

COPYWRITER
GRAPHIC DESIGNER
CUSTOMER SERVICE REPRESENTATIVE
PHOTOGRAPHER
PRINT BUYER
ILLUSTRATOR
PRODUCTION MANAGER
MARKETING SPECIALIST
ESTIMATOR

Careers in
GRAPHIC COMMUNICATIONS

EDUCATOR
MANAGEMENT
ART DIRECTOR
PAGE LAYOUT
BINDERY WORKER
DATABASE MANAGER
ENGINEER
WIDE FORMAT



Careers in Graphic Communications

Call it printing. Or call it graphic arts or graphic communications. Whatever you call it, you're referring to one of the largest industries in the United States in terms of not only employees but also annual revenue.

It is very hard to overlook an industry that employs over 470,000 people in over 27,500 establishments. Annual shipments are over \$80 billion.

The Graphic Communications Industry: A Quick Overview

Definition

What has traditionally been referred to as the printing business encompasses many segments: general commercial printing, quick printing, digital imaging, magazine, newspaper, book, and display graphics, financial and legal printing, screen printing, forms printing, label and tag printing, packaging, greeting cards, and trade and finishing services.

(These are encompassed by SIC codes 2711 through 2790 or NAICS code group 323).

Due to the rapid technological changes and broadening of the scope of services provided by many of the companies in the field today, it is more commonly referred to as the graphic communications industry. Companies in the business have expanded services to include creative design, retail display design, e-commerce, web page design and hosting, mailing, fulfillment, and a host of services that provide horizontal marketing well beyond the core printing model. This is a description that more accurately represents the broader range of what "printers" do today.



What We Do and Who We Are

We help the world communicate across a wide range of platforms. Ideas are created on the computer and carried through to a variety of platforms that can include the Internet as well as printed forms of many types and variations, from personalized digital imaging to long-run conventional to the side of a bus.

Many graphic communication jobs are high tech, highly skilled, high paying, creative, and innovative. They cover a wide range of positions from professional and managerial, to administrative, sales, and job planning through production positions operating machines.

Graphic communication companies are entrepreneurial and innovative. They range from small companies with a few employees to large plants with several hundred people on multiple shifts. Nearly all have modern computerized equipment and stay current with technology changes taking place in the field.

Overview

Graphic communications is America's most geographically dispersed manufacturing industry and is a major force in the economy of every state. Every state has at least 50 printing plants, over 700 employees, and over \$100 million in production. The average state has over 650 printing plants with 18,000 employees and over \$3 billion in shipments. (Source: Printing Industries of America, 2010)

You can go virtually anywhere in the country and get a job working in the graphic communications profession. There are more people employed nationwide in the industry than there are working at the top three fast food restaurants combined!

The top ten leading states in total number of graphic communication employees are California, Illinois, New York, Pennsylvania, Texas, Ohio, Wisconsin, Minnesota, New Jersey, and Michigan.

Graphic communication and imaging is one of the few industries that runs an annual trade surplus. (Source: International Trade Administration) Almost all printing that is consumed in the United States is produced in the U.S. and the industry exports billions of dollars of products to other countries. In fact, the U.S. printing industry is projected to remain a strong domestic-based manufacturing industry for the foreseeable future.

National figures:

Number of establishments: **27,500**

Printing is the **second largest manufacturing industry** in the United States in terms of number of establishments.

Number of people in the industry: **over 470,000**
(Direct Marketing Association, 2013)

Overall almost 80% of graphics companies employ less than 20 people. However, the industry also has **many multinational corporations and publicly traded companies.**

(Source: Printing Industries of America, 2013)

Annual shipments: **\$80 billion**

Contrary to popular belief, **31% of all advertising dollars are spent on printed media**, while less than 11% are spent on the Internet.
(Country Business Patterns, 2012)

Job Outlook

We anticipate that 40,000 additional people will be needed each year through 2020, due to baby boomers retiring, along with changes in workflow, production, and new technologies.

The Bureau of Labor statistics projects the following through 2020:

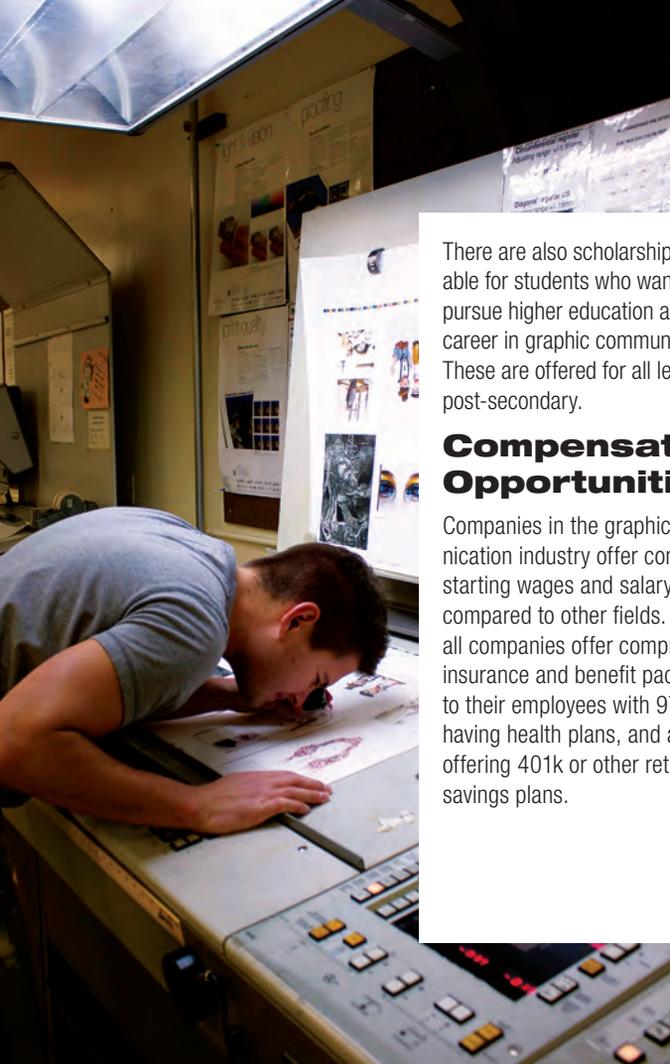
Employment declines for printing workers should be moderated by other segments of the industry that will likely experience steady demand, including print logistics (labels, wrappers, and packaging) and print marketing (catalogs and direct mail).

The industry will need drivers, bindery workers, sales and customer service people, computer operators, graphic artists, chemists, machinists, warehouse operators, mechanics, production supervisors, and all forms of management.

Our occupation is stable and there is ample opportunity for career growth. Individuals who have a high school education can start out as trainees and learn on the job for many positions. With time they can advance to lead positions and into supervisory positions. Graphic communication jobs are located in every state, and in every type of community, from rural areas to the largest cities.

Educational Opportunities

Post-secondary opportunities are available in many forms. Technical colleges offer one- and two-year programs in production and management. There are four-year degrees at several colleges to pursue print management. Continuing education is an important part of the industry as new processes and methods are introduced. Industry associations, manufacturers, technical colleges, and in-house training are among the many ways that workers continue to gain knowledge.



There are also scholarships available for students who want to pursue higher education and a career in graphic communications. These are offered for all levels of post-secondary.

Compensation Opportunities

Companies in the graphic communication industry offer competitive starting wages and salary packages compared to other fields. Nearly all companies offer comprehensive insurance and benefit packages to their employees with 97% having health plans, and a majority offering 401k or other retirement savings plans.

Hourly wages: The average wage per hour for production/non-supervisory personnel was \$18.12. Wages averaged \$21.43 in the industry's core lithographic offset segment. In comparison, wages averaged \$19.21 in automotive repair and maintenance, \$14.28 per hour in retailing, and \$10.60 for health aides
(Source: U.S. Bureau of Labor Statistics, 2012)

For other specific job titles, some recent median and maximum wage survey results give the following information:

	Median	Maximum
Desktop Technician	\$21.22	\$38.88
Design/Layout (Art Director Designer)	\$20.60	\$53.75
Digital Color Press Operator (Indigo, Igen, etc.)	\$18.50	\$36.06
Large Format Operator (Inkjet)	\$17.34	\$30.25
38" to 42" 6-color press helper	\$18.00	\$35.32
38" to 42" 6-color press operator	\$26.00	\$40.40
Commercial Heatset Web - Full, Press Operator	\$23.44	\$34.28
Folder/Cutter Operator	\$18.00	\$37.57
Stitcher/Binder Operator	\$18.25	\$30.00

(Source: 2014 PIA Wage and Benefit Report)

Administrative salaries: Average annual base salaries (not including incentive pay) for department heads/supervisors:

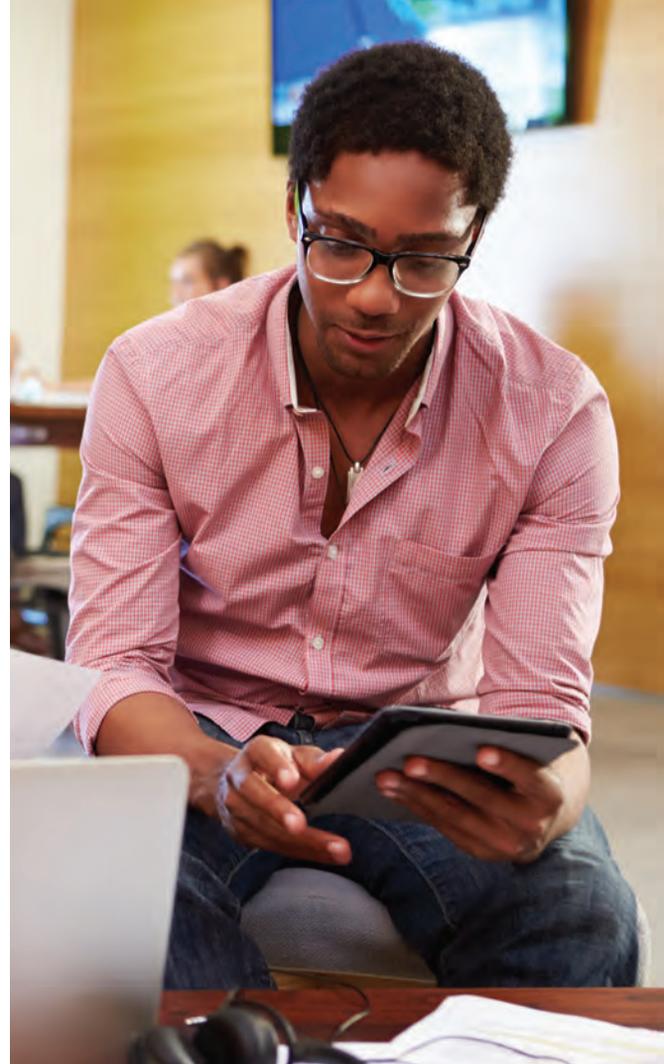
Prepress:	\$62,400
Press (Conventional):	\$65,520
Human Resources:	\$60,000
Bindery/Finishing:	\$61,992
Purchasing:	\$53,497
Production Manager:	\$79,040
Plant Manager:	\$79,040

(Source: 2014 PIA Wage and Benefit Report)

For Management positions, here are the median salaries for the following positions:

Chief Operating Office/Vice President/General Manger	\$100,000
Production Manager/Plant Manager	\$79,040
Sales Manager/Vice President Sales	\$95,000
Manager of Marketing/Business Development	\$70,000
Estimating Manager	\$60,240
Production Planner/Scheduler	\$53,518
MIS/IT Manager	\$72,000
Office Manager	\$43,160
Estimator	\$48,880
Database Technician	\$51,417

(Source: 2014 PIA Wage and Benefit Report)



What We're Looking For

Regardless of the area of a company that a person may be considering going into, today's mix of technology, craft, and communication skills require bright talented people. We have customers with ever rising expectations and our jobs continue to increase in their complexity. This requires individuals with a high level of skill sets, including verbal and written communication, math skills, computer literacy, critical thinking, and problem solving. Naturally a good work ethic is always important.

Many secondary schools offer graphic communication and imaging courses through their career and technical education centers.

Approximately 130 colleges and community colleges offer graphic communication programs. Our industry is interested in all individuals who are interested in learning a good vocation, having a solid career path, and making a good living in the graphic communication field.

Remember, graphic communications is a catch-all term for all the different industries involved in reproducing an image. The image, whether it be a word, photograph, or illustration, can be reproduced on paper, cloth, metal, glass, plastic, or a variety of other media so that the message can be widely seen. Most often, these images are reproduced using a printing press, but graphic communications involves much more than just printing. Available in this multifaceted industry: There is a wide

range of career opportunities spanning printers, publishers, packagers, papermakers, inkmakers, equipment manufacturers, and in-house design and printing departments within corporations, banks, and even department stores.

This highly technical industry employs men and women working as chemists, engineers, computer programmers, writers and editors, designers, marketing specialists, researchers, press operators, technicians, salespeople, managers, photographers, and bindery workers, as well as a variety of other positions.

Many, but not all, of these occupations require a college degree. Students interested in pursuing a college degree in a field related to graphic communications should contact the Print and Graphics Scholarship Foundation (PGSF, www.pgsf.org) for additional information about scholarships as well as a directory listing technical schools, colleges, and universities offering courses in graphic communications.

Joining the graphic communications industry is a wise career choice for high school graduates, college graduates, and vocationally trained students as the number of printing and publishing companies ranks second to restaurants in total establishments in the United States. The industry includes small, medium, and large establishments in both small

towns and large metropolitan areas. But the biggest part of the industry is what meets our eye.

Graphic communications is all around us: when we read a newspaper, novel, or cereal box; drink from a beverage can; open a can of soup; or eat from a bag of pretzels. Products of this huge industry include the package you just opened, the greeting cards we send, the signage in a store, and the paper money we spend. We are surrounded by the products of graphic communications even when we are asleep in the forms of printed wallpaper, designed and printed sheets, bedspreads, pajamas, and even the printed face of an alarm clock.

Everything from billboards and comic strips to toothpaste tubes and detergent boxes are produced by the graphic communications industry. In fact, the demand for the end products has grown and will continue to grow. Consumption of printed products per capita in the United States has never been so high. Despite the increased use of the personal computer and the Internet, and the prediction of a paperless society, the demand for printed products continues to grow. By the way, publishing on the World Wide Web is a form of graphic communications. The age of convenience and throw-away packaging continues to keep the graphic communications industry producing an wide variety of books, catalogs,

corrugated boxes, magazines, labels, food (flexible) packages, financial and legal documents, business forms, brochures, newspapers, and greeting cards.

The on-going demand for printed products has stabilized in the number and variety of job opportunities in graphic communications. The ongoing rapid technological advancements made in the graphic communications industry is another reason for the existence of so many opportunities for college and vocational graduates. It is important to understand that graphic communications is not just a printer working with presses; it is also people working with computers, lasers, and even satellites. For instance, USA TODAY is transmitted via satellite to a number of regional printing locations, saving shipping costs and providing readers with printed information quicker.

Students often have questions. The following list of the careers in graphic communications will help to illustrate the size and importance of an industry that employs so many and touches our lives daily.

Copy writer

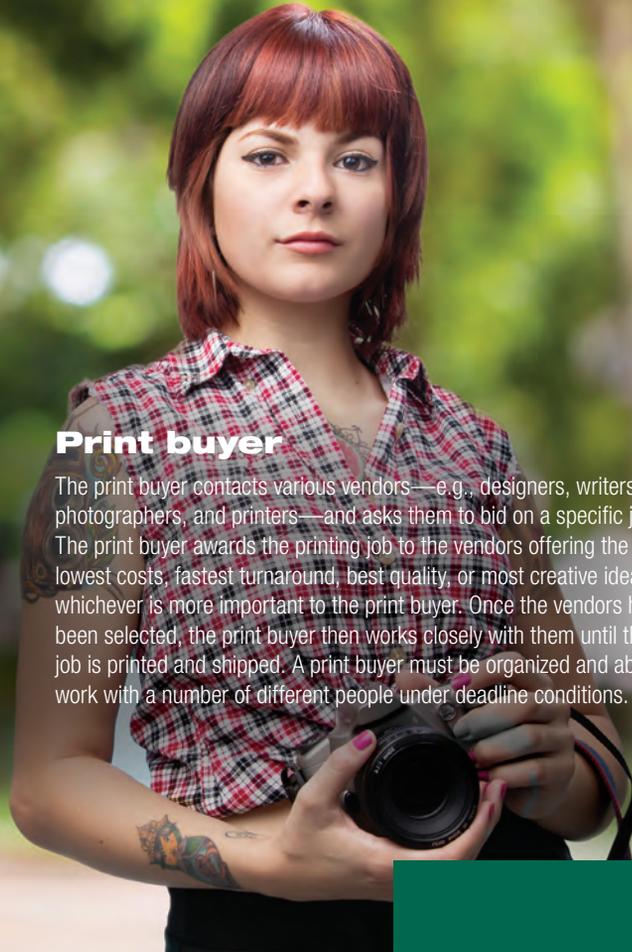
The copy writer starts the process of graphic arts production by writing the text for the piece to be printed. Writers can be technical writers, creative writers, or journalistic writers such as newspaper reporters. A copywriter should have a good command of the language and the ability to be concise and accurate. Copy writers work in business firms, software development companies, advertising and public relations, and other industries. Many specialize in writing materials for a particular area, such as software documentation manuals.

Photographer

The needed photographs or transparencies for a printing job are produced by a photographer, who usually works closely with the writer. Photographers must have proven creative talent, as well as the ability to get along with others during a photo shoot. In addition, they need a sense of good composition and a working knowledge of lenses, filters, and color theory. A tool for photographers in recent years is the digital camera, which uses no film but rather stores the captured image as a file that can be downloaded to a computer. Therefore, even photographers must be aware of and familiar with digital and computer technologies.

Print buyer

The print buyer contacts various vendors—e.g., designers, writers, photographers, and printers—and asks them to bid on a specific job. The print buyer awards the printing job to the vendors offering the lowest costs, fastest turnaround, best quality, or most creative ideas—whichever is more important to the print buyer. Once the vendors have been selected, the print buyer then works closely with them until the job is printed and shipped. A print buyer must be organized and able to work with a number of different people under deadline conditions.





Customer Service Representative

The customer service representative, or CSR, functions as a liaison between production and the customer once a job has entered the printing plant. If there are any questions or problems concerning a printing job, the CSR must be able to communicate fluently with the buyer and must understand the customer's needs. Although a CSR does not operate production equipment, he or she must be technically knowledgeable about the entire printing production process in order to communicate effectively with customers as well as plant personnel.

Sales Representative

The sales representative solicits business for a printing firm, manufacturer, or supplier. A sales representative advises customers how to get the most out of their printing budget. Ambition and the ability to maintain a good appearance, as well as getting along well with others, are a few characteristics of a professional sales representative.

Production Manager or Coordinator

The production manager or coordinator directs traffic for printing, production, or manufacturing jobs through the plant, making sure that each piece of material gets where it should go at the proper time and in the proper sequence, from the time the job enters the plant until its delivery. Production managers or coordinators should be well-organized individuals, able to plan ahead, foresee and troubleshoot problems, and be level-headed in their dealings.



Educator

An educator specializing in graphic communications stimulates the students' interests in the topic by presenting an accurate and up-to-date picture of the state of the industry. Opportunities for teaching graphic communications courses are available in high schools, vocational schools, and colleges and universities, as well as within the industry itself, as a trainer.

Estimator

The estimator calculates the cost of a printing job after it has been discussed with the client or print buyer. The estimator's recommendations are the basis for the printing firm's bid on a job. The estimator also looks at ways to do the job while bringing costs down. Students interested in this area should have a sharp mind and a way with numbers.

Department Supervisor

The manager is responsible for policy and decision making in the company and for purchasing proper equipment for normal operation and expansion. There are various levels of management, such as company president, vice president, and printing plant supervisor.

Marketing, Internet and Social Media Specialist

The marketing specialist works in public relations, advertising, or marketing. Specialists in marketing often analyze where and how the company can do its business more efficiently. Advertising and public relations employees are responsible for promoting the work of the company through advertising campaigns, brochures, print, television, radio, and public appearances.



Engineer or Scientist

The engineer designs machinery, and the scientist conducts research in all aspects of the industry such as ink formulation, papermaking, health and safety standards, and quality control. Due to the widespread application of computers in the industry, electrical engineers, mechanical engineers, and computer specialists are in demand. Included in the group are chemists, physicists, mathematicians, optical engineers, and color specialists

Graphic Designer

The designer plans the piece to be printed and establishes the mood and style of the printed piece. Although designers still use traditional design tools, the designer relies also extensively on the computer for a variety of design-related tasks. Designers should have a natural artistic talent as well as an eye for detail and color.

Illustrator

The illustrator creates illustrations, drawings, charts, graphs, or full-color artwork to complement the written words. Although most illustrations are now created using a computer and a software program like Adobe Photoshop or Adobe Illustrator, some illustrations are still created with the traditional tools of the illustrator. An illustrator must have precise artistic talent as well as a knowledge of composition and proper use of the tools of the craft.



Page-layout Artist

The page-layout artist uses a computer workstation to assemble the artwork and the text according to the designer's layout. Since the artist prepares the piece for production, the job requires precision, accuracy, neatness, and the ability to follow directions. With the advent of desktop publishing, one person often performs all the functions of the graphic designer, illustrator, and page-layout artist. Therefore, the person needs a well-rounded knowledge of computer software, in addition to having artistic ability.

Electronic Prepress Technician

The Prepress Technician uses digital software to perform a variety of functions for the printing company that are key to the production and processing of a job, up to the final plating or submission for digital output. Depending on the size of the company, these technicians may perform only basic functions, or they may perform a number of related functions. Among the functions performed in electronic prepress are preflighting, scanning of images, file repair, trapping, imposition, and outputting of proofs and plates.

Press Operator

The press operator is the person who actually runs the printing press, putting "ink on paper," so to speak. Press operators must know the mechanical workings of the machine, possess good manual dexterity, and think quickly on their feet in order to produce a good quality product. Most new presses have a large number of automated or computerized features; therefore, the press operator must be comfortable around computers. In addition, digital printing devices are widely utilized, and the digital-press operator requires an even more extensive computer background.



Bindery Worker

The bindery worker typically performs one or more of the following functions: cutting, folding, gathering, collating, trimming, and binding the final printed piece. Most bindery workers must be able to operate various kinds of machinery, so ground-level training on each piece of equipment is important. Many large printers have computerized bindery systems that automate the bindery process.

Materials Handlers

Materials handlers are responsible for the loading and unloading of freight cars or trucks and for moving the materials throughout the printing plant. Much of this work is done using forklift trucks, but some manual lifting is required. Many large printers have at least partially automated materials handling by using computerized vehicles to move the materials.

Wide Format Specialist

The production of wide format or display imaging materials is produced in many plants throughout the industry. Wide format printing is accomplished using a variety of substrates and finishes in a number of ways for displays, banners, fixtures, and much more. Wide format specialists must be flexible and creative to handle a large variety of projects.

Obviously, not every career in graphic communications can be listed here. These are some of the ones asked about most often. The educational requirements for these careers vary according to the type of work, size of company, and amount of responsibility.



About the Print and Graphics Scholarship Foundation

The Print and Graphics Scholarship Foundation (PGSF), founded in 1956, administers the largest scholarship and fellowship program for students pursuing undergraduate or graduate degrees in graphic communications. Each year, PGSF administers over 200 scholarships and fellowships, ranging in value from \$1,000 to \$5,000. Since its inception, PGSF has helped over 6,000 students. These scholarship and fellowship programs are made possible by donations from individuals and companies involved in graphic communications.

About Printing Industries of America

Printing Industries of America, along with its affiliates, deliver products and services that enhance the growth, efficiency, and profitability of its members and the industry through advocacy, education, research, and technical information. The 1999 consolidation of PIA, established in 1887, and GATF, established in 1924, brought together two powerful partners: The world's largest graphic arts trade association representing an industry with more than 470,000 employees and \$80 billion in sales and a nonprofit, technical, scientific, and educational organization dedicated to the advancement of the graphic communications industries worldwide.

The Association's staff of researchers, educators, and technical specialists help members in more than 80 countries maintain their competitive edge by increasing productivity, print quality, process control, and environmental compliance and by implementing new techniques and technologies. Through conferences, webinars, workshops, consulting, technical support, laboratory services, and publications. Printing Industries of America strives to advance a global graphic communications community.

Printing Industries of America: The Magazine brings you the best of the best in editorial content. Ten issues will be published yearly with sections on technology, solutions (how-to and practical stuff), what's hot and super current, resources to manage your business, along with key information from the Government Affairs Department, pertinent economic insights, and environmental updates. In addition, the *Forecast: Technology, Trends, Tactics* is published the beginning of the year.

For more information about PGSF, Printing Industries of America, special industry groups, sections, products, and services, visit www.printing.org or write to 301 Brush Creek Road, Warrendale, PA 15086-7529 (phone: 412-741-6860).

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