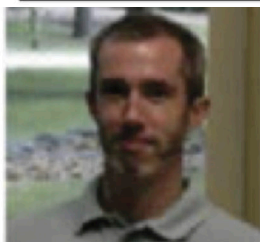


•Serving the Twin Cities Atari Community for Four Decades•

## • October 2023 Edition •



### The President's Corner *By Michael Current*

Another month, another new hardware announcement from today's Atari! This one I had missed until tonight: the Atari Gamestation Pro, in partnership with My Arcade. (Who are they?) Seems to be a mini emulation box that includes a range of 2600, 5200, 7800, and Arcade titles, all in the same box.

This will complement the 2600+, a modern take on the actual wood-grain 2600 that also works via emulation, but which uses real 2600 cartridges and controllers.

And there's still the modern Atari VCS, an attempt to be a modern gaming console and ecosystem featuring the resurrected spirit of Atari. And I'm not even trying to keep up with the many new game releases by Atari lately! Are you following along?

Are you planning to buy any of these new consoles? Who is the target market for all of these different products?

Thanks, keep using that Atari, and come to your next SPACE meeting: Friday, October 13, 2023.

### TRIVIA TIME!

**Mathematician and writer Ada Lovelace (1815-1852) is considered by many to be the world's first computer programmer, notably for her work with Charles Babbage on the Analytical Engine mechanical computer.**



Message from Captain Irata:

"I'm into chips and dip! Microchips and DIP switches, that is!"

HOO-RAH!



### Treasurer's Report *By Gregory Leitner*

What another great Friday we had for our monthly SPACE meeting on September 8th.

The weather has been fantastic so far this year, and so we had five members present for the meeting. Steve, Roger, Tom, Glen, and myself got right into the monthly DOM, and it had two interesting games on it, one on each side.

Side Two contained a Xmas game that reminded me of Centipede, but you had to knock out parts of the worm to advance.

On the first side of the disk were some of the small files that we have had in the past few months, but it had a breakout game to fill up the rest of the disk that you have to see to believe! This game could easily have been a commercial game.

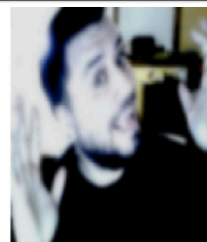
It was that good. Steve tried his hand on it and did quite well. There were many challenges with this game, and Steve and I agreed there were no bugs that came up. You need to get this DOM just for that one game alone. For \$3.00 it's a steal!!

Well now for our treasury after I got way off track. Our beginning balance for September was \$1,328.45 and we added \$21.00 on the sale of seven DOMs. We ended September with a bank balance of \$1,349.45.

This is once again a very healthy balance for our Club. We have a few more membership renewals before the end of the year (including mine), and with DOM sales it looks like we will break the \$1,400.00 mark!!

Please try to make the October meeting. Fujinet for Atari is a big talking point right now, and we have Roger and Tom to show us the way.

It's an exciting time to own our Ataris, so come to the meetings to see for yourself! See you on October 13th.



### Secretary's Report *By Steven Peck*

#### HELLO WORLD!

Welcome to the Secretary's Report for September 8, 2023. Here's how it went.

#### MEETING COMMENCEMENT:

The meeting commenced at 7:30 PM, so the meeting was on time. Greg, Glen, Tom, Roger, and myself were present, making the attendance at five members for the meeting. There was talk about the September DOM, as Greg so noted. It is a great DOM, and I recommend anybody who bought to use it for the content in the disk.

#### MEMBERSHIP COUNT:

There are ten members paid up at present.

#### WEBSITE REPORT:

There was no one to present the Website Report, but it is assumed that the Website is working within normal parameters.

#### OLD BUSINESS:

There were no Old Business points presented.

#### NEW BUSINESS:

There was talk about the recent acquisition by Atari of AtariAge Forums. Also, there was talk about FujiNet, which was the key point in the New Business, as was also discussed in the Treasurer's Report. There was also talk of a British company laying claim to the copyright of the design of the case for the Atari 800XL, which could spell trouble for the imminent release of the RM 800XL, the refresh of the Atari 800XL computer. This is because the company making the RM 800XL is using that very case design. I cannot say what may transpire from that due to differing international laws within Poland and England.

There were discussions concerning copyright and certain brands at the meeting, as well as podcasts interviewing people involved in the FujiNet projects. There was talk of a documentary involving the making of Karateka, including an interview with creator Jordan Mechner involving how the animation was created for the game. This documentary was created by the group involved in the Atari50 project. There was also discussion on the ST computers and lack of expansion for them, especially the STE line of 16/32 computer made by Atari.

#### MEETING ENDING:

The meeting adjourned at 8:18 PM.

So, with that I conclude the Secretary's Report. Thanks for reading the Report. In the words of the late, great Stan Lee.

EXCELSIOR!

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## FujiNet: The Atari Swiss Army Knife

Written by Roger Mier



The current Atari marketplace has no shortage of modern gadgets which add new functionality to our aging 8-bits.

From cartridges that can pretend to be nearly any Atari cartridge, via ROMs stored on an SD card. To video modifications allowing us to use our Ataris on new-fangled HDMI televisions, and nearly anything you might imagine in between.

But recently, one peripheral has been making major waves in the online Atari 8-bit computer “scene” as the one that you just gotta get. The one that does it all for not a lot of money! FujiNet!

Okay, so it doesn’t do everything, exactly. But it sure does a lot. Enough that I feel that anyone with an 8-bit Atari should seriously consider purchasing one. Which I know, is a tall statement. Let me explain.

### “What is it?”

On the surface FujiNet is an Open Source WiFi networking peripheral. This seems an easy explanation, but quickly grows more complicated due to the sheer utility of the device.

The FujiNet project began with the simple desire to make a WiFi modem for the Atari 8-bit line of computers.

WiFi modems can be found for practically any computer with a serial port, or that can adapt a port to be a serial port.

But at the time there wasn’t one which could plug directly into the SIO port.

Once attached to the port, WiFi modems typically pretend to be a regular modem, but with an “extended” Hayes command set. These extended commands allow one to do things like setup the WiFi connection and store the WiFi password.

You can use WiFi modems to “dial into” Bulletin Board Systems across the Internet via Telnet. Since it’s still using Hayes commands, it will often just work with whatever communications software you prefer. The one I own knows how to talk Telnet, FTP, Xmodem, and Zmodem.

The modem speaks Xmodem, and Zmodem because it also has an SD card that can be accessed by those extended Hayes commands.

However, the only way to get the data from the card to your computer is to download it, hence the modem has those transfer protocols included.

It’s handy, but it’s modem slow, and it’s not really a networking device like you would find on a PC.

### A Network Device for the Atari?

Other peripherals, such as the DragonCart, have existed for many years, and have attempted to add Ethernet ports to the A8, with limited success. These cartridges work fine, but the poor Atari just doesn’t have enough power to do very much on-line by itself.

The fact that the Atari has to do almost all of the heavy lifting when it comes to reading, constructing, and writing TCP/IP packets, means communications are slow, and its online capabilities are quite limited.

Enter FujiNet! Under the hood, the hardware is based off of the ESP32 microcontroller, which has integrated WiFi and Bluetooth.

The finished peripheral can be purchased for around \$65, and plugs into any standard Atari SIO port. It even has a daisy-chainable SIO port on its back!

But better than just WiFi and Bluetooth, the ESP32 microcontroller includes a 32-bit, dual-core microprocessor running at 240MHz!

Since this CPU is over 200 times faster than our beloved 8-bits’ 6502, it can be utilized to do the heavy lifting for TCP/IP networking that made things like the DragonCart so slow.

This leaves the Atari free to just send and receive data using standard XIO/CIO commands, as if it was a disk drive, or any other SIO-attached peripheral.

And indeed, the FujiNet has been designed in accordance with the design of the 8-bit line in general. It communicates using standard CIO/XIO commands, and automatically adds itself as the N: device.

Which means you can access the FujiNet directly from Basic, or whatever other programming language you like!

But, I can already hear you saying, “So what can I DO with it? There’s no web browser for the Atari 8-bit, and if there was, most of the traffic on the Internet now is encrypted! And decrypting TLS takes a bunch of processing power!”

And indeed, that’s correct, there’s not now, nor is there likely to ever be a web browser for the A8 like we think of a web browser today.

However, another bit of functionality that the ESP32’s CPU gives us is the ability to actually write programs that run on the FujiNet, and those programs can help out the Atari when it needs to do more complicated actions.

These programs enable the FN to do things that a regular WiFi modem is incapable of.

Through these “Virtual Adapters”, the FujiNet can talk Telnet for BBSing, or talk HTTP for accessing web sites, or TNFS for talking to TNFS file sharing servers. (TNFS servers are very simple file sharing servers, usually sharing Atari software, that the FujiNet can access directly.)

It can even be made to do the complicated math required for encrypting and decrypting HTTPS packets, which is how most of the modern Web communicates.

This is a feat that no other network peripheral, or networking software, for any 8 or even 16 bit computer system can accomplish! This means FujiNet is able to communicate on the modern Internet!

“Right, right, but what can I DO with it?”



*The FujiNet Weather Application displays the weather*



*ISS Tracker shows the current position of the ISS*

Well, let me show you.

Each one of these apps uses the FujiNet to make API calls to specific URLs (such as to the OpenWeather site), which then sends us back a big blob of text that contains the information we want.

So for example; in the case of the Weather app, it takes your location, queries the OpenWeather site for the weather in your area and waits for the response. OpenWeather responds with the requested data formatted in a standard data structure called ‘JSON’.

Finally, the Weather app parses that data and uses it to present the weather in lovely Atari 8-bit graphics.

The ISS tracker does similar things in order to show its position over a graphic of the globe, and in addition to these, there are now a decent number of FujiNet-enabled apps that let you do all sorts of things across the Internet.

These programs include for example: Multiple chat programs, a news feed aggregator, a Mastodon client that can read and post messages, games such as Reversi, Chess, and Five Card Stud, even a clever but simple demo which bounces a ball between two people’s Ataris across the Internet.

### Atari Swiss Army Knife

Again I hear you say, “Okay, the Internet is cool, but what’s all this about a Swiss Army Knife?”

Well, the Internet is just one part (albeit a big, impressive part) of what the FujiNet can do. Out of the box, even before setting up the wireless networking portion, the FN has a MicroSD card slot which can be used for moving files between a PC and your Atari, or loaded up with programs and used to run those programs directly from the FN.

For indeed the FujiNet is also a floppy disk emulator capable of mounting either disk images, or Atari executable files, and booting them as if you had a floppy disk attached.

These programs can either be locally stored on



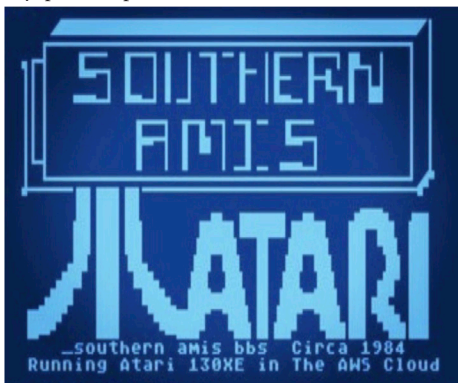
the SD card, or remotely stored on a TNFS server on your LAN, or the Internet. The FujiNet will pretend to be up to 8 floppy drives, and it even supports High Speed SIO up to 120K bps if your



Atari has the right modification.

Like any WiFi modem, it can also pretend to be a modem. It has a built-in modem handler, and will let you virtually dial into Telnet BBSes with nearly any Atari Communications program without any modifications to said program.

Just put a web address into where you would usually put the phone number, and the FN will be



able to 'dial' it and connect. But that's not all! Really, the FujiNet developers have gone above and beyond with this little gadget. If anyone remembers SAM -- the Software Automatic Mouth -- voice synthesis program. They built SAM into the FujiNet too!

Whenever you push the button that swaps disks on the FujiNet, SAM will pipe up to say the number of the disk you've just changed to. It is also available for programming if you like.

FujiNet can also pretend to be a printer. In the configuration page, you can set it to emulate a whole bunch of different printers. These include all the Atari printers, (even the 1020 plotter!), and some of the more common 3rd party ones.

Again, I hear you exclaim, "It's not a printer! How can it print things? Where do you put the paper?" And again, you're right. It's not a printer...exactly. What it does is emulate the printer you've selected, and prints the file virtually to a PDF saved to the SD card. You can then take the SD card, put it in your PC and print the document from there.

The printing functionality is quite impressive, and the resulting output will look like it was printed on the selected printer. Even the 1020 looks like it was plotted onto the page!

Finally -- and if ads from the late 70s, and early 80s are any indication -- no home computer was truly useful unless you could buy an expansion to run CP/M on it. (CP/M being an ancient OS which underpins much of what became MS/DOS, and had an impressive application ecosystem coming out of the late 1970s.)

So, FujiNet includes a tiny CP/M implementa-

tion as well! Much like if you had an upgraded Indus GT disk drive back in the day, you can use your Atari as a Terminal to access a CP/M system running on the FujiNet, and then you can run any of those "thousands of CP/M programs" I always read about in the old magazine ads.

### In Closing

To close, the FujiNet Project is an ongoing, constantly improving project currently in active development. The hardware for the Atari comes in versions from 1.0 to 1.7 at the time of this writing. The differences aren't very important, and none of them add or remove functionality, with the one notable exception of version 1.5 can have an external WiFi antenna for some people who couldn't get good reception without it.

The rest are usually refactors of the hardware when either a better part becomes available, or when a part they were using stops being available, or in a couple cases when a part they were using doesn't end up working as they thought it would. (This led to a bug in version 1.3 that made some of them hard to flash the firmware. This is fixable with some soldering skill, or can be worked around without.)

On top of all I've written here, the FujiNet Project isn't limiting itself to the Atari 8 Bit platform. There are active projects right now to bring the FujiNet to nearly every 8 and 16 bit platform out there, including gaming consoles!

Already, the Coleco Adam FujiNet is more or less finished and the hardware is considered stable. The FujiApple project is nearing stability now as well, being able to do much of the basic functionality of mounting disks and booting from them.

The Commodore FujiNet project is working in conjunction with the Meatloaf project which had already existed and was trying to do some of the same things as FN. The ZX Spectrum group is making a parallel bus version of FujiNet, which requires a great deal of very low-level knowledge of the hardware to get to work. I don't understand most of what they're doing, but I find it fascinating to watch.

Ultimately, the FujiNet Project hopes to bring wireless networking to every 8 and 16 bit platform, computer and console alike, and they're well on their way to doing it!

If you would like to learn more, or just lurk and watch the development of FujiNet as I do, you can join the FujiNet Discord server, which is where most of the development work gets done and discussed.

You can ask questions there, or on the dedicated FujiNet AtariAge Forum. The FujiNet web site is also a good source of current FN events and improvements. I will include links to all of these below.

#### FujiNet Discord:

<https://discord.gg/7MfFTvD>

#### AtariAge Forum:

<https://forums.atariage.com/forum/346-fujinet-sio-network-adapter/>

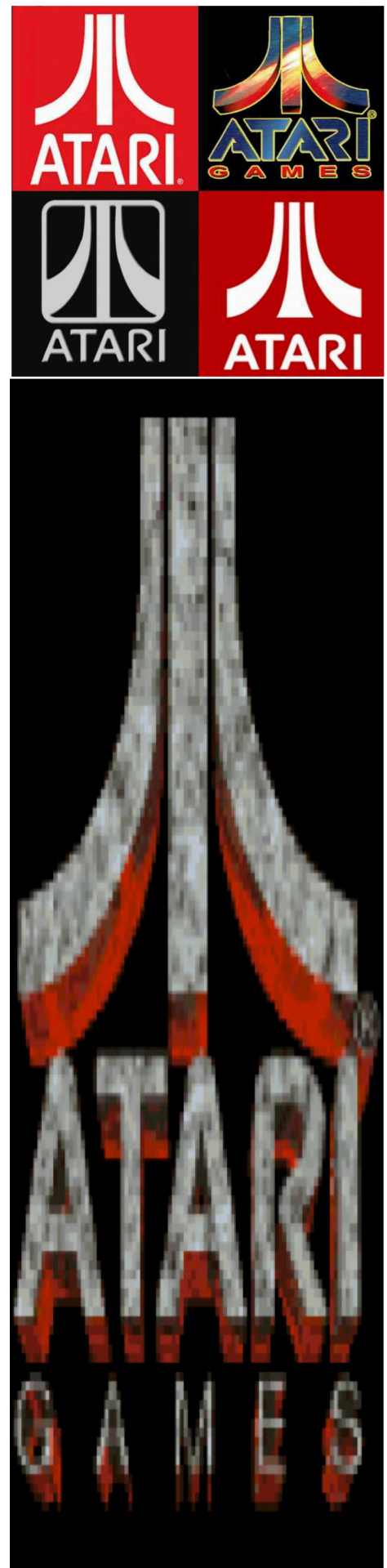
#### FujiNet Web Site:

<https://fujinet.online/>

#### NOTICE!

**I will be taking a temporary hiatus from providing the Atari 8-bit DOM Review every month starting October 2023.**

**The Atari 8-bit DOM Review will return monthly in January of 2024. In the meantime, I am preparing a special publication for December of 2023! Thanks and keep reading!**



## RECENT ATARI NEWS

Torrance, CA (September 18, 2023) – My Arcade® teams up with the legendary Atari® brand to introduce the Atari® Gamestation Pro with 200+ games! The Atari® Gamestation Pro is available for pre-order today, at select retailers for delivery by October 31, 2023 for an MSRP of \$99.99 USD.

The Atari Gamestation Pro (DGUNL-7012) is the first console on the market to integrate the Atari 2600, 5200, 7800, Arcade and bonus titles into a single platform. Included are heart-pounding favorites like Adventure®, Missile Command®, Asteroids®, Centipede® and many more!

The Atari Gamestation Pro arrives with not one, but two 2.4GHz wireless joysticks, inspired by the iconic originals. For those looking to reignite the magic of paddle games like Breakout® or Warlords®, fear not – the joystick controllers with integrated paddles have you covered. Indeed, the paddles feature three sensitivity settings for custom user preference.

The Atari Gamestation Pro features plug-and-play simplicity and wireless connectivity that makes diving into retro arcade games on your TV a breeze. Navigate the intuitive user interface that lets you search for games by Atari system. Dive into game overview pages that provide insights and gameplay actions for mastering each unique challenge. In-game save options allow you to save your progress.

"The response to the unveiling of the Atari® Gamestation Pro has been extremely positive," said Ethan Zoubek, President at Atari. "Fans love the design, the games, and the unique combination of simplicity and modern features."

"We've meticulously blended the best of the past with the cutting-edge technology of today," exclaims David Cox, Chief Revenue Officer at My Arcade®. "This isn't just a gaming console; it's a journey back in time, wrapped in the convenience of the present."

### Atari® Gamestation Pro - Key Features:

- First console on the market to integrate Atari 2600, 5200, 7800, and Arcade games into a single platform.
- Featuring over 200 officially-licensed classics, including Pong®, Asteroids®, Breakout, Warlords, and bonus titles!
- Dual 2.4 GHz Joysticks with integrated paddles with 3 sensitivity settings
- Game save options: 2 save slots via on-board memory and 2 save slots via Micro SD Card (not included)
- Dynamic RGB LED lights with 3 glow modes
- Console powered by USB-C
- Console connects via HDMI® to TV

The Atari® Gamestation Pro is available for pre-order today, September 18, 2023, at select retailers for delivery by October 31, 2023 for an MSRP of \$99.99 USD.

### About My Arcade®

My Arcade® is an exciting line of miniature retro arcade devices, Plug 'N Play consoles and portable gaming handhelds, which include officially licensed iconic titles from Atari®, Bandai Namco, Capcom®, Data East®, Konami®, Taito®, and Jaleco®. My Arcade® brings classics like Pac-Man®, Galaga®, Tetris®, Space Invaders®, Street Fighter® II, Mega Man®, and many others to the palm of your hand.

For more information please visit:

[www.mycarcadegaming.com](http://www.mycarcadegaming.com).

### About Atari®

Atari® is an interactive entertainment company and an iconic gaming industry brand that tran-

sends generations and audiences.

The company is globally recognized for its multi-platform, interactive entertainment and licensed products. Atari owns and/or manages a portfolio of more than 200 unique games and franchises, including world-renowned brands like Asteroids, Centipede, Missile Command, Pong, and Roller-Coaster Tycoon®. Atari® has offices in New York and Paris. Visit online at [www.Atari.com](http://www.Atari.com).

For pre-ordering the Atari® Gamestation Pro and more information, visit:

[www.mycarcadegaming.com/atari-gamestation-pro](http://www.mycarcadegaming.com/atari-gamestation-pro)

### PRE-ORDERS FOR THE ATARI 2600+, CX-30 PADDLE CONTROLLER, CX-40 JOYSTICK AND NEW GAME CARTRIDGES WILL SHIP THIS HOLIDAY SEASON

New York, NY (September 13, 2023) - Atari today announced global pre-order availability for the Atari 2600+ – a modern day faithful recreation of the pioneering console that first appeared in 1980. The Atari 2600+ will be released on 17th November 2023 and is now available to pre-order for €119.99 / £99.99.

Following strong consumer response to the Atari 2600+ in the United States, the iconic hardware can now be pre-ordered in Austria, Belgium, Canada, France, Germany, Italy, Netherlands, Poland, Slovenia, Spain, Switzerland and the United Kingdom. It is also available for preorder in Australia and New Zealand.

More markets will be added prior to the product release on November 17, 2023. For more information on Atari 2600+ and to keep updated on local market retailer availability please visit:

<https://link.atari.com/2600>

The Atari 2600+ comes with a 10-in-1 game cartridge and a CX40+ Joystick controller. Joystick Controller for that added touch of nostalgia. Also available for preorder is the CX-30 Paddle Controller with 4-in-1 multi game cartridge that will retail for €34.99 / £29.99. A standalone CX-40 Joystick will retail for \$24.99 (€22.99 / £19.99).

Additional launch titles, including cartridges for Berzerk Enhanced Edition and Mr. Run and Jump, will also be available for The Atari 2600+ for \$29.99 (€29.99 / £24.99).

## FINAL THOUGHTS

*By Steve Peck*

Well, we have had some interesting stuff that has been written about in this month's Newsletter. It tempts me to get a FujiNet for myself. I am impressed by the new things coming out for our older Atari machines. Really amazing.

Anyway, to make a long story short, like I said earlier in the Newsletter I will not have a Atari 8-bit DOM Reveiw monthly until January 2024. There is a method to my madness, and it's a surprise. But, I think you will like this surprise.

So, in short, there will still be DOM Reviews. Don't worry about that. I just need to rethink how to do this and play catch-up. I have an idea already. Anyway, thanks for the information, everybody, about the neat stuff coming out.

I also know the FujiNet will soon be available for the Atari ST line of computers, if it isn't already. I look forward to getting one of those units as well. Internet and printer emulation are neat incentives for getting something like that.

Well, I need to go. But, keep those Atari machines working. Have fun with them. That's what they're there for. I will be back next month.

Carpe Diem, fellow SPACE Cadets, and thanks!



# GET INVOLVED!



# WE WANT YOUR ARTICLES!

**WANTED!**

**Ideas Suggested for Comics!**

**Please feel free to email  
The Newsletter Editor!**

**Email Address is on the Last Page  
of the Newsletter!**

**Thanks!**



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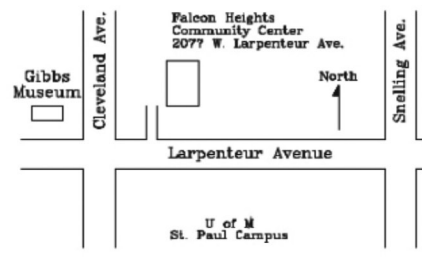
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The Saint Paul Atari Computer Enthusiasts (SPACE) special interest group meets on the second Friday of every month at 7:30 PM in the Falcon Heights Community Center at 2077 West Larpenteur Avenue. Doors open at 7:00 PM.



S.P.A.C.E.

c/o Gregory Leitner  
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Please feel free to visit our website at this URL:

<http://space.atari.org>

## NOTICE FOR AUTHORS OF SPACE NEWSLETTER ARTICLES:

Articles meant for newsletter publication must be received by the SPACE Newsletter Editor by two weeks prior to the start of the next scheduled SPACE Meeting. Thank you for your understanding on this.



*The next SPACE meeting  
will commence on  
Friday, October 13, 2023,  
at 7:30 PM, local time!*

*We hope to see you there!  
Thanks for coming!*



Another Message from Captain Irata:

"That's all she wrote, SPACE Cadets!"

HOO-RAH!

