C I R C U M L U N A R
T R A N S M I S S I O N S

Issue One
May 2021
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## Preface

Back in February, around the time of the ogre incident, Jone wondered out loud on the circumlunar.space BBS, telem, about the possibility of a CS zine. The idea was well-received by the rest of us sundogs, and for some time, talk of the zine flooded telem as we proceeded to howl at the moon in excitement. Amidst this jubilee, I somehow ended up wearing the proverbial editor pants--for this inaugural issue, at least.

Anyone who has had the pleasure of perusing the many phlogs and gemlogs here at circumlunar.space will be aware of the impressive diversity of interests, talents, and backgrounds of the sundogs residing here. It will be interesting to see how these influence the zine over time, but currently what the zine is and how it will be produced is largely still up in the air. It's really just a fun experiment, and this first issue is a kind of pilot episode.

The strategy of this first run has been to just get it out there. Rather than prematurely exhausting our energy on determining what it should be, or pidgeonholing ourselves into a niche or format without actually having produced any content, we elected to first just give it a go and see what we get. So for this first issue, we have what has been endearingly termed a "topic salad." And I believe it has turned out to be quite a nutritious one at that.

Circumlunar Transmissions will be distributed exclusively over Gopher and Gemini by whoever would like to host a copy on their own gopherhole or capsule. That is, anyone can clone the git repo of the project and serve its contents from their own smolnet space. This kind of "newstand" method of distribution solves a lot of the logistical issues of where and how to bi-host such a thing in an accessible way. In addition to Gopher and Gemini editions, we intend to provide printable formats that readers can easily print-and-bind for their own enjoyment offline or to distribute locally.

It has been a pleasure to contribute something to this wonderful community of thoughtful and creative individuals whom I respect and admire sincerely. During my relatively brief inhabitation of the Zaibatsu, I've learnt a great many things and have been inspired to create and wonder about things I would not have otherwise. It is with profound gratitude and pride for this habitat and its inhabitants, and the smolnet ecosystem at large, that I present to you this first issue of our smolzine, Circumlunar Transmissions.

~mieum
April 25, 2021
Incheon, Korea

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## The Circumlunar Mixtape

The Circumlunar Mixtape is an ongoing series for Circumlunar Transmissions where one user per issue shares 10 tracks they have been listening to. Y'all have all kinds of

ways to stream or otherwise find and listen to music, so tracks are just listed and it is on the reader to locate them. As a courtesy, when a weblink to streaming is available playlist curators may choose to supply it.

## sloum's covid-year playlist

These are songs I have listened to at various points throughout the last year. Some are old some are new. It has been a weird year and this is a kind of weird mix. I provided Bandcamp weblinks for each track except the Charlie Parr, which is a Youtube link because I like this song live and this is my favorite performance recording of it and the recording doesn't appear on any of his albums.

Enjoy!

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Format: [track name] by [artist name] from [album name]

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https://adriannelenker.bandcamp.com/track/forwards-beckon-rebound Forwards Beckon Rebound by Adrianne Lenker from Songs
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https://talons.bandcamp.com/track/catamaran Catamaran by talons' from Songs for Boats
=> https://www.youtube.com/watch?v=P46hGYUycoE Possessed By the Devil by Charlie Parr from N/A (live video on Youtube)
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https://pinback.bandcamp.com/track/some-voices Some Voices by Pinback from Some Voices e.p.
=>
https://tomomusic.bandcamp.com/track/get-to-know-you Get To Know You by Tomo Nakayama from Melonday
=> https://lusine.bandcamp.com/track/just-a-cloud-feat-vilja-larjosto Just a Cloud by Lusine from Sensorimotor
=> https://slint.bandcamp.com/track/good-morning-captain-remastered Good Morning Captain by Slint from Spiderland (Remastered)
=>
https://humband.bandcamp.com/track/step-into-you Step Into You by Hum from Inlet
=>
https://windhand.bandcamp.com/track/kingfisher Kingfisher by Windhand from Grief's Infernal Flower
=>
https://nilsfrahm.bandcamp.com/track/nue Nue by Nils Frahm from Wintermusik

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Ask Jone

-- Do you have a problem? Send your questions to joneworlds@mailbox.org

W. asks:
> "I have a strained relationship with my
> sister. What are some things I can do to
> help repair it?"

I remember my dad and I went through this patch where we were both pretty pissed off at each other, not that I remember why at this point. But sharing is caring, right? So to keep things going, I'm still dropping off cans of Chunk'n'Dunk soup for him, because it's all he ever feels like eating anymore. Although that stuff is just not very nutritious.

But because I'm mad at him, I don't bother to bring his favorite, the meatball-carrot stew one. Instead, I bring him can after can of turkey-a-la-king. You ever try that one from Chunk'n'Dunk? Not great. And I guess dad's thinking along the same lines as me, because every time I come by he leaves me another pair of snow tires he found. But I'm not selling tires any more by then, so I don't want them. And he knows that, but he keeps on getting tires anyhow.

And so we go on like this for weeks: I come by and put like 5 more cans of turkey-a-la-king on his kitchen counter, and he stacks a few more snow tires outside his door for me. And all this stuff is piling higher and higher and higher, and we're gradually getting madder and madder at each other. Until one day I go over there with another box of cans, and he starts screaming and yelling about how he hates turkey-a-la-king. And he gets so mad he accidentally knocks over the stack of cans. And some falls on his head and he falls over, and the rest of the cans come crashing down on him. Pretty bad scene. So I go to help him up, but I slip and trip on a can on the floor, and hit the ground hard too. And if you've ever fallen on a pile of Chunk'n'Dunk turkey-a-la-king cans, you know that hurts pretty bad.

So we're both groaning on the ground, and then there's this weird sound by the front door. When I get out there to check it I find that co-incidentally the big pile of snow tires out there has also fallen over, and it's crushed some unlucky little gnome who must have been milling around by there. Those things are so bad at staying alive, I just can't believe it sometimes.

Anyways, if you're looking to patch things up with your sister, I would say maybe don't do it with canned soup, or snow tires. It sure didn't help us any. It just wasn't a good result for anyone, especially for that gnome. Or if you have to go with soup, at least stick with the meatball-carrot one. It's actually not bad.

Thanks for writing in. I hope that helps.

-JONE

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Manifesto of a Granular Ideologue
by tfurrows

Passing Thoughts
of an Impractical Idealist

Our ancestors stood on the banks of the Euphrates and cast their ideas into the inexhaustible current. First they cast in words, ephemeral. Then they learned permanence; epochs brought clay tablets and papyrus, script and type, bits and clouds.

Permanence dammed the river, a logjam of ideas tossed in as if each was a consummate standard. Life-giving waters slowed, intelligence waned, the elastic mind seized and crumbled. The word manifesto dates to the fourteenth century, but the notion dates to our earliest written conclusions.

This is not the manifesto to end all manifestos. It is a message in a bottle that few will find. It is a loose model for dealing

with the mountainous dam of manifestos that stop the flow of creativity, passion, and progress. At the risk of making the problem worse, I proffer:

From a Message in a Bottle,
Sitting Atop the Dam of Manifestos

* Let your mind move freely, become a seeker
* Accept that knowledge is scattered broadly
* Find kernels of truth and germinate thoughts
* Take something from every ideology, fear nothing
* Subscribe to that which you find value in
* Mistrust labels, they carry unimaginable baggage
* Acknowledge all that came before, but accept the utility of your journey
* Never believe that you have the best vision for the world
* Don't try to fashion the world to your ideals; your ideals are cursory
* Be a maximal minimalist, distill purity from immensity
* Find, purify, share, repeat
* To conclude means to cease to grow

<tfurrows@circumlunar.space>
<tfurrows@sdf.org>

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What's the Deal with Leap Seconds?
A Brief Overview of Timescales
by solderpunk

Astronomical Seconds

Why is a second as long as it is, and not a little shorter or a little longer? This is a seemingly simple question which leads down a deep and delightfully twisted rabbit hole. It's something that I wish Neal Stephenson had written an epically long, inexplicably compelling 1990s Wired article about, in the spirit of his "Mother Earth, Mother Board" or "In the Kingdom of Mao Bell". But he didn't, so you're stuck reading this, instead: a brief, incomplete, possibly slightly inaccurate overview based on my own characteristically obsessive reading on the topic over the past week or so.

For most of the time that the concept of the second has been around, its length has been defined implicitly by that of the day. Everybody knows the answer to "why is a day as long as it is?" - one day is the time it takes the Earth to complete a single revolution about its axis. And since there are 60 seconds in a minute, 60 minutes in an hour and 24 hours in a day, a second is simply one 86,400th of the time it takes the Earth to rotate once. Or, if you like, a second is the time it takes for the Earth to rotate one 240th of a degree, out of the full 360. End of story, right?

Well, no. This is a perfectly sensible way to define time - for some applications, it's the best way to do it. This astronomically defined time scale is still in use today in certain contexts. The official name of its modern incarnation is Universal Time, or UT (technically, there are a few subtly different variants, denoted UT0, UT1 and UT2, but we'll gloss over that here). The official determination of UT nowadays is based mostly on measurements made at observatories tracking the movement of distant radio sources across the sky as the Earth rotates. This is easier than making precision measurements of the sun, but is still measuring the exact same thing.

Earth is a Nice Place to Live,
But it's not the Best Clock

The problem with an astronomical definition of the second is this: the Earth doesn't actually rotate at a perfectly constant rate (it wasn't until the 19th century that we could build clocks accurate enough to notice this). In fact, the Earth's rotation is slowing down. Very slowly, of course. Every century, a complete rotation takes about 2 milliseconds longer than it used to. The rate of slowing down is not steady. Some years the change is more and other years it's less. In fact, even though the overall trend is one of slowing down, some years the rotation actually speeds up. The dynamics of the process are complicated, and we can't make accurate long term forecasts. Gravitational interaction between the Earth and the moon is the primary driver, but the movement of tectonic plates and friction between Earth's surface and its atmosphere and oceans have their say, too. The Indian Ocean Earthquake in 2004 was powerful enough to shorten the length of a day by 2.68 microseconds. There are even periodic variations in the rate of rotation that we just don't understand the cause of yet. But the take home message is that, whatever the causes, astronomical seconds actually have small, random fluctuations in their duration over long time spans. If you define the second by looking into the skies, no two seconds are exactly the same.

That's a pretty inconvenient property for the official definition of a fundamentally important unit like the second to have. For most of the time this definition was used, the fluctuations were smaller than we could reliably measure. Certainly, they weren't enough to have an impact on everyday life. Nobody was going to be late to lunch because of the Earth's unsteady rotation. But by the 20th century, scientific and technological progress meant these tiny fluctuations started to matter, as we began measuring natural phenomena and building machines which operated on very small time scales. A 10 megahertz radio oscillator, for example, has a period of 0.0000001 seconds - only 100 nanoseconds! Gigahertz radiation, which is important in radio astronomy and was used for communications and radar during WWII decades before it came to underpin modern technology like GPS, WiFi, and mobile data networks, has periods measured in *picoseconds*. Even very, very small variations in the length of a second are enough to make the measured frequency of radio waves change, even if the *actual* frequency is fixed. Modern technological society simply couldn't be built using a wobbly clock like the Earth.

Atomic seconds

Fortunately, in the 1950s, atomic clocks were invented which kept time better than any previous mechanism. I'll gloss right over the details, but suffice it to say, we came up with a new way to define the second which involved measuring the properties of caesium atoms instead of looking at things moving through the sky. In 1967, the relatively young International System (or SI, for the French "Système International") of units redefined the second on this basis. The new atomic second was defined such that it had the same length as the astronomical second in use before it, as far as measurements at the time could tell, but it had the added bonus that the length of the second was then fixed and unchanging. Caesium atoms at a given temperature "vibrate" (very loosely speaking) at a frequency which, as far as we can tell, is completely and perfectly stable, and which can be measured very accurately in a sufficiently advanced laboratory.

With the arrival of atomic seconds, a new time scale was also defined: International Atomic Time (or TAI, for the French "Temps

Atomique International"). At midnight on January 1st in 1958, TAI and UT were perfectly synchronised. Ever since then, they have slowly but surely drifted apart. The seconds of TAI are of perfectly unchanging length (as measured by averaging hundreds of atomic clocks all over the world), but the seconds of UT fluctuate with the Earth's rotation. The accumulated drift up until now is a little less than 40 seconds, but it will continue to grow, without limit. And while the perfectly uniform seconds of TAI make it the perfect tool for some tasks, this drift apart from UT makes it problematic for others. If you go outside at noon UT in Greenwich, England (or anywhere else at 0 degrees longitude), the sun will *always* be high in the sky. This is true today and it will be true in a thousand years, Because UT is fundamentally linked to the Earth's rotation. TAI, on the other hand, is fundamentally divorced from it. Thousands of years in the future, there will come a day when, according to TAI, the sun rises in Greenwich at midnight.

This isn't just an abstract concern for the distant future. In the late '50s when TAI was defined, it was still common for ships at sea to figure out where they were by using a sextant to record the position of the sun above the horizon at a certain time and consulting a printed table of conversions. For this purpose, ships carried the most accurate clocks they could afford, and compared them regularly against true UT time using time signals broadcast by radio stations all over the world. Celestial navigation works very well when using a timescale which is tightly linked to Earth's rotation, and hence the position of things in the sky. But if the radio time signals switched to broadcasting TAI instead of UT, celestial navigation would become increasingly less accurate as TAI drifted further out of synch with the Earth and the stars. This meant that the "new and improved" TAI time scale wasn't actually an improvement for everybody.

Coordinating chaos

Instead of broadcasting two different time signals for different purposes, which could easily lead to confusion, on January 1st in 1960 the powers that be (back then that was the International Time Bureau, or BIH, for the French "Bureau International de l'Heure", but today the torch has been passed to a combination of the International Bureau of Weights and Measures, or BIPM, for the French "Bureau International des Poids et Mesures" and the International Earth Rotation Service, who have the gall to abbreviate the *English* version of their name and go by IERS) defined yet another time scale, in an attempt to achieve the best of both worlds and make everybody happy. Enter Coordinated Universal Time, or UTC - at last, something normal people have heard of!

The abbreviation UTC is a strange compromise between the English abbreviation CUT and the French abbreviation TUC (for "Temps Universel Coordonné"). This is somewhat fitting, because UTC itself is a strange compromise time scale between UT and TAI. Like TAI, UTC is an atomic time scale. Every second of UTC is exactly as long as any other, using the SI standard second based on caesium atoms, allowing scientists and engineers around the world to calibrate their instruments and reliably measure time intervals and frequencies very precisely. But whereas TAI is destined to drift ever further away from UT, to the chagrin of sailors and astronomers, UTC is kept synchronised closely enough with UT that it allows seafarers to perform celestial navigation with sufficient accuracy for safe ocean passage. This synchronisation is achieved,

like all technical compromises, using ugly hacks. It cannot be any other way, as UTC is a stubborn attempt to reconcile two desirable but fundamentally incompatible properties of a timescale: perfectly regular seconds, and synchronisation with a spinning globe whose rate of rotation is unpredictably irregular.

The precise nature of the ugly hack underlying UTC has changed somewhat since it was first defined, but for almost 50 years now, starting in 1972, the ugly hack of choice has been the leap second. The way it works is this. The difference between UTC and UT - a quantity denoted DUT - is carefully monitored. Any time it looks like that difference is on track to exceed 0.9 seconds, in either direction, UTC is kicked back into alignment by either inserting or removing a single second on one particular day. This makes UTC the *only* time scale where the number of seconds in a day is not absolutely fixed at 86,400 by definition. There almost always *are* 86,400 seconds in a UTC day, but 86,401 and 86,399 are also allowed when necessary to keep the time scale locked to the movement of the sun across the sky.

So far, there have been 27 leap seconds defined, although UTC and ATI are today exactly 37 seconds apart - the other 10 seconds come from hacks applied before leap seconds were established in 1972. All of them to date have been insertions rather than removals. They don't happen on a regular, predictable basis, like leap years (which are an adjustment for the fact that the time it takes the Earth to orbit the sun once, defining a year, is not perfectly divisible by the time it takes the Earth to rotate once, defining a day). Because the Earth's rate of rotation fluctuates randomly, sometimes slowing down and sometimes speeding up, astronomers need to be actively on the lookout for excessive values of DUT. When it's decided a leap second is needed - it's the IERS who makes that call - they are announced at least six months in advance. They're allowed to occur on either June 30th or December 31st, and are inserted or deleted at midnight UTC (which is the middle of the day in some time zones, of course) on those days. At the time of writing, the last leap second happened on December 31st, 2016. In principle, six months is enough advance warning that nobody doing anything which depends on precise time synchronisation should be caught by surprise when a leap second rolls around. In practice, it's not always so simple.

Increasing Implementation Burden and an Uncertain Future

Leap seconds have always had their critics, but at the time they were adopted, their benefits arguably balanced their associated hassle. 50 years later, this hack is starting to show its age. The advent of cheap and reliable GPS technology means that celestial navigation at sea is now rarely a matter of life or death (although some sailors still appreciate the relative simplicity of the technology it relies on), removing some of the argument for making sure UTC stays in lock step with the Earth's rotation. At the same time, the internet has come along: a massive network of computers talking to each other, with the frequent need for activity on one to be synchronised with activity on another (hence tools like the Network Time Protocol, NTP). Computer programmers *hate* leap seconds, for the same reason they hate Daylight Saving Time: they complicate time calculations (you can't accurately calculate the number of seconds between two UTC timestamps without consulting a table of when previous leap seconds were inserted) and are a frequent cause of confusion and errors,

when one system implements them differently from another its trying to interoperate with.

Affordances for leap seconds are often added to software as an afterthought - if they are added at all. Some systems represent the extra second using the timestamp 23:59:60, but others instead repeat the timestamp 23:59:59 twice (since some software will fail to parse a timestamp ending in :60). Other systems "smear" the leap second out over longer time periods, like 24 hours, to avoid problems associated with sudden discontinuities. This just leads to a whole day of small, slowly varying errors compared to non-smearing systems. Some systems, of course, forget to do anything at all. Because all the leap seconds to date have been insertions rather than removals, it's a safe bet that there's plenty of software out there which has worked correctly so far but will fail the first time a second is removed. And the Earth's rotation is going through a bit of a fast phase right now, so the first negative leap second might be looming on the horizon.

The software interoperability situation at the time of a leap second is bad enough that several major stock exchanges simply agreed to voluntarily shut down for an hour around midnight UTC in 2016, rather than risk problems by continuing to trade during the leap second. Given that a number of major web services, including Amazon, Instagram, Netflix and Twitter, experienced outages around this time, this was probably not a bad idea. Of course, simply shutting time critical services off for every leap second isn't always an option. It's one thing to shut down the New York Stock Exchange for an hour, but Air Traffic Control has to stay up 24/7. It's no surprise that increasingly many voices in the tech industry are calling for leap seconds to be abolished. Plenty of people are very unhappy with that idea, of course, not to mention there's no consensus on what to do instead.

It's far from clear what the future holds for the leap second. As software continues to eat the world, the headaches leap seconds cause are only likely to get worse. The atomic definition of second likely isn't going away any time soon, though, and that means that getting rid of leap seconds entirely means abandoning the millennia old notion that the way we represent time is intimately linked with the natural cycle of night and day. Assuming we're not willing to do that, there are only two alternatives: coming up with a new ugly hack which is somehow less problematic, or giving up on a "one size fits all" time scale.

But wait, there's more!

If you think this story has been needlessly fiddly and complicated, rest assured I have skipped over a tonne of details. If you're actually interested to learn more, I highly recommend the article "The leap second: its history and possible future", which you can easily find on the web (full citation below), along with, as always, following Wikipedia links wherever they take you. Along the way you can learn the difference between UT0, UT1 and UT2, meet other exciting astronomic and atomic time scales like Ephemeris Time (ET), GPS Time (GPST) and Terrestrial Time (TT), and discover that the SI system of units defined the second based on something other than Earth's rotation when it was established in 1960, seven years before the caesium definition was adopted.

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=>
https://ucolick.org/~sla/leapsecs/timescales.
html "UTC might be redefined without Leap
Seconds" by Steve Allen

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The Hearth of the Matter
by durtal

It seems that Kepler first used the Latin
word 'focus' in 1604 to refer to 'the point of
convergence' in the mathematical sphere. It
is possible that this is an analogical use of
the term and may reference the point of light
created with a lens. You probably know
what I mean. I remember another child
showing me a trick with a magnifying glass
outside one sunny day. He quickly adjusted
the glass's height over my forearm to effect
a sharp pain as the converging rays burned
a hole in my skin.

Hobbes brought 'focus' into broader English
parlance nearly fifty years later. I don't know
if he did this with a magnifying glass or not.
But, Hobbes certainly not my favourite
philosopher. With its particular take on
human nature, he published Leviathan
about the same time he popularised a word
whose use is ubiquitous but whose original
meaning is too often unknown. Sometimes
the abstractions of science and a specific
sort of philosophy separate us from the
mundane realities of life in unfortunate
ways.

Ironically, the political philosopher who
espoused that humans are "all take and little
give" used a word that belied his
contentions in the original. Focus is the Latin
equivalent of the Old English word 'hearth'.
People still used the latter term in my youth,
especially in rural regions. Phrases like
"hearth and home" and "keep the home fires
burning" catch something of its ethos. The
hearth was where household members
gathered to cook or to work by the
hearthstone's firelight. In its warmth,
children sat to hear the stories of the family
and community after dusk. Kith and kin
entertained themselves with music and
drinking and dance nearby. In some
cultures, families kept ancestral bones
beneath the hearthstone. Here was a point
of convergence in the human habitat.

The rising or setting sun reminds me of a
hearth fire as it converges on the horizon. I
know what it is to wait in anticipation for the
warmth of a fire on a cold winter's morning.
Others gather close to you, hoping to absorb
a little of your body's heat while they wait
too. You each rub and blow warm breaths
onto your hands and comment on the cold,
and you remark on the day ahead. As the
kindling catches, hope builds and blossoms
as the flames devour the larger pieces of
wood. The fire roars madly as you bask
away, waiting for the wooden pyramid to
collapse. When there are coals left mostly,
you cook your breakfast over them and drink
your morning coffee. You smile and share a
joke or two with your fellows. One of them
ruefully remembers that it is his day to do
the dishes; they are piling up as the others
finish and go. This time, like its later double,
is a short space of intimacy before
separation.

By analogy, sunrise is like the birth of a child
for whom the family cares. Such brief
familial intimacy is still most often the case
for the young. But, not so for the elderly. We
fill the noon meridians of our lives so
completely with striving and drift so far from

one another that, too often, family members no longer live near to one another at the sunset of a loved one's life. Now others, not family members, nurse the frail and wash their bodies late in life and at its very end. Frequently, there is only the intimacy of strangers who alone know where the bare bones of our final days lie before we slip into the deep dark of death's night. This is all that the world offers in this day when hearth fires and home are all but forgotten. We now only focus camera lenses (automatically).

Did old Thomas Hobbes have a point?

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Why I Still Game Proprietary
by wholesomedonut

Proprietary Gaming Isn't All Bad

Since getting into the FOSS community, I see a lot of pushback towards the gaming industry as a whole. I can see why: DRM runs rampant, terrible business practices regularly conflagrate internet forums, anti-cheat programs are basically consensual (and mandatory for official online play in some cases) trojans, and to make it all worse it costs a mint to get into the hobby nowadays due to scalpers and crypto miners running rampant in the market.

I agree with all of those observations. They tire me. They concern me. They frustrate me daily.

However! There are still reasons -not- to go the route of some I see in the FOSS world and eschew gaming altogether on anything but a FOSS platform, with FOSS games, because.... FOSS. That argument is just as dumb in practice, because it's an artificial limitation that stands on somewhat subjective, opinionated reasoning. "But wholesomedonut, thou angereth me!" I hear in the imaginary comments section because this is Gemini and you can't do that. I am certain you will find peace through measured contemplation and a cup of whatever warm or cold liquid you enjoy.

Why Do I Use Steam?

Well.... everyone else that isn't a computer nerd usually does too. And the overhead for getting people of minimum technical understanding (that like playing video games) into FOSS gaming generally is much more costly in terms of mental and social capacity than the clout I usually have with my friends or family on such matters.

King's English: If I have to instruct them to download the latest version of the game directly from Github in the Releases tab, or from some random website they've never heard of (even if it looks nice and is HTTPS secure) instead of just adding it on Steam or Epic or Microsoft Store or PS/Xbox or some-other thing, there is a solid 90% chance I'm going to lose that argument unless they are very specifically interested in that particular kind of game, its' content, or have a better socially-driven reason. This comes from years of trying and f'nagling with people from many walks of life; the UI and UX of FOSS gaming needs to be on-par with modern commercial offerings; this means all the way from landing on a page, to funneling through a sales conversion or free download, to playing the game with their friends needs to be understandable, unobtrusive and transparent. That is, if the overall userbase is to grow and sustain itself on a higher magnitude than current.

Give People the Benefit of the Doubt

People are intelligent, generally. They're very skilled in a multitude of things that aren't computers. But asking someone who -isn't- tech savvy to figure out how to pull down the right version of a FOSS game from a code repo (or heaven forbid build it themselves with cmake or whatever) is like asking ME to diagnose a car's problems using nothing but a flashlight and a screwdriver. I have no idea what the hell I'm doing anyway in that department. Without the proper tools and education too? I'm screwed. Therefore I urge empathy and patience in introducing others to FOSS gaming. It's a bit more finicky than the plug-and-play mentality commercial systems have fostered.

Enter the Mech Man

A good example of a FOSS game that has plenty of good and bad would be MegaMek. It's basically a fully computerized version of the Classic Battletech rules, which is a board game that's existed since the 1980s and is going on 40 years of conniving, number-crunching tomfoolery that only a particular subset of people even enjoy. All in the name of combined-arms strategy on a hex board that involves groups of multi-ton robots, tanks, airplanes and infantry taking and giving damage to individual components, weapons and armor locations in a somewhat realistic and highly detailed simulation of 31st-century warfare.

To alleviate the issue of significant calculational overhead for every-single-action-attack-or-damage-roll-ever, this program does all of the math, calculations, and rules proofing for you. So you can enjoy the game with others, wherever they may be, instead of reaching for your G.A.T.O.R. card for the tenth time to show the newbie of the group what happens when an SRM-6 missile spread hits a light vehicle whose armor is already exposed on its' left flank. There are plenty of grognards out there who know these rules well and can do half the game in their head: they're obviously not the target of this article.

I shiver at the thought of doing all that stuff manually if I don't have to. That kind of tedium takes away from the moment-by-moment gameplay, forcing everybody to get ox-in-the-mired over details that don't matter overall instead of letting their big stompy robots blow each other up.

Megamek works wonders in that regard. A game of Classic Battletech that could easily take 5 or 6 hours in person without any sort of calculator apps or an otherwise breakneck pace of gameplay and rules-lawyering will only take an hour or two maximum with Megamek. It's a godsend for a hobby that would otherwise be relegated to local play over predetermined days, not a "Hey want to play a match? Sure!" kind of casual pickup on a boring afternoon.

But it Isn't All Sunshine and Rainbows

Nope! Megamek is, in my humble and donut-shaped opinion, a terrible example of UI and UX. I played a round recently, and another aficionado of the series played against me. Quoth my opponent: "This program looks like something out of Windows 95." Neither of us had played the most recent version of the game. I hadn't touched it in a year at least.

Some changes were welcome, and the development progresses smoothly. But it's still just as much a spaghetti plate in terms of user experience: configuration options laid out in long lists of check boxes organized by multiple top-window tabs; a decidedly 15-years-old design language that clashes with modern perceptions of UI and UX (which is bad considering that taking in

new blood is crucial for both userbase and developer contribution reasons); and the final nail in the coffin is the fact that the much easier and more recent Alpha Strike ruleset isn't included at all by default, to my knowledge. You might be able to configure something like that using plugins, but we're already putting the cart before the horse at that point.

To Be Fair,

The project started in 2000. It's 21 years old in some places, if only in logic and not literal syntax. It's written in Java. And it's been a community effort by dozens of talented people over the decades. The fact that it's alive at all is impressive, but so's the fact that the franchise whose boardgame it emulates even has a fanbase still. BT fans aren't quitters, certainly. And this is all considering the fact that trying to automate, obfuscate and de-FUBAR the mountain of minutiae that Battletech's rulesets and technical data (on a per unit and per variant basis no less) is a monumental task. I can hardly think of a video-game adaptation of a more complex board game that does a better job, in proportion to the complexity of the physical source material and gameplay flow.

So considering it was made in the waning days of Win98 (because Windows ME doesn't exist and you can't convince me otherwise) it's expected that it's ugly as most things were back then. It was written in Java (yea verily, begone foul JVM!), which for all its' foibles makes a very easy cross-platform distributable program. It's solidly a relic of an earlier time of online gaming, where dial-up connections were still common. That's a given. And it is what it is. I won't waste time bemoaning those facts that are immutable in this context. I'm only stating them to set the stage.

I'm left at an interesting impasse.

There is no other way I could ever play Battletech with friends from all over the world in such a great degree of fidelity. Megamek serves its' purpose very well for what it is: a highly detailed computerization of a niche franchise that has a fanbase spanning generations. However, it also stands out to me as one of the prime examples of a FOSS project being understandably opaque to newcomers. It's hard to use at first, hard to look at always, and sometimes hard to find other people to play it with. Those three things will nail the coffin of any fledgling game shut. That concept is true regardless of genre, art style, or UI/UX.

So, I leave it to you to put the pieces together here. I can choose to play with average people that A) aren't technically inclined, B) don't have a heart that beats for free-as-in-freedom, and C) want something that "just works," or confine myself to a much smaller content base with an even smaller playerbase to share it with.

Call me the gaming nerd Whore of Babylon, but I don't see the point in beating my head against the wall overtly trying to make my hobby free and open if there isn't a platform for those newcomers to even stand on and explore once (or if ever) they choose to get involved in FOSS gaming of their own volition.

At the end of the day,

I encourage people who play video games which are also interested in free and open source software to consider the prospect of inviting others into this world of free-as-in-freedom/beer/whatever with a grain of salt. Until we make it easier to onboard new people from all walks of life, significant

adoption of FOSS systems or the games that run on them will not be seen. And therefore we will not see the requisite uptick in talent, contribution and playerbase that will consequently drive a growth in production quality, variety, and competitiveness in the market space of people's free time.

Contact Me

external email:
wholesomedonut at tuta dot io

mastodon:
at wholesomedonut at fosstodon dot org

matrix:
at wholesomedonut colon matrix dot org

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