THE VIDEO GAME HISTORY FOUNDATION

The Video Game Media Archive

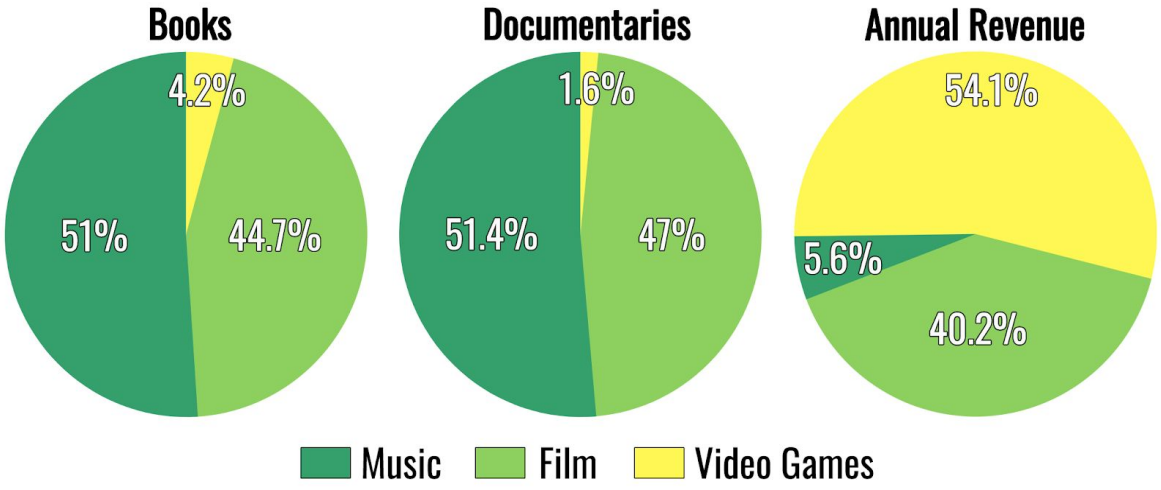
Unreal Megagrants Proposal

The Video Game History Foundation, a 501(c)3 non-profit corporation operating out of Oakland, California, has inherited a collection of nearly 24,000 priceless, often one-of-a-kind objects crucial to the study of video game history. Included in this collection is material related to the earliest days of games that used Unreal Engine, some of which was previously thought to be lost. Many of these objects are on volatile media that needs to be digitized immediately, as decay and "bit-rot" has already destroyed some of these objects, and more are sure to follow.

Overview

The history of video games has a very serious documentation problem. Traditional preservation methods have managed to ensure that a good deal of gaming's history can be *played*, but playing a game is only part of the equation. Without *context*, a video game falls into complete obscurity. Would a child today understand 1985's *Super Mario Bros.* if the character hadn't endured? Would a player today appreciate Atari's *Adventure* without understanding its influence?

And because we have a documentation problem, we have a history problem. Our stories just aren't being told. Books about film and music outnumber books about video games by a significant margin, despite the video game market being the largest by far.



Source: Wikipedia

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The Video Game History Foundation was founded in 2016 with a clear mission: to make sure that people have the tools they need to understand the history of video games, whether they're publishing a book, editing a Wikipedia article, making a YouTube video, or learning just for fun.

We provide context to our past by collecting and preserving objects beyond the games themselves, the kinds of items that historians rely on. Our library in Emeryville, California houses over 10,000 books and magazines relevant to the study of video games, going all the way back to their primordial roots in the 1950s.

A significant portion of these items are not available anywhere in the public library system, nor are they scanned and available online. Our collection also contains the personal archives of notable game developers (including materials related to games that never commercially shipped), documentation and tools for early game engines and kits, promotional and marketing materials, historical photograph negatives, conference proceedings, audio and video interviews, unfinished "preview" and show demo builds of games, and more.

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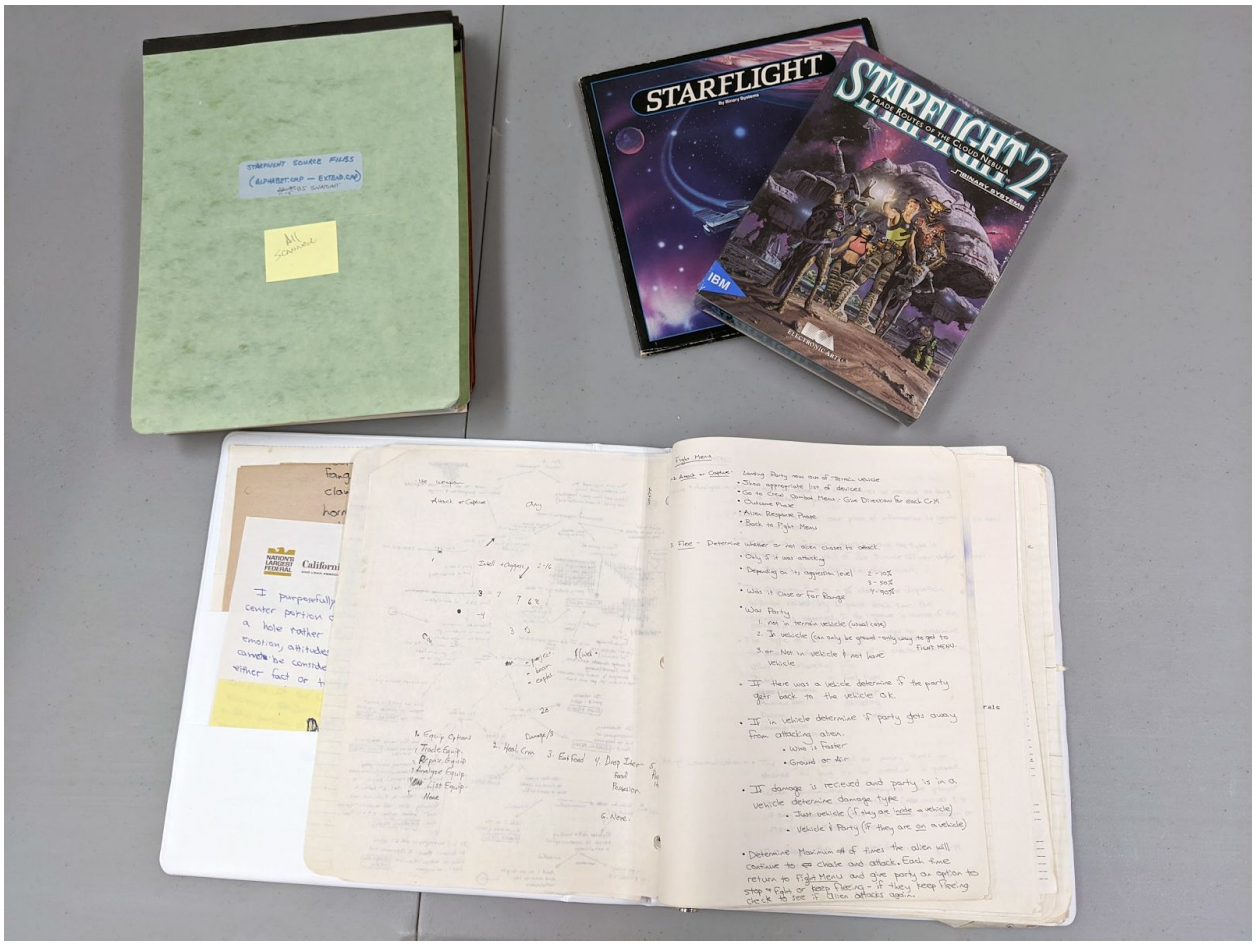

One of our major projects has been what we call the “Video Game Media Assets Collection.” The collection seeks to preserve and document materials originally created for marketing and public relations. This way, a researcher can see beyond what the video game media reported: it can access the actual material used in that reporting. Some of that material reveals early draft ideas and artwork for games that would eventually become legendary.

Some of it provides quotes and rare photographs of the pioneers who helped to shape the industry, some of whom are no longer with us. Others still provide our only glimpses at games that are now considered lost, or that have become so obscure that a cursory Google search provides little to no results. Just because the media *could* report on it doesn’t mean that it did! In the world of history, it’s ephemeral material like this that provides the kinds of breakthroughs needed to tell a story properly, and it’s why we’ve made it such a major focus.

This media was made to be disposable, to be used once for coverage and then never accessed again, so most of it is considered lost. Even in the rare cases where a magazine held on to this material, the magazine itself eventually succumbed to a downsizing, an office move, or worst of

all, a complete closure. And that's to say nothing of the video game companies that issued the material - most of them are gone too. Since the Foundation's inception, we've managed to acquire small pockets of surviving collections: a binder of press kit discs that lay forgotten in a publisher's closet, the occasional former editor's private stash, or in one case, a collection literally saved from the trash. There is, however, one exception to this rule.

In 2019, The Video Game History Foundation was gifted the most substantial collection of video game media assets in the world. This collection spans approximately thirty years of video game history, from 1990 through today, and contains well over 15,000 optical discs of data, over 24 feet of paperwork, floppy disks, photo negatives, interviews on cassette, trade show footage, and much more.

This collection is a research library on its own: the answers to thousands of burning questions are hidden in here, waiting to be discovered. Books will be written based on what's in here.

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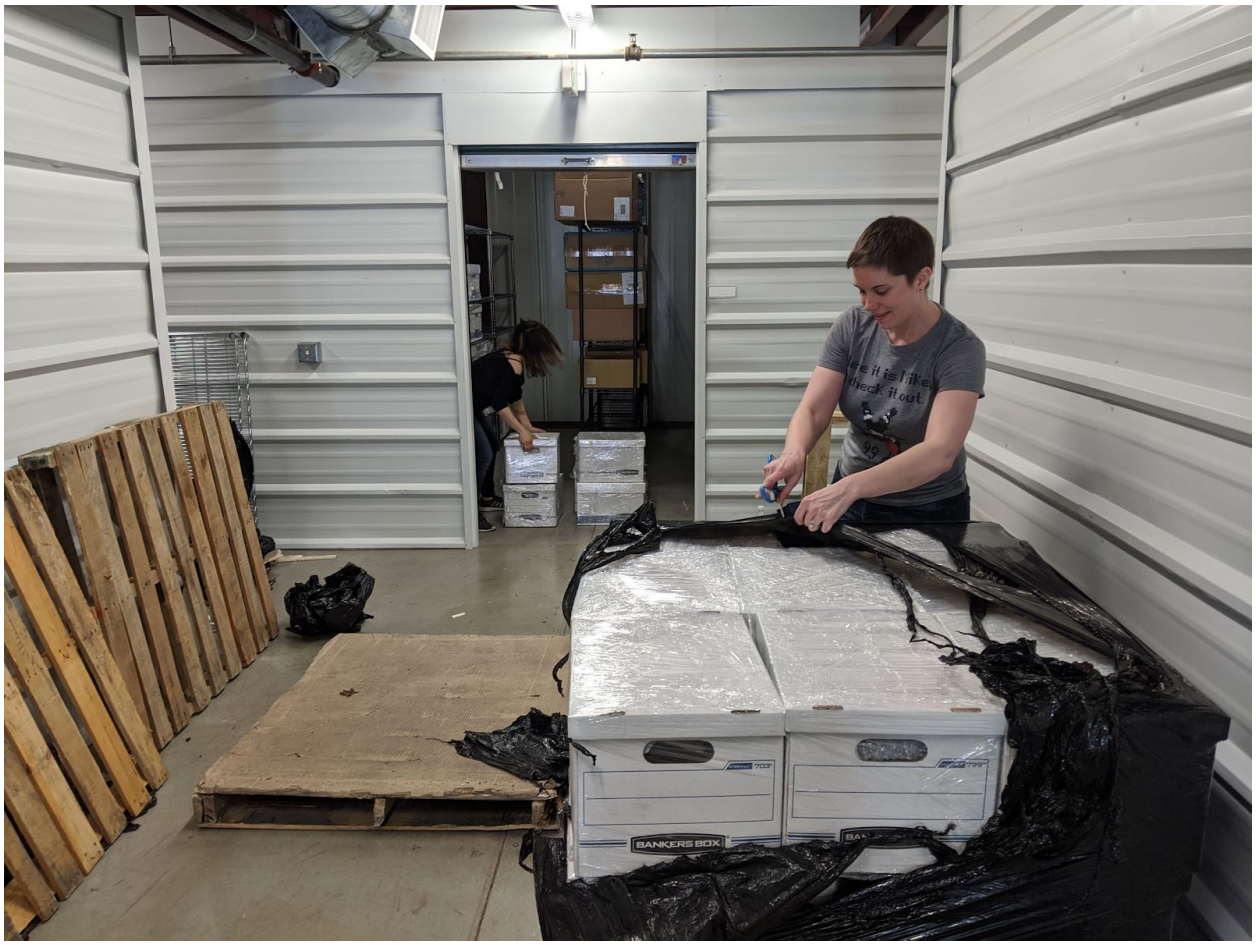

But the amount of material here is overwhelming from a preservation point of view. The Video Game History Foundation is in the best position to properly digitize, catalog, and present this material, but we need financial assistance to get it done.

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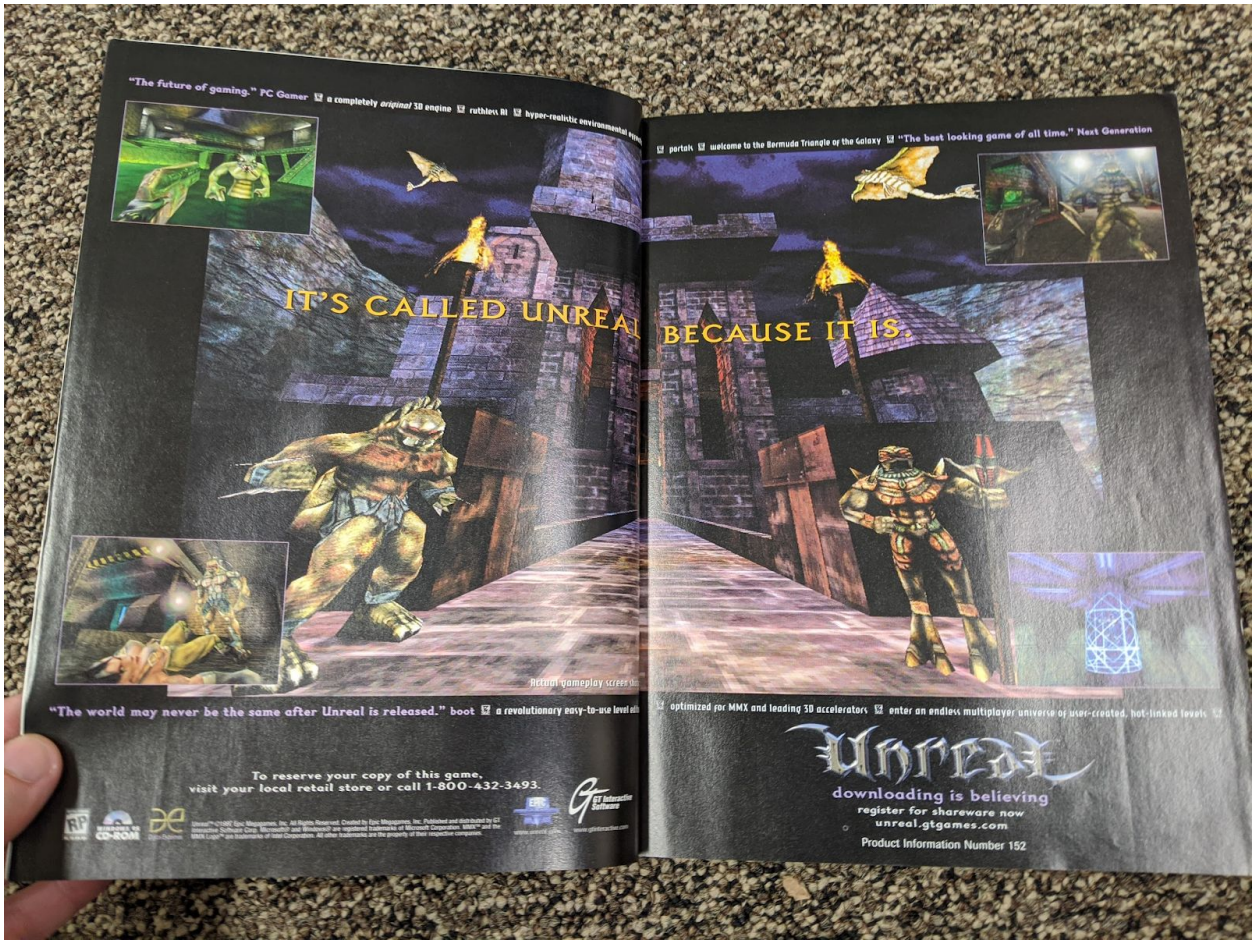
Preserving Unreal Engine's Early History

The Video Game Media Asset Collection contains a wide breadth of material from all corners of the industry, including the earliest days of Unreal and the Unreal Engine. The following pages highlight just a few of the assets we've been able to find through our early work on this project - odds are there's significantly more where this came from.

This high res render of a Kraal was used by publisher GT Interactive to promote the original *Unreal*, and was used in magazine and website coverage of the game. This is likely among the first pieces of art used to promote the game.

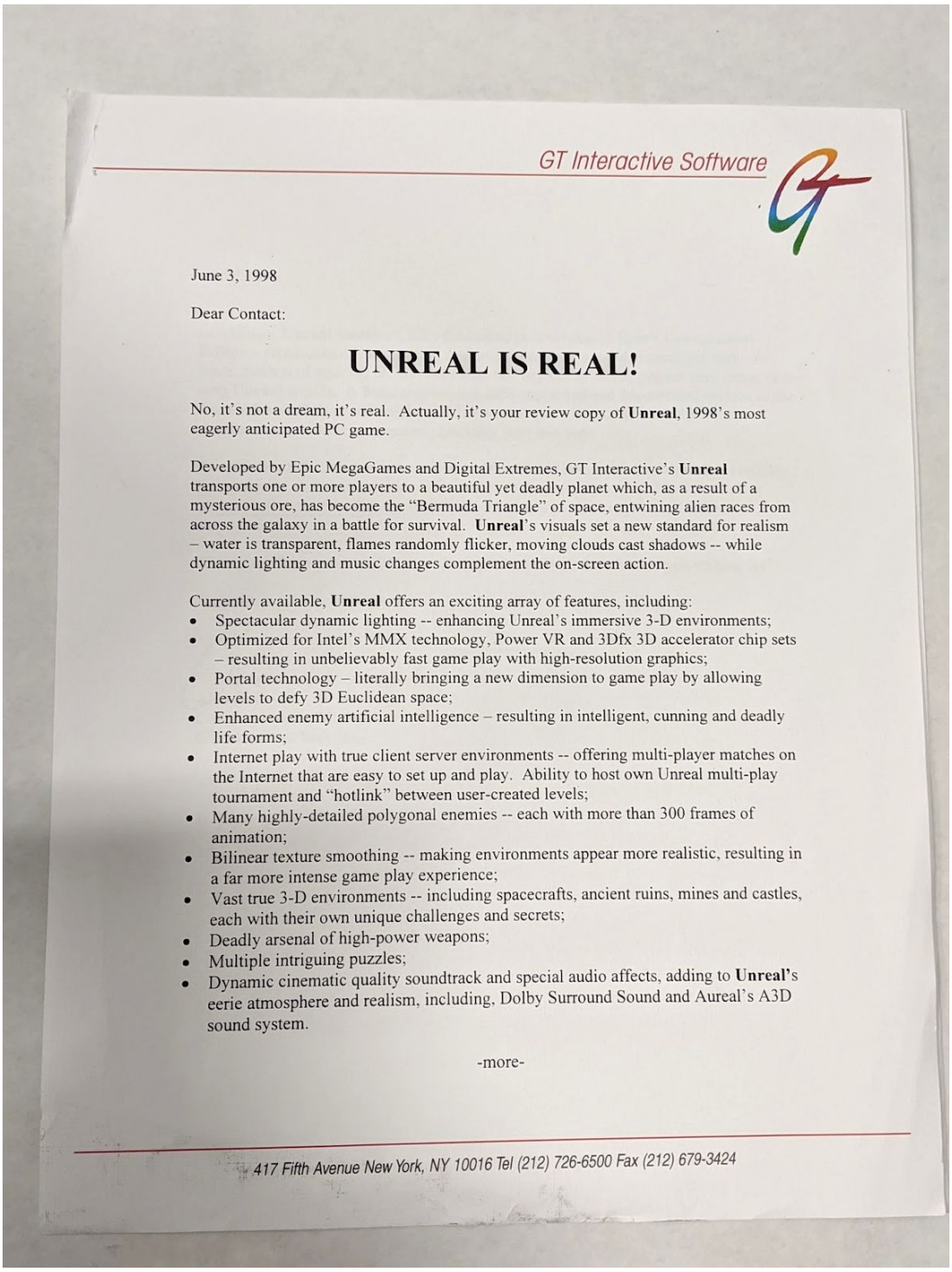
Early artwork used for the promotion of Ion Storm's *Deus Ex*, exhibiting a significantly different art direction than would be seen for the game's release.

In the late 90s, many publishers showcased the graphical fidelity of Unreal Engine with high resolution character renders like these. Top: *Rune* (Gathering of Developers), *Unreal Tournament* (GT Interactive). Bottom: *Deus Ex* (Eidos).



GT Interactive's early advertisement for the original *Unreal* provided what for most was their very first look at Unreal Engine.

A sampling of high resolution game logos from the earliest days of Unreal Engine. It is possible, even likely, that the Video Game Media Asset Collection contains the only surviving copies of original logos from defunct publishers such as *Wheel of Time*'s GT Interactive.



GT Interactive Software

June 3, 1998

Dear Contact:

UNREAL IS REAL!

No, it's not a dream, it's real. Actually, it's your review copy of **Unreal**, 1998's most eagerly anticipated PC game.

Developed by Epic MegaGames and Digital Extremes, GT Interactive's **Unreal** transports one or more players to a beautiful yet deadly planet which, as a result of a mysterious ore, has become the "Bermuda Triangle" of space, entwining alien races from across the galaxy in a battle for survival. **Unreal**'s visuals set a new standard for realism – water is transparent, flames randomly flicker, moving clouds cast shadows -- while dynamic lighting and music changes complement the on-screen action.

Currently available, **Unreal** offers an exciting array of features, including:

- Spectacular dynamic lighting -- enhancing Unreal's immersive 3-D environments;
- Optimized for Intel's MMX technology, Power VR and 3Dfx 3D accelerator chip sets – resulting in unbelievably fast game play with high-resolution graphics;
- Portal technology – literally bringing a new dimension to game play by allowing levels to defy 3D Euclidean space;
- Enhanced enemy artificial intelligence – resulting in intelligent, cunning and deadly life forms;
- Internet play with true client server environments -- offering multi-player matches on the Internet that are easy to set up and play. Ability to host own Unreal multi-play tournament and "hotlink" between user-created levels;
- Many highly-detailed polygonal enemies -- each with more than 300 frames of animation;
- Bilinear texture smoothing -- making environments appear more realistic, resulting in a far more intense game play experience;
- Vast true 3-D environments -- including spacecrafts, ancient ruins, mines and castles, each with their own unique challenges and secrets;
- Deadly arsenal of high-power weapons;
- Multiple intriguing puzzles;
- Dynamic cinematic quality soundtrack and special audio affects, adding to **Unreal**'s eerie atmosphere and realism, including, Dolby Surround Sound and Aureal's A3D sound system.

-more-

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While every game reviewer received a similar letter along with their copy of *Unreal*, it is unlikely that any other than ours survived. This sheet of paper is just a tiny part of the Video Game Media Asset Collection's archive, which measures over 24 feet.

DEUSEX.RTF	4/22/1999 7:13 PM	Rich Text Document	9 KB
E3 Unreal Level Release.doc	4/20/1999 5:17 PM	Microsoft Word 9...	33 KB
E3 UT Release.doc	4/20/1999 5:18 PM	Microsoft Word 9...	57 KB
E3 WoT Rel.doc	4/15/1999 5:01 PM	Microsoft Word 9...	82 KB
Mobile Forces Final Fact Sheet.doc	5/2/2002 9:32 AM	Microsoft Word 9...	73 KB
Mobile Forces Final Release.doc	5/2/2002 9:36 AM	Microsoft Word 9...	33 KB
MtG Fact Sheet.doc	8/14/2003 2:11 PM	Microsoft Word 9...	95 KB
Nerf ArenaBlast release.rtf	10/21/1999 5:52 AM	Rich Text Document	43 KB
Nerf ArenaBlast.rtf	10/21/1999 5:52 AM	Rich Text Document	46 KB
STTNG Klingon Honor Guard.doc	5/19/1998 9:15 AM	Microsoft Word 9...	11 KB
U2Xbox_Annc_Final.doc	8/14/2003 2:09 PM	Microsoft Word 9...	105 KB
Unreal Mission Fact Sheet.doc	4/14/1999 4:53 PM	Microsoft Word 9...	29 KB
UT Fact Sheet.doc	4/14/1999 4:47 PM	Microsoft Word 9...	34 KB
WoT Fact Sheet.doc	4/6/1999 12:37 PM	Microsoft Word 9...	29 KB
X-COM Alliance at E3 RTF.rtf	5/2/2000 11:08 AM	Rich Text Document	10 KB
X-COM Alliance RTF.rtf	5/5/2000 9:40 AM	Rich Text Document	50 KB
X-COM Developer Q&A.rtf	5/5/2000 10:03 AM	Rich Text Document	7 KB

In addition to art, The Video Game Media Assets Collection also contains a wealth of information on early Unreal Engine-powered titles via digital documents such as these.

Not all Unreal Engine games made it into players' hands. This artwork used to promote *X-COM Alliance* provides a compelling "what could have been" look at the doomed shooter.

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Where We Are Now

The Video Game History Foundation has made this project a priority over the last three years. In that time we have invested nearly one-third of our company revenue and a combined nine months of volunteer labor in order to try and save as much of this data as we can, but we need a lot of help to finish the project.

The good news is that the entire collection has, after years of negotiation and discussion, been gifted to us. We have climate-controlled, secure off-site storage, and are now able to access it without substantial travel. In the past, we had to work with this material out-of-state, meaning that any time spent with it also involved a housing cost.

We have also done a “first pass” digitization on an estimated 33% of the collection, thanks mostly to a five-week, full-time volunteer project in May of 2019 that saw a team of six working diligently to try and save data from the most volatile media.

VGHF technical director Travis Brown oversees our optical data farm in May of 2019.

So the good news is that roughly one third of the digital data - around 25TB of mostly-unique information - is safe, with redundant backups already in place. The bad news:

1. That remaining 67% is going to be a slog. A good chunk of these are old CD-R and DVD-R discs - literally thousands - that could not be read through traditional archival methods, and need specialized equipment and labor to be rescued. These writable discs are extremely volatile, as they naturally decay, and we're going to lose some of them if we can't solve this soon. Additionally, we have some media types that are going to take quite a while to digitize, including hundreds of hard drive backups made on tape in the 90s, which take hours each to fully retrieve.
2. While we have that first-pass data, it's *just data*. Our priority has been to back up as much as we can as quickly as we can, meaning we did not take the time to document the media as we digitized it. In order for it to be retrieved and used, that data now has to be analyzed and cataloged, a process that requires substantial human labor.

What We Need/How We Get There

With enough funding, we are confident that this entire collection can be properly digitized and cataloged, changing the way games can be studied in the future. We've identified several financial milestones for making this happen.

In 2019, we spent five weeks working full-time with a large team of volunteers to digitize as many objects as possible. We were able to make significant progress, largely thanks to prioritizing what media we could automate -- CD-Rs and DVD-Rs fed through our own data-ripping robot farm. For anything that could not be automated, our volunteers were able to digitize an average of between 25-30 objects per day. At this rate, assuming we have some amount of additional volunteer labor, it will take two full-time workers about 16 months to digitize the remaining 16,000 objects that have not yet been given even a "first pass" digitization. At an average rate of $20,000/month for the labor and overhead required to employ full-time workers and train volunteers, this means a cost of $288,000 to make sure all of this data is safe for future generations.

The cost of digitizing the data is just the first step. To securely store these objects both in the physical and digital space means a new yearly cost for our organization. Integrating our collection into a highly secure, retrievable digital storage solution such as Preservica will come with an average cost of $2 per object per year. This means that for the duration of the project -- just the time it will take to migrate and catalog this data -- our 24,000 objects will cost us $144,000.

Physical storage is a concern, too. While our collection resides in climate controlled, monitored storage, it's neither easily accessible nor as safe as we feel it should be. We estimate that a

high-quality storage solution would come at an additional cost of $24,000 per year, meaning $72,000 for three years.

The greatest cost comes with cataloging these materials and making them accessible to researchers. Digitizing the data is a vital first step, but tens of terabytes of raw data is not useful or navigatable, making its study nearly impossible. We spent several weeks of labor calculating the average time it takes to catalog each object, and found that a full-time worker can fully tag and catalog an average of 20-25 objects per day. For two full-time workers, and assuming some volunteer labor, this will take us about 27 months to complete, costing a total of $552,000.

Finally, in order to digitize these objects with the highest quality standards, we'll need some new equipment. Professional film scanners for slides and film, high DPI feed scanners for our paper archives, and a Forensic Recovery of Evidence device for decaying media are all needed to properly and efficiently finish digitizing. These devices cost a total of $25,000.

Overview of Financial Milestones

The following costs would complete the Video Game Media Assets archiving work, as well as allowing secure storage and digital retrieval for three years.

$288,000: Remaining objects in our collection digitized
$552,000: Complete cataloging of the digitized objects
$72,000: Three years of secure, climate-controlled physical storage
$144,000: Three years of digital storage and retrieval through Preservica
$25,000: Total equipment cost

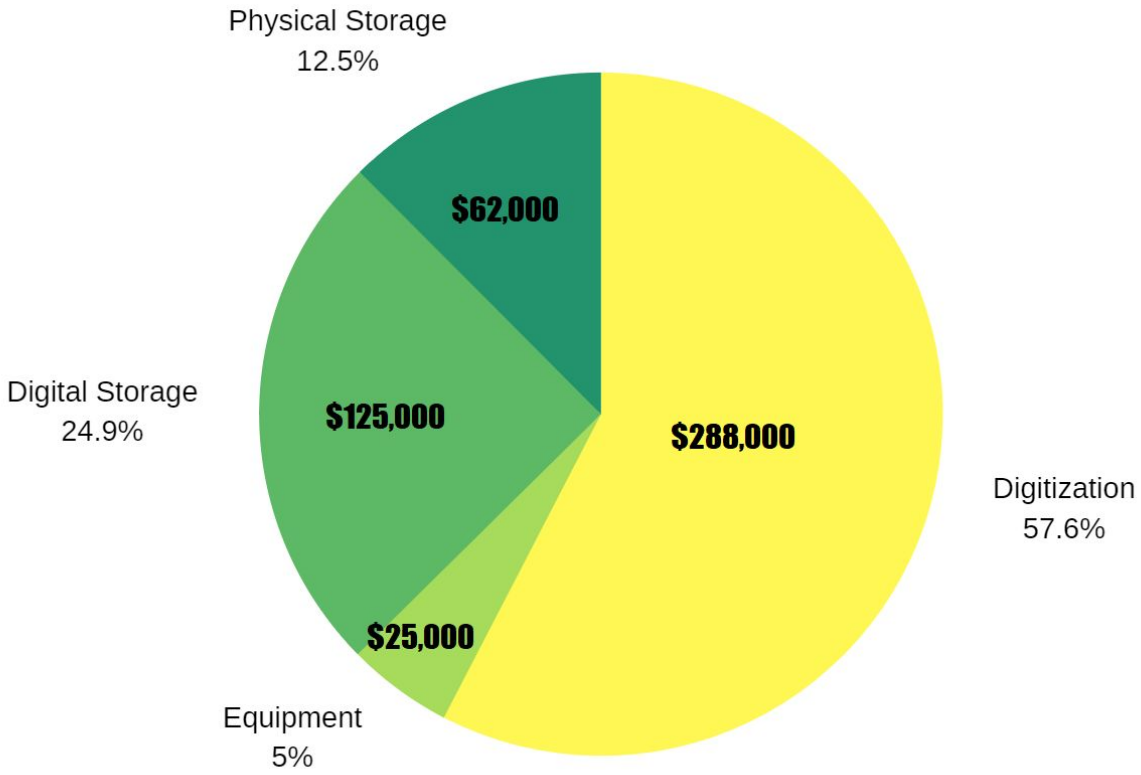
Overall Project Total = $1,081,000

Or, to put it another way, an average of $50 per object in our archive to be completely digitized, cataloged, and stored for three years.

$2/object per year (x3), online storage and retrieval
$1/object per year (x3), secure, climate-controlled physical storage
$18/object digitization
$23/object cataloging

While we need over $1 million to finish the project, an Epic Megagrant of $500,000 would allow us to complete the most dire and time-sensitive portion of this project. This amount of funding would all but guarantee that we can completely digitize the collection before it succumbs to deterioration and rot. It would fund equipment needed to get the highest success rate out of

even the most damaged media. It would also mean that we could place this data in premium, secure storage (both physically and digitally) for 31 months.



We plan to seek additional funding in 2020 to see this project to its completion, but an initial $500,000 of seed money in the form of a Megagrant will rescue this data from the scariest conclusion. Most of these items are the only remaining of their kind, so when data begins to rot, they will be gone forever. Expediency is vital, and to delay digitizing risks losing irreplaceable video game history.