LETTER FROM THE PRESIDENT

Cortney Balzan

In the near future, 2nd Vice President Young McQueen, will have prepared an outline for A.G.A.’s Long Range Planning. This was discussed at the Tucson ’89 Conference and is now underway.

The purpose is to build on A.G.A.’s present association and prepare for the future where new gemological/appraisal groups come into existence and where existing associations are buying to stay afloat.

Young McQueen’s action plan will set up the goals and a strategy to achieve them. A long range planning committee will be formed.

By Tucson ’90 we will discuss this at some length under one common roof. Presently, we will start laying the groundwork for a concrete discussion in February ’90.

This will be one of the most important aspects of our annual board meeting coming up.

Young believes we need ideas from members. Not just ideas of what they think A.G.A. can or should do for them, but what are they having trouble with in their daily jobs as gemologists. How can their job be made easier, more profitable and more professional.

This information will be used to formulate a strategy of achieving the goals set forth and consequently increasing the value of the membership. In this respect, Young will serve as coordinator, bring this together and poll the membership.

DR. KURT NASSAU ANNOUNCES HIS RETIREMENT

DR. NASSAU RETIRES

Dr. Kurt Nassau is retiring at the end of 1989 after 30 years with AT&T Bell Laboratories, Murray Hill, New Jersey.

In his technical research on crystal growth, lasers, semiconductors, glasses and high temperature superconductors, among others, Dr. Nassau has over two hundred technical publications and fifteen patents. He has published the textbook "The Physics and Chemistry of Color" (Wiley, 1983) and Encyclopedia Britannica article on "Colour" for the 1988 and subsequent editions. He was awarded the Distinguished Technical Staff Award for Sustained Achievement by Bell Laboratories in 1988, consisting of an honorarium, a metal sculpture and other benefits.

Dr. Nassau is well-known in the field of gems and minerals for his gemological research, reported in over one hundred and fifty articles and his two popular books, " Gems Made by Man" (GIA, Santa Monica, CA, 1987) and "Gemstone Enhancement" (Butterworths, Boston, 1984). He is on the board of governors of the Gemological Institute of America.

In his retirement in his recently-completed home in Tewksbury, NJ (mailing address 154A Guinea Hollow Road, Lebanon, NJ 08833; Tel: 200-832-2499). Dr. Nassau intends to continue writing and expand his consulting and teaching activities.
Martin Rapaport, founder and publisher of one of the diamond industry's most respected and long-standing publications, the Rapaport Diamond Report, spoke at the San Francisco Diamond and Jewelry Mart in mid-September, where he gave an analysis of the future of the international diamond business.

A "guru" in the industry, Rapaport was joined by David Atlas of Philadelphia, who discussed the values of old mine and European cut diamonds and how to buy and sell more profitably. This was the first professional seminar for the trade held at the newly-opened mart.

Rapaport is on a world tour and his mart appearance was his only one in San Francisco. Some of the lecture, including the question and answer session, recorded at the mart will be included in a two-hour "round the world" videotape which Rapaport is filming.

"We had people from all over the Bay Area and from as far away as Sacramento," said mart management team member and diamond dealer Harold Apfelbaum. "We had owners and managers of retail stores, and wholesalers. Everyone left feeling they had gotten something out of it."

He noted that both the speakers and audience, which filled the building's atrium, were impressed with the San Francisco Diamond and Jewelry Mart.

The organizer of September's seminar was Cortney Balzun, San Francisco based president of the Accredited Gemologists Association, which presents similar events across the nation and world-wide.

---

Mr. Cortney Balzun, C.G.A. R.G.A.

2323 candles Place
San Rafael, CA 94901

Dear Cortney,

Everyone I have spoken to reported that the Rapaport Seminar, held at the Diamond and Jewelry Mart, was a smashing success on all accounts.

On behalf of the owners, management and tenants, I'd like to thank you for choosing our facility to host the seminar. To promote the building and to become even more involved in the industry, we hope to increase industry related seminars and events to be held here.

Please provide me with any comments or concerns you have regarding the seminar, so I can improve our services to you next time.

Sincerely yours,
Emily P. Searls
Building Manager
WORLD RENOWNED
MARTIN RAPAPORT
LECTURES ON
DIAMONDS AT MART

FULL HOUSE AT MART'S FIRST INDUSTRY
SEMINAR

From: Diamond & Jewelry Mart FACETS
Vol. 1, No. 2
Fall 1989

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LETTER RESPONSE TO
RAPAPORT
CONFERENCE

From Emily P. Searls
Building Manager
San Francisco Diamond & Jewelry Mart

September 20, 1989

Mr. Cortney Balzan, G.G.
A.G.A.
915 Lootens Place
San Rafael, CA 94901

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Sincerely yours,
Emily P. Searls
Building Manager
PAST AGA PRESIDENT
JOE TENHAGEN
PRESENTS SEMINAR

From: Kansas Jewelers Association
P.O. Box 70027
Shawnee Mission, KS 66207

Joseph Tenhagen presented an all day seminar on October 1, 1989 to the Kansas Jewelers Association in Salina, Kansas. There were 35 jewelers present. He spoke on "APPRAISING... START TO FINISH".

Some of the comments were:

"Excellent... Speaker well prepared... Time well spent... Should have Mr. Tenhagen return for a second session... Speaker very informative... We learned that some of us tend to treat appraisals too lightly... Mr. Tenhagen was a real pro."

LETTER TO THE EDITOR
FROM DR. DURT NASSAU

Sept. 15, 1989

The Editor, AGA Update
Accredited Gemologists Association

Dear Sir,

Let me comment on the article "Diamond Film Deposition - A Gem of a Process" (AGA Update, September 1989). It is a useful article for the technologist could be misleading to the gem trade.

In the gem field, "diamond" refers to pure carbon, in the cubic form, usually in single crystal form. This article, however, deals with what are in the thin-film field usually called "diamond-like" films. These films may contain some regions where the bonding among carbon atoms is like that in diamond but also contains regions of other types of non-diamond-like carbon: in addition, they contain lots of hydrogen! Unfortunately, the regrettable shorthand usage of calling these films "diamond" has arisen in that field.

True diamond films in single crystal form can be grown only on diamond, with great difficulty, and then only extremely thin. Polycrystalline diamond films can be grown quite thick, but adhere only very poorly except on diamond, silicon, or silicon carbide. The films most easily produced, and the subject of the article, are the "diamond-like" ones, which are reasonably hard, reasonably adherent, but definitely not diamond.

In my opinion, these films should be of no particular concern to the gem trade.

Sincerely,
Kurt Nassau, Ph.D.
1989 Accredited Gemologists Association Software Review

Review Committee:

Co-Chairs
Robert Rosenblatt
Thom Underwood

Members
Jelks Cabaniss
Young McQueen
Dana Richardson
Leo Schmied
Nancy Stacy
Charles Zawacki

Software reviewed:

Gemdata
JEMS
KIS
MacJewel
Multi-Manager
Networks Unlimited
Polygon
Stepstone

Layout & Design Editor:

Lynn Sharpe Underwood
The 1989 AGA Software Review

The Accredited Gemologists Association (AGA) Software Review Committee was formed last February with the purpose of providing AGA members with a comprehensive overview of currently available software for the retail jewelry and appraisal industry.

We wrote to dozens of designers/publishers of programs asking if they would be interested in submitting their product to our scrutiny. Originally, we got dozens of replies from software publishers interested in participating; however, only eight programs were actually submitted for review by the committee deadline.

Our goal was to have every member receive and work with every program submitted so that each program would get a more extensive in-depth review. We found this goal more elusive than we expected. Some programs were not submitted to every member, or business and personal demands on committee members did not allow them time to complete reviews on every program. We have indicated the number of copies submitted of each program so that you may get a sense of the exposure any particular program got and how broad-based or narrow a particular review might be.

The programs (and number) submitted for committee review were: Gem Data (4), J.E.M.S. (7), KIS (2), MacJewel (1), Networks (7), Polygon (7), Stepstone (7), and Multi-Manager (1).

The process of reviewing the software we received included first taking an inventory of

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what a program offered. (SEE CHART ON PREVIOUS PAGE.) This included listing whether a program had an Inventory Database, Customer Database, Point of Sale, Mailings, Appraisal, Gem Identification, General Ledger, Payroll and Telecommunications.

In reviewing the programs there were several things that became apparent to us:

* Getting “hands on” was critical. The brochures and manuals were informative and sometimes even engrossing but there was no substitute for actually loading and using the programs. We discovered the real joys and the problems as well.

* There is objective data that one can collect about a program as well as subjective responses. We have included both in our reviews. It quickly became obvious that many programs are far too complex to fully understand the ramifications of a particular entry let alone test for accuracy. We approached this review process as users and hoped to get a “feel” for what we were examining.

We used a Review Criteria Worksheet to evaluate each program (See chart at end of review). To evaluate the different aspects of each program we used a scale of 1 (Poor) to 5 (Excellent).

The general areas of criteria we used were as follows:

- Printed manual and document support material
- Ease of loading
- Phone support
- Clarity/Ease of use
- Accessibility of entered data
- Ease of modification of data to specific needs
- Portability of data
- Printing formats and capabilities
- Report writing capabilities
- Speed of response

The following reviews were done by various members of the committee. We have indicated the persons providing the composite view. We have edited the reviews in order to cover what we felt were the most important aspects of each program and to integrate comments from different reviewers.

**STEPSTONE**

Reviewed by Thom Underwood, Young McQueen, Leo Schmied & Charles Zawacki

Publisher: StepStone Jewelers

Database

852 5th Ave. #203

San Diego, CA 92101

619-233-STEP

Contact: Dan Rubenstein

Version reviewed: 2.10

System requirements: IBM PC or compatible; 640 K; 20 MB hard-disk drive

Size: 3 MB

Price: $2,995

StepStone Jewelers Database offers a complete system for the small jewelry store owner with easy to use menu screens. Our reviewers couldn’t stop raving about StepStone’s ease of use.

“This system is the most complete system for a jeweler who wants and needs a working program”.

“We are most impressed with this program”.

“Excellent program compared to others tested.”

Of all the jewelry store management programs we tested, Stepstone was undoubtedly the easiest to learn while still providing the full range of attributes required to run a jewelry store.

Nearly everyone found StepStone easy to load with documentation which was straightforward without being overwhelming in size. The simplicity of the manual was a welcome experience.

Those of us who called for phone support found some of the best response for any of the software we tested. The StepStone people were always pleasant and if they couldn’t give us the answer to our question right then and there, they returned our call in a reasonable amount of time. While there is no direct telecomputer service, StepStone is a member of Polygon and can be reached via computer by leaving a direct message there (user #1254).

No other program received such diverse scoring on our worksheets (2.8 to 5.0), indicating that this
program probably engenders fond and faithful users while also alienating a few.

There were some complaints. Some of the data entry fields (that's the number of spaces allowed for you to enter the data) were too small for some terms we wanted to use.

There is no field for title (i.e. Mr., Mrs., Dr.) in the customer database and if you try to put this in the 'First' name field you often run out of room.

On some entry screens you can not always "back-up" to correct or change a previous entry. In these cases you must complete what you are entering and then come all the way around and re-enter the changed data.

The menu screens are not always consistent throughout, using letters in some places and numbers in others.

One reviewer disliked the reverse video display screens for customer data entry. Several complained about being required to put on the "caps lock" when entering the program. Why not have StepStone force its own caps where necessary?

StepStone suggests you use the customers last name for the "customer code". StepStone will not allow you to duplicate a "customer code". If you have two customers with the same last name, you are asked to add the first letter of the first name to the end of the last name to provide a different code. This can initially be confusing; however, StepStone provides you with search and scrolling facilities in the customer database so this becomes easier with use.

StepStone will run on a network system (though file locking is still sometimes a problem) and there is also a Macintosh version which we did not test.

This is a full spectrum jewelry store management program that we found easy to learn and easy to use. With some cleaning up, StepStone has the potential to be one of the best.

Editor: In a follow-up call to StepStone, they indicated that some of the problems mentioned above have already been resolved.

KIS

Reviewed by Thom Underwood

Publisher: KIS Software
7705 Wadsworth Blvd
Arvada, CO 80005
1-800-553-6226

Contact: Gary Thompson

Version reviewed: 3.0

System requirements: IBM PC or compatible; 640 K; 40 to 60 MB hard-disk drive

Size: 6 MB

Price: $4,795 - single version
$6,795 - multi version

When I first received the KIS (Keep It Simple) package, I was not prepared for the sheer size of the documentation and the large number of disks. This was at first overwhelming as well as intimidating. Once you get beyond the first few days and spend time running the program, you will find a KIS that is well thought out and the most complete jewelry store package that I tested.

As mentioned before, the manual for KIS is large and intimidating and at least for the beginner it was difficult to get a grasp of where to look for answers and directions. I can't help but wonder if it couldn't be edited down a bit. Nonetheless it does not lack for thoroughness and I'll bet that with some time one would be able to get along with it just fine.

Loading KIS took some time because of the large number of disks. There were no real problems. You should be prepared to put a whopping six megabytes onto your hard disk not including any data.

The phone support was good. Most questions, however, were answered with a prompt callback rather than by the person answering the phone which would have been preferred. Still, when I had problems and I needed help it was there. KIS did "fall out" on me a few times; and once when running General Ledger it requested more memory to complete the task. I never felt I had problems that couldn't easily be corrected for me over the phone. For those of you who are telecomputer junkies they even have a 24 Hr. BBS to serve you.

I felt this was one of the most comprehensive programs that I looked at. As a consequence, it also appeared to have the longest learning curve, and often asked for more data to perform each function. For example, I found it difficult to understand the Point
of the Sale function even after several efforts. It was lengthy and asked lots of questions. After becoming more accustomed to Point of Sale, I found it less confusing but still a bit tedious.

The upside of answering more data questions was the extensive data that KIS stores and the opportunities you have as a user to manipulate this data for more effective management and marketing.

The Appraisal section was the least attractive aspect of KIS for me. I found the format unattractive and while it was relatively easy to use there seemed to be little adaptability for specific requirements that a unique item of jewelry might require.

I found the password setup in KIS easy to use and well thought out allowing multi-level access to different users.

I must also say hooray for the color selection screen which allowed me to set screen colors to my liking for different sections of screen text and background. It was down right fun and certainly would be a lift to those lucky few who have color monitors in their stores.

All in all, KIS is certainly one of the best programs of the complete programs reviewed and offers the jeweler a package that may be difficult to learn but rewarding in the long run. The program is designed by a jewelry store owner and it shows his knowledge of the business as well as his progressive thinking in gathering potential marketing information. My guess is that the user of KIS will find many happy returns on down the road.

Editor: We were told at press time that KIS has new features in Shipping, Point of Sales involving repairs, and the Mailing List Notepad.

MACJEWEL

Reviewed by Jelks Cabaniss

Publisher: MacJewel Vertical Market Solutions
#1 Main St.
P.O.Box 111
Duncans Mills, CA 95430
1-800-537-2603
California call: 707-865-2950
Contact: Bill Bryant
Version reviewed: 1.89
Current version: 1.90.1
System requirements: Mac II, IIc, IIx, IIcx, IIGS; 50 MB hard-disk drive, LaserWriter 2nc printer or similar.
Size: 2.5 MB
Price: $1,500 with 30 days support
$2,500 with one year support

It must be understood at the outset that I have no experience in jewelry store management. My remarks derive solely from some background in using the MacPlus computer, the LaserWriter Plus and the ImageWriter.

The program reviewed was a demonstration model contained on two disks containing essential program features, an assumed inventory, and the company, employee, customer, and vendor data. The disk data had been compressed so that, although contained on two disks, when “decompressed” the storage requirement became 6 megabytes (For me, this meant removing numerous files from my 20 meg hard drive).

Editor: Jelks had the demo version with an extensive database already filled in.

The MINIMUM hardware requirements listed in the manual are: 512KE or larger Macintosh with an 800K disk drive and a minimum 10 meg hard drive. RECOMMENDED requirements are at least 1 meg of RAM and enhanced ROM, and 20 meg hard drive. (These Minimums must be for an earlier version. Even the Recommended requirements are inadequate.) The version tested showed screen icons different from those described in the manual. A toll-free phone call was all that was necessary to get up and running.

MacJewel is an inventory management system for the independent jeweler designed, according to its brochure, for jewelers doing from $200,000 gross sales to about $10 million annually. It is a point-of-sale inventory management system in which salespeople have immediate access to inventory information such as descriptions, quantities, and suggested retail price. Upon termination of the sale, a custom sales slip is printed, inventory is adjusted, sales data is recorded, and the customer file updated.

The principle module, Inventory, keeps track of, creates...
AGA Special Software Review Report

reports about, and calculates the material and labor cost for each item. Every piece is numbered: no voids are allowed.

Repric gives many of us have of hitting ENTER to go to the next step will not cause some small grief.

I found confusing the listing of diamond and gold colors and diamond clarities by letters or numbers which have no relation to GIA color grades. For example, GIA color D is listed as A. VS-2 is B. (These codes can be changed by the user.)

Operating speed on the MacPlus is excruciatingly slow, taking what seemed at times minutes to search a data base or to change to another menu option. I

strongly recommend that MacJewel be run only on the newer and faster machines such as the SE30 or the Mac II. Just how fast it would run on these I cannot say because I have not seen it, but my guess is much, much faster. Storage will be a function of the store size and activity. One jeweler reportedly uses a Mac II with 90 meg hard drive to support several users, print newsletters and do accounting, etc.

The program is copy protected, but only to the degree that every six to nine months it will refuse to boot. The user is directed to call a number listed on the screen for a validation number in order to continue operation. The slight inconvenience does offer the author protection for his labor and it gives him the opportunity to advise of updates or fixes available and to receive comments from users.

The brochure maintains that improvements can be expected on a continuing basis. Accounts Recievable and Accounts Payable were listed menu options but were not supported by the demo. An adverted appraisal module has been shelved, for the moment anyway, because of legal difficulties. (Appraisals must be done by an appraiser, not a computer.)

Learning to use this complex program will take time, and the very thought of entering a large inventory in the first place is forbidding. Still, these would be a necessity no matter which inventory management program a jeweler selects.

A last minute phone call bears out the promise that improvements will continue to flow. An Accounts Receivable is now available in the Sales module, there is a provision for printing ring tags (my manual portion for this was blank), and suggested hardware is now SE30 with 4 megs of ROM and at least a 40 meg hard drive to accommodate the many changes and additions. Good business practice of daily backups suggests an external tape drive to avoid the time consuming use of floppies. Most users are reported to have purchased the full version of Omnis for increased flexibility.
AGA Special Software Review Report

Editor: A last check with the publisher found a new telecommunications downloading program for inventory on the road (i.e., jewelry shows). Portable Mac, here we come!

J.E.M.S.

Review by Charles Zawacki, Leo Schmied & Thom Underwood

Publisher: CRF Development
215 West 1st St. #105-73
Tustin, CA 92680
714-262-9112
Contact: Bob Turner
Version reviewed: 1.2
Current version: 1.4
System requirements: IBM PC or compatible; Hard-disk with at least 1 MB available; 640 K
Size: .5 MB
Price: $495

The manual for J.E.M.S. is well written and easy to understand. Information is complete within the manual and on screen. The system requirements are clearly outlined in the manual making J.E.M.S. easy to install.

Probably the best thing about working with this program was that it was easy to reach the J.E.M.S. offices and they were able to answer technical questions. They were happy to take their time and were concise with their answers.

After taking about and hour to explore all the features, the system becomes easy to use. It is easy to move from one activity to another (i.e., salesperson activity to inventory activity to on-hand inventory), easy to edit and make changes, and easy to get back to the main menu.

If you have Dbase III+ or Dbase IV, you can copy the database files from J.E.M.S. and use them within the Dbase environment; however, changes made to the database files outside of the compiled structure would not be compatible with the compiled version.

Data entered is easy to access. Printouts are attractive and give information needed to make judgments concerning inventory, sales by salesman, vendors and returns. The way in which information is provided was found to be adequate. The inventory activity report shows the invoice number, the date, item number and vendor number, the category, style number, quantity purchased, cost and invoice amount. Totals are shown for cost each and the invoice amount. A light bar manipulated by the up and down arrows makes it very easy to make a selection from the Report Menu. J.E.M.S. produces a straightforward and easy to understand report.

I did have some trouble with the type printer I have, a P351 Toshiba. In order to get a good printout I had to change the dip switches to the IBM mode. When I called, they pointed out that the program was designed to work on the Epson type of printer.

Here are some of my notes that may help you in deciding about your interest in the program:

-Report writing is easy within a fixed format.

-Data can be changed easily and the program does all of the calculations to bring everything up to date.

-Salesperson activity can be entered and reports will indicate the total for each salesman and items sold.

-The program prepares a mailing list and prints labels with the type of flexibility required to reach those that meet certain criteria e.g., diamond purchasers.

-The program does not prepare an appraisal program or a gemstone identification system.

-No telecommunication functions in the program.

-A password is required to access the program and provisions have been made so that the password can be changed.

I like the program and feel that it can do a good job of keeping track of the activity of a small jewelry store.

Editor: The latest news on J.E.M.S. is a more extensive help system and hence, even greater user friendliness and an upcoming repair module.

GEMDATA

Reviewed by Leo Schmied & Thom Underwood

Publisher: Gemdata
68 Forest House Russell Cotes Rd. BHI
3UB
Bournemouth, England
(0202)23209

ACCRREDITED GEMOLOGISTS ASSOCIATION
Contact: Peter G. Read  
Systems requirements: IBM PC or compatible

Gemdata is a simple program dedicated to facilitating the gemologist in the identification of gemstones. It was easy to load into the computer with no problems whatsoever and the manual was easy to understand. While there was no phone support, this was not missed because none was needed.

The program was easy to use. Once you were up and running, it took you step by step through each identifying characteristic (i.e. refractive index, color, etc.) and brought you to the conclusion with the suggested gem. Though you do not have access to the program to add any new gems, we found that every gem we tested for was in the database. Maybe finding what gems are not in the database could be a fun game?

There are no print commands or facilities so if you want to print any results you must use CTRL-PRT SC. There doesn’t seem to be much reason to print though.

I felt that not enough care was taken about synthetic gemstones, since many synthetics show identical or very similar laboratory results leaving microscopic examination as a primary tool for separation. (i.e. Corundum does not show synthetic Corundum as a possibility)

We found Gemdata to be simple to use and very user friendly. We wonder if this program would not be as useful to a working Gemologist/Appraiser as it would to a student of gemological studies. The experienced gemologist most often knows what the laboratory tests are identifying or knows how to find the information quickly in his/her library and Gemdata would seem a bit too cumbersome in most situations. The student might gain valuable educational experience seeing the results of each test accumulate and finally culminate in a gemstone answer. This might help them experience the scientific and analytical process as well as facilitate their learning of gemology.

Editor: Maybe it could be used as a memory resident program that would “pop up” on call as an accessory to a full blown Appraisal program. This would make it readily accessible to the appraiser without having to load every time you want to use it.

Polygon is a telecomputer system designed for the computer user who knows how or wants to learn how to use his computer for marketing advantage. The system is international and uses Compuserv as its “bulletin board”; and therefore, it is always a local call (they also offer a satellite version which is online at all times). You are billed a set fee every month depending on your contracted usage.

Once you have the program loaded, which is no problem (my update came with a threat that not following instructions would cause my hard disk to crash and burn...ha ha ha). You had better brace yourself because it’s instant communications.

You will find yourself plugged into the stores, supply houses, stone brokerage houses, living rooms and bedrooms of America and by satellite, of the world. Now mind you, you can choose what you want to hear and say on Polygon but be prepared for action. The system has a simple menu across the top of your screen which may take a short time to learn and adjust to. But once learned, you will feel like a master on the keys.

Polygon is divided into a number of different channels including Diamond buying, Diamond selling, Colored Stones, Watches, and the open channels --BX or CX. You can choose to send or receive messages to or from all channels or only selected channels. You may also send a message to just one other subscriber on the system (That’s a DM or direct message).
We found the specific channels (i.e. Diamond selling) to be active and very responsive. When we sent out a message looking for a particular diamond, the response was so fast that one jeweler had a hard time assimilating the information and using it effectively. There is a full selection of different channels to cover most every need.

The most active channel by far however is the CX channel. WOW! Hold on to your hats, ladies and gentlemen. Be ready for lots of useless banter mixed in with very insightful conversation about far ranging subjects such as Appraising ethics, or contents of a complete Appraisal, or how to expand your present sales with insurance replacement business. How about an open auction on an Opal you’ve never seen (guaranteed you’ll like it if you win), or tickets for the Pennsylvania lottery (when it was hot), or taxes, or the World Series, or...you put it out there and someone (probably lots of someones) will respond.

"I found it exciting and addictive as it brought out the observer, the little kid, the computer hacker, and the businessman in me."

Support is critical when using such a program. Polygon provides extensive support. One reviewer got help in configuring his modem hardware for his computer. These guys have service down pat.

You can contact them by calling on the phone or just leaving them a DM (direct message) on the system. We found their latest update worked very well with no detectable bugs.

"5.10 works very well and has more features. Polygon seems to take a personal pride in improving their system and takes a true interest in their customers, especially when they have ideas on how to improve their system. They are always asking for your input on how Poly can better serve their members needs."

Polygon is an exciting system that will “fit” some people and not others because of temperament rather than any lack in the program itself.

"Very well designed and in my opinion a portent of things to come in the jewelry industry."

The user must have imagination to use this system. It taxes your ability to sell or buy your products and/or services.

The people on the system (Polywogs) do seem to “police” themselves. If you don’t do what you say you going to do ... the subscriber will let you and all the other subscribers know “real quick”.

“You must use the system as a “source” and all transactions must be based on your own experience and ‘gut feeling’ about selling and buying.”

NETWORKS

Reviewed by Young McQueen, Thom Underwood, Charles Zawacki & Leo Schmied

Publisher: Networks Unlimited Inc.
119 N. 2nd St.

Killeen, TX 76541
1-800-448-6638
817-628-1638
Contact: Patty Harper
System requirements: IBM PC or compatible; 256 K; MS DOS 2.0 or higher; single floppy (hard-disk recommended); 1200 or 2400 baud Hayes compatible modem on COM1 or COM2; RJ2 modular phone jack
Version reviewed: 2.0
Current version: 2.02
Size: .5 MB
Price: $99 per month unlimited usage

Networks may be the right system with wrong timing. Every reviewer who tested the system was happy with the design but found almost no subscribers on the system to communicate with.

We found Networks generally easy to load and those of us who had problems found help on the other end of a telephone. One reviewer could not test Networks because it runs only on COM1 or COM2. Otherwise, the system was easy to use and understand and ran without a problem.

Networks is divided into channels (i.e. Diamonds buying and selling, Colored stones, Watches, etc) which are then further subdivided into finer categories. For example, Diamonds are divided into various weight ranges from melee on up. This was too refined for normal searching and buying needs and therefore cumbersome. Overdesigning has made the system cumbersome and more time consuming than it needs to be.
AGA Special Software Review Report

This is a fine program which hasn't found its audience. Lack of a subscriber base makes for little action, either selling or buying. Networks is worth keeping an eye on and checking into if you are looking for a network system. If the subscriber base grows then we may have a network with a different "feel" than Polygon which would understandably have some appeal.

Editor: Our test was run in the early summer of 1989.

MULTI-MANAGER PROFESSIONAL

Reviewed by Robert Rosenblatt

Publisher: Verasoft
4340 Almadyn Expressway, Suite 250
San Jose, CA. 95118
(415) 723-9044
Contact: Eric Small
Version reviewed: 1.7
System requirements: IBM and compatibles, Atari ST, Macintosh, and Commodore.
Requires a hard disk (20 MB is plenty).
Size: 1 MB
Price: $399.00 run time
$699.00 run time with source code.

I tested the the Atari version on my ATARI ST with 4 MB RAM memory and a 60 MB hard disk. The following are my notes on what I found and worked with for this review:

1. The manual comes in a three ring binder and is well written, easy to follow and concise.
2. Multi-Manager must be run from a hard disk. The manual gives very easy instructions on transferring the four floppy disks to the hard drive. A customized "AUTO" install program makes loading easy, even for the computer neophyte. The program will run on as little as 1/2 MB of RAM but 1 MB will make it much faster.
3. Phone support is EXCELLENT! Although there is no 800 number, (my questions were always answered promptly and in a courteous way (no matter how simple or stupid my question, they never made me FEEL stupid).

Features include:
* Inventory auditing
* Multiple stores
* Unlimited items per invoice
* Payroll
* Reorder lists
* Complete customer mail list
* Data backup archiving
* Discount by category
* Hot mover lists
* Networking (not tested)
* Aging inventory reports
* Password security
* Special group discount
* Employee spiff & commission
* Price quote without sale
* Complete inventory control
* Packaged sales
* Converts other Dbman or Dbase 111 files
* Backstock inventory control
* Sort inventory by category
* Sales Reports by category
* Enter inventory by vendor or item

*Customized reports
*Customize invoice headings
*Modify report formats

4. Functions are all in menu format with help lines at the bottom of the screen prior to selection of any particular function. Moving around the menus is as simple as a keystroke. Multi-Manager does not require any complicated computer command language for the user to operate it. It is always easy to return to the main menu and you can abort in the middle of most functions without difficulty.

5. Inventory, vendor and customer database can all be edited and are easy to access. Data can be modified to any user required format in the source code version if the user is familiar with the "Modify Report" function in Dbase.

6. Data can be transferred to other programs via the report writer function in Dbase only. Program language is Dbase III and Dbman.(Dbman includes "greased lightning").

7. Data access is speedy. Large data bases as well as wildcard (Editor: a broad category search) searches are fairly instant. Number crunching is fast with re-indexing and deleting invoices taking the longest time (average of about 3 minutes with 8,000 items in inventory).

8. Reports can be customized only to certain extent within
Multi-Manager. I found that when using "Report Writer" in Dhrman that I could completely customize my reports to my choosing. Tons of invoices and mailing invoices can be customized to your liking as well. Any Epson compatible printer can be used.

9. The current version of the program is very "BUG FREE". However, if a bug does come up, the program automatically records your exact steps that led to the problem in a special file and asks you to call in for help. This makes it easy to communicate any problems you have since the information the programmers needed is automatically placed in a file for them.

10. A 24 hour BBS is available and updates to the program are posted upon user request. There is a nominal charge for version up-dates, however there is no charge for updates to bug fixes.

In summary, Multi-Manager seems to be a program that offers an incredible amount of features for a relatively small cost. With a minimum amount of computer aptitude you can get the program up and running for your store. Further expertise may be required to customize the system to your specific needs and come away a winner but don’t let this scare you away. You may have to put a little more into Multi-Manager but you will get allot back for your efforts.

Acknowledgments

The Committee would like to thank each software publisher who submitted their product for examination.

Thank You's go to co-chairmen Robert Rosenblatt and Thom Underwood as well as to the committee members: Jeks Cabaniss, Young McQueen, Dana Richardson, Leo Schmied, Nancy Stacy, and Charles Zawacki.

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The Valuation of Old Mine and Old European Cut Diamonds:

Diamonds: Sharpening your skills at GIA, Diamond Grading, Buying and Selling more Effectively.*

Presented by:
David S. Atlas, GG, ASA.
Master Gemologist
Appraiser

In gauging the varied interests of the audience today, I gave some thought to the factors that make one give up their Sunday off and come to hear today's topic. You are the kind of people who want to keep learning throughout your lives, the kind who keep an eye on fashion, and those who have an interest in the combination of aesthetic and intrinsic values when it comes to jewelry.

For over two thousand years precious metals have been used in jewelry. The main scientific approach for most of this long time has related to metals. Alloying for durability, maleability, and color was of greatest interest. It is relatively recent that a grading science for gems has developed. Diamond has been the subject of the most complete study and that is the main reason we are all here today.

In addition to modern and estate jewelry, I deal with diamonds. A few of these stones have GIA certificates, but the majority predate the grading science altogether. Sometimes I call some of these older stones "antique diamonds."

The nature of man is to quantify and pigeonhole information. It is logical that such an approach has been taken with diamonds. The problem arises when information is in the markets which does not fit into existing spaces in the information structure.

I will go over some of the commonly known body of knowledge that seems to be generally misunderstood later, but first let's cover the diamonds which don't fit the modern cut mold. They do not fit well in our pigeonhole framework. Old Mine and Old European cut diamonds must be discussed.

Old Mine cuts are the typical type of diamonds from the Georgian and Victorian periods (the nineteenth century). They are cushion shaped in general since the technology for making them circular or fancy shaped was not readily available. Old European cuts are round in outline and occasionally fancy cuts are found as well. Both types of old cut diamonds retain more weight from the rough than do modern cut stones since less was known about maximizing light reflections and refraction when they were produced.
Inside an old cut diamond is a smaller modern cut diamond which can be readily produced and pigeonholed. However, making value judgments and economic decisions is just not that simple.

Why not? Old cut diamonds look different than modern cut diamonds and, more importantly, old cut diamonds display the light effect produced by their cutting style in a way that looks different than modern stones. In other words, the light from a modern cut diamond looks like long shafts or swords. Light from old cuts have more blocks and short triangle shaped effects. Old items of jewelry do not look right with modern cut diamonds when used as replacement stones.

Another reason (from an economic standpoint) that old cuts do not always fit our convenient system is that they do weigh more than modern cuts. Customers who want a stone of a particular weight above all else, may opt for an older cut they can afford and which gives them what they want (the extra weight).

For years we have been taught that the value of an older cut diamond is the value of the modern cut diamond trapped inside, less recut costs and expected weight losses. This is only somewhat true, but not completely so. It would be more accurate to say that an old cut diamond is never worth less than its recut value, and that it may be worth substantially more, depending on market demand.

Some months ago I was commissioned to sell a large (16+ carat) Old Mine cut diamond for a charitable institution. The stone has a GIA certificate for I-VS2. It had been well shopped before I took possession of it and was known to have a liquidation value of about only $8,000. My job was to obtain more and still get immediate payment. As soon as I picked up the stone, I went to the offices of an important international trader in jewelry who, I thought, might need this kind of stone. He was very interested. The diamond brought a price closer to $30,000 immediately. Why? This diamond fit a layout of other diamonds being collected to reset an important necklace. Also, this price is what the real market dictates for this type of diamond, regardless of what modern cut diamond dealers and cutters figure, using their field of knowledge.

Another thing to keep in mind is how to handle the appraisal for insurance of old cut diamonds. Values based on recut value can be valid, and there may be a rare occasion where the value might have to be based on recutting a larger modern cut to an older cut's shape and size. This should be a very rare instance. I recently appraised an old cut heart-shaped diamond that might be of interest. If the existing 2½ carat stone were recut to a modern stone, it would weigh about 1.80 carats. However, the ring mounting was very fine and beautiful. If the stone was lost or badly damaged, it would be very difficult to find an old cut replacement even if time was not a factor, and so I valued the heart as a 2.30 modern cut with the same width and length, but cut to modern standards. This is not standard practice, but I believe it is important to see the various avenues open to us as valuers and experts.

Just as the large Old Mine cut and the old cut heart shape do not fit the system, there are many other stones that also do not fit. This, mostly because the system does not address cutting considerations in a full way. If
you remember when we watched Star Trek, they played a three dimensional chess game. Think of the myriad combinations possible if we address not only the present parameters of weight, shape, color, clarity and make, then add on the parameters that more clearly define Old Miners and old European cuts in all their various forms. The Rapoport sheets would be a weekly book rather than a few pages. I think we could not begin to comprehend that material and it would require a large computer to gather the information. Remember we work with a system that has many large grey areas in it now. All price guides have gaps where one size diamond goes into the next larger or smaller size. Cutting is only generalized in the reporting of prices now and it would be much more difficult if cutting considerations were more deeply analyzed.

I have partially addressed cutting considerations of diamonds by utilizing the cut classes 1, 2, 3 and 4, which the GIA has defined in their diamond course, and then further breaking them down into A and B categories to make a total of 8 pigeonholes. Cut class 1 has the stones cut very close to the Tolkowsky proportions and sold only by a few domestic firms. Kaplan, Kiger and Kepple are those that come to mind. These stones are a most beautiful though costly product since the maximum of light is returned to the eye at the expense of additional weight loss from the rough. Cut class 2 diamonds are those typically traded in the international arena where return from the rough is more balanced with return of light to the eye. Rapaport's prices have to do mostly with cut class 2 diamonds. When we get to cut class 3, we are arriving at the U.S. diamond market in terms of commercially available goods for large users. Most jewelers will get class 3 diamonds from their suppliers unless they are very fussy about cutting. We live in a price sensitive environment where quality, when it comes to cutting, is of lesser importance.

I do not say the lack of quality in cutting is the fault of any one factor. It is certainly a combination of things. There is no reason to blame anyone, but we should understand the market we live in. What is most important is that cut class 2(A) diamonds look virtually the same as cut class 2 diamonds. They should cost somewhat less, however. Cut class 3(B) diamonds give up something meaningful in their appearance. They should be quite a bit less than cut class 2, and less than 3(A) stones as well. This is a very important break point in the system of clarity grading that we have to work with today. To complete the cut class system is cut class 4. Stones of this poor make are not all that common since market demand for them would be very weak. They would look poor and would not refract light well. They would be fragile possibly, if cut extremely thin.

I know many of you came here today to hear about old cut diamonds. DeBeers has been very successful in keeping the value of their new production above the value of the existing supply in the market. Today this is changing. It struck me as unusual that rare, antique, or near antique diamonds were always considered to be less valuable than modern stones. As I have explained, this may not now be the case. The prices are rising on old cuts as the supply diminishes.

A very important element is that when old cuts are properly set in fine old jewelry, they are worth more than when they are unset. There is a thin supply of fine estate jewelry and it is a market force not addressed by any diamond grading and pricing system we might today cover.
The basic price guidance I am able to give you is for unset stones and for diamonds set in non-collectible jewelry. The Art-Deco and Edwardian items that command high prices at major auctions today cannot be cost analyzed based on a nuts and bolts approach to value any more than a fine painter’s work can be valued by a cost analysis of his paints, canvas, frame and labor. Please do not use my price information in a way that will bring you a problem. You must consider all the factors before determining if you have enough facts to make an evaluation.

If we could only pigeonhole all the parameters of modern and old cut diamonds and then add in the factors concerning collectible periods of jewelry, we would really have something. I doubt we could handle all the guidance effectively.

When it comes to the collectible markets I will give you just a bit of insight. Many items of fine platinum construction set with Old European cuts trade between $650 to nearly $2,000 per carat for mostly smaller diamonds. No one adds on the value of the mountings. Get the auction catalogs and realized price lists after the sale if you want to know more. Personally, I’m glad we have some grey areas of pricing left to us. We would be mistaken to remove the romance from jewelry.

Some pricing guidance follows on old cut diamonds. I supply some prices to Diamond Market Monitor in Pittsburgh, PA. on smaller old cuts. I would recommend this publication highly as it covers many more areas of information than some other price guides. It is also organized for a user who is not just a New York City diamond dealer with direct access to the markets. The other price guidance I have supplied to you is for .75, 1.00 and 2.00 Old European cuts. Believe me, there are many grey areas of information on this sheet. It is for informational purposes and not for quoting on your appraisal documents. It is, however, also based on my personal market experience.

Martin Rapoport, who is my co-speaker today, will tell you how to use his price sheets with increased accuracy. This should be welcome information to you since no price guidance is self-explanatory. Diamonds are very scientifically graded today, but there are plenty of half-trained, backyard scientists using the available information inefficiently or incorrectly. This is costing the jewelry business money as well as loss of the public’s confidence.

An example from the handout on large old cuts is as follows:

A 1 ct J/K OEC would be about $1,800 p/c in an SI clarity. In an Old Mine cut, the price would be about $2,350, and in a modern cut, about $3,000 p/c.

I must stress we are never in a stagnant market. Change is all around us. Many large and small old cuts are worth just as much or more than equivalent modern cuts. This depends on market demands that are impossible to quantify and on the unique character of some older cut stones. To obtain old cut diamonds one cannot usually deal with a regular diamond source. Old cuts go through other channels where the philosophy is not restricted to: 'buy rough, cut it, sell it, collect money, and buy more rough'. It takes an international dealer, or a more antiques-oriented dealer to work with you on these
unusual requests for old cut stones. I have found it a great avenue for creating new business relationships.

Making intrinsic valuation decisions is the starting point, as it has always been.

When it comes to estimating recut weight of diamond, nothing is better than having direct experience and/or a good diamond cutter as your consultant. I have a rule of tens that may be of general help to you. Deduct 10% for each of the following and figure a total of 50% weight loss if all areas are touched upon. (1) girdling, (2) Pavilion/ceulet, (3) Crown/table, (4) Pavilion depth, (5) Crown/height, (6) Shape surgery.

Most Old European cuts can be well handled with steps 1 or 1 and 2. Generally a weight loss of 15% is common. Old Miners on the other hand, can lose an average of 35% in formal recutting. Many can lose 50%, some even more. Don't guess when your reputation is at risk. Don't guess when your client's trust and money are at risk either. This is strictly to help you to learn how to figure out these problems. Before cutting you have to research the market demand for the old cuts as they exist.

When recutting, you have to consider your goals. Cutting old diamonds to cut class 1 and 2 diamonds is not always the best situation. Cut class 3(A) is probably going to give you the most saleable stone in the average and below average qualities. These are the stones most stores now are obliged to offer their customers due to price and supply constraints. Making a recut diamond into a type 1 or 2 stone probably is best for high quality stones and guild type retail jewelry stores. You have to be the best judge of what is appropriate for you. Don't view this situation with distaste or annoyance. These things can also change. When jewelers really inform themselves and their customers about the merits of well cut diamonds, market demands may indeed shift.

My firm does diamond grading for many stores and dealers. We have our 8 cutting ranges listed on the form in a prominent position with color and clarity. When these dealers look at stones that may be submitted for grading, you can be certain that cutting considerations are important in a way they were not before.

The price guidance I have given you is for stones with good symmetry and alignment. Old Miners are cushion without being rectangular or very square with right angle corners.

What can we say about grading mounted diamonds? When it comes to color grading it is very common for a yellow shank to make a G color stone look I color, or for a platinum ring to make a K color stone look I color. It is dangerous to gamble on the grades of set stones. To add to the difficulty in clarity grading of mounted diamonds is the fact that the GIA grades some diamonds over 1 carat as SI although they have eye visible inclusions. This is a subjective situation as most clarity grading is, but a major confusion exists in the expert diamond market. This is something you need to be made aware of. Note that every Rapaport Sheet carries the statement that SI stones are eye clean. This means that eye imperfect SI stones, which are common, are not priced on the Rapaport Sheets. I know this, too, is confusing. You will find that diamond dealers will send you eye imperfect SI goods at apparent bargain prices. Maybe the prices are not so cheap after all. I hope everyone here today keeps this important grading problem in mind when they buy, sell and appraise.
What else can we discuss when it comes to grading set stones. If you tilt or peer into the stone at an angle through the table, you can sometimes see what might be under an opposing prong tip. Color grading of fancy cut diamonds today has as much to do with face-up considerations as through the girdle color grading. Face-up color limits how high a grade will be.

Another factor is the daylight appearance or effect of fluorescence. You've all seen a strongly fluorescent diamond that was cloudy with the fluorescent effect. Many, however, are not visibly clouded by fluorescence. If a stone should fluoresce bluish under U.V. light in a way that did not interfere with transparency, there is a chance that a stone might appear to be a better color grade than it actually is. This would be most typical of a G through J color stone. I grade daylight visibility of fluorescence as none, observable (by an expert) as noticeable (visible readily by an expert), prominent (visible by untrained eyes). Only when a diamond has "observable" daylight fluorescent effects does there exist the possibility of enhancement. The possibility of deterrence is far greater due to fluorescent effects. A copy of my innovative DIAMOND REPORT CARD is included for your examination so that you can see how I have treated fluorescence and how my one grade reporting system works.

The sharper your skills within the diamond grading system, the better buyer you will be. Honing your skills on the many levels that exist outside the standard system will only serve to further improve your abilities. Your customers will certainly appreciate it.

* From the text of a speech presented 9-17-89 in San Francisco, CA for the AGA

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<td>925</td>
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Old European cut diamond per carat prices, revised 9/89
These are near memorandum prices, but prices vary widely due to supply and the whim of the sellers. Prices are hypothetical in many cases since few stones trade at the high or low end of the qualities listed. Old mine cuts average 75 to 80 percent of these prices for well made stones, but can range from 50 to 95% under market conditions as they exist today. Prices supplied by D. Atlas & Co., Inc.
How does your diamond compare with other diamonds on the market in terms of color, cutting, and clarity? What is your diamond's suitability for use in jewelry? Inside this report card is our unique single grade diamond rating system, explained in both G.I.A. (Seminological Institute of America) terms and layman's language, that applies to the diamond we have examined for this report.

D. Atlas & Co., Inc. has assigned an arbitrary point value to each G.I.A. grade. This point value will be used in arriving at the final overall quality grade found at the end of this report. The grading system we have devised is based on the following:

**Color** = 4/8 of the total grade 
**Cutting** = 3/8 of the total grade 
**Clarity** = 1/8 of the total grade

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<thead>
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<th>GIA Points</th>
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<td>0.9</td>
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<td>Y</td>
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<td>Beyond Z</td>
<td>4.2 to 5.9</td>
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**Cutting**

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<td>CROWN ANGLE</td>
<td>34-35°</td>
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<td>GIRDLE DEPTH</td>
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<td>PAVILION DEPTH</td>
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<td>V.G.-EXC.</td>
<td>EXC.</td>
<td>GOOD</td>
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**Old European Full Cuts (58 Facets)**

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<th>Color</th>
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<th>0.01-0.25 ct</th>
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<th>0.51-1.00 ct</th>
<th>1.01-2.00 ct</th>
<th>2.01-3.00 ct</th>
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<tbody>
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<td>G</td>
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<td>410</td>
<td>560</td>
<td>650</td>
<td>735</td>
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<td>J</td>
<td>VS2-GBS</td>
<td>355</td>
<td>490</td>
<td>570</td>
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<td>780</td>
<td>905</td>
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<tr>
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<td>VS2-GBS</td>
<td>270</td>
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</tr>
<tr>
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<tr>
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**Old Mine Cut**

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<td>110</td>
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**THE STONE**

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<th>Measurements</th>
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<tbody>
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</tbody>
</table>

**Fluorescence**

- O (none) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Daylight Effect of Fluorescence**

- Faintly observable | 30 | 22 | 15 | 10 | 5 | 2 | 1 |
- Noticeable | 20 | 15 | 10 | 5 | 2 | 1 | 0 |
- Prominent | 10 | 7 | 5 | 3 | 2 | 1 | 0 |

**Other Color** enhancement | 25 | 20 | 15 | 10 | 5 | 2 | 1 |

**Examinant While**

- Yes | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- No | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**THE GRADE**

A point average of 5 or greater is an A grade (excellent)
A point average of 4 or greater is a B grade (above average)
A point average of 3 or greater is a C grade (average)
A point average of 2 or greater is a D grade (passing)
A point average of 1 or greater is an E grade (poor)
A point average below 1 is an F grade

**NO VALUATION GIVEN ON THIS FORM**

While D. Atlas & Co., Inc. makes every effort to use the G.I.A. system with accuracy, we make no claim that our grade will be the exact grade the G.I.A. might issue were they to perform a grading examination on the stone we have analyzed here for you.

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ACCREDITED GEMOLOGISTS ASSOCIATION
"NUKED" BLUE TOPAZ: HOW SAFE IS SAFE?

By: Jane Everhart
Reprinted with permission from: Jane Everhart
Rapaport Diamond Report
September 8, 1989

"Only relatively recently, after years of reducing "acceptable levels" of exposure, have the authorities publicly admitted that there is no such thing as a "safe" dose of radiation."

Catherine Canfield, author
"Multiple Exposures"
Harper & Row, New York, 1989

Retail jewelers all over the country have been asking us, "Is it safe to wear gemstones that have been irradiated in a nuclear reactor?" Even more importantly, they want to know, "Is it safe to sell these gemstones?"

Our answer is, as it always has been, "No one really knows at present. But results of long-term studies are gradually coming in, and the news is not good."

That's not a very reassuring answer, but we're not in the reassurance business. We're in the business of trying to get at the truth.

The truth about irradiated gems has become even more important to the industry these days as word has hit that neutron-irradiated gemstones are coming into Hong Kong from mainland China. According to Jewelry News Asia, a respected jewelry industry publication based in Hong Kong, gemologists and dealers "are concerned that the (Chinese) laboratories may not follow the necessary safety precautions to ensure topaz has no residual radioactivity before it is sold."

One Hong Kong dealer, Muler Gems Ltd., tested a piece of the Chinese irradiated topaz and reported that "the radiation level was about double the level accepted internationally. We would not even consider selling such topaz."

The question that arose to many reading this statement was - are other gem dealers in Hong Kong going to be that fastidious? Or are "hot" gems going to be mixed in with others by a dealer less scrupulous than this one? Remember, radioactivity cannot be seen, heard, felt or smelled. A highly radioactive gemstone looks exactly the same as a safe one.

Even more perplexing is the problem of gems brought in haphazardly from Brazil and other countries. Sources close to the situation in Brazil have told us that there are few regulations on nuclear reactors in Brazil, and even those are erratically enforced. It is possible to pay treaters in Brazil to process material "after hours", said our source; many will do so, for the extra money.

True, the U.S. Nuclear Regulatory Commission (NRC) has an agreement with the Brazilian government that radioactive gems may not be exported to the U.S. without proper testing, but even the NRC seemed surprised to find out that many irradiated gems are slipping through the cracks and getting into the U.S. illegally.

For example, at the 1988 conference of the Internationally Society of Appraisers (ISA) in New Orleans, during a panel discussion on irradiated gems, a jeweler in the audience told the panel and audience that she regularly goes to Brazil several times a year to buy gems for 11 stores in the Texas-Oklahoma-Louisiana (TOLA) area. "I buy them on the street," she told the group, "from barefoot kids who run after you offering handfuls of gems for sale."

She has never had them tested for radioactivity levels, she said. On the panel, as surprised as anyone else, was John Hickey, chief of operations at the NRC in Washington, D.C.

Customs Not Checking Imported Gems

But most jewelers aren't concerned about these contraband gems; they consider the likelihood of getting them in their stores very small indeed - a false security. The truth is, the NRC is not, at present, testing gems that come through customs. Here is a word-for-word transcript of a telephone discussion we recently had with Michaele LeMastra, Chief, Commercial Section of the NRC in Washington, D.C.:

RDR: Are irradiated gems being checked for safety as they come in through Customs?
NRC: No.
RDR: Do you think they (radioactive gems) are coming in?
NRC: Probably.

"Beginning January 1, we intend to stop all illegal imports from abroad - or attempt to," LaMastra told us. "There's really no way we can stop anybody from bringing them in. It happens..."
all the time. A person can buy a watch with tritium on it in Europe and bring it into this country, but it's illegal. Tritium is radioactive - it's what makes some watches glow in the dark - and we require a license to bring these items in.”

Nevertheless, they are getting into the country by illegal means, NRC admits, and it’s become a worrisome thing even for the NRC.

You've Got to Tell Customers

But suppose you've purchased your blue topaz from a reputable, NRC-licensed U.S. dealer and he's even written on his invoice, as the NRC recommends, "This gemstone has been treated in a nuclear reactor and has passed safety standards imposed by the Nuclear Regulatory Commission." Can you then sell the gemstones with complete confidence?

Not necessarily. You must reveal to your customer the same information about the stone that was disclosed to you by the gem dealer, says the NRC. However, if you don't disclose this information, the NRC, it's the first to admit, has no way of checking up on you.

Do many jewelers disclose to their customers that their just-purchased gemstone has been "nuked" and may retain a low level of radioactivity? We doubt it. We have heard of a few who will hand their customers the disclosure cards provided by American Gem Trade Association, which tell the consumer, usually after he has made the purchase, that the gem may have been irradiated.

But according to purists like Cos Altobell, the North Hollywood, Calif. jeweler who is very involved in the American Gem Society's efforts on disclosure, additional disclosure should be made. The card can be lost, or the customer can say that he never got it. To protect yourself in a possible lawsuit, you have to put the information in writing, perhaps on the Invoice, and have the customer sign it to acknowledge that he has been told. The reason? In the event of a lawsuit, you'll have proof that the customer was informed and knew the risks involved.

The Jeweler as Legal Target

According to an article in the New York Times (May 18, 1986), the effects of radiation on man are known only very approximately from studies of the Hiroshima and Nagasaki casualties. Estimates by the Environmental Protection Agency and the NRC place the fatal dose of radiation at 600 rem. Roughly 450 rem will kill half the exposed people within 60 days. The maximum radiation dose recommended for the public by various authorities in the U.S. is no more than 500 millirems per year. (A rem is a measurement of the degree of damage that radiation may inflict on a living organism; a millirem is one one-thousandth of a rem).

NRC's operations chief, John Hickey, said in an interview last year, "We don't expect you'd get anything near (the 500 millirem maximum dosage) that from this type of jewelry (i.e., those containing irradiated gems) if it was cooled down properly." Let's assume, for the moment, that the blue topaz you have purchased has been cooled down properly and retains only the "acceptable" limit of 15 becquerels (a becquerel is a measurement of radioactivity in the stone itself) of radioactivity. Is it then safe for a human being to wear around the neck?

In order to judge this, you'd have to know what kinds of background radioactivity your customer is exposed to. Radioactivity is cumulative. Does she sit in the sun a lot? Does she fly more than six times a year? Does she live in Denver? If so, she may already be getting well over the recommended limit of 500 millirems a year from natural background radioactivity alone. (The ultraviolet component of sunlight is an even more dangerous carcinogen that anyone had realized; cosmic rays deliver a dose of 2.5 millirems to anyone flying from New York to Los Angeles; and she'd get twice the radiation from cosmic rays in a high-altitude place, like Denver, than in a low-altitude area like the Southeast U.S.).

But she can't very well sue the sun, Denver or the airlines. One of the dangers implicit in the irradiated-gemstone problem is that should your customer develop cancer, you, the jeweler who sold her an irradiated gem, are the most vulnerable in terms of being a litigation-target.

Are "Safe" Radioactivity Levels Really Safe?

But even taking background radiation into account, there is some discrepancy, even among NRC's experts themselves, on what constitutes a dangerous dose of radiation. At the 1988 conference of the International Society of Appraisers in New Orleans, NRC's John Hickey was asked point blank by a member of the audience, "How does a dose of radiation you'd get from the jewelry compare to what you'd get from, say, the reactor accident at
Three Mile Island?" Hickey replied, "You'd get more from the jewelry because the radiation at Three-Mile Island was diffused into the air, whereas you wear the jewelry right on the skin."

Other experts also question the "safe" dosage. In a letter to the Washington Post on December 15, 1987, Dr. Gloria White McNally of Washington wrote:

"... After the Nagasaki/Hiroshima bombings, scientists followed victims of radiation exposure, accumulating a large body of evidence about the damaging effects of very low doses. For example, it has been determined that in Hiroshima the incidence of chronic myeloid leukemia increased even in those exposed to 20 rads (the rem and the rad are similar), or 0.02 rem. The incidence of female breast cancer also increased among women ages 10 to 19 as a result of exposure to the atomic bombings when exposed to at least 100 rads (0.1 rem).

"Having studied this problem for many years, I am constantly impressed by the tendency to downgrade damage from low-level exposure, and a sort on uncalled-for optimism about what constitutes "safe" radiation exposure. As the National Academy of Science states, there is no safe level of radiation exposure, since radiation causes damage to cells even at low dosage and is cumulative over the years." (emphasis ours)

And in case you want to discount the threat from natural radiation sources alone, another expert, biostatistician Dorothy Wellington, author of "Cancer Mortality: Environmental and Ethnic Factors," wrote to the New York Times on December 5, 1987:

"Radiation from natural sources varies across the United States, annual exposure levels in the mountain states being twice those in the Southeast. There was, after adjusting for major carcinogenic factors, a statistically significant relationship (meaning increased risk) for white males and white females between background radiation and age-adjusted mortality rates of thyroid and gall bladder cancer."

Add to this the cumulative radiation from a close-to-the-skin source, like jewelry, and your customer may well be over the 500 millirem-per-year limit.

Wrote science writer Malcolm W. Browne in the New York Times on May 10, 1986:

"The longterm effects of relatively small doses of radiation include increased susceptibility to cancer, but these effects are hard to quantify and remain the subject of scientific controversy. According to one school of thought, there may be a threshold of ionizing radiation below which tissues are able to repair themselves, leaving a person essentially unscathed. But an opposing view is that any amount of ionizing radiation, however small, inevitably causes damage of the kind that can lead to genetic disruptions and cancer." (Emphasis ours)

Who can You Believe?

Who can the jeweler believe? Gem dealers who handle irradiated gemstones are most at risk, yet they are often the strongest proponents of the "irradiated gems are safe" viewpoint. This is perhaps understandable, since they have a vested interest in the material. But handling or selling irradiated gems does not make these person experts in health physics, and reassurances of safety by sellers of irradiated gems should be viewed with skepticism.

But even medical people are often resistant to changes in thinking. For example, the realization that an unborn fetus exposed to even a single abdominal x-ray has an increased chance of developing leukemia and, it has recently been discovered, of being mentally retarded, has led to attempts to ban all non-emergency abdominal x-rays of women of childbearing age. "The medical profession has resisted that suggestion," writes Catherine Caufield, author of Multiple Exposures, a monthly published study of the problems caused by radioactivity. This led the U.S. government to launch a poster campaign a few years ago, urging pregnant women to remind their doctors not to x-ray them. But as late as 1980, 266,000 pregnant women in the U.S. were x-rayed merely to check the size of the birth canal, notes Caufield.

The jewelry industry has evidently not learned its lesson from the famous case of the New Jersey watch dial painters. In the 1920's, some 250 young women were hired by the U.S. Radium Corp. in West Orange to paint the dials of watches with radium so they would glow in the dark. In 1924, researchers found that it wasn't only the watches that glowed; when examined in a dark room, the hair, faces, hands, arms, necks, even the underclothes of the dial painters glowed. When the young women exhaled onto a zinc sulfide screen, it glowed. Tests of 22 employees failed to find a single one whose blood count was normal," writes
Caufield. Most of the young women subsequently died from anemia or bone cancer, but not before suing U.S. Radium Corp.

Six months after the cases were settled out of court - each woman got $10,000 and a pension of $600 a year, plus medical expenses, a generous sum in those days - the owner of U.S. Radium, Dr. Sabin Bon Sychocky, died himself. His bone marrow, destroyed by radiation, had stopped producing blood cells. The radium inside him had also eaten away at his hands, his mouth, and his jaw. In 1925, while helping test the dial painters, Sochucky discovered that his own breath registered more radioactivity than that of any of the dial painters. "He knew then what his fate was," writes Caufield. "He died a horrible death but he gave all that was in him to help and comfort others suffering from this disease."

Yet, Dr. Sochacky, who closely guarded the secret of his luminescent paint, had for years, before he realized that he, too, was ill, insisted that the radium paint was safe and that the young dial painters who eventually died from cancer of the jaw were actually victims of "poor dental hygiene."

The story of the sad fate of the watch-dial painters has gone down in the annals of workplace safety and serves as a reminder - or should - for all those who today take a cavalier attitude toward the use of irradiation in the jewelry business.

What You Can Do

What can the jeweler do to protect himself from potential litigation? We advise that the jeweler buy only from an NRC-licensed dealer, get disclosure information on the invoice from the supplier, and inform customers in writing that the gemstones are irradiated in a nuclear reactor and may retain a low level of radioactivity.

We also recommend that the jeweler who does a lot of business in irradiated stones obtain a Gelger counter and personally check each gemstone that comes into his store (tourmalines, sapphires, and colored diamonds should be checked, as well as blue topaz). If he discovers any that register radioactivity (remember, only high levels of radioactivity will be picked up by a hand held Gelger counter), he should notify the NRC.

Jewelers should not depend on the NRC, however, to make sure that the stones coming into his store are safe. The NRC isn't at present, capable of keeping out "hot" gems that are smuggled into the country. It simply does not have the manpower nor the budget.

However, do keep in mind that the NRC reacts to public opinion. It is basically a servant of the people and responds to what it perceives as a mandate from the people. At present, the NRC is convinced that jewelers want and need irradiated gems in order to conduct their businesses profitably. In licensing reactors to irradiate gems, and allowing irradiated gems to be sold at retail, the NRC has acquiesced to industry pressure. If you feel differently about the issue, you can write to the U.S. Regulatory Commission, Division of Industrial and Medical Nuclear Safety, mall Stop 6-H-3, Washington, D.C.

Privately, many NRC people feel that the irradiation of gems in a nuclear reactor is "frivolous use" of a powerful tool. Much of the information contained in this piece was supplied to us on the "Q.T." by NRC personnel, apparently in the hope that we would educate the industry.

So far, consumer groups are not aware of the nuclear-reactor-treated gemstone issue, but it is only a matter of time before it comes to their attention, and when it does, it has the potential of creating a public loss of confidence in all retail jewelers. It is important that the industry develops a solid and consistent disclosure policy, and promotes and enforces the rigid NRC guidelines for the treatment and sale of nuclear-reactor treated gems.
JEWELERS' 10 BIGGEST MARKETING MISTAKES

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1. THINKING YOU KNOW YOUR MARKET. Times change. Re-acquaint yourself with who's out there on a consistent basis.

2. GETTING MIRED IN DAY-TO-DAY OPERATIONS. "Some people are so busy making a living, they don't have time to make money." This headline from sales motivational pitchmen has a ring of truth. Learn to delegate. Take time to assess where you're going, and where you want to go.

3. RESTING ON YOUR LAURELS. Many old-time jewelers are local institutions--practically "the mayor," when it comes to community recognition. But markets change. Recognition is important, but make sure it is business recognition, and that you are recognized in the way you want your business to be seen and regarded.

4. NEGLECTING TO INSPIRE LOYALTY. "The mayor" in the example above, is just the kind of jeweler who may soon decry the customer's lack of loyalty. Loyalty must be earned and re-earned. Get close to the customer. Stay close to the customer.

5. LETTING PROSPECTS "WALK" BEFORE GETTING THEM ON THE LIST. Most business comes from people who know you. Get names and qualify them.

6. LOSING ENTHUSIASM. When management is not inspired and excited, employees aren't either. If there's no enthusiasm in the store, no customers will be enthused about shopping there.

7. GROWING BY ADDING INVENTORY. No matter how extensive your selection, you can't please everyone. Reduce inventories and turn goods faster. That's possible, once you've determined who your customer is and who you are.

8. FAILING TO PROMOTE. You don't have to be a visibly promotionally oriented store to promote. And price isn't the only kind of promotion that works.

9. FAILING TO CULTIVATE NEW BUSINESS. Mine your existing business for more dollars, and search for new customer bases.

10. FAILING TO MEASURE SUCCESS AND FINE-TUNE TACTICS. Change is constant. Therefore, measurement of the success and failure of your marketing strategies is an ongoing prices that requires fine-tuning every day.

Remember: Analyze your marketing strategies every business day.

TOOLS FOR "SMART MARKETING"

FIGURE 1: The store sign-up card is at the heart of developing, maintaining and utilizing your customer base to expand sales volume. Note that it contains combined and separate information for people in the same household so the retailer can "target" to individuals and to households. The lower right corner, "For Store Use Only", codes customers according to buying power: H--high-end buyer or prospect; R--regular, average customer and M--minor buyer, the group targeted for conversion to R or H.

Circle one: Ms. — Mrs. — Mr. & Mrs. — Today's date

Last Name: ____________________________ Your Name: ____________________________

Spouse's Name: ____________________________ Phone #: ____________________________

Address: ____________________________ Apt. #: ____________________________

City: ___________ State: ___________ Zip: ____________________________

Your Sweetheart's Name: ____________________________ Phone #: ____________________________

Address: ____________________________ Apt. #: ____________________________

City: ___________ State: ___________ Zip: ____________________________

Her Birthday: ___________ His Birthday: ___________ Anniversary: ___________

CMS 1989 For store use only: H R M

Figure 1

FIGURE 2: Sample printout of a typical master list contains "duplicate" addresses for couples, along with their buyer (H, R and M) code, birthday, anniversary and telephone. Duplicate addresses can be eliminated for household mailings.
to H prospects and mailed one per household.

Figure 2

FIGURE 3: Duplicates are eliminated on this zip code analysis of a typical master customer list. The high proportion of shoppers from the "Granite City" zip code is a cue to future marketing efforts. A general mailing to all households in the Granite City code is likely to result in a better response than one to "Normal" or "Alhambra." On the other hand, if "Madison" or another code has demographics similar to "Granite City," it may also be a rich source of potential new business, once the jeweler is well known to these prospects.

<table>
<thead>
<tr>
<th>CITY</th>
<th>ZIP CODE</th>
<th>CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>63161</td>
<td>1</td>
</tr>
<tr>
<td>Alhambra</td>
<td>63001</td>
<td>1</td>
</tr>
<tr>
<td>Bethalto</td>
<td>63202</td>
<td>1</td>
</tr>
<tr>
<td>Chillicothe</td>
<td>62234</td>
<td>1</td>
</tr>
<tr>
<td>Granite City</td>
<td>62040</td>
<td>15</td>
</tr>
<tr>
<td>Madison</td>
<td>62259</td>
<td>2</td>
</tr>
<tr>
<td>East Saint Louis</td>
<td>62021</td>
<td>2</td>
</tr>
<tr>
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<td>2</td>
</tr>
<tr>
<td>Collinsville</td>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Saint Louis</td>
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</tr>
<tr>
<td>Saint Louis</td>
<td>63144</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 3

FIGURE 4: This sample summary of information from the master mailing list contains a wealth of information for target marketing and cuts the marketing task down to manageable size. For example, it shows birthdays and anniversaries by month--very inexpensive targets for a personal card and/or a phone call. While it lists all prospects, it identifies each by the coded buying power (H, R and M), and separates prospects individually by gender, or together, as couples. High-end exclusive promotions will get the best rate of response for the investment if they are limited