



# Decompressing 2D Barcodes in Adobe® LiveCycle® Forms

## Introduction

Adobe® LiveCycle® Barcoded Forms are PDF documents, which contain executable code to solicit field input from end users. The code enforces certain edit checks and logic developed by the form designer, and when the end user is done, it creates a PDF417, DataMatrix or QR Code barcode symbol to hold the end user inputs and the field information. Usually, the form is then printed by the end user, signed and sent in via fax or mail (then scanned). To maximize the quantity of data stored in the limited space on the form, the data may be compressed.

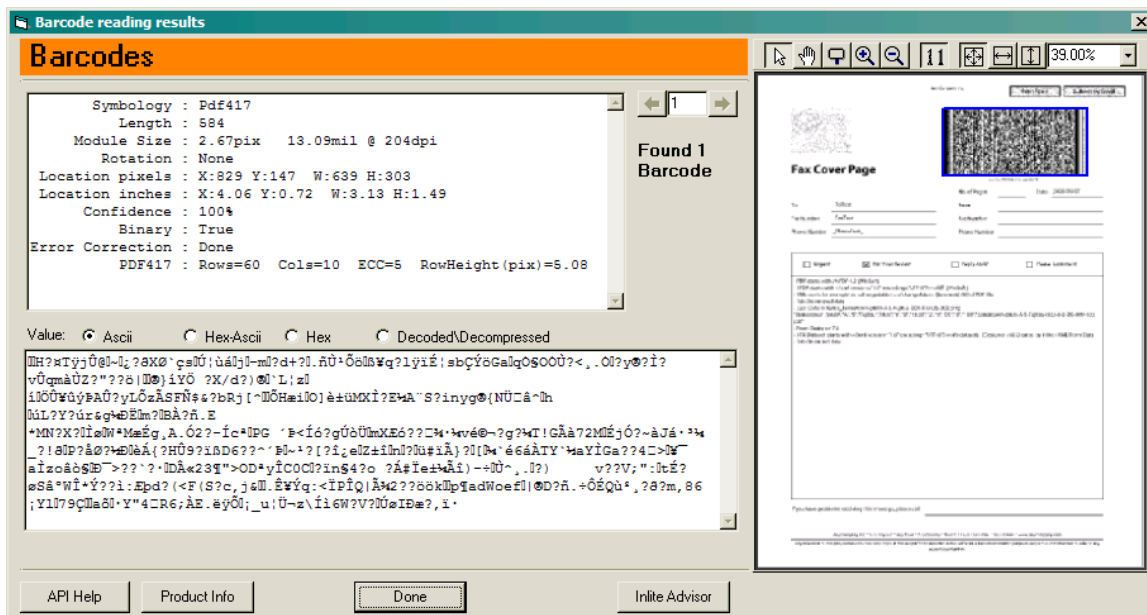
Inlite's [Visual Barcode Designer](#) is another tool that provides optional data compression to embed the maximum quantity of data into smaller size barcode. Because it is a general purpose barcode generator, it can be used to add barcodes to documents generated by any application.

The typical use for either compression methods is to store XML data in the barcode.

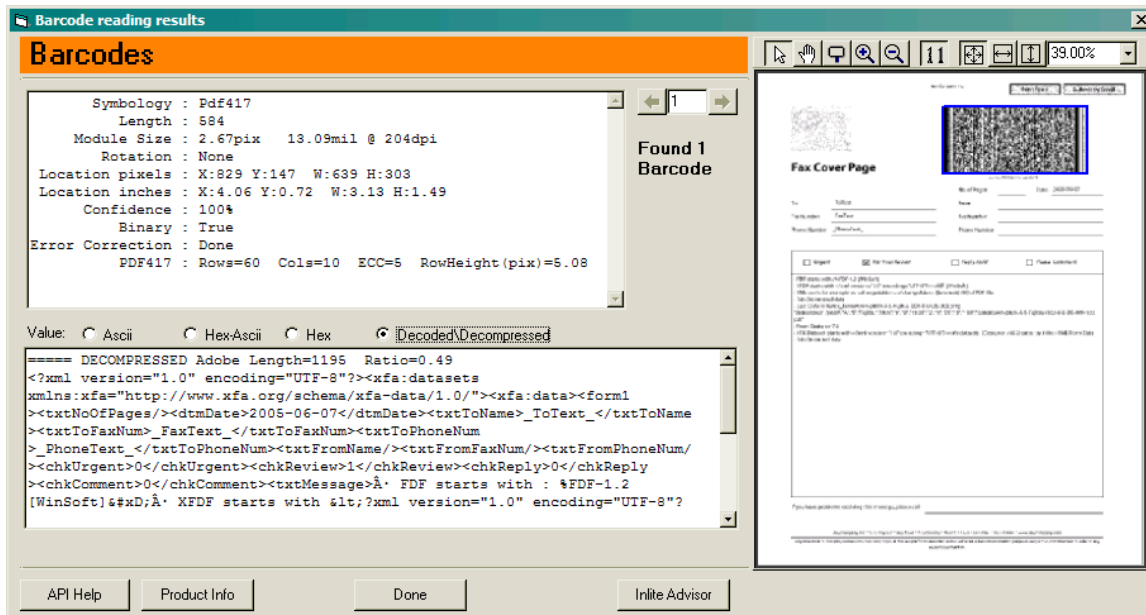
This note explains how to discover whether the barcodes are compressed in either the Adobe or the Inlite compression formats, and how to decompress the data. This information is also available in the ClearImage COM online help.

## ClearImage Demo Application

In the ClearImage SDK Demo application, open the file and read the barcode in the usual way. The results will be displayed in the dialog box:



Note that the data seems to be gibberish. To show the type of compression and to display the decompressed data, click on the radio button **Decoded\Decompressed**. The proper information will be displayed in the results window.



## Decompressing the barcode data in a COM application

ClearImage COM API provides mechanism to obtain decompressed barcode data in your code.

Barcode reading objects **CiPdf417**, **CiDataMatrix**, **CiQR** specify a property named **Encodings**. This property provides a set of flags identifying all possible encoding or compressions that ClearImage can automatically detect before returning barcode value. Currently supported values are:

Member	Value	Description
ebeNone	0	No decoding\decompression
ebeCompressionV1	1	Barcode value was compressed by Inlite Barcodes-For-Documents
ebeCompressionA1	2	Barcode value was compressed by Adobe® LiveCycle®

Basic steps for obtaining decompressed value:

- Set the **Encodings** property to the expected value or to the OR'd combination of multiple expected values.
- Call the **Find** or **FindFirst** methods to read and to decompress the barcode values
- Check if compression was detected by examining the [CiBarcode.Encoding](#) property.

## Visual Basic sample source code

```
Public Function T_Pdf417_Adobe-Decompress(ByRef Ci As CiServer, sFileName)
    Dim Bc As CiPdf417: Set Bc = Ci.CreatePdf417
    ' Open image from file
    Bc.Image.Open sFileName
    ' Configure barcode
    Bc.Algorithm = cibBestRecognition
    Bc.Directions = cibHorz
    ' Try to decompress barcode value created using Adobe compression
    Bc.Encodings = ebeCompressionAl
    ' Read barcode
    Dim Barcode As CiBarcode
    Set Barcode = Bc.FirstBarcode
    ' Process barcode
    If (Not Barcode Is Nothing) Then
        ' Use detected compression:
        if (Barcode.Encoding = ebeCompressionAl) Then
            \ Process barcode value that was compressed by Adobe
        Else
            \ Process uncompressed barcode value
        End If
    End If
End Function
```

## Decompressing the barcode data in a .NET application

The ClearImageNet API does not implement these capabilities. To decompress barcodes in .NET applications use ClearImage COM API through Interop. See examples of code and Application Notes at:

[http://www.inliteresearch.com/homepage/support/kb\\_programming.html](http://www.inliteresearch.com/homepage/support/kb_programming.html)

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