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WhatIFF?-Issue 2.10 June 2023
For The Creative Amiga User

ENTER MAGAZINE

Welcome to WhatIFF?

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-# WhatIFF? - Issue 2.10 - June 2023 #-

--EDITORS DESK-- -MEET THE WRITERS--

A few word from the current editor about the magazine.

---SHELL TALK---

A place for WhatIFF? writers and readers to air out their Amiga laundry or just talk about anything Amiga related!

-----REVIEWS----- ---GAME REVIEWS----

Reviews of hardware and software, old and new covered.

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Guides and support to all things Amiga.

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Hear from the people making hardware and software for the Amiga.

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Amiga related links and Amiga vendor websites.

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Vendor advertisements and more.

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Find out whats on this issue's covedisk.

NEXT ISSUE *All content copyright of the respective authors 2023*

From The Editor's Desk

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From The Editor's Desk - by: Timo Paul

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Here we are now in the middle of June and what a sweltering month it has been already. Tokyo has been seeing temperatures up to 33 degrees which is not usual for this time of year. With the heat comes legarthy and it has made putting this issue together a bit more time consuming hence the later date of release. But aside from that, this is a great issue. We have reviews of two Raspberry Pi powered devices, namely the PiStorm and A314-CP, the HID2AMI v2 USB adapter, How Synthesizers Work by Tony Horgan several game reviews, articles on how to use your Amiga better and interviews with Remi, the developer who created this issue's cover disk game Hamulet, Carlos the programmer of RedPill, Marcin one of the hardware engineers who worked on the A314-CP and finally but not least Mirko who created the HID2Ami adapter. All four interviews are very interesting and each person provides fascinating details of their projects. I am particularly excited to have a demo of Hamulet, a HAM game, it is a beautiful game that is quite addictive. Thank you to Remi for allowing us to host a demo of the game.

There is much more in this issue so I will not keep you, as usual I hope you will enjoy it and see you around the interwebs!

*Correction from a previous issue:

In issue 5 there was a guide about setting up a wireless printer, the article stated using NetPar, however it should have been listed as NetParLpr.lha, if you use a printer that is connected directly to your network NetPar will not work, however NetParLpr will. This will be updated an issue 5 and re-uploaded.

Free For All About The Amiga

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Shell Talk - by: John Scolieri

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PPC/OS4.x users rant RE:amigaworld.net

The red vs blue wars are long gone in the PPC Amiga communities...but for more than a few years now there's a group of 'usual suspects' that pop up on every single thread over at amigaworld.net relating to either AmigaOS4.x or PPC hardware by A-Eon is specifically made to run OS4.1 and/or MorphOS. So you might ask so what's the issue, Johnny?

Well rant mode on: MY issue is this group of usual suspects spams every thread with 'PPC is dead' and/or 'PPC hardware by A-EON is too expensive' and/or 'OS4.x users are xxxx' (insert derogatory terms)

I know there's a classic term for these types of repeat offenders on Amiga forums but it annoys me to no end how many times I and other OS4.1 users have had to refer OP's of such threads over to a more 'friendly' site such as amigans.net to avoid the constant BS. It also baffles me there's little to no moderation on the site since it's been supposedly owned by A-Eon/Amigakit which are well-known PPC supporters...well at least recently, but that's another rant in the making.

That's it...rant over.

Welcome to the reviews section!

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- Reviews -

Hardware Review: PiStorm 32-lite

Not sure what the PiStorm is or still on the fence about getting one?
Then read John Scolierie's low down on the PiStorm to help make up your mind.

Hardware Review: A314-CP

Internal Wifi card for the any Amiga with a clock port, driven by a Raspberry Pi. Find out inside if this is the only network card you will ever need.

Hardware Review: HID2AMI v2.0 USB Adapter

USB Adapters a dime a dozen for the Amiga, what separates the HID2AMI from the pack and is it worth your time?

Hardware Review: Commotron Gamepad Turbo 2000 Super

A new wireless control pad for the Amiga, with a name sounding like a Transformer character, is as good as the name hints or is it another Megatron?

Books Review: How Synthesizers Work - A Simple Guide

Written by Tony Horgan of CU Amiga fame, we take a look at his new book all about synthesizers and see how it can be of use to Amiga musicians.

Software Reviews: Aminet Goodies

Writers top Aminet selection, each issue a writer will write about their top downloads from Aminet.

#Reviews - WhatIFF? Issue 2.10 - June 2023#

gamereviews

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- Game Reviews -

Weasels Quick Gaming Corner

Ivan Sorensen looks at two new and two old games and gives them a quick run down.

Game Review: Attack of the Petscii Robots

Rob O'Malley tries out the Amiga version of Attack of the Petscii Robots, find out if it is worth adding to your game collection.

Game Review: Luma

Mirrors, lasers and puzzles, the donation/free to download game from Zoopersof Games. Is it worth your attention?

Game Review: NEON Noir

A hybrid point and click game set in the future with stylistic graphics. Find out inside if this free to play game is worth your time.

weaselsquick

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Weasels Quick Gaming Corner - by Ivan Sorensen

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Welcome to my corner where I will be reviewing four Amiga titles:

Two quite old and two quite new. These are just a quick look at the games, what they are about and whether you might be interested in them or not. In this column I don't intend to give scores. I am talking about games I have really enjoyed and think you might as well.

First on our list is Worthy from Pixelglass. Worthy is a maze game requiring you to gather a collection of diamonds, dodge monsters and reach the princess in the end. 40 levels are included and while they start out quite easy the difficulty increases very quickly. While you certainly do need quick reflexes on the joystick, you also have to puzzle your way through to figure out the path that will solve each maze.

This is all presented beautifully with graphics that are both fun to look at as well as very clear. I did not encounter any bugs while playing the game either. It is a commercial release and could easily have been a full priced title back in the day.

It targets an A500 with 1MB though I had no issues on my expanded 1200. When you purchase the game you get both disk image, CD image (usable on CD32) and hard drive versions.

Absolutely well recommended and easily worth a few bucks.

The second new title is perhaps not so new: It is Metal Gear from Hoffman on itch.io. This is a port of the MSX game of the same title and comes packed with features including multiple translations and two different music tracks. It also allows you to play using a CD32 controller. System requirement is just a 1 MB system and a WHDLoad installer is even available.

If you are not familiar with Metal Gear, it is one of the earliest stealth games as you infiltrate a heavily guarded military facility, dodge guards, bypass cameras and fight bosses. It served in large parts as inspiration for the later Metal Gear Solid but this version is quite fun to play though you may wish to use a walkthrough or at least some maps.

What would an Amiga article be without some old classics however?

If you are in a more strategic frame of mind, it is hard to miss the original Warlords by Strategic Studies Group. While it often gets overshadowed by its more ambitious sequel, the original game has a lot to offer. The map is very charming and while the UI has a few quirks, it all controls very easily (and all from the mouse, not always a given in the era). As one of eight fantasy warlords you are trying to claim rulership of the land, gathering armies of elves and knights to your side.

What makes the game so unique is that it is both a strategic game about capturing castles and churning out armies but also features a fantasy quest element as your heroes can search old ruins for magic swords or monsters to ally with. Each of the 8 playable armies offers different bonuses and challenges and you can have as many human controlled factions as you like, perfect for some two player action. It is worth reading the manual so you can understand how the combat system works.

Finally we have Shanghai by Activision. This is a very early title for the Amiga and is one that is well worth checking out if you have not already.

It is a Mah-Jong type of tile matching game with a really simple premise: You can remove a pair of tiles if they have the same symbol and are not underneath any other tiles. The graphics are crisp and once you play for a bit, the board becomes very easy to read. The experience can be quite addictive and while there are perhaps more handsome versions of this type of game on the Amiga, I keep coming back to this one. The game comes with a couple of play modes, though only one board layout with randomised tile placements. A fun game to spend an evening on, while sipping your tea and swearing that you will go to bed after this one go.

Game Review: Attack of the Petscii Robots

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Game Review: @Attack of the Petscii Robots - by Rob O'Malley

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Product Name

Attack of the Petscii Robots

Developed By

Original version by David Murray

Amiga Conversion by Vesa Halttunen

Available From

www.the8bitguy.com

Price

Digital 10.00 USD

Boxed 35.00 USD

Hardware/Software Requirements

A500+ 512K Ram or 1MB for music

Test Machine

Amiga 1200 + Fast Ram

Review

ATTACK OF THE PETSCII ROBOTS

To those of you who regularly watch YouTube content on the topic of vintage computers you may already be familiar with David Murray, aka the 8-Bit Guy. But for those of you readers who are not, in addition to making many videos about 8-bit computers, their history, restoration and usage he is also something of an independent games developer, with this being his third project after the strategy games Planet X2 for the C64 and the MS-DOS game Planet X3. And if you had not guessed by the title of this game the original version is for the Commodore PET.

The plot, what there is of it, goes as follows: Sometime in the future, robots have attempted to take over human settlements on various planets. Which they seem to have done an effective job of, since aside from the protagonist there are no other humans to be found in the game. And it's your job as the player to eliminate all the automatons and make these settlements habitable for humans once again.

Enemies come in the form of hoverbots, which just wander back and forth minding their own business until provoked whereupon they will give chase and hurt the player just enough to be annoying. Rollerbots which follow a set movement pattern and will shoot at any humans foolish enough to get in their line of sight. And evilbots which will chase the player relentlessly and kill him pretty quickly on contact, but thankfully cannot operate doors and are usually found conveniently locked in a room so that the player does not have to deal with them until they are absolutely ready to do so.

You start each level with absolutely nothing and must search the surroundings for the tools you will require to overcome this mechanical menace, this feature reminds me of ye olde Impossible Mission games. But aside from that the actual game is quite unique and original at least to me, and I would have difficulty placing it into an existing genre of game. Maybe real-time strategy or puzzle could describe how it is to play but those terms have come to mean very specific things and this game sits quite comfortably outside of those narrow definitions.

To assist with eliminating the rogue robots one can find pistols and

plasma guns, which are fired in one of the cardinal compass directions with the corresponding button on the CD32 pad. The former weapon being rather weak, requiring ten hits to kill a lowly hoverbot and the player would have to fully unload at least 75 rounds if they were foolish enough to try and dispatch an evilbot with one. And the latter weapon being quite powerful and making a large explosion on impact which if one is not careful could easily harm the player as much if not more so than the intended robot target. Given the limited amount of ammunition available for both weapons on normal and hard difficulty settings one must be clever and efficient with the use of these.

As well as the two basic weapons there are also several tools such as EMP devices, which stop all the robots in the vicinity in their tracks for a short period of time. Bombs, which surprisingly enough explode shortly after being dropped. Magnets which turn any robot that comes into contact with one into a folk singer, and also move erratically. And finally medkits, which extend the life of the player should they be unfortunate enough to be attacked by a robot or lucky enough to survive an explosion. Oh and boxes, which also often contain goodies and furniture such as chairs and stools, can be moved around to obstruct the robots movement. And finally explosive barrels which can also be moved around and, surprise surprise, explode when shot by either the player or a rollerbot.

This game is playable with a two button controller, including Sega compatible controllers, although if you're using a Megadrive/Genesis pad then only two buttons are usable. It's also playable with a CD32 compatible controller, which I believe is the way this game was intended to be played. Or if you're lacking either of those control options, then there's always the good old keyboard control. Which you will also be needing to use if you find yourself in a position where you need to quit the current game and start over or if you just don't like music for some reason as these features are only accessible via keys.

I found that the controls took a little getting used to, but after a couple of plays become second nature, with the CD32 controllers play button seeing quite a bit of usage which I do find a little awkward to access, especially in the heat of the moment. But also makes sense considering all of the buttons on the CD32 pad are put to good use. However I do find I have the bad habit of accidentally using an item when what I am really wanting to do is close the built-in map, as full movement is still possible while this feature is active. But I think that's more of a failure on my part than the developers and I have learned to switch the active item to something other than the bombs before I bring up the map to avoid accidentally terminating the hero.

Petscii Robots runs on just about every model of Amiga with a minimum of 512K RAM, although you really need at least a whole megabyte to get the full experience including soundtrack, which as far as I can tell has a unique tune for each of the fourteen maps within the game. Also, hailing from Texas, the original author grew up in the land of NTSC and this game really is made to use the NTSC screen mode. While it will run on PAL systems, the action will be just that little bit slower and there will also be an ugly black border at the bottom of the screen. Now at the time of writing this review the only way to force NTSC mode on a PAL system is to select it in the early startup menu on newer models of Amiga, as for some reason the WHDLoad install ignores the NTSC option. But I have been in contact with the author of the Amiga version and this option could possibly be working by the time you are reading this.

Also I feel I must mention that I had a couple of false starts using the included installer script, the first being where I had to install a required package from Aminet and the second where I had to modify the default filename as a long filename will cause a guru. I'm not holding this against the game in any way. But it might have been nice if these minor issues were mentioned somewhere in the documentation instead of surprising the user with them during the installation process.

But otherwise the manual is very well written and does not leave out any crucial information and the final portion contains pictures of all the fourteen maps and helpful tips on how to play each of them successfully. While this document is included in PDF format in the digital package, having the printed manual to hand while playing really does enhance the gameplay experience and if you decide to purchase this game I wholeheartedly recommend buying the physical package for this alone, even if you are running the disk image from hard disk install or an emulator.

Pros and Cons

- + Original game concept
- + Enough content to keep you occupied for quite some time
- + Low system requirements
- Limited viewable area
- Jerky movement
- Too easy to get stuck requiring the player to quit and start again

Graphics: 7/10

Certainly much prettier than the various 8-bit versions, but there's little if any animation to speak of and movement is as smooth as sandpaper.

Sound: 8/10

Sound effects are purely functional, but the varied soundtrack is excellent and really sets the mood nicely.

Gameplay: 7.5/10

Innovative, rewarding and ultimately quite fun. But I find that after I have played one of the maps, I feel like doing something else to pass the time other than having another go immediately.

Overall: 7.9/10

Final Thoughts

This score is in the context of what is available for Amiga, and if I were rating the original PET version in the context of games available for that machine Petscii Robots would score mid 90's. But I can't help but feel that the Amiga version is slightly hamstrung by being a faithful port of a game made for a much less capable machine. Nonetheless despite a sub 80% final score this is still a game that I think is worth playing, and playing the Amiga version is one of the best ways to experience it. But players might be well advised to check out the demo version before purchasing the full commercial version.

neonoirreview

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Game Review: NEON Noir - by Timo Paul

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Product Name
NEONnoir

Developed By
Programmed, story and some art by Massimo Loi
Music by Matias Sosa
Graphics by SandySketches

Available From
steamknight.itch.io/neonnoir

Price
Name your price

Hardware/Software Requirements
Amiga 1200 w/4MB+ Fast Ram & 5MB of of hard disk space

Test Machine
Amiga 1200/TF1260/OS 3.2.2/Indivision AGA Mk3

Review

NEONnoir is a cyberpunk point-and-click adventure/visual novel game available for AGA amigas with fast ram and a hard disk. The game can be downloaded from Massimo's itch.io website and you name your price before downloading.

The game first caught my attention on EAB when it was announced there and when I visited the official website I was immediately intrigued. Being a bit of a bookworm, I greatly enjoy visual novel games, especially ones that have a cyberpunk theme.

Installation is simply unpacking the the .lha and copying the drawer over to your destination of choice, no need to a installer or extra files.

If you have not saved a game upon first loading it, do not click on the load game text as this will create a file that will cause glitches when the PDA icon is clicked and make the game unplayable. I did this having forgotten that I had not saved the game and had to delete and reinstall the game again.

Right from the start the game oozes style, the intro music is moody and the intro sceen graphics give you a hint of what to expect. Clicking on 'Start Game' brings you straight into the game, the prologue is quick and emerses you into the world of NEONnoir. The writing is in a typical detective novel of the 1950s and suits the game style perfectly. I was quickly invested in the story and wanted to find out more, just like a good mystery book should do.

Navigation is very simple, move the mouse around to find hotspots and click on them to get more detail or move to another area. At the bottom right side of the screen you have the PDA button that allows you to see what items you currently have, save the game and quit the game.

I greatly enjoyed playing NEONnoir, the story was engaging, the characters were relatable and I found myself getting involved in what happened to them. The only negative point I can find is that the whole game is too short.

Final Thoughts

A fun and engaging adventure game that has some unique ideas and plays well on the Amiga. I wish it was longer though as I could finish it off in about 30 minutes of continuous play, but it was a very enjoyable 30 minutes. I hope the developer will continue the NEONnoir series.

Pros and Cons

- + Simple and easy play mechanic
- + Gorgeous artwork
- + Music does not get boring and fits the game nicely
- + Very engaging
- A bit too short

Scores

Gameplay: 8/10

Graphics: 9/10

Sound: 8/10

Overall: 8/10 - A great adventure/visual novel game that oozes class and style.

lumareview

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Game Review: LUMA - by Timo Paull

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Product Name
LUMA V1.0

Developed By
Programmed by zooperdan
Music by ma2e/dSr (Original C64 music by Mike Richmond)
Graphics by Simon Jameson (Adapter for the Amiga by zooperdan)

Available From
www.zoopersoft.com
www.zooperdan.itch.io

Price
Download Version Free

Hardware/Software Requirements
Kickstart 2.x & 1MB Chip

Test Machine
Amiga 1200/TF1260/OS 3.2.2/Indivision AGA Mk3

Review

I will start this review by being honest, I did not really play that many games on the Amiga back in the day, even when I had a MD/SNES I did not spend much time gaming. My drug of choice back then was DPaint and Brilliance, OctaMED and Audio Master, LightWave and CanDo. Being creative with my Amiga was what mostly interested me, so when I did do some gaming I like ones that I could dig into a for a little while and then get back to some graphic work etc. As such the puzzle game genre was my favourite way to kill some time. I loved Lemmings, The Boston Club, Pipe Mania, Heartlight, and Pushover. My other favourite style of game were the Sokoban games, the PC Engine Sokoban World being the penultimate version in my opinion, SOKO was good on the Amiga but never felt quite right.

LUMA is similar in vein to the Sokoban games, to complete the level you need to connect a battery to the laser and place the mirrors within in a limited set of moves. This adds an extra layer of strategy requiring you to plan out your moves ahead of time.

Though the game comes from the C64 the graphics are very pleasant and and have seemingly been updated making the game look like it was made in the late 80s/early 90s. Control is via the keyboard (arrow keys) or joystick. I found it more convenient to play via the keyboard since I could restart a level with a quick press of the spacebar.

The audio seems to either the original C64 music or updated on the Amiga with C64 sounds. Either way it is very pleasant and I did not find myself turning it off. It complements the style of play very well, creating a relaxed and thoughtful gaming experience.

After having played it for a few hours I find myself coming back for just one more round. The concept it easy to pick up but the increasingly complex puzzles will tax your mind, making you think hard. It is a very pleasant game to play and I find my wife joining me often seeing who can figure out the solution fastest. I introduced the game to my newphews who are 10 years old but they are of the age where they like the platform games or more active ones and did not find it very enthralling. However

if you are looking for a game that you can get into and out of quickly and enjoy puzzle games then this is a great game to go for. It is free to download but I suggest donating to the developer for creating such a fun and well put together game.

Final Thoughts

Consisting of 128 brain busting levels this game will not be finished any time soon. However it hits all the right notes, easy to pick up and hard to master. It has the essential, one more time, effect on gamers and is amazingly free to download. I find myself loading it up often when I need a break from writing the magazine or doing any other work. If you get stuck on a puzzle it can worm into your brain as you try to think of the solution. A mark of a well put together game!

Pros and Cons

- + Easy to understand
- + Simple but effective graphics
- + Nice music
- + Addictive!
- Graphics could be a bit better

Scores

Gameplay: 8/10

Graphics: 6/10

Sound: 7/10

Overall: 7/10 - A fantastic little game that will keep you up a night or late for work as try to get to the next level.

Hardware review: PiStorm 32-lite

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Hardware Review: PiStorm 32-lite - by John Scolieri

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Product Name
PiStorm 32-lite

Developed By
Claude Schwarz

Available From
AmigaKit
AmiBay

Price
A314-CP 39 EUR
Pi Z2W 15 EUR
Shipping 13 EURO
Total: 67 EURO

Hardware/Software Requirements
Amiga 1200

Test Machine
Amiga 1200

Review

PiStorm32-lite Amiga 1200 accelerator initial tests and how to get the onboard HD LED to work

I'm pretty sure many of you readers have heard of the new PiStorm32-lite accelerator boards by now but for those that haven't, it's basically an open-source Raspberry Pi-based Amiga 1200 accelerator board created by Claude Schwarz that uses a Raspberry Pi to emulate the native 68k CPU at much higher speeds than the original CPUs. It also offers RTG graphics card support with high-resolution modes through HDMI and a hard disk interface via microSD card on board.

For starters, there is currently no other PiStorm32 model (at least from the time of me typing this) and the 'lite' label was added to mitigate component shortage problems at the time of its release so to save a few keystrokes I'll be calling it Storm32 from now on :-)

Many well-known Amiga resellers are selling the PiStorm32 at the time of writing this article and the only other item you need to hunt down is a Raspberry Pi which sadly are rather scarce for the past year or so due to the worldwide chip shortages from the Covid shutdowns etc. Currently, only the Raspberry Pi3A, 3B and 4B models (with custom-made CM4 adapters) are supported. I was fortunate enough to get hold of a Pi3A+ locally for a fair price as prices online were ridiculously higher due to the supply issues mentioned. The PiStorm32 is very reasonably priced at around \$90 CDN + shipping.

For the hardware installation which included attaching the Raspberry Pi3A+ to the PiStorm32 board I followed the well-detailed wiki over at Amiga.org

=> <http://wiki.amiga.org/index.php?title=PiStorm32-Lite>

The hardware setup is very straight forward and the only area to be careful with is not to over-tighten the small plastic screws that attach the Raspberry Pi to the PiStorm32-lite.

Once you've got your PiStorm32 assembled you attach it to the Amiga 1200 just like any other accelerator and of course be careful to ground yourself to keep the magic smoke inside lol. Now it's time for the software installation and configuration to make the magic happen between the PiStorm32 and AmigaOS! Following the [amiga.org](https://amiga.org/wiki/AmigaOS3.1/Installation/Installing_PiStorm32) wiki link above you can carry out the Quick Method or the More Involved Method. If, like me, you would like to take advantage of the higher transfer rate speed of the PiStorm onboard HD then carry out the instructions for More Involved Method and if you're happy with you're current HD in your 1200 then carry out the Quick Method. For either method, you'll initially need an extra monitor with HDMI input to set up the Raspberry Pi. When setting up my PiStorm32 I downloaded the stable Emu68 file dated March 10, 2023. Make sure you choose pistorm32-lite files ONLY ok. You can follow all the latest nightly releases at

=> <https://github.com/michalsc/Emu68/releases/tag/nightly>

NOTE:

* You don't have to have the physical ROMs inside your 1200 to match the ROM file on your microSD card on your PiStorm32.

* Make sure to click on the make drive bootable box when creating the new bootable partition on the PiStorm32 SD card.

* When setting up your new partitions on your PiStorm SD card I would recommend using 4096 blocks for any partitions larger than 1GB as I find it to be snappier with load times with large folders with many small files in them etc.

Once all new partitions are set up on the PiStorm32 SD card HD next step is to rename the new PiStorm partition names on the startup-sequence and user-startup files as well as any/all ASSIGNS etc. This will save you a lot of time on your first boot-up..trust me lol. Lastly open up your favourite file manager, cough .. DOpus and copy all files from your 1200 HD over to the corresponding partitions on your PiStorm32. Also, remember to remove any previous 68030 or 68060 library files in the LIBS folder.

Based on my testing so far I'm extremely happy with the stability and performance of my 1200 with the PiStorm32 and Raspberry Pi3a+! SysSpeed results between my MTec030@50, TF1260@50, and Cyberstorm MKIII 060@50 in my 4000 can be seen in Picture A (quick breakdown it's 7.4X faster in MIPS, 10.2x faster in MFLOPS compared to my Cyberstorm MKIII and with a nice 362Mb Fast Ram! In Lightwave a scene rendered on my A4000 with Cyberstorm MKIII took 47m21s and with my PiStorm32 it took 5m59s!

The speed of the PiStorm32 HD is approx. 21MB/s which is a big difference from my onboard IDE HD speed of approx. 2MB/s.

I tried out a bunch of games both WHDLoad and non-WHDLoad that ran fine and also many 060 specific demos that ran smoother and faster than my 060 systems. I've read on various forums and YouTube videos that there are some issues with some demos or games that don't work properly and also users that use high Workbench resolutions with the AGA chipset noted slower performance and more specifically with chip ram applications i.e Deluxe Paint etc. Benchmarks can be seen here: [Benchmarks](#)

If you're like me and use standard screen mode resolutions or if run RTG with your PiStorm32 you won't notice the AGA chip ram issue; however, there are new updates to the PiStorm32 Emu68 files are regularly being updated by the PiStorm developers/community and performance and compatibility issues are getting better and better with each update.

I look forward to using my PiStorm32 regularly from now on!

Oh almost forgot to mention that I was wondering why my HD LED wasn't blinking happily after booting up solely from my PiStorm32 and after

checking out the Discord channel here's what needs to be done to get it working:

1- purchase this LED adapter from Sordan.ie

=> <https://sordan.ie/product/1234/amiga-hard-disk-drive-activity-led-driver-fix-ide-25-adapter/>

2- Refer to pictures B and C. Some basic soldering skills are required to solder a wire from ACT pin on small adapter at top of onboard IDE header and at PP13 on the backside of Pi.

Pictures can be viewed here: Adapter on IDE Adapter Connected to PiStorm

If you use and enjoy the PiStorm32 with your Amiga 1200 I strongly recommend making a donation to Claude Schwarz at:

=> <https://github.com/PiStorm/pistorm32-lite-hardware>

Hardware review: A314-CP Card

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Hardware Review: A314-CP Card Card - by Timo Paul

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Product Name
A314-CP

Developed By
Niklas Ekstrom (Based on original design by Marcin)

Available From
Hardware: Amibay
Software: github.com/niklasekstrom

Price
A314-CP 39 EUR
Pi Z2W 15 EUR
Shipping 13 EURO
Total: 67 EURO

Hardware/Software Requirements
Amiga with a clock port
TCP/IP Client Software

Test Machine
Amiga 1200/TF1260/OS 3.2.2/Indivision AGA Mk3

Review

The A1200 has been limited to two forms of network connectivity, namely the PCMCIA slot and Serial port. Recently we have also had the Plip Boxes which connect to the Parallel and Serial ports respectively. However all of the options mentioned are external and take up precious desk space.

The A314-CP on the otherhand is an internal network card using a Raspberry Pi (more specifically the Zero 2 W) to 'give' the A1200 internal WIFI connectivity.

The board is an open source project that can be built from the Gerber files available from GitHub or you can buy pre-built boards from Eriond on Amibay, just search for A313-CP.

The version that I am reviewing today is the latest version created by Eriond which is a newer and slimmed down version of the original made by Niklas Ekstrom. Eriond's version allows for a much more compact form taking up less space in the cramped A1200. I ordered mine directly from Eriond on Amibay and received the card quickly along with plenty of help and support. You can find out more about Eriond and the creation of the A314-CP in this issues's interview with him.

The A314-CP board comes in at 39 euros and the Pi Zero 2 W at half the price of 15 euros. Even factoring in shipping costs this is a very reasonable price for obtaining internal network connectivity. It should be possible to reach download speeds of 880 kilobytes/sec which is the maximum transfer speed of clockport.

Installation and Use

Since I bought my card prebuilt installation was a simple case of downloading the Raspberry Pi SD installer and OS, and installing them to the SD card. The latest version of the installer now has the ability to

set WIFI connection, locale and timezone settings from within the programme before writing the OS to the card.

Prior to the latest installer you needed to setup WIFI, locale and timezone via the Amiga's Shell or if you have trouble like I did you can SSH into the Pi from your PC/Mac to setup the internet.

When setting up the Pi I had to make sure that my country and time zone were correctly setup, otherwise it will cause a problems connecting.

Once you have finished setting up the Raspberry Pi side of things and it is connected to your Wifi, you will need to copy some files over to your Amiga. Firstly you will need to have a TCP client installed such as Miami or Roadshow, I personally use Roadshow as it is very convenient having it run in the background all the time. If you already have a TCP client installed then all you will need to do is download some files from the following website:

https://github.com/niklassekstrom/a314/tree/clockport_interface/releases

You will need to grab the 'amiga_binaries.zip' file, this contains all the files you need to allow your Amiga and the A314-cp to talk. They contain the following drawers and files:

Once these are done you can reboot your Amiga or if it is the first time do a complete shutdown as if you only reboot the Amiga it does not power down the Pi.

After a complete shutdown and cold reboot, the Amiga took a little while longer to boot up, it takes around 15 seconds from when you see the Workbench screen and you have internet access. To check if my connection was correct I did a ping from the Shell and got a the correct response.

If you have any problems, it is a good idea to check the Pi side first, you can access the Pi by type 'pi' into the shell, this will display the Pi display prompt in the window. As a side note I was using ClassicWB and encountered issues with the Pi shell becoming corrupted making it impossible to setup anything on the Pi side. After asking in the A314 Discord channel they suggested SHHing into from another computer, which was easy enough and once I was in I could set things up from the Pi side.

It can be a little tough to get set up at first as you need to confirm if the Amiga and Pi are communicating okay and then if the Pi is connecting to the Wifi correctly. While I had some trouble this was more due to the locale settings being incorrect on my Pi, once I had the correct country and timezone set it connected without issues.

Once the Amiga and Pi were confirmed to be working it was time to give it a go. Using AmiSpeedTest I got an average download speed of 441KB/sec which is a lot faster than my previous maximum speed of 55KB/sec with the PCMCIA card. In real life terms browsing the internet on an AGA machine is much more pleasant, even IMP gains a boost from the A314 loading up much faster than previously.

Lost Time

The only issue I had with the card was the loss of my battery backed clock, if you have an ACA accelerator then you will probably have another free clock port or one of the clock port expanders then this will not be an issue. However if you are like me with no space for a clock port expander and have a TerribleFire card then you will need another option. The Amiga Binaries pack comes with PiSetClock however this did not work for me. A solution came up in an older issue of WhatIFF? In issue 3 John Scolieri wrote a guide about using an internet time syncing client such as 'sntp.lha' from Aminet. Using this software instead has give me the correct time and date back, each time I turn on my Amiga the time and date are set via the A314-CP internet connection. This adds a little more time to the boot sequence but it is a small price to pay for having

the correct time and date each time.

Final Thoughts

Considering this is an open source product and is only be made by a few builders it is a very solid and stable product. While there is a steeper learning curve than other cards, you need to learn some of the basics of the Raspberry Pi and know how to setup a TCP/IP client on the Amiga this is something that most Amiga users are already experienced with.

The increase in speed and convenience of it being internal cannot be overstated enough, this is an amazing product that makes your Amiga feel quite modern, especially if you are running Roadshow, all networking is done in the background without any input from you aside from loading up AWeb or IMP. It is much faster than the PCMCIA solutions and this in turn makes surfing the web a bit more bearable on none RTG machines.

The support for the card from the developers and community are second to none and the quickly got me up and running. If you want fast network access and internally this is the best and most cost efficient solution available for the A1200 and A600 or any Amiga with a clock port.

Pros and Cons

- + Small and cheap
- + Very well documented
- + Helpful community
- + Fast!
- Can be difficult to setup
- Need knowledge of the Pi shell

Scores

Value for money: 8/10

Ease of use: 7/10

Useful features: 9/10

Overall: 8/10 -- An essential purchase if you want to get your A1200 connected.

Hardware review: HID2AMI USB Adapter

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Hardware Review: HID2AMI v2.0 USB Adapter - by Timo Paul

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Product Name
HID2AMI v2.0

Developed By
Mirko
Amibay: sampedenawa

Available From
Gerber files for building one yourself:
<https://github.com/EmberHeavyIndustries/HID2AMI>
To Purchase a prebuilt one contact Mirko on the Amibay thread:
<https://tinyurl.com/bdzd6874> (Links to the AmiBay thread)

Price
32 EUR + Shipping

Hardware/Software Requirements
Any Amiga with a DB9 connector

Test Machine
Amiga 1200/TF1260/OS 3.2.2/Indivision AGA Mk3

Review

The Amiga scene has been growing with activity and 2022 was no exception with a plethora of new devices hitting the scene. One of the hotspots for finding out about new hardware developments is the Amiga forum Amibay. On the site a user going by the name 'Sampedenawa' from Italy has been selling a new USB device that he designed and built. Ladies and gentlemen I introduce you to the 'HID2AMI' USB adapter.

In a previous issue we have covered two other USB adapters, so what makes this particular adapter stand out from the rest? Firstly the schematics or Gerber files are freely available from GitHub if you have the ability and skill to solder a board for yourself. Secondly the HID2AMI is the most compatible adapter available for the Amiga due to it's 'modular' firmware.

After having read the thread I contacted the user 'sempedenawa' whose real name is Mirko, about obtaining an adapter. He was already on the second batch of production had planned a 3rd batch, I was in time to get my order in for the second batch. The current version is 2.0 which now has full support for mice with a scrollwheel, though you need to download driver for the Amiga. Mirko was very polite and fast to answer any questions I had regarding payment and about the product. He was kind enough to agree to an interview for this issue, if you have not read it yet, please go there after this review as he explains in detail about how he made the adapter.

After waiting for about a week, Mirko confirmed that the 2nd batch had arrived and were ready to be shipped. It was surprisingly fast to receive the package in Japan from Italy. The adapter was packed very well and arrived safely. It is a beautiful looking device, with an eye catching purple board, compared to the other USB adapters that I have used it is quite small. It is possible to 3D print a case for the adapter and a kind user on Amibay is getting orders together for a group print in translucent plastic so you can still see the flashing LEDs going on and off.

Installation and Use

The adapter fit snugly into my mouse port and did not block the joystick port, there are no screws to attach it to the DB9 connector but I did not experience any looseness during use. It recognised my Buffalo and logi mice right away, after downloading the firmware my scroll wheel was recognised for the first time. I never had this happen with my previous USB adapters so it was a real pleasure to be able to use this feature on my Amiga. It becomes hard to go back to an Amiga without this feature after you get used to it.

I experienced no delays or lag during use, I put it through its paces doing pixel work in Brilliance, OctaMED, Workbench and scrolling through websites in AWeb and IBrowse. Not once did I run into any issues, the fact that it also supports a large variety of mice has made it much easier when I want to change to a different model.

There is only so much that you can say about a USB adapter but this is definitely the best one I have purchased so far. It is one man building them however he provides great support and the scene is lucky to have people like him offering their expertise and skill.

Final Thoughts

There are a variety of USB adapters available for the Amiga but none of them offer the support and ability to grow like the HID2AMI v2.0. It works flawlessly, looks great (and even better with a translucent case) and it available for a reasonable price. If you are feeling a bit overwhelmed with the choices then you cannot go wrong with the HID2AMI.

If you are after putting the board into a case you can print your own if you own a 3D printer or you can use the files available on GitHub and have them printed at a place such as PCBWay or similar.

Pros and Cons

- + Small
- + Compatible with a variety of devices
- + Good price
- + Has scroll wheel support!
- Could do with a case

Scores

Value for money: 9/10

Ease of use: 9/10

Useful features: 9/10

Overall: 9/10 -- You can't go wrong with this USB adapter!

Hardware Review: Commotron Gamepad Turbo 2000 Super

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Hardware Review: Commotron Gamepad Turbo 2000 Super - by: Timo Paul

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Product Name

Commotron Gamepad Turbo 2000 Super

Developed By

COMMOTRON Group

Available From

<https://shop.tentelian.com>

Price

32.69 EUR + Shipping

Hardware/Software Requirements

Amiga, Atari ST, Commodore VC20, C64, Atari 2600, Atari 400 & 800
ZX Spectrum and Atari 7800 (DB9 connector)
2 x AAA Batteries

Test Machine

Amiga 1200/TF1260/OS 3.2.2/Indivision AGA Mk3

Review

Few topics get gamers going as whether you are an joystick or gamepad gamer. While I flirt between the two, I find it is easier and cheaper to buy gamepads for the Amiga. The prices in general have not been that low, as such it has been common to buy second hand MD/MS pads, which have been gradually going up in price as the retro scene has become more mainstream. During my search for a decent joypad for my Amiga when I came across the Commotron in Amiga Future.

What stuck me immediately was that it was a wireless which was a big deal for me since my Amiga is kept in a sliding drawer under my desk.

The pad is sold by Tentelian.com but it is also available from other Amiga shops. I bought mine from Tentelian.com and had a very pleasant shopping experience with frequent updates and receiving within two weeks.

There are several designs that you can choose from: Amiga, C64, Atari Wood and Atari 2600 (Junior Metal). I chose the Amiga theme as it just seemed wrong to have Atari design pad connected. Though I have to say the C64 design looks best out of the four designs.

So what features does the pad have?

- * DB9 Wireless Dongle
- * Up to 6 metres wireless distance
- * Accepts 2 x AAA batteries
- * 3 Independent buttons
- * 6 Selectable button mappings - Commodore/Amiga & Atari ST/7800
- * Memory function

The box has a very nice design invoking memories of buying joysticks and controllers in the 80s and 90s. Very nicely done! The box contains a DB9 dongle, the Commotron pad and a manual.

With the batteries inserted the pad feels solid, not too light or heavy and the buttons and direction pad comfortable, not too mushy or clickly with just the right amount of travel. They have obviously put a lot of

effort into making a comfortable control pad. The cross pad is similar to the NES with the buttons arranged in a diamond shape. The bottom button is already assigned as jump, with the next button from the right 1, top 2 and left 3. In the middle you have the Map and Auto buttons, with the former allowing you to set the speed of Auto fire. Once pressing the Map button you can adjust the speed with the 1, 2, and 3 buttons or use Up and Down. You can set speeds between 3 taps per second to 13 taps per second.

When first using the control pad all you need to do is turn off your Amiga, plugin the wireless adapter, power up the Amiga and press Auto on the control pad. The receiver and pad will flash for approximately two seconds then stay solid to indicate a connection. Nice and easy, much faster and easier than trying to connect my bluetooth mouse to my Mac!

How does it play?

While the control pad is rectangle it is quite comfortable, not too small and the buttons all feel good. When in play it functioned very well, I played a few games such as Powerglove, Worthy, and MineRunner. It is always a worry with wireless controllers of lag however I am happy to report that I could not detect any lag if there was any. It was very responsive and the comfort of having a wireless controller cannot be overstated. I am even considering to buy a second one so my wife and I can enjoy some two player Amiga gaming. I have been using controller for over a month almost everyday and the batteries are still going strong. The pad will turn off after 5 minutes of no use, however it will power on and connect immediately with a press of Auto.

Final Thoughts

It is rare to find a wireless control pad for the Amiga, especially one that is this well made and at a cheaper price than other wired controllers. The wireless feature alone is a real deal breaker and the good build quality, built in features and price make this a no brainer. Even if you game a little bit on the Amiga, do yourself a favour and buy this controller. I can imagine you will find yourself playing more games on the Amiga because of it.

Pros and Cons

- + Well built
- + Wireless!
- + Good price
- + Different button combination support
- None!

Scores

Value for money: 8/10

Ease of use: 9/10

Useful features: 7/10

Overall: 8/10 -- A great controller for the Amiga that comes in at a decent price, easy to use and is relatively comfortable to hold.

Book review: How Synthesizers Work

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Book Review: How Synthesizers Work - by Timo Paul

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Product Name
How Synthesizers Work - A Simple Guide

Written By
Tony Horgan

Available From
Amazon
Barnes & Noble

Price
19.49 USD

Review

Have you ever wanted to create your own sounds with a hardware or soft synthesizer but were too overwhelmed by all the options? If you answered yes then this book just might be what you have been waiting for. Written by Tony Horgan known in the Amiga world for his work on CU Amiga and all things Amiga audio related. While not an Amiga book persay much of the content contained inside can be applied to Amiga music creation.

I often use software synths in Renoise to create a sound and then sample it into the Amiga for use in OctaMED. Though I must confess to using the preset sounds most of the time. Having tried in the past to create my own sounds I found myself quickly lost in the array of knobs and sliders. I attempted to read several other books but I ended up more turned around than when I started.

'How Synthesizers Work: A Simple Guide is the first book that takes you by the hand and explains each part of the synth in an easy to understand format with plenty of diagrams and visual aids, with text that is easy to understand. I first found out about the book from Tony's Twitter page, and quickly a copy from Amazon. It appears to be printed by Amazon locally so will be fast where ever you order it from. The book is roughly A5 size with a drawn synthesizer in colour on the cover. The cover already gave me the sense that this book will be much easier to understand than the previous books I had read.

The book is broken down into the following sections:

- 1) An introduction to synthesizers
- 2) Types of sound sythesis
- 3) Oscillators and waves
- 4) Resonant filter
- 5) LFO (Low Frequency Oscillator)
- 6) Envelopes
- 7) Effects
- 8) Sounds
- 9) Modular signals (CV and Gate)
- 10) Arpeggiators and sequencers
- 11) MIDI and timing synchronization
- 12) Audio cables and connections
- 13) Glossary and index
- 14) Choosing a synthesizer

As you can see the book covers the basics and which helps those who have no understanding of synths (Like me!) how to begin in the complex world

of synths, albeit a hardware or soft synthesizer.

Each section is layed out logically starting with the basics without overwhelming the reader with too much information. Large sections of the book are taken up with diagrams denoting the knob and slider positions for a particular sound. Tony even mentions famous uses of a synth sound setting, filter or effect which greatly helps in understanding what kind sound the settings will make. It is particularly helpful that the book does not overwhelm you with numbers instead relies on the aforementioned diagrams. As an example I used the free soft synth Lokomotiv to create a 'Cloud Pad' on page 90. The reliance on visuals made it much easier to understand what I had to do, he also includes some tips on how to improve the sound. I have included a sample of the sound that I created with this issue for use in a tracker of your choice.

Not all of us have the money or space to buy real hardware and some of the mainstream soft synths or VSTs command quite a price. Luckily the book mentions some of the free VSTs that you can download and use the book's tutorials with, such as Lokomotiv.

Conclusion

I greatly enjoyed reading this book, for a long time I had wanted to use the power of soft synths/VSTs to create my own sounds but could never figure out what I needed to do. 'How Synthesizers Work' packs everything I need into a handy and easy book. I particularly enjoyed that it was written for the beginner but could also be used by someone more adept at synthesizers. Tony's use of illustrations and digrams along with a style of writing that is easy for the layman makes this book stand head and shoulders above all the other synth books I have read. If you have no experience or understanding like me then I suggest starting right from the beginning and read all the way through to the end. If you have more experience then it is easy to jump to the section that you are interested in.

If you have even an inkling of interest in synthesizers and want to learn more I whole heartidly recommend this book. It is was real pleasure to read, I learnt so much and it was fun at the same time. It is great to see Tony Horgan is still writing and I hope that he will write something about the Amiga in the future. While this book may not be Amiga specific it is a very guide for Amiga musicians wanting to create better productions.

Pros and Cons

- + Very easy to understand
- + Lots of images and diagrams
- + Good price
- Maybe could be in colour

Scores

Overall: 9/10 -- A great book that will is perfect for the beginner and veteran alike.

Aminet Goodies - Writers top downloads from Aminet.

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- Aminet Goodies -

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Welcome to Aminet Goodies section, each issue one of our writers will list their top 10 downloads from Aminet. Taking the reins this issue is myself Timo Paul, hopefully you will find something new or of use in the list.

1. IMP3 Infinity Music Player
<http://aminet.net/package/mus/play/imp3>

Akin to Spotify or Apple Music, this is one of the first programmes I launch after Workbench has loaded. Having the ability to save and favourite songs makes this a very modern programme.

2. Avalanche
<http://aminet.net/package/util/arc/avalanche>

Avalanche provides a GUI for the xadmaster.library, it requires OS3.2 due to using ReAction but this is why I like it. We should all be moving over to OS3.2 and leave behind the bloated and slow MUI that 3.1 needs.

3. AmiGemini
<http://aminet.net/package/mus/misc/net/AmiGemini>

Web surfing is still a painful experience on the Amiga and AmiGemini is the best alternative to surfing the web. Fast and with more content being added everyday this is an essential download for any classic Amigas with internet access.

4. SoundBox
<http://aminet.net/package/mus/misc/SoundBox>

An essential audio convertor, great if you need to convert many samples. It's simple interface makes it quick to get hang of and support for many formats puts it ahead of many other commercial products.

5. MagicMenu
http://aminet.net/package/util/wb/MagicMenu_2.35

Once you have used MagicMenu it is almost impossible to go back, having pop up menus and the ability to edit them makes this an essential tool for all Amigas.

6. RNOEffects
http://aminet.net/package/gfx/edit/RNOEffects_68k

The only modern image processor that the Amiga has had in the last few years is Image FX, however if you do not want to spend money RNOEffects is the best next thing for free. It works best with RTG screens but is still useful on standard Amiga screen modes.

7. VisualPrefs
<http://aminet.net/package/util/wb/VisualPrefs>

Most Amiga users are probably already aware of VisualPrefs and it's ability to change the look of windows, scroll bars and buttons. A great tool if you want to go beyond the standard Amiga look.

8. Birdie2000
<http://aminet.net/package/util/wb/birdie2000>

A great little utility to add a texture or image to the window frames, a nice tool that can spruce up your Amiga Workbench.

9. CloudsAGA
<http://aminet.net/package/gfx/edit/CloudsAGA>

An essential tool for my graphic work, great for creating textures or skies, even more useful now with super powered Amigas more easily available. Very realistic cloud images can be made with this software making it great for backgrounds in presentations if you use Scala for example.

10. sntp
<http://aminet.net/package/comm/net/sntp>

If you are using an A314 then this is an essential utility to replace your battery RTC. Just add it to your start-sequence and your Amiga will always have the correct time and date provided you have internet access.

Welcome to the guides section!

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- Tutorials/Guides -

A314-Setup Process

While not too difficult to set up, this is a guide to getting your A314 up and running, what to do if you run into issues and suggestions.

LightWave 3.5 - 101 Creating Objects For 2D Work

In our eight installment of the Lightwave 101 series we will look at how easy it is to use LightWave for your 2D work in Brilliance/Dpaint.

Brilliance - Rubthrough

Brilliance is already an amazing piece of software making the art of moving pixels a more enjoyable experience. This time we will look at some of the essential keyboard shortcuts you need to know.

#Tutorials/Guides - WhatIFF? Issue 2.10 - June 2023#

Installing and Setting Up an A314-CP

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Installing and Setting Up an A314-CP - by: Timo Paul

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Installation of the A314-CP

While the A314-CP does not offer as much functionality as the PiStorm the installation process is more complicated and lengthy. If you have decided to purchase an A314-CP after reading the review then I hope this guide will prove helpful the setup and installation of the card and aid in negating any issues or traps.

@[b]Raspberry Pi Side

The first step to setting up your A314-CP is the Pi side of things, much like the PiStorm you will need an SD card and install the PiOS to it. When doing this you will need the Pi Imager software available for Windows and Mac computers. Fortunately the latest version of the imager has removed one of the major steps necessary when setting up the Pi side of the of A314-CP. The network settings: previously it was necessary to connect the Pi to the keyboard and monitor, Pi from the Amiga or SHH if you have issues. Now it can all be done from the imager.

Beyond the point of it being easier, it can also help avoid any pitfalls that might occur. Upon my first installation of the OS there WIFI setting was not available in the Imager. I first tried it from the Amiga shell using the "Pi" command but I kept getting corrupted text and graphics. In the end I had to resort to the SHH mode of logging into the Pi from my MacBook Air.

Open the imager, choose your Pi OS image file, the connected SD card and here is the most important part, click on the cogwheel located at the bottom right. This will open another window, if you scroll down you will be able to set the WIFI settings, WIFI country/locale and timezone. I cannot overstate how useful this is and the amount of time it will save you in the future.

Once you have the Pi OS installed on the SD card with the WIFI, country locale and timezone set, you can slot the card into the Pi Zero 2W and plug the adapter with the Pi onto the clock port.

Amiga Side

From here on we do not have to worry about changing anything on the Pi side of things, if the OS has been installed correctly. By now you should have booted up your Amiga, it is important to note that after Workbench has loaded it will take about 15 seconds more the Pi to have fully booted as well. However for now we need to install software on the Amiga, what you will need are the following:

- * Amiga TCP/IP Software: Miami DX, Roadshow etc.
- * A314-CP Files: They can be found at
- => github.com/niklasekstrom/clockport_pi_interface/releases
- Download: [amiga_binaries.zip](#)

Once you downloaded the file you find it has three directories:

```
C/  
*Pi  
*PiAudio  
*PiHid  
*PiSetClock
```

*RemoteMouse

Devs/

*a314.device

*a314disk.device

*a314eth.device

*Mountlist

L/

*a314fs

You will need to set up your TCP client and make sure it is using the a314eth.device, you will still need to set the DNS, access point IP address and Amiga IP address though.

All you need to do is copy the files contained in each drawer over to their respective directories on your hard disk. Since I only wanted to use the board for internet access I just copied over the Pi, PiSetClock, a314.device, a314eth.device, copied the contents of Mountlist and the as314fs files.

Then it is case of setting up your TCP/IP client to communicate with the A314. This is done via the 'a314eth.device', just make sure that you have setup the correct DNS, access point (Router) IP address and Amiga IP address. Once that is done you need to reboot your Amiga. Remember that when you do a soft reboot the A314-CP does not restart, to restart the A314-CP you need to completely turn off your Amiga.

When your Amiga is running again, it is time to check the status of your internet connection. The easiest way to do this is via the Shell and do a Ping. Simply type 'ping google.com' and if you do not get any errors then you are connected.

Probably the hardest part of the entire install is setting up the Amiga side of the TCP/IP, it is very easy to mistype the addresses so make sure you double check.

LightWave 101 - 3D to 2D

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LightWave 101 - Part 8 - by: Timo Paul

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In last seven tutorials we have been looking at how to create objects, cut them up and past them together, how to render with textures and lighting. This issue we will look at how LightWave can be useful for doing 2D work, especially if you are more comfortable working in Brilliance or DPaint.

By default when you render an object LightWave will use the 'Realistic' render type. However there are three modes available, they can be found under the 'Camera' button, clicking on it will bring up a panel and at the top you will see three buttons: Wireframe, Quickshade and Realistic.

Wireframe, as you probably have already guessed will create a wireframe of your object but the problem with this is that if you want to edit or colour in your object at a later date this will make it very difficult as you can see through the object. It is useful if you want to make a retro wireframe animation.

If you wish to colour and texture in the object in another programme then the Quickshade is the option you want. By choosing this and setting the 'Basic Resolution' to Medium, you can render a perspective correct image that can be edited in your favourite art package. If you plan to greatly reduce the amount of colours, then it pays off to move the Light source and do test renders until you have an image that you are happy with.

I will mention here that if you have read the previous tutorials, you will hopefully remember that it is possible to colour in the object facets via the Modeler. In previous issues we created a bouncing ball and set the facets colour from the Modeler. This makes it much easier to reduce the colours in your image processor if you render in 'Quickshade'.

That brings me onto one more step that you should do and that is load the saved image into an image processor such as ImageFX, Art Department Pro or PPaint.

From there you can reduce the image size or colours to suit your project needs. Remember you might not be able to reduce it to as many colours as you want in the image processor due to the shadow caused by a misplaced light source in LightWave.

This technique can be very useful for creating realistic looking images in only a few colours with a bit of experimentation. It would be ideal for making icons or WB backgrounds.

Well that is it for this issue, thank you for having followed this series I hope you have found it useful. See you next time!

Brilliance 101 - Rub Through

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Brilliance 101 Part 9 - by: Timo Paul

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We are all used to the 24Bit displays offered by our modern computers that for many of us it has become important to add higher colour and resolution displays to our Amigas. The PiStorm for example gives the humble A1200 the ability to use RTG screen modes. However the old AGA chipset can still be of use, in particular the HAM8 modes and when programs such as Brilliance allow you to work on 24Bit images there is still a lot that can be accomplished on the humble A1200 that can still look great on modern computers.

While Brilliance does not offer layers like Photoshop it does have something that offers a close enough experience and can be very useful. For this tutorial we will be using two aspects of Brilliance:

Draw Mode's Rub Through & Buffer mode

*Note: When a keyboard shortcut is referenced it will be case sensitive hence if the key 'j' is mentioned this is without the Shift key but if 'J' is written then you will need to press and hold the Shift key at the same time.

By default Brilliance starts with the Work and Spare buffers, the former being the first black screen that you see after you have loaded Brilliance. You can toggle between the two with the 'j' key, where it gets interesting is that you can add more than one spare buffer. This can be accomplished by pressing the '/' on the numeric pad, to switch between all the buffers use the '(' and ')' on the numeric keys. These can all be done also via the buttons in the Buffer menu.

One of the new features to Brilliance 2.0 was the Rub Through accessed via the Draw Mode menu. Unfortunately I do not have the version 2.0 Addendum and Quick Reference Card anymore, so I am not sure which key activates the Rub Through mode. However the Draw Mode menu can be called up with the 'F' key. On a side note, if anyone has a physical copy of Brilliance 2.0 with all the manuals and reference card and is looking to sell it, please contact me at timopaul@whatiff.info as I would be most interested.

For our tutorial we will just use the default Work and Spare buffers. To begin with, once you have loaded Brilliance and not touched anything press the 'j' key to take you to the Spare buffer. While we are on this screen let's make a pattern that fills the whole screen. For my image I drew out a filled box in purple and proceeded to create a simple pattern with dark and light lines. Once I had something I used the Cut Brush tool to grab a copy of it, you can use the left mouse button if you want to copy it or the right mouse button to cut it. Either way, once you have your brush, left click on the Fill tool and then right click on the Draw Mode button and select Pattern from the left hand side of the menu.

Wait for the screen to fill up with your pattern, once it is finished press the 'j' key again to get back to the Work buffer. For my image I created three buffer pattern screens: Buffer 1 Buffer 2 Buffer 3

Now the fun starts, you can apply the Rub Through effect to almost anything. A simple test would be to choose the Filled Rectangle tool by either clicking on it or pressing 'R', then press 'F' to go to the Draw Mode menu and click on 'Rub Through'. Now draw out your box or rectangle and watch as the background from the Spare buffer comes through. Rub Through can be used in both the Register and True versions

of Brilliance.

Now you know the basics of how how Rub Through works you can go crazy, press 's' to get to the Connected Draw mode, you can then Rub Through and image or draw something that has a pattern inside it.

A very useful example of the Rub Through technique is when applying it to text, and this is very simply done. Create your text the Text tool, once you have your text as a brush press 'F' or right mouse click on the Draw Mode button, choose Rub Through and then press the text anywhere on the screen, you will see the text filled with the pattern from the Spare Buffer. A nice technique for this would be to add a shadow to the text and this can be done easily by using the palette. Right mouse clicking on any colour in the palette will make it the background colour.

For our example, you could draw out a red box. Since by default black is set as the background colour all we need to do is place the text over the red box, and right mouse click to place a black version of the text. If you still have the Draw Mode selected all you need to do is offset the text a bit so it looks like the black text is a shadow and press press the left mouse button to place the text with the rub through effect.

You can create some very funky effects with the rub through effect, such as quickly making a textured frame using the transparency setting. Have a look at the sample image to see what can be done. Example Picture

I hope you will find this tutorial helpful in your exploration of the fantastic Brilliance. If you have any artwork that you have created with Brilliance and want to share it, please send it in to:

submissions@whatiff.info and we will include it in next issue.

Until next time!

Articles

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- Articles -

Amiga Gaming And You

If you are looking to get into Amiga gaming and don't know where to start then Ivan Sorensen has the perfect article for you. Click on the link to get started on your Amiga journey.

Amiga Daily Software

Ivan Sorensen introduces you to the essential software that any Amigan new or old should have installed on their systems.

#Articles - WhatIFF? Issue 2.10 - June 2023#

Amiga Gaming and You

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Amiga Gaming and You - by: Ivan Sorensen

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These days retro-gaming is all the rage: Youtube is full of videos with people playing retro-games whether for challenges, trying games they missed or even platforms they never experienced the first time around.

These often focus on console games first and the DOS gaming era second, with other home computers getting less attention, but the Amiga can offer a lot to the retro-gamer and I want to take a few moments to discuss some of those things, as well as my perspectives on it.

The Amiga fit into a particular cross section of gaming where it both received console and arcade style titles as well as 'PC' style titles. Combine this with a very active and enthusiastic public domain scene and you have a very wide array of experiences you can pursue.

I suppose it is strange to write about Amiga games to a mostly Amiga audience, but there's a not insignificant amount of Amiga users that primarily used their machines for productivity purposes as well as people who dabbled in Amiga gaming but never delved in deep.

In this article I intend to give you a bit of an overview of some of the riches available as well as making a couple of recommendations for where to start with titles, picking both the most mainstream and maybe a few deeper cuts.

If you are interested in more arcade oriented experiences there is a wealth of platformers, shoot 'em ups and the likes. Some were available on other platforms but many were unique to the Amiga. In a lot of ways these can be thought of as the 'European style' of game: The 8 and 16 bit systems had numerous such games and platforming was the default style for many licensed titles such as movie tie-ins.

Of course games of the era tend to have a reputation for difficulty which is just as well as many were rather short. Turrican 2 is an epic game but you can blow through it in about 2 hours if you know what you are doing. Curiously while a lot of old hands find their reflexes are perhaps not all that great, patience and experience can make up for a lot. You might be surprised what happens when you pick up an old title you haven't played in years. Just take it in stride when your spaceship blows up yet again.

On the more arcade-oriented front, there are mountains of titles to recommend to the curious but as a starting point, my recommendations for shooting games would be Apidya, Banshee (requires an AGA Amiga) and Wings of Death.

For platform games I would suggest starting with Superfrog, Switchblade II and Turrican 2.

One word should be said about conversions and ports here. Amiga fans are often quick to point out when a game was ported from the Atari ST or otherwise lacked features because of the need for the game to be easily assembled on the rival system. Likewise you can find many titles that were available on consoles at the time and sport superior visuals, even if the sound could often be weaker. Adams Family is an example of a game that is incredibly solid and fun to play on the Amiga, but tends to get dismissed because it looks inferior to the SNES version.

This is especially the case for ports of arcade games where some held up incredibly well (Marble Madness, Silkworm) while others tended to be a

fairly sorry affair (Strider comes to mind).

Whether this is something that bothers you is an individual choice. For me, my interest is mostly just in the Amiga so the presence of a superior version is irrelevant to my experience, though for some people it can be disqualifying. This can be a factor when discussing games today compared to how they were reviewed and generally seen at the time. As an example the Amiga port of Street Fighter 2 is not viewed favourably today but it reviewed quite well at the time and we spent considerable time playing it, even with having access to the real system down at the local arcade.

The Amiga was blessed with a lot of great sports and racing games and many make for outstanding two player experiences. For the soccer inclined the Kick Off series, Sensible World of Soccer and Goal are all great options, while racing fans might want to look at the Lotus series, Jaguar XJ220 or Supercars 2.

The early 90s was the high water mark for graphical adventure games and most of the famous titles had solid Amiga versions with titles like Flight of the amazon queen, Beneath a steel sky and Simon the sorcerer all being well worth checking out. You typically miss out on any digitised speech that the PC versions got, but you get the nice Amiga music instead. It should be noted that if you are playing on real hardware, you will absolutely want a hard drive for these games. Swapping through the 14 disks of Beneath a steel sky is no joke.

If your tastes go a bit older there are a ton of text adventures (some with images and some pure text) that can be enjoyed as well, including many of the classic Infocom titles.

If you enjoy your thinking with a bit of violence thrown in, RPGs were well represented both in classic series such as Ultima, Bards Tale and the SSI Gold Box series but also in 3D titles such as Eye of the Beholder. For an RPG experience somewhat off the beaten path try checking out the Heimdall games or Perihelion (but make sure you have a manual available for the last one). As these games rely on their stories and immersive gameplay, they often hold up very well but you do generally have to have a bit of patience, especially to figure out the occasionally arcane rules. A working knowledge of how to play AD&D won't hurt.

Finally on the strategy front you can find a wide array of games from early examples of God games like Populous, proto RTS experiences like K240 or Mega Lo Mania and turn based strategy such as Battle Isle or the famous Civilization. If you prefer your strategy to be a bit more peaceful why not have a look at Railroad Tycoon or A-Train. Amiga strategy games often benefit from the integration of mouse controls making them very playable in a way that is not always the case for old strategy titles. Some are even playable with two (or more) players such as Warlords or Kingdoms of England.

Any list such as this could go on and on with genres such as puzzle games and flight sims being somewhat outside my experience. I hope this gives you a bit of a feeling for just how much really is out there and maybe some places to start.

amigadailysoftware

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Amiga Daily Software - by: Ivan Sorensen

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Greetings Amigans. In this article I am going to talk about the tools I use in my daily use of my Amiga, to both give an idea of what you might want to look into to get up to speed as well as what a typical use case looks like. Unlike a lot of folks in the Amiga community today, I have absolutely no talent for programming or making music. Instead I am a bit more of a common user from the heyday of the machine. The below all runs on an A1200 with a 68030 and 32 MB of RAM, but should work fine on more modest machines. It does go to show that you can put some serious work into your Amiga without requiring an 060, PPC, Vampire or Pistorm.

The core of my system is the ClassicWB distribution. While this is becoming a bit outdated with the new 3.2 Amiga OS available, it is still a great way to get up to speed with your Amiga. It bundles and configures a bunch of convenient software, patches and utilities and was certainly a wonder when I got seriously into Amiga again. Of course if you prefer building everything by hand, you may have more fun doing it one step at a time, but in my case that sort of thing does not interest me a whole lot so this option was perfect.

In particular this comes with Scalos which is a replacement for the regular Workbench interface and offers a number of convenient menus that can be customised nearly endlessly. This is not required to run your machine but having simple menus that can call up the most used applications is very handy, especially if you tend to forget where you installed a particular application. I have the menus set up so all the basic programs, utilities and game launchers I use are accessible through two or three mouse clicks. I would recommend restraining yourself however and not adding every possible program to these menus. It is easy to get overwhelmed and you are likely to use one or two programs of a given type most of the time. If you use Eagleplayer for 90% of your music listening, just add that to the menu and put the rest in a folder somewhere for example.

So let me walk through the various things I need to do on my Amiga and then talk about how they get accomplished:

First we have to be able to actually handle files. The Amiga graphical user interface is fine for moving one or two files but for anything more serious like moving multiple files, mass deletions and operations that involve moving stuff to and from a number of folders that may have to be created Directory Opus is the lifesaver. This piece of software is pretty well known but if you have never tried it, it is something you absolutely want to have available.

Using a two panel setup, it is effortless to transfer or copy a group of files from one location to another, create new folders and so forth. Ive also noticed that while folders with a large amount of files in them can be a bit awkward to mange in the normal UI, DOpus handles that like a charm. If you do anything that involves a large amount of file manipulation, get this baby.

If you download any Amiga software, it is almost always packaged in LHA format which means you need some sort of tool to handle those. There are a lot of those available. The one I use is called MiraWizArc and uses a simple GUI that makes it easy to unpack archives and put them wherever you want to. I usually unpack directly to RAM and then sort through the files later with DOpus.

One quirk I notice is that if the file names are far too long the system cant always recognise them as an ADF (for example). You can fix that on the Amiga but I find it faster and easier to just rename them on my Mac before transferring them over.

I do not have a CD ROM drive and adding one to an A1200 is not trivial since my IDE port is already spoken for and I dont want to mess too much with my hardware. Luckily Imagemount fixes this for me. When I want to browse an Amiga Format cover CD I can just mount it using the simple GUI and it pops right now. It is not especially fast but it works wonderfully. You can also mount ADFs and they pop up just fine. This probably wont work for system-unfriendly software but usually I just need to copy files from the disk to my Amiga and it does that wonderfully. It works fine when installing a program too and you can even have multiple disks open without a problem. The mounted disks are not really "using up" a drive so you can have 6 disks mounted simultaneously with no problem.

The only flaw is that you cannot unmount things as far as I can tell. A quick reboot gets rid of the images though.

The last tool I use to operate my system is Icon Installer. This is an easy tool for replacing one icon with another one. I have a particular look to my folders that I like and when a new program is installed, it often will not match that. Additionally I have some fun icons I have installed for particular programs or folders.

With Icon Installer all you have to do is copy the source icon to one side, copy the destination (current) icon to the other side and voila. If you enjoy a working environment where everything looks just so, this can be a big help.

With all of this in place it is time to do some actual work on the Amiga. Now as noted I do not have any programming tools and I don't make music. I also don't have any benchmarking programs or anything of the sort.

What I do need is the following four roles however:

First I need to write. I use my Amiga to write drafts for ideas for work to explore if I think they will work. I also do my tabletop RPG campaign planning on the Amiga (no chance of a player accidentally sneaking a peek!) and do a bit of general journaling for fun. With time I would like to write a few short stories on it as well.

Word processing really ranges from very simple text programs to full featured modern programs and everything between. My favourite to simply focus on grinding out text is Interword. While the UI is a bit awkward to a modern user, something about the stark visuals and simple feature set makes it really appealing to work in. For something a bit more modern but still quite streamlined, I enjoy Wordworth 3. A copy of Final Writer 97 makes up the high end for when I need a bit more in the way of features. One thing to note with these programs is that they are often not particularly compatible with each other. You will want to make sure you can output files as either rtf or ascii if you need to transfer them to something else.

I am slowly getting back into messing with computer painting and I must admit I went straight for my old love: Deluxe Paint 4 AGA. For ease of use while having some very nice features, Deluxe Paint is still hard to match and my skill set is nowhere near where I would benefit from a much more feature-filled package.

I love music and of course working on the Amiga you need some tunes going. While I have not found that much to distinguish one music player from another, Hippoplayer will play most things I try out, the UI is easy to use and it still sees updates and patches. My system cannot really handle MP3s so I don't worry about that. I do have Delitracker and Eagleplayer available as well, but 99% of the time I use the Hippo.

Finally I am a big Amiga gamer and of course you need to have a way to organise your collection of games, especially if you intend to actually play them. I tend to use two pretty big folders for my WHDload games, which makes them difficult to pick through manually.

The most popular tool is Igame, which I also use especially as it is also receiving updates and continued development these days. This gives you a very nice menu where you can organise your games by genre, so if you want to only see your adventure games for example, you can do so easily.

Two minimalist game menus I also use on occasion are Tynylauncher and WHDLoadmenu. Tynylauncher has a very cool launcher menu that can be joystick operated. It also lets you add demos and music files to the launcher so you can use it as a general "Amiga entertainment system" setup. WHDLoadmenu is very minimalist and just gives you a visual list of your game titles which you can then launch by clicking on a game.

While I use Igame most of the time, the other two are great when I want something a bit simpler.

With this collection of tools and programs, I can do my writing, draw a bit, listen to some tunes and get in some gaming and ultimately that has always been my goal with any computer I have owned. I hope this helps you get yourself situated with your Amiga, especially if you are getting back into the system (or perhaps even exploring for the first time).

Welcome to voices of the people behind Amiga hardware and software.

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- Talking Amiga -

-= Remi Veilleux: Hamulet Interview =-

We talk to the developer Remi about his new HAM mode game Hamulet and its creation.

-= Carlos Peres: Red Pill Interview =-

Red Pill has now become the go to tool for game creation on the Amiga, we talk to its creator Carlos about its creation and history.

-= Mirko: HID2AMI Interview =-

The creator of the HID2AMI USB adapter kindly sat down with us to discuss his latest creation.

-= Marcin: A314 Interview =-

While we have reviewed the A314-CP this issue we also talk to the creator of the original A314 and it's early development.

#Talking Amiga - WhatIFF? Issue 2.10 - June 2023#

Remi Veilleux Interview

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Interview - Remi Veilleux (HAMULET)

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1. Thank you for taking the time for this interview, to begin with, can you introduce yourself?

Hello, my name is Remi Veilleux, and I am a technical programming director at Behaviour Interactive in Canada. I have a background in game programming, with experience working on a variety of titles such as GoldenEye: Rogue Agent and the Syberia adventure game series. My passion for game development started when I was young, thanks to my parents' small printing shop and the access to computers it provided. I'm excited to share my insights and experiences with the readers of WhatIFF?

2. When and how did you get started with the Amiga?

I first encountered the Amiga 500 when I was a kid browsing a game computer store. It was the mid-1980s, and home computing was still in its early stages. I had some experience with the Commodore 64, but the Amiga was something else entirely. When I asked the clerk how many colours it had, he showed me the Workbench Preferences and said "Son, on this machine, you can create colours." That moment was a turning point for me.

I was hooked on the possibilities of the Amiga and we ended up getting one.

3. You are developing a game which is using the HAM mode, rarely seen in games, have you developed Amiga games before?

My early experience with Amiga game development was with Amos Professional a user-friendly programming language that made it easy to get started with this amazing computer. However, as we know, Amos came with a performance cost compared to coding directly at the bare-metal level. Seeing games like Psygnosis' Shadow of the Beast, which displayed 128 colours on screen, inspired me to push the limits of what was possible with the Amiga's graphics capabilities. Over time, I coded a few freeware games using Amos and uploaded them to BBS. These games ranged from simple puzzle games to platformers and helped me hone my skills in game development.

4. Did these games also employ the HAM mode or the standard register graphics mode?

No, the games I developed with Amos mostly used regular bitplane colour modes, typically with either 16 or 32 colours. In one project, a turn-based tactical game prototype, I used Extra Half Brite to create unit shadows with minimal processing overhead. I also experimented with HAM once, as part of an attempt to create a point-and-click adventure game. Using a Digi-view scanner, I was able to take snapshots of real locations and convert them to HAM, which created a unique and visually interesting look for the game. However, the challenge of working with HAM graphics proved too great for the project, and it was ultimately abandoned.

As technology evolved and the PC era took over for me, the Amiga was eventually stored in a closet. Until recently.

5. Can you explain a little about the game, i.e. what type or genre of game will it become?

Hamulet started as a proof-of-concept project that combined my interests in learning assembler and C Amiga game development and the use of HAM graphic mode. As the project developed, I began to envision a game that would incorporate puzzles, small action RPG gameplay elements, and a lighthearted story centred around a rogue heroine who uses a mysterious amulet to navigate through dungeons. Players will encounter a variety of puzzles that require careful observation and critical thinking to solve, while also battling enemies and collecting up items. The game draws inspiration from classic action RPGs like Zelda and Diablo, as well as puzzle and tile-based games like Crypt of the Necrodancer.

6. What made you decide to use the HAM mode?

I decided to use the HAM mode for my game because it's a unique feature of the Amiga platform that has been largely underutilized in game history.

It allows for a high degree of colour flexibility, with up to 4096 colours on screen at once. This makes it ideal for creating rich, detailed images with a wide range of hues and shades. However, working with HAM is technically challenging, as it requires careful management of colour palettes and memory usage. I've had to experiment with different optimization techniques to ensure that the game runs smoothly and looks great on a wide range of Amiga hardware configurations. Back in the days, I only saw and played one action game that used this graphic mode: Pionner Plague. More recently in 2021, an amazing demo named HAM Eager was released: This was the final nudge I needed to take on this challenge.

7. What have you found most difficult about creating the game in HAM?

The main difficulty comes from combined factors: HAM requires six bitplanes, which taxes the display DMA bandwidth and overall slows down the processor by approximately 50% during screen refresh. Also it takes 50% more memory than a 16-colour game would, both for the screen buffer as well as all graphic assets. It is clear to see that our mighty Amiga 500 will be stretching its absolute limits quickly.

8. Is there anything that has surprised you during the development of the game?

The thing that surprised me the most was when I realised how perfectly designed and well thought the HAM mode fits in the overall architecture of the Amiga. This is very ironic for a mode that almost got cut during production because it was initially designed to be useful for a Hue/Saturation/Luminance display, not for the final RGB output. The fact that HAM uses exactly 16 colour registers, it leaves the other 16 colour registers free for sprites. Also, contrary to the later AGA HAM-8, HAM is able to perfectly map all the Amiga colours since it uses 4-bit to encode a colour channel, which corresponds to the entire 4096 colour palette of the Amiga (which is 16x16x16). In fact, we can say that HAM is really a hardware compression technique which allows storing a full colour 12-bit image with only half the memory footprint by reducing to 6-bit per pixel.

It is quite a technical marvel.

9. The demo version runs incredibly smoothly, how did you achieve this?

I have set myself personal goals for the game, and one of them being that the gameplay must run at full frame rate, being 50 frames per second on PAL and 60 frames per second on NTSC. In order to achieve that, several techniques are used: the game main loop is divided into multiple frames in order to split the work and perform updates less frequently for lower priority tasks. For example, except for the hero character, the sprites are animated at a lower frame rate than the display. Same thing for the patrolling enemy AI, in order to free of CPU. Everything is carefully calculated and measured to spread the workload evenly. Also as a sort of general philosophy, the key to get good performance on the Amiga is maximising parallel work between the three main chips: The copper

(for sprites, dynamic colours, special effects), the Blitter (for background tiles redraw, and general fast memory copy operations), and the CPU (for running game logic and coordinating everything). The fun challenge is to optimise the usage of the DMA bandwidth in order to always have many things happening at once.

10. HAM is notorious for fringing, how did you get around this or hide it?

You are absolutely correct in noting that HAM can produce fringing artefacts, especially when it comes to horizontal scrolling and background animation. To mitigate this issue in Hamulet, I employed a few techniques. First, I arranged my background tiles to be "fringe-resistant" by carefully making sure their RGB values changed frequently. Additionally, I placed a narrow "status bar" sprite overlay on the left side of the screen to hide the fringing that occurs underneath. By doing this, I was able to keep the fringing effect hidden as much as possible. Another approach I took was to render all animated objects as sprites, which allowed the copper to efficiently reposition and recolour them, enabling multiple animating objects to be displayed on the screen without producing fringing.

11. Why did you decide on using the older HAM mode instead of HAM-8?

As another of my personal goal and challenge for Hamulet, I wanted the game to have been possible in 1985 on the original Amiga 1000. This means I must restrict to video modes that existed on OCS and the original CPU speed. I know HAM-8 combined with AGA sprites could be used to create amazing games, which would also benefit from the faster processor and larger memory offered by the Amiga 1200 and its console sibling, the CD32. Fun fact: HAM-8 allows for 262144 colours, which is more than the number of pixels on a standard 320x256 screen.

12. Is the game being developed on an Amiga or one of the game creation tools such as Scorpion, and why did you choose this method of the development?

I love Scorpion as a tool to bring more people programming for the Amiga platform through ease-of-use and comprehensive list of features. However on the flip side, there is usually a price to pay on performance or flexibility when using a game development toolkit. Additionally, developing directly for the Amiga hardware gave me a greater sense of nostalgia and connection to the platform. Ultimately, I wanted to create Hamulet as a learning experience for myself and as a tribute to my favourite computer of all time.

13. Do you have plans for games beyond this game?

Oh yes, many ideas are springing to mind while working on Hamulet. I thought of doing a vertical shoot'em up in HAM. Also I had ideas for an adventure point-and-click game. I pondered over the idea of doing CD32 game development: faster CPU, more memory, AGA, and large storage.

Overall I really feel we have yet to see all this machine can do.

14. Thank you for your time, is there anything else you would like to say about the game or yourself before we finish?

I wish to thank WhatIFF? magazine for this opportunity to share some information about my little game. With many recent awesome and high quality Amiga games, I am really honoured to be able to contribute back and I hope we will continue to see more innovative and unique games for years to come. You can contact me at my site =>

www.remantic.com

Happy coding, everyone!

Carlos Peres Interview

Interview - Carlos Peres (Red Pill)

1. Can you tell us about your background and how you got started in game development?

I got started in programming when my brother got an Amstrad CPC, it came with a big book explaining the Basic commands and this was my contact with programming and game development.

At age 14, I got an Amiga 500 but I continued programming on CPC. Later on, when I was studying computer science, I purchased Blitz Basic 2 and started doing some games on Amiga. In one demoparty I was showing some of the games and I ended up joining the Ozone demoscene group under the nick Zener, there I learned some Amiga assembler, although I was not very active on the demoscene front.

When I finished University I started working in a game company and from then on I have been working on professional videogame development.

I kept developing from time to time on the Amiga, for example, I did Tracker Hero, a music rhythm game that works like Guitar Hero but uses Amiga MOD files, and you can actually play with a PS2 guitar.

And finally, in 2014 I started to work on the Redpill Amiga game creator.

2. What inspired you to create the RedPill Amiga game development system?

Basically the lack of games for Amiga at that time. I attributed it to the lack of programmers and the lack of time to spend developing a game. It was around 2014 and there were just a few new games for Amiga and most were made in Backbone. I want to mention that to me Backbone is a great game maker, I know it gets a lot of bashing, but there is a lot of effort behind it and it is very well done.

As any maker, it demands more from the computer but the problem I had with it is that even with high-end Amigas the frame rate doesn't improve and the result are that the games can lack the Amiga feeling sometimes. I wanted to create something that non-programmers could use to make a game fast in Amiga, also a learning tool and introduction to game development.

The goal is to have fun, learn, play, and maybe later on they could switch to real programming.

3. How does RedPill differ from other game development systems currently available?

I want to think that it's the easiest one to learn and to use, at least that's my aim. You don't need to program, you can do the games mostly with the mouse. Also, you can run and use it from the Amiga, the same way you had Deluxe Paint for graphic creation you can have Redpill for game creation.

You can almost do the whole games from there, a graphic editor can be linked, it includes animation editor, level editor, sound editor, etc.

It's very flexible, you can create many types of games with it, I've seen people doing mostly platformer games but also top-down games, shoot'em ups, racing games, puzzle and adventure games. It also supports all the classic Amiga range, from A500 to CD32, including CD32 audio playback, score system, CD32 pads, OCS, AGA and EHB modes.

And finally it has a physics engine and supports multiplayer via TCP, it's incredible easy to turn a 2 players game into a 2 players network game.

It is also very fast to get a game running, you could have a basic game running in less than one hour.

4. Can you walk us through the process of developing a game using RedPill?

The first thing would be to create the project, give it a name and set up the screen. ECS or AGA? How many colours? Next step would be loading or drawing some tiles for the project, define its size and properties.

After that, you have to load some graphics from a sprite sheet for your game objects. To start having something playable in the Objects menu you would define the graphics to use and how the objects interact between themselves and the level.

In the level menu you would edit a basic level for your objects using the tiles you loaded. After that, it is all about iteration and determination to finish the game. When you are done you would click Build to generate the final game that will be executed in the Amiga.

Of course it will be more complicated than what I explained, making a full game takes some time even with the best tools.

5. What challenges did you face while developing RedPill, and how did you overcome them?

The biggest of them is the lack of time to develop it, what could take a day to implement easily takes a month. Also, when I started my goal was just to make a toy for people, but then users got easily to the game creator limits and asked for more, a lot more actually! Changing the architecture while keeping compatibility with old version has been a challenge. At the same time people ask for more features, they want the games to run in lower spec Amigas.

This has been also a great challenge, the Amiga can be very impressive when using its tricks, but in a tool where you need to prioritise flexibility it's very difficult to optimise everything the same way you would do when developing a specific game. In the first years of development I cared about performance but not as much as I do now. It's a pity because some of the games developed during that era would run much faster now.

6. Was RedPill developed on an Amiga or PC/Mac, and why did you choose development this way?

I started developing it on my Amiga 1200 but at some point I switched to WinUAE. Basically in PC it compiled much faster and in one machine I have access to the compiler but also to the browser and other tools. Later on I found ways to edit the code also in PC, it's much more comfortable and nowadays I edit in PC and compile in WinUAE.

7. Can you share with us some of your favourite games that have been developed using RedPill?

I will list some of my favourites.

Putter by Czorny:

This game is the perfect Redpill game, it's clever and uses the physics of the game creator.

Snaky by Yoz:

This one pushed Redpill quite a lot, different playabilities, AGA graphics several enemies and huge maps.

Bad Ninjas vs Rick & Joe by Ricky Place:

A beat'em up, it was a surprise that this could be done with how the creator was several years ago, and it's very fun to play.

Lumberjack Platform by Lemming880:

A cute and nice game that plays very nicely.

Agonman by Fondriesete:

A shadow of the beat like game, I know a huge effort was put while developing it.

Redpill Racing:

Another surprise, a car racing game made in Redpill. It was also one of the first games.

Noah by Sensei-Sama:

This one is very emotional and truly deserves a full write-up. It's a game developed by a father in the hospital while his premature born baby was in an incubator fighting for his life. The sounds effects come from the hospital machines, the mother, etc.

I am also waiting for Temptations, a game made by Soy for Amiga CD32 that uses some of the latest Redpill features.

8. What do you think sets Amiga game development apart from other platforms?

For me Amiga is the first modern computer, you could do anything with it, and this explains why people are still developing hardware and software for it.

The hardware was very advanced at the time, also difficult to use, but when used properly the result is magic. The limitations make it a challenge, every cycle counts.

It's also very fun to program, you are always close to the hardware and at the same time you can do complicated stuff.

9. How important do you think community feedback is in the development process, and how has it influenced the development of RedPill?

Incredibly important, they are the ones pushing for more features and for making it a more robust and professional tool.

10. What future developments or updates can we expect to see for RedPill?

When the game creator reaches version 0.9, all the basic stuff for game development was already integrated. My focus now is making it easier to use, document all the features, optimization and advanced features.

To consider it complete, I need to work on documentation, examples, tutorials... the boring stuff :D

11. Do you have any advice for aspiring game developers, particularly those interested in developing games for the Amiga platform?

Keep it up! Making a game is a difficult task even with the best tools. If you know programming there are multiple tools available, to get the best performance you may need to learn assembler.

But if you don't know much programming, or you are short on time, give Redpill a try!

12. Finally, we always ask our guests for their Amiga setup, so what Amigas do you have and what Amiga do you dream of having if don't have it yet?

My main machine is an A1200 with a Vampire V2, I also have an A1200 and an A500 for testing purposes. Actually I have some more machines at home but I never had a desktop Amiga, they have all the keyboard integrated.

My dream machine would be an A3000 or A4000, although I probably don't have space for it :)

Thank you for this interview, I hope more people get started into Amiga game development and we have more new game for our beloved machine.

Mirko Interview

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Interview - Mirko (HID2AMI)

=====

1. Hi Mirko, thank you for taking the time for this interview, can you tell us a little about yourself?

Hi Timo, happy to be here answering your questions!

Im an engineer with an insane passion for the retro computer scene in general, and Amiga computers in particular. I used to be an active Amiga user and (professional) software developer in the golden days and a writer and contributor for a few Amiga magazines in my country, during those years.

Rethinking today about those days, I can truly say "I was there when it happened!"

2. How did you get started with the Amiga?

My first one was the A500, which I bought after leaving my beloved ZX Spectrum (never been a C64 fan, sorry). I was amazed by the first games, as everyone, but quickly discovered the huge power hidden in that machine's OS and its multitasking architecture. Over the years I have owned an A500+, A2000 and the A4000/040 which was the last Amiga I bought at the time. I spent several thousand hours by learning those beautiful architectures and coding professional software taking advance from the stunning features of these wonderful machines.

3. Can you briefly describe what the HID2AMI USB adapter is and what it does?

HID2AMI basically is a protocol translator; its purpose is to allow modern USB peripherals like optical mice, joysticks, joypads, trackballs, etc to be connected and enjoyed with the Amiga and other retro computers or video game consoles, if they share the same DB9 connector interface and pinout.

In converting the mouse protocol, an additional task is needed, because all original trackball mice of the time talked the "quadrature wave" protocol, a common solution used to translate their hardware movement encoders into electrical signals; in the case HID2AMI gets the movement information from the optical device, decodes them and synthesise the precise quadrature waveform, talking then with the Amiga hardware as if it was a "real" trackball mouse.

4. How did you first become interested in creating the HID2AMI adapter?

I had those wonderful Logitech joypads laying around, and wondered if I could make use of them on my Amiga, maybe also mapping some key combo to ease certain arguable game design choices (typical example: direction up for jumping mapped to a jump button instead).

A second later, I realised that it would have been really nice if I had the possibility to connect my laser mouse to the Amiga, with precise movement tracking and three buttons at my disposal.

I started searching for an existent solution for my needs, but couldnt find one that fulfilled them all, so I decided to make one by myself!

5. Can you walk us through the process of creating the HID2AMI adapter, from conception to production?

First step was aiming the target use cases: I wanted a "universal" adapter, which could be used for both pads and mice on the fly without the need of any configuration from the user. It would have been automatically compatible with virtually all USB devices, present and future.

Performance was a strict requirement: I wanted it not to have any measurable lag in translating protocols, so that the user couldnt tell the difference in performance by swapping their original controllers with the new adapter.

Second step was to define the hardware, and develop a working proof of concept mockup, by making use of a prototype board.

Once the prototype board was up and running, I moved into designing the real "production" board, defined the layout, designed and routed the circuit, and finally produced and hand-assembled the first PCBs.

Develop never ends, so through a few months I kept constantly refining/upgrading both the firmware and the hardware designs, by also taking into account user"s feedback, until we reached the current v.2.0 revision, which is, compared to the first v1.0, quite compact and optimised in size, plus offering support to the mouse scrolling wheel, a "highly requested" feature from the community of users.

6. What makes the HID2AMI adapter unique compared to other USB adapters on the market?

A few other adapters were on the market when I designed HID2AMI, and a couple new have been developed recently after HID2AMI"s great success with users.

Compared to all of them, I would honestly say that HID2AMI is by far the most compatible one with the majority of USB peripherals (thanks to its modular firmware design which allows the implementation of new drivers for "not-so-hid-compliant" devices). Quadrature waveform synthesis is a perfect 1:1 recreation of a real trackball mouse, in both phase and timings: the Amiga can"t tell the difference.

At last, the recently added support to mouse scroll wheel (by mean of a proprietary protocol designed and implemented by scratch) is by far the most performing and compatible with all Amiga hardware.

7. Can you discuss some of the challenges you faced during the development of the HID2AMI adapter, and how you overcame them?

I must admit, the list of challenges could fill up an entire book. Just to name a few: the very first one was the choice of a properly powerful microprocessor chip, with USB HOST capabilities. I chose the STM32 architecture, which turned to be the right choice in terms of performance but, as I discovered later, had a severe drawback in terms of bugged low level libraries for USB stack management. I had to spend dozen of hours cleaning up and rewriting from scratch a number of low level routines, in order to make it work properly.

Another major challenge was how to supply support for the most number of peripherals; majority of them "talk" a proper HID protocol language, and so their management could be easily standardised into common firmware routines, but there are a number of devices who talk "their own" HID dialect (or don"t talk HID standard at all), so dedicated modules must be written, by sniffing and decoding their behaviour, in absence of written specifications.

The last challenge I faced against was the mouse wheel support: at the

time of Amiga, the mouse wheel concept simply did not exist, so nobody could have imagined and implemented a way to manage it. This means that there is no direct mean to bring a wheel message from the mouse to the Amiga, and a "tricky" alternative solution had to be found to circumvent the limit. I ended up designing a solution which "embeds" the wheel messages among the other existing signals, and a paired driver on Amiga side that "decodes" and routes it to the Amiga OS. Similar solutions already existed, but they introduced noticeable degrading of the movement behaviour; on the contrary mine is totally un-noticeable, even by looking at it with a scope.

8. How easy is it for users to set up and use the HID2AMI adapter with their Amiga computer?

Basic usage is straightforward: just plug it and play !

The adapter recognises and initialises itself according to the device you connect, whether if it is a mouse, a pad, or else. You don't have to set up anything.

Most advanced users can take benefit of extra features like mouse speed ratio custom settings or button remapping, by pressing a proper key sequence in order to activate them.

A good starting point for advanced users is to read the "user guide" available on the HID2AMI's GitHub site.

9. What types of USB devices are compatible with the HID2AMI adapter, and are there any limitations?

HID2AMI can manage natively all USB devices who talk the standard USB HID protocol; some more recent/more advanced devices could talk a "quasi-HID" dialect and in those cases a slightly dedicated firmware driver would be needed to implement.

At last, some devices are not USB-HID and in that case a full dedicated protocol must be added (e.g. Xbox360 pads). In the latter cases, an HID dump of the protocol is needed in order to decode and implement a working driver, so virtually there is no limitations at all on the number of devices supported.

10. Are there any future plans or updates for the HID2AMI adapter?

Next step in development would probably be the support for CD32 pads protocol; I already started its basics, but it will take time to properly manage it according to my quality standards. Also consider I'm doing all of this as a hobby during my spare time, so time constraints aren't a must to me (but I must admit the pressure from user's is pushing hard...)

11. How has the response been from the Amiga community to the HID2AMI adapter?

I was really astonished by the enthusiastic response I got from the community! At first I designed this little thing for my own use and sharing it among a small number of Amiga Italian users, then the whole thing slipped out of our hands and become worldwide. Up to the current date (first public announce of HID2AMI was in November 2018), the GitHub repository gets constantly dozens of unique visitors-per-day; mostly are just curious, but it's nice to see that such a simple device is in a "must have" thing anyone owning an Amiga would consider.

12. Do you have any plans for products beyond the HID2AMI?

You know I said I'm doing this as an hobby in my (small) spare time, so I can't manage to approach big projects like Pistorm or similar.

Nevertheless I'm always in search of small needs which could be turned in "simple" new projects for the Amiga community. Recently I released the AMIRGB2VGAPLUS adapter, a double buffered impedance matching dongle, and thanks to the user Wiretap from the Pistorm community I revamped an old project of mine (dated around 1995) for a stereo sound digitiser.

I'm open to suggestions and new ideas at any time!

13. Lastly, where can people go to learn more about the HID2AMI adapter and potentially purchase one?

First place to look at is my Github at =>

<https://github.com/EmberHeavyIndustries/HID2AMI>

where one can find updated news, detailed descriptions, tested hardware compatibility list, user manuals and all sort of information they could need.

Users with assembling skills can build their own adapters by themselves, by downloading Gerber files and documents from the GitHub

(a PCB-way shared project also exists here =>

https://www.pcbway.com/project/shareproject/HID2AMI_v2_0_with_Mousewheel_Support_5ff28e3c.html)

Bootloader also is freely downloadable from the GitHub in order to test and pre-activate their builds. Full working order adapters needs then to be flashed the tied firmware app, which can be requested to me according to instructions of the Github site.

Fully assembled units can be purchased, from time to time, by requesting a reservation on the dedicated Amibay thread =>

(<https://www.amibay.com/threads/hid2ami-v2-0-with-mousewheel-support-hid-mouse-and-gamepad-to-a>)

14. Thank you for your time, do you have any final words before we finish the interview?

Thank you for this nice interview!

I'm really glad that in 2023 an electronic Amiga magazine like WhatIFF? still exist and is actively followed by lots of *active* Amiga users worldwide.

And I'm also glad and proud that *we* all are contributing to preserve, maintain, and *improve* that piece of our heart the Amiga is and will always be!

marcin

Interview - Marcin (A314)

1. Hello Marcin, thank you for taking the time to talk about the origins of the A314 project. To begin with can you tell us a bit about how you got started with the Amiga?

I got to see an Amiga over at a friend of mine back in 1986, where his father had imported it from the U.S. to use as a video titling machine. I was totally mesmerised by the GUI and mouse input, and remember arranging workbench windows in an aesthetically pleasing order, pixel by pixel, for probably an hour or so. There's probably a clinical diagnosis that fits that behaviour, but that was the moment I got hooked. After endless nagging and begging, my parents got me an A500 for Christmas in 1987.

Back then DRAM prices were horrendous due to a chip plant in Asia being destroyed in a fire, so I got to choose between an A501 RAM expansion or a 1084 monitor as accessory for the machine. Those two were almost equal in price! I went for the monitor, and have never regretted that choice, haha.

2. What did/do you mainly use it for?

When in my teens, I played games occasionally, but most of the time the Amiga was a tool for me. I programmed some simple apps in SAS C but never got skilled at it, so AMOS came to the rescue instead. I did some lousy tunes in Soundtracker but realised that I wasn't a musician either. Some years later I got a modem and spent some time at various BBS's and FIDO-net mail groups. But the single most time-consuming application for me was a German PCB-CAD tool called NewIO. I must have spent thousands of hours drawing PCBs back then.

Today I don't use it that much. It's mainly a platform that I design hardware for, just for the fun of it. You know, "because I can" I can't really explain that behaviour, since it doesn't even make sense to me, but at least it gives me some satisfaction. I guess it's like most hobbies; they don't have to make sense, as long as they make you happy!

3. Can you explain a bit about what the A314 is?

As you probably have already heard, the A314 is an open-source non-profit project, aiming to offer an alternative way to get your ageing Amiga up-to-date (as far as we can make that possible, at least).

4. The A314 seems like quite a mature product, is it based on any earlier designs?

During 2010 I was a frequent visitor and member of SUGA in Stockholm. There I had been discussing a device that could combine a network (ethernet) port, some memory, an SPI and/or I2C port(s) and some CF or SD card storage as a hard disk. This project had gone under the name NEMESIS and was an acronym for NETwork, MEMory, Serial Interface and Storage. Initially, we were experimenting with Xilinx Spartan II FPGAs, but the lack of understanding of these devices, and their relatively high complexity resulted in the project never getting off the ground. I made a PCB for it, with all the necessary components, but we could not find anyone competent enough to help us with the HDL code for the FPGA.

5. Thank you, Marcin, so the origins of the A314 were the NEMESIS, how did it evolve into the A314?

I came up with this idea back in 2018, or even earlier - but let's stick

with 2018 for the shape and form it has today. It started something like this: "Why isn't the trapdoor expansion port used for more interesting things than just adding chip mem?" It may seem like an odd question to ask, but that is a trait I have; to think outside the box, and to see possibilities others may have overlooked. Simply, I have an issue with rigid rules and conforming to standards. Sometimes (actually, quite often) I do things just because they can be done, and less because there's an actual need for them to be done (my way).

In the case of the A314, there was a nice coincidence where my need for obscurity met actual real-life needs.

The first A314 was the -500 model because it fit in the A500's trapdoor port. That port is not a full-fledged computer bus like the side-car connector, but rather an extension of the Fat Agnus DRAM bus. This means it is restricted in what it can provide to just DRAM memory. The access cycles aren't ordinary CPU cycles, but ones optimised for accessing DRAM chips with all the peculiarities that come with them.

So, to make "something else" that still sits in the trapdoor slot, this "thing" had to expose an emulated DRAM as its interface since that is the only thing Fat Agnus expects from that port. So how do you do anything useful with an emulated DRAM?

By this time my thoughts and ideas had caught the attention of my friend Niklas Ekstram, at the time a frequent visitor at the SUGA HQ in Stockholm. I myself am a long-time member of the Swedish User Group of Amiga, and that is where this idea was born.

Being rather well-informed about the Amiga architecture, we recognised that there is the concept of DMA, which is widely used within the Amiga itself. DMA means that multiple devices in the computer may access its memory. Up until then, computers were built around the idea that the CPU was the only device that used/accessed RAM (with a few exceptions). Amiga on the other hand, used the RAM as a shared resource that any device in the machine may use. Some devices were primarily readers of memory, others just wrote information to it, whilst most did a little of both. This was a unique concept that the Amiga was built around, and why the commercial people at Commodore kept chanting about "the many co-processors". Simply put, DMA means load sharing. How does this come into play with a Raspberry Pi, you may ask?

Well, the A314 is just a shared memory resource between the Raspberry and the Amiga. With the little "trick" that it is done so fast, that the Amiga hardware with all its processors and what have you, doesn't even notice the presence of the RPi. Only made possible by the 30 years of semiconductor evolution since the golden Amiga years.

The trapdoor memory expansion was designed by the Amiga engineers to be exclusive to the FatAgnus chip memory controller, and there was no support for DMA in that specific part of the hardware. But being blazingly fast, the A314 (or more specifically, Niklas HDL code in the FPGA that is so fast) moves data in and out of the emulated DRAM in between the Amiga/FatAgnus accesses. Hence the DMA we do goes by without interrupting the normal work of the computer! In fact, there is no way for the Amiga to tell that it is an A314 in the trapdoor instead of an ordinary A501 expansion.

This feature is what makes the A314 100% safe and compatible with all existing software. If you don't invoke the specific A314.device, it will just continue on emulating an A501. So here we come to the second part of the A314 clever implementation (if I may say so myself)

How does the Amiga switch on the full features of the A314?

That is done using the RTC...

The Amiga 500 was a cost-sensitive computer, aimed at the equally sensitive home market. This is why Commodore told the Amiga engineers to save costs wherever possible during the design of the A500, and so they did. One of the first parts that got excluded, was the Real Time Clock. At the time (pun) home computers rarely had proper timekeeping. And since there was no global standard for acquiring time remotely, the machine had to have a battery-backed chip that kept a clock and calendar running even when power was out. A500 didn't have an RTC, but if you bought the A501 memory expansion, it came with such a device. So does the A314-500, as it has to emulate all aspects of the A501.

Within the tiny memory map of the RTC module (it has 16 addresses/registers), there were a few bits - yes, we're talking single bits here - that were unused, and those bits are utilised by us to initialise signalling between the Amiga a314. device driver, and the Raspberry Pi "a314d" daemon service. Once the services and drivers are up and running, they agree upon a reserved area of the shared A314 memory to use for fast data transfer between the two computers throughout the remainder of the session. A new/different shared memory area is negotiated every time the Amiga is powered up. The reason for this awkward setup, compared to the more common "secret handshake" method, is to guarantee that no random combination of data in the emulated chip memory, will ever interfere or inadvertently cause issues with the A314. This is why we can say with absolute confidence that unless initialised, the A314-500 is 100% compatible with the A501, and thereby all existing Amiga software.

6. Can the Raspberry Pi be used for more functions in the Amiga?

Although the Raspberry Pi is a complete Linux machine, from the perspective of the Amiga, it's just a co-processor - a little helper that does away with tedious tasks, like SSL website decrypting or MP3 audio decoding - so the Amiga can carry on being it's best, being an Amiga.

For this to work well, ie. to cater for a nice user experience, make sure your Amiga PSU is in good shape. Most of the complaints and issues we have heard over the years come from old, out-of-spec PSUs with ageing capacitors and other worn-out components.

7. What made you turn to Raspberry Pi as a solution?

During the development period, the Raspberry Foundation had released the Raspberry Pi, and I had been working with various SBCs (Single Board Computers) at work over the years, so was quite comfortable with them. And it was at this point that the idea of putting an RPi in the trapdoor slot of an A500 was born. Actually, when I initially presented the idea to a bunch of guys who were hanging out at our club HQ, it was met with scepticism and dismissal. Most of them had already lost hope in the NEMESIS, and they thought this was another of my wild and unrealistic ideas. However, at that time there was a new guy who had joined recently: Niklas Ekstram. He sat mostly coding some demos in Assembler or playing his favourite Amiga game, Silkworm. He had overheard our discussions, and instead of joining the choir of dismissal, he replied "I think it is doable. And I think it is a realistic goal." And so I began my friendship with Niklas, and the beginning of the A314 story.

8. Was it a difficult road to the A314?

Now, that story wasn't a straightforward path to success, because none of us still couldn't code a single word of HDL, nor had we done any such similar project before. But we were stubborn and kept on iterating through several hardware designs until one day we had something that worked. I must say that this would have been impossible without Niklas's fantastic ability to read and comprehend any type of programming code. It seems that reading programming languages is to him as obvious and natural as reading English or Swedish. That is unfortunately not the case for me. My skills reside in the graphical spectrum, having designed PCBs since the

Amiga days of the early 90s. (At the time, actually using an Amiga and the German ECAD suite 'NewIO') After some time, and me attending HDL training to no avail, we split up the work such as I designed the hardware, while Niklas wrote *all* the soft- and firmware. It was a tremendous amount of time spent, especially from Niklas part, who had not only written the HDL code for the FPGA but also designed and coded the framework that includes drivers for both platforms, *and* all the applications on top of that, that were using this elaborate system. There is really a lot of advanced programming behind the A314, but maybe it's better if Niklas explained that himself.

Once we had a working version of the A314-500, it was released publicly on GitHub: <https://github.com/niklasekstrom/a314> and shortly after, I brought it with me to Amiga34 in Neuss in Germany. There it caught some attention, but I think it was only a few people who grasped the 'greatness' of having an RPi as a co-processor in the Amiga. One of them who did was Claude, who later created the PiStorm accelerator. I don't think, however, that the A314 was the spark for the PiStorm project even though Niklas has helped Claude with various bits and pieces over the years since. And as you probably know, parts of the A314 software suite have been ported over to PiStorm.

After the successful 'launch' of the A314-500, I went on and made an 600 version for the trapdoor slot of the A600. It was a straightforward revision, as both machines have much in common. The main difference is that all A600s come with the newest Fat Agnus 8375 that can handle 2MB of chip RAM. Further, Commodore engineers had for some reason made a signal accessible in the A600s trapdoor, that would allow a device to disable the onboard chipRAM on the motherboard, and thereby provide all of the 2MB chip from the trapdoor port. This was an unexpected feature, that we of course take advantage of in the A314-600. For the -500 there are various hacks to do the same thing, but they require not only upgrading your Fat Agnus, but some cutting and soldering to the motherboard as well.

9. The original A314 for the A600 and A500 which were designed by you are different from the A314-cp, how did the A314-cp come about?

Now we are somewhere in the beginning of 2020, and the pandemic is beginning to show its effects. The chip shortage didn't come until late 2020 or the beginning of 2021, but somewhere around this time, the main chip of the A314, the Intel MAX10 FPGA disappeared from the market and is largely gone until this very day. Since our design was heavily dependent on that chip, there wasn't much we could do, or at least that is what I thought. Until the previous summer of 2022, when (almost) without warning, Niklas messaged me with photos of a device he had designed, built and of course programmed himself. That was the Clockport-Pi interface:

https://github.com/niklasekstrom/clockport_pi_interface

Later, it became called the A314-cp (for Clock Port), due to its functional similarities with the previous A314s. However, this device uses a different approach for communication between the platforms, which you will have to ask Niklas about the details. On a high level, it is still a shared memory that is accessible from both the Amiga and the RPi, but it is not part of the ordinary Amiga memory map, like the A314-500 and -600 is, and it has its own driver model. I decided to make my own variation of the -cp PCB layout, mainly because I wanted to streamline it for mass production, and there were some minor things I thought could be done differently. That, and that I wanted to take advantage of the fact that the RPi Zero was completely free from components on one side, and so could be mounted flush with the A314-cp board, making for an extremely compact unit.

Thank you for your time Marcin, we wish you and Niklas the best of

luck with the A314 project.

10. Since we are nearing the end of the interview we always ask our guests, how many Amigas do you own?

Oh, this is almost embarrassing, but to date, I have 2 x A500s. 4 x A600s 3 x A1200s, 3 x A2000s, 1 x A3000, 1 x CD32 and 3 x CDTV's. The reason for having three is to have one for development and experiments so that you won't lose any sleep if it breaks (ie. ugly exterior is ok), one that is the "proper" one, and one for redundancy/spare in case something happens to the primary machine.

11. And what is your favourite Amiga model?

Hmm, that would be the CDTV, but actually any model from the "original" 16-bit machines. And that comes down to my skill level, or rather a willingness to learn about their hardware architecture to such an extent where I feel I have a, if not complete, then at least a very good grip on how they operate (at a hardware level). I guess I could learn about the 32-bit ones too, but for now, I feel it's kinda "not worth the effort". There are enough 16-bit Amiga platforms for me to make hardware for.

13. Finally, where do you see the Amiga scene 10 years from now?

Right now we're in a sweet spot for the Amiga, as many of us who remember the platform from our youth, have come to a point in life where we can afford it and actually spend both a lot of time but also substantial amounts of money on it. Not too far from now, the hype will move on, and instead, we will see devices from the late '90s and early 00' being focused on as "retro", and so on. The Amiga retro scene will dim down to a smaller community of true enthusiasts, and eventually when we who "grew up" with the Amiga have passed away, then (hopefully) a new generation will take over. They won't be attached to the Amiga out of nostalgia, but rather a genuine interest in the hardware and software of early, commonly accessible, computing. Much like those tinkering with really old cars from the early 20th century. This doesn't answer your specific question of "10 years from now", but my guess is that we will be somewhere along the line I described.

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Links

www.amiganews.net/en/

One of the most up to date and comprehensive sources for Amiga news from around the globe.

www.eab.abime.net

English Amiga Board, the majority of the users are from Europe, a very friendly and helpful Amiga forum.

www.exxoshost.co.uk

The resource if you need help or information about the new Terrible Fire cards.

www.amibay.com

A great place for buying and selling Amiga hardware, they also have some very nice people to give advice about. Of recent it has become very hard to register on the website since their server migration.

www.amiga.org

Probably the longest running Amiga forum on the world wide web, most American Amiga users are on this board.

www.amigaworld.net

Another large Amiga website covering all Amigas, includes news, discussions and classifieds.

www.amigans.net

English Amiga website covering next generation, emulation and classic Amigas.

www.amigafuture.de

The longest running Amiga print magazine, issues are available in English and German.

www.amiga-addict.com

Newest English Amiga print magazine, if you are missing the likes of Amiga Power and Amiga Format, then this is the magazine for you.

www.ka-plus.pl

Commodore and Amiga print magazine available in English and Polish. Lots of games content.

mancave-ramblings.blogspot.com

Our own John Scolieri's personal website.

If you have a link that you would like added to list
contact: submissions@whatiff.info

Welcome to the Amiga vendors section!

Amiga Vendor Links

Alinea

<https://www.amiga-shop.net>

Amedia Computers

<https://www.amedia-computer.com>

Amiga 68k

<http://amiga68k.com>

Amigakit

<https://amigakit.amiga.store>

Amiga MC1

<http://amiga1.com>

Amiga Shop

<https://www.amigashop.org>

AmigastoreEU

<https://amigastore.eu>

Amiga on the Lake

<http://amigaonthelake.com>

Arananet Retro Products

<https://www.arananet.net/pedidos>

Arcade Shopper

<https://www.arcadeshopper.com>

BuyElbox

<http://buy.elbox.com>

Electronics Is Fun

<https://electronicsisfun.com>

GGs Data

<http://www.ggsdata.se>

My Amiga Shop

<https://shop.myamigashop.com>

Relec

<http://www.relec.ch/fr>

RetroAMI

<https://retroami.com.pl>

Retro Passion

<https://www.retropassion.co.uk>

Retro Ready

<https://retroready.one>

Sell My Retro

<https://www.sellmyretro.com>

Retro Rewind

<https://retrorewind.ca>

Sordan

<https://sordan.ie>

Tindie

<https://www.tindie.com>

Vesalia

<https://www.vesalia.de>

#Amiga Vendor Links - WhatIFF? Issue 2.10 - June 2023#

Welcome to the Amiga Groups section!

Amiga Group Links

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*****
*                                     *
*   United Kingdom United States Canada Germany Sweden
*                                     *
*   France Belgium Czech Republic Denmark Finland
*                                     *
*   Australia Russia Ireland Scotland Malta Japan
*                                     *
*****
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#Amiga Group Links - WhatIFF?#

uk

Amiga Group Links

United Kingdom

Amiga North Thame

<http://www.amiganorththames.co.uk/>

Birmingham Amiga Group

<https://www.facebook.com/groups/BhamAmigaGroup/>

LINCS Amiga Group (LAG)

<http://lincsamiga.org.uk/>

Norwich Amiga Group

<https://norwichamigagroup.co.uk/>

North West Amiga User Group

<http://www.bambi-amiga.co.uk/spudmiga/nwag/index.html>

South West Amiga Group

<http://www.southwestamiga.org.uk/>

#Amiga Group Links - WhatIFF?#

usa

Amiga Group Links

USA

Sacramento Amiga Computer Club
<http://www.sacc.org/>

Central Texas Amiga Computer Society
<http://main.org/ctacs>

Central New York Amiga Computing Enthusiasts
<https://www.meetup.com/CNY-Amiga-Computing-Enthusiasts>

Central Texas Commodore Users Group
<https://www.meetup.com/Central-Texas-Commodore-Users-Group/>

Metroplex Commodore Computer Club
<http://www.amigamccc.org/>

Southern California Commodore and Amiga Network
<http://www.portcommodore.com/dokuwiki/doku.php?id=sccan:start>

Fresno Commodore User Group
<http://www.dickestel.com/fcug.htm>

Westchester Amiga User Group
<http://www.westchesteramigausergroup.org/>

Amiga Computer Users Long Island
<https://www.facebook.com/groups/202303702519>

Southeast Amiga User Group
<https://www.facebook.com/groups/SoutheastAmigaUserGroup/>

Stamford Peterborough Amiga Group
<https://www.facebook.com/groups/spaguk>

The Other Group of Amigoids
<http://togausergroup.org/>

#Amiga Group Links - WhatIFF?#

canada

Amiga Group Links

Canada

Amiga Computer Users of Edmonton
<http://www.amicue.org>

Amiga Users of Calgary
<http://www.amuc.ab.ca>

Toronto PET Users Group (TPUG)
<http://www.tpug.ca>

* Started in 1979, TPUG is also the operator of the annual World
of Commodore computer show.

#Amiga Group Links - WhatIFF?#

germany

Amiga Group Links

Germany

AUCB Treffen

<http://www.amigaclub-bautzen.de/>

Amiga Club Munster

<http://acmuenster.de/>

#Amiga Group Links - WhatIFF?#

sweden

Amiga Group Links

Sweden

Swedish User Group of Amiga
<http://suga.se/>

Amiga Computer Group
<http://www.amiga-cg.se/>

Syntax Society
<http://www.syntaxsociety.se/>

france

Amiga Group Links

France
Triple
<http://www.triplea.fr/>

AFLE
<http://afle.free.fr/>

AmigaPower
<http://www.amigapower.net/>

#Amiga Group Links - WhatIFF?#

belgium

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Amiga Group Links

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Belgium

Belgian Amiga Clubâ€™<http://www.amigaclub.be/>

#Amiga Group Links - WhatIFF?#

czech

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Amiga Group Links

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Czech Republic

Luky & Amiga Klub Forever + Czech PowerPC User Group
<http://powerpc.lukysoft.cz>

#Amiga Group Links - WhatIFF?#

denmark

Amiga Group Links

Denmark

Amiga Club Denmark
<http://www.amigaclubdanmark.dk/>

Danish Amiga User Group
<https://www.facebook.com/groups/101927439851660>

#Amiga Group Links - WhatIFF?#

finland

Amiga Group Links

Finland

Finnish Amiga Users Group
<http://saku.amigafin.org/>

#Amiga Group Links - WhatIFF?#

australia

Amiga Group Links

Australia

Sydney Amiga Users Group
<http://www.saug.org.au>

Amiga Users Group
<https://www.amiga.net.au/>

MAUG
<https://www.facebook.com/groups/MAUGr/>

Perth Amiga User Group (PAUG)
<https://www.facebook.com/groups/perthamigausergroup/>

#Amiga Group Links - WhatIFF?#

russia

Amiga Group Links

Russia

Amiga Information Center (AIC)
<http://amiga.org.ru>

#Amiga Group Links - WhatIFF?#

ireland

Amiga Group Links

Ireland

Amiga Ireland Meetup
<https://www.facebook.com/groups/amigaireland>

#Amiga Group Links - WhatIFF?#

scotland

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Amiga Group Links

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Scotland

Scottish Amiga User Group
<https://www.facebook.com/groups/626138110921245>

#Amiga Group Links - WhatIFF?#

malta

Amiga Group Links

Malta

Amiga Malta

<https://www.facebook.com/groups/amigamalta>

#Amiga Group Links - WhatIFF?#

japan

Amiga Group Links

Japan

Commodore / Amiga Fan Club Japan
<http://cfc.amiga.co.jp/>

#Amiga Group Links - WhatIFF?#

#Amiga Group Links - WhatIFF? Issue 2.10 - June 2023#

Cover Disk Number 2

June 2023 Cover Disk Contents

For this issue I am very excited to have a demo of in development game Hamulet. Inside the WhatIFF? drawer you will find the Hamulet drawer. The game can be run from Workbench, or be written to an ADF if you wish to try it on a machine without a hard disk. Just a few words from Remi before you try the game.

We are excited for you to try out this Hamulet demo. Just a heads up, it is for promotional purposes only and is not for resale. Since the game is still in development, the demo may contain bugs or incomplete features and may not represent the final product. Thanks for understanding and have fun playing!

If you have any technical issues or questions please contact us at: submissions@whatiff.info or visit Remi's website:

=> <https://remantic.com/>

The rest of the content in the cover disk are images relating to reviews and guides. I hope you will enjoy this issue's cover disk, if you enjoy the demo please contact Remi to let him know.

What's coming up in the next issue?

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Next Issue - 2.11 September 2023

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I hope you enjoyed our 10th issue, it has been a pleasure seeing the magazine grow over each issue with more content. While it might be hard to top this issue we already have some plans for the next issue and they are the following. Reviews: ImageFX 4, AmigaKit LED Lights, OmniPort and the CD32 Disc Reference Guide. In addition we will also have guides for Brilliance, LightWave, how to create a digital scrapbook in ImageFX and possibly a guide on beginning in RedPill. Alongside that we should have the usual interviews, game reviews and hopefully Kevin Saunders and Steve Lord back again. See you next issue in September!

#Next Issue - WhatIFF? Issue 2.10 - June 2023#

Meet the writing staff of WhatIFF?

Writing Staff

WhatIFF? is an independent magazine created by Amiga enthusiasts from around the world looking for a more serious magazine. The main writers at the moment are a small group but hope to grow in coming issues.

* Main Writing Staff *

Ivan Sorensen

John Scolieri

Kevin Saunders

Rob O'Malley

Steve Lord

Timo Paul

We are always interested in new articles, guides or stories, if you have something you wish to submit please send it to:
submissions@whatiff.info

#Writing Staff - WhatIFF? Issue 2.10 - June 2023#

timopaul

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Name: Timo Paul

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amifan (EAB)

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Websites:
www.whatiff.info
www.binarybeats.xyz

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Bio:

My journey with the Amiga started in either '87/'88 when the family got an A500 (Back then it was a computer for the whole family), I remember the monitor and A500 boxes almost being as high as myself. Before this time I had only been exposed to the ZX Spectrum and C64, using the blue Workbench for the first time was an amazing experience. When I saw DigiPaint in action I could not believe my eyes. From that moment I was a devoted Amiga user going through various Amigas, A500+A570, A600, A3000 and A1200. Over the years my Amiga has been used to creating digital artwork and for making or shall I say trying to make music. Then in the year 2021 I decided for some crazy reason that the Amiga scene needed a digital magazine similar to Amiga Report. It was my intention to have something that picked up where the great Amiga magazines such as Amiga World and Amazing Computing left off, providing a more serious look at Amiga usage through tutorials and reviews.

stevelord

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Name: Steve Lord

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Aliases:
stevelord (EAB)

Contact info:
stevelord@whatiff.info

Websites:
www.thedorkweb.substack.com

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Bio:

Steve enjoys doing impossible things on his Amiga 4000 and CDTV. Whether it's using his CDTV for email, playing Internet radio through his bluetooth speakers from his Amiga 4000, or talking to the world via the ISS from either. If people say the Amiga couldn't do it, he's probably looking for a way to do it. Steve writes his WhatIFF articles mostly using Arnor ProText.

johnscolieri

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Name: John Scolieri
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Aliases:

klx300r (EAB)
328gts (amigans.net)
aGS@C64_AMIGA (Twitter)

Contact info:
johnscolieri@whatiff.info

Websites:
mancave-ramblings.blogspot.com

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Bio:

Like many Amiga users my first computer addiction was the mighty Commodore 64! One day close to Christmas of 1986 I drove to my local Commodore store called Comspec...I was in high school and played rep hockey at the time and didn't have the time I used to when I was in grade school to visit Comspec each weekend to check out the latest magazine and games. Imagine my surprise when I stepped into the store and immediately in front of me was THE AMIGA! It was looping the Defender of The Crown intro and I fell in love instantly! From that day on it was my mission to buy that Amiga but I had just worked a few part time jobs to help pay for my first ever used car and didn't have a hundred bucks to my name lol. The Amiga was close to \$2,000 Canadian dollars (after taxes) and unlike my C64 my parents didn't fall for the 'I need it for school' rant again.

To (try) to make a very long story short I didn't save up to buy my Amiga until I started University in 1989. In the mean time I saw another Amiga called the Amiga 500 at Comspec and it was a lot cheaper than THE AMIGA but my eyes and heart and soul were only set on THE AMIGA! When I finally bought it that was the proudest/happiest moment I've ever felt and I jumped straight into University with Excellence! word processor and Logistix spreadsheet/ database. In my 2nd year I bought my first ever hard drive, a whopping 33MB which had its own case which sat atop my Amiga 1000 case. Later fast ram side cars showed up and I mingled with Manx Aztec C compiler in computer science class. Of course all the great games with awesome music/sound effects made my Apple/PC friends envious!

By my 3rd year we had a small Amiga computer club and a few of us got our first accelerator boards for our Amiga which was called LUCAS and was based on a design in a Transactor magazine. It had a 68020 at 16 MHz with FPU on it and it really helped out with the more complicated spreadsheets and compiling programs. Life was good, the internet was just starting up, I graduated University and got my first full time job and then the bad news of Commodore going bankrupt hit the newspapers, magazines, and BBS boards! There was so much activity going on still in user groups and computer stores so us Amiga users just figured that it would sort itself out. At work there were only PC's running AutoCAD and I despised using the early Windows systems and couldn't wait to get back home to my Amiga. Over the years busy with work and 'adult life' many of my Amiga friends moved on to PCs and I ended up getting my first Amiga 1200 and later Amiga 4000 for great prices. I was still amazed how the Amiga community was still active and so helpful up to the early 2000's. By then I was married and working harder than ever to save up to buy a home instead of

renting an apartment and my Amiga's were left at my parents house until around 2010 or so I read about a brand new Amiga which was coming out based on PPC CPU called the AmigaONE X1000 running a new AmigaOS4. I was skeptical at first after hearing about the technical issues with the earlier SE, XE boards with the initial AmigaOS4 release but after consulting with some friends I joined the beta test team to get one of the first X1000 boards and I immediately felt at home with AmigaOS4.1 and have used it as my home Amiga ever since. Once I got some space set up in my house I got my Amiga's out of my parents house finally and eventually my original Amiga 1000 sits next to my AmigaONE X1000 and original C64 and of course my Amiga 1200 and 4000 came along too and with new accelerator cards and ram boards and spare motherboards and parts etc etc etc. Here I am today grateful to the Amiga computer and especially to the amazing Amiga community who back then and today has always been resilient, creative and helpful !

kevinsaunders

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Name: Kevin Saunders
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Invent (EAB)

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Websites:
www.patreon.com/KevinSaunders
www.youtube.com/KevinSaunders
www.twitter.com/invent71
www.instagram.com/invent71/
www.ko-fi.com/kevinsaunders

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Bio:

My journey with the Amiga started around 1988, The first time seeing the Amiga 1000 in the shop window playing animations such as the Amiga Juggler I fondly remember. My Brother and I saved up for an A500, and eventually bought an A4000 (cybervision 64 card) and then an A1200 with an 030 accelerator. I loved collecting every Amiga Magazine with demo disks. My interest in game designing for the Amiga started with deluxe paint and I did dabble with The Miracle Keyboard but that skill in music didn't last. It is because of the Amiga that I now work in video animation and game design.

ivansorensen

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Name: Ivan Sorensen
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Aliases:
Weasel Fierce

Contact info:
ivansorensen@whatiff.info

Websites:
everydayamiga.posthaven.com

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Bio:

Danish Amiga fan since the 90s. Started with a 1200 and a 1200 is my machine today. I am interested in the casual and the philosophical aspects of the Amiga computer.

My cats enjoy Turrican.

robomalley

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Name: Rob O'Malley

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Aliases:
anaki rob
Mr.Roboto

Contact info:
anakirob@whatiff.info

Websites:
systemofsound.org

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Bio:

Rob has been making music on Amiga ever since in the mid to late 90's his guitar teacher suggested that he get a drum machine to practice along to, and he instead opted to use OctaMED on his Amiga 500+ with A590 to craft beats and basslines

Favourite quote:

'...all she wanted to do was play with my ears all night' :P

danielreimann

Name: Daniel Reimann

Aliases:

Contact info: daniel_reimann@freenet.net

Websites: Translator for www.amiga-news.de

