KNIGHTS OF THE DESERT™
Introducing SSI's simulation of the North African Campaign of World War II — for your APPLE®, ATARI® and TRS-80®.

KNIGHTS OF THE DESERT.
A pretty classy name for a classic wargame.

In the year 1096, knights in shining armor set out on the First Crusade, marching across Asia Minor to reach the Holy City of Jerusalem and free it from the invading Turks.

Nearly a millennium later, in 1941, a similar scenario would be played out. This time, Crusader tanks of Great Britain rolled across the broiling sands of North Africa to repel invaders of a different sort — the armored forces of Nazi Germany.

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This simulation has everything you've come to expect in an SSI wargame: historical accuracy and detail; complete morale and strength ratings for all units; innovative movement rules and combat systems; two-player and solitaire modes; and best of all, maximum playability.

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If there are no convenient stores near you, VISA and Mastercard holders can order direct 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, 883 Sterlin Road, Bldg. A-200, Mountain View, CA 94043-1983. (California residents, add 6.5% sales tax.)

KNIGHTS OF THE DESERT is available on 48K disk for the Apple II with Applesoft ROM card; 40K cassette or 40K disk for the Atari® 400/800; and 16K cassette for the TRS-80 Level II, Models I & III. When ordering, please specify computer and format.

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FEATURES

CLOSE ASSAULT .................................................. 6
Review and Analysis ............................... Bob Proctor

ADVENTURE GAME CONTEST .................. 7
Fill in the Crossword Puzzle

COMPUTER AMBUSH ........................................... 10
Review and Analysis .............................. David Long

PINBALL CONSTRUCTION SET .................. 12
A Toy for All Ages ................................. John Besnard

WHEN SUPERPOWERS COLLIDE ................. 14
Part 1: Germany 1985 ............................. Maj Mike Chamberlain

GALACTIC ATTACK! ................................. 19
Sir-tech’s Space Combat Game ............. Dick Richards

TELE-GAMING ..................................................... 20
A New Column ........................................ Patricia Fitzgibbons

THE NAME OF THE GAME ....................... 22
A New Column by Jon Freeman

TWO COMPUTER BASEBALL LEAGUES ........ 23
Two leagues for SSI’s Computer Baseball .... Stanley Greenlaw

CHESS 7.0 ..................................................... 33
Odesta’s Program Evaluated ................. Floyd Mathews

Departments

Inside the Industry ........................................... 2
Hobby and Industry News ....................... 3
Taking a peek ............................................. 4
Silicon Cerebrum .......................................... 13
Atari Arena ............................................... 28
The Learning Game ...................................... 30
Microcomputer Mathemagic .................... 34
Route 80 ....................................................... 35
Micro-Reviews ............................................ 36
Reader Input Device ................................. 47
This issue we're going to look at the nearly thirty computer games that have been on the best-sellers lists for months. There was a time when a new game program came out, sold out, and then the next new program came along to replace it and repeat the cycle. A game's "life-span" at the store was measured in weeks.

But this has been changing. Several games have been continuing to sell well for months, despite the hundreds (no exaggeration) of games that have come out since these games were first introduced. This interesting list was compiled from "hot sellers" lists provided by wholesalers.

Wholesalers are middlemen in the computer game industry. They buy software programs in volume from publishers ("vendors"), and then sell them in smaller amounts to individual retail stores. Since there are literally thousands of stores and departments nationwide that sell software, wholesalers fulfill a real service to both retailers and game publishers.

A software publisher likes working through a wholesaler because they then need to work with only a few dozen accounts for shipping and billing, instead of hundreds or even thousands of individual stores each requiring individual shipments and individual bills.

Retailers like working with wholesalers because they sell literally hundreds of different companies' products. Try counting the number of different software publishers on the shelves in your local store next time you're there. (The January-February issue of CGW listed 1982 releases from more than 130 game publishers!)

A store is only run by a few people, and even with the help of a computer (no pun intended), it would be very difficult to work with so many different software publishers. Therefore, retailers like working with just a few distributors through whom they can get nearly all the software programs they need — and order them in the quantities they can handle.

As you can see, wholesalers are important to the software industry. And because of their unique position, they have a perspective on what's happening that can be more accurate than a poll of stores or publishers.

For example, your local store may be selling a lot of one particular game, but other stores around the country may not be doing so well with it. Also, a publisher may think he's doing great with one of his new games, when another publisher may be selling twice as many of his slowest-selling game! Because they really are in the "middle" of things, wholesalers can provide a much more accurate picture of the overall software market.

The following 27 games have been on wholesalers' best-sellers lists for at least five months. This, in itself, should tell you something about the quality of the games in terms of play value, replay interest, word-of-mouth support, and value for the money.

<table>
<thead>
<tr>
<th>Game Program</th>
<th>Publisher</th>
<th>System(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ali Baba &amp; the Forty Thieves</td>
<td>Quality</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>Apple Panic</td>
<td>Broderbund</td>
<td>Apple, Atari, IBM</td>
</tr>
<tr>
<td>The Arcade Machine</td>
<td>Broderbund</td>
<td>Apple</td>
</tr>
<tr>
<td>Aztec</td>
<td>Datamost</td>
<td>Apple</td>
</tr>
<tr>
<td>Canyon Climer</td>
<td>Datasoft</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>Centipede</td>
<td>Atari</td>
<td>Atari</td>
</tr>
<tr>
<td>Choplifter</td>
<td>Broderbund</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>CrossFire</td>
<td>Sierra On-Line</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>Deadline</td>
<td>Infocom</td>
<td>Many</td>
</tr>
<tr>
<td>Frogger</td>
<td>Sierra On-Line</td>
<td>Many</td>
</tr>
<tr>
<td>Knight of Diamonds</td>
<td>Sir-tech</td>
<td>Apple</td>
</tr>
<tr>
<td>Mask of the Sun</td>
<td>Atari</td>
<td>Atari</td>
</tr>
<tr>
<td>Pac-Man</td>
<td>Ultrasoft</td>
<td>Apple</td>
</tr>
<tr>
<td>Pinball</td>
<td>Sublogic</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>Preppie</td>
<td>Adventure</td>
<td>Atari</td>
</tr>
<tr>
<td>Sargon II</td>
<td>International</td>
<td>Atari</td>
</tr>
<tr>
<td>Serpentine</td>
<td>Hayden</td>
<td>Apple, TRS</td>
</tr>
<tr>
<td>Shamus</td>
<td>Broderbund</td>
<td>Apple, Atari</td>
</tr>
<tr>
<td>Snack Attack</td>
<td>Synapse</td>
<td>Apple</td>
</tr>
<tr>
<td>Snooper Troops #1</td>
<td>Datamost</td>
<td>Apple</td>
</tr>
<tr>
<td>Snooper Troops #2</td>
<td>Spinnaker</td>
<td>Apple, Atari, IBM</td>
</tr>
<tr>
<td>Starcross</td>
<td>Spinnaker</td>
<td>Apple, Atari, IBM</td>
</tr>
<tr>
<td>Submarine Commander</td>
<td>Infocom</td>
<td>Many</td>
</tr>
<tr>
<td>Temple of Apshai</td>
<td>Thorn EMI</td>
<td>Atari</td>
</tr>
<tr>
<td>Wizardry</td>
<td>Epyx-Automated</td>
<td>Many</td>
</tr>
<tr>
<td>Zork I</td>
<td>Sir-tech</td>
<td>Apple</td>
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<td>Zork II</td>
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Creative Software has moved into new offices at 230 E. Caribbean Dr., Sunnyvale, CA 94086. A large independent publisher of software programs for the VIC-20 and C-64, they will be entering the TI 99/4A and Timex 2000 markets by June of this year.

Originally produced for use on Apple computers, EVOLUTION, by Sydney Development Corporation, will soon be available in versions for the C-64 and IBM PC microcomputers. Sydney's second Ottawa-produced game will be "Quest for Tires," incorporating the characters from "B.C." and "Wizard of Id."

COMPUGAMEWARE introduced six new arcade games on cassette and disk for the Radio Shack Color Computer and TED System 100. They are Grand Prix, Moon Hopper, Navy Force, Block Head, Shark Treasure and Megapede. EPYX has expanded its list of games for the IBM-PC and the VIC-20. Added for the IBM-PC are Star Warrior ($39.95), Jabberwalky ($29.95), and Crash, Crunch, Chomp! ($29.95). Added for the VIC-20 are Invasion Orion ($24.95), and Datestones of Rym ($19.95).

EPYX has also expanded its line to include games for the Commodore 64 personal computer. The first game released for the C-64 will be Temple of Aphat ($19.95), to be followed by Upper Reaches of Aphat ($19.95), Curse of Ra ($19.95), Crash, Crunch, Chomp! ($29.95), and Sword of Fargoal ($29.95).

Synapse Software has announced that it is poised to launch 32 new game, educational, and utility programs for the VIC-20, TI99/4A, C-64, IBM-PC, Apple II, and Radio Shack Color Computer. The slated new releases are to include Phonon's Curse, Fort Apocalypse, Necromancer, and Shamus: Case II.

MUSE Software has released its popular Castle Wolfenstein for the Atari 400/800. 32K ($29.95).

Edu-Ware Services, of Agoura Hills, California and Sweet Microsystems, of Providence, Rhode Island announced a hardware/software joint venture which will result in a biofeedback mouse for Apple, Apple II, II+, and IIe. A second version will be compatible with any computer accessible by RS232.

A handrest control device collects pulse rate, galvanic skin response, and skin temperature. Converting analog to digital, it interfaces with software and alters programs taking user excitement or anxiety into account. Higher pulse faster action. High anxiety - more friendly instructions.

Infocom, Inc. has announced the June introduction of WITNESS, a whodunit rooted in the classic mystery novels of the 1920s. WITNESS is a follow-up to the successful DEADLINE, the murder mystery released by Infocom last year.

On-Line Inc., a leading home computer software publisher, is entering the educational software market. The company has announced: the acquisition of a product line developed by SunnySoft of Fresno, California; a new emphasis on the development of its own education programs; and the appointment of Nancy Anderton as manager of educational publishing.

The educational product line will start with a focus on pre-school and elementary school skills, geared to specific ages within the three to eight-year-old. The first four releases scheduled are: Learning with Lepre, Bop-A-Bot, Dragon's Keep, and Troll's Tale.

Counterpoint Software Inc. announced the next product in its Early Games for Young Children series, Early Games Music. Designed for children ages 4 to 12, the program is available for the IBM-PC, C-64, Apple II+, and Apple IIe computers.

Home Computer Software of Sunnyvale is offering Family Bible Fun, a series of Bible games for the Apple and Atari home computers. The games, on diskettes, cover Biblical themes graded for primary, junior and adult levels. Using animation and sound, each contains learning activities ranging from word puzzles and games to true-false, multiple choice and matching quizzes. Subjects include David, Great Men of the Bible, The Life of Christ, Book of Acts, Old Testament Prophets, Patriarchs and general Biblical lore.

Electronic Arts, a new computer game manufacturer, begins shipping product in May. Among their first releases is ARCHON by Jon Freeman and Ann Westfall. The game will be played on two levels. The strategic level is somewhat like chess. You move your fantasy units across the board to encounter enemy fantasy units. When two units are in the same "square" battle ensues. The screen is filled with the terrain of the "square" and a hi-res tactical battle takes place between the occupants. Another game, also by Jon and Anne is MURDER ON THE ZINDERNEUF which is scheduled for a June release. MOTZ is a repeatable mystery game in which the player takes the role of a detective on the German dirigible which is returning from the 1906 Berlin Olympics. There is a murder, and there are 15 suspects.

Dan Buten's release for EA is M.U.L.E., a game of planetary colonization and resource management. The game is somewhat like Monopoly in that the players buy and sell parcels of land. "Great graphics, animation and sound" according to Joe Ybarra, Producer at EA. The game is layered from a novice to tournament level play. HARD HAT MAC by Mike Abbott and Matt Alexander formerly with Cavalier Computer. HHM is an arcade game that takes place on a construction site. "A favorite around the office" according to Ybarra. Two other releases are AXIS ASSASSEN and WORMS! Both build use geometric figures. The former has certain similarities to the coin-op game Tempest and the later is actually based on an article on mathematically games which appeared in Scientific American. The game make uses instructions from the player to begin producing geometric figures. The program will continue to create patterns based on the most recent instructions received.

In addition to these releases, EA will release the Atari version of PINBALL CONSTRUCTION SET by Bill Budge. Bill is a "signed artist" with EA and will be doing other games for them. All initial EA releases are for the Atari 400/800. Most will be on the Apple and C-64 later.

SSI will release COMBAT LEADER in June. CL (Atari 8K) is a game of tactical armored warfare in the 20th century. The game is in real time against the computer and from a bird's eye view. The real time aspect, ease of play and realism makes this a new generation game according to Joel Billings, president of SSI. GEOPOLITIC 1990 is due out in late June for the Apple. The statistics-based boxing game, RINGSIDE SEAT will be out in July for the Apple and C-64. It even has color commentary.

A WWI air game for the Atari (with Apple and C-64 conversions) will be out in August. Gary Grigsby's WAR IN RUSSIA will be out in 1984. This one is even bigger than Guadalcanal Campaign. Expect a price higher than GCC's $55.00. BROADSIDES, a detailed historical simulation of fighting sail will be out later this year.
SPECTRE: A maze-chase game that gives both an overhead and a 3-D eye level view of the maze. The overhead view of the maze gives you a complete view of a level for five seconds after which the maze walls disappear. Your task is to close Space Ports on each level to keep out enemy Questers, but of course, many are already on the ship to hinder your task. Apple II. $29.95.

WIZPLUS: a utility program for Sir-tech Software's WIZARDRY. WizPlus allows you to change, restore, add to, modify, recover, edit or move character, equipment, spells or treasures. In addition to the program documentation, the handsomely done manual also includes maps of Wizardry/Proving Grounds and equipment lists for both Proving Grounds and Knight of Diamonds. Sir-tech Software, has taken a strong stand against WIZPLUS and other programs of the same nature. In each Wizardry box a note concerning what they call "cheat" programs is enclosed. In part it says: "It took more than four years of careful adjustment to properly balance Wizardry. These products tend to interfere with this subtle balance and may substantially reduce your playing pleasure". Apple II. $39.95.

DOUBLE TROUBLE: In DT you play two arcade games at once. Your single joystick controls the central character on both the left and right sides of the screen. A good move on the right might be disastrous on the left. Top three scores are saved. There are five different games are used on the split screens. The games are recognizable as typical arcade games (maze-chase, invaders, etc.). The split-screen-single-control idea is interesting and at only $15.00 one can easily overlook the low cost packaging. Apple II.

A.E.: The Atari version of the Space Invader type arcade game which originally came out for the Apple. The graphics create the feel of a three dimensional battle between you and your mobile gun and the invading A.E.s (manta ray like creatures). The A.E.s come in from the horizon circling closer to you, diving behind obstacles, seeking to destroy rather than be destroyed. A nice twist to the Invader type game. Apple and now Atari. $34.95.

SKY BLAZER: Just like the Apple game of the same name (which was originally marketed under the name STAR BLAZER). A 'Scramble'-like arcade game in which you have five missions (see review of STAR BLAZER in CGW 2.5) The missions include destroying a ground radar station, tank, ICBM, and the Bungeling headquarters. As with all Broderbund products, the graphics are well done. As will all conversions from the Apple to the Atari, the sound is much better. Atari. $31.95.

THE MISSING RING: A fantasy adventure game with 3-D graphics that gives a different viewpoint than most adventure games. Rather than a side view or bird's eye view, TMR gives us a "bank camera view". That is, the view as it would be seen from a vantage point above the room on one wall (but not on the ceiling). The perspective is impressive and if for no other reason makes the game interesting. Another unusual feature is that the game allows for up to five separate players, each in control of one or more characters in the adventure. Apple II. $29.95.

BEZ 4700 Irvine Blvd., Suite 108B Irvine, CA 92714

Broderbund Software 1998 Fourth St. San Rafael, CA 94901

DataMost Inc. 8943 Fulbright Ave. Chatsworth, CA 91311

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NEW WORLD: A game of colonization. Each of the three players (Spain, France, England) seek to gain land and wealth in the New World by conquest and colonization. Beginning in 1495 each turn represents one year. Players raise armies, recruit colonists, explore, etc. Hitting the return key at the wrong points will bomb the game. Since hitting the return key is almost a reflex action for most Apple gamers, this problem can be annoying. The documentation is not up to Epyx's old standards. Graphics are good. The game itself is similar to a board game from Avalon Hill called CONQUISTADOR. Apple and TRS-80. $39.95.

JUMPMAN: An arcade game in which you, as the Jumpan, scale ladders, girders and ropes as you attempt to defuse 30 bombs. Obstacles include Alienator bullets, robots, dragons, birdmen, flying saucers, crumbling girders and vanishing escape routes. Atari and C-64. $39.95.

ILLUSTRATED COMPUTER DICTIONARY: Written in simple language and with many helpful illustrations, ICD defines more than 1000 words and phrases. $4.98.

MINER 2049er: Like DONKEY KONG, players must travel around split level screens, using elevators slides and the like to capture apples, destroy mutants, etc. There are 10 levels. Top five scores are saved. Joystick is required. Apple.

CRIME WAVE: You drive a police cruiser and patrol the city streets looking for and then trying to capture bank robbers. One way streets (which you can't violate) hinder your pursuit. If you drive up while the thieves are still at the bank there is a brief moment in which you may capture the bag man as he runs from the bank. Apple. $19.95. The penguins are not unusually dressed in this one.

CONTINUED ON PG. 45
CLOSE ASSAULT (CS) is a computer game very much in the AH tradition — what they now refer to as “a computer-assisted game”. This means you move counters around on a mapboard, type in your moves using a simple coordinate system, and get information back from the computer in the same format. There are no on-screen graphics at all, which is why the game can be made available on so many different types of computers.

(CS) is a game of tactical infantry combat in World War II. Tactical means you make decisions about which building to hide in and which direction to fire your machine gun, instead of wrestling with larger issues like whether to attack Moscow or Kiev, or how many divisions should be committed to defend Egypt. You are the top-ranked officer, giving orders to one or more squads. You know the status of every support weapon and losses to the man. For example, squad 107 is healthy, but their heavy machine gun isn’t working. Squad 102 has lost 3 men, but their leader and flamethrower are intact. Squad 110 has lost 6 men and their leader and the rest are demoralized.

The game can be played by two players but the obvious intent is that one person plays solitaire against the computer. I say obvious because a two-player game (with the computer as referee) ideally requires two sets of boards and counters and only one is provided. The program keeps track of the position of all units but you only know about the enemy units that can be “seen” by your units. Therefore, both players could not keep all of their forces set up on a single board without giving away the locations of hidden units.

In its role as ref, the computer can catch all of the mistakes that are typically made in normal boardgames. It makes sure that you don’t move too far in one turn. It checks Lines Of Sight (LOS), so you can’t shoot at somebody through a building or a hill. It calculates combat odds correctly and determines the outcome quickly. It reminds you of each phase of the turn so that you don’t accidentally skip one or get the order mixed up. Of course, it’s still possible to goof; for example, you could type a legal move into the computer but move the counter to the wrong place on the map. This could cause a lot of confusion if not detected promptly.

This is a well-designed and challenging game. The map and counters are very well done and were borrowed from Avalon Hill’s best-selling board game SQUAD LEADER. German, Soviet and American troops are all represented. There are two different scenarios and several combinations of nationalities for each. If this isn’t enough, you can design your own. The computer will play either side in any scenario, and it plays well enough to teach you good infantry tactics. It does better in some scenarios than others and the rulebook gives some advice in this area. It also gives some examples of play, but you don’t need to read the book before you start playing. Just sit down and begin — the program is self-explanatory. You don’t really have to know the rules for moving or combat; the computer will tell you what is legal. Of course, you'll make a few tactical blunders but that’s part of learning!

IS THIS COMPUTER SQUAD LEADER?

It is inevitable that CS will be compared to Avalon Hill’s SQUAD LEADER (SL) boardgame. The game was obviously derived from SL — the mapboard is board #3 from SL, the counters look the same, the turn sequence is identical. It is only fair to warn SL fans, though, that if they buy CS hoping to have a computer SL opponent they will be disappointed.

At best, you could say that CS is a very simple version of SL. If you’re struck dumb by SL’s 140+ pages of rules, this may be a blessing. Let’s quickly spell out the major differences for those who are familiar with the SQUAD LEADER system.

Continued on pg. 42
Baseball tournaments? Space ship design contests? Robotwar tournaments? Who cares about all that when there are damsels to rescue, dragons to slay, and nations to be saved?!?! We don't want all of you adventure game players to feel left out — so here it is! The COMPUTER GAMING WORLD ADVENTURE GAME CONTEST. We have collected for you 23 mind teasing, knowledge testing, budget busting questions. Your budget would have to be busted if you owned all 23 games.

We have ventured far and wide to find these questions in Appleland, Atariland, and elsewhere. If you follow our trail, you may know the answers! We throw down our gage. We dare you to solve the puzzle of the CGWAGC. Oh lusty adventurer, solve the 23 riddles and you can win...for the publishers of this fair journal will give unto the first correct entry from each of the fifty states and from each foreign land a free one year subscription to COMPUTER GAMING WORLD. But count the passage of time well, as entries will only be accepted through the final day of July in the year of our Lord, Nineteen Hundred and Eighty Three. Answers will appear in the Sept issue of CGW. Godspeed.

The crossword puzzle was created with CROSSWORD MAGIC from L&S Computerware. CM runs on the Apple II and retails for $49.95. L&S Computerware, P.O. Box 70738, Sunnyvale, CA 94086.
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Applefest is the place to view the most technologically advanced products for the Apple.

At Applefest you can try out and compare hundreds of products in an exciting, information-filled environment. You can learn more in two days than you could in months of visiting computer stores and reading trade journals.

And, best of all, everything on display at Applefest is for sale at special show prices, so you can save hundreds—even thousands—of dollars by making your purchases at the show.

This year a whole new conference program is being introduced to Applefests nationwide. The program will show you how to squeeze absolutely the most power, versatility and usefulness out of your Apple.

Seminars and workshops will teach you the ins and outs of buying software intelligently, using spreadsheet and database programs, putting Apples to work in classrooms and using the Apple as a management tool. You'll learn about new programming languages, important applications for telecommunications, exciting ways to use graphics and more.

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Software Spotlights will provide an in-depth, understandable look at hundreds of different software packages. Each Spotlight will cover the features, capabilities and limitations of a group of packages, to help you find the software that's best suited to your applications. Experts will be on hand to answer all your questions.

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Admission Fees

Additional Information
To receive more information about attending or exhibiting at Applefest, including the Conference, Seminar, Workshop and Panel Discussions Program, or information on local hotels call 617-739-2000 or 800-841-7000 (Boston).

Applefest/San Francisco:
Friday-Sunday, October 28-30, 1983
Moscone Center
10:30AM-5:30PM daily

Any Questions? Call 800-841-7000 (Boston)
Computer Ambush, SSI World War II man-to-man combat game, is back! After nearly two years of intensive effort, SSI has finally completed their Second Edition and the wait has been well worth it.

One of the first games I bought for my Apple was Computer Ambush (the First Edition). Having been a long time fan of Avalon Hill's Squad Leader (but not a fan of repeated die rolling, and of pretending not to see the enemy when I was playing solitaire) I had visions of instantaneous response and a fast smooth flowing battle between my brilliantly led troops and the evil Nazis under the control of the devious artificial intelligence. As anyone who acquired that first edition knows, my visions were rudely shattered the first time I completed the orders phase and entered the execution phase. It seemed to me that the orders phase lasted a millennium or two.

When SSI announced the proposed revision, I immediately sent in my Ambush disc and the required fifteen dollars. I then began to wonder whether I might die of old age before the new version arrived. The revision, when it finally came, soon made me forget the long wait for its arrival. The speed of this Second Edition is like a 930 Porsche compared to an old VW Bug. With ten men (the maximum) on each side in the middle of a massive firefight, the combat resolution phase typically last less than three minutes. The barely legible American flag that used to represent the American men to the German has been replaced by a nice clear star, and you can both drop and pick up weapons (helpful for when the Nazis blow away your machine gunner on turn one) and really enjoy the game. In fact, if the game were much more realistic you'd probably find yourself picking shrapnel out of your computer room walls.

THE SOLDIERS

Four teams of standard soldiers are presented for your fighting pleasure, one of red blooded GIs, and three teams of Germans. Both the Americans and the average German teams are available for two player games, with one additional team of German rookies and one of SS "supertroops" to allow you to handicap against the computer.

Both the two player option teams provided come fully described in a variety of characteristics. These include weight, strength, intelligence, dexterity, power of observation, throwing and firing ability, and hand-to-hand combat effectiveness. These characteristics range from a low of one to a high of ten, and directly affect the effectiveness of your fighters. For example, a firing ability of seven means that your man would have a 70% chance of hitting his target with a fire weapon, before taking into account the accuracy rating of whatever weapon he happens to be carrying. As might be expected, the stronger the soldier, the more he can do before becoming exhausted and required to rest. Intelligence and dexterity determine how quickly a soldier will respond to his orders. Dexterity reflects the innate speed, while intelligence affects combat reflexes and the trooper's ability to understand exactly what it is that the squad leader is telling him to do. Power of observation is crucial. A man with a PO of ten will very likely see enemy action on the other side of the board through windows and doors, while one with a PO of one may not see the enemy until they stand up in front of him and yell "BOO!"

Only one soldier per squad can be a demolitions expert, although the squad leader has a chance of successfully detonating the plastic explosives in case the demo expert is killed. This means you better not have the demo man lead your initial charge on the enemy position if you use his knowledge later.

THE WEAPONS

At the beginning of the game you have the option of either allowing the computer to allocate weapons for you, or doing it for yourself. If you choose to do it yourself, you can then select between a limited availability of weapons or an unrestricted availability. In two player games, I suggest that you make a decision as to what weapons will be available, and then select the unrestricted allocation option. If you pick the limited allocation option, the computer may very well give one side three rifles and two autorifles, while giving the other side two rifles and three autorifles. This can really make a difference in a concentrated fire fight. Against the computer, the limited allocation option is fine, and almost certainly more realistic.
Weapons available are machine guns, autorifles, rifles, and grenades. In addition, each soldier gets a knife, and each squad is normally allotted one garotte and one packet of plastic explosives. Each of the fire weapons has its own rate of fire and accuracy rating, both of which are affected by the personal characteristics of the man carrying them.

In order to be used, a weapon must be prepared (you can't have both your rifle and a grenade prepared at the same time) and, a fire weapon, loaded. Each time a fire weapon is used, there is a chance that it will run out of ammo and have to be reloaded before refiring.

THE MAP

Computer Ambush is played on a 37 by 63 square map of a war ravaged French village. Each space is three meters square and one second equals ten time points. The game is mathematically adjusted to eliminate the artificial bonus that sometime is found in moving diagonally, a factor which adds to the realistic feel of the game. Terrain types include doors, windows, hedges, a statue, exterior and interior walls, piles of rubble, and building contents. Each different type of terrain exerts a multiplier on both time and energy expended. You may very well be able, for example, to run back through a building, out the door, down the street, around the corner and up the alley to spot adjacent to where you started in less time than it would have taken to crawl out the window.

THE ORDERS

The great thing about the orders phase game mechanics is that you can try as many different things as you want with your men and thus calculate which of the numerous possible options is your best one. You can always change your orders without penalty, so long as you have not (F)inished your turn. If you give more orders than can be accomplished in the time span allotted (you decide at the beginning of each turn how many time points will be simulated that turn) the orders will carry over to the next turn. Then, at the beginning of that turn, you may either add to the existing orders, or (R)eplace them with a new command. A minor word of caution here. Should you decide to enter (N)ew orders, you may not then change your mind and so back and recapture the left over order from the prior turn. They are lost.

The orders format allows you maximum flexibility at the cost of a fair degree of complexity. You can walk, run, crawl, run dodging, fall prone, stand up, sneak, and/or wait (resting at your option. You can fire single bursts at specified squares, or direct area fire at anything in your field of vision (assuming that you do in fact see something)! As mentioned earlier, you can get and drop things, look around, prepare and load your weapons, throw grenades, and set off plastic explosives. As SSI has devoted nearly five pages of explanation to orders and movemeth, I am not going to attempt to detail them here. Suffice it to say that once understood, they allow you to quickly and exactly determine what you want your soldiers to do and to explore virtually every possibility prior to committing to a particular course of action.

THE SCENARIOS

Five solitaire and six two player scenarios are built into the game. The solitaire games include the NCO Training game (a simple introduction to the game with a detailed first turn example to acquaint you with the game mechanics), Ambush (where you lie in wait for the unsuspecting Germans), Raid (blow up the German HQ), Infiltration (get from one point on the edge of the board to another without meeting the Grim Reaper), and Barn Defense (in which you defend your position from the enemy).

In each of these you have a choice of opposing a German team of Volks grenadiers (Rookies), Wehrmacht (The average run of the mill German), or Waffen SS (Experts). My favorite solitaire game has been infiltration, since you may choose one of eight different starting points, and then choose any of the remaining squares as your objective, so long as it isn't adjacent to your starting point.

In the two player mode, you can select Ambush, Patrol (like Ambush only the Germans lie in wait for the Yanks), Strongpoint (the GI's defend the factory), Church Defense (Germans defend the Church), Seek and Destroy (a meeting of two enemy patrols), or Alley Fight (one side defends a specific alleyway). Finally, as in nearly every SSI game, you can have a free for all. Two Player scenario seven is Free Form, which means you can do anything you want.

Two Scenarios which I and my playing partners have come up with that may be of interest are Rescue and Spy Recovery. In Rescue, one side has captured an enemy, and is holding him for interrogation. The captured soldier is unarmed (except for a knife, which is unavoidable) and is held in a room with one armed guard. The rescue team, often a team of commandos all equipped with autorifles, must free the captured soldier and get him back to a friendly map edge alive. The defenders cannot shoot the prisoner before the prisoner attempts to escape (moves or attacks his guard). In Spy Recovery, the spy starts at the bottom of the map and the recovery team at the top (or vice versa). The defenders spread out anywhere in the mid-section of the board and must prevent the spy from successfully reaching the opposite end of the board from where he started. In this scenario the defending team should have at least 50% greater forces than the recovery team, while in Rescue, the rescue team should have 50% greater forces than the defenders.

For those of us who wish to fight our own battles, or relive the escapades of comic books or television heroes, SSI has made provision for the creation of soldiers. You can change both characteristics and names, and then save your new squad for future use or go straight into a battle from the creation phase. This brings up the one and only bug that seems to have found its way into this version of Computer Ambush. After creating and saving a new German team (only usable in a two player game) the weapons allocation phase crashes with the message: "Error of unknown origin!" This bug can be avoided by (1) allowing the computer to allocate weapons for you, or (2) going straight from the soldier creation phase into the game. The bug has been located, and in future copies of the Second Edition will probably be corrected.

HINTS

The most important suggestion that I have in this area is to take your time. It is absolutely essential to provide cover fire before rushing an enemy position. There is a chance that when an enemy soldier is fired on, he will duck. If he

Continued on pg. 44
When I first played Raster Blaster, I vowed that I would buy all future BudgeCo products sight unseen. I did so with the Pinball Construction Set. My faith was well rewarded! Bill Budge has moved us into a new generation of human-computer interfacing. This "Software Toy", as Bill refers to the product, allows a user to build a video pinball game. And, better yet, to do so without any programming. In fact, you don't even have to type a single character on the keyboard, unless you wish to save the results.

A joystick controlled "hand" and a set of icons are the tools in the Construction Set toolbox. Move this pointing hand to a Thumper Bumper, push either button on the joystick to 'pick it up', and drag the bumper from the toolbox onto the playing field. Let the button go and the bumper is left in place. If you don't like the placement, push the button again and move it to a new spot or put it back in the toolbox. This completely interactive technique transcends language and age barriers. My eight-year-old had absolutely no difficulty in creating a set of games of his own. The Pinball Construction Set finally got him interested in the Apple as a tool, rather than as just a connector for our joystick. The key to the ease of use of this product lies in the pictorial representation of objects or activities. "Icons," as these pictorial representations are technically called, are activated by pointing them out with the hand. A hammer allows polygons you move into place to be "pounded" into shape, and a paintbrush allows them to be colored in. (I still can't believe that the balls bounce accurately off these walls.) Made a mistake? Cut it out with the scissors. You can finally shape your ideal pinball table layout.

Like all of Bill Budge's programs, this product is very complete. Most of the traditional pinball elements can be included in a game:

- Thumper Bumpers
- Drop Targets
- Knockers and Slingshots
- Spinners
- Ball Catcher
- One Way Gates
- Rollover Lights
- Single Strike Targets

But it does not end there; there is also a magnet that holds a ball for a split second, then releases it, and a ball integrator, that not only catches balls but eats them as well. Moving things around the playing field is fun in and of itself, but the really amazing part is that at any time you can point to the 'play' icon and instantly test your creation.

Users can create very sophisticated games through the use of the logic icon. Up to three elements on the playing field can be tied to an AND gate. When all inputs to this gate are 'true' (they have been hit) the player can be awarded bonus points or the bonus multiplier can be increased. A sound can be selected to signal this achievement as well.

There's even more. A magnifying glass icon and the pointbrush allow you to customize about 75 percent of the screen. How about a custom made pinball gift for your favorite Apple gamer? Russell Sipe got one along with this article. Does your special friend live on the moon where gravity is only one-eighth that of earth? No problem, just set the gravity of the game to any value you want.

Is there anything else you could possible want? Yes, just a few things I which were included. First, if you're a pinball purist, you'll still be a little disappointed in your ability to 'catch' the ball with a flipper. This implementation is better than Raster Blaster, but still doesn't 'feel' right. Second, there is no real way to apply "Body English". One of my favorite finishing touches in Raster Blaster was the way the score seemed to roll into place from digit to digit. The Construction Set just displays the scores like any other game. I guess it's a small price to pay for being able to make your own game so easily. Finally, I would have liked to be able to link the output of some of the AND gates to an element on the playing field. That element would be invisible during play until all the inputs to the gate went true, then it would show and come into play. Using a technique like this, the ball savers in the hard setting of Raster Blaster could be duplicated.

All of that notwithstanding, there's something almost magical about the way this product works. You take everything it does for granted after just a few minutes. Bill Budge obviously worked very hard to make the outcome so easy to use. It became obvious that picture

Continued on pg. 43
A year ago (issue 2.3), I wrote about influence mapping. The column gave a simple algorithm which, given a map and units placed on it, would calculate areas of influence. I then made two rash promises. The first was that I would follow up on the subject the following month; the second, that listings would be sent out to those who wrote and asked for them. My life has been in high gear ever since and those promises have not been kept. My apologies to all and sundry, especially those who wrote and never heard back from me. This column represents my first attempt to live up to those promises.

The technique is, indeed, a simple one. Figure 1 shows a hex grid with two types of units on it. The circles shall be called quarks and the squares, bosons. To start our algorithm, we set the value of every unoccupied location to zero. We then set the location of each quark to -50 and of each boson to +50 (see Figure 2). We then make a series of passes on the map. During a pass, each location receives a new value equal to its old value, plus one for each adjacent location whose old value is greater than 0, minus one for each adjacent position whose old value is less than 0. After 10 passes, the map in Figure 2 has become the map in Figure 3. The sign of each locations — "+" or "-" — indicates whether it is controlled by the bosons or the quarks, while the magnitude — ranging in this case from 1 to 105 — shows how strongly it is controlled.

That's as far as the column got last year. I then promised to consider such problems as terrain, unit differentiation, movement, ranged combat, and what to do with all of this marvelous information. In this issue, we'll look at terrain and unit strength and how they can be taken into consideration.

The example above assumes that a unit's influence propagates evenly throughout the map. However, the game may include different terrain types which affect how units move and fire, so we may want to take that into account. Figure 4 shows the same map now populated with four different types of terrain:

- **CLR** = clear terrain; no effect on influence
- **RGH** = rough terrain; harder to control
- **MNT** = mountains; can only be slightly controlled and cannot influence other hexes
- **WTR** = water; cannot influence or be influenced

Having modified the algorithm to reflect these differences, we now get the influence map shown in Figure 5. As you can see, the terrain makes quite a difference. In Figure 3, the quarks control over twice as many hexes as the bosons (97 to 46). In Figure 5, the ratio has dropped to less than 3 to 2 (69 to 49), and the shapes of the areas have changed considerably. Indeed, what used to be a powerful thrust by the quarks between the two boson areas has now become a two-way split with the key point contended for by both sides.

**TERRAIN**

Continued on pg. 45
WHEN SUPERPOWERS COLLIDE

CHAPTER ONE
The Battle for Central Germany

Major Mike Chamberlain

BASIC INFORMATION

NAME: GERMANY 1985
TYPE: Tactical Wargame
SYSTEM: Apple II with Applesoft or Apple II Plus - 48K
FORMAT: Diskette
# PLAYERS: 1 or 2
AUTHOR: Roger Keating
PRICE: $59.95
PUBLISHER: Strategic Simulations Inc.

"Mustang Three, Mustang Three, this is Gunner One Six, Over!"

"Gunner One Six, this is Mustang Three, go ahead, over."

"This is One Six! We're in position Bravo on Phase Line Apple!... Under attack by Red Tank Regiment!!... Heavy artillery! Request TAC Air Support; coordinates nine five two eight!! Reinforcement required ASAP!!... DO YOU COPY MUSTANG??!!"

"Roger One Six, TAC on request. ETA 2nd Brigade eight hours. Hold current position. Maintain radio contact... good luck."

As you hunker down in front of your computer preparing to go toe-to-toe with the Soviet's finest, you begin a scenario which some imagine could occur one day in the Fulda Gap of central Germany. You are in the lead elements of a meeting engagement between NATO and WARSAW Pact Forces in Strategic Simulations' new game, GERMANY 1985; and about the only thing missing is the static on the radio.

Having spent eight years in Germany as an army officer, I was anxious for the opportunity to see and play GERMANY 1985. I haven't been disappointed. The game presents, in a reasonable general manner, the challenges (and frustrations) which such a conflict would place on a ground Commander. Allocation of air support, planning air superiority, prioritizing fire support targets, and allocating reinforcements are just some examples. Add to this a fluid situation and a powerful opponent (human or computer) and you have the makings of an excellent wargame.

OVERVIEW

GERMANY 1985 is the first in a four-game series by Roger Keating titled "When Superpowers Collide." It uses the basic game system which he developed for SOUTHERN COMMAND (Note: for a review of this game see CGW Vol. 2 No. 2, Mar-Apr 82, pg. 6). Although GERMANY 1985 is obviously an enhancement of the SOUTHERN COMMAND game system, it is also clearly its own game with nice touches added, more options, and a simpler playing system. The biggest bonuses in Roger's current game are the ability to play either side against the computer and the provision of two totally different scenarios. The factors make GERMANY 1985 a real bargain at SSI's regular major game price of $59.95. The game comes in a standard SSI box with one disk, a map card with one map on each side (different terrain for the two scenarios), a reinforcement schedule/control key card, and the rule book. Getting started is no problem as the disk has a souped-up DOS and the program loads quickly. You won't go much further though, unless you've read the rule book which can be something of a chore — especially for the beginner. The rule book is the only serious flaw I found in the package. I discovered three commands that I couldn't make work at
all (it could be me) and one key (H) that wasn’t mentioned, it draws in the hexes for those who like that sort of thing. All of these things, though, were really only minor irritants and shouldn’t stop you from buying and enjoying the game. Once you’ve made it through the rules and know your way around the battlefield, you’re ready for the fun.

**THE GAME**

**GERMANY 1985** is played on a 39 X 28 hex grid with each hex representing one mile. Since the tactical map on the monitor contains a 13 X 9 blowup of the terrain, you have to scroll around the map a la’ **SOUTHERN COMMAND** while playing. By hitting the “P” key you can view the entire 39 X 28 map in a less detailed manner but with all exposed units and key terrain clearly evident. You need this screen to keep a feel for the overall flow of the battle. If you focus attention or forces in one area, you can be sure that your opponent will take the opportunity to go somewhere else.

The terrain in the game is generally similar to the terrain I saw in Germany, lots of wooded areas with rolling hills and some rough. The rivers and roads don’t always fix exactly with the tactics one would like to employ, but then they rarely do in reality either. This is particularly true in the “Invasion” scenario where the invading forces advance on both sides of a north-south river (tough!). The graphics for the terrain are colorful and easily identifiable. Don’t worry if you have a B&W monitor because there’s no trouble there. The unit graphics represent battalions of different types (Tank = Armor, APC = Mech Infantry, Helicopter = AIRCAV, Howitzer/Truck/SPG = Artillery).

The forces available are roughly equivalent to three divisions for each side. They are numbered for identification and to assist in maintaining unit integrity (crucial on the Soviet side because artilllery can only answer fire missions for their own division). The mix and number of the units are obviously dictated by gaming considerations and don’t mirror actual US or Soviet force structures, but they’re close enough.

The object in both scenarios of the game is the “control” of town, village, and airfield hexes. Control is established by the last unit which passes through the hex and is graphically indicated with a “+” for NATO control and a “0” for Soviet control. According to the designer, the intention of the victory condition of majority control was to represent the necessity for lines of communication and supply. I understand that aspect, but it is also true that you can “win the battle and lose the war” if all you end the game with is a couple of hidden units in the rear gobbling up objective hexes. Each gamer can decide on his own concept of victory, of course, but I suggest that “true” victory is to be found in some combination of hexes controlled, number and strength of units remaining, and the ending tactical situation.

The game end is, randomly, turn 20, 21, or 22 (representing about 3½ days at 4 hours per turn) but can be continued for up to 240 turns (40 days) at your option.

At any time during a human players’ turn, the game can be saved by hitting “CTRL B”. This allows you to save the game on a moments notice and is a real improvement over the old “end of turn, do you want to save game?” method. Saving requires an SSI initialized disk. The **SOUTHERN COMMAND** save game disk will not work, but this is really another enhancement due to the easy-to-use catalog of saved games and better speed.

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PLAY

Upon booting the disk you'll be given a wide list of options: 1 or 2 players; which side the computer is to play; difficulty level (1-3); hidden or exposed movement; reinforcements; and finally, the scenario you wish to play. (The options available give you 96 possible combinations against the computer!!)

After you make your selections, the map appears and you are given the additional option of randomizing terrain. With this option all terrain except towns, rivers, and swamps are randomly dispersed. I don't recommend you try it until you're fully comfortable with playing the standard terrain.

Movement of units is similar to SOUTHERN COMMAND and involves entering the movement mode either individually with the "M" key or automatically cycling through the units with the "ESC" key. Movement is accomplished with the 1-6 keys and to assist seeing what's ahead, you can center the moving unit on the screen with the "0" key at any time. The options available in commanding your units include a list of orders (the "O" key) and modes (the "C" key). Both are expansions of the options previously available.

The order commands allow you to commence firing, call in air and artillery fire, withdraw and reorganize, move forward and attack or fire, move to capture nearby villages, exit map, and set a delayed attack or fire mission. The latter is somewhat different from SOUTHERN COMMAND in that you only order the ambush, allowing the computer to decide when it's triggered. This makes unnecessary the previous, somewhat cumbersome, system of play.

The change mode option allows you to direct units to enter different modes of operation; normal, transportation, reorganization, river, support, fire, defense, and attack.

All of this might sound a bit complex at first reading, but the game plays very well using only a couple of selected options. As you become more familiar you'll grow into the rest.

Unit to unit combat in the game is initiated by moving next to an enemy unit, or by hitting "CTRL C" if already located in an adjacent hex. The strength of combatants is affected by the number of enemy units in sight, distance from unit headquarters, number and type of supporting units, terrain, preparatory artillery barrages, mode of operation and, of course, unit's strength and efficiency. (Aren't you glad you own a computer?)

A major addition to combat in GERMANY 1985 is the provision of more realistic air support play. There are now two factors which must be accommodated, tactical air support (TACAIR) and air superiority. TACAIR is scheduled one turn ahead of time by entering the air mode (CTRL A) and striking T for TACAIR. You then position the cursor in the desired location and lock in the target with a CTRL F. On your next turn, you may call in the strike if you have (1) air superiority or air parity, and (2) friendly units within three hexes of the hex previously specified. At that point the computer will attack the best enemy target within three hexes. The air attack has the effect of a strong artillery strike and can, in many cases, spell the difference between victory and disaster on the battlefield. All this great air support planning is meaningless, however, if your opponent has air superiority. In that case your TACAIR doesn't show up and you can find yourself in what is known as a "tactical bind". Air superiority is achieved by allocating between one and nine sorties to the target and firing. The Soviet side seems to have an advantage in artillery. This is certainly true in the "real world" — they're loaded with it as any student of WWII will tell you. One recommendation for using the fire support order is necessary. Since the orders do not differentiate between artillery and air support, activating the order will call in everything within range. If you don't want your artillery to go where your airstrikes do, you must fire your artillery manually before activating TACAIR.

Another new wrinkle for the game's artillery is the provision for firing smoke. This capability can be very important if you have to withdraw or if you're conducting a river crossing operation.

I feel somewhat obligated to mention engineer play in the game since I am an engineer officer. Although the game has indications of mines, they are not available in this scenario. Keating says that he ran out of memory and at the time couldn't pack it in. This is also the reason that there is no nuclear play. The lack of mines or the capability to destroy bridges makes the engineers either bridging or fighting units. It also means that you can't reinforce terrain with
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There is one other provision not made in the game that I think would add to its realism. Although you can move an infantry, armor, or artillery unit and subsequently fire (if you have movement points remaining; the reverse is not true. I think that the addition of a "fire and withdraw" order would provide tactical options not now available. As it stands, you have a tough choice when faced with mounting pressure to either try to back out without inflicting damage (really only delaying the battle), or stand and fight.

One other improvement worth mentioning is the speed of computer movement. In SOUTHERN COMMAND, computer forces moved so quickly they were almost impossible to follow. In GERMANY 1985, however, you can slow down the speed of the movement by striking the "right arrow" key until the speed is acceptable.

THE SCENARIOS AND TACTICS:

Advance to Contact — this is really a meeting engagement between the forces. The initial forces are pretty equal (about 2 brigades each) and start at opposite sides of the map rushing to gain ground in the middle.

The stronger US battalions are slightly fewer in number and have a chore in covering all the terrain and trying to avoid strong Soviet artillery and initial air strikes. The US player has to choose his ground carefully and avoid early decisive engagements. He has to hold initially and wait for reinforcements before moving to penetrate the Soviet front. He shouldn't be so timid that he can't recover from deep Soviet penetrations, but at the same time he can't afford to become overly aggressive at the start.

The Soviet player should look for holes in the US line and, while holding down US units with moderate forces, attempt to infiltrate and cause problems in the US rear. He needs to protect and make good use of his superiority in artillery and if possible destroy the US air cavalry squadron which is highly mobile and therefore significant threat. Actual Soviet tactics call for massing a superior force and breaking through the enemy front, then exploiting the breakthrough. This is an excellent approach in GERMANY 1985 but shouldn't be attempted too early.

Invasion — this scenario begins with the US player placing his forces (about two brigades) anywhere on the map. After placement, but before the US player's movement, the Soviet player positions two airborne drops on the map. The "attack" by the Soviet begins on turn three with the appearance of ground forces attacking from the south. There is a major north-south river traversing the center of the map and the attack comes up both sides.

The US player has a problem right at the beginning — does he set defenses for the imminent ground attack, or does he try and neutralize the airborne forces in his rear? There is no "good" answer. The US player should react to the airborne placement with two objectives in mind; first, control of the two major bridges across the river (this forces a Soviet assault crossing with engineers), and second, the elimination of the secondary attack along the west bank of the river. If the latter can be accomplished, the US player can consolidate his forces and move when appropriate to attack eastward. Since later US reinforcements appear in the northeast, he can effectively "squeeze" the Soviet and win.

The Soviet player should place his airborne drops carefully. His artillery is light and vulnerable and must be protected. Consideration should be given to a drop to secure the southern bridge (sound familiar?) and thus provide good lateral movement. He must be selective in his use of the western force and may wish to consider a reinforcement crossing with his engineer unit from the east. Basically, he must react to the initial US strategy.

Naturally, all of these tactics change as you select different difficulty and reinforcement options prior to play. When the computer is playing, increasing the difficulty factor increases the reorganization capabilities of its units. It handles this very well, withdrawing and reorganizing at opportune times. The result is a more aggressive opponent. Winning against the computer with the most difficult combination of options will take every bit of savvy you have plus a bit of luck!

THE FUTURE

The remaining games in the "Superpowers" series are: RDF 1985 (Rapid Deployment Force) a US reaction to a Soviet invasion of Saudi Arabia; BALTIc 1985, a Soviet invasion against primarily anti-tank forces on the northern European plain; and NORWAY 1985, a Soviet invasion of Norway across their common border, and the NATO response.

The next release, RDF 1985, has just hit the street and I will have a follow-up review in an upcoming issue of CGW. The good news is that these later games will sell for $34.95 (you will need the GERMANY 1985 rules - $5.00 if you have to order separately). [Ed Note: SSI is considering including a copy of the GERMANY 1985 Master Rule Book in future releases in the "Superpowers" series.] SSI told me that the price reflects the fact that the game system is already developed and that there will only be one scenario per game. It's a good bargain and SSI deserves appreciation for their fair treatment of their customers.

There's still more! Although not officially announced, Roger Keating told me, SSI confirmed, that they hope to release a fifth disk. It will not be a game, but instead will give owners of the previous "Superpowers" games the ability to enter those disks and modify unit arrival schedules, force composition, and possibly terrain. The program is still in the conceptual stage but, if introduced, will be a landmark in computer wargaming!

ERRATA

1. The following keystrokes do not function:

CTRL P: Combat pause on/off
CTRL K: Global leave (cycle round all units)
CTRL D: Divisional leave (cycle round divisional units until all moved) — This can be accomplished by using the "L" key when auto-move is active.
CTRL M: Turn auto move on/off — use the "ESC" key for this function.

2. The "H" key (not mentioned) will draw/remove a hexagonal overlay from the tactical map.
GALACTIC ATTACK!

Dick Richards

Sir-tech's Space Combat Game

BASIC INFORMATION

NAME: Galactic Attack
TYPE: Arcade/Strategy
SYSTEM: Apple
FORMAT: Disk
# PLAYERS: 1
AUTHOR: Robert J. Woodhead
PUBLISHER: Sir-tech Software, Ogdensburg, NY

Galactic Attack is a real time space war simulation from Sir-tech Software, the people who made Wizardry. You, as commander of the USS BLAISE PASCAL, must free our solar system from the invading Kzinti. Only the Earth and Luna remain safe, all other planets and the asteroid Ceres are garrisoned by the aliens. To succeed in your mission, you must travel to each planet, strafe off the vermin, and beam down Human armies to complete the reconquest of the planet. As this is a real time game, it demands quick thinking — indecision can be fatal — because the computer controlled Kzinti never hesitates.

The graphics display gives you an excellent view of our solar system, with ringed Saturn, cloudy Venus, and strangely shaped Ceres and all the others individually portrayed in their proper relationships to each other. Each new game places the planets in differing orbital positions, so that while Mercury is always closest to the sun and Pluto furthest away, each game is different. One game could, for example, find Venus and Mercury quite close together, while in the next game they might be on opposite sides of the sun. GA also allows you to view the display with a magnification of from 1 (close up) to 9 (shows virtually all the planets).

To allow you to learn without instant self-destruction, you can vary a number of the game parameters. The attacking Kzinti fleets can be composed of from one to nine enemy ships (three is a challenging beginning number). You can also set the number of hit points required to destroy a Kzinti ship (from 50 to 300) and the number of hit points inflicted by a torpedo explosion. Since your ship can take 100 hit points before becoming a mini-nova, this allows you to handicap either side, while the torpedo inflicted damage is the same for both the BLAISE PASCAL and the Kzinti. One advantage that you have is that your ship has shields, something the Kzinti have never developed (probably due to their low regard for life). As long as your shields are up, your ship takes no damage points at all.

After you destroy the entire Kzinti fleet which has engaged you, you’ll have time to concentrate on the planets. Orbit the Kzinti infected planet of your choice, strafe off the vermin, then beam down enough Human armies to wipe out the remaining aliens (strafing won’t affect the last three Kzinti), and the planet is yours!

Each human army beamed down will wipe out one alien army and destroy itself in the process. Hence, if there are four Kzinti and you beam down six Human armies, you will take over the planet and have a garrison of two Human armies.

Sounds easy, doesn’t it? The problems, however, are numerous. First of all, you start out with the capacity to transport only one Human army at a time. This transport capacity increases as you destroy additional Kzinti (up to a maximum of ten), but the more armies you transport, the poorer your ship performs. In fact, when carrying the full complement of ten armies, the BLAISE PASCAL maneuvers like a beached whale and probably couldn’t survive an attack by a Kzinti captain’s gig!

Another problem encountered, is that in order to strafe an enemy planet, you must first drop your shields. This means that, while you are strafing, the planetary defenses will be blasting you. I’d suggest you break off your attack when your damages reach 50% to 60% or you’ll soon be referred to in the past tense. Cruise to a safe distance to repair your damage and then head back into the fray. A word of warning here. When strafing, the keyboard registers a strafe order for each press of the “S” key, so if you madly hit the key ten times, you will be committed to ten strafing runs. You’ll find this very frustrating when, after six or seven runs, you realize you’re about to explode!

There is a random time period between the destruction of the last Kzinti fleet and the arrival of the next. One thing you’ll want to avoid, therefore, is

Continued on pg. 42
Well, of course, someday is today! No matter where you live, if you have a computer or terminal, a modem, and a private telephone line, you can explore the exciting world of gaming via telecommunications (“tele-gaming”). Do you prefer to match wits against a computer or against another human being? Either way, you’ll find hundreds of online opportunities to challenge your skills, share your knowledge, and have just plain fun!

If you don’t already have a modem for your home computer, you’ll need to purchase one at a computer store. Check the various computer magazines for information on popular brands and price ranges, as well as for reviews of terminal software to accompany your particular hardware configuration.

Okay, you say, I’ve got my computer all set up with a modem and software. Now what do I do? Here comes the hard part: choosing the online service with which to connect, and which games to play. You have many options, and your choices will depend upon your gaming preferences as well as your budget. If you decide to investigate the games offered by one of the major telecommunications services (such as CompuServe or the Source) you will need to become a subscriber and pay an hourly fee for your online time.

CompuServe, for example, offers a subscription that you can buy at most computer stores. The basic kit contains a password, a terminal emulation program, and five free hours of online usage for $39.95. However, you can purchase the subscription package alone (without the software) from Radio Shack for $19.95, including one free hour of usage. CompuServe’s hourly rates for 300 baud service are: $22.50 from 8:00 a.m. to 6:00 p.m., and $5.00 from 6:00 p.m. to 5:00 a.m. (and all day on weekends and holidays). Over forty online games are available, including the exciting new “Dungeons of Kesmai,” nine Scott Adams Adventures, and “MegaWars,” a game that offers the capability for ten people to play simultaneously. You can also join CompuServe’s Gaming Special Interest Group (GameSig) where members take part in ongoing fantasy role-playing games, game authors trade ideas in the conference area, and users upload their public domain game programs to a database.

Perhaps one of the most amazing phenomena in online gaming is the explosion of information exchanged between computer game players. Messages such as the following are posted daily on GameSig:

#:7604 Sec. 1 - Adventure Games
Sb: #WIZARD AND THE PRINCESS
27-Mar-83 16:27:19
Fm: Chuck Wright 73105,1161
To: Scorpia 74045,221
Help! I’m in the castle and I can’t get to the frog. I’ve been able to go everywhere except the locked room in the maze. Is there an exit somewhere or is there a way to get to the frog??? I would appreciate your help!
Chuck Wright

#:7607 Sec. 1 - Adventure Games
Sb: #7604-#WIZARD AND THE PRINCESS
27-Mar-83 16:58:51
Fm: Scorpia 74045,221
To: Chuck Wright 73105,1161
Hi Chuck! Well, there isn’t a key for that particular lock, but check your inventory for an item you’ve had since the beginning of the game, but haven’t used yet. That should give you some ideas! And when you do get past that door, keep in mind that it helps to go upstairs twice!
Best,
Scorpia

Obviously, the ability to receive almost instantaneous help in solving a frustrating puzzle is one of the most valuable assets of this gaming special interest group.
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The Name of the Game

Jon Freeman

Five years as a professional game designer is enough time to develop a long "hit list" of things (and people) that disturb, distress, and annoy me about the art, craft, hobby, and business of computer gaming. These — the subjects of this column — will often be tough topics — tough sometimes because they require heavy thinking, but tough, also, because they may make someone (even you) uncomfortable or unhappy.

Rest assured that it's all in the cause of truth, justice and Margot Kidder...

At Applefest I overheard someone complain about pirated copies of "their" game, and the royalties they were thereby losing.

What made this comment so ironic was that it was just another copy of Pac-Man for the Apple. It was not "inspired" by, "derived" from, nor even an "imitation" of Pac-Man. It was a blatant rip-off.

It was, in a word, plagiarism.

If someone painted a nearly perfect likeness of the Mona Lisa, we wouldn't call it "a new version of the classic 'La Gioconda' paintings"; we'd say it was a fake or forgery.

When enterprising crooks print "funny money," we don't say the result is a "clone" or an "imitation" of what we laughingly call real money; we call it counterfeit.

When Linda Ronstadt records "a new version" of a song like "Desperado," she doesn't pretend it was merely "inspired by" the Eagles. She is giving the song her own special treatment, but Don Henley and Glenn Frey still get credit — and royalties — for writing it.

If I wrote a spy novel about a hero named James Band, who liked his martinis "shaken, not stirred" and fought a villain named "Silverhand," whose Oriental bodyguard was called "Oddjob," would a critic refer to it as "the latest in the secret agent 007 genre?" Or would I be visited by a nasty lawyer — if not the police?

The Awful Truth

As Abe Lincoln is reported to have said, "Calling a tail a leg doesn't make it one." There's no such thing as "eat-the-dots games" (plural) or Goldfinger movies. "Maze games" are a genre; Pac-Man rip offs are not (though they are an industry, almost).

Contrary to a recent article in this magazine by Anthony Melendez, "maze-chase games" have not been "overused." (Abused, yes; overused, no.) Just offhand, I can think of only three games for home computers that might fall in the category of "maze-chase games:" Tax Dodge, Serpentine, and Pac-Man. None of the three is very similar to either of the others, and only Pac-Man has been "overused" — in the form of dozens of shoddy fakes.

I am not an apologist for Atari. I don't work there; I don't own stock in Warner Communications; and I probably have more gripes about them than you do. (That's another story, however.) I don't even like Pac-Man very much, and (speaking of "shoddy") the 2600 (VCS) version was simply a disgrace.

So why make a fuss?

Because it matters. It affects what games get done and who gets rewarded. It makes a difference to you — whoever you are — in the long run and it affects people like me right now. Today and every day.

In his review in the January/February issue of CGW, Allen Doum described Tax Dodge, a game Anne Westfall and I created, as "a kind of Pac-Man variant." In a limited sense, that's true. (Or, as Sally Field said in Absence of Malice, "It's not true, but it's accurate"). Tax Dodge is loosely, a maze game, and as such it's closer to Pac-Man than it is to, say Asteroids or Zork.

The problem is that what is intended as a helpful bit of orientation (since Allen goes on to detail many of the differences between Tax Dodge and Pac-Man) may mislead the casual reader, who, jumping to a false but predictable conclusion, reads no further: In the average gamer's experience, the only thing vaguely similar to Pac-Man is a counterfeit Pac-Man. Ergo (he thinks), Tax Dodge is just the Same Old Thing, and its theme is as bogus as the other rip-offs.

The Bottom Line

This is not just unfortunate; it is unacceptable. I do not want to be found in the company of con men and rip-off artists, even by accident. More importantly, perhaps, this confusion reinforces in the mind of the average gamer the notion that no alternative is possible. Original ideas (some think) occur miraculously in certain arcade games, and the only thing home computer programmers can do is copy them.

There is a four-letter word for that notion, but it is unjust as well as vulgar: manure is necessary and, it its way, useful. The idea that rip-offs are inescapable is useless, offensive, and evil.

Sorry but these are not "nice little games." They're nasty little pieces of trash, and belong in the garbage with their illegitimate brethren.

Jon Freeman is Creative Director of Free Fall Associates, a development team whose newest games, Archon and Murder on the Zinderneuf, are available from Electronic Arts.
Ah Yes! It's that time of year again! The birds are singing, kites are flying, and thousands of computer gamers are hunched over their computers setting the daily line-up for the big game. Watch them, riveted to the monitor, as the speaker spits out a low pitched "beep" and the flashing ball rockets down into the left field corner driving in all the runners.

Of the several computer baseball games on the market only two are truly "stat" games: SSI's COMPUTER BASEBALL (CB), and Avalon Hill's MAJOR LEAGUE BASEBALL (MLB). The former, by Charles Merrow and Jack Avery, is the more popular (according to our R.I.D. ratings) and allows you to make up your own teams. The latter, by Richard Bamberg, allows you to design your own teams, however the process is more difficult than with CB. To design your own teams with MLB you must first have the board game version of MLB which contains the information on rating players and then you must use a text editor to create the teams.

Don't confuse Avalon Hill's MLB with another computerized baseball game they have, BASEBALL STRATEGY (we won't use an acronym on this one). This game is a "you against the computer" game based on their board game of the same name. In BASEBALL STRATEGY, you and the computer manipulate identical rosters to set up the best lineup for your strategy (long ball, running game, etc...). Actual play involves the defense picking one of seven pitches and the offense picking one of twelve swing types (go with pitch, punch, long ball, etc...). Results are found by cross-indexing the two choices on a matrix. The nice feature of the board game version of BASEBALL STRATEGY is the ability to have head-to-head games with human opponents, each having the same tools with which to work. Unfortunately, the computerized version is strictly a solo game.

The idea behind a "stat" baseball game is that each individual player has a separate data string or "card" which rates him in the offensive and defensive categories associated with baseball. For example, Babe Ruth's "card" would call for a lot of home runs but also a lot of strikeouts. The ideal result being that if you played a team through a particular season, individual players would end up with stats very similar to their real life performance for the year in question.

In addition to using the standard teams that come with the game, CB is supported by yearly update disks with the past season's teams. The disks cost $15.00 and are available directly from SSI. There are presently two season data disks: 1980 & 1981. The 1981 disk has a nice feature not found in the original game or 1980 disk: A season statistics compiler. Any gamer who has tried to run a baseball league, board or computer, knows the tedium of compiling statistics. With the 1981 data disk, you simply save the results of the game to a statistics disk and, with the touch of a few keys, you can get a printout of your team's performance to date. The new 1982 disk should also be out in June or July according to Joel Billings of SSI. And, CB will soon be available for the Commodore-64, the IBM-PC and later the Atari.

CB Enterprises of Ft. Lee, Virginia sells five CB data disks on which you can get every pennant winner, division winner, close contender, and notoriously bad team from 1900 through 1979. The disks cost $15.00 individually or $60.00 for the set of five. You can even order a customized disk with just the teams you wish on it.

LEAGUES

The most interesting way to play a "stat" baseball game is to set up a season replay or a league. Seasonal replays are just what they sound like. Using Sporting News' BASEBALL GUIDE for the year in question to find each team's schedule as well as the results of each game, it is possible from one source to get the information needed for the season. You can simply replay the same schedule while resting the pitchers according to the general rule that a pitcher needs one less day of rest than the number of innings he pitched (with four days rest being the maximum required).

Leagues on the other hand can be created according to your own tastes. The two leagues which I ran this past year were an ALL STAR LEAGUE and a WINTER LEAGUE comprised of last year's four division winners (St. Louis, Milwaukee, Atlanta, California) plus the two teams that were eliminated at the very end of the season (Baltimore and Los Angeles).

1981 ALL STAR LEAGUE

The ALL STAR LEAGUE was based on 1981 players and was comprised of four teams, each representing one of the divisions of major league baseball. Selections for team members were based on information gleaned from BILL JAMES' BASEBALL ABSTRACT 1982 (Ballantine Books; $5.95) (the 1983 version is now available for $6.95, and is a must for any serious baseball fan) and influenced somewhat by the actual All Star selections for 1981.

It was a 36 game league in which the computer coached both sides (a nice "spectator" feature available in CB) thus eliminating any bias on the part of the league commissioner.

Continued on pg. 26
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THE RESULTS

The American League Western All Stars were the league champions finishing with a record of 22-14. After six games the AL Westers were 3-3 and trailed the NL Easters by a game. But, the ALW then proceeded to sweep three from the NLE and went into first place to stay for the rest of the season. From game nine on, the ALW never had less than a two game lead.

1982 WINTER LEAGUE

The 1982 Winter League matched the four division winners and the two near winners in a six team, thirty game league. Like the All Star League, the Winter League was dominated by one team. The 1982 Milwaukee Brewers were the runaway league champs.

The Atlanta Braves had their usual quick start, winning their first six games. But, they then went to Milwaukee where they dropped two of three to the Brewers. The Brewers went on to win six straight and after 18 games had a one game lead on the field. At that point, they put the competition away by winning nine straight games and clinching the league championship. The last three games were strictly an exercise in determining the second place team.

There were many interesting games in the league, but none more interesting or odd than the final game of the season between the California Angels and the Los Angeles Dodgers. The Angels had just one last chance to avoid the onus of having the league cellar all to themselves. A win by the Halos would bring their Southern California neighbor down in the cellar with them. But, to add insult to injury, not only did Fernando Valenzuela defeat them, he threw a NO-HITTER! What made this game even more unusual, and at the same time very frustrating, was that it rained out after seven innings!

The MVP competition was not even close as Don Money won the Triple Crown as well as leading the league in triples! His real statistics for 1982 (.284, 16HR, 55RBI) indicates that the random number generator in the computer liked Don a lot. I went back more than once to check the figures we entered for Don at the start of the season looking for data entry errors that would cause such a performance, but none were found.

FIRE CASEY

One disadvantage of letting the computer (Casey) play is that he will sometimes make some really off-beat decisions. He will, for example, leave pitchers in too long. The Dodger's Valenzuela had his final ERA ruined by one disastrous outing in which the Braves nailed him for 10 runs on 15 hits (he was never removed from the game). At other times the computer will take pitchers out seemingly too early. Phil Niekro of the Braves had a shutout going through eight innings and had not allowed a baserunner for three innings when the computer pulled him. Gene Garber got the last three outs for the shutout.

Letting Casey do all the coaching may reduce bias and make things go faster, however some teams require more coaching than Casey is prepared to give. For example, in 1982 Gene Mauch brought the California Angels to the playoffs using what he called "Little Ball" (i.e. a lot of bunting, sacrificing, hitting behind the runner, etc.). While this method got the Angels to the playoffs; with a weak coach (which is all you can consider Casey) the Angels were buried in last place.
SOME HELP FOR THE COMPUTER BASEBALL MANAGER

The biggest problem with running a league/replay is the keying in of the data. It gets to be very tedious. Many readers who read about our "GREATEST BASEBALL TEAM OF ALL TIME" tournament wanted to replay the tournament but gave up because of the data entry involved. In addition to the disks mentioned above, Computer Gaming World has available a data disk that contains all of the teams from the All Star League, Winter League, and the Greatest Baseball Team of All Time Tournament. In addition, reprints of the "Greatest Baseball Team of All Time" articles are available from CGW.

### COMPUTER BASEBALL HELPS

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<tr>
<th>Item</th>
<th>Price</th>
<th>Source</th>
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</tr>
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<tbody>
<tr>
<td>1980 Data Disk</td>
<td>$15.00</td>
<td>SSI</td>
<td>Contains all 26 teams from the 1980 season</td>
</tr>
<tr>
<td>1981 Data Disk</td>
<td>$15.00</td>
<td>SSI</td>
<td>Contains all 26 teams from the 1981 season as well as a season statistic compiler</td>
</tr>
<tr>
<td>Teams of the Past</td>
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<td>CBE</td>
<td>Each disk contains 61 teams of the past. A full set of disks includes 305 teams.</td>
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<tr>
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<td>CGW</td>
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<td>Reprint of the three articles in the &quot;Greatest Baseball Team&quot; Tournament</td>
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SSI=Strategic Simulations, 883 Stierlin Rd. Building A-200, Mountain View, CA 94043-1983
CBE=CB Enterprises, 58A St. Lo Road, Ft. Lee, VA 23801
CGW=Computer Gaming World, P.O. Box 4566, Anaheim, CA 92803-4566

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  - Dunzhin! 48K D 17.97
  - Kaiv Vol. II 48K D 17.97
  - Lucifer's Realm 16K C 11.97

- **Strategic Simulations**
  - Knights/Desert 32K C 23.97

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**VIC-20**

- **Automated Simulations**
  - Crush, Crumble, 16K C 17.97
  - Monster Maze ROM R 23.97
  - Rescue at Rigel 16K C 17.97
  - Ricochet 8K C 11.97
  - Sword of Fargorl 16K C 17.97

- **Avalon Hill**
  - Tank Arcade 16K C 9.00

- **Compu-Things**
  - Buck Dodgers 3K C 13.17
  - Marsh Hoppers 3K C 13.17

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THE ATARI ARENA

NAME: 	 Wayout
TYPE:	 Arcade/Maze
SYSTEM: Arari & Apple
# PLAYERS: 1
PUBLISHER:Siriour Software
Sacramento, CA

BASIC INFORMATION

NAME: 	 Survivor
TYPE:	 Arcade
SYSTEM: Atari 400/800, soon for the CBM64, VIC-20, and TI 99/4A
# Players: 1-4
AUTHOR: Richard Carr
PRICE: 	 $34.95
PUBLISHER:Snyapse Software
Richmond, CA

BASIC INFORMATION

NAME: 	 Astro Chase
TYPE:	 Arcade
SYSTEM: Atari 400/800
# Players: 
AUTHOR: Fernando Herrera
PRICE: 	 $29.95
PUBLISHER:First Star Software
New York, NY

THE ATARI ARENA

There are eight different types of fighters, and the game may begin with the player facing one, two or three of any one type by selecting one of the first 24 chases. There are ten more chases above that, but the dangers there are undocumented, and can only be reached by beating chase 24. (I would like to tell you what's up there, but editorial policy is not, alas, the reason that I cannot. Astro Chase is a tough game at even the lower levels.)

Allen Doum

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THE ATARI ARENA

To describe anything as being “state of the art” is tricky. The three games reviewed this time, however, each define what can be done technically with the Atari computers. All three of these games qualify as “arcade-type” action games. There are, of course, state of the art wargames and adventure games, but action games presently offer the most advanced graphics and animation.

Two of these games, Astro Chase and Survivor, have similar scenarios: a lone space-ship trying to finish a difficult mission while being hounded by enemy fighters.

In Astro Chase, the mission is to save the earth. The Megards, humiliated in past conflicts, have returned and surrounded the earth (and an amazingly crowded local area of space) in an impenetrable force field. Into this area they have launched 16 Mega mines that home in on the earth. If any mine reaches the earth, the earth explodes and the game is over. The player flies a saucer shaped ship around a fully scrolling area about ten times the size of the screen. By constantly patrolling around the earth, the player could easily destroy all of the mines as they approached. The enemy fighters provide the perhaps, fatal distraction.

Each time the player destroys all 16 mines, he is rewarded with two free lives and another wave of mines approach Earth, guarded by tougher fighters. (Waves are called Chases in this game.) Chase one is guarded by one Ramatron, a slow moving fighter that must ram the player's ship to destroy it. By chase 24, there are three Firelon Jets, fast, missile firing enemies that can fly through the earth and other obstacles.

The player flies his ship at a constant speed by using a joystick. If the action button is pressed, the ship continues on its present course, while the joystick aims and fires the ship's missiles. This control scheme is called Single Thrust Propulsion and First Star seems to believe that it is unique enough to be placed under separate Trade-mark. Displayed at the bottom of the screen are the chase number, score, high score for session, energy remaining, ships remaining, and mines remaining.

What qualifies Astro Chase as “state of the art” is the graphics presentation. The full scrolling playfield is not only drawn beautifully, but changes with each chase. The explosion of the earth is so good, that seeing it almost makes up for losing. There are even cartoon intermissions. When the game is loaded,
and again after every fourth chase, there is a short interlude of an astronaut landing and reboarding his ship to an increasingly spectacular reception.

Almost as good as the graphics is the documentation, which clearly and completely explains all the features of the game (except what is beyond chase 24, of course).

The mission in Survivor is to eliminate four large Xenogryph space forts. Each fort is surrounded by a barrier which must be blasted through, and each bristles with gun emplacements. When all of the guns have been destroyed, or when the player runs out of lives, the game ends.

The three types of enemy ships that pursue the player do not fire, but each has a different plan of attack. The fighters can pass through the barriers and forts, but are destroyed by the guns or the asteroids that roam in the "open" space between the forts. Needless to say, all of these destroy the player's ship.

What really sets this game apart is the control scheme. The player's ship is controlled by joystick and fires directly forward and backward, as in the arcade game Boscianian. That is, it does this in the one player version. When two players are involved, one controls the ship, the other the guns, which still fire in opposite directions. Unless, that is, there are three players. A third player gains independent control of what has been, up to now, the "rear gun". And the fourth player? (That's right, four players.) With each additional player the ship becomes more versatile. This is, however, offset somewhat by the problem of coordinating the action. Even so, our first time at the four player version (with two rookie gunners) we were able to destroy all four forts at the lowest difficulty level.

There are seven difficulty levels, with the enemy fighters appearing more often at the higher levels. In addition to the above variations, the ship's guns may be placed on automatic fire and there are two different ways that the ship's movement can be controlled—one with momentum.

Displayed at the bottom of the screen are the players score, level of play, lives left, and smart bombs left. (The smart bombs will destroy all three enemy fighters at once.) The main display is fully scrolling, and uses a very good redefined character set for all but the ships.

The ships in both games use player/missile graphics, and that is not the only similarity. Both keep high score for that session, but in both it is not really the score that counts, it is the success of the mission. Both also show a flat universe from a point of view "above" it. While there have been games that show the action from the player's point of view (Star Raiders, of course), they have always been limited either in what they showed, or in the animation of the scene. Until now.

Now there is Wayout, a maze game with several exceptional features. The most striking is the animated perspective graphics. The screen displays the maze from the player's viewpoint, not simply jumping to the next space, but moving and turning at all angles as the player moves and turns. The floor is brown, the sky white fading to blue "in the distance", the walls a different shade of blue with black outlines. All except one wall that flashes red and black. That one in the way out; the goal. (in the Apple version of the game only the outline of the walls is displayed.)

Solving the maze is not all that straightforward, however, some passageways are blocked with a strong wind that will blow the player helplessly through the maze. Sometimes the wind can be overcome, but often not. At large in every maze is the Cleptangle, a spinning column of light that chases the player and will steal first his compass, then the map drawer. To retrieve these, the player must chase the Cleptangle into a corner or dead-end. The thief then disappears, but only for a while.

You are given the choice of keyboard, paddle or joystick control and there are 26 different mazes in Wayout. Both a low score (of time spent moving) for each maze and a game in progress may be stored to disk.

The mazes are not simple. INTRO, the first maze, is not much more complex than a Pac-Man maze, but most of the mazes have literally hundreds of passageways. Fortunately, the player may mark up to nine reference points in each maze and return to any of them with a single keystroke.

Wayout has the best "attract mode" I've ever seen. The program actually solves the INTRO maze, while demonstrating all game features except the reference points.

What do you think about the following game? The players are members of a tank crew with the sections of the screen showing each player's control panel and the commander's window showing a detailed view of the terrain. The objective is just behind that stand of trees, when suddenly an enemy tank, a Tiger, appears on the right.

Sound good? Well, as far as I know, that game isn't available yet. But all of it's features are, in the games just described. After all, these games can't stay "state of the art" forever. Watch this space for future developments. (P.S. And let me know as soon as that tank game shows up, will you?).
BASIC INFORMATION
NAME: Rocky's Boots
TYPE: Logic Game
SYSTEM: Apple II+ or Apple II with Applesoft
FORMAT: Diskette (DOS 3.3)
BACKUP: $12 by mail
# PLAYERS: 1
PRICE: $75.00
PUBLISHER: The Learning Company
4370 Alpine Road
Portola Valley, CA 94025

It seems you can no longer assume that everyone knows who and what the Beatles were. For those of you who don't know or remember, then, let me just state that they were a singing group and they wrote a song about a boy named Rocky Raccoon who got into a pack of trouble over a girl and got mad, shot and religion, in that order. This has nothing to do with him. Instead, I'd like you to meet a raccoon named Rocky who leads a much more wholesome life; in fact, he's the sort of playmate any child should know.

ROCKY'S BOOTS is a program from The Learning Company. To an adult, it is obviously educational; when I saw it I was excited by the outstanding use of graphics and by the well-structured progression from one concept to the next. In children's eyes however, it is first and foremost a game and one that is very fun to play. They seem to regard the instruction as "learning the rules of the game", something you do for any game, and since that part is highly interactive it's fun too.

What does Rocky teach? The best answer is "logic", more specifically the logical concepts of ON and OFF (or true and false) and the logical operations AND, OR and NOT. It does this by having you build electrical circuits, not out of real components like batteries and transistors, but out of logical components: AND gates, inverters, and such with wire to string them together. Another important component is Rocky's electric boot, which gives a powerful kick whenever it is turned on. The ultimate goal is to construct a device that boots certain kinds of targets but not others.

Believe me, the telling is much more complex than the concept. If it sounds complicated, I can give you no better advice than to try ROCKY'S BOOTS yourself. The game will entertain people from the ages of six or seven right on up to the oldest person you know. Even engineers who know this stuff are fascinated by the manner in which it is presented. They are also challenged, as the problems given at the end run the gamut from very simple to very tricky.

A word of advice here. One of the big advantages of computer-assisted learning is that it is non-threatening. Once you are comfortable using the computer, you stop worrying about making mistakes. All the pressure of knowing people are judging you based on how quickly you pick things up disappears. At least, that's the case if they're not all standing around the computer watching you every move. So be sensitive; even the best programs can be made uninteresting by people laughing at your mistakes. It may even be more likely with a program like ROCKY'S BOOTS, which will draw lots of people, all of whom want a turn as soon as possible.
A RUNTHROUGH THE GAME

You control ROCKY'S BOOTS by moving a cursor through a series of rooms. Each room contains instructions to read and doorways and arrows show you the way to the next room. Most rooms have something to do as well; the photos show a room where you practice fine controls by putting a key in a keyhole to open closet with a skeleton.

As you can see from the menu, there are six parts to ROCKY'S BOOTS. Part one just teaches you how to move the cursor and manipulate objects. In parts two and three, you learn basic concepts and circuitry. Each component is introduced and explained in turn, starting with the simplest. At each step, you can manipulate and test to make sure you understand.

We finally reach the game in part four; Rocky gives us some puzzles to solve using what we've learned thus far. For instance, you might be expected to build a machine that will kick all triangles. This is done by hooking the boot up directly to the triangle sensor. When a triangle enters the target rectangle, an orange pulse of electricity shoots from sensor to boot and the triangle gets kicked. A more complex puzzle is to build and target that is either a diamond or a circle. The solution to this (shown in the photo) uses an OR gate to turn the boot on when either OR the other (or both) of the sensors detects something.

Part five teaches some more components for our logic circuits: flipflops, delays and clocks. The format is similar to parts 2 and 3. Part six, ROCKY'S CHALLENGES, is similar to part four, but includes all of the newly-learned components. It also has many more puzzles, from simple ones all the way up to some real mind-bogglers. There is even a room wherein you can design a puzzle to stump your friends.

CONCLUSION

This is an outstanding game. The only bad thing I can say about ROCKY'S BOOTS is the high price tag. It may be a fair price, but it will (unfortunately) keep it out of many homes. If you like the concept but want something for younger children, The Learning Company uses the same format to teach set theory in GERTRUDE'S PUZZLES and GERTRUDE'S SECRETS.
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DATAMOST
CHESS 7.0:
Review & Analysis

Floyd Mathews

BASIC INFORMATION

NAME: Odesta Chess 7.0
TYPE: Chess Program
SYSTEM: Many
FORMAT: Disk
AUTHOR: Larry Atkin
PRICE: $69.95
PUBLISHER: Odesta

Odesta's Chess 7.0 (C7) is easily one of the best chess programs now available for microcomputers. This new program is designed by Larry Atkin, a co-author of the Northwestern University Chess 4.7 mainframe program, which was the world computer chess champion from 1977 to 1980. It is ideal for both chess novices and experts.

C7 has 17 skill levels, 27 special features, is written in machine language with disk storage access, and is much stronger than other microcomputer chess programs. Satisfied customers also report that it is superior to "dedicated" commercial chess computers, including the famous Chess Challenger 9 and Sargon II, formerly viewed as the strongest home computer program, is defeated five games out of six at tournament speed.

For comparison, the United States Chess Federation rating for the Atari Chess program is only about 1250 at tournament speed. Sargon II rates about 1400. C7 is unofficially rated at 1813 at tournament speed, and is of course very much stronger at the slower depth limited levels.

The program has an "opening library" of over 7,000 moves. Over centuries of analysis, the best possible opening move sequences have been discovered, and many of them are stored on disk. If you play a "book" opening, C7 will immediately reply with one of the best book responses.

Also recorded on the disk are 40 of the most famous games and problems in chess history, including several games played by world class mainframe class computers, such as Belle, the current world computer chess champion.

C7 has nine time limited skill levels at which it averages from one second to sixteen minutes per move, depending on the complexity of the position. It also has eight depth limited skill levels at which it considers all positions which could possibly arise up to a certain number of moves into the future.

The time limited levels are best for quick fun or tournament play. The depth limited levels are best for postal chess, thorough analysis of difficult problems, and for stiff competition against expert human players.

In chess, each move by a side is called a "ply". At its lowest depth limited skill level, C7 examines all possibilities about three ply into the future, and averages about 20 seconds per move. At the highest skill level (the so-called "perpetual" mode) it searches an awesome 23 ply ahead, but may take literally forever to do so. This is truly impressive, as current world class mainframe chess computers only search about seven ply ahead at tournament speed in complex positions.

The manual is very well done and extremely informative. Beyond this, demo command gives demonstrations and brief descriptions of most of the special features. And, C7's 26 other optional special features will be helpful to both novice and expert chess players as the program is very user friendly.

The following are some of the most important of the special feature commands:

1) The value feature gives the program's evaluation of which side is winning in any position. It considers who has lost more men, as well as positional strength. A pawn lead is worth one point, a knight is worth three, and so forth. The relative strength of a position is usually worth only a fraction of a point, except in a hopelessly lost position.

2) The look feature gives C7's a prediction of the best future moves for both sides which were discovered in its analysis. Each progressive move represents one less ply of search by the program, therefore the first predicted move is much better than the later moves. C7 continues to "think" while the player is considering his next move, so that if you take a long time to move, or if you move as predicted, it may respond more quickly.

3) The visible command allows you to see the moves which C7 is "thinking" about on its turn.

4) The change command allows you to change any position, and is a fast way to set up special chess problems for C7 to consider.

5) The auto feature instructs the computer to play both sides against itself. This feature is very educational for novices, very entertaining for spectators, and is also safe and effective therapy for incurable kibitzers!

A game was played by telephone over a period of weeks as a test of C7's higher levels (E and F) against a very strong player, Spencer R. Mathews, who has a U.S.C.F. rating of 1965 and has studied chess avidly for 30 years. (Spencer is a former South Carolina State Champion, and defeated Bobby Fischer in a simultaneous exhibition in March, 1963). S.R.M. had previously played several other chess programs, including Atari Chess and Chess Challenger, and had easily defeated them at their highest skill levels. The game was played under postal chess conditions and S.R.M., playing black, averaged about 30 minutes a move, although neither side was under any time limit.

The game appeared to be even or slightly in Black's favor until the 28th move. Faced with being down by at least one point, and convinced that C7 would...
Greetings once again! Now that I have finally made my big move (note my new address below), I can settle down for some more mathematical games. As always, I am interested in your questions, improvements, superior programs, and so on — especially answers to questions asked in the column. I particularly am interested in getting your programs to solve the MCDONALD'S PERMUTED CHANGE PROBLEM from the last issue of COMPUTER GAMING WORLD. The best ones will be acknowledged and published, probably in the next issue. (In general, due to time lag in getting articles to the editor, then to the printer, etc., responses take some time to get into print. Bear with us, folks!). So, send all your comments, questions and answers to:

Dr. Michael W. Ecker
COMPUTER GAMING WORLD
129 Carol Drive
Clarks Summit, Pa. 18411

Please remember that I will answer any personal questions if you provide a self-addressed stamped envelope. With this business out of the way then, let's look at this issue's new recreations.

A NUMBER GUESSING GAME WITH YOUR COMPUTER

Program one, a no-frills program in Microsoft BASIC, will enable you to play a simple guessing game with your computer. The computer will randomly (or pseudo-randomly) pick an integer from 1 to 1000 and prompt you to guess it. You will then be told whether your guess is correct, too low, or too high. The computer loops back to the prompt for a guess until the correct answer is obtained. As always, this program was written for a TRS-80 (I have a Model 3), but is very easily adapted to Apples and Ataris (the two computers owned by most of our readers) as well as any others. Specifically, CLS clears the screen, so change that line to HOME or whatever command clears the screen for your machine.

10 CLS
20 RANDOM : X=RND (1000)
30 PRINT "I'VE PICKED A NUMBER FROM 1 TO 1000."
40 PRINT "WHAT'S YOUR GUESS";
60 INPUT G
45 J=J+1
50 IF G=X THEN PRINT "HOORAY! YOU GOT IT (IN";J;"GUESSES).";
60 IF G X THEN PRINT "TOO HIGH. TRY AGAIN.";
70 IF G X THEN PRINT "TOO LOW. TRY AGAIN.";
80 PRINT: GOTO 40

Can you think of a mathematical strategy for guessing correctly within a specific small number of moves? How many moves are enough to get the answer every time?

I have been told that certain calculators by Texas Instruments (I think the TI 58 or 59, if memory serves me) are equipped to play this game with either the machine or the player doing the guessing. The computer uses an algorithm for getting the answer in as few moves as can be expected without mind-reading.

(There is, of course, one way to get the answer the first time every time: when you run the program and the computer prompts you for the number, hit the break or escape key, "PRINT X", and then type "CONT" to continue -- but that is not very sporting!)

Once you figure out a way of handling this, I challenge you to the problem of writing a program which will allow YOU to pick the number and have your computer guess it. Your program should give it the same feedback that the program here gives you. Specifically, it should ask whether its guess is too high or too low, and not just right or wrong. Again, I will publish the best one(s) several issues later. You should strive, if possible, to make the program so that the computer can guess the number in as few moves as possible, so think about how to do this!

FIXES AND IMPROVEMENTS

In Micromagic column #1 (Vol. 2, #6), the program for THE REMARKABLE NUMBER 153 produces unwarranted decimals sometimes due to the use of the exponentiation operator. To eliminate this minor (but annoying) shortcoming, change line 110 as printed to read:

110 A(I)=VAL(MID$(N$,I,1)):A(I)=A(I)*A(I)*A(I)

which has the desired effect by simply using iterated (or repeated) multiplication (which is what exponentiation is anyway).

THE BASE TWO CARD TRICK

This trick is totally in the spirit of the guessing game program above. Briefly, you pick a number from 1 to 63 (in fact, you may even choose from 0 to 63). The program will ask you whether your number appears on the screen. You type either Y or N (yes or no) and hit ENTER or RETURN each time. After doing this for six screens, the computer will tell you what your number is! I won't give the explanation (at least not until next issue anyway), so just enjoy it for now! Until next issue...

1 CLEAR 5000
5 DIM A(6,32)
20 CLS
30 PRINT "PLEASE THINK OF A WHOLE NUMBER FROM 1 TO 63"
40 PRINT: PRO Z=1 TO 1000:NEXT Z:
50 REM TIME STALLER
45 PRINT:PRINT:PRINT

Continued on pg. 43
The ominous grey ruins of an ancient castle loom out of the mist as we approach the town of Telengard, far from the familiar scenery of ROUTE 80. Today we're exploring a newly discovered locale: THE DUNGEONS OF TELENGARD!

Telengard is an adventure game from the Avalon Hill Company. As with many fantasy role-playing games, Telengard appears to have borrowed heavily from the original Dungeons and Dragons (D&D) game. In fact, my first reaction was to search the credit lines, looking for some acknowledgement to Gary Gygax and his pals at T.S.R., producers of D & D.

As in D & D, you start by creating your own personal dungeon adventurer. Somewhere deep in its electronic recesses, your computer patiently rolls three six-sided dice, producing random values for the time-honored D & D character attributes of strength, intelligence, wisdom, constitution, dexterity and charisma. Using these values, it churns out an endless string of adventure characters; one of which you must select as your hero. This can be a long process. Faithfully adhering to the odds of statistical probability, the computer produces an abundance of slightly-flawed lance and shield carriers. The computer has infinite patience and sees no reason to depart from its mathematical randomness. You, however, sit with a finger poised over the enter key, waiting for just the right combination of high-value attributes to come along. Usually, the “right” combination never does show up, so you eventually settle for a less-than-ideal candidate...Perhaps a ruffian with a strength of 15, constitution of 12 and a charisma of 5 and you name him “Igor”. Or, more likely, “Svigor” as the program has an unusual character naming convention: if you want to be able to resurrect a character from oblivion, the first two letters of his name must be SV.

This produces some unpronounceable names, and also lets everyone know whether you have been bravely risking final, irrevocable death while raising a character to 27th level or whether you have simply been resurrecting him after each unsuccessful foray. One possibility overlooked by the authors is the option of creating your own character by selecting desirable values yourself, or inputting attribute values of a character already created for some other game system, such as a favorite D & D character.

Those of you who play D & D are familiar with the character classes of fighter, mage, cleric and thief. Each class requires special capabilities in one or more of the six basic attributes (strength, wisdom, dexterity, etc.) In Telengard, regardless of his abilities, your character is a hybrid of fighter and magic user with no opportunity to choose his own destiny.

The character comes equipped with an economy grade sword, armor and shield and the ability to cast one magical spell. He doesn't have a farthing in cash and no way to upgrade his equipment or buy anything additional. The ability to make purchases from a general store would have added an extra and very desirable dimension to the game. This would be particularly interesting later in the game as your hero accumulates treasure from his adventures. As the program is written, he has nothing to do with his wealth except to deposit bags of gold in the Inn safe which is done for him automatically. Igor doesn't even get to decide how much cash to take with him on each succeeding adventure. Some other fantasy adventure programs handle this better. The DUNJOQUEST series by AUTOMATED SIMULATIONS provides an inn-keeper who haggles over the price of five types of weapons, five kinds of armor and two sizes of shields. The Maces and Magic series from ADVENTURE INTERNATIONAL provides an amazing array of 80 weapon choices and 26 types of armor!

As you begin your descent into the dungeon, you might look around and discover that you're all alone! This is a solo adventure, and you don't have the company of fellow-travelers to provide comfort and security. The dungeon itself is composed of 50 levels of rooms and corridors, with each level containing progressively more dangerous monsters and traps. The Dungeon is displayed as simple overhead views of the walls and doorways, and you are shown only what your character would actually be able to see from his current position. Anything around a corner or behind a door is left blank. This can create some confusion in mapping, because what appears to be an opening from one perspective may show up as a blank wall after you have moved. You should definitely prepare a map of your travels as you will need to know the locations of all the dungeon features in order to find your way in and out and to avoid traps. The features include a variety of puzzles, traps and teleportation devices. The effects of each feature may change between encounters, so that you can never be quite certain of what is going to happen at any particular feature, even if you have visited it previously.

As you travel through the passages you will encounter 20 different types of treasure...
TWERPS, an arcade game from Sirius, has eight levels of difficulty. After selecting your play level you see a re-enactment of the infamous day when a Twerp explorer ship, with nine Twerp crew, met with a mysterious accident and crashed on an asteroid. Fortunately, all nine crew Twerps survived and took refuge in individual caverns on the asteroid.

Your mission, as Captain Twerp, is to travel from the mother ship to the surface of the asteroid, rescue stranded Twerps, and return them to the mother ship.

In order to travel from the mother ship to the surface of the asteroid, you must blast your way through Orbiters. If you get past the Orbiters, keep your finger on the fire button because now you must guide your rescue vehicle, “Lunar Lander” style, to the asteroid landing pad. Once landed, you move the figure of Captain Twerp to the various caverns and rescue the Twerps. Each rescued Twerp will fall in line behind you and follow as you rescue the rest of the crew. As you bravely move about with your chorus line of Twerps, a birdlike figure will appear on the screen. This figure is called a Glingas and it loves to pluck Twerps from the line and carry them to empty caverns. You must re-rescue any unlucky Twerp so plucked.

In addition to the Glingas, you will sometimes see a Gleepnok walk across the screen. The Gleepnok will track your string of Twerps and, will immediately eat any he catches. Of course, once a Twerp has been digested it can not be rescued. You cannot destroy Glingas or Gleepnoks, but you can hide from them by quickly jumping into the nearest unoccupied crater. When you have rescued all nine Twerps, or as many as possible, you simply return to the space vehicle and blast off. Once in space you must again blast your way through Orbiters to reach the mother ship and safety.

Dan Thompson has programmed many extras into this game including very good graphics and well placed sound routines. Fuel is a function of time and each rescue mission must be completed within the allotted fuel (time) limit. Points are deducted for each Twerp not rescued. The game at level one is very easy to play. My nine year old mastered it in about 20 minutes. At level three it gets hard and by level eight it presents a real challenge for even skilled arcade game players. This game will provide a pleasant diversion for children and adults alike.

Mark Bausman

AZTEC is an adventure arcade game from Datamost. Aztec combines real-time animation with fast arcade action and the puzzles of a good fantasy role-playing game. The object of the game is to recover a golden idol from the recesses of an ancient Aztec temple. As you search for the idol, you will have the dubious honor of battling the various denizens of this temple—including tigers, dinosaurs, spiders, alligators and others. In addition, an assortment of deadly traps must also be overcome, in the true spirit of “Raiders of The Lost Ark”. If you are lucky, you may find a machete, a gun or even some dynamite hidden amongst the debris which litters the temple. But remember, even if you should find the idol, you must still escape to claim your reward.

The temple consists of eight levels, each containing eight separate rooms and each room, in turn, containing three floors which are simultaneously visible. The game is reminiscent of Muse Software's Castle Wolfenstein, except for the fact that the Aztec maze is shown from a cut-away view, whereas Castle Wolfenstein is shown from an overhead view. You need not fear getting bored with the same old maze, as the temple configuration is chosen randomly from 32 possible combinations. There are eight levels of play available to the player to insure that the game will remain a challenge.

The hero's movements are controlled by the keyboard; a joystick would be inadequate. You can make him walk, run, jump, kneel, stop, turn around, climb, place dynamite or fight with either a machete or a revolver.

The graphics are among the best that are now available on the market. Each creature moves with such fluid animation that they seem at times to be alive. What results from these excellent graphics is non-stop action which will make many games appear obsolete by comparison. After playing Aztec a few times, you can easily become addicted.

Aztec has, however, a few minor flaws. The graphics routines will upon occasion leave ‘garbage' on the screen. In
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addition, the documentation provided with the game is adequate but far from clearly written. I had to play several times before I realized that you must kneel twice before placing dynamite. These minor faults seldom effect play, but you should not, for example, run into the next room just after lighting a stick of dynamite.

When Aztec's few faults are balanced against some of the best action graphics and general designs now available, the latter definitely win hands down.

Tom Jones

**BASIC INFORMATION**

**NAME:** Sherwood Forest

**TYPE:** Adventure

**SYSTEM:** Apple II (48K)

**FORMAT:** Disk

**# PLAYERS:** 1

**AUTHORS:** Dav Holle & Dale Johnson

**PUBLISHER:** Phoenix Software, Inc. Lake Zurich, IL.

"#'*%&," he said as he unsuccessfully tried to get out of the 'Little Twisty Passages' in the Colossal Cave. Well, don't try typing that into this adventure. The people at Phoenix Software don't take kindly to people who swear. They do, however, take good care of logical two word commands. "Sherwood Forest" is similar, in many respects, to most of the picture oriented adventure games on the market today. The top portion of the screen displays a room (the generic term for your current location), while the bottom four lines are text and give a verbal description. What sets this game apart is in how well it performs the required transition from 'room' to 'room.' The speed of picture creation is almost frightening, but even more amazing is the quality of the picture once it arrives. There is ABSOLUTELY no bleeding of one color into the next. Each scene is exceptionally well drawn, and some of them are even partially animated. The animation consists mostly of blinking or shifting eyes, a scene with smoke rising is very nicely presented.

The puzzles, for the most part, are simple, straightforward and logical — prompting Phoenix Software to classify this a Class 3 Adventure. If you really like sinking your teeth into an adventure game, this one will be like a couple of sticks of chewing gum. A master adventurer should be able to solve the entire adventure in an afternoon. There are less than 50 separate scenes and only about 25 puzzles to be solved. The first few puzzles are exceptionally easy, making this a very fine beginner's introduction to adventure gaming. But, there are still a few challenges that might tempt you to enter an expletive or two. Finally, there is even a separate screen to reward successful completion of the adventure. I don't know about you. But after spending a couple of weeks solving a horde of puzzles, it's a real let down to just see, "GAME FINISHED, DO YOU WISH TO PLAY AGAIN?" at the bottom of the screen!

Should a puzzle get the best of you, Phoenix has prepared a map and hint sheet that they will send in a self addressed stamped envelope. It took only a few days for them to respond to my request. The hint sheet is even coded to prevent accidentally reading a clue you did not want.

Up to ten versions of the game can be saved on a separate disk. Those of you with two drives will appreciate the fact that the save disk can be placed in drive two, meaning you never have to swap disks during play.

Phoenix has put everything in place to allow them to create a really great adventure game. Sherwood Forest isn't bad, it's just too short. Look for great things to come when they produce a Class 1 adventure.' Then let the foul invectives Fly!

John Besnard

**BASIC INFORMATION**

**NAME:** COMPUTER FACTS IN FIVE

**TYPE:** Quiz Game

**SYSTEM:** Atari, Apple II, IBM PC

**FORMAT:** Disk

**# PLAYERS:** 1 to 4

**AUTHOR:** Paul F. Granchelli

**PUBLISHER:** Avalon Hill Game Co. Baltimore, MD

**COMPUTER FACTS IN FIVE (CFIF) is the computer version of Facts in Five, Avalon Hill's popular game of knowledge and quick thinking. With rules very similar to its board/card game counter part, CFIF is faster moving, more demanding, and vastly more versatile.

The basic concept and function of the game is quite simple. CFIF is played in rounds, during which one to four players work against the clock to give five answers to each of five classes and possibly sub-categories of subject matter ranging from popular subjects to highly academic ones. The answers must, however, begin with the letters to be found following the five subjects. For example, if the subject class were CITIES, and the sub-category FOREIGN, with the letter L as the first of five letters following, then a correct answer to this part would be LONDON, as London is a Foreign City beginning with an L.

Selection of the subject categories may be made by either the computer or the player(s). If done by the computer, the program will randomly select five classes and possibly sub-categories from the over 1000 choices available to it. Selection by player, on the other hand, offers many more options, and potential strategies to be used. The computer will display a group of classes or classes and categories from which one must be chosen. The players alternate in the selection of subject until all five subjects for the round have been chosen. The strategy, of course, comes in choosing a subject at which either you excel, or at which your opponents are poor. More than half the battle may be won or lost during this part of the pre-round setup.

The strength of CFIF lies in its extreme versatility. During the initialization process you may essentially tailor the game to your requirements. At this time the following options are given: setting the time limit per player per round (normally 5 min.); specifying the number of rounds per game (1-999); the number of games per match; the alphabet to be used (you may, for example, remove some difficult letters); set letter options (each subject with five unique letters or all five subjects using the same five unique letters); and the option of using an eighty column printer. Added to these options, there are three different game modes, each with five variations.

When the desire comes upon you for a change from arcade games, or from
Each game turn consists of an interrupt phase (summary of basic game status); a non-crew movement phase (strategic movement by the player); two action phases (tactical movement within a room, passage, or vent for both player and computer); and a movement phase (strategic movement by the player). The movement phase is accompanied by a map of the ship to aid in plotting the crew members' movement (+) and tracking the aliens' movement (-) over the ship's thirty rooms, passages, and vents. The map is accompanied by two bookkeeping displays to aid in keeping track of action points expended and the location/status of crew and equipment.

The player's force consists of three character types: 1) officers, 2) scientists, and 3) engineers (each of which has particular value). The officers are in charge of the armory and are the only ones who can engage the self-destruct mechanism. The scientists have the best chance of breaking the protection code on the computer's classified data file concerning alien life. If one of the scientists is the android, however, you will have the frustration of seeing "DATA PROTECTED" displayed on the screen ad nauseam. They are also the only ones who can lock aliens or animals in laboratory cages or who can take inventory.

The engineers are important because they are the only ones who can construct makeshift electric prods and flamethrowers.

The game can be as unsettling as the plot for the movie. Just as the account which begins this article suggests, you can think things are under control and then have disaster strike. The first time I played the game, I had the alien engaged, anesthetized and flanked by two armed crew members. The alien broke out of the cage and escaped without so much as a chance for defensive fire. It is frustrating to have prepared for just such a contingency and have the advantage taken away from you. In some locations you can soften this blow by placing an armed party in the room or passageway adjacent to the compartment with the engaged and/or anesthetized alien. This is not always practical, since some locations offer several escape routes (such as the bridge or any passageway). Although this feature of the game could be defended as being like a "reaction phase" (similar to some rules for miniatures), it demands the use of strategies which do not actually make much sense.

A minor difficulty is encountered in the action phase displays. These are only text displays and sometimes have a tendency to give confusing information. If a character is located in a room with more than one object, it is often difficult to interpret what the character is actually carrying and what is simply present in the room. The matter is always cleared up during the crew movement phase, however, and rarely offers a problem in the flow of the game.

"The Alien" is an interesting strategy game which will take many hours of gaming to master. Variables in number and locations of aliens, rate of metamorphosis, and identity (or existence) of the android crew member offer the possibility of an above-average shelf life.
minute time limit. Though you have unlimited "lives", it takes five seconds for both the Colossus and Nautilus to be repaired. The Nautilus has an unlimited number of Thunderbolt torpedoes to deploy, which takes no extra energy to fire. Colossus will drop depth charges and one barracuda missile at a time. Quick reflexes are a must, though, as the Colossus moves between the dock on the east shore to the deployment area on the west at roughly twice the speed of the Nautilus. Colossus gains points for each city-block repaired, and Nautilus for each destroyed. To aid the Nautilus, there is a support helicopter which is constantly bent on damaging Colossus. If Colossus is damaged, the ship is automatically returned to base, then repaired and deployed.

The game has nine challenging skill levels and a handicap option which governs the amount of points the Colossus receives, between 10 and 80, for each city block repair. To the beginner, this game is enjoyably frustrating, as even nicking a cave wall will send you crashing to the bottom. With a little persistence, though, you'll soon find that you can handle even the tightest squeeze.

The graphics are the highlight of the game, with a beautifully scrolling split screen showing the progress of both the Nautilus and Colossus. The underwater world is an excellent concept, creating an exciting adventure in which to explore and play, something that typical single screen arcade games lack. The Nautilus and Colossus are well portrayed on the screen and the sound effects are quite good.

Documentation comes in the form of a small but thorough seven page booklet. It gives a player everything he needs to get going, except strategy notes. There is also a small bug in the program which sometimes places an unmovable and undefendable barracuda missile on the ocean surface. Since the Nautilus needs only to go around it, this does not affect the playing of the game to any great extent. Otherwise, Nautilus is very well designed and written.

Truly, Synapse has produced another top rate game with outstanding graphics and intense action.

Grant Butenhoff

**BASIC INFORMATION**

**NAME:** NECROMANCER  
**TYPE:** Arcade  
**SYSTEM:** Atari 400/800  
**FORMAT:** 32K Disk/Cassette  
**16k Cartridge**  
**Player:** One  
**PRICE:** $34.95  
**PUBLISHER:** Synapse Software  
**Richmond, CA**

It's the age of darkness and evil wizard Tetragorn rules supreme. He has many allies — halving spirits and legions of arachnids and the Earth is in his grip of terror. Only you, a lone Druid, have the power to defeat him. Aided by the powers of Mother Nature, you can grow trees and create your own army to defeat the wizard's forces.

There are three Acts in the game. **Act One** is where you grow trees which are needed to proceed to Act Two. You start out with ten seeds. As you plant them, they begin to grow from a bud, to a young tree, and finally into a full grown tree. This happens in a matter of seconds. Ogres like to eat seeds and young trees, but can't hurt full grown trees. Using your "Wisp" to defend the trees is easy since the Wisp loves to eat Ogres. The enemy of fully grown trees is the Spider. It poisons adult trees. The poisoned trees call for help and you have a limited time to save them by hitting them with your Wisp. The more trees you grow, the faster the Ogres come out, and the faster the spider poisons a tree. The poison works faster as well, with uncured trees turning into useless stumps. After losing all your strength on this level, you are transported to **Act Two**, the **Vaults**, with the number of adult trees left alive.

In Act Two, the trees are used to plant over the bins in the vaults. In these bins are Spider eggs. Any eggs not destroyed will become spiders. The Wisp turns the plants into walking trees. You can walk tree over a bin and plant it. It will automatically grow roots downward into the bin eventually falling through and smashing the egg. When, during this act, an egg is ready to hatch, it will flash — so watch for them. Hands of Fate will also drop down every few seconds, and anything that walks under them, such as a tree or a Druid, will be picked up. Each level of the vaults has two levels of bins, four stairs going up and four stairs going down. To get downstairs, a ladder must be lowered. To lower a ladder, you must walk the Druid across a question mark (?) left by the hands of fate. Be quick, as the Hands will return to pick up what they left. There are five levels of vaults, and each level is harder than the previous one. The more difficult the level, the faster hands drop down and the eggs hatch. Also, any spiders hatched in the vaults will not only eat the trees that you have brought with you, but will shoot poison at your Druid while so doing.

After going through all five levels of vaults, you reach **Act Three**, the **Wizards Domain**. The Wizard can only appear on graves with headstones so, to defeat him you must destroy the headstones on thirteen graves. Here also, you now face the spiders and eggs that escaped destruction in the vaults of Act Two. Each spider you destroy, in this Act, however is only temporarily gone as it can be reincarnated by the Wizard. When you destroy the wizard, he vanishes in blue flame creating a new spider and new grave (with a headstone to be knocked down). Destroying the wizard gives you strength, which you need because the spiders drain strength by touching you or being hit by your Wisp. There are five levels in Act Three, each faster than the previous one. When you defeat the wizard on level five, the screen explodes in a shower of colors and the Wizard is defeated forever. The graphics in the game are superb using every color available on the Atari. The details are as good as the colors showing the leaves of trees that sway in the wind. It's a fast paced game with plenty of action to keep even the best arcader busy with joystick controls. This is definitely one of the best games in the Synapse line for the Atari. Even the best arcader will have a difficult time defeating the wizard and reaching level five of Act Three.

**Hosea Battles Jr.**

**STAR MAZE WINNERS**

In the Nov-Dec issue of COMPUTER GAMING WORLD (2.6) we sponsored a contest based on Sir-tech's space arcade game, Star Maze. Roe Adams of Hyde Park, MA won the first prize. Barry Schlossberg of Louisville, KY was the second place winner. Congratulations to both.
until turned away from the wind. Each ship has three destructible sails. Speed is reduced with each sail lost in combat. In addition to sails, guns can be lost to enemy fire. One of the more interesting encounters is between a ship with little mobility (one or more sails gone) but good fire power against a ship with a full set of sails but with most of her guns shot away.

Players can sail their ships off the edge of the screen and enter the fog. While in the fog they can fire back onto the screen but cannot themselves be hit. This feature makes for some interesting “ambush” tactics. Try to work to the outside of your opponent and lead him toward the edge. If you are to the outside, you can duck into the fog and engage him with impunity. On the other hand, when you see an opponent working toward the edge and you cannot stop him, high-tail it to the other side of the screen to force him to return to the battle area.

While the fog can be interesting, it can also be deadly. When you exit the board a beeping begins and rises in frequency, ceasing only when you return to the battle area. When the beeping reaches its upper limit, your ship is lost in the fog, considered sunk, and a victory given to your opponent. It is especially dangerous to sail off into the fog with one or more sails down as you may not be able to get back in some situations before you are lost. One of the most frustrating yet humorous encounters I have had was a long battle with a friend in which we fought tooth and nail and were each down to one sail and a couple of guns each. I at last crossed the “T” and put the final salvo into him which gave him 100% damage. When a ship reaches 100% damage it explodes and sinks. However, the process salvo into his ship I jumped up and cheered (it really HAD been a tense battle) but my opponent only smirked. While congratulating myself my ship had continued on into the fog. Before I realized what happened, his ship sank and mine was lost and sank as well, producing a draw. Argh!

A more detailed fighting sail game (by Wayne Garris) will be released by SSI later this year. However, it will not “replace” the present game, for OI has an appeal all of its own.

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The wind always blows from the bottom of the screen toward stationary

OLD IRONSIDES (OI) is an excellent example of a game that combines graphic/arcade features with strategic planning. Grognards from the WOODEN SHIPS AND IRON school of fighting sail games may at first find OI “too simplistic”. There is no selecting of ammo type (chain for sails, grapeshot for anti-personnel, ball for hull damage), there is no boarding, there is no this or that. Personnel, ball for hull damage), there is no selecting of ammo type (chain for sails, grapeshot for anti-personnel, ball for hull damage), there is no boarding, there is no this or that. However, the simple nature of this game makes what is basically a strategic game very easy to play even for someone totally unfamiliar with fighting sail.

OI pits two players (no solo version unfortunately) against one another on the high seas. Each identical ship has six guns per side and begins with six rounds of powder per side. Powder is replenished at a rate somewhat slower than the maximum fire rate. This means that you must conserve your powder when getting ready to enter a melee. On the other hand, a useful strategy is to try to force your opponent to engage in a series of broadsides from his under-supplied side. Hopefully you will still have a keg or two of powder left when he runs out.

The wind always blows from the bottom of the screen toward stationary

While the fog can be interesting, it can also be deadly. When you exit the board a beeping begins and rises in frequency, ceasing only when you return to the battle area. When the beeping reaches its upper limit, your ship is lost in the fog, considered sunk, and a victory given to your opponent. It is especially dangerous to sail off into the fog with one or more sails down as you may not be able to get back in some situations before you are lost. One of the most frustrating yet humorous encounters I have had was a long battle with a friend in which we fought tooth and nail and were each down to one sail and a couple of guns each. I at last crossed the “T” and put the final salvo into him which gave him 100% damage. When a ship reaches 100% damage it explodes and sinks. However, the process salvo into his ship I jumped up and cheered (it really HAD been a tense battle) but my opponent only smirked. While congratulating myself my ship had continued on into the fog. Before I realized what happened, his ship sank and mine was lost and sank as well, producing a draw. Argh!

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The Blade of Blackpoole (BB) is an illustrated fantasy game similar in format to “The Wizard and the Princess”. The object of BB is to recover the magical sword Myraglym and return it to the altar from whence it was stolen. Rumors speak of a secret chamber near Blackpoole in which sword is said to lie.

When the game begins you are deposited in a forest with only a money belt and some gold coins in your possession. As you get the lay of the land and attempt to fulfill your quest, you will probably come across a tavern. Here you can purchase some items that could be useful. However, you are only allowed to carry five objects in your possession at one time; so it is wise to pick and choose among the objects that are made available to you. In some cases you should drop an item as soon as it is used to allow room for another item that you might not need until late in the game. Some of my repeated starts resulted from the fact that I traveled past certain points in the game where you could not return through only to find that I had left behind a needed object. So, pick your inventory carefully.

The ability to play and finish this game involves solving many puzzles before the successful conclusion. The author did not intend for this game to be solved in one evening.

As in other games of this genre, mapping is another must. Accurate knowledge of where you have been and where you currently are cannot be over emphasized.

When you first start the game, you make a “player’s disk” by copying the back side of the original disk. From that point on you just use the original disk to boot and then play with the copy. As you can realize this saves an awful lot of wear and tear on the disk that you

Continued on pg. 44
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CHES (Cont.)
continue its error-free play, Black resigned.

In other tests against two 1900+ rated players, C7 consistently played a strong positional game, not merely setting tactical ambushes. It handles its pawns well, and strives to push passed pawns to the eighth rank. It is particularly strong in the end game and in its opening library, but is somewhat weaker in complex middle game positions. In one memorable game at a low level against a 1911 rated player, C7 sacrificed a knight for two pawns plus a surprisingly lethal kingside attack. The player eventually won, but just barely.

Odessa's Chess 7.0 probably has the most powerful chess solitaire play capability now available for home computers. You will find it extremely entertaining even if chess is not your favorite game. I hope that more designers will try to reach this level of solitaire capability in other types of computer games.

CLOSE ASSAULT (Cont.)

Probably the most important difference is in the Defensive Fire phase. In CA, you can only shoot at an enemy squad in its CURRENT position; no dragging it back to where it ran across the open for a more effective shot. This makes defense a lot harder and you'll find the most challenging scenarios are those where you play defense against the computer. You can also shoot at only one squad at full firepower. If two or more enemy squads occupy the same hex, you can opt to fire at all of them, but firepower is diluted among them.

CA also treats LOS differently — an obstacle is assumed to fill the entire hex even though its symbol on the map may be much smaller. CA has no counters for leaders and support weapons; these are assigned to squads at the beginning of the game. You can't transfer support weapons between squads, even if the squad gets blown away, nor can a leader rally any squad but his own. CA has no stacking limits, no fire groups, no artillery, no vehicles, and no entrenchments. The only support weapons represented are machine guns (light, medium, and heavy), flamethrowers, demo charges and smoke.

On the other hand, it does keep track of unit strengths much more precisely. Each squad starts at a strength of 10 men, but may suffer losses as men are killed or wounded. The combat routines have been modified somewhat to take advantage of the greater detail. Another improvement, in my opinion, is that you are definitely in the role of leader. When a squad becomes demoralized and refuses to follow orders, the computer controls its behavior until it rallies. If you get yourself killed then you don't get to give any more orders. The computer takes over control of your remaining troops and plays out the game. Your subordinate may win or lose, depending on how good a position you've left him in, but all you can do is watch.

As usual, Avalon Hill has provided the source code, so if you'd like to make your own modifications to the game, you can. CLOSE ASSAULT is written in machine language rather than BASIC, however, so be advised. Now that I've played LEGIONNAIRE, I can't say that CLOSE ASSAULT is Avalon Hill's best computer wargame, but it IS their best for the Apple and TRS-80. I recommend it strongly to anyone who is looking for a first computer wargame.

GALACTIC ATTACK (Cont.)

being a short distance away from a Kzinti planet in repair mode (ship damaged, shields down) when a new Kzinti fleet appears in orbit around that very planet. You'll then have to do some fancy flying to avoid disaster. It is this danger which makes the Short Game (solar system extends only to Mars) more difficult than either the Intermediate Game (solar system extends to Jupiter) or the Normal Game (all the planets and Ceres). The newly arriving Kzinti comes in randomly at one of the alien controlled planets or at the edge of the solar system. The fewer planets there are, the greater the chance that the enemy will arrive at your current location while you're in repair mode.

GA requires fast thinking, a fair amount of keyboard dexterity, and a good knowledge of the directional commands. For some unknown reason, Sir-tech has reversed the traditional 0 to 360 degree COUNTERCLOCKWISE layout, and has all commands entered on a COUNTERCLOCKWISE 360 degree layout. To fire a phaser, you must type "P", then the numerical direction in which you wish to fire. The same procedure gives directional course commands, and fires torpedoes. Although Sir-tech gives you 'short cut' orders of movement and torpedo fire thru the use of the keys surrounding the "S" key, you have to use the numerical commands to fire phasers.

As with any game, the actions required may be simplified to three basic actions. The steps in winning are 1) strafe, 2) transport and beam down, 3) move to next planet and engage the Kzinti Fleets there. (A process which can, in the long game, become rather repetitive.) If you have a garrison of three or more, they'll multiply and you can completely forget about that planet.

Starfleet Command has requested that this transmission be terminated, so I'll leave you with these final words of advice. Launch your torps in clusters three or more in rapid succession so the Kzinti don't have time to recover between hits, and use your phasers at close range for the coup de grace. To do this, you MUST know your phaser angles! Lastly, don't forget that the "S" key will give your shields a boost when they're sagging.

Good hunting, and when you win a complete game against nine Kzinti at a time, write in and let us know.
PINBALL (Cont.)
images lead to quicker and easier understanding than written words. The instruction manual for the Pinball Construction Set is a scant nine pages long. Contrast this with the 38 pages BRODERBUND used to describe The Arcade Machine (see our review in the last issue of Computer Gaming World).
That book, although very complete, was actually one of the drawbacks to the product. It was necessary to refer to it often to determine what the codes on each screen stood for. The Pinball Construction Set manual is actually overkill. Once you get the feel for pointing and moving, you never need the book again.
The Pinball Construction Set is worth buying even if you don't like pinball. It represents a landmark leap into the future of computer processing. Almost any interactive process can benefit from the use of pictures to represent actions.
Look for icons to appear and be called 'state of the art' in future products. Yet the idea has been around for three thousand years. Bill Budge brought back hieroglyphics - maybe the ancient Egyptians were on the right track, after all.

ROUTE 80 (Cont.)
monsters, each randomly appearing at any point in the dungeon. The instruction booklet depicts and describes each monster and you would be very wise to become familiar with these denizens of the dungeon depths. When you encounter a monster, you have three choices of action: fight, cast a spell, attempt to evade. Knowing which monsters can be dispelled by a magical incantation and which ones should be avoided altogether can very well mean the difference between life and death.
All of the action takes place in real-time, so any delay in making your decision can find you decapitated or burned to a crisp before you even lift your sword! A fire-breathing dragon is nothing to fool around with!

One of the best features of Telengard is the character's use of magical spells. A total of 36 spells are available to him; each one different and distinct in its effect. Some are combat spells, such as *magic missiles, fireballs, lightning bolts* and the ability to turn away the *undead*. Other spells provide higher levels of abilities, such as *levitation, detection of traps and curing of wounds*. Learning to use each spell properly is an exciting part of the Telengard adventure. To further complicate your tenuous life, the instruction booklet cleverly provides the names, but does not describe the effects of the higher level spells. You have to learn through trial and error! Imagine hacking your way through 12 hours of mortal combat with skeletons, vampires, orc and demons, just to be incinerated by your own improperly invoked *wall of fire* spell!

As you accomplish various feats of daring and dexterity, you are occasionally rewarded with treasures such as *magical swords and shields, rings of protection, magic potions*, and other useful accouterments. It is wise to accumulate a number of these life-insuring devices before attempting to probe the deeper depths of the Telengard dungeon. They'll be needed!

The more I played Telengard, the more I appreciated its possibilities. At first, it seems to be a simple cut and slash type of adventure. But, you gradually realize that a substantial amount of careful planning and cautious exploration is necessary for a successful assault on the dungeon's treasures. You'll lose many a good fighter before learning all of its secrets and, if you're really brave, try it without using the *"SV"* in your character's name!

Telengard has one of the most necessary qualities of a good game: The ability to grab your interest and bring you back again for another try. There are features missing which I would have liked to have seen included in Telengard, but it is still an excellent addition to the dungeon adventure collection of computer games.

Fortunately, because it's written in basic language, some of the missing features may be implemented easily. In the next issue I'll be providing a few lines of code which will allow you to print out a permanent record of your character's attributes and current status. If any of you devise some changes to the original program, I'd be happy to print them in future columns. Just send them to me with a statement that they can be used for publication.

Until next time, Happy Gaming! I'll be looking for you again on route 80!

MATH MAGIC (Cont.)

```plaintext
60 PRINT "PRESS (ENTER) WHEN
YOU ARE READY TO CONTINUE"
70 PRINT:PRINT
80 FOR J=1 TO 6
90 FOR K=1 TO 32
100 READ A(J,K)
110 PRINT A(J,K),
120 NEXT K
125 PRINT:PRINT
130 INPUT "DOES YOUR NUMBER
APPEAR ON SCREEN (Y or N)": N$
140 IF N$="Y" THEN S=S+2[(J-1):REM "[" IS EXPONEN
150 IF N$ < > "Y" AND N$ <= "Y"
153 N$=""
155 CLS
160 NEXT J
170 CLS
173 FOR Z=1 TO 300:NEXT Z
175 PRINT "OKAY, CONCENTRATE
VERY HARD NOW..."
180 PRINT "I AM READING YOUR
MIND..."
183 FOR Z=1 TO 700:NEXT Z
185 PRINT:PRINT
186 FOR K=1 TO 2
188 PRINT " ": STRING$ (57, "=")
189 PRINT
190 NEXT K
193 FOR Z=1 TO 300:NEXT Z
194 PRINT "AH! YOU PICKED THE
NUMBER":PRINT S: FOR Z=1 TO
1200:NEXT Z
200 DATA 1,3,5,7,9,11,13,15,17,19,
21,23,25,27,29,31,33,35,37
210 DATA 39,41,43,45,47,49,51,53,55,
57,59,61,63
230 DATA 2,3,6,7,10,11,14,15,18,19,
22,23,26,27,30,31,34,35,38
240 DATA 39,42,43,46,47,50,51,54,55,
58,59,62,63
260 DATA 4,5,6,7,12,13,14,15,20,21,22,
23,28,29,30,31,36,37,38
270 DATA 39,44,45,46,47,52,53,54,55,
60,61,62,63
290 DATA 8,9,10,11,12,13,14,15,24,25,
26,27,28,29,30,31,40,41
300 DATA 42,43,44,45,46,47,56,57,58,
59,60,61,62,63
320 DATA 16,17,18,19,20,21,22,23,24,
25,26,27,28,29,30,48,49
330 DATA 50,51,52,53,54,55,56,57,58,
59,60,61,62,63
350 DATA 32,33,34,35,36,37,38,39,40,
41,42,43,44,45,47,48,49
360 DATA 50,51,52,53,54,55,56,57,58,
59,60,61,62,63
```

43
TELE-GAMING (Cont.)

On the Source, another timesharing service, subscribers pay $100 to sign up, plus a monthly minimum charge of $10. The hourly rates for 300 baud service are $20.75 from 7:00 a.m. to 5:00 p.m. $7.75 evenings, weekends, and holidays, and $5.75 from midnight to 7:00 a.m. The Source has over seventy online games from which the gaming enthusiast may choose. You can pit yourself against the puzzles in “Blackdragon” or blast Klingon ships in “Trek.” And, for the gamblers at heart, there are computer versions of “Poker,” “Craps,” and “Blackjack.” Many of the popular play-by-mail games (such as Diplomacy and those from Flying Buffalo) are in progress on the Source as well. “Post Games,” a bulletin board where users can leave their hint requests, is a heavily-used feature.

These two companies are the largest providers of national online gaming services. Throughout the United States, however, there are hundreds of private electronic bulletin board systems (BBSs) in operation. Many of these BBSs offer an additional means through which gamers can talk, play, and exchange information. For the cost of a local or long distance telephone call, you can connect with a gaming bulletin board system and join in the fun. Hint messages, game reviews, and long-running mail games — particularly fantasy role-playing games — are the typical fare on these systems.

This column will be devoted to bringing you news about the present realities and future possibilities of tele-gaming — the who, what, where, when, and how much. With future issues of CGW, we’ll be taking closer looks at every facet of online gaming. In the meantime, your comments, suggestions, and questions are welcome. I would especially appreciate hearing from readers who are confirmed tele-gamers as well as from those who are running their own gaming BBSs. You may write to me at the following address:

Patricia Fitzgibbon
195 Claremont Avenue, Suite 115
Long Beach, Ca. 90803
72145, 42 (CompuServe)
810262 (Source)

I will be happy to reply personally to your letters if you enclose a stamped, self-addressed envelope. Until then, remember, as the great Sherlock once said: “The game’s aphone!”

AMBUSH (Cont.)

does, then he will not fire his weapon for 4 to 30 timepoints. If he is fired on again while ducking he again may duck. This really adds to the realism of the effects of cover fire. This addition was made too late in development to reduce the ducking soldier’s chance of being hit by future fire so you can still kill him while he’s ducking.

Soldiers can only be given a limited number of orders per turn so, if you are concentrating fire on a specific spot, you may find it advantageous to use the FS command for the first part of the turn, and then switch to the FA command.

Another point worth remembering is that a soldier throws a grenade through a window or door and is not sneaking, may very easily blow himself up. If sneaking, however, he will be assumed to have flattened himself against the wall beside the door or under the window and will be unharmful. Grenades, by the way, are very effective and the computer controlled enemy knows it. They love to toss grenades as soon as they know exactly where you are — so it is rather dangerous to stay in one spot firing for very long. In one game, I had my machine gunner and two autoriflemen in excellent positions firing at the approaching enemy with fairly good success. It was a bit disconcerting when all three of them were killed by grenades in the same turn! Hit and run, move and shoot, are the best tactics.

In designing your own forces, it is a nice touch to not know what your two player scenario opponent is like. Since there are seven really pertinent characteristics (strength, intelligence, dexterity, observation power, throwing, firing and hand-to-hand combat ability) you can pick an average number, say six, multiply by seven, and then distribute the resulting point total in any way you want.

CONCLUSIONS

Computer Ambush (Second Edition) has been well worth the wait! It’s fast, smooth flowing, and surprisingly realistic. This game could set the standard for tactical simulations for a long time to come. At least, until the Third Edition comes out.

BLACKPOOLE (Cont.)

bought. It is also important, as it allows new adventurers to save the game frequently. It can be very frustrating if you succumb to one of the many traps along the way and have to start over from the beginning.

An improvement over previous games of this type is that you do not have to limit yourself to two word commands. The only rule you have to remember is that a verb always precedes the noun or object of the sentence. For instance you can say “move the rock with a lever”. I thought this was great, but after awhile I found myself out of habit reverting back to the old verb-noun syndrome, i.e. move rock, get staff, etc. You can talk with the inhabitants and there is even a HINT or HELP command. I used these commands a lot even though they were usually too vague to be very helpful.

One unique feature is that when you lose (get killed) or win, you are scored by the computer on how well you did. A perfect score is 500 and your score is displayed as a ratio of this 500. The less moves it takes you to complete the quest the higher the score. This adds much to the game’s potential life span.

There is one aspect of these types of games that has prevented me from really enjoying them. More often than not, I get stuck on a problem that does not involve a riddle, deducing a clue, or wondering whether to go north or south. I find myself getting stuck on how to tell the computer exactly what I think should be stated to get something done or advance me closer to the end of the game. I spend more time on the trial and error of how to say a command as opposed to enjoying the other aspects of the game. I know I am in the minority, as these games are so popular, but I do wish that, for the benefit of people like myself, a complete list of the games’ vocabulary would be included in the directions even if it were put in the form of some code. Then I could spend more of my time enjoying the game itself.

BB runs on the Apple and the Atari
SILICON (Cont.)

UNIT DIFFERENTIATION

Our original example assumed that all units exerted equal influence. What if they don't? Wargames commonly involve units with different combat strengths, so we may need to take that into account. For example, Figure 6 shows the quarks and bosons again, but this time, the bosons have a strength advantage of over two-to-one. How shall we take the different strengths into account?

The method I came up with involves a slight modification to the new weight calculation. Before, we just added in the sign (+1, 0, -1) of each adjacent hex. I changed that to a signed magnitude: +1 for values up to 39 and an additional +1 for every 20 points thereafter. Figure 7 shows the result if we again ignore terrain. The quarks still have the advantage in numbers (85 to 58), but it is now the bosons who have cut the quarks' area into two pieces. Indeed, the bunched-up formation of the bosons is all that keeps them from controlling most of the board.

CONCLUSIONS

One of the advantages of this technique is its ability to be modified to reflect the importance of different factors. We'll continue to look at this next time (honest) dealing (hopefully) with such problems as unit movement, ranged combat, and just what to do with all of this information.

Copies of "Map Weighting" part 1 from the May-June 1982 issue are available directly from CGW for $1.00.

PEEK (Cont.)

THUNDERBOMBS: When supported by the Mockingboard (a popular sound board for the Apple II), TB has a few speech features and better than normal sound. TB is an arcade game in which the player is caught in the middle of a crossfire of alien ships. You must fire and dodge to score points. Apple. $19.95. The penguins wear space suits.

THE DARK CRYSTAL: TDC is High-Res Adventure designed by Roberta Williams (Time Zone) and based on the epic fantasy film conceived by Jim Henson (The Muppets). The game follows the movie's plot with enough differences to make it a challenge. As Jen, last of the Gelflings, you must find a shard of the Great Crystal and restore it before the Great Conjunction. The documentation is excellent and a four color poster is included with each game. Apple. $39.95.

POLICE ARTIST: In Police Artist the game player is an eye witness to a crime and must remember the culprit's face so as to be able to pick it out of a police lineup or reconstruct it from a catalog of face parts. The program creates more than 1,000,000 different faces, each with a unique name. Apple.

IFR FLIGHT SIMULATOR: A flight simulator for the Apple that requires knowledge of IFR flying or at least willingness to learn. Using an ADF, a compass, and two OMNI indicators the program has 13 problems that can be flown (such as flying into LAX (LA International) using real life fixes. Apple. $50.00.
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COMPUTER GAMING WORLD
RID #7

There were 215 R.I.D.s turned in by press time for this issue. The breakdown of users was: Apple (63%); Atari (31%); Others (6%). The mean score for RID #7 was 6.12. Starting with this issue, we are no longer adjusting mean scores as we have in the past. New games will be listed with the score obtained from that R.I.D. Repeat listings will have their scores averaged in with previous R.I.D. scores for the same game. The new games and updated games are listed with **bold type** in the table on page 48.

GAME RATINGS

The following table includes all games evaluated by our readers since May 1982. For a game to be included in this listing it must first have been offered for rating in our regular RID rating system. Games offered for evaluation are those covered in the magazine and/or have a good sales record during the time of evaluation. Once offered for evaluation, the game must have been evaluated by a sufficient number of readers to be included in the results. Any game not evaluated by at least 10% of the respondents was not included in the results.

Games were rated on a scale of 1 (terrible) to 9 (outstanding). Respondents were asked to consider such things as PRESENTATION (graphics, sound, packaging, documentation); GAME DESIGN (design, playability, interesting?); Life (does the game wear well?).

R.I.D. #8 (Use card provided)

On this page a number of games and articles are listed for evaluation. Please take time to evaluate these games and articles. Use the guidelines above for game evaluation. Leave blank any game which you have not played enough to have formed an opinion.

GAMES

1. The Missing Ring (Datamost)
2. WizPlus (Datamost)
3. New World (Epyx)
4. Jump Man (Epyx)
5. Crime Wave (Penguin)
6. Pie Man (Penguin)
7. Spy’s Demise (Penguin)
8. Suspended (Infocom)
9. Championship Golf (Hayden)
10. Hi Res Golf #2 (Avant Garde)
11. Jump Jet (Avant Garde)
12. Galactic Attack (Sir-tech)
13. Police Artist (Sir-tech)
14. Chess 7.0 (Odesta)
15. Twerps (Sirius)
16. Sherwood Forest (Phoenix)
17. Facts in Five (Avalon Hill)
18. Alien (Avalon Hill)
19. Nautilus (Synapse)
20. Necromancer (Synapse)
21. Survivor (Synapse)
22. Old Ironsides (Xerox)
23. Blade of Blackpool (Sirius)
24. Astro Chase (First Star)
25. Computer Ambush (2 ed.) (SSI)
26. Close Assault (Avalon Hill)
27. Ali Baba/40 Thieves (Quality)
28. Apple Panic (Broderbund)
29. Zaxxon (DataSoft)
30. Kid Grid (Tronix)

ARTICLES

31. Micro Mathemagic
32. The Name of the Game
33. Tele-Gaming
34. Atari Arena
35. Route 80
36. Silicon Cerebrum
37. The Learning Game
38. Adventure Game Contest
39. Baseball League Article
40. Computer Ambush review
41. Close Assault review
42. Germany 1985 Review
43. Taking A Peek
44. Reader Input Device
45. What computer do you own?
   1+Apple, 2+Atari, 3+TRS-80, 4+C-64, 5+IBM PC, 6+Vic 20, 7+other (please specify)

MISCELLANEOUS

A. Do you use the reviews in CGW as a buying guide?
B. What type of articles would you like to see more of (reviews, strategy, contests, hobby insights, game designer notes, etc.)?
C. Other comments.

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<thead>
<tr>
<th>Rating</th>
<th>Game Name</th>
<th>Developer</th>
<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.09</td>
<td>Wizardry</td>
<td>Sir-tech</td>
<td>Apple</td>
</tr>
<tr>
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<td>Bomb Alley</td>
<td>SSI</td>
<td>Apple</td>
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<td>Knight of Diamonds</td>
<td>Sir-tech</td>
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<tr>
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<td>Miner 2049er</td>
<td>Micro Fun</td>
<td>Apple</td>
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<td>7.34</td>
<td>Gaadacanal Campaign</td>
<td>SSI</td>
<td>Apple</td>
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<td>Ultima II</td>
<td>Sierra On-Line</td>
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<td>Pinball Construction</td>
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<td>Galactic Adventures</td>
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<td>Zork Series</td>
<td>Infocom</td>
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<td>Cosmic Balance, The</td>
<td>SSI</td>
<td>Apple, Atari</td>
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<td>Eastern Front</td>
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<td>SSI</td>
<td>Apple</td>
</tr>
<tr>
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<td>Legionnaire</td>
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<td>Cartels &amp; Cutthroats</td>
<td>SSI</td>
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<td>Crisis Mountain</td>
<td>Synergistic</td>
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<td>Pursuit of the Graf Spee</td>
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<td>SSI</td>
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<td>Napoleon's Campaigns</td>
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<td>Temple of Apshai</td>
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<td>Apple,TRS-80</td>
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Tactical Armor Command

One last tug to the helmet strap—a reassuring glance at the line of powerful steel monsters and you know all is ready. From your command hatch you raise your hand and order “forward!” The air suddenly fills with the roar of engines and the rumble of treads, as the mighty dreadnoughts of the land start forward. You command a team of your country’s finest armored vehicles in a mission to search and destroy the enemy.

T.A.C. is a game of World War II tactical armored combat. You pick a nation (from among the four major combatants—Britain, U.S.A., Germany and Russia). You build a combat team from their most powerful tanks, assault guns and tank destroyers. You command the team you’ve created in major operations against like forces of the enemy.

All the famous vehicles of the second world war are here—Tigers, Panthers, Shermans and JS IIs; Jagdpansers, SU 152s, Fireflies and T 34s, just to name a few. They have all been thoroughly researched and their important features programmed into the game. Each vehicle is distinguished by such elements as armor thickness (rear and flanks as well as front), firepower, speed, acceleration and gun traverse. Even minor points like fuel tank location can be critical.

The computer handles all the technical details. This lets you concentrate on making the same kinds of decisions the real-life tank commanders made. You search for the enemy, set your speed, aim your gun and knock out the enemy. The computer will handle all the rest.

BY RALPH BOSSON
* Trademark of Apple Computers, Inc.

Here are just some of the exciting features:

- **T.A.C.** can be played solitaire against the computer or as a two player (or two team) game with the computer as mediator.
- The most important armored vehicles of Britain, Russia, U.S. and Germany are available to command—40 in all.
- Choose from five different scenarios to play. Actions range from open meeting engagements to assaults against prepared positions.
- You pick the sides. You choose the weapons. A simple purchasing system has been provided to let you “buy” what you want in balance with your opponent.
- The results of combat are determined by the computer. It factors such critical elements as range, armor thickness (front, rear and flanks), tracking time, the speed and maneuvers of both the firing and target units, visibility and weapon adjustment to determine weapon accuracy.
- Special options include hidden movement, improved positions, smoke mortars, minefields, close assaults, overruns and indirect fire.

Each copy of **T.A.C.** includes a rules booklet, player aid pad and the software for your home computer. All you need to take command.

**T.A.C.** can be played on the following computer systems: Apple® II, II+, Ile with Applesoft®, a minimum of 48K Memory and one disk drive.

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Games of strategy, fantasy, science fiction, sports, even education for the Apple II, Atari, Commodore, TRS-80 and IBM Personal Computers.

NEW

LEGGARD—Highly acclaimed real-time wargame simulation by Chris Crawford. You as Julius Caesar command up to ten legions against the barbarian infantry and cavalry during the days of the Roman Empire. The battlefield scrolls before you in full color and animation. Such a unique and pleasant departure from traditional wargames that Video Games Player magazine has awarded LEGGARD the 1983 "Golden Joystick Award." Atari 48/1200 cassette (16k) $35.00, diskette (32k) $40.00, joystick required.

TELLER—Another not so mighty adventurer bites the dust nominated in the February 1983 issue of Playboy. TELLER is one of the most powerful examples of the challenging diversions your computer can offer these days. Teller is a 50-level dungeon exploration game featuring sprite graphics and sound for your Commodore 64. The monsters and creatures in the Teller dungeon will not wait for you to react, so quick wits and reflexes are needed! Will you return from the cruel labyrinth to tell tales of horror, despair, great treasure and magic? Or will you be another of the foolish ones, only to perish in the dark depths? Commodore 64, TRS-80 Mods, III (32k), Atari 800/1200 (48k) cart $29.00, Apple II (48k), Atari 800/1200 (48k), TRS-80 Mods, III (48k) cart $28.00 each.

NEW

TAC—Tactical Armor Command

By Ralph Rosson. Avalon Hill's Microcomputer Game of Armored Combat during World War II. You control individual tanks, anti-tank guns, and infantry squads in tactical combat situations. Official armor statistics are utilized. For one or two players featuring outstanding high-resolution graphics, enhanced sound, and stimulating challenge. Five different scenarios are available from Meeting Engagement, Rear Guard, and Total Defense, to Breakout and Stalemate! The player(s) control up to eight vehicles, guns and squads simultaneously, utilizing the equipment of either the German, British, Russian or American forces. A microcomputer simulation for the most demanding gamers. For the Apple II computer systems with 48K and disk drive. Atari 800/1200, IBM P.C., and Commodore 64 versions available later this fall. $40.00.

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