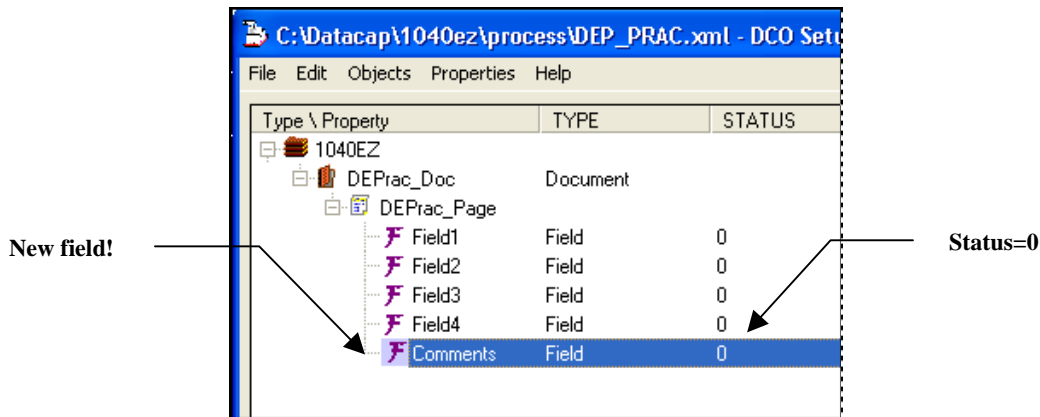
- ✓ For those who intend to add a number of fields, we recommend that you add the applicable Field objects to the Document Hierarchy (Stage 1, below), and use the *Autoform* utility to produce a new panel (Page 5).

### Snippets and Data Edit Field Pairs

Adding a field **pair** – a snippet and Data Edit field - to a *Data Entry* panel, is a procedure that takes place in five stages. **Alert!** Be sure to work in a **Test** environment when you begin this procedure.

#### Stage 1: Add the Field Object to the Document Hierarchy

If you are adding a brand new field such as “Comments”, insert its corresponding **Field** object in your application’s Document Hierarchy first:



DEP\_PRACT.xml – with Comments field

#### Stage 2: Check the Field Object’s Status

Check that the value of the **Status** property of the new **Field** object is “0”.

**Important!** If **Status** is not listed as a default property of **Field** objects in the *Document Hierarchy Setup* window, use a text reader such as *Notepad* to open the Document Hierarchy file (.xml) located in the **Process** directory. Scroll down to the field’s specifications and change the value of **Status** from “-1” to “0”. This allows the field to be represented in the *Data Entry* panel.

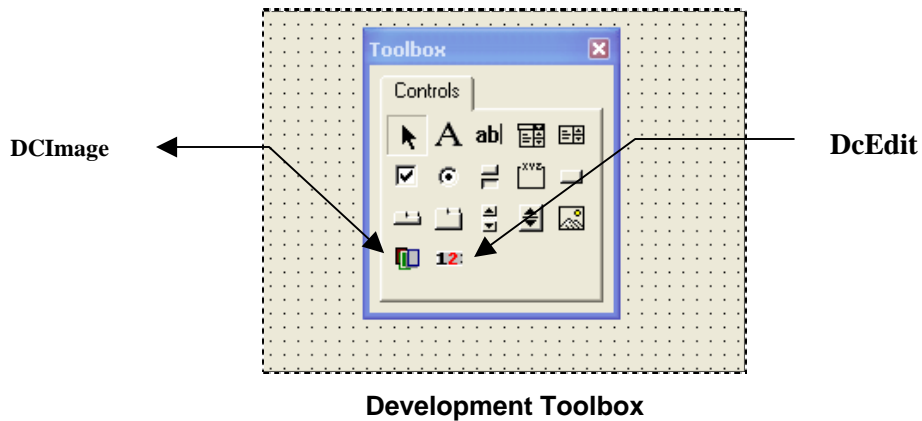
#### Stage 3: Add Field Controls to the Data Entry Form

The new field will require two field controls in the *Data Entry* panel. During processing:

- The **Snippet** will display an image of the field and its value in the current *source* page;
- The **Data Edit field** will display the field's *recognized* value. This is an interactive field control: after comparing the value in the Data Edit field to the image in the Snippet, the operator can correct the value in the Data Edit field, if necessary.

You'll add the controls above to the **Datacap form (.dcf)** that contains the panel's structure and content. To access this form – **1040\_DataEntry\_Prac.dcf**, in this case:

- ◆ Open *Batch Pilot*.
  - ◆ Use the **Open Form** item in the *Batch Pilot Window's* **File** menu to retrieve the form, which is in your application's **Process** directory.
  - ◆ For extra caution, **save** the form as a different **.dcf** file
  - ◆ Move within the form to a "free" locale with plenty of space.
- ✓ To insert the controls, first...
- ◆ Click on the **Development Toolbox** icon in the *Batch Pilot Window's* toolbar, or select **Toolbox** from the **Form** menu.
  - ◆ **Be sure** the toolbox contains a **DcImage** icon *and* a **DcEdit** icon (Chapter 3).



If either is missing:

- ◆ Right-click on the toolbox and select **Additional Controls**.
- ◆ In the *Additional Controls* dialog, check the **DcEdit** control option and/or the **Datacap Tiff Viewer Control** option (which produces the **DcImage** icon.)

Use the **DcImage** icon to place a rectangular Snippet control on the form, and the **DcEdit** icon to place a rectangular Data Edit field control just below the Snippet.

Save the form!

### Stage 3: Configure Properties and Events

Each control has a unique set of properties. To review and modify these properties, right-click on a control you've added to the form to access the *Properties* dialog for that control.

- ✓ **Important!** The new Snippet control (using the *Comments* field as an example) requires the following specific values for three specific properties:

<b>ControlTipText</b>	Comments
<b>FileName</b>	DcimComments
<b>Name</b>	DcimComments

The Data Edit field control needs these values:

<b>ControlTipText</b>	Comments
<b>Name</b>	Dced5Comments

**Be careful!** Be sure to assign similar values to the properties of any new field pair –and do *not* deviate from the syntax in the example.

**Events** associated with the Data Edit field control also need a few lines of helpful code. If you double-click inside the control *after* you've supplied new values for its properties, the form's scripting mode moves into the forefront of the *Batch Pilot Window*:

Add code similar to the code below to three events you can select from the drop-down list in the upper right-hand corner: **Enter**, **KeyPress** and **NoMoreLCChars**.

```
Sub DcedComments_Enter()  
    DcceditEnter(me)  
End Sub  
  
Sub DcedComments_KeyPress()  
    Call stats_nKeyPress()  
End Sub  
  
Sub DcedComments_NoMoreLCChars()  
    Call NextLC(True)  
End Sub
```

### Stage 5: Bind the Modified Form to the Verification Task Project

If you have been working with a completely “new” *Data Entry* form (.dcf), you have to bind it to the Verify task's Task Project (.bpp). You can bind it to the existing project or, if you are being especially cautious, to a Task Project you have set up exclusively for development and testing.

If you are using a new form with a new name:

- ◆ Open *Batch Pilot* and the *Batch Pilot Window*.
- ◆ Select **Open Project** from the **File** menu; and open the applicable Verify Task Project.
- ◆ Select **Setup Tree** from the **View** menu.
- ◆ In the **Batch View** area at the bottom of the window, highlight the **Page** object just *beneath* the target document.
- ◆ Right-click and select **Pick Form**.
- ◆ When the *Open* dialog appears, select the appropriate **.dcf** file. This binds the form to the **Page** object.

## Special Purpose Field Controls: OMR, Dictionary, and Database Lookup Fields

Because you set up fields in these categories outside of the *Batch Pilot* development workshop, the next few pages briefly describe the fields and tell you where to obtain complete explanations of fields in each category.

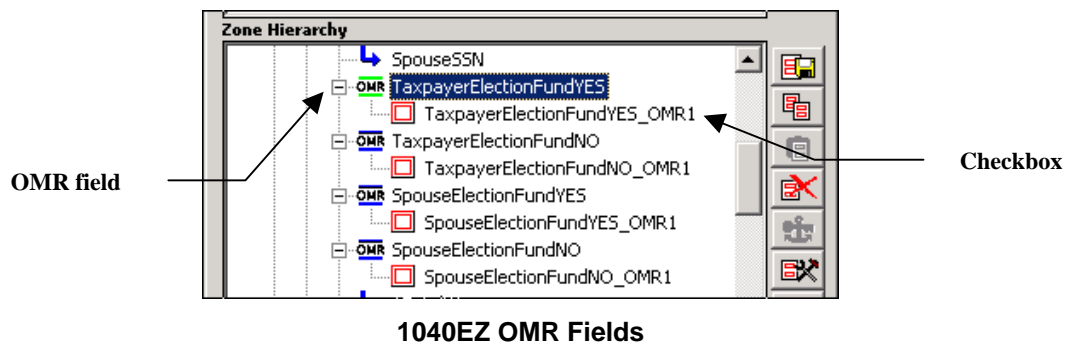
- ✓ Keep in mind that *Autoform* automatically adds these fields to the *Data Entry* panel as long as you define them *before* you create the panel.

### OMR Fields

You use the *Recognition Options Setup* dialog accessible from the *Fingerprints & Zones* panel of the *Rule Manager Window* to construct a set of Optical Mark Recognition fields. In the example below,

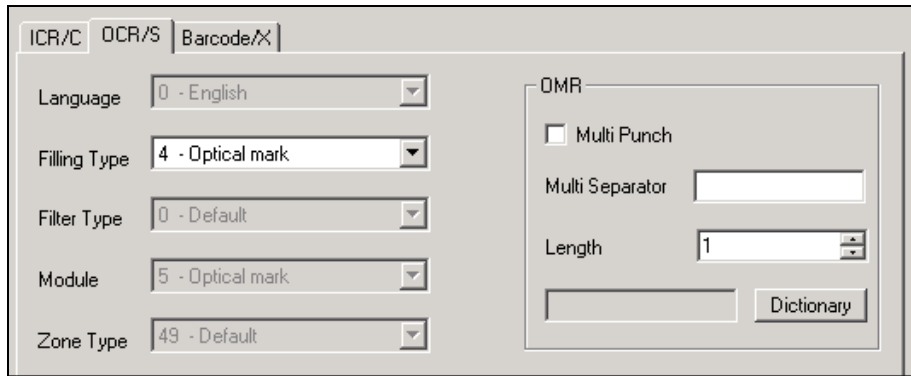
Tools of the dialog's *OCR/S* tab of the *Recognition Options Setup* dialog add Optical Mark Recognition (OMR) **Field** objects to your Document Hierarchy quickly, easily and accurately.

The default *1040EZ* Document Hierarchy has four such fields: each contains a single checkbox a taxpayer or spouse can use to respond *Yes* or *No* to the **Election Fund** option.



## How to Add Fields to a Data Entry Panel

A **Field** object can take on OMR characteristics only if the *OCR/S* tab of the **Recognition Options Setup** dialog provides them. The settings for the *TaxpayerElectionFundYES* field look like this:



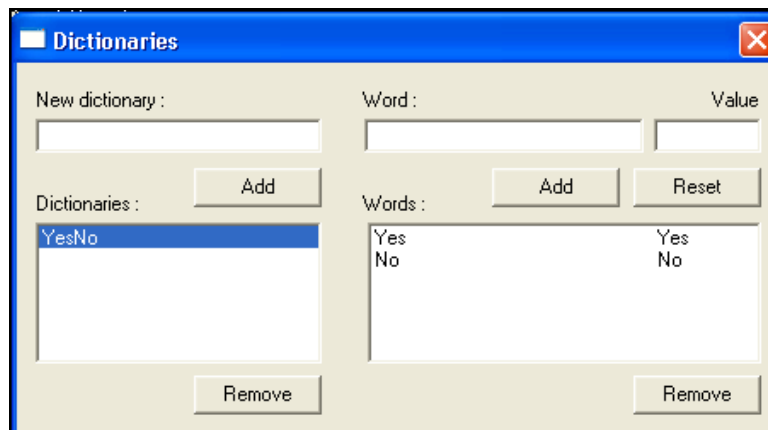
Options Setup dialog – OCR/S tab

- ✓ Chapter 4 of the *Guide to Taskmaster Rules* describes these fields, and the steps you take to add them to your **Data Entry** panel.

### Dictionaries

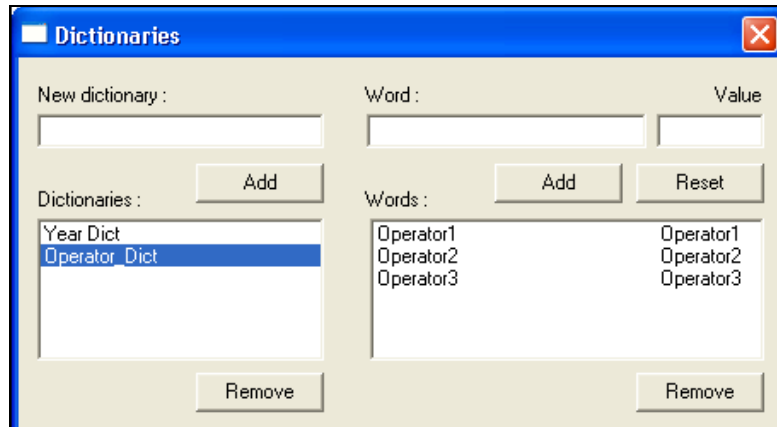
Values in a dictionary appear automatically when a panel's Data Entry operator accesses a field with multiple pre-defined values.

In the simple example below, *YesNo* is a single dictionary with two values that are assigned to that the **TaxpayerElectionFind** and **SpouseElectionFund** fields – and are listed when the *1040EZ* Data Entry operator reaches these fields.



1040EZ Dictionary: Yes, No

The *Express* application employs two dictionaries:

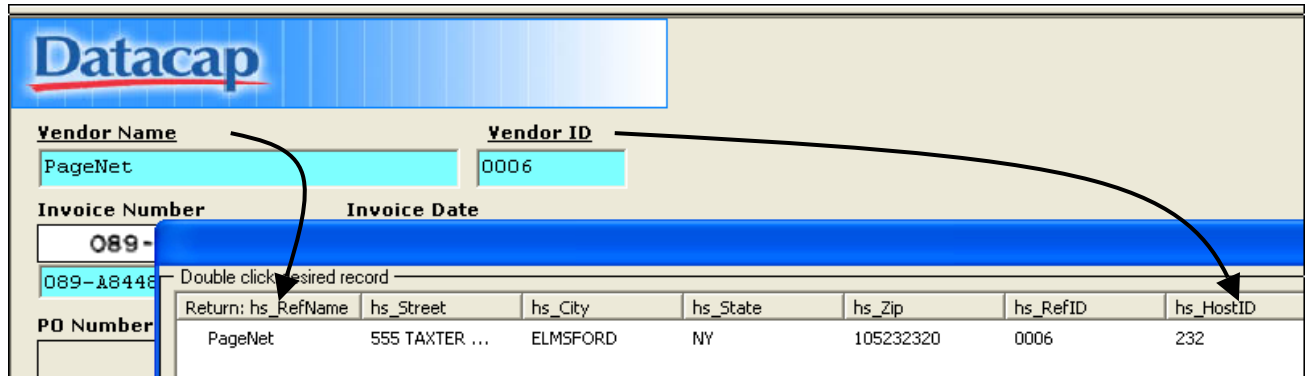


**YearDict and Operator\_Dict Dictionaries -  
Express Application**

- ✓ **Dictionary** is a property of the applicable **Field** object of the Document Hierarchy; although individual dictionaries can be defined in the *Document Hierarchy Setup* window, it's easier to use *OCR/S* tab of the *Recognition Setup Options* dialog. Chapter 4 of the *Guide to Taskmaster Rules* explains both approaches.

**Database Lookup Fields**

The upper portion of the standard *Taskmaster for Invoices* application's *Data Entry* panel features two Database Lookup fields: Vendor Name and Vendor ID.



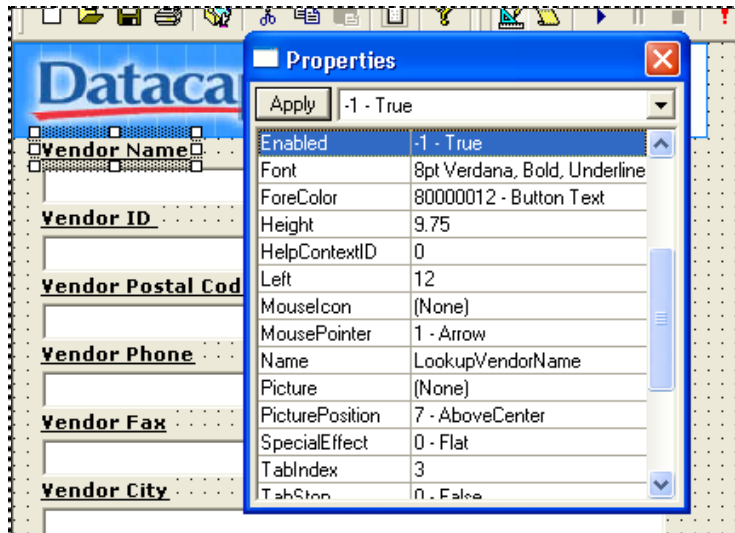
**InvoiceRule Database: Host table**

The underlined labels identify the fields' special purpose. When the operator clicks on a title, a row of the **Host** table of the application's Rules database appears – or all rows, depending on the circumstance. (The **Host** table contains vendor information.) If appropriate, the operator can change a field's value in the panel.

## How to Add Fields to a Data Entry Panel

The panel's **Vendor Name** control has these special properties:

- **Name:** *LookUpVendorName*
- **Font:** *Underlined*



**Properties – VendorName label**

When you double-click on the label when *Batch Pilot* is in *Design* mode, the **Label** control's Click event has this code (**bold** type is for emphasis):

```
Sub LookUpVendorID_Click()  
  
    Call Lookup2Dlg(DcedVendorID, "<SQL flist='VendorID,  
VendorName, VendorStreet, VendorCity, VendorState, VendorPos  
talCode' dsn='InvoiceLook'>SELECT TOP 10  
vt_RefID, vt_RefName, vt_Street, vt_City, vt_State, vt_Zip  
FROM VendorTable WHERE vt_RefID like  
'@@VendorID@@' </SQL>")  
  
End Sub
```

In this example, when the operator selects the *Vendor Name* label, the **Data Entry** panel uses a LookUp dialog to list data from the first ten Vendor Records in Vendor table of the *Taskmaster for Invoices* Lookup database.



## How to Add a Magnifying Lens to a Data Entry Panel's Image Control

It is possible to project a Magnifying Lens within the Image control via two calls to the **DCImage** API: **DCImage.LensRatio** and **DCImage.LensZone**. An example of the Magnifying Lens is shown below.



**Sub DCImage.LensRatio.** This subroutine sets the magnification factor of the Magnifier Lens Zone. This subroutine should be called first - before **DCImage.LensZone** (below). The parameter for this call is a decimal value that specifies the relative Zoom factor of the lens.

Setting the parameter for this call to 0.0 removes the Magnifying Lens from the **DCImage** control. We recommend that you set the Lens ratio to 0.0 when the task finishes. For example:

```
Sub Pilot_OnEndBatch(eStatus, bCancel)
  Call ImageCtrl.LensRatio(0.0)
End Sub
```

**Sub DCImage.LensZone.** This subroutine set the position of the Magnifying Lens zone. It takes four parameters (X1, Y1, X2, Y2). The subroutine is optional. You can manually add a Magnifier Zone by dragging a zone onto the **DCImage** control. However, a call must first be made to **DCImage.LensRatio**.

- ✓ Both calls can be used in events of the **Pilot** object such as **Pilot.OnBeginBatch**, **Pilot\_OnEndBatch**, **Pilot\_OnHotKey**, etc. – and in events of other controls.

## How to Add a Magnifying Lens to a Data Entry Panel's Image Control

The example below shows two command buttons added to a standard Batch Pilot Verify form.

The screenshot shows a Datacap form titled "Invoices - Data Entry Panel". It features a blue header with the Datacap logo. Below the header are four input fields: "Vendor Name", "Vendor ID", "Invoice Number", and "Invoice Date". To the right of the "Vendor ID" and "Invoice Date" fields are two small square buttons labeled "1" and "2" respectively. An arrow points to button "1" with the label "On!" and another arrow points to button "2" with the label "Off".

Invoices - Data Entry Panel

In this example, coding of the "1" **Button** control's **Click** event places a **magnifying lens** right on top of the current image. The operator can move the lens anywhere in the image for a better look at fields and their values:

```
Sub CommandButton1_Click()  
    Call ImageCtrl.LensRatio(2.0)  
    Call ImageCtrl.LensZone(0,0,200,200)  
End Sub
```

Coding of the "2" button's **Click** event removes the lens.

```
Sub CommandButton2_Click()  
    Call ImageCtrl.LensRatio(0.0)  
End Sub
```

- ✓ The code for both controls uses the **ImageCtrl** object (**DCImage.ocx**) that is built into all *Batch Pilot* forms.

## Hot Keys of the Data Entry Panel

The *Autoform* utility (Page 5) automatically endows a new *Data Entry* panel with a full set of global Hot Keys. Operators can use the Hot Keys to move swiftly and efficiently through the contents of the current batch.

- ✓ The tables in this section describe the panel's default Hot Keys; Chapter 3 describes the steps you take to define additional Hot Keys for your panel.

### Procedures and their Hot Keys

This table lists a *Data Entry* panel's Hot Keys according to the procedures they carry out. The table on Page 30 is organized according to Hot Key.

Both tables display **Index** and **Keycode** values that are used by the code that determines the Hot Keys' procedures.

Procedure	Hot Key	Index	Keycode
<b>Batch, Doc and Page</b>			
Check <i>Document Integrity</i> and raise condition if fails.	F3	3	114
Check <i>Expected Docs</i> and raise condition if failed.	F5	5	116
Go to the next problem page in the batch.	Ctrl+N	-	-
Go to previous problem page in the batch.	Ctrl+P	-	-
Go to the next page in the batch.	Shift+Ctrl+N	-	-
Go to the previous page in the batch.	Shift+Ctrl+P	-	-
Mark/unmark page for review.	F2	2	113
Mark/unmark page for rescan.	Ctrl+Alt+R	41	196690
Validate data and go to next document	F6	6	117
Run validations.	Alt+V	12	65622
Delete the current document.	Alt+D	27	65604
Quit the current task.	Ctrl+Q	-	-
<b>Images</b>			
View Image (menu toggle)	Ctrl+Alt+I		
Image full view.	Alt+E	15	65605
Image quarter view (counter clockwise).	Shift+Alt+Q	8	327761

### Procedures and their Hot Keys (continued)

Procedure	Hot Key	Index	Keycode
Image quarter view (clockwise).	Alt+Q	9	65617
Restore image from quarter view.	F7	7	118
Scroll up in the image.	Ctrl+(KeyPad) Up	-	-
Scroll right in the image.	Ctrl+(KeyPad) Right	-	-
Scroll down in the image.	Ctrl+(KeyPad) Down	-	-
Scroll left in the image.	Ctrl+(KeyPad) Left	-	-
Zoom out.	Ctrl+(KeyPad) Minus	-	-
Zoom in.	Ctrl+(KeyPad) Plus	-	-
Print image.	Ctrl+Alt+P	30	196688
<b>Data Edit Fields</b>			
Next Field	Tab		
Previous Field	Shift+Tab		
Clear all controls.	F11	11	122
Clear current field.	Alt+Z	14	65626
Delete remaining characters in the current field.	Ctrl+K	39	131147
Go to next Low Confidence character.	F10	10	121
Go to next Low Confidence character / field.	Alt+L	13	65612
Go to next Low Confidence field.	Shift+Alt+L	40	327756
Go to next Low Confidence character / field. <i>Will not prompt you to go to the next problem page.</i>	Ctrl+Alt+L	-	-
Move focus to first field (field with lowest tab index)	Alt+H	16	65608

## Procedures and their Hot Keys (continued)

Procedure	Hot Key	Index	Keycode
<b>Snippets</b>			
Move snippet contents up.	Shift+Alt+Number8 (Number Lock Off)	31	327718
Move snippet contents down.	Shift+Alt+Number2 (Number Lock Off)	32	327720
Move snippet contents left.	Shift+Alt+Number4 (Number Lock Off)	33	327717
Move snippet contents right.	Shift+Alt+Number6 (Number Lock Off)	34	327719
Zoom snippet contents in.	Shift+Alt+I	35	327753
Zoom snippet contents out.	Shift+Alt+O	36	327759
Restore default snippet display.	Shift+Alt+R	37	327762
Open/close a Supper Snippet	Ctrl+S	-	-
<b>CCO Navigation</b>			
Show/hide CCO lines.	Alt+R	28	65618
Show/hide CCO words.	Alt+W	29	65623
Navigate CCO down.	Alt+Number2 (Number Lock ON)	18	65634
Navigate CCO down & left.	Alt+Number1 (Number Lock ON)	17	65633
Navigate CCO down and right.	Alt+Number3 (Number Lock ON)	19	65635
Navigate CCO left.	Alt+Number4 (Number Lock ON)	20	65636
Navigate CCO right.	Alt+Number6 (Number Lock ON)	22	65638
Navigate CCO up.	Alt+Number8 (Number Lock ON)	24	65640
Navigate CCO up and left.	Alt+Number7 (Number Lock ON)	23	65639
Navigate CCO up and right.	Alt+Number9 (Number Lock ON)	25	65641

Procedures and their Hot Keys (continued)

Procedure	Hot Key	Index	Keycode
Navigate CCO. Set word to field value. <b>(Check)</b>	Alt+Number5 (Number Lock ON)	21	65637
Navigate CCO. Append word to field value. <b>(Check)</b>	Ctrl+Alt+Number9 (Number Lock ON)	26	196713
<b>For Future Use</b>			
<i>For Future Use</i>	F1	1	112
<i>For Future Use</i>	F4	4	115
<i>For Future Use</i>	Shift + Alt + S	42	327763
<i>For Future Use</i>	Shift + Alt + A	43	327745
<i>For Future Use</i>	Ctrl+Number5	38	131173

**Hot Keys and their Procedures**

Hot Key	Procedure	Index	Keycode
<b>Batch, Doc and Page</b>			
F3	Check <i>Document Integrity</i> and raise condition if fails.	3	114
F5	Check <i>Expected Docs</i> and raise condition if failed.	5	116
Ctrl+N	Go to the next problem page in the batch.	-	-
Ctrl+P	Go to previous problem page in the batch.	-	-
Shift+Ctrl+N	Go to the next page in the batch.	-	-
Shift+Ctrl+P	Go to the previous page in the batch.	-	-
F2	Mark/unmark page for review.	2	113
Ctrl+Alt+R	Mark/unmark page for rescan.	41	196690
F6	Validate data and go to next document	6	117
Alt+V	Run validations.	12	65622
Alt+D	Delete the current document.	27	65604
Ctrl+Q	Quit the current task.	-	-

## Hot Keys and their Procedures (continued)

Hot Key	Procedure	Index	Keycode
<b>Images</b>			
Alt+E	Image full view.	15	65605
Shift+Alt+Q	Image quarter view (counter clockwise).	8	327761
Alt+Q	Image quarter view (clockwise).	9	65617
F7	Restore image from quarter view.	7	118
Ctrl+(KeyPad) Up	Scroll up in the image.	-	-
Ctrl+(KeyPad) Right	Scroll right in the image.	-	-
Ctrl+(KeyPad) Down	Scroll down in the image.	-	-
Ctrl+(KeyPad) Left	Scroll left in the image.	-	-
Ctrl+(KeyPad) Minus	Zoom out.	-	-
Ctrl+(KeyPad) Plus	Zoom in.	-	-
Ctrl+Alt+P	Print image.	30	196688
<b>Data Edit Fields</b>			
Tab	Next Field		
Shift+Tab	Previous Field		
F11	Clear all controls.	11	122
Alt+Z	Clear current field.	14	65626
Ctrl+K	Delete remaining characters in the current field.	39	131147
F10	Go to next Low Confidence character.	10	121
Alt+L	Go to next Low Confidence character / field.	13	65612
Shift+Alt+L	Go to next Low Confidence field.	40	327756
Ctrl+Alt+L	Go to next Low Confidence character / field. <i>Will not prompt you to go to the next problem page.</i>	-	-
Alt+H	Move focus to first field (field with lowest tab index)	16	65608

### Hot Keys and their Procedures (continued)

Hot Key	Procedure	Index	Keycode
<b>Snippets</b>			
Shift+Alt+Number8 (Number Lock Off)	Move snippet contents up.	31	327718
Shift+Alt+Number2 (Number Lock Off)	Move snippet contents down.	32	327720
Shift+Alt+Number4 (Number Lock Off)	Move snippet contents left.	33	327717
Shift+Alt+Number6 (Number Lock Off)	Move snippet contents right.	34	327719
Shift+Alt+I	Zoom snippet contents in.	35	327753
Shift+Alt+O	Zoom snippet contents out.	36	327759
Shift+Alt+R	Restore default snippet display.	37	327762
Ctrl+S	Open/close a Supper Snippet	-	-
<b>CCO Navigation</b>			
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Alt+W	Show/hide CCO words.	29	65623
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Alt+Number1 (Number Lock ON)	Navigate CCO down & left.	17	65633
Alt+Number3 (Number Lock ON)	Navigate CCO down and right.	19	65635
Alt+Number4 (Number Lock ON)	Navigate CCO left.	20	65636
Alt+Number6 (Number Lock ON)	Navigate CCO right.	22	65638
Alt+Number8 (Number Lock ON)	Navigate CCO up.	24	65640
Alt+Number7 (Number Lock ON)	Navigate CCO up and left.	23	65639



## Hot Keys and their Procedures (continued)

Hot Key	Procedure	Index	Keycode
Alt+Number9 (Number LockON)	Navigate CCO up and right.	25	65641
Alt+Number5 (Number LockON)	Navigate CCO. Set word to field value.	21	65637
Ctrl+Alt+Number9 (Number LockON)	Navigate CCO. Append word to field value.	26	196713
<b>For Future Use</b>			
F1	<i>For Future Use</i>	1	112
F4	<i>For Future Use</i>	4	115
Shift + Alt + S	<i>For Future Use</i>	42	327763
Shift + Alt + A	<i>For Future Use</i>	43	327745
Ctrl+Number5	<i>For Future Use</i>	38	131173