



Chameleon Information Management Services Limited

INFOFLEX 5

Functionality for NHS Numbers

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16/12/2009	01	5.30.3700	HV	New document
June 2010	1.1	5.40.0100	JW	Updates for 5.40.0100 End of section 2. Remove need to remove spaces when using ValidNHSNumber function with text items Section 4 para 2. update for display of text items in documents



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1 Introduction

New functionality has been introduced into InfoFlex to assist with compliance with Data Set Change Notice DSCN Reference No: 32/2008 Version No: 1.0 Information Standards: NHS Number Standard for Secondary Care (England).

The new functionality gives assistance in the following areas:

- *Validating (both format and check-digit) the NHS Number when input.*
- *Allowing the NHS Number to be input, into the appropriate data input field on the screen, as 10 digits with or without spaces*
- *Printing and displaying the NHS Number in 3 3 4 format (e.g. 123 456 7890).*

2 Validating the NHS Number

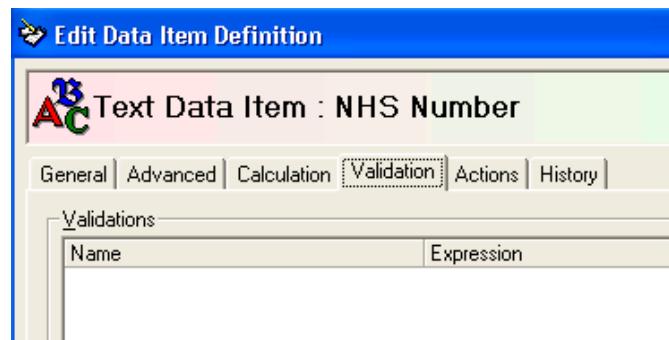
A function called **VALIDNHSNUMBER** has been added to the InfoFlex Expression builder to validate v2 NHS Numbers. The function ensures that it is 10 digits long and validates the check digit using the algorithm provided by the Dept of Health. (See http://www.cabinetoffice.gov.uk/govtalk/schemasstandards/e-gif/datastandards/identifiers/nhs_number.aspx).

VALIDNHSNUMBER(testvalue)
Returns True if the supplied value is a valid NHS number

The function can be used in the normal way as for other InfoFlex functions, e.g. in calculated items, validations etc. For example, a validation message can be designed to warn the user when they input an NHS Number that is not valid. Alternatively, a calculated boolean item could be created and displayed as a checkbox to show a tick when the NHS Number is valid, and a cross when it is not.

Here are the steps to add a validation to a data item to warn the user when the NHS Number is not valid.

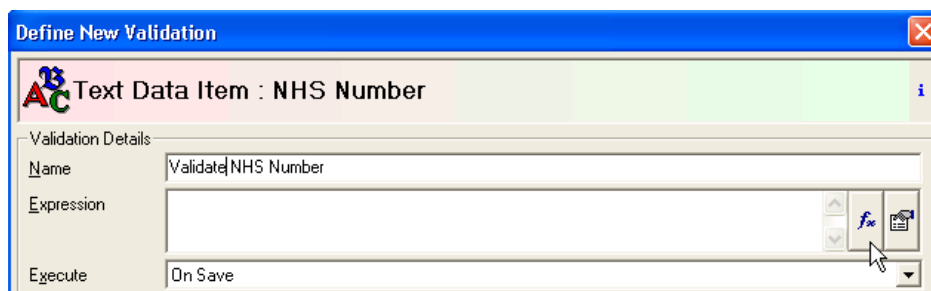
1. In Design Management, find the NHS Number data item, edit the definition and select the **Validation** tab.



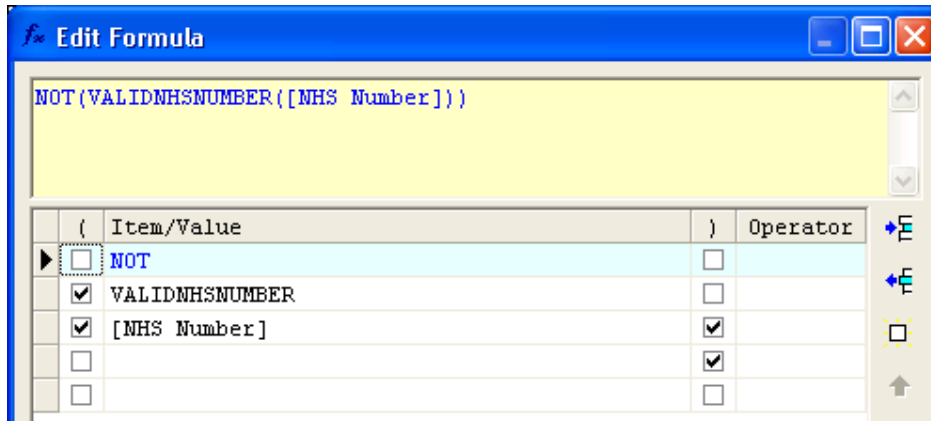
2. Press the Add button to add a new validation.



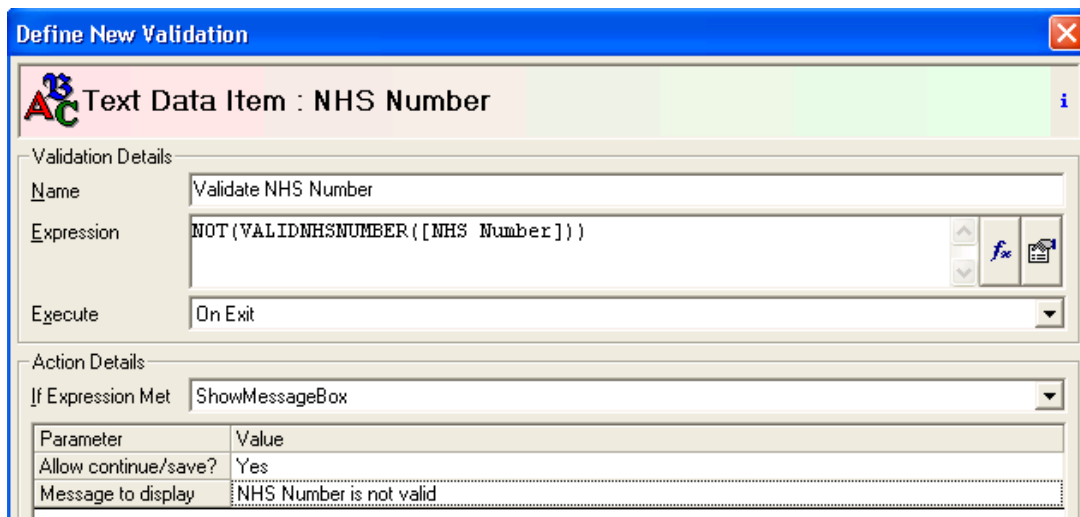
3. Give the validation a name, and select the Edit Formula button to define the expression that will trigger the validation message.



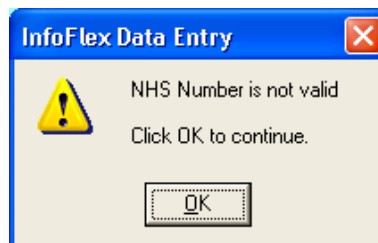
- The validation message will display when the validation expression is true. So we want to capture the case where the NHS Number is **not** valid.



- Select OK to return to the Validation definition. Select some text to display when the NHS number is not valid, when to execute the validation, and whether to allow the user to continue or save when the NHS Number is not valid.



- In Data Entry, the message will appear if the NHS Number is not valid.



3 Inputting NHS Numbers

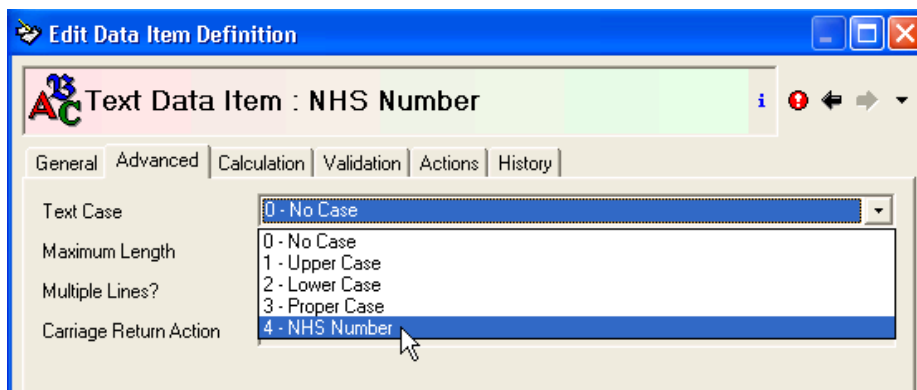
The NHS Number needs to be displayed in the 3 3 4 format (i.e. it has three numbers then a space, another three numbers then a space, then four numbers, e.g. “123 456 7890”). However, the user must be able to input the number with or without spaces.

To accommodate this requirement two additions have been made to InfoFlex

- For text items, a new text case has been added called **NHS Number** case.
- For value items, a new format has been created “**000 000 0000**”.

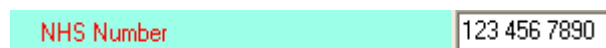
3.1 Text NHS Number Items

If the NHS Number is a text item, then there is a new option for the property **Text Case**. In Design Management, edit the text item definition and go to the **Advanced** tab. For the property **Text Case** there is a new option **4 – NHS Number**.



When you select the **NHS Number** case it tells InfoFlex that the format must be the 3 3 4 format, there is a maximum of 10 characters, and only numerical digits are allowed. It also prevents the other Advanced tab properties from being used (**Maximum Length**; **Multiple Lines?**; and **Carriage Return Action**)

When the user types in the field in Data Entry, InfoFlex does not allow any characters other than numbers. It automatically formats the digits with the spaces in the correct place, and the user can type the spaces or not type the spaces as desired.



When the user searches for the patient using the NHS Number, the same text case is used, so the user can type the number with or without spaces and it will automatically be put in the 3 3 4 format.

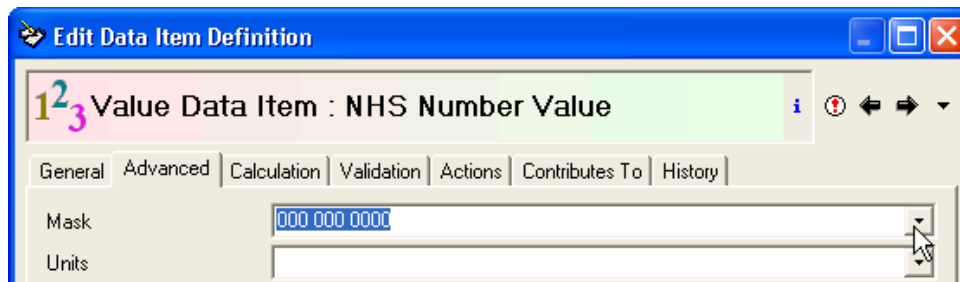
Historical data will display in the 3 3 4 format even if it was put into InfoFlex without spaces. However, the underlying text stored will not change unless the item is edited.

Note that the new NHS Numbers will be stored in the database including the spaces. So the text stored is exactly the same as the text on display, and is 12 characters because of the two spaces.

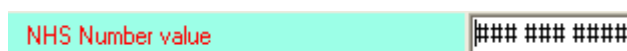
3.2 Value NHS Number Items

If the NHS Number is a value item, there is a new format mask available for NHS Numbers “000 000 0000”.

In Design Management, edit the value item definition and go to the **Advanced** tab. Select the property called **Mask**. Choose the option **000 000 0000**



In Data Entry, when the user types in the value item with this mask selected, only digits are allowed, and they will be automatically formatted in the 3 3 4 format. The user can type spaces or not type spaces as they wish.



In addition, changes have been made so that InfoFlex recognises that this mask is a non-numerical format, so the ‘+’ and ‘-’ buttons will not be displayed on the item.

The same mask will be used when searching for the patient using the NHS Number, so the user can type in the number with or without spaces in the search window and it will automatically be formatted correctly.

Note that the value in the database stored is a 10 digit numerical value and so will not contain any spaces. The mask is simply for displaying and inputting.



4 Displaying NHS Numbers

If the NHS Number is already stored in 3 3 4 format, then it will be displayed in this format on InfoFlex screens and documents.

If the NHS Number is a text item, but was originally put in the database without spaces in, then it will display on InfoFlex screens in the 3 3 4 format as long as the **NHS Number** text case is used. It will display in InfoFlex documents in the 3 3 4 format as long as no formatting is specified in the Format or Case column for the item on the Items tab of the document definition.

If the NHS Number is a value item, then it will display on InfoFlex screens and documents in the 3 3 4 format as long as the mask **000 000 0000** is used.

There may be occasions when a design needs two NHS Number items, one for displaying and input using the 3 3 4 format, and the other without spaces for interfacing with other systems or for use in extracts. One item would be calculated from the other.

The following functions can be used for going from one format to another:

In Documents

1. The following function in the template will allow text or value items without spaces to be displayed in the 3 3 4 format:

0123456789 → 012 345 6789
`|$C|Format(<<NHS Number>>, "000 000 0000")|$EC|`

2. The following function will remove the spaces from an NHS Number text item:

012 345 6789 → 0123456789
`|$C|Replace(<<NHS Number>>, " ", "")|$EC|`

In Calculated Items

1. The following function will create a text item in the 3 3 4 format from a value item.

0123456789 → 012 345 6789
`FORMAT([NHS Number Value], "000 000 0000")`

2. The following function will remove spaces from a text item in the 3 3 4 format

012 345 6789 → 0123456789
`REPLACE([NHS Number], " ", "")`

(This will also work if the end result is a value item. Although the function creates a text string, InfoFlex accepts it as a value in a value item as long as it contains only digits and no spaces).

3. The following function can also be used to go from a text item without spaces to a text item with spaces in the 3 3 4 format.

0123456789 → 012 345 6789
`LEFT(<<NHS Number>>, 3) & " " & SUBSTR(<<NHS Number>>, 4, 3) & " " & RIGHT(<<NHS Number>>, 4)`