CART 451 FINAL PROJECT PROPOSAL

Tentatively: *Playtime Archival*

Theme

I unfortunately hold the belief that tech cannot solve (and very often accelerates) any social issue. Just the same, I cannot discount the role tech can play in the highlighting of our own frailties through good amusement, just as any medium could.

With that in mind, I've found the issue of data permanence increasingly troublesome; I know my reliance on YouTube has already cost me a small library of music and video that I never bothered to save. My own work was taken off the platform, and hard-drives have failed me before. And yet the digital world is still so ephemerally fun - it's hard to help, isn't it?

There is a sword of Damocles forever hanging over all that is mine only digitally, I know that servers can go down, accounts deleted and software bit-rotted too long ago for recovery. I can print photos (and do), but what about the rest? I haven't the equipment to press records, but I deeply enjoy the physical reassurance - all the more so if it's possible to render what was produced with high tech into something operated without power at all. So instead, using the playful format of Fisher-Price record players (pre-digital), I intend to artfully encode a mementos of our time in newly minted disks.

Audience

An initial run of prints will comprise the "context;" temperature data, national anthems, financial records and interpolations of prominent events. Each coloured disc encoding in the 21 available "tracks"real, interpolated data that may be played as a cyclical song. This would be a static project were it not for the ability to encode one's own discs: accompanying the player is an application to reduce arbitrary data one's own disc.

The aggregate of interactions with this interface will then produce "the people's record" at any given time. This is a special disk that represents the lifetime average of all data so far encoded into the system. The necessary quantization step presents an opportunity for musical expression and opinion to take over from raw, 1:1 facsimile.

It is my hope that with the disk-making tool's availability online or via distribution platforms, other's may make their own records, all the while enlarging the corpus of aggregate encodings. Time and design permitting, user submission will be possible.

Connection

The cultural thesis presented within Hito Steyerl's "A Sea of Data," at least that of large scale data collection being largely adversarial to human life and dignity, is one I broadly already agree

with. That which we discard, and the machines that chose to do so on our behalf, ultimately chips away at the resolution of the whole. It's sad in that sense how much we as a people continuously lose in the records we don't keep, or keep poorly.

In a less grim fashion I aim to embrace the harsh noise filter, and present datasets as easily digestible, as if for children, fully aware of their quantized nature. I certainly hope that my imperfect storage medium sparks reflection on better safekeeping that it does facilitate the building of a digital human enclosure.

As per "The Point of Collection," the building of an aggregate record, or the choice in the context discs is naturally informed by my own choices in steering the project. I know I must exclude a great deal of what can be otherwise rendered by real digital archives, but even microfilm has its limitations. I'd look to embrace this limitation as modern 8-bit games often do.

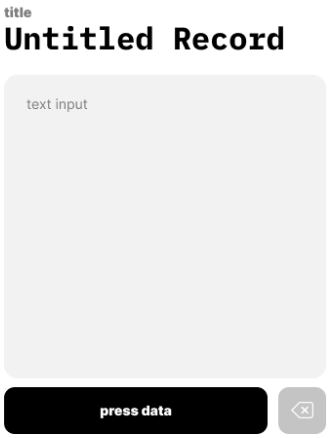
Medium

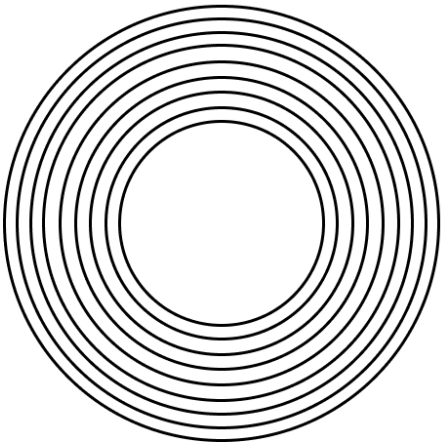
The 1971 Fisher-Price "Music Box Record Player" is entirely unmolested as a platform. Indeed, I hope to preserve as much original functionality (double-sidedness, minimum groove spacing) as possible from the original device's disks so to maximize the chances it will work with other units. The disks will be made via 3D printing in PLA, which is both most common and economical without sacrificing quality to an unworkable degree.

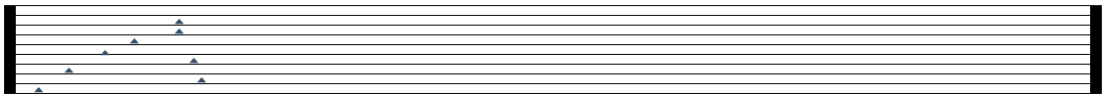
On the platform side, I intend to build the entirety of the disk creation process online if resources permit, allowing for the app to be relatively portable (web as universal runtime)! The technology stack here is of less important than the frontend and the ability to interpolate disparate data (especially text) into disk notation form. Since the severe penalty in quality precludes any real similarity to actual audio recording, I have no concerns regarding copyright. Though, conceivably, one could bit-encode copyrighted files across many discs.

It is paramount that the resulting interface be accessible to laymen, and that the tangible discs

appeal in their own right. I do not want to rely on titles or accompanying text. The clarity of the encoded data may be subservient to the overall aesthetic of the presentation itself.





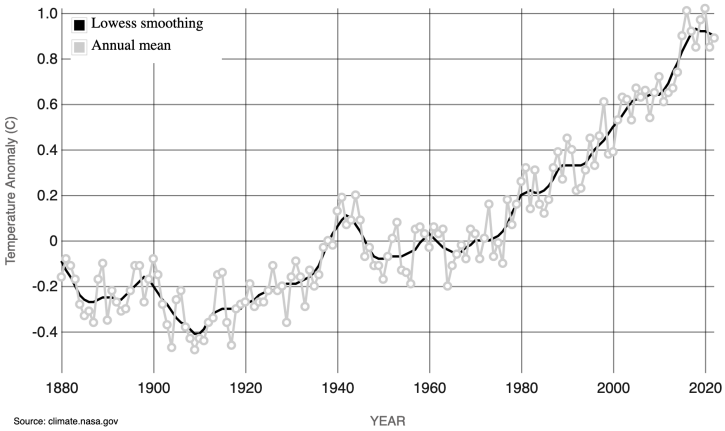


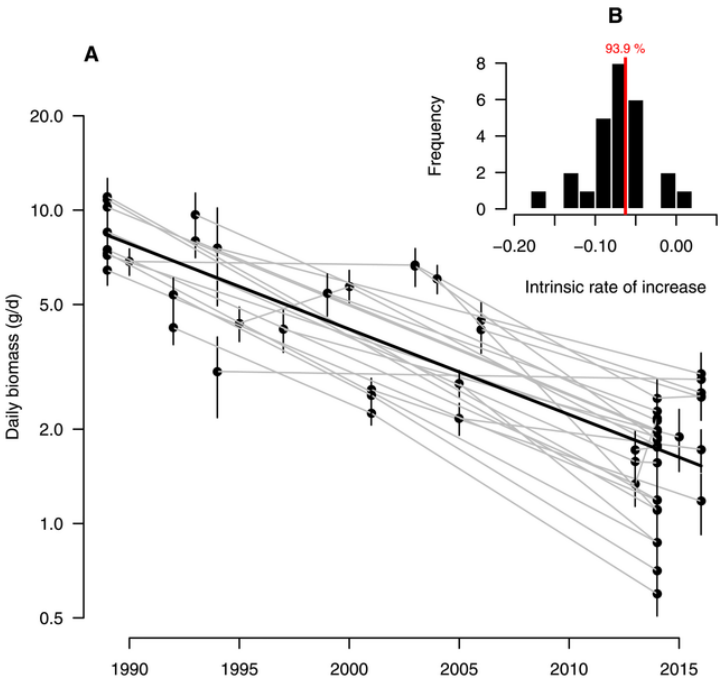
Data

The data in the context discs will tentatively be sourced from:

Environment A side: NASA's Jet Propulsion Laboratory

Environment B Side: Hallmann, CA; Sorg, M; Jongejans, E; Siepel, H; Hofland, N; Schwan





Other sources of data have not yet been specifically explored; financial data will likely be aggregate and easily representable as a time-series. Likewise, national anthems not yet selected are quantized as actually discernible tunes in disk. Exploring culture as in the Voyager record holds some appeal.

User submitted data is processed on-device, as I'd ideally like this project to have zero ongoing running costs barring hosting or data-storage should I chose to sunset it. Storage or course will not keep original material, only the encoded disc format and metadata useful for further visualizing sources: IP, time of submission and number of submissions from the same location. Since the Fisher Price disks have titles, those may be stored as well. I am unsure if accounts are necessary, but some sort of signature may be nice if the catalogue of submitted works is ever made functional or public as a stretch goal.

Feed the algorithm

As stated, a key algorithmic function involves data quantization and encoding. To convert data, including temperature records, national anthems, financial information, and user-submitted text into a format suitable for playback, all information must be pressed into the 21 track space of a disk. Following the quantization step, there's space for artful rearranging, and then finally designing the algorithm to make the 2D grid into a printable object.

These algorithms are essential to ensure that the resulting cyclical songs, played back by the record player, make sense and provide insight into the data.

Additionally, algorithms are employed to enable users to create their own customized discs. The creation of an application for encoding arbitrary data onto discs requires sophisticated algorithms to transform this data into a format compatible with the record player. These algorithms may include techniques for data interpolation, compression, and disc layout.

Finally, the "people's record" creation involves quantization algorithms that take an aggregate of various interactions with the interface, producing a representative disk of the data encoded into the system. This quantization process, which offers an opportunity for musical expression and opinion to influence the data encoding, requires algorithmic design.

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In the interest of time, project references will be added in another file.