



*Version 6.0 for Windows® Whitepaper*

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### **Remark Office OMR Overview**

Remark Office OMR is a software package designed to collect data from optical marks (bubbles, checkboxes) and barcodes on plain paper forms. The software works in conjunction with an image scanner to collect the data. You create your own forms with whatever software package you feel comfortable using (e.g., a word processing package, survey design package, etc.). You are allowed a great deal of flexibility in the design process. You do not need special marks or drop-out inks, nor do your respondents need to use a number two pencil to fill in the forms.

### **Image Scanning vs. Traditional OMR**

The main difference between the two types of scanning is in the hardware with which they work. Remark Office OMR works with common image scanners. These are the type of scanners that can also be used for scanning pictures or pages of text and are readily available from your local computer dealer. Traditional OMR readers are commonly associated with standardized testing, pre-printed forms and number two pencils. Typically, these machines are sold directly to the end user by the manufacturer's sales representatives.

When using Traditional OMR products, you use pre-printed forms that are created to very exacting specifications. OMR readers are specifically designed to read these specialized forms.

Remark Office OMR is the flexible solution to your data entry needs that works with forms you create and print. Forms are created in any word processing, page layout or survey design software. Forms can be duplicated on a laser printer, photocopier, or if desired, can be professionally printed. Following our basic form design guidelines will ensure that you get the best recognition results possible. Remark Office OMR is a "trainable" software package. Rather than you having to conform to a particular form design, you tell the software what your form looks like.

### **Scanners/Peripheral Options Directly Supported**

Remark Office OMR is compatible with most scanners on the market today. Specifically, the software works with scanners that support the TWAIN scanning protocol. These scanners include some or all models made by the following manufacturers:

Fujitsu, Lexmark, Xerox, Avison, Bell & Howell, Canon, Epson, Kodak, Panasonic and Ricoh.

Remark Office OMR can also read image files which can be created by network multi-function machines from companies such as Lexmark, Xerox and Brother.


[Click here for more information on scanners.](#)

## Example Applications & Forms

Optical Mark Recognition (OMR) technology is ideal for use in processing many kinds of forms, including compiling survey results, summarizing personnel evaluations, grading tests and tabulating ballots. Sample application forms are included with the software and are also available on our web site. The following are two representative forms.

**History 102 Midterm Exam  
Answer Sheet**

*Please follow the directions on the exam question sheet. Fill in the entire circle that corresponds to your answer for each question on the exam. Erase marks completely to make a change.*

Teacher ID: 

Student ID: \_\_\_\_\_

\_\_\_\_\_ (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)

\_\_\_\_\_ (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)

\_\_\_\_\_ (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)

\_\_\_\_\_ (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)

---


1. (A) (B) (C) (D)	11. (A) (B) (C) (D)	21. (A) (B) (C) (D)	
2. (A) (B) (C) (D)	12. (A) (B) (C) (D)	22. (A) (B) (C) (D)	
3. (A) (B) (C) (D)	13. (A) (B) (C) (D)	23. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	14. (A) (B) (C) (D)	24. (A) (B) (C) (D)	
5. (A) (B) (C) (D)	15. (A) (B) (C) (D)	25. (A) (B) (C) (D)	
6. (A) (B) (C) (D)	16. (A) (B) (C) (D)	26. (A) (B) (C) (D)	
7. (A) (B) (C) (D)	17. (A) (B) (C) (D)	27. (A) (B) (C) (D)	
8. (A) (B) (C) (D)	18. (A) (B) (C) (D)	28. (A) (B) (C) (D)	
9. (A) (B) (C) (D)	19. (A) (B) (C) (D)	29. (A) (B) (C) (D)	
10. (A) (B) (C) (D)	20. (A) (B) (C) (D)	30. (A) (B) (C) (D)	
31. (A) (B) (C) (D)	41. (A) (B) (C) (D)		
32. (A) (B) (C) (D)	42. (A) (B) (C) (D)		
33. (A) (B) (C) (D)	43. (A) (B) (C) (D)		
34. (A) (B) (C) (D)	44. (A) (B) (C) (D)		
35. (A) (B) (C) (D)	45. (A) (B) (C) (D)		
36. (A) (B) (C) (D)	46. (A) (B) (C) (D)		
37. (A) (B) (C) (D)	47. (A) (B) (C) (D)		
38. (A) (B) (C) (D)	48. (A) (B) (C) (D)		
39. (A) (B) (C) (D)	49. (A) (B) (C) (D)		
40. (A) (B) (C) (D)	50. (A) (B) (C) (D)		

Sample Generic Test Answer Sheet

**Tourist Bureau  
Questionnaire**

We thank you for visiting Anytown USA. Please fill out this short survey so that we can see how we are doing.

Name of Hotel/Motel: \_\_\_\_\_ Date of visit: \_\_\_/\_\_\_/\_\_\_



0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. What was the main purpose of your trip?
 

<input type="radio"/> Vacation	<input type="radio"/> Business
<input type="radio"/> Attend/participate in sporting event	<input type="radio"/> Other
2. How did you hear about our area?
 

<input type="radio"/> Travel Agent	<input type="radio"/> Internet
<input type="radio"/> Television	<input type="radio"/> Magazine
<input type="radio"/> Newspaper	<input type="radio"/> Recommendation
<input type="radio"/> Radio	<input type="radio"/> Other
3. How many nights did you stay with us?
 

<input type="radio"/> 1 night	<input type="radio"/> 5 nights
<input type="radio"/> 2 nights	<input type="radio"/> 6 nights
<input type="radio"/> 3 nights	<input type="radio"/> 7 nights
<input type="radio"/> 4 nights	<input type="radio"/> 8 nights or more
4. Please list all of the sources you used to gather information about our area.
 

<input type="radio"/> Advertiser number/address	<input type="radio"/> Friend/Relative
<input type="radio"/> Travel agent	<input type="radio"/> Internet
<input type="radio"/> Chamber of commerce	<input type="radio"/> Other
5. How did you arrive to the area?
 

<input type="radio"/> Air	<input type="radio"/> Bus
<input type="radio"/> Train	<input type="radio"/> Car/truck/RV/motorcycle
6. Approximately how much did you spend on your entire visit (including airfare, gasoline, lodging, meals, entertainment, etc.)?
 

<input type="radio"/> \$1000 or less	<input type="radio"/> \$3000 - \$4000
<input type="radio"/> \$1000 - \$2000	<input type="radio"/> \$4000 - \$5000
<input type="radio"/> \$2000 - \$3000	<input type="radio"/> More than \$5000
7. How many total people were there in your group?
 

<input type="radio"/> 1	<input type="radio"/> 4
<input type="radio"/> 2	<input type="radio"/> 5
<input type="radio"/> 3	<input type="radio"/> 6 or more
8. How many children did you have traveling with you?
 

<input type="radio"/> 1	<input type="radio"/> 4
<input type="radio"/> 2	<input type="radio"/> 5 or more
<input type="radio"/> 3	<input type="radio"/> No children
9. What was the main reason you came to our area?
 

<input type="radio"/> Business purposes	<input type="radio"/> Part of a package
<input type="radio"/> Beach destination	<input type="radio"/> Reasonable price
<input type="radio"/> Recommendation	<input type="radio"/> Been here before
10. What activities did you engage in while in the area?
 

<input type="radio"/> Sightseeing	<input type="radio"/> Dining
<input type="radio"/> Golf	<input type="radio"/> Sporting event
<input type="radio"/> Beach/swimming	<input type="radio"/> Shopping
<input type="radio"/> Fishing	<input type="radio"/> Theater
11. How would you rate the following:
 

	Excellent	Good	Fair	Poor
Lodging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Restaurants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Attractions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Area Roads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shopping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value for cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Visit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. What is your total household income?
 

<input type="radio"/> Under \$15,000	<input type="radio"/> \$45,000 - \$54,999
<input type="radio"/> \$15,000 - \$24,999	<input type="radio"/> \$55,000 - \$64,999
<input type="radio"/> \$25,000 - \$34,999	<input type="radio"/> \$65,000 - \$74,999
<input type="radio"/> \$35,000 - \$44,999	<input type="radio"/> \$75,000 or higher

Sample Generic Survey Form

**These two sample forms were both created in Microsoft® Word.**

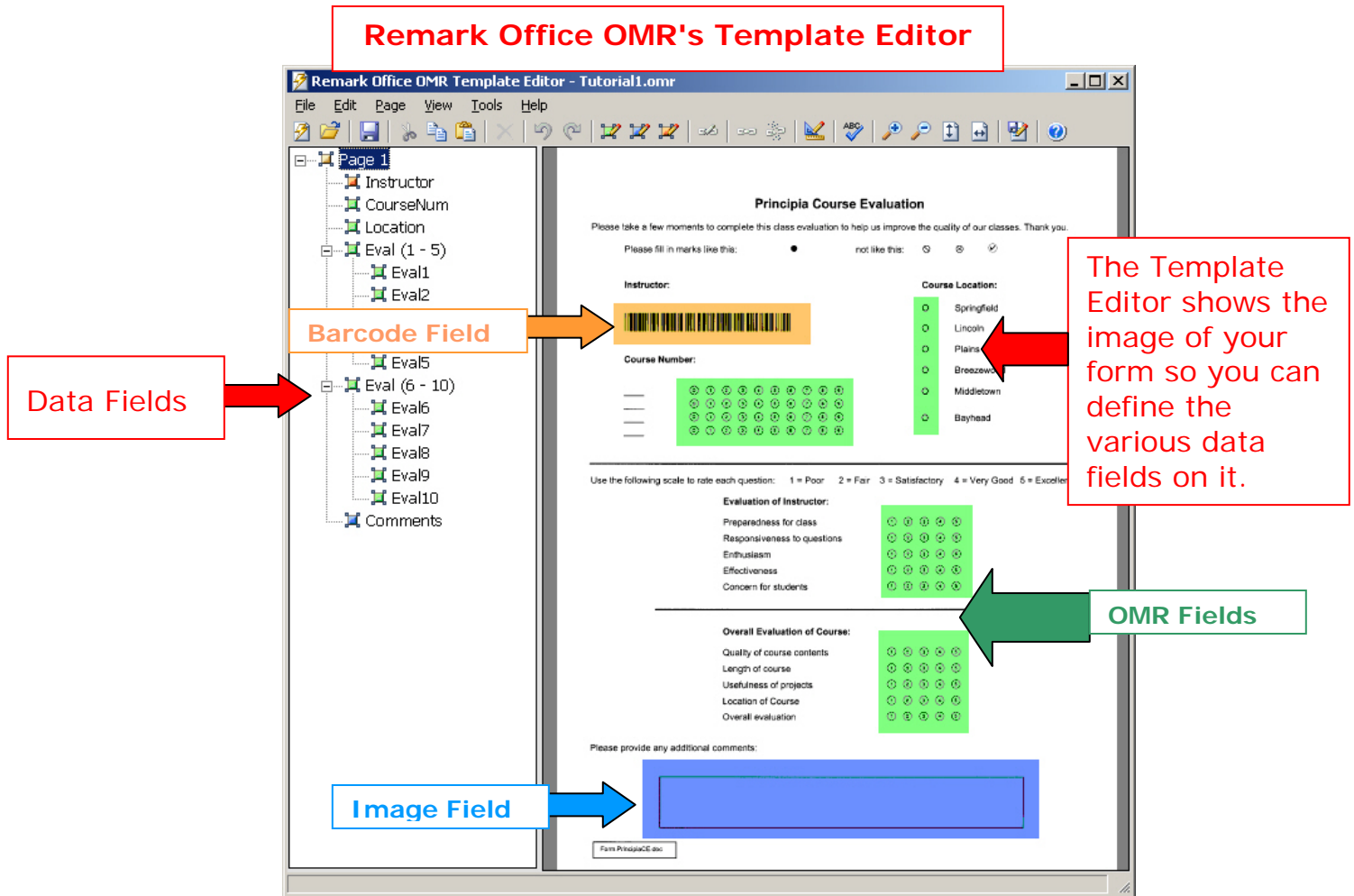
Forms can be created anywhere from word processors to survey design packages to art programs, including: Microsoft Word, Microsoft Excel, Survey Pro (Apian Software), Magenta (Datablocks), Survey System (Creative Research), Quark, Adobe Photoshop and many more.

## Using Remark Office OMR

There are three basic steps to using the software. 1) Scan a blank copy of the form and tell the software how to interpret the questions on the form by creating a form template. 2) Scan the completed forms and proof for exceptions using the Data Center. 3) Run reports or convert your data to a file format compatible with a database or spreadsheet package using Remark Quick Stats.

### Step 1: Form Template Editor

The form template tells the software how to interpret the marks on a form. To create a form template, scan a blank form into Remark Office OMR using a supported image scanner. An image of the form appears on the screen. Using your mouse, you can show the software the areas you want to process on the form (i.e. groups of questions), and then fill in basic information about your fields in the Field Definition window. Fields can be OMR (marks), barcode or image fields for data entry of handwritten comments.



### Step 2: Data Center

The Remark Office OMR software can read forms either from a directly supported scanner or from image files scanned with some other device. After reading completed forms, the collected data appear in a spreadsheet-style grid window. Remark Office OMR provides a Review Exceptions feature for automatic detection and correction of exception cases. Exceptions are reviewed and corrected on-screen by viewing images of scanned forms. Often exceptions are the result of improperly filled-in forms. For example, a respondent may have failed to fill in a bubble completely or chosen two responses for a question that only requires one response.

Note: Please see scanning window screenshot on next page.

## Scanning Window

The screenshot displays the Remark Office OMR Data Center interface. At the top, a red box highlights the title bar 'Remark Office OMR Data Center - Steve\_test\_6.omr [Untitled (1)]'. Below the menu bar, there are tabs for 'Templates', 'Data', and 'Analysis'. On the left, a 'Data Options' panel includes 'Read Wizard...', 'Review exceptions...', 'Open data file...', 'Save data', and 'Save data as...'. Below that is an 'Exceptions Legend' with icons for Multiple responses (green), Blank responses (yellow), Recognition errors (red), Image region (blue), Database lookup region (purple), and Barcode region (orange). The main area is a data grid with columns: 'Stud\_number', 'Instructor name', 'Sample question 1?', 'Sample question 2?', 'Sample question 3?', 'Sample question 4?', 'Sample question 5?', and 'Sample c...'. Row 9 is highlighted in orange, with a yellow 'Y' icon in the 'Sample question 3?' column. A red arrow points from a 'Data Grid' label to the grid. Another red arrow points from an 'Exceptions' label to the yellow 'Y' icon. At the bottom, an 'Image Viewer' window shows a scanned form with a grid of bubbles. A red arrow points from a 'Scanned image' label to this window.

### Step 3: Converting and Saving the Data

More than thirty standard output file formats are available for use, including the following:

Formats	Applications Supported
Database Formats	Access, dBase, FoxPro, and Paradox
Spreadsheet Formats	ASCII (various styles), Excel, Lotus1-2-3 and Text
SAV	SPSS statistical software
Remark	Format for use within the Remark software. Saves data from the grid, as well as grid information such as links to image files and exception cases.
ROA	Remark Office Archive allows you to move your images and data to another system for cleaning and/or analysis.
HTML and XML	Internet or Intranet applications
SRV/STL	Survey Pro (Apian Software) survey design and analysis package
CCI	CCI Assessment analysis package
DAT	The Survey System (Creative Research) survey design and analysis
MRG	LXR Test software
Report	Fixed length format. For use with custom written applications.
Questionmark	To be used with Questionmark Perception software.
ODBC	To export to various relational databases, such as Oracle or SQL.

Please see <http://www.principiaproducts.com/> for a complete list of output formats.

## **Remark Quick Stats**

Remark Quick Stats is a built-in analysis package that can be used to tabulate surveys and grade tests. The software provides several standard reports. Reports can be customized to include user specified titles, colors, fonts and graphics.

There are two versions of Remark Quick Stats: the default version and the legacy version. The legacy version is an older software package that was used in previous versions of Remark Office OMR. You may still use this version if there are reports you are accustomed to using.

For a survey, you can run reports such as an item analysis, item statistics or crosstabs to view your results. If you administer tests, the software can automatically grade them. For a test, you can specify an answer key, grade scale, learning objectives, benchmark scores and other options, and then the software can grade the test and produce statistics and graphs representing the item analysis, frequency distribution, student scores and several other test statistics. Remark Office OMR also produces a grade report for each student which can be printed and handed back to the student.

### **Survey Statistics include:**

- For each item Remark Quick Stats calculates: Mean, Variance, Standard Deviation, Standard Error, Min, Max, Range, Median, Skewness, Kurtosis, T-Value, Percentiles, Confidence Intervals
- For each answer choice Remark Quick Stats calculates: Frequencies, Percentages, Valid Percent
- A Response Report displays all of the handwritten comments for any Image region on one, easy to read, report
- Crosstabs
- A Group Report displaying means for question groupings (new version only)

### **Test Statistics include:**

- A Grade Wizard steps you through the process of setting up an answer key, grade scale, questions points, learning objectives, benchmark scores and other grading information for your test
- For each item Remark Quick Stats calculates: Mean, Variance, Standard Deviation, Standard Error, Min, Max, Range, Median, Skewness, Kurtosis, T-Value, Percentiles, Confidence Intervals, P-values, Point Biserial Correlation
- For each answer choice Remark Quick Stats calculates: Frequencies, Percentages, Point Biserial
- For each student Remark Quick Stats calculates: Total score, Raw score, Grade, Dev. IQ, Number correct, incorrect, unanswered
- For the test Remark Office OMR calculates: Number of graded tests and items, Max, Min, Median, Range, Percentile scores, Mean, Variance, Standard Deviation, Confidence Intervals (1,5,95,99%), KR 20, KR21, Coefficient (Cronbach) Alpha
- A Grade Report displays each student's results on the test and optionally includes an image of the test
- A Group Report displaying grades for specific subsets of your data (new version only)

### **Remark Office OMR Main Features:**

- Forms commonly scanned with Remark Office OMR include surveys, tests, research studies, evaluations, assessments, inventory, field testing, patient history and many others.
- Allows flexibility in form design. Remark Office OMR forms can be created with any word processor or survey design package and printed on any laser quality printer. Purchasing expensive, pre-printed forms is not required.
- Interfaces with most desktop scanners and supports the TWAIN scanner protocol. An automatic document feeder is recommended. Speed depends on the scanner (typically runs at rated speeds).
- Exceptional mark recognition (recognizes bubbles or checkboxes). No registration marks or drop-out colors are needed.
- Recognizes barcodes. Barcode symbologies recognized are Code 39, Codabar and Interleaved 2 of 5.
- Uses database verification to confirm that recognized data from a field appears in a particular database field. Lookup and replace items from the database. For example you can lookup a student ID and replace it with a student name.
- Includes a spell checker.
- Produces output that can be used with most popular spreadsheet, database, survey design and statistical programs.
- Allows user to mix forms of different types into the same batch. Eliminates pre-sorting of forms. Forms can have form, page and respondent identifiers on them.
- Processes multiple-page forms and double-sided forms.
- Processes batch header sheets.
- Allows for the correction of errors while scanning pages or as a post-scanning task.
- Saves scanned images to disk for response verification or for use by another software program.
- Saves parts of pages, such as a signature block or comments section, to disk as images. Additionally, handwritten comments can be saved as "Image Fields" for use with a "Respondent Report" or for data entry within the Remark Office OMR software.
- Views and reads several different image file formats, some of which include: PCX, TIF, PDF and BMP.
- Includes Remark Quick Stats, a built-in analysis component.
- Calculates statistics including:  
*Item Analysis, Number of Respondents and Tabulations, High/Low Score, Median, Mean, Range, Standard Deviation and Variance, Kuder-Richardson f20, Coefficient Alpha, P Values, Point Biserial, Frequency Distribution, Class Grades, Student Grade Reports, Comparative Reports*
- Tabulates surveys. Remark Quick Stats produces item analysis, item statistics and crosstabs.

- Grades tests and provides item and summary analyses. An answer key can be scanned, entered by hand or read from a file. Different weights can be assigned to various sections of the test to accommodate questions that were answered correctly, incorrectly, or not at all. A subjective set of points can also be read and added into the final grade. Measures performance against learning objectives, benchmarks, etc. Can grade using multiple answer keys.
- Analysis results can be saved to PDF, HTML or RTF file formats.
- Context sensitive help is available by pressing F1 in all windows.
- Free form reviews are available for all registered users.

### Who Uses Remark Office OMR?

- **Education Professionals** for student testing, institutional research or community surveys
- **Marketing Professionals** for consumer surveys and customer satisfaction
- **Psychology Professionals** for testing, assessments and evaluations
- **Government Agencies** for data compilation from internal and external sources
- **Healthcare Industry** for customer surveys, patient data and research
- **Pharmaceutical Companies** for clinical trials and product evaluation
- **Police Departments** for racial profiling compliance and community surveys
- **Computer Professionals** for combination or integration with another software package
- **Human Resource Departments** for employee surveys, time sheets and evaluations
- **Training Professionals** for course and instructor evaluations
- **And Many More**

### Notes:

If you are considering offering your paper-based survey, test or evaluation in a web-based format, try our [Remark Web Survey®](#) package too.

### Minimum System Requirements

- Personal computer with a 1Ghz or faster processor
- Microsoft Windows 2000, XP or Server 2003
- 512 MB RAM
  - Important Note: Analysis reports require memory to run. Lengthy or graphic-intensive reports may take longer to run; you may need additional memory to run these reports.
- 250 MB free hard disk space to install software
- 1 GB free hard disk space recommended to use software
- Screen/monitor resolution of 1024x768 or higher and at least 16-bit color (32-bit color recommended)
- Mouse
- CD-ROM drive (for installation purposes)
- Windows-supported printer (optional)



## About Gravic, Inc.

Gravic, Inc. is a privately-held corporation located in Malvern, PA, about ten miles (16km) west of Philadelphia, PA USA. We make a number of computer software products for data collection, transformation, and distribution uses. Customers for our products include schools (Primary and Higher Education), hospitals, government agencies, market researchers, trainers, meeting planners, brokerages, travel agencies, stock exchanges, electric utilities and telcos.

In 2001, we completed a merger of our three predecessor companies. Principia Products, Inc. was restructured and renamed to Gravic, Inc. in order to capitalize effectively on our data collection, transformation and distribution core competencies. Our core purpose is *To Improve Society Through Innovation*, a theme that you will find in all of our products, services, and corporate activities.

Please visit our web site at <http://www.gravic.com/about.html> to learn more about our company, values, and purpose.

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