White Paper – FoD-OMR

Management Summary

This program is highly successful for companies selling OMR. For sales staff, instant production of OMR forms for prospects and for technical staff instant OMR forms from a scanned image of the original document. Both uses are extremely ROI positive and have the added benefit of generating general competence within your staff, aiding in the selling of the OMR solution.

As authors of the system from 1989, we have benefitted from being able to quickly produce designs and even print plates from the product in our selling capacity. In our technical capacity, we use the product for instant support where waiting on a mailed form is impractical. A competent technician can model the emailed sheet image in less than five minutes to produce a form for testing / correction of the customer's OMR reading parameters. This excellent service can be turned to advantage by returning the form to the customer as a printable PDF (as well as an illustration of the capability of the program).

The product is designed for seamless integration into applications where each form is unique and requires the user identification embedded as either barcodes or OMR pre-slugging. We have promoted its use in variety of contexts from aged care menus (each household is delivered next week's fully laser printed menus which are picked up with the delivery of this week's food), student identification (pre-slugging and a copy of their ID photo printed on individuals' test sheets in Africa) to follow-up surveys where laser-printed tests (including mailing address text) are printed for follow-up to interesting items occurring on the main survey (five year plus Asthma survey) and finally to national elections with hundreds of thousands of unique OMR sheets..

Easily add an additional $500-$900 profit on scanner sales by supplying this program. FoD-OMR increases form printing revenues due to the client being able to easily design and deploy new surveys and tests, many of which grow beyond the limits of laser printing.

With further investment, you can prepare and print from customer's designs where the professional version of the system produces print plates or direct-to-print typesetting.

Details

Scanners supported

Copies of the program are available from OMR manufacturers Scantron, DRS and Nanhao.

The program adapts to any OMR scanner configuration, including timing line in the middle of the page where the scanner supports that (as well as OMR from Image where the scanner reads the entire page image). The new generation of OMR scanners with image reading capability are prime targets, and the program includes construction of bounded hand-print boxes for OCR as well as OMR images. The physical attributes of the reading device are catered for by the program, which includes standard layouts for most common scanners with the ability to "define your own" included. A full set of barcode facilities, including two-dimensional PDF 417 completes the functional set for scanners.

Color or Black and White

The red "drop out" color used by most scanners translates to color laser printers where the red color is visible to users but is not seen at all by most readers. Black and white forms have the option of sparse response shapes and grayed out text that are visible to the user but below the read threshold of normal OMR scanners. We have ourselves printed sheets in huge volumes,

102 timing lines, double sided on A4 paper via Xerox Docutech machines for electoral processing in 1987 which operates to this day.

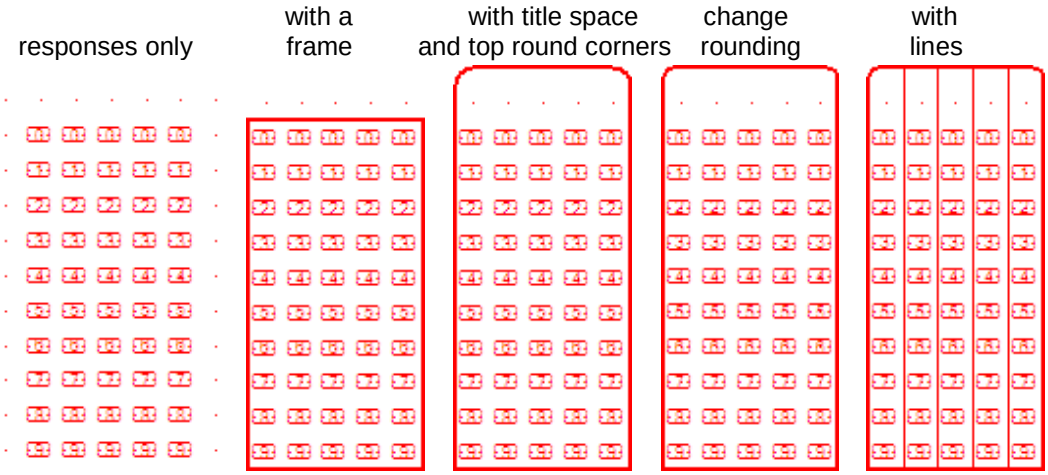
There are a variety of response shapes included and our experimentation suggests the “best” ones include a “suggested” mark position as part of the response shape. Samples of the available “blind” and “B&W” response shapes are shown below.

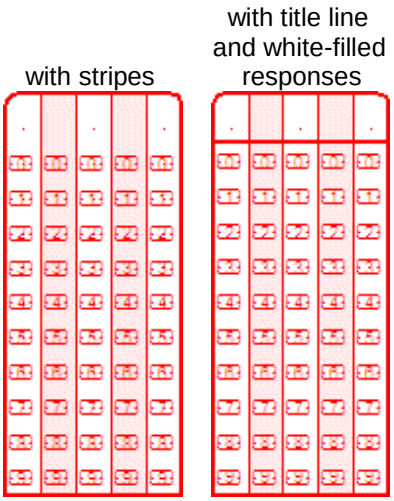
Responses, their Framing Elements and their Associated Text

This is where the real power of FoD-OMR is displayed, with all of these “peripheral” objects bound to the OMR responses which are in turn bound to the timing line layout. Once defined, the whole group moves and can be manipulated as one object, including cut and paste, duplicate-drag-and-drop, resize etc.

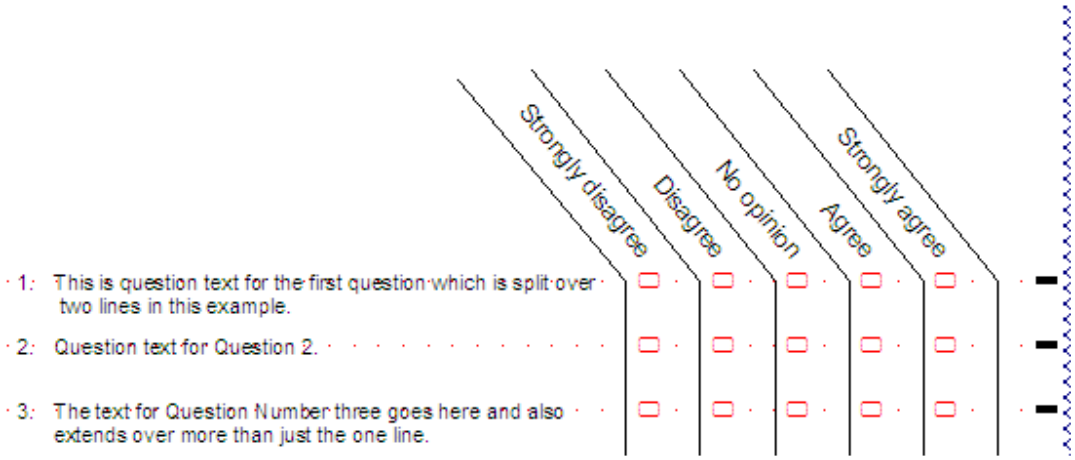
These are some of the extraordinary single objects you can easily build for OMR responses:

Frame elements:



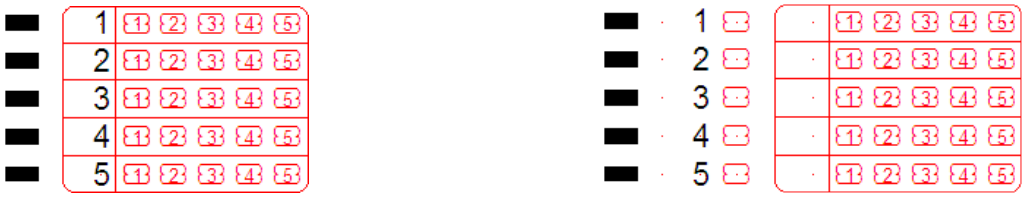


Question texts



Questions with Titles and In-Response Text

This is made from two objects, overlaid and grouped, as shown below:



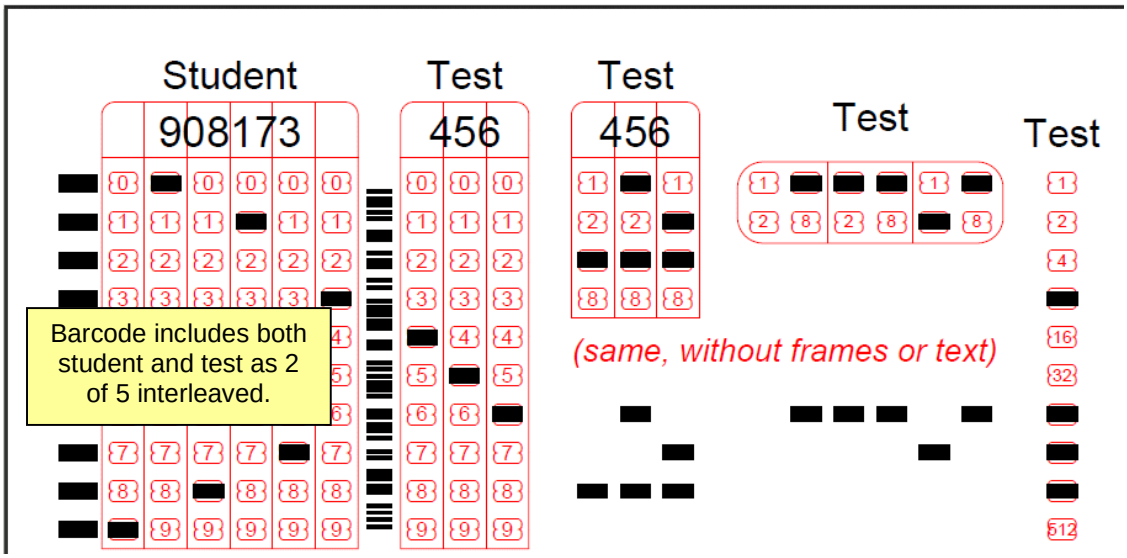
OMR Timing Tracks and Sheet Presentation

Form designs provide for Landscape and Portrait forms, with the Timing line Top / Bottom (landscape) or Left / Right (portrait). Timing lines may be placed anywhere, any number of them, any size and at any spacing. This provides all of the facilities required, including placing timing marks on the fold lines of folded document, varying the spacing and size for laser-printed pre-slugging vs user responses, separation of questions blocks etc. This variation in the timing track is illustrated in the examples above and delivered as PDFs with this document.

The program provides for swapping the timing line from one side to the other, and retains the position of responses on the revised document without intervention.

Data in Forms

Data can be present in a form by simply referencing an external file with the required fields. Barcodes are the obvious method to pre-identify users, however pre-slugging in various formats is also available. Methods include straight binary, BCD 1,2,4,7 or BCD 1,2,4,8 and “random” BCD as shown, with or without frames and response values.



FoD-OMR has very strong facilities for integration of data into text such as the example below where various elements are integrated into a paragraph, after being translated into their optimum Human Readable format.

Data:

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112334,Mr,Smith,William,22/05/2010,123.45
654439,Mr,Andrews,Benjamin,30/9/2010,12334.66
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Text produced:

Dear Mr Smith,
Your account number 112334 is in credit by ONE HUNDRED TWENTY THREE DOLLARS AND 45 CENTS ($123.45) as at May 22, 2010 and will remain in credit for next term unless you advise the registrar otherwise.

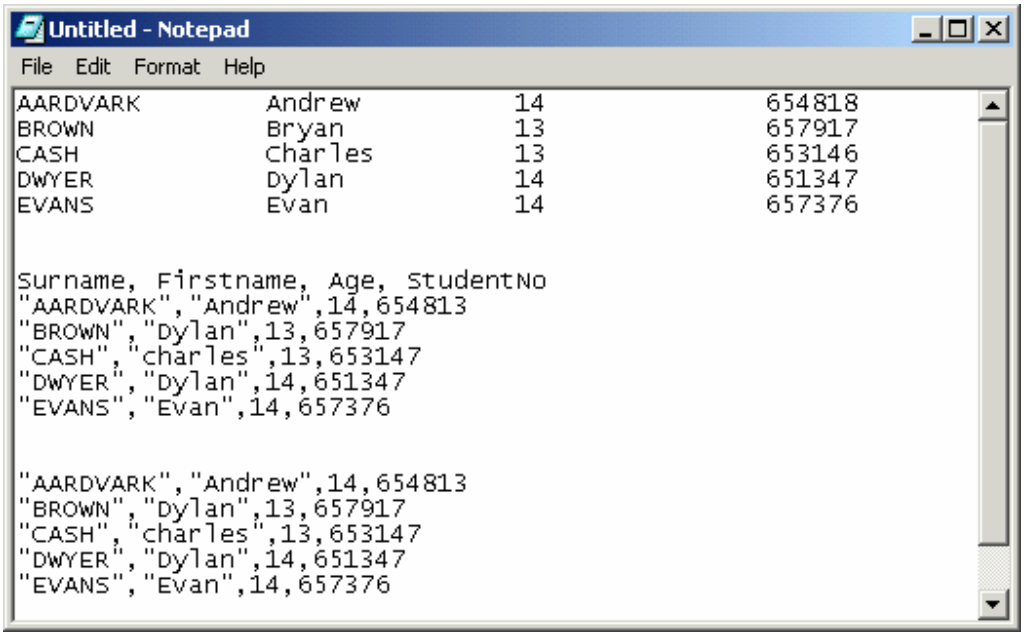
Dear Mr Andrews,
Your account number 654439 is in credit by TWELVE THOUSAND THREE HUNDRED THIRTY FOUR DOLLARS AND 66 CENTS ($12,334.66) as at September 30, 2010 and will remain in credit for next term unless you advise the registrar otherwise.

File Types

Any of the following file types are accepted as FoD-OMR input, meaning spread sheets or DB output can be used. The “named” files are pertinent in that the data is located by name rather than position, hence the file can change with irrelevant data introduced or deleted without impact on the forms produced.

Fixed length files where the data is located by start position and length.

Delimited files, which can be named (in which case the order of fields does not matter) or unnamed (in which case the order of fields must be correct). Delimited files default to comma separator, but others (such as Tab) can be specified.



Integration and Run Characteristics

While the program normally runs as a GUI program under user control, the program will run as a batch task and can be fully integrated into running systems as a subroutine via a call or via a **.bat** command. It can and is fully integrated into systems for various tasks, producing OMR sheets as a bye product from the operation of those systems.

Summary:

Aids selling OMR solutions, demonstrable at the customer's site, produces immediate customer-specific collaterals.

Easy on-sell with scanners.

Immediate resolution of customer queries without waiting on the mail.

Allows customers to design their own forms and come to you for typeset and supply.