YESTERDAYS NEWS

30 Years Ago...

Historical Information taken From Bill Gaskills TIMELINE

October 1987:

Second ever checksum program for proofing TI BASIC/XB programs appears in MICROpendium. Written by Los Angeles 99er Tom Freeman.

CSGD User Disks #5 and #6, along with CSGD Cataloger are released by Texaments.

Artist Fonts Volume 1 is released by Asgard Software.

Designer Labels by Paul Coleman is released by Nameloc Software.

After Hours BBS v1.4 is released by Ed Schaum of Bronx, New York.

Funnelweb v4.0 is released on October 20, 1987.

Ryte Data South, run by Houston, Texas resident Henry Schlereth, closes its doors.

Wizard's Lair and Wizard's Revenge adventure games are released by Rainbow Software of Brooklyn, New York.

QDE, the Quick and Dirty Editor by Clint Pulley, is released in an 80-column version for the Geneve.

Video Digitizer and Titling software is rumored to be in the works, the creation of Seattle, Washington 99er Tom Wynne. It is designed to work on a Peripheral Expansion Box card that will be marketed by Barb Weiderhold of Queene Anne Computer Shoppe in Seattle.

Sysop Blaine Crandell reports that TI-SIG, formerly TexNet, on The Source, gets a reprieve from extinction when most 99ers report that they will drop The Source entirely if TI-SIG is abandoned. As part of the efforts to increase interest and participation, the Terminal Emulator 2 download protocol is dropped in favor of the more popular xmodem protocol. This eliminates a major commercial resource and reason for owning and using the TEII cartridge.

Boston Computer Society member Walt Howe previews MyArt for the Geneve 9640 in the October BCS Newsletter. Howe is the author of the documentation for the program.

Ernest Chandler and Frank Paquette of Great Lakes Software release Certificate 9 9 v1.0.

Myarc releases MDOS 0.99 for the Geneve 9640 computer when O/S author Paul Charlton uploads the code to CompuServe and Delphi on October 14th for free download by Geneve owners.

The most comprehensive comparison of database managers for the TI-99/4A ever published appears in MICROpendium.

Datax announces move to Florida.

The DC area 99ers hold a TI Fair on October 24-25, 1987.
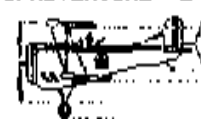
Spadventure #2 — A SPAD ADVENTURE
by Dave Wakely

THE CASE OF THE WALKING WILLOW   **Chicago Times 10/87**

By now most SPAD owners have probably taken off and fought the good fight in the skies. For many, as soon as the package was opened, you chased the "observation planes" and tried to shoot them down, or, if you have the Mark 2 version, took on the Red Baron, with possibly disastrous results. It is after some of this, however, that you may find yourself tiring of the "game" aspects of SPAD XIII.

ARTICLE BY BILL GASKILL

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COLLECTING CARTRIDGES PART 4

VERSIONS AND UPDATES:

As far as I can tell, TI produced only one update to original code for a cartridge, and that was Extended Basic. There may have been other updates, but I have not run across any reference to them. We know that Disk Manager, Terminal Emulator and TI Logo got new versions, but they also got new product numbers in the process so they are easy to track. But updates and upgrades to cartridges are things to be on the look out for when collecting.

Similar programs by different authors or manufacturers are another area to pay attention to. For example, there are several versions of Extended Basic such as the Exceltec and Micropal versions of XB v110, the Mechatronics' Extended Basic+ and the Craig Miller, Danny Michael, Mark Shillingburg collaboration called Super Extended Basic that was marketed by Triton Products before Activision bought Triton out. There's also Myarc's XBII. Another example of the same program being released by more than one manufacturer is Numeration 2. I own a TI produced version (PHM 3051) and a Scott, Foresman produced version (SF 30216) that are both white cartridges, but which have different labels. The TI version is a blue label with gold type in a typical TI design, while the Scott, Foresman version has a white label with blue type typical of the design shown in a Scott, Foresman advertisement in the November 1982 issue of 99er Magazine on page 53.

Similarly, some modules were given name changes that make one think a new program has appeared, when for all practical purposes it is the same program. For example, DataBiotics' Magic Memory and TI Workshop are the same program as is their Console Calc and TI Planner spreadsheets. Another example is Sofmachine's Jumpy and QMAZE. Different names, but really the same programs.

CATALOGS:

Vendor catalogs have helped me piece together the history and availability of cartridges between 1979 and 1989. If you run across any TI-99 product catalogs from the past thirteen years, I recommend latching on to them. They open a valuable window into the history of TI-99 product development.

Of the big four, which I define as the catalogs from TexComp, Triton, Tenex and Unisource, I rate Triton catalogs as the most valuable. They contain a lot of illustrations and descriptions, they had their own product numbering system to help differentiate between new versions of a product and they were produced almost on a quarterly basis from 1984-1989. This helped me quite a lot when trying to determine release dates for some cartridges.

RARE CARTRIDGES:

Although I've never run across any official documents which list how many cartridges were produced for a given title, I am going to take a stab at identifying some of the hard to find cartridges, based mostly upon their catalog availability in the major vendor catalogs during the 1980's. I don't have enough space to get into much detail unfortunately.

Virtually any Scott, Foresman produced cartridge is a rare find, especially if it includes the original manual. I am not referring to the TI released programs that Scott, Foresman Company wrote for Texas Instruments, but the ones which were released under the Scott, Foresman label. Some, like Frog Jump, are still available today as "new" product, but do not have the original instruction manual, so they are not really collectible unless you can find an original manual somewhere else.

All of the Addison-Wesley Computer Math Games cartridges are difficult to come by now, but titles 1, 3 and 4 are the really rare ones. The other titles released were 2 and 6. A Computer Math Games 5 was never produced.

Any Exceltec/Sunware cartridge is worth buying or hanging on to if you own one. Exceltec you may recall was the firm started by two former TI employees that offered to produce your GPL or assembly language program in cartridge form. Sunware and Exceltec are the same firm, different name.

Certain Atarisoft modules like Dig-Dug and Ms. Pac-Man are hard to come by now and according to their catalog availability always have been.

DataBiotics produced a hard to find cartridge called Escape. It appeared in the Triton catalogs only, and then for less than a year.

Any Funware cartridge with original docs and/or original packaging is worth holding on to. Larry Conner has a pretty good supply of titles, but they will come to you in ziploc bags with photocopied manuals.

Any of the three Parker Brothers cartridges produced for the 99/4A are worth latching on to if you can find them (Frogger, Popeye, Q*Bert). Of the three, Frogger is by far the rarest in my opinion.

Any Tigervision cartridge is also worth holding on to if you own one. Of the ten titles promised from them for the TI-99, Tigervision only produced two.

A COMMUNITY PROJECT:

Back in the first installment of this series I talked about needing to compile detailed descriptions of each cartridge. Now that you've had a chance to see the Kind of detail I was referring to (packaging, cartridge design, cartridge color, label design/color/font, and documentation) how about joining in a TI Community project to collect that information? If you are willing to write a (legible) description of the cartridges you have and send the list to me, I will compile all the input and come up with a data base of varying types for each title. Anyone contributing will be entitled to a copy of the end product if sufficient input is received to produce an end product. I will allow several months for acceptance of your input, and then ask only that you send a disk, mailer and return postage to receive your copy of the data base. When describing your cartridges please include the cartridge name, product number if Known, manufacturer, and detailed descriptions of those parts of the product listed in the beginning of the paragraph. Send descriptions to Bill GasKill 2310 Cypress Court Grand Jct, CO 81506.

CREDITS:

I would like to thank Jerry Price of TexComp, Steve Mehr of the LA 99ers, Charles Good of the Lima, OH User Group and Mike Wright, the author of TI-Cyc, for providing the reams of information necessary to put this article together. Without the time and effort each has contributed to the TI Community, COLLECTING CARTRIDGES could not have been written.

```
100 REM Mystery Program by     210 DATA 76,65
    Chris Schan                220 CALL INIT
110 REM Requires Memory        230 CALL PEEK(-28672,A)
    Expansion and Speech       240 IF A<>96 THEN 340
    Synthesizer                250 FOR Z=1 TO 11
120 REM Runs in Extended       260 FOR X=1 TO 4
    Basic or Console Basic     270 READ A
    with Mini-Memory or        280 CALL LOAD(-27648,A)
    Editor/Assembler           290 NEXT X
130 REM                        300 CALL LOAD(-27648,64)
140 DATA 71,64,72,65,70,75     310 CALL LOAD(-27648,80)
150 DATA 73,70,76,67,66,66     320 NEXT Z
160 DATA 65,68,76,68,77,68     330 STOP
170 DATA 78,71,77,66,68,66     340 PRINT "You don't have a
180 DATA 66,67,74,67,74,77         Speech"
190 DATA 74,68,73,71,64,67     350 PRINT "Synthesizer attac
200 DATA 72,68,76,65,72,68         hed!"
```

Spadventure continues...

There will probably come a time when some combat techniques will find their way into this series, but its real purpose is to explore the limits of the simulation , to find the undocumented and unKnown, and in general to increase your enjoyment of this program. Last time, we took a long initial flight to see some of what there is to see from the air, and to demonstrate some very basic techniques. This time we are going to stick closer to home while learning other basic maneuvers. As you may have figured out, this series is not meant to be read away from the computer. The best way to use it is in conjunction with the program itself. By booting up SPAD XIII and Keeping this page next to the Keyboard, you will be able to follow along as we take each flight.

Those of you with the MarK 2 version will have an easier time of this since there is a way to "pause" during a flight. If you press the M Key all action will stop and a menu of locations will appear at the top of the screen. This is an added feature of MarK 2 which allows you to travel to different places instantly. You can also use it when the phone rings or to stop to catch up with the instructions here. When you pause with this Key, however, don't play around with number Keys 1-4 on the menu , since they no longer are "view" Keys, but will now move you to a different place on the map, which you don't want to do, because you cannot return to the same place you were when you pressed the Key unless you were at one of the designated spots. To resume the flight, press S, the menu will disappear, and the action will pick up where you left off.

Thanks to some help from Not Polyoptics, I now have a copy of Version 1 of SPAD XIII. This has let me discover that some of the directions I gave last month were incorrect, as you probably already Know. I assume that most readers of this column have Version 1, but to get the most from the series, and the program, you will want to upgrade to MarK 2. For example, I hope some of you aren't still up there circling around trying to find the "lines" on the ground I mentioned last time. There are no perspective lines in Version 1, but they definitely add an important dimension to MarK 2. Also, the plane itself is "smaller" in MarK 2. In both versions the instrument view shows the wings of the plane on the screen. In Version 1 the top wing is fairly large and near the top of the screen. By contrast, in MarK 2 the upper wing is smaller and lower on the screen, giving more viewing area. In general, MarK 2 is also significantly faster than Version 1, especially when it comes to updating the graphics. Version 1's scenery, and even the sound, tend to be "jerKy," but in MarK 2 things move more "smoothly," adding to the overall effect. I also Know more about the control differences I was only guessing at last time. In Version 1, when the appropriate Key is pressed to move the stick, it re-centers when you let up, but the plane remains "banked" until you level off by pressing the opposite Key. In MarK 2 the Key re-centers when you let up, and the plane also

Spadventure continues...

re-centers, automatically. This makes more intuitive, if not aerodynamic, sense. If the stick has been returned to center, the ailerons are level, and the plane should begin straightening out. In the future, all Spadventures will be run on both versions, and important differences will be noted here. Meanwhile, onto this month's Spadventure.

Start up this flight by going through the pre-flight check-out outlined in the last installment. Strangely enough, it's another beautiful day out there, and it's also a good time to explore and learn. On our last take-off I asked you to throttle up in increments by repeatedly pressing the B Key until the top RPM setting was reached. But the keyboard template clearly reveals that by pressing 9 the throttle will be immediately put on full, so why not use that? First, it is probably not good for the engine, especially from a cold start. Those early Spring mornings in France can cause condensation to form inside the engine, and it will take some time for engine heat to dissipate it. Second, it was necessary to show you the relationship between engine RPM and speed. This morning, however, the crew has had your SPAD out on the tarmac for some time , warming up, and if you want to go to full throttle, use the 9 Key.

As usual, when speed => 100 mph, pull back on the stick until the nose rises (or the scenery "drops"). In Mark 2 you will hear a beep which sounds at take-off speed. Watch the altitude gauge. This is a steep climb, and the indicator may "jump" right to 100 feet. When it does, take off two clicks of RPM by pressing 7 twice. This is a slower climb, and the altitude gauge will show 150 feet, then 200. When it does, drop two more clicks. You are now at 800 RPM, which you will recall puts you in level flight. This is one of the significant numbers you want to remember.

As you look around, you will see the field receding in the distance behind you. Something else you may or may not see is one of the German observation planes. These planes tend to hang around in what the map calls the "Combat Area." For the most part, if you don't bother them, they won't bother you, but there are some important exceptions to this. Recall that the manual notes that these planes have guns which can fire in any direction. On their random circles, if an observation plane comes fairly close to you it will fire at you, and can destroy your aircraft, which will considerably shorten this flight. This is a random occurrence, but one you should be aware of. To minimize this possibility, we are going to stay on our present heading until the home airfield completely disappears from sight. Look back with the 4 Key. Has the field gone yet?

Now look out the front with an unobstructed view (U Key). What else can you see out there? Besides the horizon line, clouds (in Version 1 there is a solid white line of "distant clouds" above the horizon line, in Mark 2 there is a line of dots which more closely resemble clouds above

the horizon), the sun, and your shadow, what else is there? Well, for one thing, those small dots on the ground in front of you are trees. In the Microsoft Flight Simulator, there are no trees, only green patches. From this height you can see them reasonably well, so watch them slide by under you, observing them off your left or right wing, and then behind you. They will appear to arrive in equal intervals. Very tidy, these French people, they even have all their trees lined up.

As one tree gets fairly close, another will pop into view. Pick out one of the distant ones and then let's head down for a closer look. Use left or right aileron to get one centered on the screen while it is still some distance away. Now put on full instrument view (1 Key) and use three or four down clicks of power to reduce altitude. Push the stick forward to get the tree lined up in your cross-hairs. Then, watching your speed and altitude (keep that nose up), land some good distance in front of a tree. Then press the 0 Key to kill power, and you will roll to a stop.

OK, so it didn't end up dead center. The tree is slightly to the left or right of center. No matter. Let's get rolling again by putting on some power. Use the 8 Key to step up 5 clicks, to 500 RPM. Your airspeed will still read "0"! Not enough torque to move the mass of the plane, I guess. Add one more click (600 RPM) and you will begin rolling. Eventually, the air speed indicator should tell you that you are moving at a steady 30 mph. Now to zero in on that tree. Use left or right aileron to move the tree back to the center of the screen. Go ahead, I'm waiting.

Yes, the horizon line "moves", indicating a bank, but the scenery doesn't move, and the tree will stay to the left or right of center. Time to kill the engine (0) and think this one out. What could be wrong? Let's see, when you move the stick left, the right ailerons (yes, there are two, this a biplane, remember?) go up,and the left ailerons go down, producing a differential effect on the wings, and the plane turns, doesn't it? No, in this case it doesn't. It looks at this point like whatever direction we are pointing in when we land is the direction we are stuck with, and we are never going to nose up to that tree at this rate. Hmmm. Perhaps it is a matter of degree . What if you press the A or F Key for hard left or right bank? I wouldn't do tha t if I were you . At 30 mph you can probably get away with it, although the plane still won't turn, but at higher speeds what happens is that your left or right wing will slam into the ground, producing the"crash" screen.

Still, you should be close enough to the tree to get a good look at it as it goes by. You should see it growing in definition as it gets closer, then off the left or right wing, and than behind you. What exactly is it, an elm, an oak? Hard to tell with no leaves on it. Maybe it's a telephone pole, and that's why they are all lined up

liKe that. They did have telephone poles in 1917, didn't they?

All right, forget it. There are other trees. TaKe off again using the usual procedure, again leveling off at 200 feet. This time, get a tree in the dead center of the cross-hairs all the way down to the ground. It may taKe several tries, but it can be done. When you have it, Kill power again. Now when you power up you are going to roll right up to that thing. Get backK to 600 RPM and you will be lazily rolling at 30 mph. It is going to taKe a while to get to the tree at this rate, so give it one more clicK to 700 and the speed indicator will stop at 90 mph. You don't want to move any faster than that while on the ground, because liKe it or not, you will taKe off! Even without pulling back on the sticK to increase the "angle of attacK," the speed of the air on the wings will cause sufficient lift to taKe the SPAD airborne. Perhaps you could fight this tendency by pushing forward on the sticK, but why bother? So 700 RPM = 90 mph when on the ground. At this rate, the tree is going to whiz past before you Know it, so backK off a clicK to 600 and speed will decrease to about 85.

Now wait a minute here, wasn't 600 RPM = 30 mph liKe earlier? In a word, no. Once you are rolling there is much less inertia to overcome. Similarly, at 500 RPM, speed = 80; at 400 RPM, speed = about 60; and at 300 speed will finally drop back to 0, but all of the above is true only if you are already rolling. Find a comfortable rolling speed as you approach your dead center tree and watch what happens. During this, put on and taKe off the instrument view as needed. Since you landed pointing straight at the tree, and you can't possibly turn, you should come right up to it, yes?

Uh, wait another minute here. The tree just moved! That thing hasn't got roots, it's got legs! It's sliding off to the left or right again, and we're going to miss it again. Maybe those are faKe trees with German spies behind them who don't want to get run over. I seem to recall something liKe this in Hamlet. Very strange. Perhaps this is due to some inaccurate ground level perspective mapping. Or something. Anyway ,there it goes, off to the side of the plane.

All right, on to the point of this flight. TaKe off one more time. Same procedure. Find a tree. Line it up. Land in front. You need the landing practice anyway. Now, as you start rolling and the tree starts sliding away, looK for the < and > rudder Keys. Try one. Aha, movement! The tree is coming backK to center. It may try to get away, but we won't let it. With practice, you will be able to get the tree perfectly centered on the cross-hairs, but if you are moving too fast you may overshoot it, so go slow. Now , get the tree dead center, a few feet in front of the plane, and stop (0 Key) to ponder. If you liKe, feel free to hop out of your SPAD and stretch your legs a bit. SmoKe

'em if you've got 'em. It's not good for your health, but in this war who Knows how long you'll be around?

It's Kind of ironic, when you thinK about it, that one of the first things we learn about trees is that they are "lovely" (as in, "I thinK that I shall never see , A poem lovely as a tree," etc.). That was written by Joyce Kilmer, who, contrary to expectations, was a soldier who died in the trenches of this same WW1. One thing's for sure , though, this must not have been the tree he was looKing at. No spies, no telephone wires, just four or five bare branches on a sKinny trunK, but it's definitely a tree. They didn't have defoliants in 1917, did they? Maybe some of the deadly mustard gas they used in the war drifted here and did a number on the leaves.

Well, time to get on with it. Climb back into the cockpit and power back up to 600 RPM, which from a stop on the ground will yield 30 mph, and on we go. But, oops, hold on there. The tree is dead ahead and we are pointing right at it and we are soon going to be either eating barK or leaving a pile of toothpicKs behind us. Which is it going to be, because here comes that tree. Scotty, beam me up, quicK! Drat, I forgot my communicator, too late ...

Ah, well! Wasn't that strange! Reminds me of an old episode of the Twilight Zone . So, what exactly happened? Hey, fly it and find out, that's the point of all this!

Although the manual states (page 3) not to use the rudder without ailerons, this in fact is the way to taxi on the ground, which is what we have been trying to do. With this technique, you can point the SPAD anywhere you want to go. Now that we are up to a good rolling speed, let's try to turn around to head back to the home airfield. Use the left or right rudder until the compass indicates straight South. See, a piece of caKe. With this and the ground speed rules above, you should now be able to just about put the SPAD on a dime anywhere in the simulator.

While still rolling, power back up to top throttle and taKe off, once more leveling off at 200 feet. You may be surprised at how far you now are from the home airfield, but Keep looKing for it, and it will eventually pop up. You should be just about lined up with the North end of the runway when you spot it. If you are slightly off, use aileron and/or rudder to come straight in. When the field goes 3-D, quicKly taKe off four clicKs for your approach.

Uh, remember that landing technique from last time? Since you are coming in at much lower altitude, you will have to modify it a bit. (This is a hecK of a time for me to tell you this, isn't it?) This time, Keep your cross-hairs on the far end of the runway all the way or you will land short, and Keep powering down. This will produce a much "flatter" approach, and when the altitude indicator says "0", pull up on the sticK so you don't nose in too hard. Now, if you still have your wits about you and while you

Spadventure continues...

are still rolling, see if you can taxi into the hangar. If you stop moving, the program will reposition you on the runway, facing North. That's still much better than other alternative "landings."

If you want further practice with this scenario, see if you can get close enough to a tree to see some branches with an overhead view. That's real close to a tree. Are all the trees in SPAD the same? I don't Know. Go looK. And, if you want to be consistent when landing and still use the steep descent we practiced last time, wait a while after the field goes 3-D and then head down with the cross-hairs on the near end of the runway, beginning to pull up at 100 or 50 feet and then landing.

Next time, I'll have some interesting and intriguing comments from the people who produced the SPADXIII. We stayed pretty low on this flight, so before our next you will probably want to get up there and air it out a bit. I'll join you up there next time.
Happy flying.

SCREW THIS

Q: How many Californians does it taKe to change a light bulb?
A: Six. One to turn the bulb, one for support, and four to relate to the experience.

Q: How many Oregonians does it taKe to screw in a light bulb?
A: Five. One to change the bulb, and four more to chase off the Californians who have come up to relate to the experience.

Q: How many New YorKers does it taKe to screw in a light bulb?
A: 50. 50? Yeah, 50! It's in the contract.

Q: How many WASPs does it taKe to change a light bulb?
A: Two. One to call the electrician and one to mix the martinis.

Q: How many data base people does it taKe to change a light bulb?
A: Three: One to write the light bulb removal program,
    One to write the light bulb insertion program,
    and One to act as a light bulb administrator
    to maKe sure that nobody else tries to change
    the bulb at the same time.

Q: How many straight San Franciscans does it taKe to change a light bulb?
A: Both of them.

SHAMUS MAP BLUE LEVEL
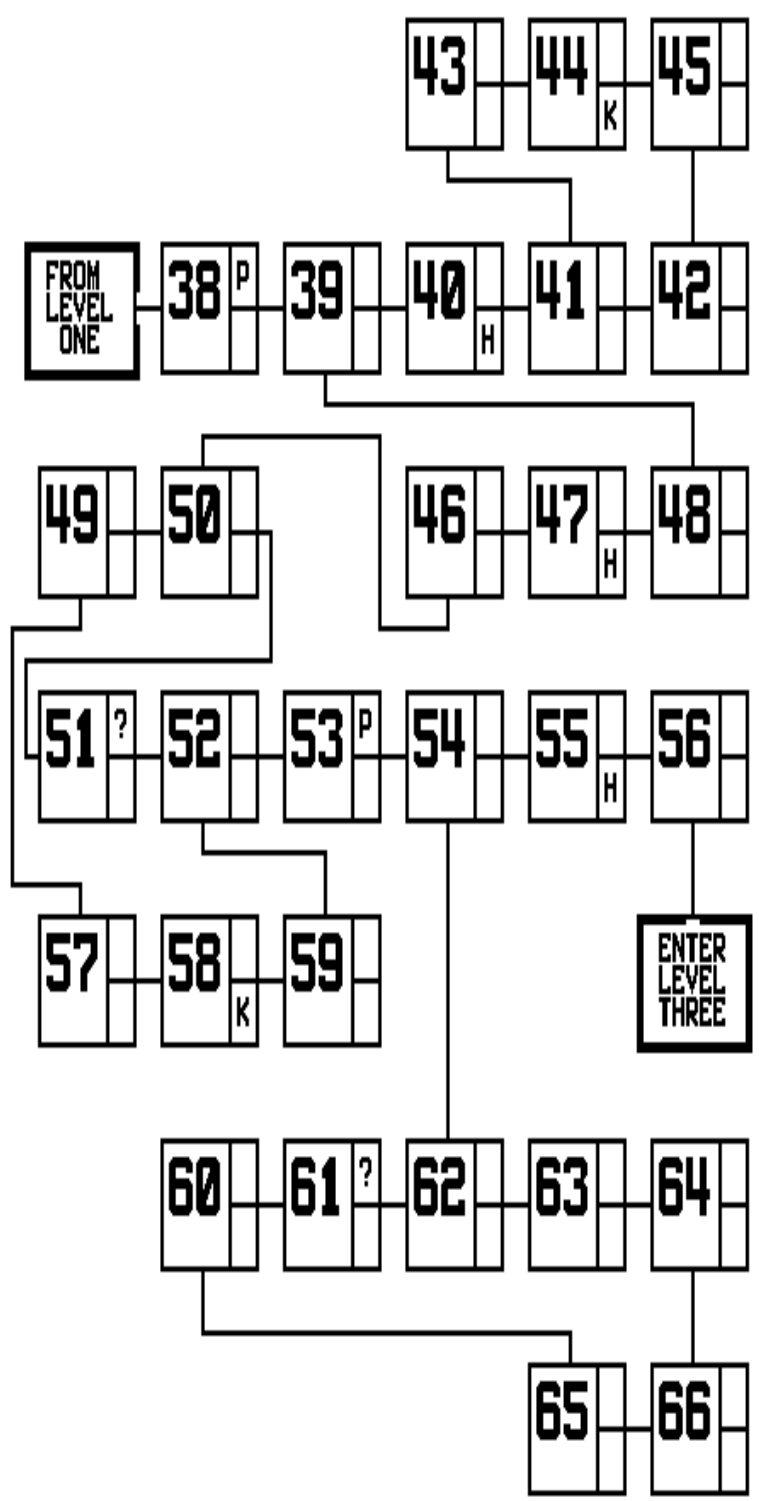
ATARI By Colin Good
From Bits,Bytes & Pixels Sep. 1997

MAP LEGEND: ?, K=KEY, H=KEYHOLE, P=POTION

NEXT MONTH - GREEN LEVEL

REVIEWED

McCann Software BUSINESS GRAPHS 99
By Dale Kaliser

Being in management of a major insurance company, I'm always asKed for reports comparing production from month to month and even year to year. To assist in my comparisons, I have always felt that utilizing charts can be most informative to the reader since in many ways they speaK for themselves.

Until recently I have been using such programs as Draw N Plot and Chart MaKer, both from Quality 99 Software. I then came across what I feel to be the best overall business graphics program entitled "Business Graphs 99" written by MiKe McCann and distributed by DisK Only Software for $24.95.

The 26 page booKlet is highly professional in both contents and layout which Kept my attention throughout the reading. To briefly explain, the program produces Pie Charts, Bar Graphs and Line Graphs which seems to be the normal contents of a sophisticated business graphics program. But what I liKe is that the program is menu driven, fast, versatile, highly professional and all options can be dumped to a printer.

System requirements are: TI 99/4A, 32K, DisK Drive, Editor Assembler or Extended Basic. Optional equipment: RS232 and Printer.

Four default settings may be set up by the user for convenience. You may set the default backGround and foreground colors, setup default output device and micro-linefeed may be changed to accommodate your particular printer. The defaults are saved to the program disK for automatic loading upon booting of the program.

The Pie Graph allows for individual labeling of slices from 2-6, the title of the graph is displayed above the graph with a subtitle below the graph. For use on a color monitor, there are 15 colors available and 7 different B/W shadings for printouts. All are displayed on the screen for selection by number. In addition, one of the Pie slices may be "Exploded" away from the rest of the pie. This comes in handy when illustrating the largest or smallest part of a comparison.

In order to adjust for the fact that each printer does not draw exact circles, the program has a feature called "Aspect Ratio" which allows you to adjust for the fact that a circle drawn on the screen or in the RAM looKs liKe a football on the printer.

The next type of graph available is a Line Graph. The Line Graph option begins by asKing for a title above the graph, subtitle below, horizontal axis title and vertical axis title. Next you are prompted for the vertical range or upper and lower boundaries of the display (1-500). Horizontal Display ranges from 0-10 and Horizontal Display Density controls proportional spacing between display items on the grid.

Once the data is entered, you have the option to draw or print four types of Line Graphs: HiLo, Line, Area and Grid On/Off. To briefly explain each, I'll begin with HiLo. The HiLo plots a vertical line for each data element in range, plotting vertically between MIN and MAX values. Line Plot will plot a line from MAX of one data item to MAX in the next and from MIN to MIN for all data items. Area Plot combines both Line and HiLo. Grid On/Off lets you turn on or off the grid lines.

The last type of graph is the Bar Graph. Once again you are prompted for a title above the graph, subtitle below, horizontal axis title and vertical axis title. Then you are prompted for the edit ranges very similar to the Line graph options. Next you enter the data for each bar. The Draw Graph option allows for drawing three types of Bar Graphs: Single Bar which plots a single bar for each data item with six shades of printing available, again displayed on the screen. The next option is to draw StacKed Bars which plots a bar for the MIN value then plots the difference between MAX and MIN as another bar stacKed on top of the first. The last option is a Double^Bar which plots a pair of bars side by side representing the MAX and MIN values for each data item. The Double^Bar type is very good for comparing one year to another.

Each type of chart option in the program may be saved to disK and can be easily accessed using the disK directory option of the main menu.

For my personal use, "Business Graphs 99" fits my needs but due to its wide range of options, it may not be for everyone. The program is copyrighted and may not be distributed through the Fairware concept but the program is not copy proof since I made a copy for my daily use.
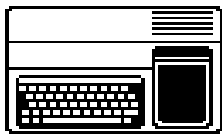
Yesterdays News
Information
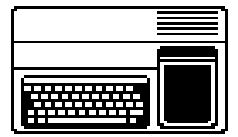
Yesterdays News is a labor of love offered as a source of pleasure & information for users of the TI-99/4A & Myarc 9640 computers.

TI-99/4A HARDWARE
Black & Silver computer
Modified PEB
WHT SCSI card with SCSI2SD
Myarc DSQD FDC
Myarc 512K Memory Card
Horizon 1.5 meg Ramdisk
TI RS232 card
Corcomp Triple Tech Card
1 360K 5.25 floppy drive
1 360K 3.50 floppy drive
1 720K 5.25 floppy drive
1 720K 3.50 floppy drive
80K Gram Kracker
Samsung Syncmaster 710mp

TI-99/4A SOFTWARE
PagePro 99
PagePro Composer
PagePro FX
PagePro Headline Maker
PagePro Gofer
TI Artist Plus
GIFMania

PC HARDWARE
Compaq Armada 7800 Notebook
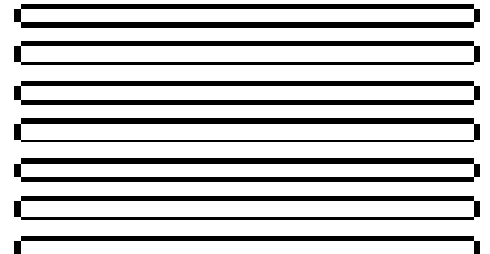Compaq Armadastation
Samsung Syncmaster 710mp

PC SOFTWARE
Dead,Dead,Dead Windows 98se
FileCap
prn2pbns
Irfanview
Adobe Distiller
Adobe Acrobat

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