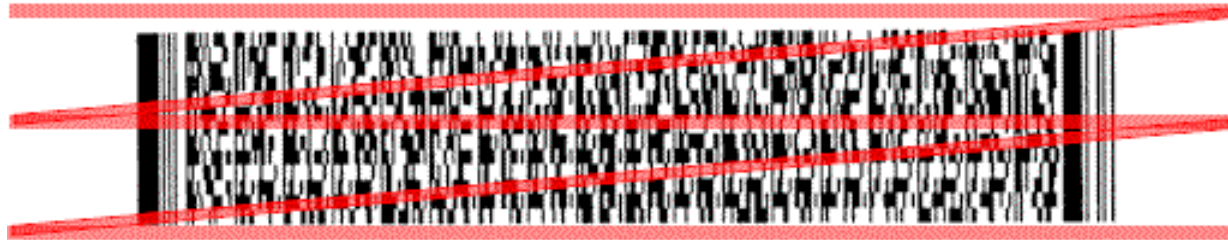


New Technology for 2-D Barcode Forms

*Missouri's Experience Using
UltraForms® 2-D Barcode*



Who Can Benefit From This Technology?

- ◆ States who currently process 2-D barcode returns through software developers
- ◆ States that don't have 2-D barcode
- ◆ Software developers who are thinking about adding 2-D barcode to their products or that already have added 2-D barcode

How 2-D Barcode Processing Works



Form Entry

The taxpayer or a paid preparer uses tax preparation software or UltraForms® to complete forms.



Print Form With Barcode

Before printing, the software will collect the data from the form and will convert it to an image of the barcode which will print on the form.



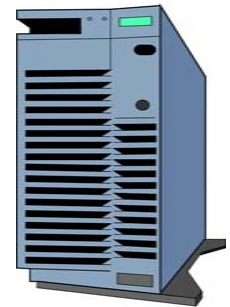
Sign and Submit

Taxpayer will review the form, sign, attach supporting documents and mail as usual



Open and Scan

Revenue's data entry division will receive form with barcode, scan form into tax system and apply document locator number (DLN)



Validate and Post

The scanned data will go through the same validation and posting process as if it had been manually keyed or submitted electronically.

2-D Barcode for State of Missouri

- ◆ Tax Year 1999 Missouri implemented 2-D barcode with two approved software vendors.
- ◆ Tax Year 2003 Missouri had ten approved software vendors.

2-D barcode program has been very successful!

Fill-in Forms That Calculate

- ◆ Missouri has offered fill-in forms that calculate since 1999 (single forms in each file).
- ◆ DOR started searching for a way to incorporate a 2-D barcode **within the Department's fill-in PDF file**, without any cost to the taxpayers. DOR didn't want to make taxpayers download any plug-ins or fonts to use the file.

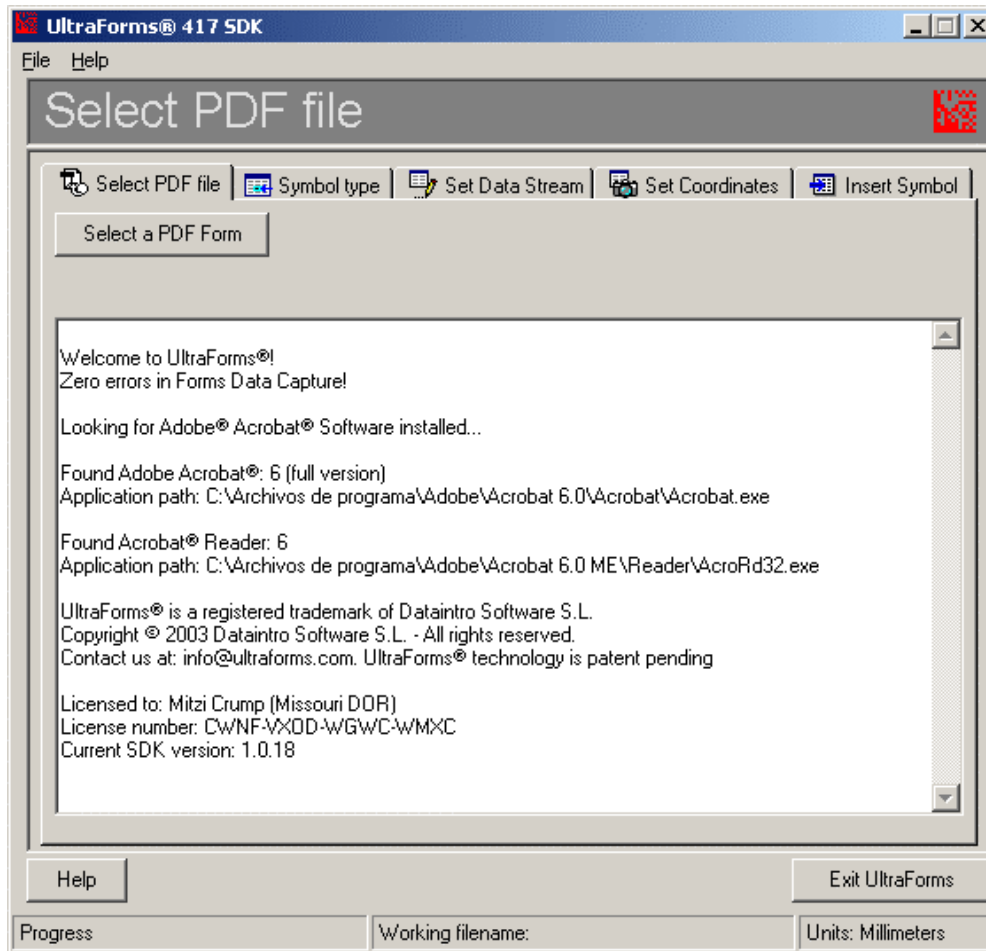
UltraForms® Technology

- ◆ Late August, 2003 MoDOR was contacted by DataIntro's Team wanting to demonstrate their product.
- ◆ *It was exactly what we were looking for!* Missouri purchased at the end of October.
- ◆ By the end of November, calculating forms with a barcode were ready to be released on the department's CD.

Embedding 2-D Barcode

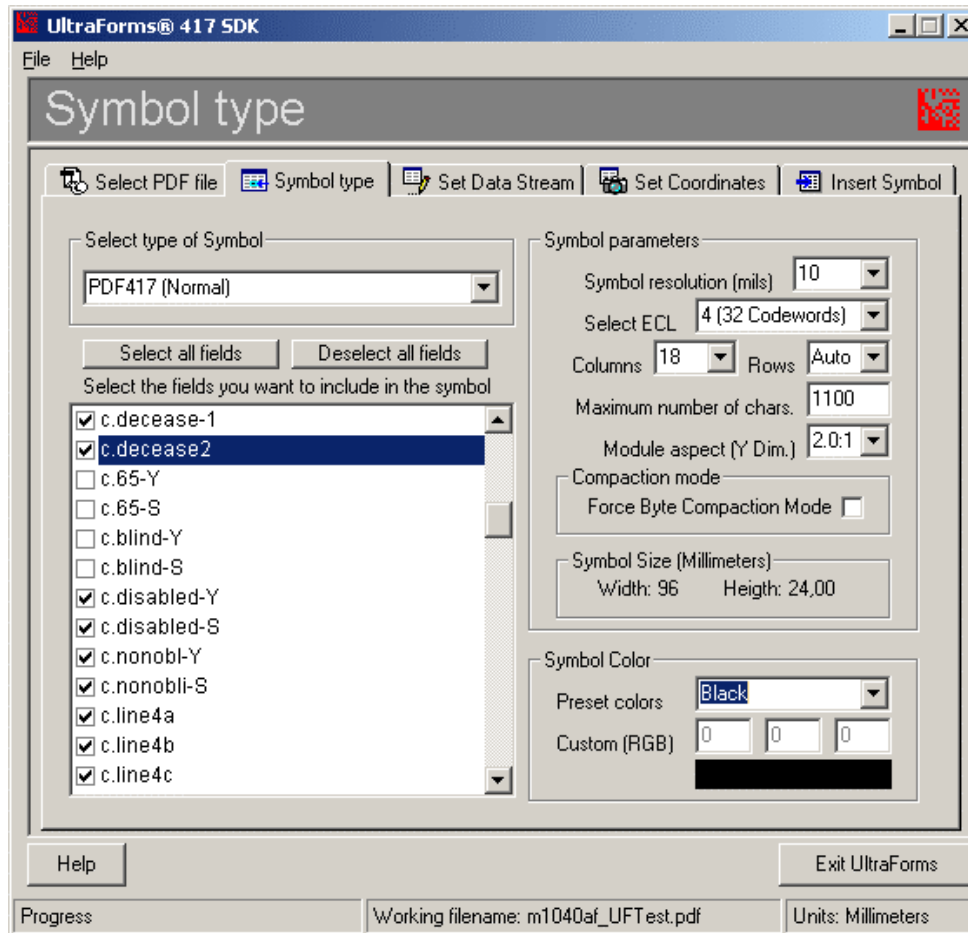
- ◆ Using UltraForms® Technology, you can embed a 2-D barcode in the PDF file *within minutes!*
- ◆ You have total control of placement of barcode, maximum number of characters, error correction level, number of rows and columns, ratio of barcode, fields to be captured, etc.
- ◆ Automatically builds a script, using the fields you have created in the PDF file.

Select A Fill-in PDF File



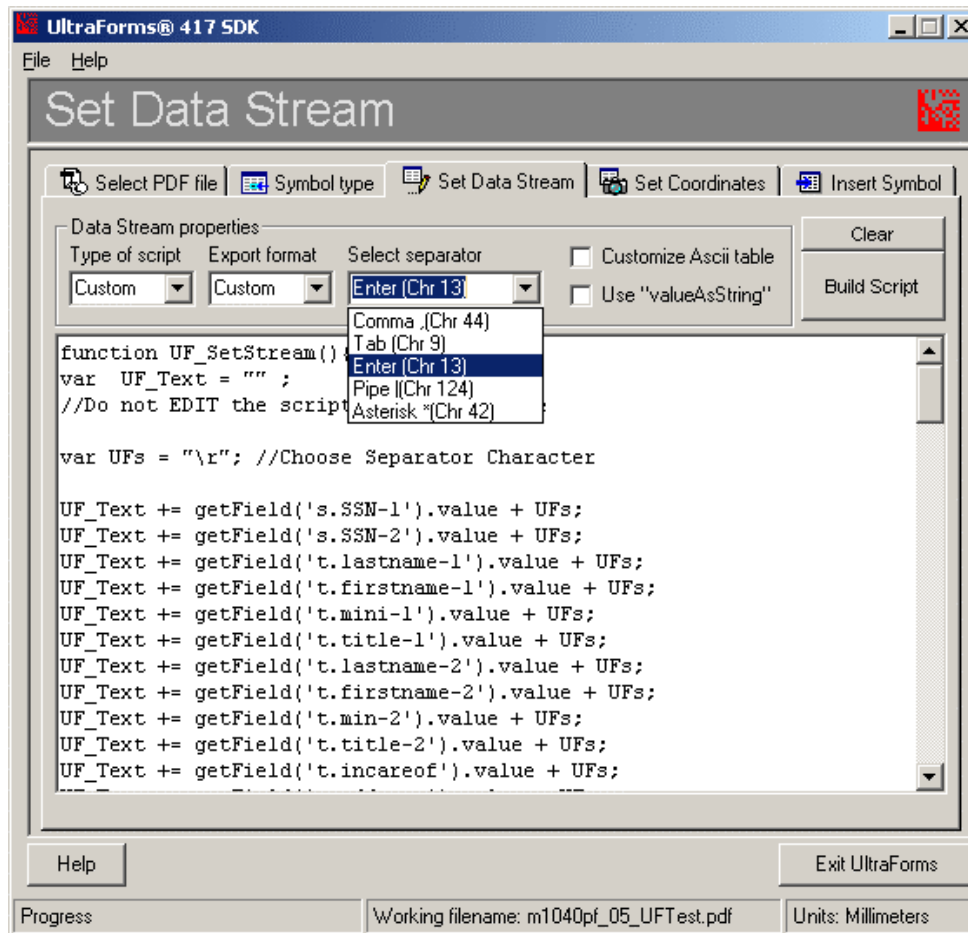
- ◆ The fill-in fields need to be created in the PDF file first.
- ◆ Select the file you wish to use.
- ◆ Never alters the original file.

Symbol Type



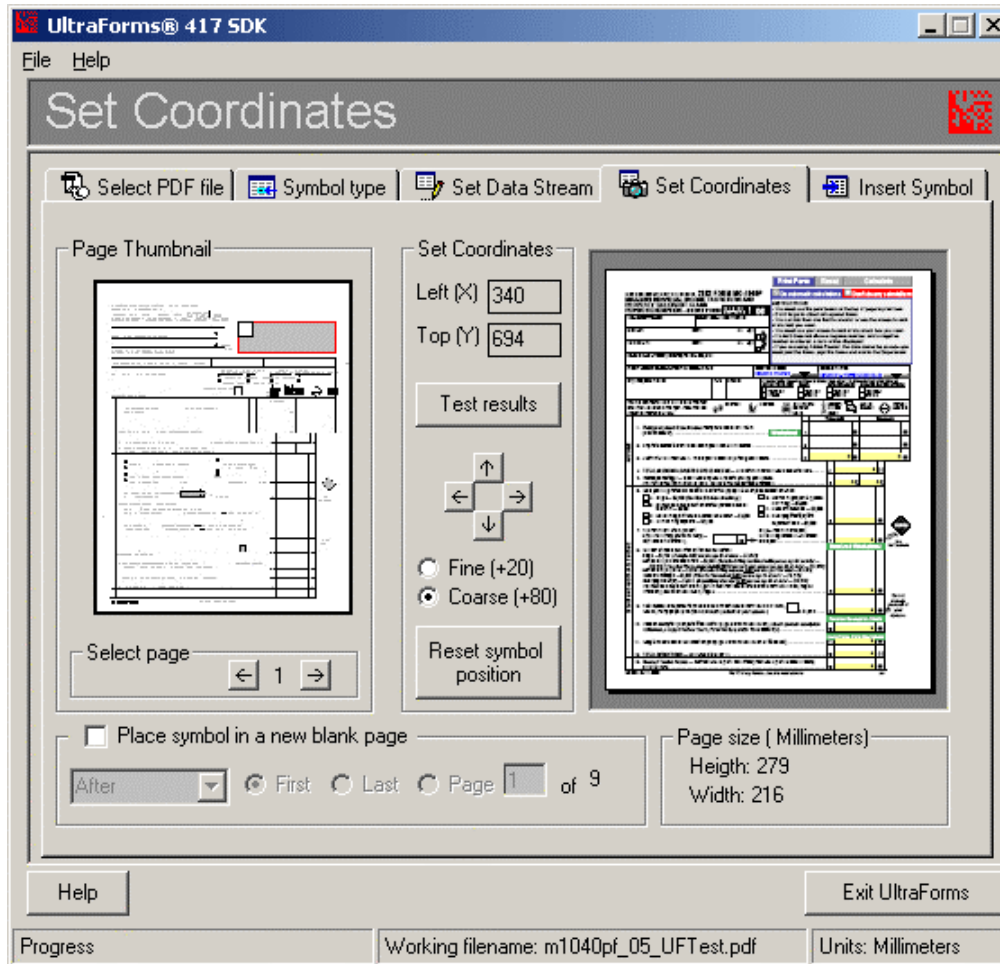
- Lets you choose the symbol resolution; error correction level; columns and rows; number of characters; etc.
- Lets you choose the fields to be selected, or all fields can be selected.

Set Data Stream



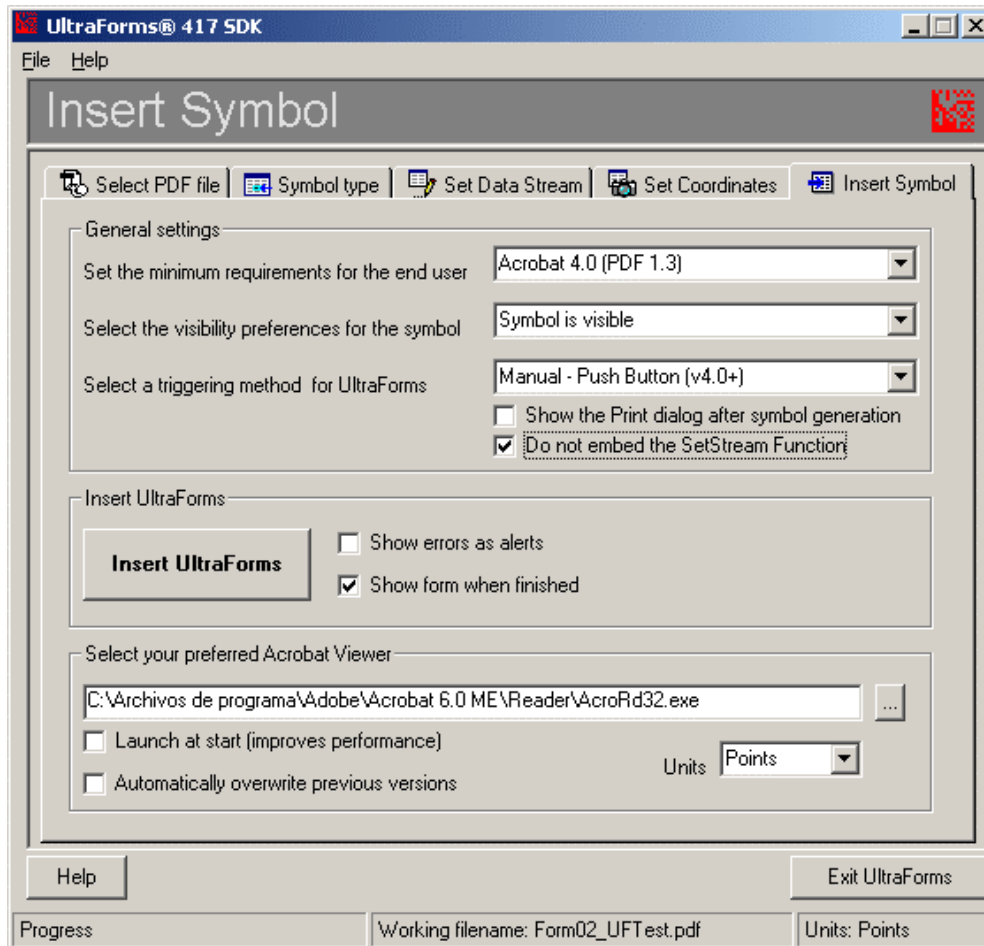
- ◆ Define the delimiter used to separate the fields
- ◆ Builds the script

Position the Barcode



- ◆ Lets you choose the position of the barcode

Insert Symbol



- ◆ What version of Acrobat can be used.
- ◆ Insert the symbol

Form MO-1040 (long form)

- ◆ **Form MO-1040 Pack** (includes Forms MO-A, MO-CR, MO-NRI, MO-TC, MO-PTS, MO-CRPs (up to five CRPs) and worksheet) **ONE** barcode to capture the data from ALL these forms.
- ◆ **Form MO-1040** (includes Form MO-A, MO-CR, MO-NRI and worksheet) (majority of taxpayers qualify to use this smaller version of the file.)

New! 2-D Barcode on Short Forms

- ◆ Form MO-1040A, One Income Filers
- ◆ Form MO-1040B, Married Filing Combined
- ◆ Form MO-1040C, Residents/Nonresident With Other State Income, and Active Duty Military
- ◆ Form MO-1040P, Property Tax Credit/Pension Exemption
- ◆ Form MO-PTS, Property Tax Credit Schedule
- ◆ Form MO-PTC, Property Tax Credit Claim

2-D Barcode Returns Processed

Tax Year 2003

Missouri processed more than 2.7 million returns: more than 1.1 million were electronically filed, the remaining returns were Telefile, WEBfile, paper returns from software developers, DOR books, flats, web, 2-D barcode, etc.

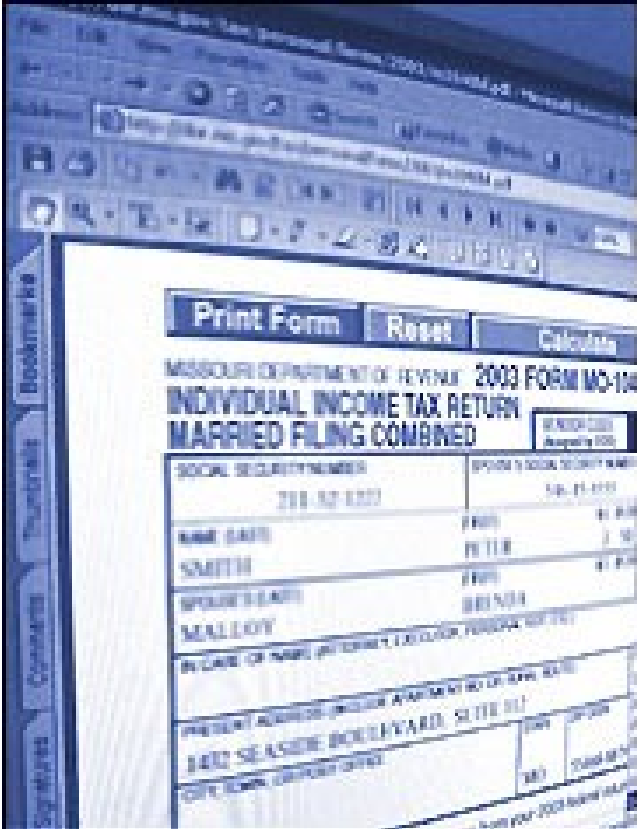
- ◆ As of August 3, 2004 there were 292,872 returns processed using 2-D barcode technology
- ◆ 58,000 of these returns were processed using UltraForms® Technology! This is equal to 20% of all 2-D barcode returns received.

Instantly Updated

- ◆ By having the forms posted on the web, if there are changes to be made, the forms can be altered and updated within a short time.
- ◆ Taxpayer will have the latest forms available at all times.

Taxpayer Enters the Data

- ◆ The taxpayer enters the data. *No plug-ins, libraries, or fonts needed.* The free Acrobat® Reader is the only thing needed to enter the data.
- ◆ Compatible with Adobe® Reader 4.0 and above.



The image shows a screenshot of a web browser displaying a PDF form. The browser's address bar shows a URL starting with "http://www.motax.com". The PDF form is titled "MISSOURI DEPARTMENT OF REVENUE 2003 FORM MO-1040 INDIVIDUAL INCOME TAX RETURN MARRIED FILING COMBINED". The form includes fields for "SOCIAL SECURITY NUMBER" (218-52-8000), "SPOUSE'S SOCIAL SECURITY NUMBER" (548-21-1111), "NAME (LAST)" (SMITH), "FIRST" (PETE), "SPOUSE'S LAST" (MULLOY), and "SPOUSE'S FIRST" (BETSY). The form also includes a section for "PRESENT ADDRESS" with fields for "HOUSE NUMBER" (1402), "STREET" (SEASIDE BOULEVARD), "SUITE" (SUITE 101), "CITY" (ST. LOUIS), and "STATE" (MO). The form is displayed within a PDF viewer interface with a toolbar at the top containing "Print Form", "Reset", and "Calculate".

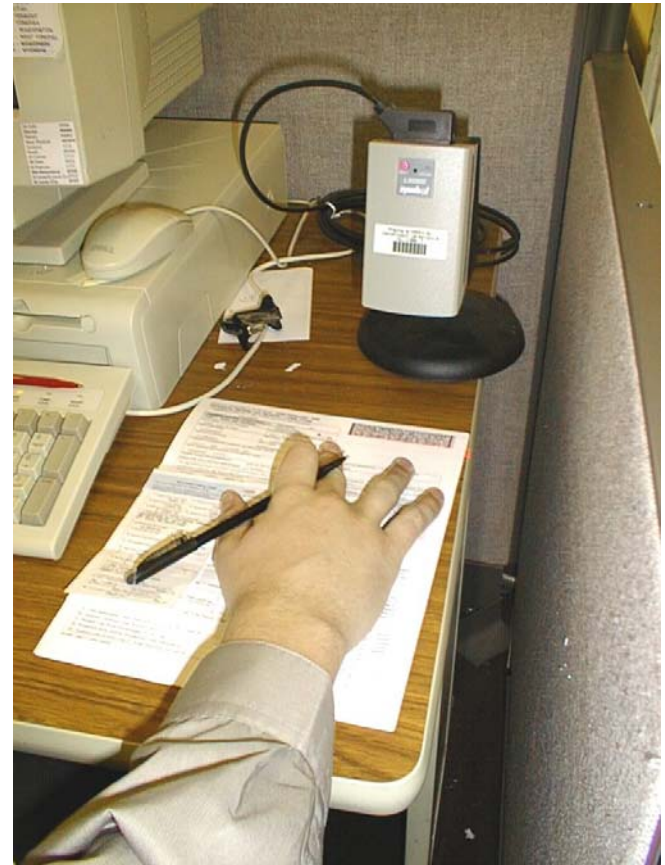
Print the Form



- ◆ The 2-D barcode is created when the taxpayer prints the form.
- ◆ The 2-D barcode always captures the same information that is keyed into the form.

Capture the Data

- ◆ UltraForms® returns are scanned, using Symbol Technology's LS6800 fixed mount scanners.



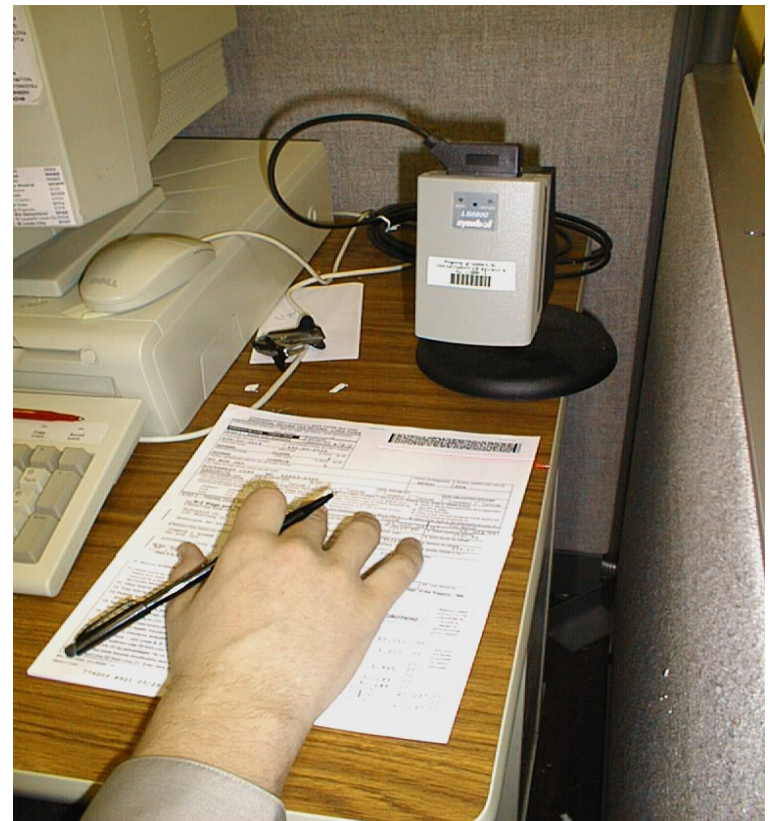
2-D Barcode Processing



- ◆ Open and sort mail
- ◆ Pre-edit
- ◆ Scan
- ◆ Save
- ◆ Write DLN on return

2-D Barcode Scanning

- ◆ On the average, 60+ returns can be scanned per hour
versus
- ◆ 20 returns being manually keyed per hour



Pricing

- ◆ Missouri purchased an Unlimited Departmental License for \$50,000. This allows us to embed this technology in an unlimited number of forms. This is a **one-time fee**.
- ◆ Yearly maintenance fee is 20% of the cost of the software. This gives you free updates, technical support, etc.



Other Cost Factors

- ◆ Missouri had already purchased 30 Symbol LS6800 fixed mount scanners, so no need to purchase scanners.
- ◆ Time to write the specifications for the Short Forms to match the long form specifications.
- ◆ Time to program the JavaScript in the forms. You don't need to program the calculations, you can use these forms as a fill-in forms only.
- ◆ Time for testing.
- ◆ Time to modify the backend system to accept these forms.

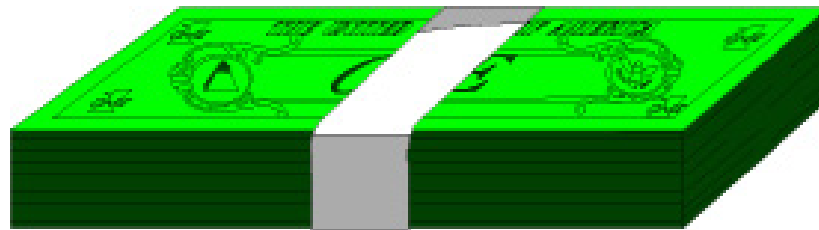
Money Saved

- ◆ DOR estimates that it costs 86 cents per return to manually process from start to finish.
- ◆ For each return that is scanned, there is a savings of more than 57 cents!



Money Saved This Tax Season

- ◆ Missouri scanned 58,000 UltraForms® for a savings of more than \$33,060. This was accomplished by embedding this technology in seven forms for one tax season.
- ◆ Fewer errors in processing which means fewer notices sent to taxpayers, for additional savings.



Helpful Hints

- ◆ Labels (that DOR provides) covering the 2-D barcode
- ◆ Print lid (DOR issue)
- ◆ New programmer with DOR had multiple jobs and didn't have portions of the program ready to accept some of the returns.
- ◆ Acrobat® Version 6—fixed and reposted within short time of discovering problem.

These are all **minor** problems. Helping others learn from my mistakes.

Taxpayer Issues

- ◆ Taxpayers writing in information **after** the form was printed and/or taxpayers manually filling in ALL data
- ◆ No SSN entered—if no primary SSN was entered DOR system would kick these returns out
- ◆ Poor print quality—ink spread, cheap paper, recycled ink, etc.

These are all issues that can occur with any 2-D barcode software...not specific to this technology.

MAC Issues

- ◆ MAC problems—a **small** number of returns came in that couldn't be read.
- ◆ DataIntro is aware of the problem and will have it fixed for the next version.

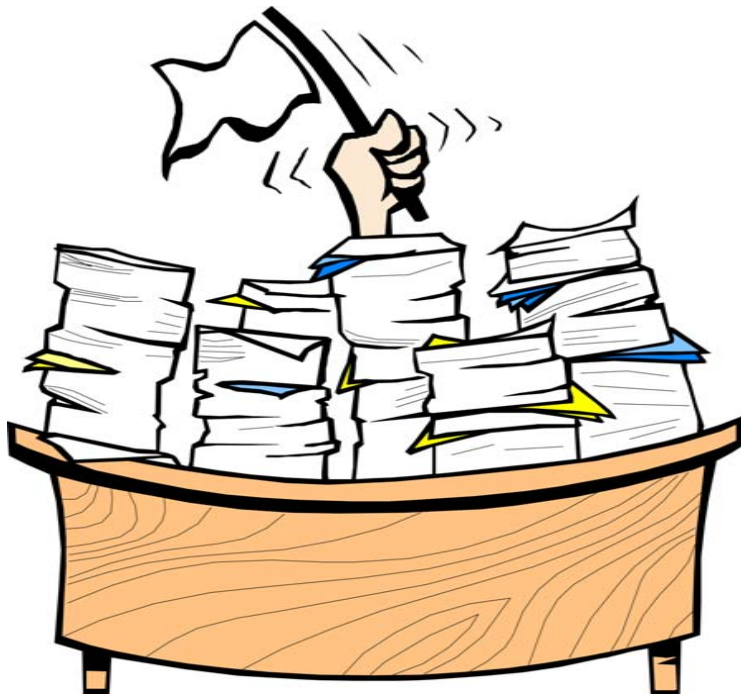


Examples of MAC barcodes that couldn't be scanned

Changes Necessary for 2-D Barcode Returns

- ◆ The forms need to be modified to accommodate barcode
- ◆ 2-D barcode specifications need to be written
- ◆ Program needs to be modified to accept 2-D data scanned (backend programming)
- ◆ Testing process
- ◆ Separate P.O. Boxes for 2-D barcode returns

Advantages of 2-D Barcode



- ◆ Quicker processing of returns
- ◆ More accurate
- ◆ Fewer temporary employees
- ◆ No additional cost to taxpayer
- ◆ 92-97% read rate on 2-D barcode returns

Missouri Informs People About 2-D Barcode

- ◆ Page on Internet
- ◆ Seminars/Conferences
- ◆ Include Brief 2-D Barcode Explanation in Tax Book (long form)
- ◆ Listserves

What Does the Future Hold For 2-D Barcode Filing?

- ◆ Each year we expect to increase the number of returns using 2-D barcode, which includes other types of taxes
- ◆ Higher cost savings each year, with increased usage



First Year of Internet 2-D Barcode

- ◆ First year was a great success!
- ◆ This technology can be implemented for various forms and applications within minutes!
- ◆ The product and technical support were great!
- ◆ Incorporating this technology only added about 30KB to the file size!
- ◆ Taxpayers using forms from web, so why not scan these returns, instead of manually keying them?



Contact for Missouri 2-D Barcode

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