SHIFT838 Newsletter

This newsletter is dedicated to the ongoing support for the Texas Instruments TI-99/4A and Myarc Geneve 9640 user community and is published by SHIFT838.

First I wanted to inform everyone that there will be a '**Floppy Days Podcast**' by Randy Kindig that some TI'ers in the community will be helping with to cover the TI aspect. We are set to record the pod cast on August 18th.

These are just a few of the links available for '**Floppy Days Podcast**':

http://floppydays.libsyn.com/

https://www.facebook.com/floppydayspodcast

https://twitter.com/floppydays

Once Randy has finished it I am sure he will post a link to it on AtariAge as I will on my site. Be sure to look for it. There are going to be some topics highlighted specifically for the TI-99/4A.

In this edition I wanted to touch on FRITZ442's new Tunnels of Doom Editor for the PC. As a lot of us know that it was very painful and slow to create new Tunnels of Doom games on the TI with the Tunnels of Doom Editor that was original published by John Behnke.

I am not saying that John's editor was not good, it was good for the time. But with the advancement of PC technology coupled with diehard dedicated TI'ers the evolution of creating programs for use with the TI on an actual PC has come to light over the years.

Fritz442 took some time to answer some questions regarding his TOD Editor and I took some time to explore the program to see how easy it is to navigate.

Thanks to all that have subscribed!

Interview

Chris: What was the key factor for you wanting to make a Tunnels of Doom editor for use on the PC?

Fritz442: I had heard of the original editor in the late 80's but never found one. I was getting some games from Triton at the time I found out about it and tried to order one but Triton shut down. Then about 3 years ago I found one and got it. I tried it and began to write a game but saw how difficult and slow it was, and thought there had to be a better way. That's about the time I came across Atariage and was hooked.

I searched but found no newer versions and decided to create one. I began with a text editor looking through the files and began to see a pattern of names and character data. The editor started with just editing the monster data then soon spread to all aspects of the game file. Knowing what I wanted to do, there was no way I could do this on the TI. One main reason to create and release this editor was to see some new games for TOD.

Chris: Did you collaborate with anyone when coding this editor, if so who and what contributions did they make?

Fritz442: I have been working mostly alone on this project not really thinking it would really be as useful as it has become. I have had two testers (*Opry99er* and *Iwantgames*) which I would like to publically thank for their support, comments and testing.

Chris: What are the key differences that your TOD Editor on the PC has over the TOD Editor for use on the TI by John Behnke?

Fritz442: Memory… The things I have done here would simply not be possible on the TI. To be honest I'm not really that good at TI programming, I made a few small programs over the years but nothing great. But without John's editor I would not have even started this project, his showed me where some things were saved and how they were saved which started it all.

With this editor you have the ability to create eight different quest images as opposed to two. This is probably the main option I concentrated on when beginning the quest interface. I have seen a few people ask if this was possible and I found large empty blocks of space in the file, then began coloring these blocks and writing the image data there.

Chris: What language is your TOD Editor programmed in?

Fritz442: Its' created in Visual Basic 6, a fairly easy program to write with. It's amazing how TI-basic can be copied here and most of it will run with little adjustments.

Chris: How many estimated hours of programming and debugging did it take?

Fritz442: I have been working on this for about 3 years, on and off at times. A lot of late nights (with *AC/DC* and *VanHalen*) at the beginning then tapering off over the past year. Does debugging ever end? LOL

> **Chris:** Now that's the type of music I like to program to and of course the *Scorpions*!

Chris: I know your TOD Editor saves in TIFILES format, how difficult was it to code the program to save in TIFILES format specific for TOD files?

Fritz442: Not really too difficult, since we start with a existing game file I'm only retrieving, editing and saving data back to the same file. A small bug has recently crept up with saving a copy of a file with the TI Header, I rewrote the save routine and added the ability to Add or Remove the header if needed.

> **Chris:** Follow-up - What exactly did you have to do in order to understand how the data needed to be saved for a TOD game. For example, what did you do to figure out where the weapons data, quest objects, etc. that needed to be stored in the file?

> **Fritz442:** This was probably the most time consuming of all. I opened the game file with a hex editor and began scanning through the file looking for text first. Then examining the data between the text, changing it to see what changed in the game. This back and forth seemed to take forever at first but then gradually I saw patterns and that went a little faster.

> After the monster, weapons, quest data was found I began to look for other data that could be altered (textures, colors, etc.) Then I found what I called the 'control data' which is the data that tells the module where to find the items in the game file, so I could move items around in the file to create the colored backgrounds for the quests and other items.

Chris: Have you run into any compatibility issues with original TI hardware or emulators and if so what?

Fritz: None that I have found so far.

> **Chris:** Follow-up - Have you been able to test the TOD created files for compatibility issues with the Nano PEB or CF7+ devices and if so were there any issues and could you explain.

> **Fritz442:** I have tested these files on real iron, Classic99, NanoPEB, CF7+ and an HxC floppy emulator and have had no issues.

Chris: How much testing was done on the actual TOD file created and for what actual TI hardware and emulators?

Fritz442: I have been testing files created since the start, many, many hours of testing and playing have been done. Most testing was done on Classic99 as it made it easy to flip back and forth to see changes and test/repair them. After that I moved it to real iron to test again.

Chris: What are your future plans for this editor as far as any new features you plan on adding?

Frits442: Nothing major at this time, as I am just cleaning up some misc. items before I proceed deeper. There are still large sections of the files I haven't gone through yet. I am constantly looking through the files to find things to edit, some work and some do not. The main objective here is to not break a file and make it unplayable.

Chris: Are you willing to take user feedback in consideration for later versions to help not only report bugs but maybe add new functionality?

Fritz442: Yes. I am always thinking of ways to add functionality. I like user feedback to see how others use the editor and hear what they understand in the interface and what needs to be changed. I will take all suggestions, but not all can be utilized (but if I can I will).

Chris: Are there any plans on providing a possible HELP file or documentation for this software so that end user could have a better understanding.

Fritz442: Yes. I wanted to create some sort of help file before I released this, but some were asking so I went ahead and released it. It's pretty self-explanatory for the most part, but a few will need explaining and some (wall/floor textures, floor colors, item setups) need experimenting to get the effect you want.

Lastly, I would like to thank Chris for creation of these newsletters to keep alive the passion that I and others have for the TI, and I am honored to be a part of them.

Hardware Repair

I have run across this a couple of times now and both times the below has repaired my non-equipped F18A TI-99/4A systems.

Have you ever had a TI-99/4A stop displaying in color and only be in black and white? Well, I have twice. Both times it was my crystal that required replacing. I am sure there are other causes as well, but so far I am 2 for 2!

These are not my pictures, I found them on the internet. But here is a step by step guide to resolving this issue. Of course if you have an oscilloscope then you can test as James Abbatiello did to verify it is indeed the crystal. I, however, do not have one and I gambled and bought a few of the crystals and it worked out for me.

If you want a complete read on the explanation of video and how the TI-99/4A works with it then click HERE . This link was published by James Abbatiello

The title screen will look like this:
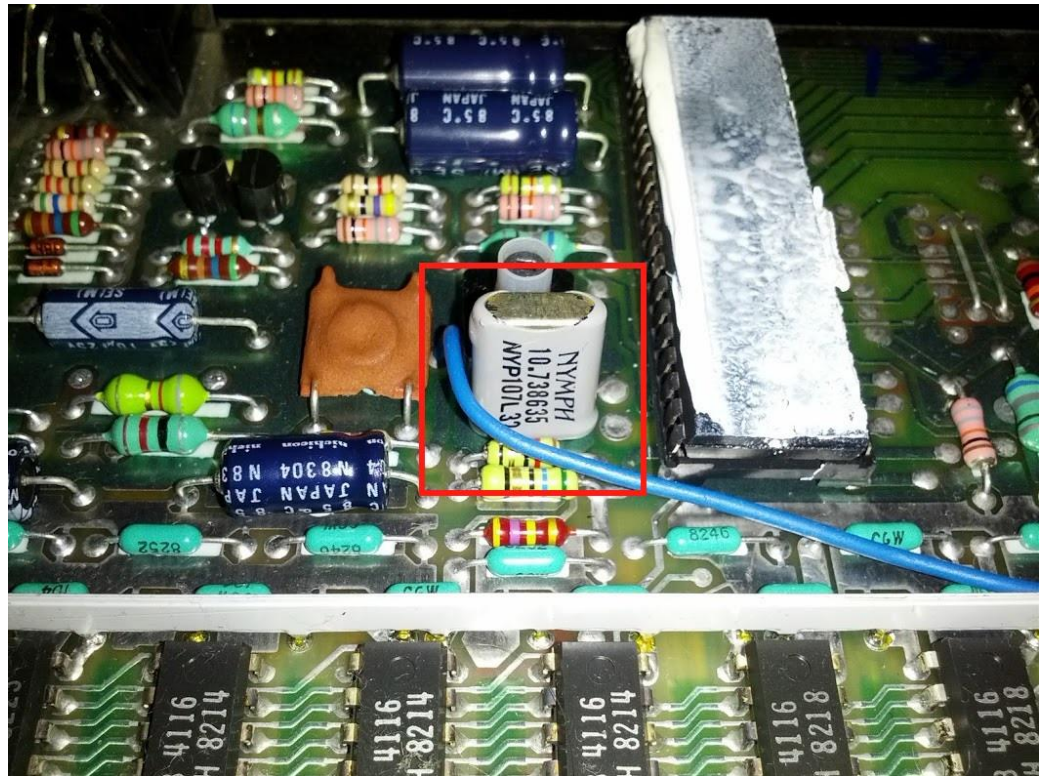

What's needed for this repair:

- New 10.738635 MHz crystal
    - Purchased mine from Mouser HERE
- Soldering Iron
- Solder Vacuum to remove old solder
- Solder
- Some patience!

STEPS:

1. Disassemble the console
   Step by step can be found [HERE](#)
2. Locate the old quartz crystal next to the VDP as shown in the picture below

3. Remove the old crystal using the soldering iron and solder vacuum (note the orientation of the crystal)
4. Solder in the new crystal with the same orientation the old crystal had
5. Clip the leads on the crystal after soldering

Once in place it should look like the below picture:

6. Reassemble TI-99/4A
7. Test your system

If the crystal was the issue your title screen should look as follows (in color):

Software

Fritz442 Tunnels of Doom Editor for the PC – Version 1.4.6

It is now easier than ever to create your very own Tunnels of Doom games on the PC for use in emulators or on real iron TI hardware thanks to Fritz442.

One of the major accomplishments I like about this program is that it is very easy to use and since the PC has a mouse it makes it that much easier and faster to create TOD games than in the past. Just think, if it was this easy back in the 80's, then how many of us TOD enthusiast would have created TOD games?

I believe this program will inspire TOD enthusiast to create new games that they did not want to do on the original editor just because it makes it so much easier and faster now.

So be on the lookout for new TOD games!

HINT to all you TOD lovers; MAKE SOME NEW GAMES!

To read the original topic on **AtariAge** click HERE

There are many new options that were not available in John Behnke's version on the TI that a user can now change. For instance you are allowed to have up to 8 quest graphics instead of the standard two. We can now change how much money the player stars with at the beginning of the game as well as how much food and weapons cost.

I noticed when working with this editor that it has the ability to change the minimum and maximum levels the dungeon can have, something else that could not be done in the original TOD Editor we used on the TI system.

One of the options that I really like, and of course it can take time to get it right by editing and testing it in a Tunnels of Doom game is the ability to change the colors in the level and the textures for doors and walls within the game. This is great as I always wanted to be able to do this and a user can truly customize their TOD game this way. We can put our own brand on it so to speak!

The program is stocked with more than 300 images of monsters and 56 different monsters to choose from. The program has the ability to listen to what each monster sounds like from a simple click of the mouse. Sorry, you cannot customize the sounds of the monsters to something you want. These sounds are built into the module and the program must use the stock sounds.

Of course with this program you can edit all your items, armor, etc. very easily.

In the original editor the images you could choose to be assigned to your scrolls was only one, with Fritz442's program you can assign up to four.

I ran this program on both Windows 7 and Windows 8 64 bit with no problems, except for the fact that you have to run this as an *Administrator* (UAC ON) otherwise it does not work. (Thanks Micorosoft for this FEATURE! – Yes this is sarcasm.) It has been tested on Windows XP, Vista as well for 32 bit and 64 bit systems.

The one thing that I found that I think can be improved upon is that when you first open the program it ask you for a file to open and this file of course has to be an existing game to be changed. I did notice that after I opened the file and saved my information that I had to re-open the file again to see the new data, like the filename that was being opened at the top of the screen, this can be confusing for users and may make users think the file they have flagged is not being changed. I am sure this is an easy fix, especially with it being coded in Visual Basic.

All in all, my experience with this editor was great and Fritz442 deserves a huge 'THANK YOU' to getting this out. His dedication to the TI community is great and I look forward to any other contributions he makes to our gem of a machine.

Calling All GAMERS!

Owen Brand (Opry99er) has started a TI Gaming competition on AtariAge where a TI-99/4A game is chosen every month and TI'ers can compete to see who can get the highest score. At the months end the person with the highest scores receives some type of prize.

Now don't get your hopes up that the prizes are going to be major. This is nothing more than a friendly competition among the TI user community and is meant to just be fun.

The winner of the 'Game of the Month' high score will receive the prize and will get to choose the game of the month for the next month and must also offer up some type of prize and of course is not allowed to win for the game that he/she has chosen.

We all know that there are various cheats in older TI games, such as the famous 'SHIFT838' cheat code. (And yes that's where I got my handle and title for this newsletter) So we all will give everyone the benefit of the doubt to know when competing in this competition that none of us will use the cheats that may be present in the selected game.

The August game of the month is the 1982 version of MunchMan. For those that do not know, there are two different version of this game, which I only recently found this out by popping in my 512k Cart #4 and finding the 1981 version. I always knew of the version from 1982 that lays the chain links down to complete the level,

but the 1981 version was new to me. The 1981 version is very similar to PacMan and instead of laying the chain links down you eat dots.

For myself I have only been able to achieve about a 50,000 score and nowhere near what some other TI'ers have accomplished. I am apparently just not that good at MunchMan, but it is fun trying and that's what it is all about. Of course my TI PAIN STIX may be contributing to my low score. At least that is what I want to say. It's better than coming to a conclusion, as General Berringer would say from War Games:

'**After very careful consideration, sir, I've come to the conclusion that your MunchMan playing ability sucks!**'

If you want to read the message thread in its entirety and possibly participate in the friendly completion then click HERE

Coding

The below code has been updated as there was an error in Volume 1 Issue #3 that has been pointed out by **Ben Yates**. Thanks Ben!

CALL LOADS & PEEKS

The below code has been updated as there was an error in Volume 1 Issue #3 that has been pointed out by Ben Yates. Thanks Ben!

The error below in line 120 shows that incorrectly specifies RELATIVE and VARIABLE in the same statement. This results in an I/O error because you can't have VARIABLE length files in a RELATIVE file. I also would like to point out that this code is used with the Mini-Memory cartridge.

The following LOADS and PEEKS were originally from CompuServe's TI Forum.

If you need to work with quite a bit of data or would like to change programs, but save the data after you press CALL QUIT then you can set up the 24K of High-Memory in the PEB as a single data file called "EXPMEM2", you open this file just as you would a disk file with one exception - you must PRECEED the OPEN statement with a CALL LOAD to the location -24574 as follows:

For INT/VAR files - 24
For DIS/VAR files - 16
For INT/FIX files - 8
For DIS/FIX files - 0

Here's an example:

If you want to open up the Expansion Memory for Display, Variable 80 files this is what you'd do:

```
100 CALL INIT
110 CALL LOAD(-24574,16)
120 OPEN #1:"EXPMEM2",UPDATE,DISPLAY,VARIABLE 80
```

If you want to open up the Expansion Memory for Display, Variable 80 files this is what you'd do:

Continue as you normally would.

Query Modem Response Codes:

The below code is similar to what I used to use in order to detect what baud rate a modem connected at to my BBS back in the 80's, but is geared for just XB standalone without the BBS running. This allowed me to be able to support multiple baud rates. I had to pound this out again and figure it out.

This does require the modem to put in verbose (numeric) response condes with the ATV1 command. This does not work on a UDS device. Please note this is geared for my modem for line 330 as the 'W2' command configures my modem to report on DCE (modem to modem speed)

```
100 !MODEM RESULT CODE
110 !    QUERY 1.0
120 !(C)OPYRIGHT 2015
130 ! CHRIS SCHNEIDER
140 !    SHIFT838
150 !------------------------
160 !OPENS RS232 PORT WITH
170 !CRLF
180 !FIXED 2 IS FOR UP TO 2
190 !CHARACTER RESULT CODES
200 OPEN #1:"RS232.CR",FIXED 2
210 CALL CLEAR
220 PRINT "1=SET MODEM"
230 PRINT "2=QUERY RESULT CODE"
240 PRINT :: INPUT ">":A
250 IF A=1 THEN 330 :: IF A=2 THEN 380 ELSE 210
260 !-----------------------
270 !MODEM INITIALIZATION
280 !COMMAND
290 !PUTS MODEM IN NUMERIC
300 !RESULT CODES & REPORTS
310 !DCE SPEED ONLY [MODEM
320 !TO MODEM SPEED]
330 I$="ATV0W2"
340 PRINT #1:I$&CHR$(13):: PRINT :: PRINT :: PRINT "DONE" :: GOTO 220
350 !-----------------------
360 !DIALS OUT TO A BBS FOR
370 !A TEST CONNECTION
380 PRINT #1:"ATDT6029554491 "&CHR$(13)
390 !-----------------------
400 !GETS RESPONSE CODE
410 !AFTER MODEM CONNECTS
420 ON ERROR 420
430 INPUT #1:A$
440 !CONVERTS RESULT CODE TO
450 !INTEGER
460 B=VAL(A$)
470 PRINT B
480 !------------------
490 !LOGIC STATEMENTS FOR
```

```
500 !MODEM RESULT CODES
510 IF B=1 THEN BA$="300"
520 IF B=5 THEN BA$="1200"
530 IF B=10 THEN BA$="2400"
540 IF B=11 THEN BA$="4800"
550 IF B=12 THEN BA$="9600"
560 IF B=15 THEN BA$="14400"
570 !-----------------
580 !SHOW CONNECTED BAUD
590 !RATE
600 PRINT "CONNECTED AT "&BA$&" BPS!"
```

 Resources

Contact information
To contact me please feel free to visit my website and click on the '**Contact'** tab.

http://shift838.wix.com/shift838

A CHAT application has been added to the site for active live chat.

Newsletter Topics
If you would like to participate in the writing of this newsletter or provide any topics for this newsletter please contact me via my web site.

Sites

There are a few of sites that I think should get their own list below. These are for the TI Hall of Fame and TI-99ers Unsung website. Please visit these below sites as both have great information.

http://www.ti99hof.org/index.html

http://www.ti99ers.org/unsung/

Also the below site has a list of all the TI-99ers that have passed.

http://ti99ers.org/modules/Inspire/remember.htm

Below resources are just a handful of sites that support the TI-99/4A and/or Geneve 9640 computers. It is in no way a full list. This section will be included in all future newsletters. If there is a site that you think should be mentioned then please contact me.

Web sites / FTP Sites

http://www.99er.net

http://www.ninerpedia.org/

ftp://ftp.whtech.com

http://shift838.wix.com/shift838

http://www.ti99-geek.nl/

http://www.mainbyte.com

http://www.atariage.com

http://www.harmlesslion.com

http://www.ti99iuc.it

http://www.turboforth.net

http://www.ninerpedia.org/

Yahoo List Groups:

https://groups.yahoo.com/neo/groups/TI99-4A/info

https://groups.yahoo.com/neo/groups/TI994A/info

https://groups.yahoo.com/neo/groups/Geneve9640/info

https://groups.yahoo.com/neo/groups/turboforth/info

https://groups.yahoo.com/neo/groups/swpb/info

TurboForth & fbForth Resources

AtariAge TI-99/4A forum:
http://ti99.atariage.com

Main fbForth thread with release stuff always up to date in the first post:
http://atariage.com/forums/topic/210660-fbforthti-forth-with-file-based-block-io-post-1-updated-12052014/

Main TurboForth resource:
http://www.turboforth.net

Both have resources listed here:

http://atariage.com/forums/topic/153704-ti-994a-development-resources/

Active BBS'

HeatWave BBS

Access: Dial-Up and Telnet

System: Geneve 9640

Software: S&T BBS Software

Location: Arizona

Content: TI and Geneve file libraries, message bases, door games and e-mail.
Telnet to: www.heatwavebbs.com port **9640**   Dialup : **602-955-4491 @ 8-N-1**

The Hidden Reef

Access: Dial-Up
System: TI-99/4a Modified
Software: S&T BBS Software
Location: New York
Content: TI and Geneve file libraries, message bases, door games and e-mail.
Dialup : **718-448-9402 @ 8-N-1**

The Keep

Access: HTTP and Telnet
System: Pentium 4 running Windows 2000
Software: Worldgroup BBS Software (up to 256 user connections)
Location: Tigard, Oregon
Content: TI and Geneve file libraries, message bases, door games, multi-user and
multiplayer games and e-mail.
Telnet : www.thekeep.net port **23**   Web browser to http://www.thekeep.net

The Keep has TI File libraries, Message bases, e-mail, door games, multi-user and
multiplayer games. The keep also has a modem line connected for anyone that
would like to contact The Hidden Reef BBS from the internet through The Keep.

Simply telnet to www.thekeep.net on port **23**, login to The KEEP and then type **/GO
DIALOUT** at the main menu, then D1 to dial out to The Hidden Reef. It's that
simple.

Vendors

SHIFT838 – Provides used TI equipment as acquired. Check with me often. A lot of the items need rehoming from other TI Users.

Arcade Shopper – Provides old and new TI equipment, upgrades and new runs of PCBs at www.arcadeshopper.com

Repair Centers

Richard Bell
Repairs available on limited basis, please contact Richard at swim4home@verizon.net for wait-time before sending any repairs

Tim
Myarc-related hardware repairs on a limited, as-available basis. Contact Tim at insane_m@hotmail.com for wait times or to request service.