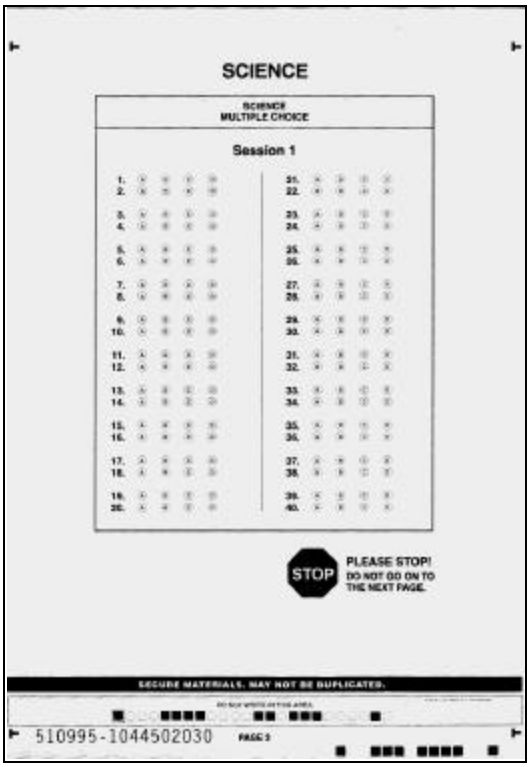
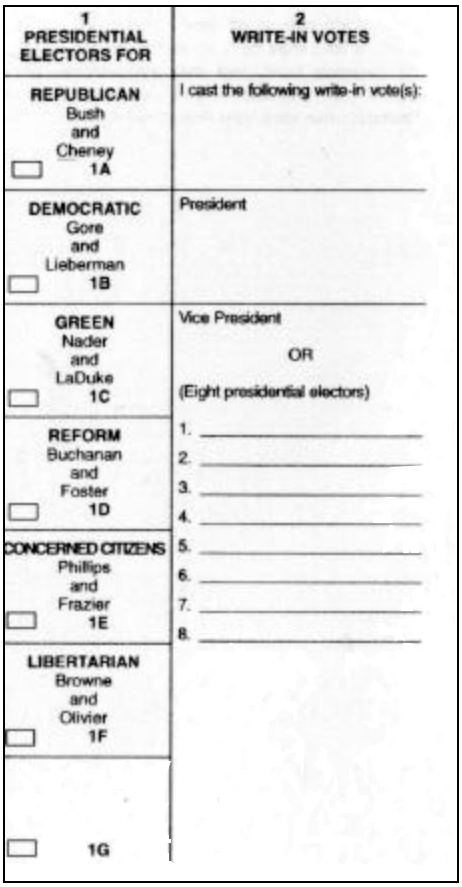
AccuScore

A Revolutionary Advance in Optical Mark Sense Technology.





PRODUCT FEATURES

- Slashes paper and print costs
- Extremely high accuracy rates
- Works with a variety of available image scanners
- Easy to use forms definition tool
- Reads rows or columns
- Graphical User Interface
- Flexible business rules
- Works with black/white and grayscale images
- Distinguishes dark marks from light
- Easily handles different size targets
- Advanced “mark find” features
- Outputs scored ASCII data and raw read results
- User-definable reference marks
- Can easily define and process multiple jobs
- Greater flexibility in forms design
- Integrated page test facility for instantly testing each page definition
- Can process dropout as well as non-dropout forms
- No timing marks required; however, timing marks can be used as referencemarks for processing legacy forms

scan-optics, inc.
The business of solutions

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GSOMR - Grayscale Optical Mark Read - is a process for reading "bubble" forms using electronic imaging technology. The types of forms processed by this program include exam forms such as SAT tests, questionnaires, voting ballots or any types of forms that are filled out by the process of filling in small preprinted circles or ellipses with a pencil.

You Say You Want A Revolution.

The automatic scoring of "bubble" forms isn't new - in fact, bubble forms were invented precisely for the purpose of automated processing using specialized scanning equipment. What is new and revolutionary about this program is that it uses electronic image capture technology in conjunction with specialized image processing software for performing the scoring. Some major advantages of this new process over existing technology include:

- No expensive paper or printing required
- No specialized LED-array scanner
- Flexible, easy-to-use forms definition tool
- Extremely high accuracy rates
- Greater flexibility in forms design

Slash Your Print and Paper Costs

Scan-Optics' new software product works in conjunction with an image capture scanner that produces an electronic reproduction of each form. The electronic images are processed by this new program to produce scoring results that achieve an accuracy rate equal to or better than those achieved by the LED scanners. Various makes and models of scanners may be used with this program, but the most accurate results are achieved when using scanners that produce gray scale image output. It is therefore not necessary require the same expensive paper and printing process as is required by LED scanners. Thus, paper and print costs can be greatly reduced without sacrificing accuracy.

Expect More Today & Tomorrow.

Since its inception 33 years ago, Scan-Optics has been the leader in high volume document processing with a strong commitment to providing the best in scanning technology. Our years of experience have taken us from image dissector tubes to digital cameras, from recognition speeds of 2,000 cps to today's 10,000 cps, from black and white, magnetic tapes and proprietary operating systems to today's grayscale, wide area networks and Windows 2000. The Accuscore technology marks yet another milestone in Scan-Optics' commitment to continuous improvements in the document imaging and scanning marketplaces. Team with us today, and we'll embark upon a new and bright future.

Technical Specifications

OMRGEN FORM DEFINITION TOOL FEATURES

Graphical User Interface program designed and optimized for easily defining and testing the layout of all reading parameters of each score page or ballot sheet

Uses scanned image of each score page or ballot sheet as a background template image for defining page layout, including reference marks, zones, and targets. Scanned images also used for defining masks for user-defined reference marks and non-dropout targets

Each job definition supports multiple page definitions

Automatic detection of the precise locations of each "bubble" target in the zone

Automatic detection of the precise location of reference marks within defined search area

Automatic detection of row/column arrangement of defined targets

SETTABLE JOB-LEVEL PARAMETERS INCLUDE:

Reference mark confidence level and minimum number of detected reference marks

Maximum target search distance

Special characters to be output for invalid multiple marks, invalid omits, uncertain targets, and form registration failures

Optional output of raw sense-levels of each target

SETTABLE ZONE-LEVEL PARAMETERS INCLUDE:

The interpretation of targets as either columns, rows, or individual targets

Label for each target to be output for each column, row, or individual target

Minimum "darkness" sense level for a target to be considered a mark

Maximum "darkness" sense level for a target to be considered an omit

Number of marks per zone allowed

Configurable for discrimination of invalid multiple marks

Handling of leading, trailing, and embedded omits

Sectional rules for multiple-zone editing

OTHER SETTABLE PARAMETERS INCLUDE:

Individual pages may be scanned at 0, 90, 180, or 270 degrees rotation

Drop-out target shapes may be defined as square, rectangular, circular, and oval

Drop-out target sizes may be defined on an individual target basis, or fixed to a single user-defined value for all targets of a job

Non-dropout target masks are created using the background image. Target masks train AccuScore to know what the targets' graphic objects look like so that at run time, AccuScore can can make the best determination of the targets' marked state.

GSOMR RUN-TIME ENGINE FEATURES:

Automatic unattended background processing of image batches

Batch status display

Maintains log file of all operations performed

Diagnostic image display may be enabled for viewing images and results as they are being processed

TIFF file format

COMPRESSION TYPES:

CCITT G3/G4

JBIG

Uncompressed

ACCUSCORE: PATENT PENDING

FOR MORE INFORMATION, VISIT:

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