

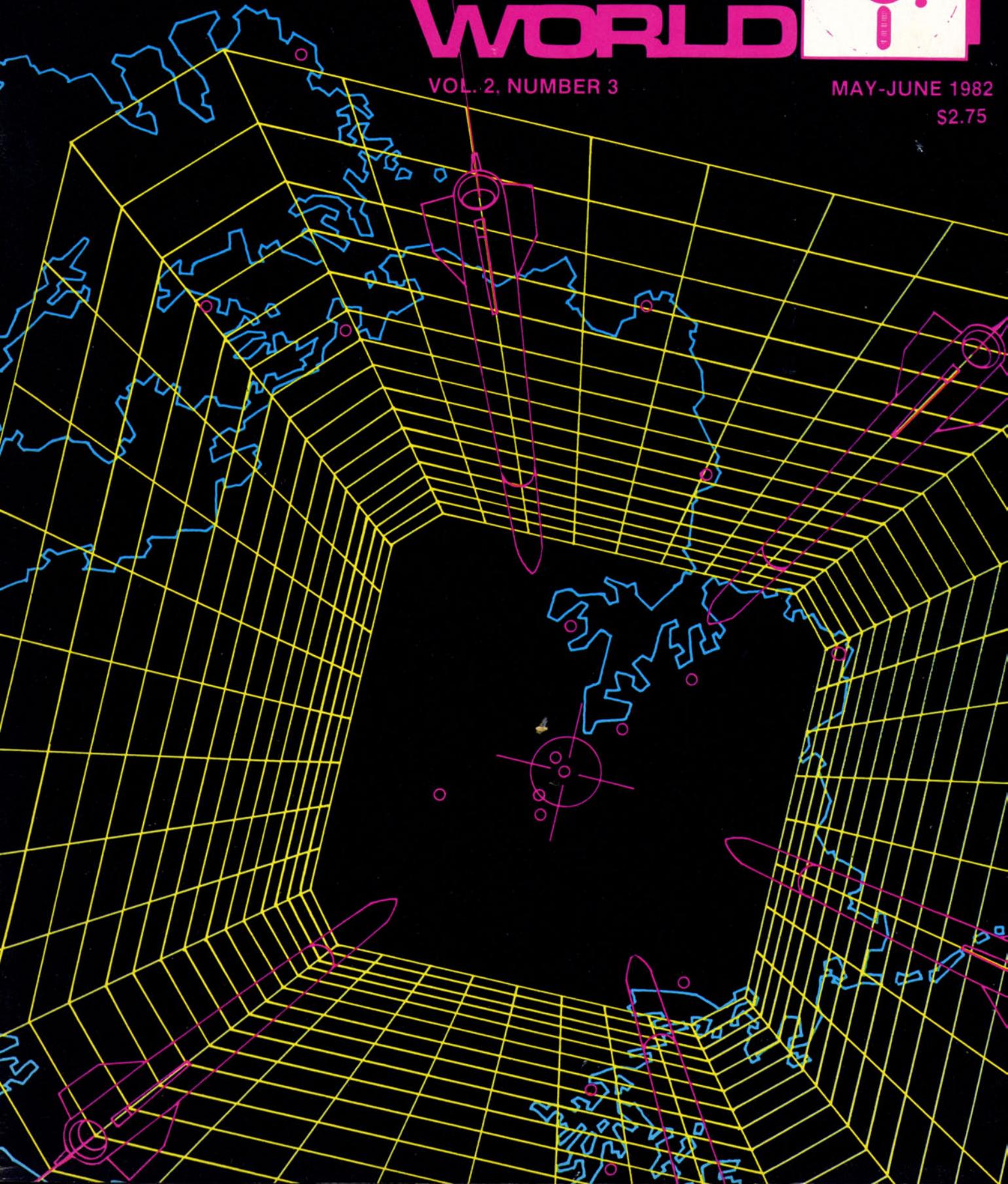
COMPUTER GAMING WORLD



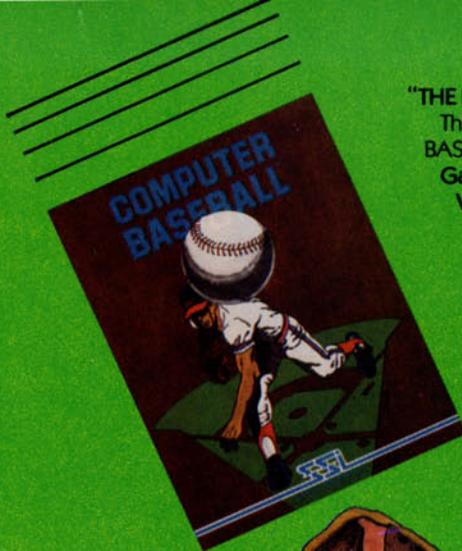
VOL. 2, NUMBER 3

MAY-JUNE 1982

\$2.75



CATCH THE BEST!



"THE BEST COMPUTER SPORTS GAME."

That's the award SSI's **COMPUTER BASEBALL™** received from **Electronic Games** magazine (a subsidiary of **Video** magazine) for 1982.

We appreciate the recognition, but frankly, we're not surprised. Especially when you consider what it took to be the best.

It's a computer strategy game* so thorough yet so easy to use you'd swear you're managing a live team.

It lets you enter extensive player statistics so you can create any team you like — from the neighborhood hackers to the great 1944 St. Louis Browns!

It gives you over 25 strategy options to choose from, options so complete you have to remember to warm up relief pitchers in the bullpen.

Its color Hi-Res graphics display has enough animation to give you a good feel for the flow of the game.

As a clincher, Teams Data Disks for 1980 and 1981 are available if you want to use real AL and NL teams of those seasons.

And the price? A steal at \$39.95. (Data disks are sold separately from SSI for \$15.00 each.)

As exciting as all this sounds, it's nothing compared to what you'll see when you get your mitts on the game at your local computer/game store. Then you'll really understand why people say **Computer Baseball** is what it is. The best.



To order directly from SSI with your VISA or MC, call toll free 800-227-1617, ext. 335 (800-772-3545, ext. 335 in California). To order by mail, send your check to Strategic Simulations Inc, 465 Fairchild Drive, Suite 108, Mountain View, CA 94043. All our games carry a 14-day money back guarantee.



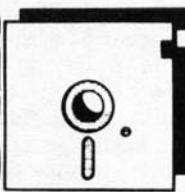
*For the 48K Apple® II with Applesoft ROM and one floppy disc drive.

Apple is a registered trademark of Apple Computer Inc.

STRATEGIC SIMULATIONS INC As part of our demanding standards of excellence, we use MAXELL floppy discs.

WE'RE LOOKING FOR A FEW GOOD DESIGNERS. We're always on the lookout for high-quality games from independent designers. If you have game programs that you'd like SSI to publish on a royalty basis, give us a call at (415) 964-1353 or write to SSI, 465 Fairchild Drive, Suite 108, Mountain View, CA 94043.

COMPUTER GAMING WORLD



VOL. 2 NO. 3

MAY - JUNE 1982

STAFF

Editor: Russell Sipe
 Asst. Editor: Kirk Robinson
 Art and Layout: Tim Finkas
 Operations: Suzanne Sipe
 Typesetting: Comarco Inc.
 Printing: Quibodeaux Printing
 Cover Art: Tim Finkas

Features

WIZARDRY: PROVING GROUNDS...	6
Review of Sir-tech's popular fantasy game	Mark Marlow
A BEGINNER'S GUIDE TO STRATEGY AND TACTICS IN EASTERN FRONT	10
	Bob Proctor
TIME ZONE: AN INTERVIEW WITH ROBERTA WILLIAMS	14
VOYAGER I: SABOTAGE OF THE ROBOT SHIP	16
Avalon Hill's new game reviewed	Dave Jones
SOME SCENES FROM THE 7TH WEST COAST COMPUTER FAIRE	20
LONG DISTANCE GAMING: GAMES VIA THE SOURCE AND COMPUSERVE	22
	Deirdre Maloy
JABBERTALKY, IN DEPTH	26
Automated Simulation's word game reviewed	Marty Halpern
GREATEST BASEBALL TEAM - RESULTS	30
OLYMPIC DECATHLON: A CLASSIC COMPUTER GAME	32
Muse's popular game analyzed	Russell Sipe
THE EAGLE HAS LANDED: A TRS-80 REVIEW	34
Adventure International's Lunar Lander game reviewed	Richard McGrath
SWASHBUCKLER: ANOTHER KIND OF PIRACY	36
A new game from DataMost	Michael Cranford

COMPUTERGAMINGWORLD is published bi-monthly by Golden Empire Publications, Inc., 1919 E. Sycamore #203 Anaheim, CA. 92805. Application to mail at Second Class Postage Rates Pending at Anaheim, CA. 92803. **POSTMASTER:** Send address changes to Computer GamingWorld, 1919 E. Sycamore #203, Anaheim, CA 92805.

COMPUTERGAMINGWORLD is available at game stores, computer stores, and through subscriptions. The subscription rate for one year (six issues) is \$11.00. Canadian subscriptions add \$4.00. Outside of United States and Canada add \$5.00. All payments must be in U.S. dollars, made by check drawn on a U.S. bank, Visa Card, Master Charge, or money order.

Article submissions are welcomed. Articles should at least be double spaced and preferably triple spaced. Leave one inch margin all around. All submissions become the property of Golden Empire Publications, Inc., rights revert to author upon publication or rejection. Submissions cannot be returned unless accompanied by a self-addressed, stamped envelope, and no responsibility for such material can be assumed by the publisher. Printed material pays 2 cents per word.

Psalm 9: 1-2

We can be contacted on The Source (TCL920)

Our phone number is (714) 776-4979

Departments

Letters	2
Hobby & Industry Notes	4
Initial Comments	4
Atari Arcade	18
Silicon Cerebrum	24
Writing for Computer Gaming World	39
Reader Input Device	40

BACK ISSUES ARE AVAILABLE

Send \$2.75 plus \$1.00 postage and handling per copy

1.1 — The Future of Computer Wargaming; Torpedo Fire; Robotwar; B-1 Nuclear Bomber; Crush, Crumble and Chomp; President Elect; Baseball Tournament; and more.

2.1 — Napoleon's Campaigns 1813 & 1815; The Swordthrust Series; Galaxy; Castle Wolfenstein; Tanktics; Baseball Tournament (Pt. 2); Operation Apocalypse; and more.

2.2 — Southern Command; So You Want to Write a Computer Game; Napoleon's Campaigns Designer's Notes; Blackjack Master; The Current State of Computer Documentation; Robotwar Tournament Winner; Tigers in the Snow; Bug Attack; David's Midnight Magic; and more.

LETTERS

FROM "CARTEL" AUTHOR

Dear Editor:

A magazine that deals exclusively with the field of computer games is an idea whose time has come! As a computer games designer (I have written *Computer Quarterback* and *Cartels & Cutthroats* for SSI) I was optimistic about the impact a publication such as yours could have on our young industry. However, after considering the Micro-Reviews in your Jan/ Feb issue, I am seriously concerned as to whether that impact will be as positive as it could be.

With an ever expanding array of competing products available each month, responsible reviews that give authors and publishers critical feedback and that provide consumers with reliable information to aid buying decisions are a major part of the role of a publication such as yours. Regretably, at least as regards the Jan/ Feb Micro-Reviews, I feel your accomplishment fell short of your promise. The review of *Cartels & Cutthroats*, of which I am co-author, was very disappointing both in itself and as regards potential comparisons with another business program reviewed at the same time.

So as not to sound "sour grapes" I will tell you that *Cartels* has been reviewed in print by educators, economists, management training consultants, and observers of the micro-computer software field (most notably David Ahl - owner and publisher of *Creative Computing*) - all of whom had high praise for the achievements of *Cartels & Cutthroats*. In addition, the information that my publisher has received in the form of "feedback/warranty cards" indicates that purchasers are equally pleased with this product. Since its introduction a year ago 99% of the people returning cards (a demographically diverse group) have stated that *Cartels* was fun to play. *Cartels* was also ranked consistently first or second in playability and realism against SSI's impressive portfolio of 20 games by consumers during that year. Thus, I feel safely sure of the quality of *Cartels & Cutthroats* even though your reviewer had doubts.

Although the overall impression of your review was positive, the reviewer wrote an awkwardly unbalanced report on the game. The basis on which a product must be judged

is against its objective and how well it is met. In several places on the packaging and in the game manual *Cartels* states its goal to be a playable game built on a foundation of a very realistic business simulation. If we look only at those sections of your review that deal with this issue such points as follow are made: "well executed economic simulation", "quite good...market simulations", "well executed and allow interaction by players", "a good introduction to micro-economics", and "an excellent program". However, the overall impression of reviewer ambivalence is conveyed by the fact that with each positive comment (dealing with an issue of major importance to the objective of the game) there is also a negative comment (concerning some superficial element of the program). The casual reader, therefore, gathers a mixed impression from sentences like: "The market simulation seems quite good although even the manual admits that beyond 40 quarters the economic simulation begins to breakdown". The two points are hardly parallel! The reason we said the simulation "may" breakdown is that we never played a game that long. In *Cartels* a short game is 8 quarters, a normal game 10 or 12 quarters, and a long game (requiring over 8 hours to play) would be 20 quarters. Why would anyone consider not being able to play a game for over 16 hours (40 quarters) as a serious flaw?

Another draw-back, at least according to the reviewer who devoted an entire paragraph to it, is the "tedious" graphics and sound effects. In our play-testing, these features were found almost universally appealing. In fact, the cute sayings and animated interlude that the reviewer considered repetitious were introduced as a result of "human engineering" that found that people had a better "feel" for the time pattern of the game if such delays were introduced. In my observation it was disruptive to people who spent a relatively large amount of time observing the results of their previous plans and developing strategies for the next turn if the computer simply returned the results instantaneously. The delay was introduced to "simulate" the fact that the player's review and planning took place at a "no-time-interval" between three long months during which plans were implemented, products were manufactured, and sales were made. Although few

players of *Cartels* are aware of this reasoning, the vast majority found that the animated interlude made the game "feel better". A reviewer could very well miss the subtlety of this element, but one not so obsessed with "delays" might have at least not wasted a whole paragraph on a point that in no way reduces the game's overall fitness as a playable, realistic business simulation.

However, though I obviously take issue with the perceptions of your reviewer concerning *Cartels & Cutthroats*, I feel the greater damage is done by the fact this demonstrates your lack of a standard policy for reviews. Product reviews can potentially help consumers choose between competing programs, but if your current review practices are continued, we are back to "buyer beware". The review of *Cartels & Cutthroats* was preceded by a similar look at a program called "Wall Street" by Donald Brown. I do not wish to "pick on" Wall Street, but a comparison of the two products and reviews is a perfect example of how the lack of a formal review policy destroys your credibility. While the reviewer of *Cartels* points out the limitations of its 15 page (12,000 word) full-size typeset manual, no mention is made of the six page (2400 word) full-size notes that accompany Wall Street. *Cartels & Cutthroats* is packaged in SSI's attractive four color box (that has become the industry standard for sophisticated software products) and includes a short rules reference card and a pad of planning sheets while Wall Street is in a simple "zip-lock" bag with a disk. *Cartels & Cutthroats* costs \$39.95 while Wall Street sells for \$29.95. I won't attempt to make distinctions in the less tangible aspects of the two products except to say that they differ significantly in realism and playability.

However, the overall impression in the *Wall Street* review was slightly negative and in the *Cartels* review it was somewhat positive. I am certain that if one reviewer wrote both reviews (instead of the two very different writers you employed) there would have been much broader distinctions drawn than appeared in the Jan/ Feb issue.

I propose that you have a panel of reviewers for each field of interest (such as business games, wargames, adventures, etc.) who would communicate frequently enough to standardize their perceptions. Thus, even if different reviewers look at dif-

ferent products the overall rating of a product would reflect some objective standard. This method has been used very effectively by *InfoWorld*. I hope you accept my suggestion in the constructive spirit in which it is offered.

Dan Bunten
Management Systems Engineering
Little Rock, AR

As Lucretius said "What is food to one, is to others poison." This is with no one more true than with computer gamers. There are many different types of computer games which appeal to many different types of gamers. We try to keep this fact in mind when we select the articles/reviews that will appear in CGW. As an individual, I find Cartels to be a better game than Wall Street. But, as an editor, I must realize that every review need not necessarily reflect my own bias. If I feel that a review has misrepresented a game in either direction, I will reject it or return it for correction. However, as you point out, the overall tone of the Cartel review was positive while the Wall Street review was somewhat negative.

Your suggestion for a panel of reviewers in various areas is a good one which I would like to implement as time goes along. As of now, we continue to look for more "quality" writers to make CGW the type of magazine that all computer gamers would like to read. -Ed.

Dear Editor,

I am glad to see a publication like Computer Gaming World at this time. The two local computer stores do not stock a large selection of computer games, and it's nice to be able to keep abreast of the latest developments in computer games.

I do have two suggestions that I would like you to try to incorporate into your magazine. First of all, it would be nice if there were a few less articles about computer wargames - not all of us are wargame fanatics. I myself would prefer more articles on fantasy & adventure games. Secondly, I would like to see a column that would provide would-be adventurers like myself hints for the various games (e.g., Wizardry, Swordthrust, Zork, Dunjonquest, and/or the Scott Adam's Adventure Series). I realize the main objective in these

games is to discover things on your own, but it can be quite frustrating until you find the correct procedure. For example, I lost three of my best Swordthrust characters trying to scale the cliff in Swordthrust #3 (Kidnapper's Cove) before I learned the alternative from a friend.

Joe Ankenbauer
Council Bluffs, IA

Dear Editor,

I am greatly enjoying CGW. However, I hope you will PLEASE avoid giving away answers to challenges, as was done in Deirdre Maloy's review of Ultima. For example, comments such as "will always be caught...in that city"; "can be found on the third floor of a dungeon"; "can be reached only by boat or air car" spoil the reader's fun of discovering these facts for him/herself. ANY clues spoil the fun.

Ken Sherwood
Reading, PA

As these two letters illustrate there is a disagreement as to the merit of including hints for adventure games. We have decided to compromise. When hints are included in an article they will be in slip code. The reader must shift each letter one position to translate the hint. In this manner we hope that those who want the clues can get them and those who do not will not read them accidentally. - Ed.

2.1 COVER

Dear Editor:

I would like to congratulate you on the quality of your new magazine, it looks like you are off to a great start. In particular, the cover of vol 2, no. 1 is fantastic. It exactly captures the status of computer gaming at the present time. Personal computers bear the same relationship to the human race as the 2001 monolith bore to the pre-humans. If you ever publish a poster series, this should be among the first.

W. B. Brogden
Port Aransas, TX

NOT ENOUGH ATARI

Dear Editor:

The cover of 2.2 should have been an Apple grove instead of a maze of hedges! There was not one article on games for the Atari. Only a handful

of the numerous new games for Atari were even mentioned. Every game (except 1 TRS-80 game) review was for the Apple.

There also seems to be a pre-occupation among your staff with wargames. Although these can be enjoyable, the arcade style games are much more exciting and hold one's interest longer than a game that may take hours or days to complete.

The graphics and sound are far superior on the Atari 800 and it's time the computer gaming world realized this fact. Software for the Atari is growing by leaps and bounds and soon will equal Apple in numbers.

I feel that your magazine must cover all the major computers so that it will be a representative publication for the great big computer gaming world and not just another orchard for Apple.

Phil Karst
Indianapolis, IN

Hurray for Atari users! The paucity of Atari reviews in CGW to this point is due to the fact that we haven't had much of a response from Atari gamers. Atari users--lets hear from you.

CGW began business with an Apple II last summer. We expressed interest in Atari articles (and TRS-80) whenever we came into contact with those users. We have just purchased an Atari 800 and hope to cover the Atari market more completely. You will note that a regular department on Atari-arcade games begins in this issue—Atari Arcade. Manufacturers of Atari computer game programs are encouraged to send review copies of their products.

We are still looking for TRS-80 reviewers. Richard McGrath can't cover the whole field no matter how much he'd like to.

**PLEASE
TAKE TIME
TO FILL OUT
READER INPUT
DEVICE
(P. 40)**

HOBBY AND INDUSTRY NEWS

Broderbund Software has released **DUELING DIGITS** and **LABYRINTH** for the Apple II computer. They have also released an Atari version of their popular **APPLE PANIC**. All three sell for \$29.95.

DALE ARCHIBALD has recently signed a contract with the Field Newspaper Syndicate to write a weekly computer software and hardware review column. You may see it in your local newspaper in the near future.

SSI will be publishing the first "monster wargame" for the computer. **GUADALCANAL CAMPAIGN** (slated for late June/early July release) will be 292 turns long in the campaign scenario. The four basic scenarios are Coral Sea, Battle of Eastern Solomons, Battle of Santa Cruz Island, and Guadalcanal. Each ship, plane and battalion of the campaign is represented. Can be played as a two-player game or against the

computer (computer plays the Japanese). Air, land, and sea battles. Wow! It will sell for \$59.95.

When SSI released **ROAD TO GETTYSBURG** they added a new twist to their games—the option of fighting the tactical battles with miniatures. They went back and added this option to **NAPOLEON'S CAMPAIGN'S 1813 & 1815**. If you have the old **NAP. CAMP. 13 & 15** disk you can return it with \$5.00 for an updated disk. Their address is 465 Fairchild Dr., Mountain View, CA. 94043.

By the time you read this magazine SSI should have the **1981 COMPUTER BASEBALL** team data disk available (including the season stat compiler). Send \$15.00 for disk.

Those that would like to have the **GBTOAT** teams (see results in this issue) on disk can drop a postcard to J.K. LEE 1519 Santa Teresa, So. Pasadena, CA 91030, for information.

Automated Simulations is sponsoring **RICOCHE T BOUNCE OFF** (a national championship tournament for their action/strategy game).

You can get information from your local computer store or write directly to Automated Simulations at P.O. Box 4247, Mountain View, CA 94040. Deadline for entries is June 30, 1982.

Automated Simulations new golf game, **FORE!**, should be available early in May.

SSI will release **SYMTRON MASTERS** in early June. SM is a futuristic robot combat game with tactical aspects and limited control over robots through the commander. It will cost \$39.95.

Avalon Hill has a long list of titles coming out in the months ahead. By the time you read this **DRAW POKER, BOMBER ATTACK, TANK ARCADE, ROADRACER/BOWLER** and **SHOOTOUT AT THE OK GALAXY** should be out. According to AH these will be aimed at the Atari 400/800 markets with selected titles on the Apple, Pet, and TRS-80 Color Computer. **COMPUTER BASEBALL STRATEGY** should be RD, G.F.S. **SORCERESS, COMPUTER FACTS IN FIVE, and ALIEN.**



WOW!
CHECK THESE
PRICES ▶

Apple Software • All Programs On Disk

SNEAKERS	29.95	·	23.96
TRACK ATTACK	29.95	·	23.96
KABUL SPY	34.95	·	27.96
DUNG BEETLE	29.95	·	23.96
MOUSKATTACK	34.95	·	27.96
ZORK I OR II	39.95	·	31.96
DARK FOREST	29.95	·	23.96
LISA ED. SYSTEM	119.95	·	95.96
APPLE PANIC	29.95	·	23.96
[SPECIALS]			
TIME ZONE	99.95	·	74.76
ARCADE MACHINE	44.95	·	33.16
GORGON	39.95	·	29.85
PFS (New Version)	125.00	·	95.85
WIZARDRY	49.95	·	37.85
TWERPS	29.95	·	22.15
UTILITY CITY	29.50	·	21.85
THRESHOLD	39.95	·	29.85
EMPIRE WORLD BUILDERS	32.95	·	24.85
dBASE II (req. softcard)	700.00	·	498.16

C.O.D. • Money Orders • Certified Checks
For Personal Check Allow Two Weeks
N.Y.S. Res. Add 7.25% Sales Tax • All Orders
Under \$100.00 add Post. & Hand.
\$2.00 U.S., \$2.50 Canada, \$6.00 Foreign

• SEND FOR FREE PRICE LIST #202 •

BYTES & PIECES (516) 751-2535

Box 525 Dept G2 • E. Setauket, N.Y. 11733

INITIAL COMMENTS

In addition to games mentioned elsewhere in this issue the following games have been received by CGW. Most but not all of these games will receive more detailed attention in future issues.

Cavalier Computer
P.O. Box 2032
Del Mar, CA 92014

MICROWAVE: A maze-chase game which pits "Teddy the Salvage Man" against the decadent aliens. Teddy patrols a spaceship picking up faulty equipment while avoiding the aliens. Microwave dishes can be dropped which kill aliens.

Data Most
19273 Kenya St.
Northridge, CA 91326

All Data Most games run on Apple II with 48K.

CASINO: Five casino games are available on this \$39.95 disk—roulette, poker, keno, blackjack and baccarat.

SNACK ATTACK: Data Most's maze-chase game. Five levels of play keep this \$29.95 game interesting.

COUNTY FAIR: Shooting Gallery arcade game similar to the coin-operated arcade game. \$29.95.

THIEF: Similar to the coin-operated arcade game **BEZERK**. \$29.95.

H.A.L. LABS
P.O. Box 2411
Riverside, CA 92516-2411

TAXMAN: Billed as "the definitive version of the popular game" this Apple II game looks just like the popular arcade game. Keyboard play. \$23.00.

Spectral Associates
141 Harvard Ave.
Tacoma, WA 98466

COLOR SPACE TRADERS: Economic game of establishing space shipping lanes. Similar to the board game **ACQUIRE**. Runs on the TRS-80 Color Computer (16K gives low-res graphics, 32K gives hi-res graphics).

COLOR SPACE INVADERS: TRS-80 Color Computer version

of the popular arcade game. Non-extended basic.

MADNESS AND THE MINOTAUR: An adventure game of the Traditional "two-word command" type. TRS-80 Color Computer. Non-extended basic.

GHOST GOBBLER: A TRS-80 Color Computer version of **PAC-MAN**. 16K non-extended basic required.

Avalon Hill
4517 Harford Road
Baltimore, MD 21214

COMPUTER STOCKS & BONDS: Computer version of AH's board game **STOCKS & BONDS**. Available for the TRS-80, Apple II, PET, Atari 400/800, and IBM personal computers. Disk versions \$25.00; tape versions \$20.00.

GUNS OF FORT DEFIANCE: Strategy/arcade game in which you command a 19th century artillery piece repelling cavalry, infantry or another artillery piece. Runs on TRS-80, Apple II, Pet, Atari 400/800 and IBM personal computers.

Lighting Software
P.O. Box 11725
Palo Alto, CA 94306

MASTERTYPE: A typing instruction system/game using a hi-res game format to teach/improve typing skills. Seventeen progressive lessons help develop mastery of the whole keyboard. Apple II 48K.

Voyager Software
P.O. Box 15-518
San Francisco, CA 94115

STARSHIP COMMANDER: A hi-res space combat simulation in which the player simulates the various aspects of being a commander of a starship. You must manage a crew, allocate power, maintain shields, navigate, fire weapons, and destroy up to three enemy vessels. Look for more in our next issue on this very well designed program. Apple II 48K.

L & S Computerware
1589 Fraser Dr.
Sunnyvale, CA 94087

CROSSWORD MAGIC 2.0: Updated version of their crossword generation program. Puzzles can be created, saved, printed out, worked on monitor. \$49.95.

Strategic Simulations
465 Fairchild Dr. Suite 108
Mountain View, CA 94043

THE ROAD TO GETTYSBURG:

a computer simulation of the Gettysburg campaign based on the Napoleon's Campaigns 1813 & 1815 game. Apple II 48K, \$59.95.

THE PURSUIT OF THE GRAF SPEE: Younger brother of Computer Bismarck. This one recreates the final days of the German pocket Battleship GrafSpee. Tactical battles can be fought on-line or with miniatures. Apple II 48K. \$59.95.

AIR COMBAT DATA DISK: Contains over 70 new aircraft from WWII and the Korean War. \$15.00.

Sir-Tech Software, Inc.
6 Main Street
Ogdensburg, N.Y. 13669

KNIGHT OF DIAMONDS: the second scenario for their popular Wizardry role-playing simulation.

Highland Computers, Inc.
14422 S.E. 132nd
Renton, WA 98056

Five hi-res adventure games (all Apple 48K):

GOBLINS: (animation); \$27.50.

MUMMY'S REVENGE: (full color hi-res); \$30.00.

OLDORF'S REVENGE: \$19.95.

TARTURIAN: \$24.95.

CREATURE VENTURE: (animation); \$24.95.

Gamma Software
P.O. Box 25625
Los Angeles, CA 90025

HOCKEY: A high-speed game of hockey. Two to four players control the two teams in this exciting game which rewards skill. Similar to the Atari home video version of hockey. Requires 16K and sells for \$29.95.

80-Northwest Publishing Inc.
3838 South Warner St.
Tacoma, WA 98409

THE CAPTAIN 80 BOOK OF BASIC ADVENTURES: 252 page book with listing for 18 different adventure games. Includes 10 chapters of background material about writing and playing adventures. All for TRS-80. Nice introduction by Scott Adams. \$19.95.

CHOOSE..

Choose an Apple Desk



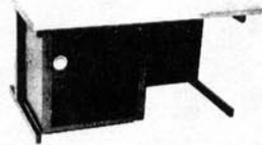
Ideal for an Apple computer system, our bi-level desk has a micro shelf to hold two Apple disk drives. Top level holds monitor, TV, or manuals. 42" w x 29 1/2" d x 35" h.

Choose a Micro Desk



Our Designer Series desk with micro shelf is suitable for the North Star, Dynabyte, Vector Graphics, and Altos computers. A variety of sizes and colors available.

Choose a Mini Rack



Mini racks and mini micro racks have adjustable Retma rails, standard venting, and cable cut outs. Choose a stand alone bay or desk model. A custom rack is available for the Cromemco.

Choose a Printer Stand



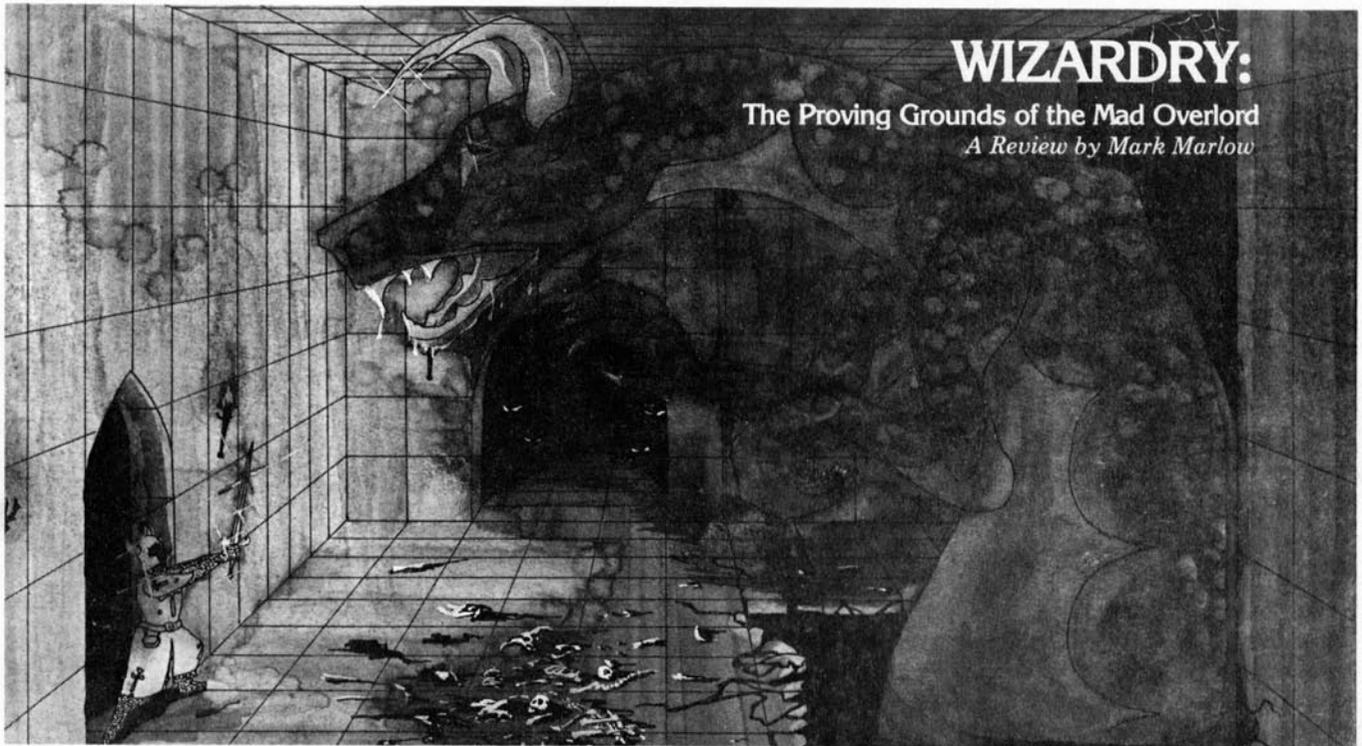
The Universal printer stand fits:

Centronics 700's	Diablo 1600's & 2300's
Dec LA 34	T.I. 810 & 820
NEC Spinwriter	Okidata Stimline
Lear Siegler 300	Anadex 9500's

Delivery in days. 200 styles and colors in stock. DEALER INQUIRIES INVITED.

ELECTRONIC SYSTEMS FURNITURE COMPANY

17129 S. Kingsview Avenue
Carson, California 90746
Telephone: (213)538-9601



WIZARDRY:

The Proving Grounds of the Mad Overlord

A Review by Mark Marlow

BASIC INFORMATION

NAME:	Wizardry
TYPE:	Graphic Adventure
SYSTEM:	Apple II 48K
FORMAT:	Disk
# PLAYERS:	1
AUTHOR:	Andrew Greenberg & Robert Woodhead
PRICE:	\$49.95
PUBLISHER:	Sir-tech Software 6 Main Street Ogdensburg, NY 13669

HEAR YE, HEAR YE! Our Noble Lord and Most gracious ruler, Trebor the Beneficent, has need of brave men and women with stout hearts and strong constitutions to undertake the task of recovering an amulet; treacherously stolen by the evil wizard Werdna. Be ye warrior, wizard, priest or thief-human or otherwise-ye are welcome! Adventurers are invited to meet at the tavern of Gigamesh. Successful candidates will be knighted and hired into the king's service. Please leave name and address of next of kin at the Adventurer's Inn. (We need to know who to bill in case of accidental death or dismemberment!)

Such might be the bulletin posted in a medieval town in some epic fantasy tale. **WIZARDRY:** *The Proving Grounds of the Mad Overlord* is a

game of epic proportions comprising nearly 14,000 lines of code on both sides of a diskette. The brainchild of Andrew Greenberg and Robert Woodhead, WIZARDRY is the culmination of nearly 2½ man-years of intensive effort. The original WIZARDRY program was written in Basic which proved too slow to make the game a viable product. The game was rewritten in Pascal but was delayed until the release of a runtime system which would allow the game to be played on Apples without language systems. The final result is a game which is superbly playable but with enough variation and complexity to whet the appetite of the most discriminating adventurer.

THE WORLD OF WIZARDRY

WIZARDRY is a fantasy role-playing game modeled on the Dungeons and Dragons game concept with the computer assuming the role of the Dungeon Master. The world of "The Proving Grounds of the Mad Overload" consists of a castle, an inn, a tavern, a trading post, a temple, the training grounds, and a three-dimensional maze, ten levels deep, below the castle.

The training grounds located at the edge of town, are the first of several stops you must make. Here, you enter a name and/or password for your character. You are then given a choice of races. Wizardry characters may be humans, dwarves, elves, gnomes or hobbits. At this point you are asked to choose the character's alignment. A caution here, only characters of similar alignment can travel together. For example, neutral characters may travel with either good or evil alignment groups, but good and evil may never mix. The

computer then generates a random number of points which you may add to the character's basic attributes. The six attributes are *Strength, I.Q., Piety, Vitality, Agility, and Luck.*

Based on the character type you pick and the points you assign, you may choose one of the classes which appear on the screen. Beginning players will usually be allowed to pick *fighters, mages, priests, and thieves.* As the characters gain experience, you will have the option of changing the class of your character to an elite class. The elite characters are *bishops, lords, samurai, and ninja.*

However, there are drawbacks to changing the class of your character. The first and foremost drawback is that your character loses all of his experience points. The second is that your character will age. Attributes tend to decline after age 50 and the effectiveness of spells, etc., will decrease in direct proportion to the decline in attributes.

Now that the characters are created, the next stop is Gigamesh's Tavern. Parties are assembled here before entering the maze. After the party is assembled, a trip to Boltac's Trading Post is in order. There is a wide selection of weapons, armor, and magic spells. Boltac has been known to run out of items so don't rely on Boltac's for all of your equipment. Some very powerful items can be found by opening chests in the maze. Any items you cannot use can be sold back to Boltac at half the retail price.

ENTERING THE MAZE

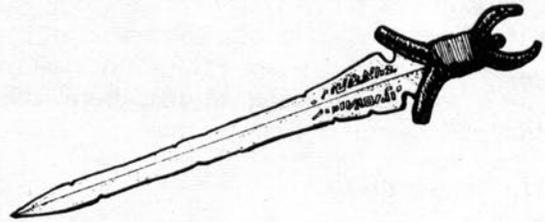
Anytime you enter the maze, you will automatically be in camp. The first time you enter you should EQUIP the entire party. As you do this, the armor class of each player who has purchased armor drops considerably. The lower the number, the stronger is his armor. When you leave camp, the maze appears in 3-dimensional aspect in the upper left corner of your screen. Movement is generated using either "R" and "L" for right and left, "F" for forward or the "A", "W", "D" group for left, forward, and right respectively. When you come to a door, you must use the "K" command to kick in the door. Some rather nasty surprises are usually waiting for you on the other side.

MAGIC SPELLS

Probably the single most fascinating aspect of Wizardry is the ability of priests, mages, bishops lords, and samurai to cast spells. Wizardry comes with a book of some fifty spells which the magic users can cast by uttering a magic word. Arcane sounding words such as MILWA and LOMILWA can shed light in certain situations. The spells cannot all be used at the outset. As in real life, the

ability to use certain things must be gained through experience. Therefore, in order to be able to cast the higher level spells, your character must gain enough levels to learn these spells. Another nice little item worth remembering is that you only have a certain number of spell points. Once these are exhausted you must leave the dungeon and rest up before the points are renewed.

Certain items in the dungeon also have magical qualities. Bishops have the ability to identify these items, it is, therefore, a good idea to bring one along in the early stages of the game. If you don't bring a bishop, you will have to pay exorbitant rates at Boltac's to get the items identified. You could always take a chance and equip your character with the items you find, but if the item is cursed, your characters performance in battle could be adversely affected.



MAPPING THE MAZE

Each level of the dungeon is a grid measuring approximately 20 by 20. Mapping is essential to survival in the game. Being trapped on an unknown level and getting the entire party slaughtered because you didn't know the way to the stairs has caused many a nightmare for unsuspecting adventurers. The stairs leading to the castle are located at co-ordinate 0,0. The casting of a *DUMAPIC* spell will tell you your exact location with respect to the stairs to the castle. By using *DUMAPIC* in conjunction with *MALOR*, the teleportation spell, you can pretty much travel all over the maze with relative safety. Just remember that the stairs are one level below the castle, so that if *DUMAPIC* tells you that you are 13 steps east, 10 steps north, and 7 levels down; you must go 13 west, 10 south, and 6 up to arrive at the stairs.

Wizardry is an extremely complex game and one of the most challenging tasks is to complete an accurate map of all ten levels. There are many tricks programmed in to make mapping difficult. I would appreciate receiving copies of maps from any readers who have mapped all ten levels and compare them to the ones I have made. If I can compile what I believe to be an accurate and complete representation of all ten levels, and the public response is favorable, then the maps may be published in this magazine. Also, if you have a list of magic items and their uses, I would like to

compile a guide to the objects you can find in the maze.

GRAPHICS

If you are looking for a game with extensive graphics and sophisticated animation, then Wizardry might disappoint you. The graphics appear in the same small square that depicts the 3-D maze. The monsters appear in the corner and a description of the monster group(s) appears at the top of the screen. Several things can occur during an encounter. You could surprise the monsters and have one round of unanswered combat. If the monsters surprise you, then they get one round of unanswered combat. If you both run into each other at the same time, the computer will randomly pick who gets to fight first, though high agility or luck could swing things in your favor.

Encounters are fought in turns: you determine what each character in your band is going to do, then the computer gives you the result in rapid sequence. The display speed can be adjusted from 1 to 5000 which translates to anywhere from a fraction of a second to five seconds.

UTILITY OPTIONS

The boot side of the Wizardry diskette has a number of important utility options. If you are playing the game and accidentally hit reset, you may use the RE)COVER option to save the characters who are in the maze. In older versions, this would cause the characters to age 10 years, but the newer versions have removed this penalty.

The MAKE SCENARIO option allows you to create an unlimited number of back up scenarios. This option enables you to use the copy you create to play the game, saving wear and tear on the original. The option does require two disk drives.

The BACKUP CHARACTERS option allows you to save your characters onto a DOS 3.3 initialized disk in case you should crash the program and inadvertently wipe out your characters. You can recover from the back up directly onto the scenario from which you made the back up.

Another option allows you to change the names of characters. This is useful when you transfer characters between scenarios and find that you have two characters with the same name.

The TRANSFER option allows you to transfer characters between Wizardry scenarios, though it deletes the character from the source scenario before writing it to the new scenario.

Finally, there is the UPDATE option, which allows you to update a friend's Wizardry disk if it is an older version.

TIPS ON STRATEGY

The biggest mistake you can make in Wizardry

is to attempt too much too soon. Patience is definitely a virtue. The first few forays into the maze should be hit and run type maneuvers. Fight one encounter, then get the heck out of the maze. Use your healing spells often. The strongest initial group consists of three fighters, two priests, and a mage. Later, you should include a thief (great for disarming trapped chests) and possibly a bishop to identify objects. A level 12 or higher bishop can identify most objects fairly quickly.

Don't attempt going down to the third or fourth levels until your characters are level 10 or higher. Hit points can be lost quickly so use your priests to heal during combat. Later, when your characters have found and defeated Werdna, you can find ways to build up characters rapidly.

- 1) Finding the entrance to the 10th level.
(UIFSF JT B DIVUF MPDBUFE BU
9F,30,9E)
- 2) Fighting greater demons.
(VTJOH MBLBOJUP XJMM VTVBMMZ
TNPUIFS BCPVU IBMG PG UIFN)
- 3) Finding the gold key.
(UIF HPME LFZ JT MPDBUFE PO UIF
TFDPOE MFWFM JO B EBSL BSFB)
- 4) Getting back into the castle after defeating Werdna.
(JG ZPV BSF JO XFSEOB'T MBSJ, DBNQ
JNNFEJBUFMZ, DBTU NBMPMS BOE VTF
UIFTF DPPSEJOBUFF: 28X, 4T, 10V)

CONCLUSIONS

Wizardry is complex, but even with its complexity, is an extremely playable game. It is highly interactive to the point that you could easily become emotionally attached to the characters you've created. I've talked to many players who have become Wizardry addicts to the point that they play the game eight to ten hours a day.

I personally could find little to fault with Wizardry. The biggest fault I could find in the mechanics of the game was that it was too easy to get killed at first. This is very frustrating for a first time player. Even experienced characters could be killed off relatively easily if surprised by a group of spell casters.

Another thing which would enhance the game would be the addition of more puzzles to solve. While the main quest is a difficult one to solve, smaller and more cryptic puzzles would greatly add to the overall effect.

In conclusion, I would rate Wizardry as one of the all time classic computer games. It sets the standard by which all fantasy role playing games should be compared. In the years to come, if there ever is a Gaming Hall of Fame, Wizardry receives my vote as the first entry into its hallowed halls.

THE NEXT GENERATION OF COMPUTER GAMES IS HERE



**FROM
THE
MAKERS
OF
THE
FIRST
ANIMATED
ADVENTURE
GAMES**



**Synergistic
Software**

- **ADVENTURE TO ATLANTIS** is a new fast action adventure game, by Robert Clardy, continuing the Odyssey Adventure series. The forces of sorcery are gathering to repulse the marauding scientific Atlantean Kingdom. The epic battle can end either in the enslavement of the world or the absolute destruction of Atlantis.
- Computer adventuring has been good, Synergistic Software has just made it better. Can you imagine the most exciting adventure game ever composed with more

color and sound, highly detailed animation, arcade like action, true role playing, greater challenge, unending variety and endless enjoyment? That's what the Next Generation of computer games is all about. This professionally designed adventure was specifically written to take full advantage of all the Apple's capabilities. Requires careful planning and strategy, quick thinking and reflexes, as well as a 48K Apple II* with DOS 3.3 and paddles.

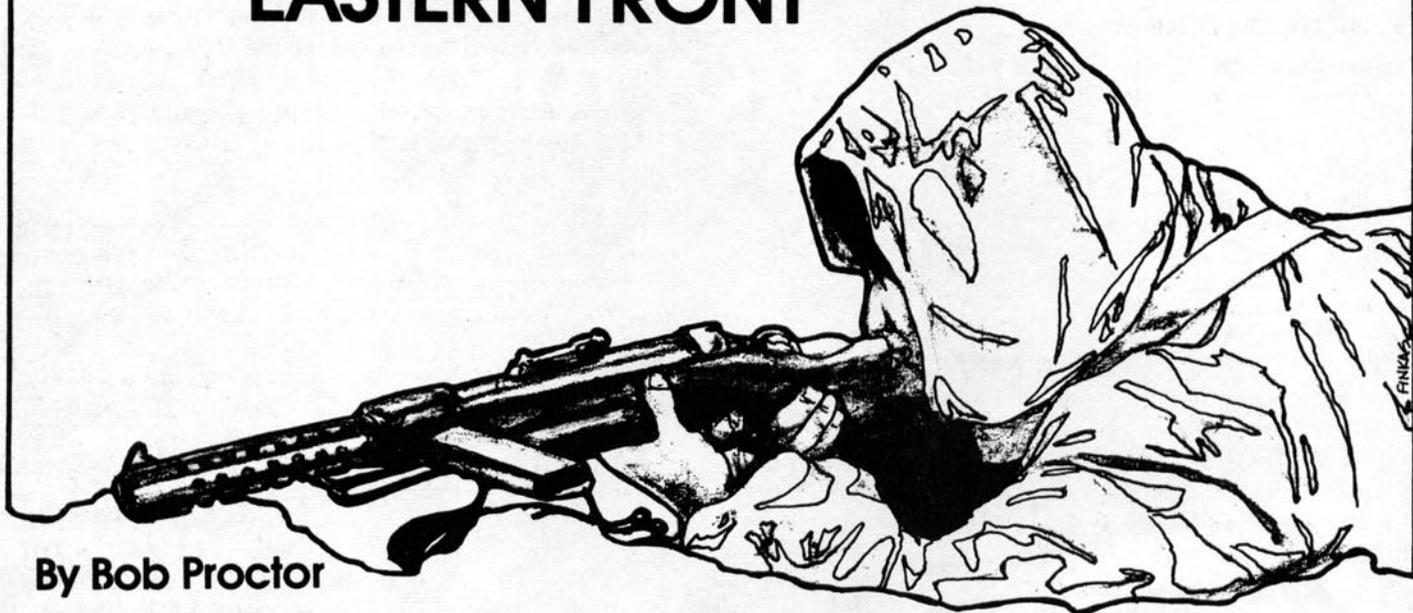
Only \$40.00

From

**Synergistic
Software**

5221 120TH AVE. S.E.
BELLEVUE, WA 98006
(206) 226-3216

A BEGINNER'S GUIDE TO STRATEGY AND TACTICS IN EASTERN FRONT



By Bob Proctor

BASIC INFORMATION

NAME: Eastern Front
TYPE: Wargame
SYSTEM: Atari 400/800
FORMAT: Disk or Tape
PLAYERS: 1
AUTHOR: Chris Crawford
PRICE: Disk--\$29.95; Tape--\$26.95
PUBLISHER: Atari Program Exchange
P.O. BOX 427
155 Moffett Park Dr., B-1
Sunnyvale, CA 94086

EASTERN FRONT 1941 has been getting a lot of attention for a computer wargame. It was reviewed in CGW, of course (issue number one), but it has also been acclaimed in a computer magazines like BYTE and CREATIVE COMPUTING because of its excellent human engineering and graphics. I noticed a peculiar thing, though, when I started talking to people who had played the game. They either thought the game was too easy or impossible; nobody felt that the level of challenge was "just right."

This dichotomy suggests that there is a secret to winning which one either knows or doesn't know.

Perhaps it doesn't deserve to be called a secret; every experienced wargamer I know has found it within three playings. It is a matter of setting the right strategic goals and discovering the tactics to carry them out.

This article was written to help those of you with little or no wargaming experience. I don't want to give you the answer on a plate but will try to direct your thinking. That way you can still experience the feeling of accomplishment that comes with that first win.

What is a "win" anyway? The rulebook suggests that any score over 100 is very good. I estimate that the actual progress made by the German army in 1941 would rate about 110 or 120. But this is a solitary game, a win can be setting some objective for yourself and meeting it. You could, say, add 100 points to your best score and go for that. The best you can get is 255; around here the good players compare the number of Russian units left on the map to tell the difference between a so-so 255 and a really good 255!

STRATEGY: THE BIG PICTURE

Strategically, what Hitler needed were the resources of the Soviet Union: the oil, the wheat, the industrial facilities, the labor force. **EASTERN FRONT**, I'll call it (EF), represents this by giving points for occupying territory. To quote from the rules, "...maximum victory points are gained by moving as many muster strength points

as far to the east as possible, while destroying as many Russian combat strength points as possible and pushing the remainder to the east." In addition, 50 points are awarded for the control of 4 major cities, Moscow being worth 20 and Leningrad, Stalingrad and Sevastopol 10 each.

It sounds pretty straight-forward, until you try it and discover that the real problem is not getting the points but **keeping them**. The game opens in June and lasts 40 weeks (a turn is one week). There are 14 turns of good weather, 4 turns of mud, and 22 turns of winter. Trying to hang on to your gains during the Russian winter counter-attack can be one of the most frustrating experiences in wargaming! Against a strong Russian force, it is utterly impossible. We must therefore find some way to weaken this counter-attack. Any unit which survives until winter can become strong and dangerous; to cease to be a threat a unit must cease to exist.

Having reasoned this much, the solution should be apparent. The primary goal must be to destroy the Russian army -- territory becomes a secondary objective in the early stages. If the Russian army is eliminated, the Germans can continue to advance even in the winter.

TACTICS: THE HOW OF IT

Now let us see how our strategic goals affect the way we give orders to individual units. In general, we want our attacks to eliminate enemy units, not just force them to retreat. In EASTERN FRONT, a unit will always retreat if it can so the enemy must be surrounded or forced up against a coast or the edge of the map. To surround a unit, it isn't necessary to encircle it with your units but only with zones of control.

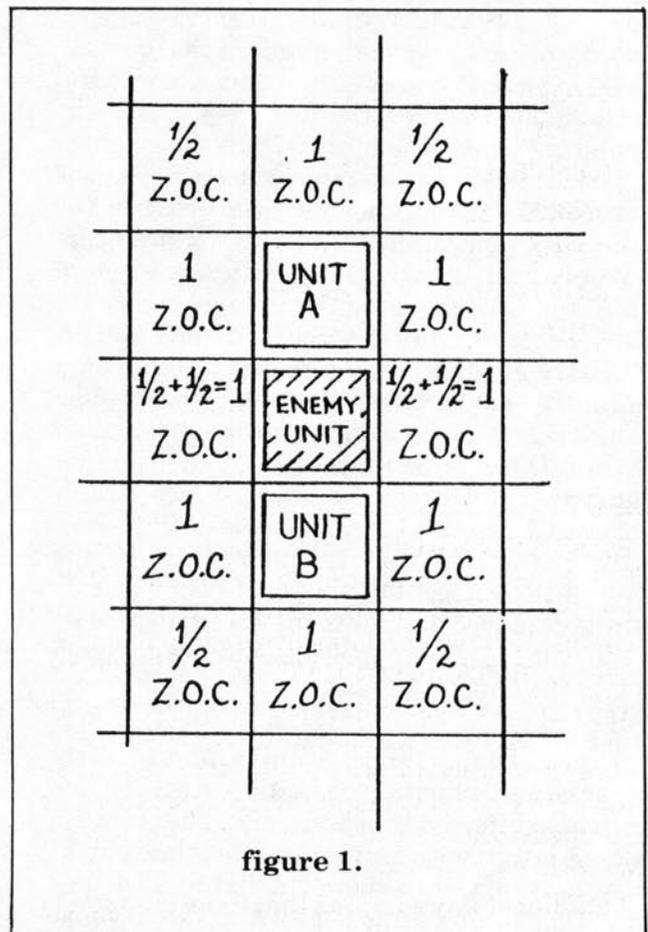
Let me digress a minute to explain zones of control for those of you who are wondering. This concept, which has been around as long as wargaming, is a means of representing a unit's effect on the nearby area. If your army was camped between the enemy and a city you were supposed to protect, you would not let the enemy march around you 20 miles to the north to attack the city. As soon as your scouts reported his movement, you would prepare to attack his force as it moved. Such an attack would force the enemy to turn and do battle with you. Your force could be said to have a "zone of control" of 20 miles. In game terms, whenever an enemy force moves within this zone (usually this is "adjacent" on whatever grid system the game uses) they must stop their movement and resolve combat.

EASTERN FRONT uses a square grid system. This creates a problem in that the squares that are adjacent diagonally are further apart, center to center, than those that are adjacent orthogonally

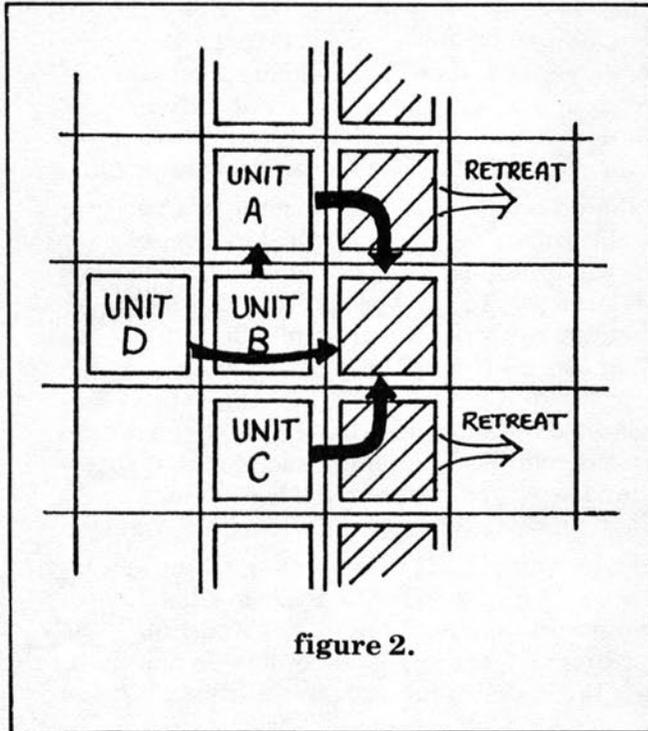
(up, down, left and right). For simplicity, EF does not allow diagonal movement but if there is no zone of control diagonally, it would take 4 units to surround an enemy, one to block each direction it could move. This is more than it should take so the game invents a "half zone of control." A half ZOC (as they're called) has no effect by itself, but two overlapping half zones block retreat. It is now possible to surround a single enemy unit with just two of your own; they must be on opposite sides as in **figure 1**. The units block retreat up or down and their joint ZOC's block retreat to either side.

It should be mentioned, in passing, that getting a single unit surrounded may still take more than 2 of your units, especially if none of your units start adjacent to it. The problem is trying to predict where it will be by the time your units move up. What seems to work best is to try to contain the enemy inside of a contracting ring. Once it is surrounded by two units, the rest can head for the front. You will be much more successful at this if you can learn to predict how the computer is likely to move. Observation and experience are the keys.

All well and good if I find an enemy unit all by itself, you say, but what if there's a big line of German units facing a big line of Russians? The temptation, of course, is to order each unit to attack the enemy unit directly in front of it; the



problem then is that your line just pushes their line back. This is great in football but in EF all it gains is a little territory -- just the opposite of our strategic plan. What we have to do instead is a little uneven pushing as illustrated in **figure 2**.



We want to attack every other unit in the line and force them back. When our units advance into the squares vacated by the retreating enemy they will surround the units which are left on the original line. The units left become the primary objects of attack. Notice that unit B, which starts in front of the intended victim, does NOT attack it as this would only push it back out of harm's way before units A and C could cut off its escape. We would like to be able to delay the frontal attack until A and C have advanced and this can be done by a trick I call a "deliberate traffic jam." It works like this: unit B gets orders to move to the spot vacated by A, unit D has orders to move through the spot vacated by B and attack the enemy. Since B can't move until A does and D can't move until B does, we are guaranteed that D will not attack the enemy until A does. Of course, B could just as easily have moved down into the space vacated by C -- you want to choose the side which you expect will take the longest to succeed so that both A and C will be in place before unit D attacks.

The presence of enemy units immediately behind the unit which you are attacking will block its retreat as effectively as you could. The problem, of course, is that you can't control their movement -- they may not stay there! In figure 2, a unit behind those being attacked by A or C will cause them to be eliminated instead of retreating. Since

A or C would still advance into the vacant square, this wouldn't affect the general plan except that the timing may be thrown off because it will take longer to eliminate a given unit than to force a retreat. Some types of terrain -- rivers, mountains, swamps -- favor the defender and may also affect timing.

CONCLUSIONS

The next step is to try it yourself. What you have learned here should enable you to get a respectable score. Further experience will teach you about timing, terrain, supplies, and (probably) over-extending yourself. I hope that from now on, as your skill grows, you will see a corresponding increase in your scores.



TWO NEW GAMES FROM SSI FOR THE

APPLE® AND THE TRS-80®!



THE BATTLE OF SHILOH: A brigade-level simulation of the first grand battle of the Civil War, pitting the Confederate Army against Grant's troops and Union gunboats.



TIGERS IN THE SNOW: Ghostlike Nazi Tiger tanks and infantry sweep across the dark, frozen forests of the Ardennes against a surprised U.S. force in this division/regiment-level simulation of Hitler's last desperate attack.

We know it hasn't been easy for you TRS-80® owners to see so many great made-for-Apple-only games from SSI pass you by. But then, it hasn't been easy for us to design games for a 16K cassette format good enough to meet our critical standards.

After all, we've got a reputation to protect, a reputation in strategy gaming for unsurpassed sophistication, innovation, realism, and playability.

Well, our designers have been hard at work, and we've not only met but surmounted the challenge. We're delighted to announce two historical wargames — deserving of the SSI label — for both the Apple® and the TRS-80® (16K cassette for the TRS-80 Model I and III; 48K disc for Apple II with Applesoft ROM card).

Combining our extensive wargame-design experience and superior programming techniques, we've given a fresh new look and feel to these favorite classic battles.

At \$24.95 each for TRS-80 cassette and \$39.95 each for Apple disc, these are extraordinary games at quite an ordinary price.

So head on down to your local store and check them out today!

VISA and M/C holders can order by calling 800-227-1617, ext. 335 (toll free). In California, call 800-772-3545, ext. 335.

To order by mail, send your check to: Strategic Simulations Inc, 465 Fairchild Drive, Suite 108, Mountain View, California 94043.

All our games carry a 14-day money-back guarantee.



As part of our demanding standards of excellence, we use MAXELL floppy discs.

Apple is a registered trademark of Apple Computer Inc.

TRS-80 is a registered trademark of the Tandy Corporation.

STRATEGIC SIMULATIONS INC

TIME-ZONE

An Interview with Roberta Williams



TIME ZONE, the long awaited multi-disk adventure game from On-Line Systems is now out and creating considerable interest in the hobby. It is an awesome game in terms of size and scope. On six-two sided diskettes, **TIME ZONE** is easily the largest game program commercially available. A game of this magnitude must, because of sheer size alone, become a landmark in the computer gaming hobby. As to whether the game becomes more than a landmark (i.e. a "watershed game" or a "classic") remains to be seen. It will be interesting to see how you, the buying public, responds to this huge and expensive game (\$99.95).

The following interview with the authoress, Roberta Williams, was held on April 2, 1982 shortly after **TIME ZONE** became available.

*nally planned six disk game to the final form which is equivalent to twelve disks, **TIME ZONE** is impressive if for no other reason than it's size and scope.*

RW: (A self-satisfied chuckle).

CGW: *The rulebook states that **TIME ZONE** was over a year in the making in addition to the six months writing the game before any programming was done. The rulebook lists ten people who worked six to twelve hours a day on **TIME ZONE**. If I take that literally and put the hours together (figuring 200 working days in a year) I come to the incredible figure of 12,000 to 24,000 hours of work. How many hours, all totaled, went into the design of **TIME ZONE**?*

RW: Actually, those involved in the project worked eight hours a day. Some of the ten listed did not work on the project full time. For example, Ken (Williams) wrote the original interpreter which is why

his name appears in the list. He never actually did any of the work. That part was already done. Jeff Stephenson took the original interpreter that Ken had written and reworked it to fit **TIME ZONE**. There were a lot of modifications that had to be done. Back to your question--I worked on the project six months by myself, although it wasn't eight hours a day, five days a week. It was more like three or four hours a day. After the six months of writing and designing the game, I worked with the others, on-and-off, for the next eight months. It was fourteen months before it was finally done.

CGW: *As a sidelight, I'd be interested in knowing what kind of a profit you can expect to make off a project like **TIME ZONE**.*

RW: We normally pay 25 to 30% royalties for a game design. But **TIME ZONE** is all in-house and I will receive no royalties, as such. Remember that **TIME ZONE** couldn't have been done by one person. It

CGW: *First off, let me congratulate you for what has obviously been a massive project. From the origi-*

couldn't even have been done by two or three people without several years work. While I wrote the game other people programmed it and did the graphics. Sometimes I feel that people don't think that I'm as much a part of the creative process as I claim, due to the fact that I don't program. The designing of the game is the most important and creative part of the project (and also the most fun).

CGW: *The rulebook mentions that a restructuring of your adventure programming procedures had to be accomplished for TIME ZONE. What is different about TIME ZONE in this respect?*

RW: Several things... The hi-res pictures in TIME ZONE draw about three times faster than in our old games. Most of the TIME ZONE pictures were drawn by Terry Pierce who is a very good artist. On the other hand I drew the pictures in my older games and I'm not an artist.

When you take inventory in our old games, the disk must be accessed, which required a delay. In TIME ZONE, inventory is in memory and can be seen at the touch of a key. Also, the new save game feature is more efficient than our old one.

CGW: *The game covers points in history from the Prehistoric Era to the far future. What level does the historical aspect of the game reach? Are the historical situations surface level or will adventurers find that they need to get out their history books to solve certain parts of the game?*

RW: No, the players will not need to get out their history books to play. Playing TIME ZONE requires logical thinking and puzzle solving. I did, though, have to do a lot of historical research to make the game as accurate as possible. We didn't want people to call up and say "Oh, you put Cleopatra in the wrong time" or anything like that (as it turned out I did make one mistake). I researched encyclopedias as well as books. On a couple of occasions I had to call the library to get information I couldn't find elsewhere. For example, I had to make several phone calls to find out where Napoleon's official residence was. It turned out that he had his official palace in Paris.

CGW: *You mentioned that you made a mistake in the game. Would you tell us what it was?*

RW: It's more geographical or zoo-

logical than historical. I put a *rhea bird* in Australia, when it actually belongs in South America. The mistake occurred because of a trip I made to the Los Angeles Zoo. The animals are displayed according to the continents they come from and the rhea bird was in with the kangaroos in the Australian area.

When we found out that the rhea bird is not from Australia, the game was almost ready to be shipped. It would have taken a couple of weeks to change it and retest the game. So we decided to just add a disclaimer in the documentation saying that there may be some mistakes.

CGW: *That doesn't sound like a major mistake. We'll just blame it on the L.A. Zoo.*

RW: Yes (laughs).

CGW: *The rulebook mentions that in May of 1982 you will be able to offer hints on TIME ZONE. Will this be strictly by phone or will you offer some kind of hint sheet?*

RW: I never liked hint sheets. I feel that if the people have the answers in front of them they will be more likely to look up the answers instead of trying to solve the problem by themselves. We are quite willing to answer questions if people call us with specific questions, but we don't want to give out hint sheets. I just don't think people should pay \$32 for *The Wizard and the Princess* and then just be able to look up the answer to solve it easily.

CGW: *Do you have any idea for the size of the overall vocabulary in TIME ZONE?*

RW: Oh, gosh! I'm sure it's in the thousands, although I'm not really sure. The average adventure game has 50 to 100 rooms, while TIME ZONE has 1300 rooms. Some rooms or regions have greater opportunity for conversation. Some regions require a lot of conversation while in others there isn't very much at all.

CGW: *At the present, TIME ZONE runs only on the Apple II. Is it going to be made available for other computers?*

RW: It might become available on the Atari 400/800 at some future point. The problem with the Atari computer at this time is that TIME ZONE (with twelve disk sides) takes a long time to copy and the Atari copy program we have is really slow in comparison to the Apple copy program. Ken could sit down and write a copy program which would make it a lot faster if he ever gets

time to do it. When that happens we will put TIME ZONE on the Atari. Additionally, TIME ZONE will eventually be available on the IBM personal computer.

CGW: *What advice would you give to potential players of TIME ZONE?*

RW: It's not an easy game. And it's not for beginners. It takes a really long time to get through TIME ZONE; even for someone who knows the answers. If I sit down to test TIME ZONE, it takes me a good week to go through it one time while testing it and I know the answers! Make sure you have GOOD maps. Use your imagination. Don't give up. It's going to take a LONG time.

CGW: *Now, the big question. When does the sequel come out?*

RW: (Laughs) Never! I am burned out on adventure games. I don't even want to look at another one. It's been two years during which I've written four adventure games including TIME ZONE and I am really tired.

CGW: *So there's no plans to ever top TIME ZONE.*

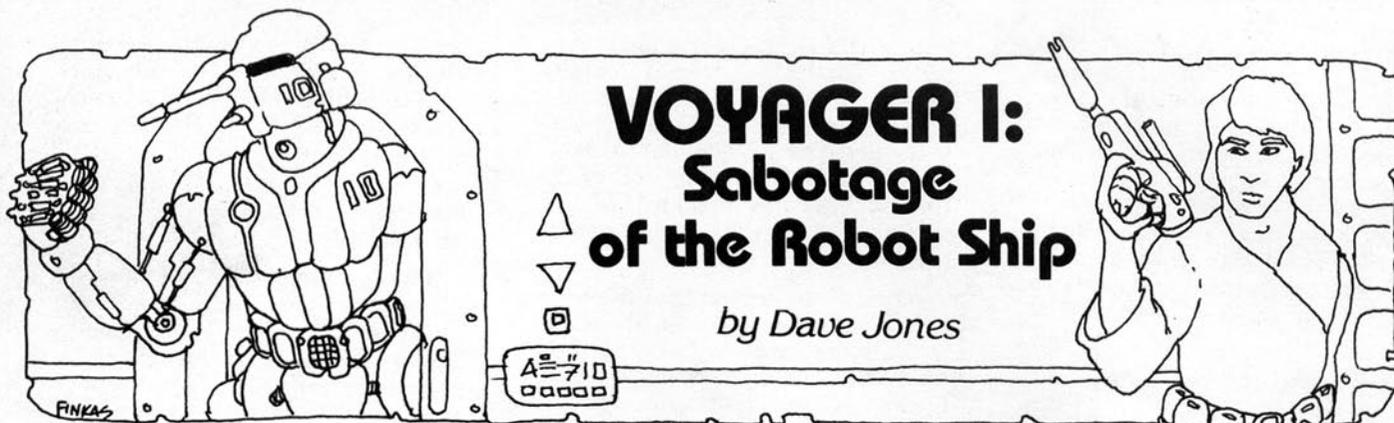
RW: I don't think it could ever be topped by anybody. Once we got into it and saw how big a job it was, we were almost sorry we started it in the first place. Now that it's over, I'm glad we did it, but it put a lot of strain on our company. It wasn't easy. To me it was akin to making an epic movie in the tradition of Cecile B. DeMille. You just don't make sequels to things like that.

CGW: *So, as far as you're concerned, TIME ZONE is something which might be looked back upon at some future time as a classic of its day.*

RW: I hope so. That would be nice.

CGW: *Is there anything you would like to add to what you've told us so far?*

RW: Yes. I feel that TIME ZONE is going to teach people certain things about history. I know that some people will learn things they never knew when they play the game. Every now and then I threw in certain historical facts that had nothing to do with playing the game, just to help teach them. In the back of my mind I always thought that TIME ZONE could be used as a learning tool for teaching history in schools. Some schools are using adventure games to teach kids how to think logically. In a way I like to think that it makes history fun. ■



BASIC INFORMATION

NAME: Voyager I
TYPE: 3-D Maze Game
SYSTEM: Apple, Atari, Pet, TRS-80
FORMAT: Disk or Tape
PLAYERS: 1
AUTHOR: William Volk
PRICE: Tape (\$20); Disk (\$25)
PUBLISHER: Avalon Hill Game Co.
 4517 Harford Road
 Baltimore, MD 21214
 301-254-5300

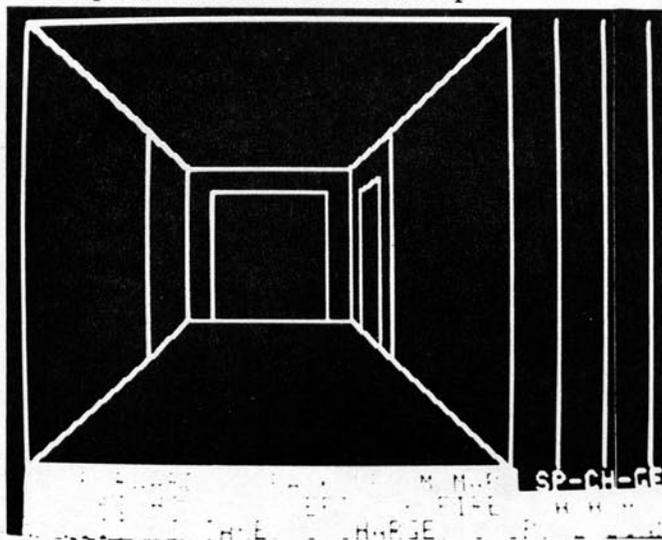
Alone and unarmed, you stand in the corridor of the alien space craft Voyager. Around you, lurking in the corridors that riddle the interior of the ship, lie in wait deadly, laser wielding robot guardians. As the only survivor of an assault squad that penetrated the outer hull of the space craft, you alone must carry out the mission of the squad to track down and destroy the robot guardians of the ship, or, in failing that, to destroy the generators which power the ship.

Welcome to VOYAGER I, the latest Avalon Hill entry into the micro-gaming arena. This real-time, science-fiction game takes place within the corridors of the alien space craft Voyager. The object of the game is to travel the corridors of the ship to seek out and destroy all the robot guardians; or the ship's generators which will cause the ship to self-destruct. Scattered throughout the craft are objects that can help the player such as lasers and space shuttles, as well as elevators which will transport the player between levels. All commands are entered through the keyboard, and allow the player to move through the corridors, change facing, travel between levels on the elevators, pick up, fire, and charge lasers, and examine the map. A running score is kept at the bottom of the screen, although

the scoring method is not described in the game handbook.

When booted, the game spends about 5 minutes randomly setting up the layout of the ship. During play, a three-dimensional picture of the corridor in which the player is facing is drawn on 3/4 of the screen. As the player moves or turns, the screen is redrawn (with surprising speed) to reflect his new position or orientation. Objects which occupy rooms, such as elevators, shuttles, robots, and lasers, also appear on the screen. Bar charts, representing the status of the player's strength points, the laser's power charge, and the ship's generator power are drawn to the right of the viewing screen. Strength points are diminished by moving or turning, laser charges by firing, and the generator power every time an additional generator is destroyed. Resting between moves will cause strength points to accumulate, while lasers can be recharged at generators.

A nice feature of the game is the automatic mapping that occurs as the player traverses the halls. At any time, by typing M, the player can see a map of the areas of the ship he has visited, his current location and facing, the location of any objects he has encountered, and the number of robots remaining. By hitting C, the player returns to his prior location within the ship.



Continued on page 38

ATARI ARCADE



by John J. Anderson

The announcement of a new computer game from Atari is a relatively rare happening. When one does arrive on the scene, as most recently **ASTEROIDS** and **MISSILE COMMAND** did, it is an exciting event. Atari game software from third party sources, on the other hand, is now issued almost daily. Computer store shelves are bulging with new programs on both tape and disk. There is, indeed, so much new software that the Atari computer owner must discriminate carefully between game programs that are "musts", those that are somewhat mediocre, and unfortunately, a few that are downright malodorous.

Determining which programs are good and which are not worth buying is not an easy task. Sometimes programs that promise the most or cost the most deliver the least. Here are some rules of thumb: 1) never buy a program sight unseen, no matter how it's hyped; 2) don't try to judge a program by its packaging or cost; 3) ask some one who has played the game; 4) read the reviews in magazines like this one to get an idea of what to expect from this growing market.

This month we will examine more examples of programs from new third-party sources--games that utilize some of the Atari's powerful graphics capabilities.

First, an update is in order on Mike Potter's **PROTECTOR**, reviewed in issue 2.1, of CGW. In that issue I stated that the game was flawed by a few mysterious bugs that soured a promising game. Well, that mystery has been solved. It seems that Mr. Potter switched companies in mid-program, so to speak--when initially issued, the program was unfinished. Ethics of this aside, a much more polished version of **PROTECTOR** is now available from Synapse Software. This version does a lot more and costs less too. Mike Potter displays real virtuosity on the Atari. I can't wait to see what's next from him.

Along with Chris Crawford's **EASTERN FRONT**, the Atari Program Exchange now offers **CAVERNS OF MARS**, a delightful arcade game somewhat reminiscent of **SCRAMBLE**. In this game you descend into the bowels of Mars, blasting enemy transmitters, fuel depots, and missiles. If you survive the descent, you can land on and activate the nuclear device that will

destroy the cavern. But then you've got to move quickly to escape the cavern before it blows.

The really remarkable thing about this addictive and excellently paced game is that it was written by an eighteen year-old amateur, Greg Christensen. It has all the look, feel, and play of a "professional" program. I understand ATARI is considering release of the game under its own name. This would be a well-deserved compliment to Mr. Christensen.

KAYOS, by Computer Magic Ltd., is well named, as it pushes hand-eye coordination to the outer limits. Although the game revolves around a rather simple and unchanging concept, it is in no way simple to master. A ship cruises from left to right across the top of the screen, while you hover at the bottom. When you hit a ship, another shape will appear on the screen for a few seconds. This shape is the only item of real point value in the game, and is not easy to hit. During the game, space debris flies at you constantly. Some of it you can ignore, some you can vaporize, some you can only dodge--if you're fast enough.

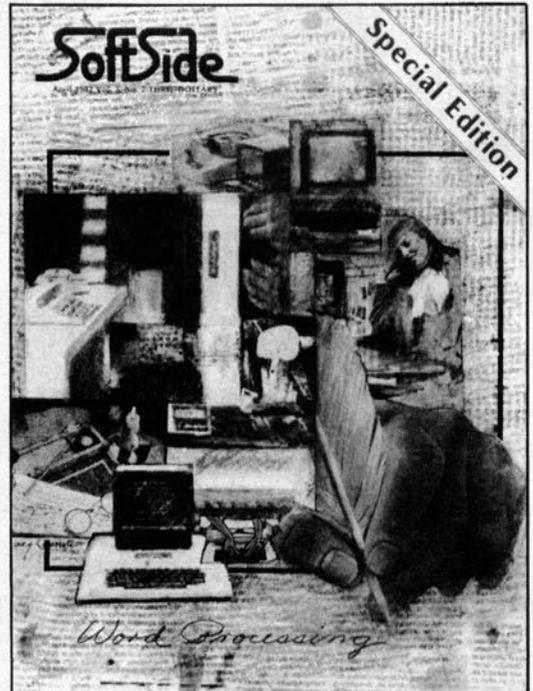
Some people do not like this one because, in their words, "it drives you nuts." But therein lies its truly addictive quality. This is the kind of game that sweeps you into an altered state--after six or seven games your head spins when you try to get up. The sound effects are hypnotic, and when it ends, you can feel the jolt.

What happens when you mix an "adventure-style" game with an "arcade-style" game? J-V Software attempts an answer to this question with **ACTION QUEST**. Rather than entering coded or text commands, as one would expect with a conventional adventure program, this game is played solely with joystick and trigger. Each room poses a new challenge and a new puzzle, as you attempt to collect all the treasures in the shortest time. If you successfully complete a level of rooms, you arrive at the next, more difficult, level. The play-value of this program won't diminish until you've reached the thirtieth room, which shall take quite some time to accomplish this.

In the next ATARI ARCADE: **KRAZY SHOOT-OUT**, the first third party ROM cartridge for the Atari computer, and **REAR GUARD**, from Adventure International. ■

FREE
Adventure
 on disk or cassette
 when you subscribe to

SoftSideTM Magazine



SoftSide is a favorite of computer users and hobbyists alike. They rely on it as a prime source of programs, reviews and articles for the AppleTM, ATARI[®], and TRS-80[®] microcomputers.

SoftSide is the magazine for the microcomputer owner who wants to learn BASIC programming, learn MORE about BASIC programming, or just wants to have FUN!

SoftSide gives you the BASIC code listings of several programs — adventures, utilities, games, simulations, you name it — for your computer EVERY MONTH.

Use coupon below to order. Mail to: **SoftSide** Publications, 6 South St., Milford, NH 03055.

Adventures to choose from:



Alien Adventure

You are the sole survivor of a crew on a mission to deliver a cargo of oil to Earth. A crash landing has left you stranded on a small planet, harshly alien but rich in lead, gold and platinum. You must find provisions and a means of leaving the planet. But beware of the THING that massacred your crew!

Jack The Ripper Adventure

Jack the Ripper is running rampant in London and you must stop him! Scotland Yard demands that you take action, and the only answer is to set yourself up as a decoy. Be careful how you plan your costume, or dear Jack will laugh hysterically and leave you in the dust!



YES! Send me a FREE Adventure with my subscription to SoftSide at the special offer of \$24 yr. for 12 issues (\$12 savings over newsstand price.)

Please specify which computer:

- Apple (req. 24K for tape, 32K for disk)
 ATARI[®] (req. 32K for tape, 40K for disk)
 TRS-80[®] (req. 16K for tape, 32K for disk)

Check one: Disk Cassette

Adventures: (check one)

Alien Jack The Ripper

Name _____

Address _____

City/State _____ Zip _____

Check/Money Order MasterCard VISA

Name of Cardholder _____

Card # _____

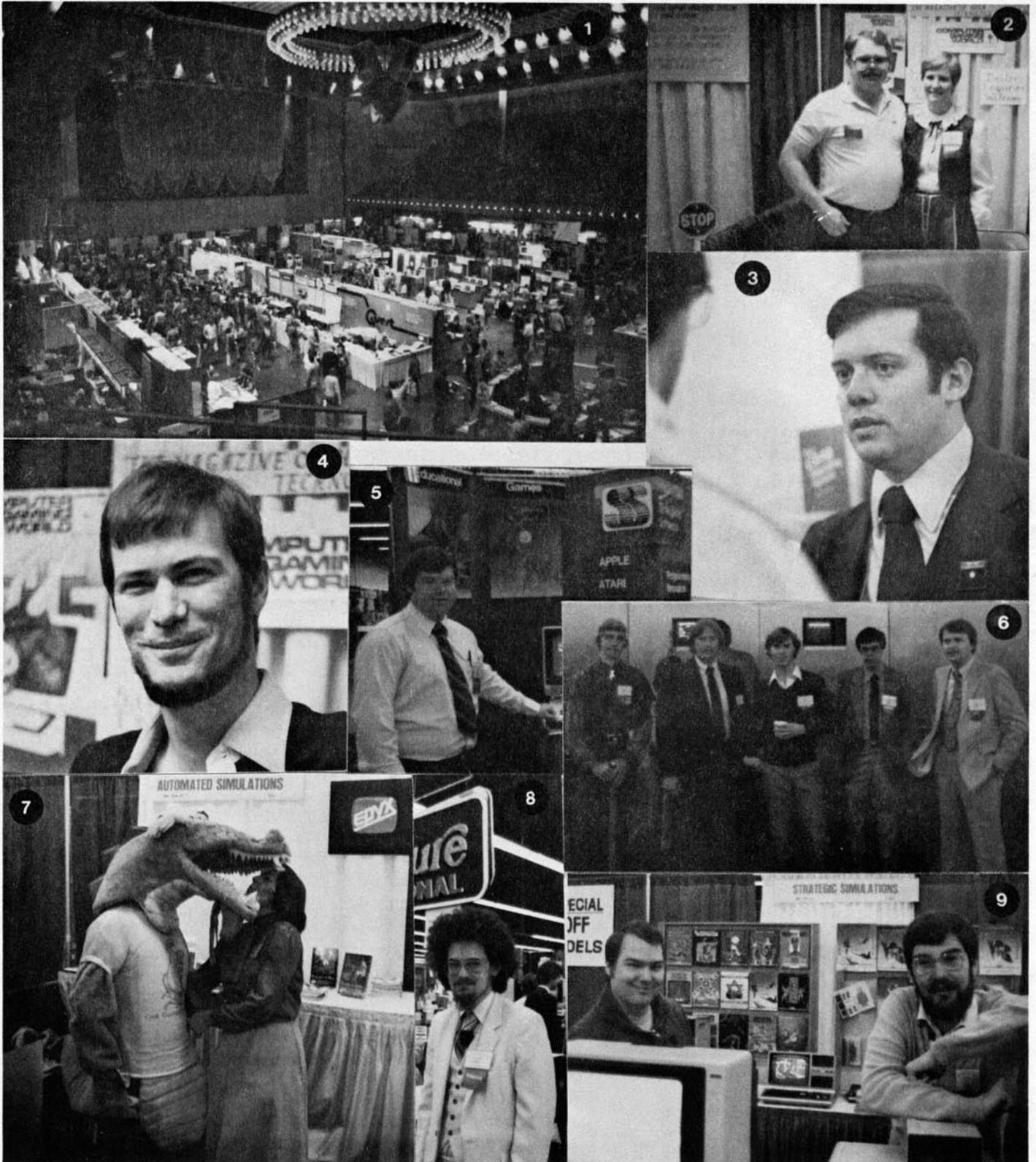
Signature _____

Please allow 6-8 weeks for delivery

AppleTM, ATARI[®] and TRS-80[®] are registered trademarks of The Apple Computer Company, Warner Communications and The Tandy Corporation respectively.

Offer Expires June 30, 1982

SOME SCENES FROM THE 7TH WEST COAST COMPUTER FAIRE





1. A view of the main floor. Most companies were on the Brooks Hall level (one level down).

2. Russell Sipe (editor of CGW) and Suzanne Sipe (head of operations). "Suck in your belly" she said. "I am" he whispered back.

3. Bruce Webster, Silicon Cerebrum author.

4. Bob Proctor, one of our most prolific writers.

5. Will Clardy of Synergistic Software.

6. The gang at On-Line. From the left: Lord British, Ken Williams, John "Don't get the red in my blood shot eyes" Williams, Paul Malachowski, and Kevin Cooper.

7. Goshilla (alias Chris Moehrke) finds a morsel to his liking in Joyce Lane, advertising director at Automated Simulations.

8. Scott Adams at the Adventure International booth.

9. Paul "Warp Factor" Murray (left) and Joel Billings at the Strategic Simulations booth.

10. Chris Crawford of Atari Computer.

11. John Lyon of Strategic Simulations.

12. Left to Right: Mike Abbot, Russell Selph and Jim Nitchals of Cavalier Computer.

13. Dave Gordon (right) and Norm Baker, big wheels at Data Most.

14. Detail of the Adventure International booth.

15. A crowd at the Sirius Software booth.

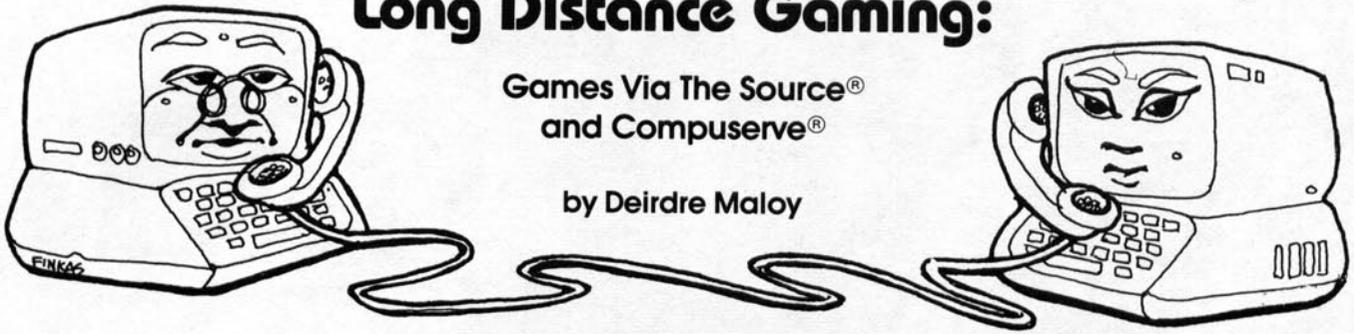
16. Ted "Quick, snap the picture, I can't be charming all day" Gillam of TG Products.

17. The Adventure International booth.

Long Distance Gaming:

Games Via The Source®
and Compuserve®

by Deirdre Maloy



Gaming by phone is nothing new. Due to advances in telecommunications, national networks are rapidly becoming more popular. Although there are many networks, most are special interest, and have only a couple of phone numbers in the country--the major cost is the phone bill for these. There are two *general purpose* networks open to nearly everyone--**Compuserve** and **The Source**. Both provide a much broader area of service than simply games, but this article will concentrate principally upon their games.

Signing up is fairly simple--for The Source, see a large (or even reasonably sized) computer dealer. The biggest disadvantage to The Source is the one-time sign-up fee (of gasp) \$100. However, I feel it is well worth it. You must write Compuserve to get their service (5000 Arlington Centre Boulevard, Columbus, Ohio 43220). For a fee, they will give you an account number and password which allows you to hook up. You will need, at the very least, a terminal and a *modem*. Though, you may need more, depending on your own system. The Source is more expensive, but I haven't heard anyone yet who, having used both systems, preferred Compuserve. After the sign-up, the two networks are approximately equal in cost.

There are many games duplicated (or very similar) on both networks. These are: *Adventure* (the classic Crowther and Woods); *Blackjack*; *Civil War* (a simulation); *Mastermind*; *Football*; *Golf*; *Hangman*; *Lunar Lander*; *Star Trek*; *Backgammon*; *Craps*; *Chess*; *Hammurabi* (where you get to be the ruler of an ancient civilization--planting crops, and feeding the population); *Maze* (generation) and *Wumpus* (hunt it--bats, pits, and the wumpus).

In addition, Compuserve has the following game programs: *New Advent* (A 750 point version of *Adventure*); *Fantasy* (a game I had trouble finding how to play--it appears to be some kind of adventure or war game); *Gomoku*; *Space War*; *Concentration*; *Cube Solver* (a real sanity aid); *Furs* (fur trading in eighteenth-century Canada); *Decwars*; *Real-Time Trek*; *Scramble*; *Scott Adam's Adventure*; *Othello*; *Pirates* and my favorite advice column--*Aunt Nettie*.

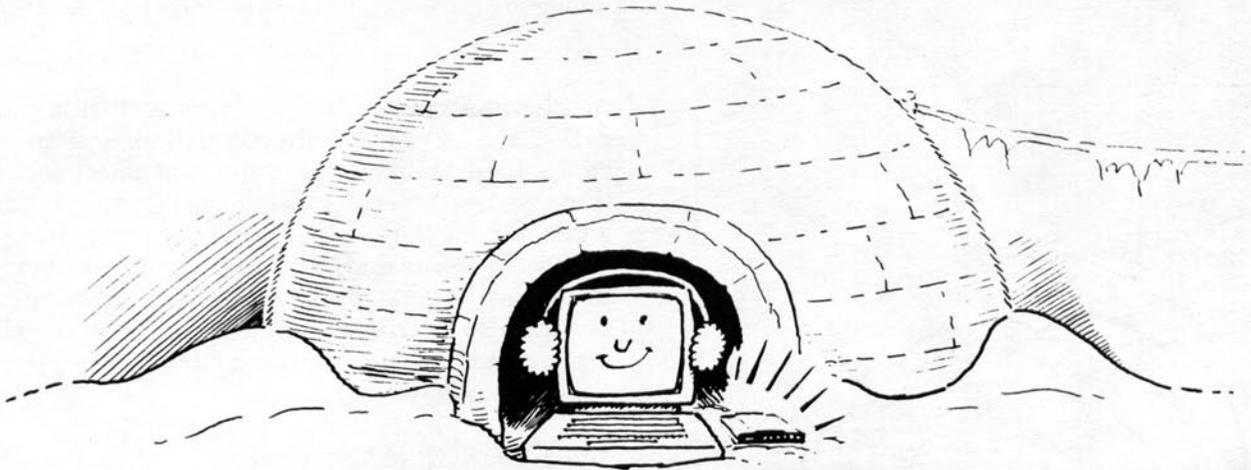
The Source has *Blackdragon* (Wizardry-type game); *Super Blackjack*; *Bridge*; *Poker*; *Checkers*; *Farmer*; *Splgam* (A spelling quiz); *King* (rule the Setats Detinu. A modern version of *Hammurabi*); *Horse Race*; *Iching*; *Iqtest*; *Life* (keep your colonies alive); *Market* (market a product); *Nim*; *Nim2*; *Watchman*; *Pica*; *Pits* (another adventure-type game); *Sumer*; *Scorefour*; *Sinners* (lots of fun!! Try and get the three devils in a line); *Slalom*; *Onearm* (a slot machine game); *Sonnet*; *Dates*; *Adv550* (A 550 point version of *Adventure* with an improved command parser); *Target Practice*; *Qubic*; *Estic* (Tic Tac Toe in Spanish); *Toro*; and (whew!!) *Vegas*.

In addition to the games they already have, both are open to new ones. Also, many users are dedicated gamers (computer and otherwise)--there are tons of *Wizardry* players listed in the User Directory on *The Source*.

In addition to traditional games, The Source has *Post*--basically a classified bulletin board. Categories of interest here are: *Apple*, *Atari*, *Chatter* (lots of strange stuff in this one!!), *Clubs*, *Fairs-and-Festivals*, *Games*, *Heath*, *Hobbies-and-Crafts*, *Hug* (Heath Users Group), *IBM*, *NEC*, *Osborne*, *OSI*, *PET*, *Puzzles*, *Sayings*, *TRS-80*. There are many more categories, with more on the way.

Also, The Source has *Chat*--lots of fun. *Chat* is a command that lets you talk with another user. You can find out who is currently on the system by typing *Online*. Then, you can chat with someone by typing *Chat* followed by their account number. There are also ways of blocking out *Chat* in case you don't want to be bothered by motor-mouths (fingers??).

There are many possibilities in gaming via modem. The only real disadvantage (other than cost and baud rate) is that the network cannot take advantage of a particular machine unless it only caters to that machine. Thus, graphics are something we may never see on remote games, nevertheless, the games are enjoyable, and the networks puts you in touch with gamers you might not have known otherwise. ■



NOW YOUR COMPUTER CAN MAKE PERSONAL-TO-PERSONAL PHONE CALLS.

A Hayes modem makes it possible.

Your personal computer could be doing a lot more for you. It could be communicating over ordinary telephone lines with any location in North America... any time of the day or night. With the help of a Hayes modem (Smartmodem™, Micromodem II™ and Micromodem 100®), you can send and receive reports from your home or office, and exchange messages or programs with personal computer owners hundreds of miles away. You can even get the stock reports, today's *Washington Post*, airline schedules and movie reviews by subscribing to one of several information utilities. The possibilities seem endless. Modems are clearly the way of the future. And Hayes leads the way — today!

Smartmodem is a smart buy.

When it comes to features and performance, Smartmodem tops the 300-baud modem market. With the Smartmodem, your IBM Personal Computer, TRS-80 Model II™, XEROX 820 — or any computer

with RS-232C I/O — can communicate with all other computers using Bell 103-type modems. Smartmodem can answer calls, dial numbers, receive and transmit data, and disconnect... all automatically.

Many cheaper modems connect to a telephone receiver, which can cause distortions and transmission losses. Smartmodem plugs right into your telephone jack... no phone needed! And thanks to an internal speaker, you can actually listen to your connection being made. That way you'll know immediately if the line is busy or if you reached a wrong number.

No wonder Smartmodem is, well, a

smart modem. And it stacks neatly atop other Hayes peripherals, like the Hayes Stack Chronograph™ RS-232C calendar/clock.

Micromodem II... exclusively for Apple II* owners. The same quality and automatic features associated with Hayes Smartmodem are built right in the Hayes direct-connect Micromodem II. It's easy to see why more Apple II owners choose



Hayes

Hayes Micromodem II than any other modem in the world.

Don't settle for anything less than Hayes... Smartmodem, Micromodem II and Micromodem 100 for S-100 bus computers. Available at computer stores nationwide.

Put your personal computer on the line!

I'm ready to talk! Please send info on:

- Smartmodem Micromodem 100
 Micromodem II Chronograph

Name _____

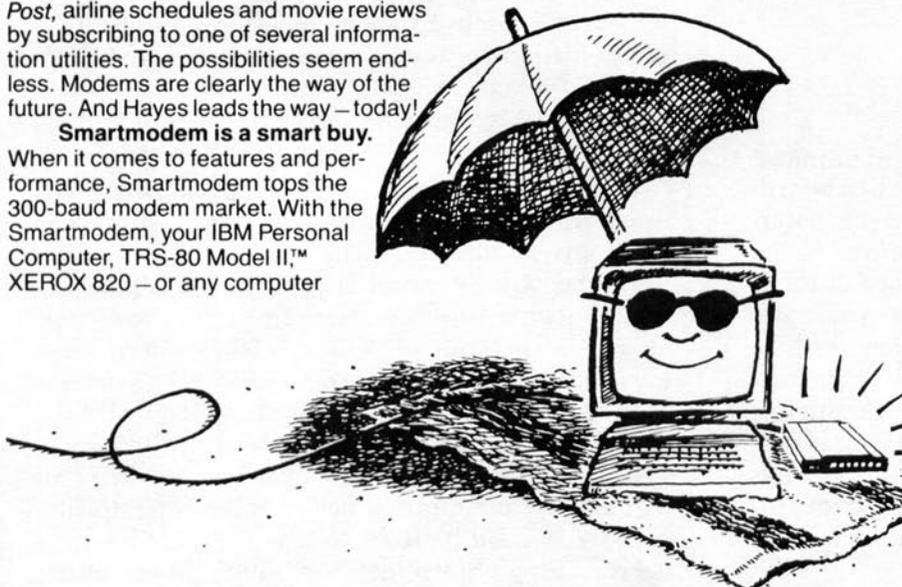
Address _____

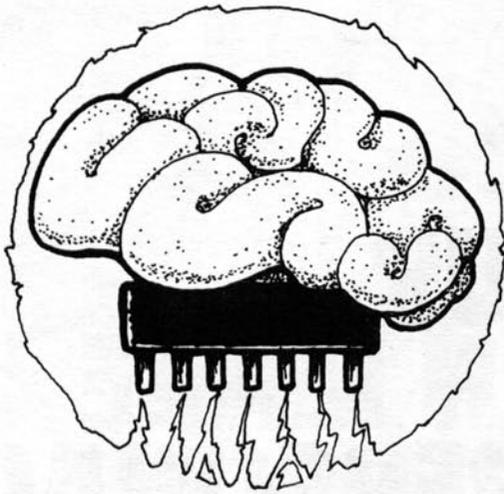
City _____

State _____

Zip _____

MAIL TO: Hayes Microcomputer Products
5835 Peachtree Corners East
Norcross, Georgia 30092
OR CALL: (404) 449-8791





THE SILICON CEREBRUM

by Bruce Webster

MAP WEIGHTING

The most critical component in a board game is the board. The most difficult component of a board game to simulate (not just represent) on a computer is the board; especially if the program has to be able to "read" it in order to move or place units. I ran into these principals when, for a graduate class in artificial intelligence, I was required to write a program which would play GO against other programs. The board in GO is simplicity itself -- a rectangular grid, with non-moving black and white stones placed on the intersections -- and yet it was extremely difficult to get my program to "see" moves and patterns that were immediately apparent to my novice glance.

The same problems exist with almost all games

involving a map or board of any sort. It is often called the "Cyclops" problem, referring to the computer's ability to see only one small section (hex, square, intersection) of the board at a time, while we blithely take the whole thing in at a glance. Patterns and situations which are obvious to us can be amazingly difficult for a computer program to "perceive." And so we must develop certain tools and techniques to help our programs to see just what's happening.

INFLUENCE MAPPING

Since it is easy for a program to examine one map location at a time, one solution to the Cyclops problem is to somehow put information about the entire map into each location. In other words, each location would contain a value or values that let the program know something about that location with respect to the entire board.

One such technique has been developed for the game of GO (Uhr, 1973; Zobrist, 1969). GO is a highly visual game. In it, players must carefully scrutinize the board in order to detect both global and local patterns and influences...precisely the type of effort with which computers have so much trouble. Zobrist, in trying to create a program to play GO, used a simple but effective method for what he called "perceptual grouping," i.e., being able to "see" how the groups of stone influenced one another. His program uses another array the same size as the board (19 by 19). First, it sets all locations equal to zero. It then places a positive value (50) in each location corresponding to a black stone and a negative value (-50) in each corresponding to a white stone. The program then makes a new copy of the array, with each new location receiving its old value modified by the four locations adjacent to it. The value is increased by one for each adjacent location containing a positive (non-zero) value and decreased by one for each adjacent location containing a negative value. The new array becomes the old one, and the update process is repeated several times.

This technique produces an array showing how much influence each side -- black and white -- has on a given location. The sign of the number indicates who is controlling it (black is positive; white, negative), while the magnitude shows how strong is the control. Values close to zero show locations that neither side really controls. Portions of the map containing adjacent locations all of the same sign indicate territories controlled by a given side, while adjacent locations of different signs show boundaries between such territories. Finally, counting all the locations on the board of a given sign shows just how much on the entire map each side controls.

USE IN WARGAMES

I've been playing around with this method to see how much it could help with computer wargames, and I think that it could be very useful. Here's an example. *Figure 1* shows an extremely simple wargame-like situation. Terrain, ranged combat, and unit types have been ignored for the sake of simplicity. Each side has the same number of pieces, all of which have an equal amount of influence. For the sake of discussion, let's call the units which point to the left "bosons" and those that point to the right, "quarks".

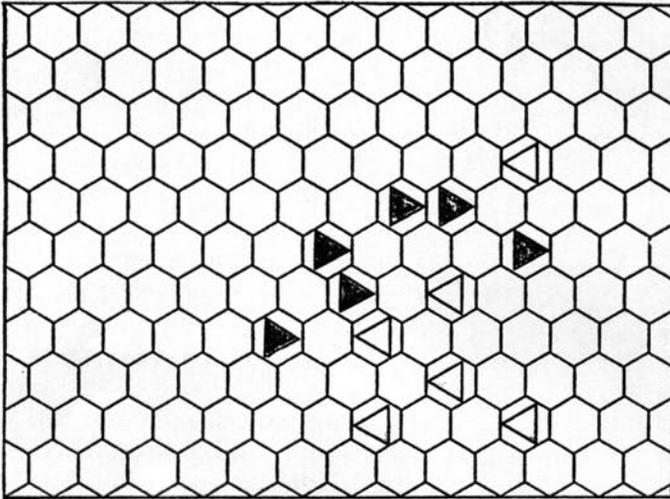
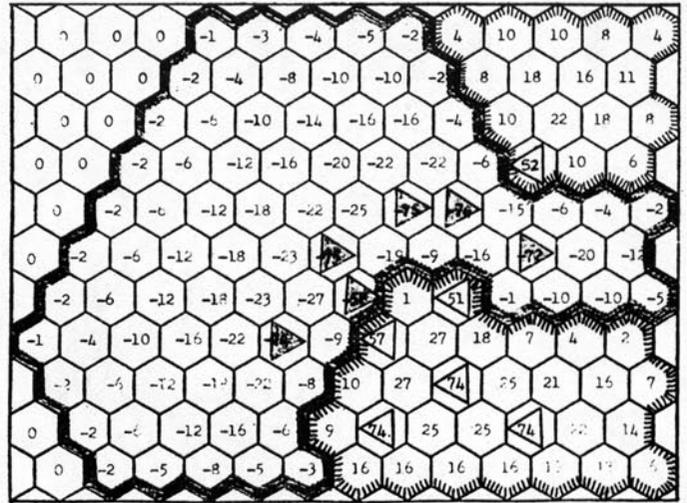


Figure 1.

As you examine the board, a number of points come to your attention. The bosons in the lower right corner have what looks to be a fairly strong position. The quarks also have a fairly tight formation and appear to have walled the bosons into a relatively small area of the board. Finally, the boson in the upper right corner has been cut off from the rest of his group and is not in a very strong position at all.

You probably had very little trouble extracting this information from *Figure 1*. Indeed, most of it would have been apparent at a glance. Think of how difficult it would be to get a program to "see" all that! And yet that information would be very valuable in helping the program to decide what to do next.

Figure 2 shows the results of applying the perceptual grouping algorithm to the same situation. Each location containing a boson was given a value of 50, while each quark location was set to -50; all others were set to zero. The only difference is that each location here has six neighbors, not just four. The update portion of the algorithm was executed five times, which was enough to show boundaries between quark and boson territory but not enough to extend the quark territory all the way to the left side of the board.



As you can see, this very simple method confirms our three observations. The main group of bosons have a strong position but control little territory compared to the quarks. All of the quarks are secure, and the boson in the upper right corner is indeed cut off from the others. It also shows that the uppermost boson of the main group is in an exposed position. It has the lowest location value of all the bosons, and the hexes to the left and right of it are pretty much "up for grabs."

CONCLUSIONS

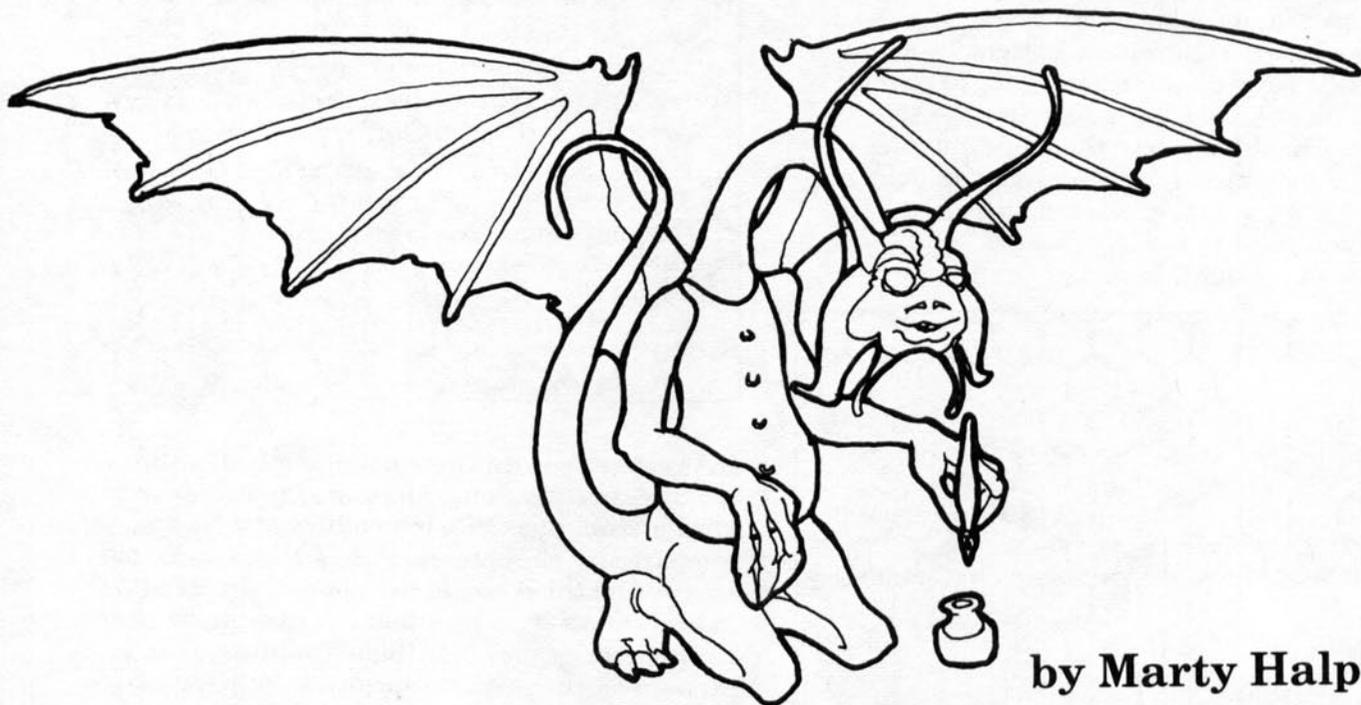
This technique is easily implemented -- I wrote a quick-and-dirty version of it for this article in just an hour or two -- but from it two questions arise. First, in what ways can a program use this information? Second, what about factors like terrain, movement, combat, and unit differentiation? Well, those are precisely the questions I plan to cover in the next few columns. In the meantime, if you have additional questions or would like actual program listings, feel free to write. If you want listings, be sure to state what language you're using (BASIC, FORTH, Pascal, an assembly language, etc.), and I'll try to tailor my response to fit your needs. I can be reached at:

Bruce F. Webster
9264 Grossmont Blvd.
La Mesa, CA 92041.

REFERENCES

- UHR, LEONARD, *Pattern Recognition, Learning, and Thought*. Englewood Cliffs, N.J.: Prentice-Hall, 1973. Chapter 12 discusses GO and Zobrist's approach.
- ZOBRIST, A. L., "A model of visual organization for the game of GO," AFIPS Conf. Proc., 1969, 34, 103-112.

“To scroll across the monitor of life...”
JABBERTALKY, IN DEPTH



by Marty Halpern

BASIC INFORMATION

NAME:	Jabbertalky
TYPE:	Programmable Word Game
SYSTEM:	Apple II; TRS-80
FORMAT:	Disk (Both); Tape (TRS-80)
# PLAYERS:	1-6
AUTHOR:	Norman D. Lane; Bernie DeKoven
PRICE:	\$29.95
PUBLISHER:	Automated Simulations P.O. Box 4247 Mountain View, CA 94040

When Lewis Carroll first published *Through the Looking Glass* in 1871, I am sure that even in his wildest dreams, he never imagined that his nonsense poem about the “Jabberwock” would, more than 100 years later, form the story line for an educational computer game. JABBERTALKY is Automated Simulations’ programmable word game, published under their new label, *Mind Toys*.

The story begins with young Alice as she boots the game diskette and is transported to the realm of Jabbertalky, with the Jabbertalker as her guide.

Immediately she is confronted with “The Great Door” and must choose which land to enter – Free Verse, Alphagrammar, Cryptogrammar, or Jabbergrammar.

Choosing what she hopes will be the safest, Alice enters Free Verseland. It is here that Alice must make her second decision, whether or not to choose a special vocabulary. Being the beginner that she really is, Alice decides not to do anything “special” just yet.

(Note: In an earlier interview with the Jabbertalker, I learned that there are, in fact, three vocabularies from which to choose – *General*, *Headline*, and *Vocab*. To choose no special vocabulary is the same as choosing *Vocab*, for this is the language in which the Jabbertalker normally speaks. Hint: The three vocabularies are text files; selecting any other file from the catalog will bomb the program and the disk will have to be re-booted. Also, to load any one of these vocabularies requires nearly two full minutes so the Jabbertalker advises the player to have patience while the disk drive whirs and stops, whirs and stops...)

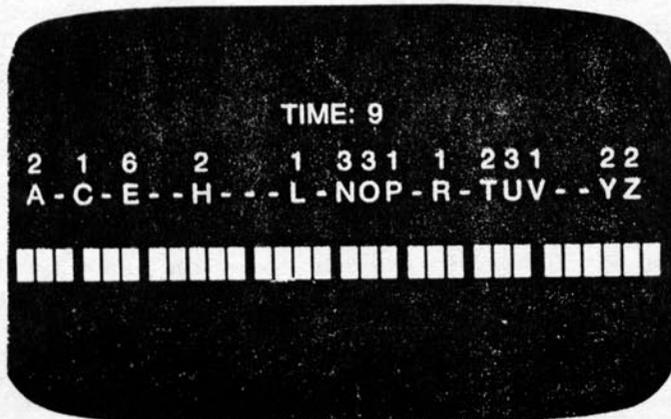
This is indeed a time for decisions as Alice is faced with another question. She must now select the level of difficulty of the game, ranging from “1” to “8” (most difficult). Remembering once again that she is just a beginner, Alice chooses Level 1.

Immediately the monitor goes blank, and then words begin to appear as the Jabbertalker writes

out his very silly, illogical (though always grammatically correct) sentences. By increasing the level of difficulty of the game, Alice learns that the vocabulary and sentence structure also increase in difficulty. In fact, by the time the Jabbertalker reaches Level 8, he is simply beside himself and gushes forth with this sentence: "In the weapon of the parent's only deceiver is the noblest kernel of doom."

Whew! Tiring of all this nonsense, Alice interrupts the Jabbertalker by hitting the space bar and once again finds herself before "The Great Door."

This time Alice chooses *Alpha Grammarland*, as she types in the appropriate key. The screen changes, and before her eyes appear a series of blotches and spaces in a kind of pattern. Above the blotches are letters (all in alphabetical order), and above each letter is a number. Alice thought and thought and then realized that Alpha Grammar is a lot like the game "Hangman" which she played when she was much younger. The Jabbertalker has provided her with a sentence pattern and she must fill in the blotches with the correct letters from those given. When a letter is placed in its proper space within the sentence, it is removed from the listing above. The Jabbertalker even keeps track of the incorrect letters Alice tries so that time isn't wasted by trying the same letter more than once.



(Note: The Jabbertalker, old and wise as he is, has no need to worry about time. But, he does make the player work against time, starting at "10" and decreasing. However, the Jabbertalker informed me that the player could simply ignore the time, because when time runs out it automatically restarts at "10" and decreases again and again. This will, of course, affect your score, but then who's counting anyway.)

Finally, Alice completes her very first Alpha Grammar sentence. It took much longer than she had thought, but she knew that practice would

increase her speed as she became more familiar with the Jabbertalker's vocabulary. With these thoughts of confidence dancing in her head, Alice ventured forth into Cryptogrammarland.

However, the journey from this point on will become rather difficult for young Alice. So, as not to discourage her in continuing her discoveries, we will leave her at this point and press on ourselves...

In *Cryptogrammar*, we are confronted with sentences in which each letter of the alphabet is substituted for another letter. At Level 1, for example, you might see a sentence that looks like this:

LF VHMMHXVG ODUGDJ HV FDCJ
QQHXVG QXG.

Pressing the "S" key calls up the question -- "Swap which two letters?"--and in this manner the player begins deciphering the sentence. Swapping an "H" for an "I" will change all "H's" in the sentence to "I's" and vice versa. Should you try to swap an incorrect pair of letters, the Jabbertalker will be most happy to inform you that you are "wrong", but at the first level only! Beyond that, he will let you swap whatever pairs of letters you wish, no matter how silly the swap turns out to be.

(Hint: At Level 1, at least, keep a written list of all correct swaps. If you swap an "H" for an "I" and then later forget that you made this swap, the Jabbertalker will let you swap back the "I" for an "H". Remember, it is still a correct swap but you will end up back where you started. Beyond Level 1, however, you are on your own.)

At the higher levels of difficulty, the Jabbertalker becomes even more cryptic. Two additional command keys become available, "F" (Flip) and "M" (Move). When the cursor is placed at the beginning of a word and the "F" key is depressed, the word is reversed. For example, if the deciphered word is "REYWAL," the "F" key will flip it to "LAWYER". Also, there is a distinct possibility that a space or two might be missing from a sentence. This means that what appears to be a very long word may turn out to be two smaller words (and one of them may be flipped, too!). Pressing the "M" key will add a space wherever the cursor is positioned within the sentence.

Of course, the more difficult levels use a more challenging vocabulary, and don't forget that the time keeps running, too. In the end, should you give up on a cryptogram and seek the Jabbertalker's help, simply press the "ESCAPE" key and he will reveal the true answer. This will work for any Alphagram, too.

(Note: In both Alphagrammar and Cryptogrammar, the player has the option to review the many vocabulary lists from which the sentences are

constructed, as an aid in deciphering the sentences. However, I found this to be of little help. If you believe the word you seek is a noun, then there are four lists (more, if you choose a special vocabulary) to review, each list containing a dozen or so words. Knowing the first letter of the word will, of course, narrow down the words from which to choose. Also, if one is indeed playing against the clock, this process is most time consuming.)

Oh! Yes. The solution to the aforementioned cryptogram sentence is:

MY SILLIEST DOCTOR IS YOUR HAPPIEST
PET.

And finally, to enter *Jabbergrammarland* is to enter the home of the Jabbertalker, for it is here that we find the necessary tools for creating our own special vocabulary.

The instruction booklet follows Alice step by step as she creates her own vocabulary, entitled *Headline*. I found some of the steps to be a bit steep, so beware of stumbling.... The player may want to load *Headline* from the game diskette and experiment with the editing commands to become familiar with this particular mode.

(Note: Alice is a VERY contemporary individual, for she is both socially and politically aware. Her *Headline* vocabulary, at the higher levels of dif-

ficulty, contains such words as "Spokesperson," "Gay Lib," "ERA," "Abortion," "PLO," "ABSCAM," and "Marijuana." Indeed, "Headline" is a most apropos title for such a vocabulary.)

Now, to create one's own vocabulary. Enter the "Edit Vocabulary" mode of *Jabbergrammar* and you will see a listing of all the editing commands at the top of your screen. The "Show List" command will reveal any word or syntax list of your choosing. Each letter of the alphabet represents a word list, and each number from "0" through "9", a syntax list. In the case of *Headline*, an "A" will call up the list of "Things", whereas "B" represents "Acts", and "1" is "Noun Phrases (Person)."

Getting started on a new vocabulary: Select List "A" and the Jabbertalker will reply that the list is "empty". Now, begin inserting appropriate words for that list. You can choose any level of difficulty, between "1" and "8", for each word. If you do not enter a specific level of difficulty for a word, the Jabbertalker will automatically enter it as *Level 1*. Also, all words are automatically alphabetized within each level in a list. If you make an error, or simply wish to remove a particular word from a list, there is a *Delete* command for this purpose.

(Hint: The words contained in each list MUST be of the same class -- nouns, verbs, adjectives, etc. -- for your vocabulary to be successful.)

A *Print* option is available for producing a hardcopy of your special vocabulary. There is also a *Save* option for saving your special vocabulary on the disk. Unfortunately, no provision exists for creating a separate text file diskette.

(Hint: Just before saving your special vocabulary, remove the game diskette from the disk drive and insert an initialized blank diskette. You can save and call up your special vocabulary in this manner.)

Should you choose to save your special vocabulary on the game diskette itself, there is no option for deleting the vocabulary except word by word, list by list.

But don't think you are finished now, you've still got a long way to go. The Jabbertalker does NOT create sentences from your vocabulary alone, you must also give him the sentence structures. After creating your vocabulary, you must then create master sentence patterns and phrases -- the syntax lists! For example, a master pattern might be

1/A/I/ B/IS A/3./.

The "/" key is used to tell the Jabbertalker where to punctuate, when to add possessive, prefixes, suffixes, etc. Anything given between the slashes will be printed as is. This is also how words like "the", "an", "is", and "a" are added to sentences.

Continued on p. 37

Fascination Software

"FEATURING ALL SOFTWARE AT 25% DISCOUNT"

SELECTED APPLE® PROGRAMS

Amoeba Man _____	26.25	Microwave _____	26.25
Arcade Machine _____	33.75	Minotaur _____	26.25
Atlantis _____	30.00	Missing Ring _____	22.50
Bandits _____	26.25	Mouskattack _____	26.25
Borg _____	22.50	Photar _____	22.50
Bug Attack _____	22.50	Pinball _____	22.50
Cyclod _____	22.50	Planetoids _____	18.75
Dung Beetle _____	22.50	Space Rescue _____	22.50
Eliminator _____	18.75	Star Blaster _____	22.50
Empire II _____	24.75	Star Blazer _____	24.00
Fly Wars _____	22.50	Swashbuckler _____	26.25
Guardian _____	22.50	Time Zone _____	74.95
Jellyfish _____	22.50	Track Attack _____	22.50
Kabul Spy _____	26.25	Twerps _____	22.50
Lemmings _____	22.50	Ultima II _____	41.25
Marauder _____	26.25	Warp Destroyer _____	22.50

We Sell ALL Apple® or Atari® Software at 25% discount. Call or write for FREE CATALOG. Telephone calls are given \$1.00 CREDIT to pay for the call.

Fascination Software

P.O. BOX 1299
BREA, CA 92621
(714) 595-4504
(714) 529-0782

Pay by M.O., cashier check, MC or VISA (include card # and exp. date), personal checks (allow 10 days), or C.O.D. (add \$1.50). Include \$2.00 shipping. CA res. add 6% sales tax.

ATTENTION ALL DUNGEON MASTERS!

SEE, HEAR, AND EXPERIENCE THE SPELL BINDING MAGIC OF COMPUTER FANTASY SIMULATION. JOURNEY DOWN DEEP, DARK, DAMP CAVES, PROTECTED ONLY BY A MAGIC SWORD, PLATE ARMOR, OR ENCHANTED VILES AND POTIENTS...

SEARCH OUT AND DESTROY KOBOLDS, DRAGONS, GOBLINS, TROLLS, AND ORCS. USE YOUR STRENGTH, MAGIC SPELLS, COURAGE, CHARISMA, CUNNING, AND WISDOM. SURVIVE THE JOURNEY...LIVE TO TALK ABOUT IT!

THE **APPLE II COMPUTER** AND YOUR TREK TO THE DEEPEST MOST REACHES OF YOUR IMAGINATION...

FOR ALL YOUR D & D, ADVENTURE, AND STRAGEGY NEEDS, WRITE FOR A COMPLETE DIRECTORY OF IMAGINATION SOFTWARE:

TECH-3

BOX 697
BREA, CA. 92621



THE GREATEST BASEBALL TEAM OF ALL TIME — TOURNAMENT RESULTS

THE RESULTS

In our first issue (Nov.-Dec.1981 - 1.1) we announced a computer baseball tournament to determine the greatest team in history. Called THE GREATEST BASEBALL TEAM OF ALL TIME (GBTOAT) TOURNAMENT it pitted eight great teams of the past in a contest to determine which was the best. A book entitled COMPUTER SPORTS MATCHUPS (by Julian E. Compton, Tempo Books, 1981, \$2.50) held a similar tournament in which the 1927 Yankees came away winners. The GBTOAT tournament uses the same teams as Compton's book (i.e. 27 Yanks, 31 Athletics, 48 Indians, 61 Yanks, 55 Dodgers, 36 Yanks, 34 Cards, 76 Reds). Our readers were encouraged to use either SSI's COMPUTER BASEBALL or Avalon Hill's MAJOR LEAGUE BASEBALL to play the tournament.

After playing the tournament in the offices at CGW I can attest that there is a LOT of work involved. I am pleased therefore, that three other readers took the time to play the tournament out to conclusion (other readers started but never finished). Here are the results.

COMPUTER GAMING WORLD'S REPLAY OF GBTOAT TOURNEY

The first match up of round I saw the 1931 Philadelphia Athletics knock off the favored 1927 New York Yankees 4-2. Babe Ruth hit three homers but one was in a rained out game and thus did not count.

31 ATHLETICS VS. 27 YANKEES

#1— N.Y.	10	PHIL.	6
#2— N.Y.	10	PHIL.	3
#3— PHIL.	8	N.Y.	6
#4— PHIL.	6	N.Y.	5
#5— PHIL.	8	N.Y.	7
#6— PHIL.	12	N.Y.	8

Batting Leaders:

Avg.— Earle Combs (NY)	.518
HR— Babe Ruth (NY)	2
Jimmie Foxx (Ph)	2

Also in first round action, the 1948 Indians defeated the 1961 Yankees. Roger Maris hit two game-winning home runs in a losing cause.

48 INDIANS VS. 61 YANKEES

#1— CLEV.	9	N.Y.	3
#2— CLEV.	4	N.Y.	0
#3— N.Y.	5	CLEV.	3
#4— N.Y.	2	CLEV.	1
#5— CLEV.	10	N.Y.	3
#6— CLEV.	4	N.Y.	3

Batting Leaders

Avg.— Lou Boudreau (Clev)	.423
HR— Roger Maris (NY)	3

The 1955 Brooklyn Dodgers won their first round contest with the 1936 New York Yankees thus eliminating any chance for a Yankee team to win CGW's version of GBTOAT.

55 DODGERS VS. 36 YANKEES

#1— N.Y.	6	BRKL.	5
#2— N.Y.	2	BRKL.	1
#3— BRKL.	8	N.Y.	0
#4— BRKL.	2	N.Y.	1
#5— BRKL.	7	N.Y.	6
#6— N.Y.	6	BRKL.	2
#7— BRKL.	3	N.Y.	2

Batting Leaders

Avg.— George Selkirk (NY)	.428
HR— Lou Gehrig (NY)	3
Duke Snider (BK)	3

The final first round series pitted the 1934 Gas House Gang Cardinals against the 1976 Big Red Machine Cincinnati Reds. Both teams turned in great offensive performances with team batting averages of .321 (Reds) and .316 (Cardinals). The Reds also took the series.

1976 REDS VS. 1934 CARDINALS

#1— CINN.	5	STL.	3
#2— CINN.	5	STL.	4
#3— STL.	9	CINN.	7
#4— STL.	8	CINN.	7
#5— STL.	9	CINN.	3
#6— CINN.	9	STL.	4
#7— CINN.	9	STL.	6

Batting Leaders

Avg.— Ken Griffey (CN) .483
 Joe Medwick (SL) .464
 HR— Pete Rose (CN) 2
 Tony Perez (CN) 2

In second round action the 1931 Athletics downed 1948 Indians in seven games.

1931 ATHLETICS VS. 1948 INDIANS

#1— PHIL.	14	CLEV.	3
#2— CLEV.	5	PHIL.	2
#3— CLEV.	7	PHIL.	3
#4— PHIL.	15	CLEV.	1
#5— PHIL.	6	CLEV.	5
#6— CLEV.	2	PHIL.	1
#7— PHIL.	8	CLEV.	4

Batting Leaders

Avg.— Al Simmons (PH) .538
 Mule Haas (PH) .533
 HR— Al Simmons (PH) 4

The other second round series resulted in a 4-1 series win for the 1976 Cincinnati Reds over the 1955 Brooklyn Dodgers. Gary Nolan and Jack Billingham each pitched a shutout against the Dodgers and led their team to an amazing team ERA of 1.36.

1976 REDS VS. 1955 DODGERS

#1— CINN.	2	BRKL.	0
#2— CINN.	6	BRKL.	1
#3— BRKL.	4	CINN.	2
#4— CINN.	7	BRKL.	2
#5— CINN.	3	BRKL.	0

Batting Leaders

Avg.— Tony Perez .588
 HR— Gil Hodges (BK) 2

In the exciting finals the 1931 Philadelphia Athletics defeated the 1976 Cincinnati Reds in seven games to win the GBTOAT tourney played at CGW. The seventh game was an extra-inning thriller in which the lead changed hands three times. After the Athletics jumped out to a 4-1 lead George Foster hit a two run homer in the 5th to make the score 4-3. Joe Morgan followed in the 7th inning with his fourth homer of the seven game series—a two run shot that put the Reds on top. The A's tied it up in the 9th and sent the game into extra innings. The A's loaded the bases with no one out in the 10th but were able to push across only one run. However, this turned out to be enough as the Reds left a runner in scoring position when Cesar Geronimo drove Bing Miller to the warning track with the last out of the game.

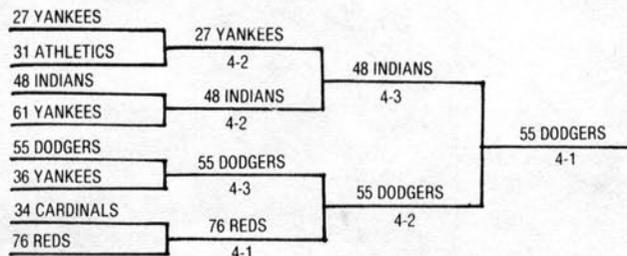
1931 ATHLETICS VS. 1976 REDS

#1— PHIL.	8	CINN.	1
#2— CINN.	6	PHIL.	1
#3— PHIL.	4	CINN.	3
#4— CINN.	11	PHIL.	4
#5— PHIL.	16	CINN.	0
#6— CINN.	4	PHIL.	3
#7— PHIL.	6	CINN.	5

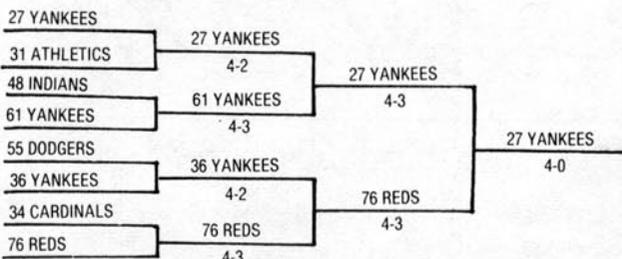
Batting Leaders

Avg.— Al Simmons (PH) .484
 HR— Joe Morgan (CN) 4

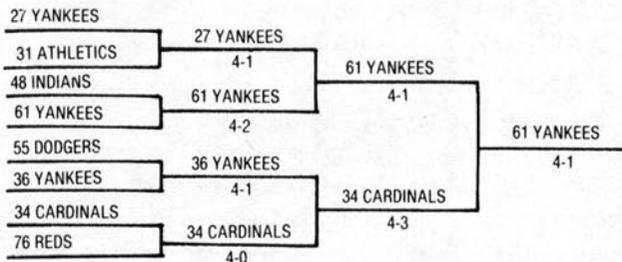
Three readers sent in results of their GBTOAT tourneys. J.K. Lee used SSI'S COMPUTER BASEBALL option of letting the computer coach both teams (as we did at CGW). This reduces the possibilities of biased coaching to almost nil. Rick Mottley used COMPUTER BASEBALL but did not indicate if the "spectator option" (our phrase) was used. Mike McGoey did not include information as to which game he used.



**J.K. Lee
 So. Pasadena, CA**



**Rick Mottley
 Harrington Park, NJ**



**Mike McGoey
 River Ridge, LA**

So we have four different tournaments with four different winners. Amazed? I guess all those baseball fans who love to spend hours arguing about which team is the greatest are not just blowing hot air. Maybe there isn't a GREATEST TEAM. We've always been partial to the California Angels around here. Any takers? ■

OLYMPIC DECATHLON: A CLASSIC COMPUTER GAME

by Russell Sipe



BASIC INFORMATION

NAME:	Olympic Decathlon
TYPE:	Hi-res Sport Game
SYSTEM:	Apple II (48K) TRS-80 Model I (32K/16K)
FORMAT:	Disk or Tape
# PLAYERS	1 to 6
AUTHOR:	Timothy W. Smith
PRICE:	\$29.95
PUBLISHER:	Microsoft 10700 Northup Way Bellevue, WA 98004 206-828-8080

We have all been asked the question "If, for whatever reason, you could only have (insert number) books to read for the rest of your life what would they be". It is an important question since it forces us to evaluate the worth of all books. Which ones will remain fresh over the years? Which ones will provide whatever we feel a book should provide?

What kind of list would be compiled if the same question were to be asked about computer games? Before you read any further about one of my favorite games, why don't you compile a list of say five games that you would take with you to that bomb shelter or on that lonely space flight to Nuba-Nuba.

Without a doubt, one of the games on my list would be Microsoft's **OLYMPIC DECATHLON** (hereafter OD). OD has all of the characteristics that are required of a long-lasting, quality game. The premise of the game is something to which almost everyone can relate. Having superb graphics and sound, it plays well solitaire and shines as a multi-player game. It remains interesting and fun to play long after other computer games are buried in your library.

In OD, every player competes in each of the ten events of the decathlon. Two events (Shot Put, Hurdles), require paddles while the remaining eight require keyboard pounding. I say "pounding", because what one does at the keyboard during any event can hardly be called data entry. In the 100 and 400 meter dashes, for example, players rapidly pound two keys which propels them down the track. I never thought that I'd see the day when

I would get muscle strain from "entering data". After many events, you are likely to find your heart pounding almost as rapidly as it would were you competing "live".

You are told during the striking introductory sequence that the world record for the Olympic Decathlon is 8,168 points set by Bruce Jenner in the 1976 Montreal Olympics. For those who wish to compete against his scores, the rule book lists them as follows:

100 METER DASH-	819 pts.
LONG JUMP-	865 pts.
SHOT PUT-	810 pts.
HIGH JUMP-	882 pts.
400 METER DASH-	922 pts.
110 M HURDLES-	866 pts.
DISCUS-	873 pts.
POLE VAULT-	1,005 pts.
JAVELIN	862 pts.
1500 METER RUN-	714 pts.
Total Points	8,618 pts.

Beating Jenner's score takes practice, but most players do so given time. Microsoft indicates that the highest scores they know of (March 1982) are 10,901 (Apple version) and 11,118 (TRS-80 version).

For those of you who are beginners at the game, here are a few tips that helped me to increase my scores (which are higher than Jenner's but not nearly as high as the Microsoft record. In the *100* and *400 meter dash* all you do is alternately strike two keys (e.g. the "1" and "2" keys). I found that my scores shot up dramatically when I ignored what was happening on the screen and kept my eyes on the keys. Concentrate on rapid strokes in which your fingers never leave the keys. Raising your fingers even a fraction will slow you down.

In the *shot put* I find that exploding the triceps to about 35% followed in sequence by shoulders to 50%, triceps on up to 100% and shoulders to 100% would put the shot out to the 18 meter range and occasionally off the screen.

The first key in the hurdles is to avoid knocking down the *hurdles*, which slow you down considerably. Once you can do this on a regular basis try developing a three-step/jump four-step/jump sequence. In my early runs I developed a three-step/jump routine which cleared the hurdles nicely but produced scores which were only so-so--to get more speed I needed to take more steps between hurdles. I eventually developed a technique by which I run three steps, jump in such a way to come down just beyond the hurdle, take four rapid steps, jump, land further beyond the next hurdle, and then repeat the process.

My most frustrating event is the *discus throw*. This event requires you to set a percentage of strength given to turning. The higher the percentage the farther you will throw the discus and the harder it is to throw between the "out of bounds" lines. It is relatively easy to make a "good" throw at only 75-85%, but your distance from the resulting score will be quite low. To get a decent score, you must set your turning strength in the 95-100% range. Unfortunately, making a "good" throw at this level can be very difficult. If the safety cage in this event showed dents from all the times the player had flung the discus against it, my cage would look like someone had set a few bombs off inside it.

An aid in the *pole vault*, at greater heights, is to keep sufficient momentum while having to grip the pole higher up. This isn't easy. I find that the pole can be gripped at least 10 centimeters below the point equivalent to the height which you are jumping; thus providing a little less "drag" on your forward momentum.

In the *javelin throw*, run as suggested in the dashes until your man gets about 10 meters from the end of the runway. While frantically hitting the arrow keys, you can strike the keyboard with a clump of fingers in the "T" key area (no need to waste time looking for the specific key. Do not hit the return key just above the arrow key! I have often been flying down the runway at high speed only to hit the return key and watch my javalin streak off in a straight line. I find that an angle of about 45° gives the longest throws.

The *1500-meter run* can easily ruin a good overall score. Somewhat like an auto race game, you must keep your figure from crashing into the "walls". If you hit the wall you must get off the wall quickly in the right direction; otherwise you will slow down and even end up going the wrong direction. If you get flustered while on the wall, you can end up starting from a dead stop and be out of contention for a decent score. Try to keep your figure in the center of the track and practice this event a million times.

Speaking of practice--OD allows practice sessions on any of the events. In this way you can practice the same event repeatedly without going through the whole game.

I'm sure that many of you have even better suggestions for high scores than mine. Please write us and, if they're good suggestions, we'll print them.

OLYMPIC DECATHLON is one of the truly classic computer games. Get it not only for the fun of it, but because it is an important contribution to the computer gaming hobby. ■

The Eagle Has Landed

By Richard McGrath



BASIC INFORMATION

NAME: Lunar Lander
TYPE: Arcade
SYSTEM: TRS-80 Model I, 16K
FORMAT: Disk and Tape
PLAYERS: 1
AUTHORS: Mike Wall and
Jack Moncrief
PRICE: \$20.95 (disk)
PUBLISHER: Adventure International
Box 3435
Longwood, FL 32750

Almost every neophyte programmer has been bitten by the "LUNARLANDER" bug at one time or another. As soon as you have mastered print and input statements, you begin looking around for some fun programs to create or modify. One of the first that most of us find is some rudimentary version of "Landing A Space Ship On The Moon Without Smashing It Into Little Pieces". This first

attempt at "LASSOTMWSIILP" probably consisted of simple print and input statements, coupled with a straight algebraic equation formula for calculating speed, altitude and fuel consumption. The entire program consisted of about 12 lines of basic code and fit into some 500 bytes of memory. Our appetites had only been stimulated, certainly not satisfied! Blurry eyed and with numbed fingers, you pounded the keyboard well into the wee, small hours of the morning, creating ever more complex and challenging "LASSOTMWSIILP's", complete with variable weight and velocity calculations, realistic input responses, and perhaps even real-time control and action! Finally, reaching the pinnacle of your programming skills, you tentatively ventured into the "set" and "reset" world of TRS-80 graphics, watching little square space ships descend to the lunar landscape.

If that's your current level of "LASSOTMWSIILP" sophistication, and you're still looking for the ultimate moon lander... then this program was made for you! Adventure International's version of "LUNARLANDER", released in 1980, presents a diverting challenge that can occupy you for just a few minutes or up to several hours at a time. It simulates an Apollo moon shot mission during the last few minutes of the descent of the Lunar

Excursion Module (LEM) to the lunar surface.

The controls are simple. The space bar provides a downward blast from the main rocket engine to slow your descent (or shoot you back up into space if you over-do it.) The right and left arrow keys provide horizontal directional control through small thruster jets on the side of the lander; operation of which these thruster jets takes a bit of practice. The right arrow fires the left jet, thus moving the craft to the right. The left arrow fires the right jet, moving the craft to the left. It all works out, but be careful on your first few attempts at getting into some of the tighter landing sites. You're sure to hit the wrong arrow at some critical point and go careening into a wall of lunar rock.

The lunar terrain is a fanciful cross between the New York skyline and the Swiss Alps. There's not a flat meteor impact crater in sight! If Neal Armstrong had encountered this topography on his moon landing, he would have turned around and headed back for terra firma! Nevertheless, you're expected to find a suitably flat landing spot and maneuver into it without "smashing into a lot of little pieces". Notice that I said "manuever into it" and not "onto it". Some of the landing sites resemble an overhung sea-side cave rather than the surface of the moon. You definitely must move "into" it, going sideways, up, down and around, rather than the more conventional straight vertical descent to a soft touchdown at Tranquility Base. All of this creates a suitable challenge for the more adept space adventurers and serves to maintain the interest of less dexterous keyboard manipulators (such as myself) who gaze in awe at today's nimble fingered whiz-kids.

Each landing site is given a difficulty rating of from 100 to 900 (the single nine hundred pointer resembles a pretzel). Your total score is based on the points accumulated by successive safe landings on a given allotment of fuel. You are sent back up to try again with the remaining fuel after each successful landing...or crash. The program keeps a record of the highest score achieved during each session of play.

A classic example of the conflict between *realism* and *playability* in games has found its way into this program. Obviously, a game is more fun if you can keep at it, achieving higher and higher scores, and continually attempting to surpass your previous best efforts. Just as obviously, once a lunar vehicle is out of fuel, that should be the end of it, no matter how good you are. Not so, in "Lunar Lander"! In order to allow an accomplished player to continue his winning streak, one of the landing sites is stocked with a fuel supply which can be used to replenish the lander and continue on to greater heights.

Supposedly the fuel was stored there by a previous mission. Not realistic perhaps, but it does make the game more playable.

For those who have struggled with simple basic graphics commands... eat your hearts out! The whole program runs in machine language, and the graphics are outstanding! The lunar module first appears as a simple shape at the top of the screen. But as you approach the lunar surface, the visual range narrows in width, so that everything on the screen enlarges to provide greater detail. The entire screen image scrolls to either right or left, providing the suggestion of a continuous landscape. The machine language provides fast screen image update and the whole visual effect is quite smooth. The lunar surface is well designed, with shading lines creating a hint of size and depth.

Simple sound effects are available if an amplifier is connected to the grey output plug. The sound consists of short radar-like beeps, a low fuel warning bleep, a static-like explosion when you crash and a little musical salute, complete with flag raising, when you land safely. Nothing great, but certainly adequate for the intended purpose.

All in all, the program is excellent, but I do have some suggestions for future revisions. Most lunar lander programs begin the descent from a much higher altitude, giving the player an opportunity to work out a fuel management strategy starting from the actual lunar orbital speed and altitude. The inclusion of this aspect of the descent would require consideration of variables such as weight vs. density ratios, acceleration factors, and inertial energy. It would add a bit of strategic challenge for those who enjoy games for a mental as well as a finger exercise.

Two other improvements would aid in the control of the lander itself. The first concerns the main engine control. When the space bar is pressed, the power is on, when released, it is off. There's nothing in-between. This makes control difficult in the cramped quarters of some of the landing sites, where finer control inputs would be valuable--something other than the all or nothing now available. Finally, readouts of descent and horizontal velocities might prove helpful. Without accurate speed information, you're flying somewhat blind; depending on visual cues which do not keep you fully informed of your status.

In spite of these suggestions, however, I have no real complaints. Adventure International has a winning program here. It is just as advertised--a quality version of an old standby. It just makes me a bit envious when I look at some of my early efforts at creating a "LASSOTMWSIILP" program. ■



BASIC INFORMATION

NAME:	Swashbuckler
TYPE:	arcade
SYSTEM:	Apple II (48K)
FORMAT:	Disk
# PLAYERS:	1
AUTHOR:	Paul Stephenson
PRICE:	\$34.95
PUBLISHER:	Datamost 9748 Cozycroft Ave. Chatsworth, CA 91311

Piracy on the high seas, of course, is the piracy to which I refer. But to say **SWASHBUCKLER** is a game about piracy wouldn't really be correct. **SWASHBUCKLER** is a fantastic hi-resolution test of skill and accuracy, wherein a player controls a tiny swordsman who weaves, spins, parries, lunges, and crosses swords with a vast host of bedraggled (yet dangerous) crew members aboard a seaborne ship. But before I get too far into game content, let's take a look at the product in stages, as will you, should you decide to purchase it.

SWASHBUCKLER hangs on the rack like your typical Apple gaming software. It's made for a 48K system, and is produced by Datamost. Opening the package, the simple documentation within gives a brief (though descriptive) background on your adventures as a swordsman on the Spanish Main. The art and logo are good, but are typical Creative Associates work or a clone thereof, which are becoming disturbingly prominent on recent gaming packages. Unique art doesn't cost any more, and surely makes a game stand out on the shelves.

SWASHBUCKLER would probably fall into the "arcade" category of games, even though the idea is, to my knowledge, entirely original. By pressing the appropriate keys one can cause a tiny swordsman to dodge and thrust like an expert fencer, moving back and forth over the center part of the screen as he battles opponents entering from the left and right hand sides. The game seems to operate by manipulating the graphics pages while constantly drawing fantastically detailed shape tables on the screen. As you lunge and parry, your opponents may slash with their cutlasses, twirl their polearms, lean against a wall for support or swing a club menacingly overhead. It all looks so real it's staggering.

As for playtesting, it was a real pleasure. You begin your battle two levels below decks, and you

must fight your way through two waves of opponents to move up. After twenty-five kills you receive a spare life -- you start with but three. The crew does not get deadly accurate until you get up onto the top deck. You have rats, scorpions, snakes, and spiders which scuttle by your feet to wound or kill you, while at the same time you have to contend with two advancing crew members, each bent on your immediate demise. After fighting through eighty kills, I find myself pitted against an entirely new crew member -- the samurai. Slipping past his guard without impaling yourself on his sword isn't easy.

Putting aside my convictions that this is the finest game I've played this year, I must admit that a few things did disappoint me. First, after a player receives his spare man at twenty-five kills, he's out of luck for some time. Also, once I hit the top deck there appeared no other place to go. Even after two hundred kills I could see I wasn't going anywhere. But, to my surprise, after 250 kills the counter reset itself to "00000" for no apparent reason, and started counting kills from one again. This is my number two complaint: what's the use of having your hi-score saved on the disk if it gets reset after 250? Of course, the one good benefit from this is that when the counter hits twenty-five again you get a new life. Shortly after 250 kills you go back down one level, to seemingly fight easier opponents, and then you come up on deck again. Logical? Not to me, but then I was out after 278 kills, so if anything happens later, it missed me. My number three complaint is more an observation based on an opinion: why didn't the programmer do more with this game at the end? Maybe at 250 kills you fight in the crow's nest, or on the beach nearby.

In any case, I'd like to restate my opinion that this is a fine game, and well worth purchasing. Have you ever had someone over who looks at your Apple and asks, "Can you play games on it?" Chuckle to yourself, then boot up **SWASHBUCKLER** for them.

ED. NOTE - Dave Gordon of Datamost informs us that the problem of resetting the counter after 250 kills will be solved. Michael's score is the highest of which Datamost is aware. If the highest score on record is 250 it is no wonder that I was frustrated by the presence of a 5 digit scoreboard! Can you imagine how long it would take to get a **SWASHBUCKLER** score that high?

A couple of techniques that have proven helpful around here are: 1) Avoid killing your opponent close to the center of the fighting area. Drive him back first. In this manner he will not re-materialize too close to you as you engage the opponent on the opposite side. 2) If you do kill an

opponent in the center you can push the corpse into the corner by moving your fighter in that direction. 3) When you kill an opponent in the corner immediately lunge again and you will kill his replacement as he materializes.

Players of the game at CGW find the graphics to be superb and the design somewhat unique (however, see Automated Simulations **DRAGON'S EYE** for another treatment of hi-res sword-fighting). However the lack of variety causes the game to become tiresome after a few dozen kills. That notwithstanding, Michael is correct when he points out that **SWASHBUCKLER** is a fine showcase game. ■

Continued from p. 28

In the master pattern example above, the Jabbertalker will randomly select a Level 1 word from List I, List B, and a Level 1 Noun Phrase from List 3 to complete the sentence. The final sentence will look something like this:

A (adjective) (noun) is a (noun phrase).

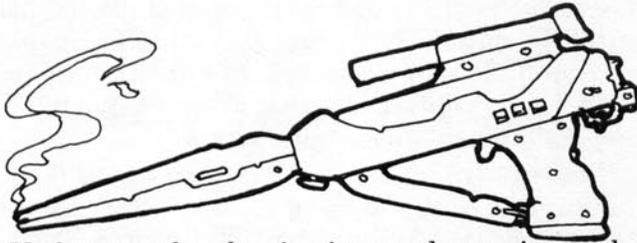
Of course, you will have to create the noun phrase patterns, too. Each sentence pattern can first be tested using the Make Sentence option before entering it in your syntax lists.

Understanding Jabbergrammar definitely requires a hands-on approach. The game is ideal for anyone who enjoys creating and manipulating words and sentences. As you learn new vocabulary words from your schooling, profession, reading or hobby, simply plug the words into the appropriate lists and then watch and learn how the words are used. Remember, too, that a foreign language could easily be programmed into Jabbergrammar.

The 31-page instruction booklet clearly summarizes all commands and command keys for each game mode. It also provides complete vocabulary and syntax lists for each special vocabulary contained on the game diskette. Having a knowledge of syntax -- transitive, passive, reflexive, auxiliary, etc. -- would be helpful but is not a necessity.

In conclusion, once you understand how the game functions, it really is quite simple. By the way, I've not revealed all of the Jabbertalker's secrets... these you must discover on your own. So, while I try to find Alice, why don't you just uncurl your cramped fingers from about that joystick, forget about the aliens or hidden treasure for a little while, and enter the world of the Jabbertalker.

"Who is the Jabbertalker, you ask. Only the most venerable, ancient, and grammatically impeccable master of wisdom and nonsense ever to scoll across the monitor of life" (from the the booklet). ■



Screen Layout Worksheet

Unfortunately, despite its good premise and graphics, Voyager is somewhat a disappointment as a game. My complaints fall into two major categories. The first is that the game is not challenging enough. The key to winning the game is not so much skill or strategy as it is persistence. In the course of his wanderings through the ship, the player will encounter the robot guardians of the ship. The robots are located in various rooms on the four levels. With one exception you have no prior warning of a robot until it attacks you. It's presence is announced by the first blast from it's laser. Also, it appears that the robot will always get off two shots before the player can return fire. For this reason, it is to the player's advantage to maintain a full complement of strength points before entering a new room. Thus, I found my game "strategy" consisting of 2 or 3 rapid moves followed by a period of inactivity (20 - 60 seconds) while I waited for my strength points to re-accumulate. There is one way to locate robots before you run into them. After you have some mapping under your belt you can go to an elevator and look at the various level maps that have been plotted. Often you find robots detected in rooms you previously occupied. These robots will patiently wait for you to come to them. Simply travel to the room adjacent to one of the robots, rest to restore your strength, then go in with laser firing. My second complaint, deals with the manner of resurrection. After a brief, graphic eulogy, the player is asked if he wishes to resurrect the character. If he answers yes, his character is resurrected back into the ship at a random location. What strikes me as unreasonable is that all the map information accumulated by the player up to the point of his demise is retained, and can be recalled by simply pressing M. Thus the player can resume play with his death being no more than a brief interruption in the action. If death is to be used as a deterrent to some types of activities, the penalty for death should be severe enough to intimidate the player into some form of caution and prudence.

In conclusion, I feel that while the graphics of **Voyager I** are good the game design itself is too simplistic to hold the interest of the average computer game player for very long. If persistence is your "thing" you will find Voyager I interesting but those who enjoy employing strategies or arcade arcade skills will probably want to look elsewhere.

Programmer's screen & printout worksheet

GRID IS STANDARD DOT MATRIX FORMAT OF 1670 CHARACTERS
80 CHARACTERS X 24 LINES
80 CHARACTERS X 24 LINES FOR APPLE™ USERS (12 SCREENS)

\$ 3.95/ pad

PROGRAM _____ DATE _____ BY _____ DESC _____

COPYRIGHT © 1981 FLIGHT OPFS, NEWPORT BEACH, CA

FLIGHT OPFS
3857 Birch St.. #237
Newport Beach, CA 92660
(714) 540-2145



apple compatible
apple compatible

SELECT-A-PORT

Provides switch selectable sockets to extend the flexibility of the APPLE's game port.

\$59.95

- Plugs directly into the game socket
- Attractive case matches the color and texture of the Apple's
- May hang conveniently on either side of the Apple or set flat on non-skid rubber feet
- 3 switch selectable sockets isolated by diodes to insure against device to device interference
- 1 switch selectable socket which automatically modifies the Joystick or paddles to operate as the second unit in dual Joystick games or four game paddle games
- Socket with no isolation for those special highly sensitive devices

- Large pushbuttons
- Highest industrial quality components throughout
- Fits conveniently in the hand
- Extra long 60 inch cords

\$39.95

GAME CONTROLLERS

- External trim adjustments to perfectly match the unit to your application and computer
- Self-centering on both axes (may be disabled)
- Two large pushbuttons
- Highest industrial quality components throughout
- Completely linear pure resistive circuit

\$59.95

JOYSTICK

Available at your dealer or order direct

All mail orders add \$2.00 for postage and insurance. Dealer inquiries invited. Apple is a Registered TM of Apple Computers, Inc.

TG PRODUCTS
1104 SUMMIT AVE., SUITE 106
PLANO, TEXAS 75074
(214) 424-8568

WRITING FOR COMPUTER GAMING WORLD

Almost all of the articles in CGW come from active readers of the magazine. We invite your submissions of articles, art, humor, etc.. CGW pays two cents per word for most copy and \$30.00 per page for most art work. Art work for less than a page will be pro-rated.

REVIEWS

The majority of articles in CGW will be reviews. These will fall into two categories: 1) *micro-reviews* of 300 to 400 words; and 2) *feature reviews* of about 500-2500 words. *Micro-reviews* should contain the following: 1) The information which goes into the Basic Information Box (see this issue); 2) General description of the fiction/background of the game; 3) A more detailed description of the graphics, documentation, and above all the game design itself. Refer to **READER INPUT DEVICE** on pg. 40 to see the kinds of questions a review should answer; 4) A discussion of the strong and weak points of the game. Remember that computer gamers have wide ranging tastes and a game which is "poison" to one may be "meat" to another. The strengths and weaknesses you find should be those of the game, not the game type; 5) A summary of the game which might suggest what type of computer gamer will want to buy this game and/or what type of gamer will want to pass it by; 6) If possible include a good photograph (color or b/w) of the game (\$2.00 is paid if the photograph is printed). To get rid of monitor screen "phasing" in the photograph you must not use a shutter speed faster than 1/30th of a second.

A 400 word micro-review cannot cover a game in detail but can: 1) give an overview of the game to a potential purchaser; and, if appropriate, 2) suggest some strategies for playing the game well. Any game released in the last 12 months is acceptable for a micro-review.

A *feature review* will do everything that a micro-review does but on an expanded scale. The subject of a feature length review should be a new game (released in the last 12 months) or one that has become a "standard". When appropriate CGW will print reviews of books, hardware, etc. as they relate to the computer gaming field.

STRATEGY AND TACTICS

While many reviews will contain suggestions on strategy and tactics, we also welcome articles which are primarily strategy/tactics oriented. This type of article will go into detail concerning

what techniques provide high scores or help a player better attain the goal of the game. In general, clues to adventure type games should rarely be included. Where they are included they should be in slip code (i.e. shift the letters of the sentence one letter to the right or the left).

SCENARIOS

Formal and informal scenarios can be designed for some computer games. A formal scenario is one which uses the scenario designing routine of the game such as SSI's *Torpedo Fire*. An informal scenario is one which the writer makes up an alternate goal for a game with success being determined independently of the game's stated scoring system. An example would be the "*Castle Wolfenstein Dash*" in which a point is awarded for each room entered minus one point for each guard killed. The *Operation Apocalypse Campaign Scenario* in 2.2 is another example of an informal scenario.

THE SILICON CEREBRUM

Bruce Webster actively solicits submissions to our regular column on gaming and artificial intelligence. Contact him directly: 9264 Grossmont Blvd., La Mesa, CA 92041.

DESIGNER'S NOTES

CGW urges game designers to submit *designer's notes* articles on their games. Contact us if you have any questions.

FICTION AND HUMOR

From time to time, CGW will print fiction related to the computer gaming field. Humor will be included on a regular basis if quality material is submitted.

FORMAT

Article submissions should be typed. The manuscript should at least be double spaced and preferably triple spaced with a one inch margin all around. Please try to avoid all-upper-case printing. For the sake of our editors, please double check both grammar and punctuation. Be sure your name, address and phone number are typed on the first page. Include a SASE for return of unsuitable material.

RIGHTS

All submissions become the property of Golden Empire Publications, Inc., rights revert to author upon publication or rejection. Specifically, our purchase covers first world rights.

microcomputer games[®]

CHALLENGING FOR EVERYONE

Sample the ever-expanding line of Microcomputer Games[®] from the Avalon Hill Game Company.

Discover the challenge of . . . slaying a dragon . . . mapping an alien spacecraft . . . thwarting a Soviet offensive . . . landing a jumbo jet . . . coaching a professional sports team.

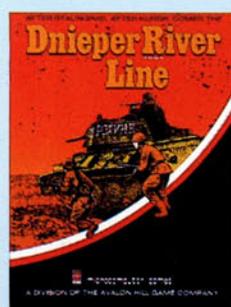
Microcomputer Games[®] has them all and much more!

Each game comes complete with loading and playing instructions, along with cassette or diskette software for the most popular home computers.



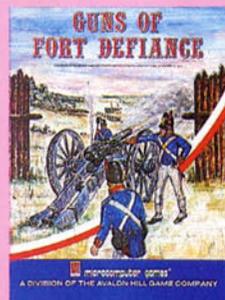
VOYAGER

A solitary computer game that challenges the human player to explore the four levels of an alien spacecraft's maze-like corridors and rooms in 3-D simulated graphics, all the while avoiding robots programmed to blast any intruders. In order to win, the human must destroy all power generators and escape or hunt out and annihilate the killer robots. **VOYAGER** comes with color-animated graphics and sound capabilities for computers so equipped.



DNIEPER RIVER LINE

A fictionalized engagement between the Russian and German forces in the southern Ukraine in 1943. The game challenges you, the German commander, to repel Russian efforts to breach the Dnieper River defensive positions. Soviet units, controlled by the computer, seek to overrun the thin German line and capture sufficient objectives to attain victory. **DNIEPER RIVER LINE** has four levels of difficulty and comes complete with over 300 illustrated counters and a mounted mapboard.

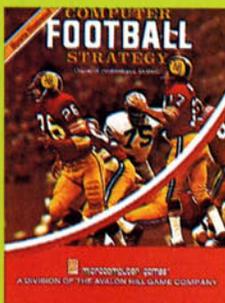
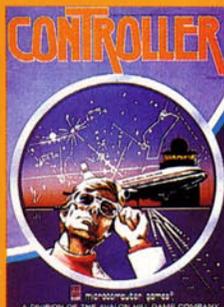


GUNS OF FORT DEFIANCE

In this exciting arcade game, you are the commander of a 19th century artillery piece in a besieged stockade. For each shot you must specify a type of ammunition—ball, canister, shell or spherical case—and fuse length (if applicable), and set the elevation and deflection of the cannon. The computer controls the enemy forces, randomly attacking with cavalry, infantry or another artillery piece.

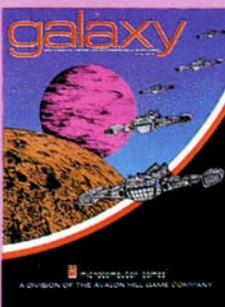
CONTROLLER

A **real-time** simulation of air traffic control in which you will have to guide the approach and landing sequence of up to 8 aircraft. There are three types of aircraft: Light Planes, Airliners, and Private Jets, with each type having a different rate of climb, turning ability, stall speed, ceiling, fuel consumption and fuel capacity. **CONTROLLER** transforms your microcomputer screen into a realistic "radar scope"; also, each aircraft's heading, velocity, and altitude is continuously displayed on a separate chart next to the radar scope.



COMPUTER FOOTBALL STRATEGY

Thrilling computer version of Avalon Hill's famous board game. Based on the award-winning Sports Illustrated game of professional football; forces the player to constantly make the right decisions about his team's offensive and defensive formations. Match wits against the computer or against a live opponent.



GALAXY

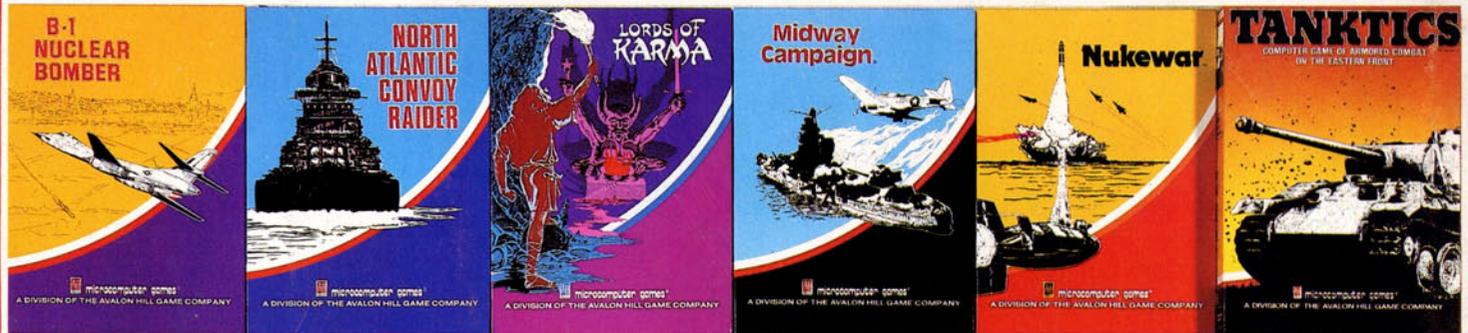
Have you ever wanted to conquer the universe? In **GALAXY**, players send their galactic fleets out to explore and conquer the universe, solar system by solar system. The planets discovered may be barren worlds or they may possess immense industrial capacity and defensive ships to resist colonization. **GALAXY** comes with sound effects (for computers with sound capability) and allows from 1 to 20 players to compete against each other or the computer. A different star map is randomly generated for every game.



COMPUTER FOREIGN EXCHANGE

Two to four players own and manage multi-national companies in various cities throughout the world. Changing conditions require each player to make constant decisions after considering the financial resources of his company and his opponents. A variety of situations will determine likely changes in currency rates. To win, a player must form and implement the most successful strategy.

more microcomputer games...



B-1 NUCLEAR BOMBER

You are the pilot of a B-1 bomber on a mission over the Soviet Union. You must fly through stiff Russian defenses to the target city, bomb it and return home. Your computer controls the Soviet MIG fighters and surface-to-air missiles. You must rely on your electronic counter measures and self-defense missiles.

NORTH ATLANTIC CONVOY RAIDER

In the Bismarck convoy raid of 1941, the computer controls the British convoys and battleships. Will the Bismarck sink the Hood, only to be sunk by the Rodney and King George V, as in history? Or, will the Bismarck cripple or sink the British Home Fleet and go rampaging through the convoy lanes?

LORDS OF KARMA

Like an intriguing puzzle! The fun is in deciphering secrets while exploring a mythical, magical city and countryside, while at the same time avoiding lurking monsters. You tell the computer what you want by typing simple sentences. The computer has many surprises in store.

MIDWAY CAMPAIGN

Your computer controls a huge force of Japanese ships whose objective is to invade and capture Midway Island. In the actual engagement, the Japanese made several tactical errors which cost them the battle. Your computer probably won't make the same mistakes! You command the badly outnumbered and outmanned U.S. Naval Forces.

NUKEWAR

Nuclear confrontation between two hypothetical countries. Defend your country by massive espionage efforts, or by building jet fighter bombers, missiles, submarines and anti-ballistic missiles. Your cold and calculating computer will choose its own strategy!

TANKTICS

Armored combat on the Eastern front of WWII. Includes full-color mounted mapboard and counters. You, as the German tank platoon leader, start the game outnumbered 2 to 1. However, you choose your tank types before each of 5 scenarios. You also specify what your opponent, the computer, is to have before going after or defending the specified objective from the Russians.

COMPUTER ACQUIRE

New Second Edition! The object of the game is to become the wealthiest person in this "business" game about hotel acquisitions and mergers. For 2 to 6 players it is a subtle game of interplayer strategy. As a SOLITAIRE game you play against the computer. One can even pit the computer against itself.

EMPIRE OF THE OVERMIND

Recent recipient of the GAME OF THE YEAR award by Electronic Games Magazine. Enchanting solitaire game. The Overmind, a tyrant that is part machine, part spirit of evil, cleverly overthrew the great king, who escaped and planned revenge that has taken 1,000 years to fulfill. Now, YOU must travel to the Empire of the Overmind and destroy the abomination.

PLANET MINERS

One to four players compete with each other and the computer to stake valuable mining claims throughout the solar system in the year 2050. Each player must decide which ships to send to which planets and when to try "dirty tricks" like a sabotage and claim jumping.

CONFLICT 2500

In 2500 AD, earth is threatened by attacking aliens programmed with an infinite number of attack strategies with which to tease the player who must defend earth. A variety of spaceships on the screen adds an extra dimension to the excitement. A game for one to ten players in which you can control the length of the game and its difficulty.

COMPUTER STATIS PRO BASEBALL

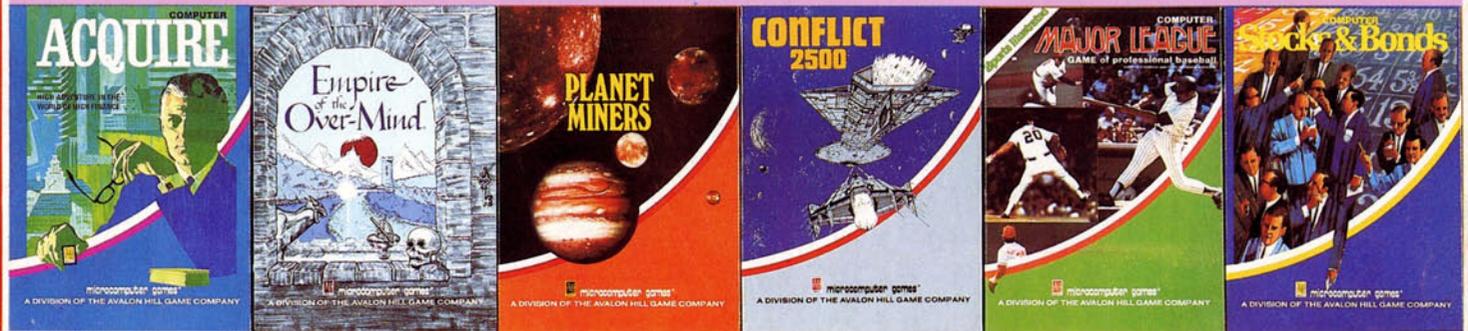
Recreate an entire baseball season, championship or world series with real life player statistics. Avalon Hill has analyzed full season statistics for each player, converting it to computer memory so each performs in your game just as he does in reality.

COMPUTER STOCKS AND BONDS

Here's your chance to be a Wall Street genius. Players choose a general strategy and invest in the stocks that fit their game-plan. Play it safe, gamble or do a little of both. In a "bear" market players investing heavily could lose their shirts, while a "bull" market would cause them to make great gains.

SOFTWARE GAMES	With Cassette For:				With Diskette For:				PRICE
	TRS-80 Color	TRS-80 Modes I & III	APPLE II* -	PET CSM	ATARI 400/800*	TRS-80 Modes I & III	APPLE II* -	ATARI 400/800*	
B-1 Nuclear Bomber	16K	16K	16K	16K		32K	48K	24K	16.00
Midway Campaign	16K	16K	16K	32K					21.00
No Atlantic Convoy Raider	16K	16K	16K	16K		32K	48K	40K	16.00
Nukewar	16K	16K	16K	16K		32K	48K	24K	16.00
Planet Miners	16K	16K	16K	24K		32K	48K	32K	16.00
Lords of Karma	48K	32K	32K	40K		48K	48K	40K	25.00
Computer Acquire	16K	16K	16K	16K		32K	48K	24K	25.00
Conflict 2500	16K	16K	16K	32K		32K	48K	40K	16.00
Comp. Stat. Pro Base	16K					32K	48K		25.00
Empire of the Overmind	48K	48K		40K					30.00
Tanktics	16K	16K	16K	24K		48K	48K	40K	35.00
Stocks & Bonds	16K	32K	16K	32K		48K	32K		24.00
Computer Foot Strat. Controller						32K		40K	29.00
Galaxy	16K	16K	16K	16K		32K	48K	32K	20.00
Guns of Ft. Defiance	16K	32K	16K	32K		32K	48K		25.00
Voyager	16K	16K	32K	32K	24K		48K	32K	25.00
Dnieper River Line	32K	32K	32K	48K		32K	48K	48K	25.00
Foreign Exchange	16K								30.00
									20.00

For credit card purchasing call toll-free: 1-800-638-9292



COMING SOON . . .

IBM Personal Computer Software!!!

GAMES CURRENTLY UNDER DEVELOPMENT:

G.F.S. SORCERESS, CLOSE ASSAULT,

ANDROMEDA CONQUEST, VC, TELENGARD,

COMPUTER BASEBALL STRATEGY, LEGIONNAIRE,

and five new "ARCADE PAK" releases:

DRAW POKER, BOMBER ATTACK, ROBOT TANK BATTLE, ROAD RACER/BOWLER and SHOOTOUT AT THE OK GALAXY.

For credit card purchasing call toll-free: 1-800-638-9292

Also available at finer computer and hobby stores. When ordering be sure to specify which computer it is for.



microcomputer games

A REGISTERED TRADEMARK OF MICROCOMPUTER GAMES, INC.

A Division of

The AVALON HILL Game Company

4517 Harford Road • Baltimore, MD 21214
301-254-5300

TRS-80, Apple, Pet, Atari & IBM are registered trademarks for Tandy Corp., Apple Computers, Inc., Commodore Business Machines, Warner Communications and International Business Machines.