STATE OF THE ONION

* There are 503,637 projects on Github locatable with the search tag 'game' (last year there were 354,421).
* But in spite of this clear indication that open source developers enjoy writing games, there are still no AAA quality revenue generating Open Source games.
* We will try, over two lectures, to examine why this is the case.

POTTED HISTORY OF GAMES DEVELOPMENT

* During the 1980's and early nineties, the emergence of home computers meant that thousands of people could develop games themselves.
* Many fortunes were made, and many iconic games series were born.
* The perception that being a programmer means being wealthy stems from this era, although even then it was only rarely true. Most games produced, even during this supposed golden age, were absolute garbage.
* The idea that the source code for these games could be revealed, or given away had simply not occured to any commercial games developers at this time.

OPEN SOURCE AND GAMES - 1

* Version one of Nethack was released by Mike Stephenson on July 28, 1987. a Rogue-like Dungeon crawler that is extremely hard, and still under active development.
* This was never a commercial game, so it likely never occured to Mike that he *shouldn't* share the code.
* Free software was in its infancy, but lots of people shared code routinely, just not in an organised way.

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### OPEN SOURCE AND GAMES - 2

* Nethack has been very influential in the three decades it has existed. I've tried several times to get good at it, but I'm just not.
* It has also always been free, with contributors gaining reputation and employment based on the quality of their work, not making money from Nethack itself.
* No commercial game has enjoyed such longevity, or attained a comparable level of code quality.
* Nor has any Open Source game, of which there are many.

OPEN SOURCE AND GAMES - 3

* Many people have written Open Source games for fun.
* Id software have released the source code for all their games once they have moved on. Source code only, not game resources.
* Attempts have been made to duplicate commercial games using all new code, sometimes these have been stamped on hard.

 OPEN SOURCE AND GAMES - 4

* Simcity has been the inspiration for several open source games (linCity, OpenCity).
* Freecraft, a Warcraft 2 clone was killed by Blizzard in June 2003 for trademark infringement.
* Blizzard also killed an attempt at an alternative Open Source Battlenet service called bnetd by threatening to sue anyone involved.

CAST OFF GAMES

* Some software houses have released entire formally commercial games as open source.
* Laudible, because it does give new games developers an opportunity to legally view commercial game developers code, but the reality is that these are games that have run their commercial course and retain no opportunity for someone to make a living from them.
* In fact, if anyone did manage to find a way to make money, it's likely the copyright holders would step in and demand a major cut anyway.

CLONES - 1

* Some very old games, some which made their millions in the eighties have been cloned (duplicated in their entirety). Manic Miner, Chuckie Egg, Space Invaders, Missile Command.
* However the problem remains that while entertaining, these are not going to make anyone a living now.

CLONES - 2

* Recreating classic games is a good way to cut your game development teeth, since people know what to expect, and can therefore apreciate a good rendition.
* It's important that the games be old enough to not be currently on sale, nor should you sell them, since old games are almost always still owned by someone.

EXAMINING THE PROBLEM - 1

* So why has no-one ever managed to create a commercially viable Open Source game?
* People have managed to use open source tools to make closed source games, so the tools exist for a totally free project, the limitation is not software based.
* The traditional games industry often views attempts at interoperability with their products as promoting piracy.

EXAMINING THE PROBLEM - 2

* Current AAA games cost multiple millions and several years to develop.
* Minecraft, a program initially written by one man, became a worldwide sensation, and was bought by Microsoft for Billions.
* The idea that succesful games must inevitably cost millions to develop is clearly flawed.
* Mobile games are now dominating the games industry, and AAA developers don't seem to be near mastering that.

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### THE TRADITIONAL GAMES INDUSTRY - 1

* Warning, vast oversimplifications follow.
* Since it's emergence in the 1970's, the traditional games industry has grown more complex and centralised.
* The AAA industry has gained, through acquisition, most of the most popular franchises.
* As each iteration of mainstream games appears, changes have been less significant, and innovation/risk taking has been less appealing to them.
* Gameplay innovation has been replaced by graphical ones, and even that is beginning to stagnate.

THE TRADITIONAL GAMES INDUSTRY - 2

* Microtransactions and in game stores have been borrowed from mobile and web based games and put in games that previously had, and needed none, to further increase revenue.
* They have not thus far seen Open Source as a valid avenue, since any such game, if true Open Source, would easily slip from their control if mis-managed.

MODS - 1

* Mods for commercial games have existed since Id software actively promoted community contributions to their FPS game Doom in the nineties.
* Not at first however, initially they were against it, quite angry in fact. [John Romero](https://en.wikipedia.org/wiki/John_Romero) seems to have been the driving force in changing their minds.

MODS - 2

* Mods have led to careers in gaming they may still, but it seems the feild is a bit crowded.
* Id sought to hire many early community developers, and there are examples of mods becoming full games. (Counterstrike, Desert Combat, Team Fortress).
* [Steve Polge](https://en.wikipedia.org/wiki/Steve_Polge) created an AI mod for Quake [Reaper Bot](http://easttown.co.uk/quake/reaper.html) in 1997 that essentially began the rise of AI NPCs in games that we see everywhere today.
* Mods are however predominantly 'free' products that enhance non free products.

MODS - 3

* There are current attempts to monetize modding, but these seem a present to be mostly aimed at producing a new revenue stream for AAA games companies, so not really relevent.
* In general I would say modding should be avoided in favour of working on your own unique IP.

KICKSTARTER

* Lots of games, have been funded through Kickstarter.
* Kickstarter game projects reward contributers with, among other things, early game access, a say in game development, and extra features, either exclusive, or just earlier than non contributors.
* How would this work if all the code, and game assets, were free to anyone all the way along?
* The advantage of a succesful Kickstarter campaign would be an initial cash lump sum.
* It seems to me that Kickstarter favours the closed source model.

PATREON

* Contributers to Patreon projects generally expect to be funding something which has reguler output.
* I have mostly encountered it on Youtube.
* There would be no initial cash lump sum.
* Patreon Does seem to favour a more open model, since no-one gets exclusive content, but they do often get a say in subjects covered.

GAME FUNDING ALTERNATIVES - 1

* One Time Purchase.
* Since an open source game couldn't use DRM (even if that did work), the piracy endemic in the One Time Purchase model world would kill any potential revenue stream.

GAME FUNDING ALTERNATIVES - 2

* Episodic purchase (expansions/DLC).
* This model shares the same weakness as the One Time Purchase model.
* It's probably not relevent, because the DLC could just be released as a new main game build.

GAME FUNDING ALTERNATIVES - 3

* Subscription.
* Usually associated with a persistant online world, so not universally relevent.
* Would definatelly require seed funding, since subscriptions couldn't start till the game reached initial release.

GAME FUNDING ALTERNATIVES - 4

* Sponsorship
* Usually in the game development world this involves a loss of creative control.
* However it is the most used method of Open Source funding, and in this area, loss of creative control is *not*common.
* A game using this approach would sell itself to sponsors as a 'value adding service'.
* Email, web browsers and social networking have been used in this regard.
* But there would always be conditions.

SHOULD YOU TARGET WINDOWS?

* Short answer, probably not at first.
* Windows has been the dominant operating system for 20+ years.
* DirectX was a genius move, and cemented Windows as the best place for companies to develop games for most of that time.
* This was a deliberate move by Microsoft, their dominance of the gaming world was no happy accident, it was a deliberate and expensive push into the feild.

WHY NOT LINUX - 1

* Structurally, there is no significant reason Linux could not run games as well as Windows.
* Linux was not initially focussed on gaming. It still has not focussed well in this area.
* Market share is king, It wasn't worth developing AAA games for Linux first.

WHY NOT LINUX - 2

* Graphics cards manufacturers have not concentrated on optimising their products for Linux performance, so Linux falls even further behind.
* Unless something really significant occurs, this problem isn't likely to go away.

SHIFTING TIDES

* The Operating system landscape is changing, Mobile OS have taken off. Microsoft are no longer the primary development market.
* Game delivery (means by which we experience them) is undergoing real change.
* Means of exchanging payment for gaming products that consumers are willing to accept are changing too.

ASSET FLIPPING

* Asset Flipping is where pre-made asset packs are purchased, edited minimally then sold on as original content.
* There's plenty about this on Youtube, so I won't cover it in detail. You can investigate it yourself.
* Asset creators releasing Open Licenced work in the Open Market would fall victim to these asset flippers as well.

EQUIVILENT MARKETS

* We can learn something from examining equivilent markets and applying the experiences from those to the sale of Open Source games.
* A market which can be viewed as similar to the one for games is Publishing (literature).

WRITING - 1

* We're going to depart from software for a little bit here, but it is neccesary.
* Publishing is a market which has undergone and survived many technological changes.
* Magazines were initially threatened by the web, but now many have embraced it.
* The end of the printed word (the paperless office) has been much spoken of, yet print co-exists with digital works, and this will likely continue.

WRITING - 2

* The following (except for the statistics) is based around the short video presentation by Piers Blofeld of Sheil Land Associates titled **Seven reasons why you shouldn't self publish** [youtube link](https://www.youtube.com/watch?v=BGXEpMIfUZ4)
* Chosen because I see many parallels between a potential market for sale of Open Source games and self publishing of literature. It definatelly needs to be watched.

WRITING - 3

* Nearly 460,000 titles were self-published globally in 2013 [source](http://www.ft.com/cms/s/0/da1b382e-c8ea-11e4-bc64-00144feab7de.html).
* In 2012, half of the self published authors made less than $500 [source](https://www.theguardian.com/books/2012/may/24/self-published-author-earnings) making them almost not worth the effort.
* Many reasons for their failing probably relate well to the Open Source world.

WRITING - 4

* Ebooks are populer, and sell really well, as this graphic shows, but the market is so saturated the per author earnings remain far too low.

WRITING - 5

* In principle, self publishing is a good thing. In practice is is reall hard to do well.
* Most self published books fail, just as most Open Source Projects (98%) fail, and for many of the same reasons.
* The literature marketing process (as any marketing process) is complicated, so any time you spend trying to prepare your book for the market place will take time away from improving your product.

WRITING - 6

* There is frustration with the 'traditional' publishing world, because it is hard to get into, so some people resent its gatekeeping role.
* Amazon particulerly have made it easy for writers to get their work published electronically, so it is increasingly fashionable to do this.

WRITING - 7

* The self publishing market lacks oversight. You can go from writing to published in a few days. This make the use of the term 'publication' a little vague. It seems to me little more than a technological gloss on photocopying your book.
* This in effect means you can put your work into a global slush pile without any checks and hope it might stand out.

WRITING - 8

* It almost certainly won't do well, but the pennies you may make will contribute a little more to Amazons profits, so they don't mind.
* Editing costs money, covers cost money, good marketing costs money. to quote Heinlein 'Nothing of value is free'.
* If you try to do everything involved with publishing yourself it seems unlikely it will work well.

WRITING - 9

* If you pay someone to tell you your book is ready to publish, they will say it is.
* If on the other hand they only get paid if you make money, the equation shifts in your favour.
* Amazon don't say you're ready to publish, they just let you publish sans (without) oversight. They only do this because they will always make money even if you only sell to friends and family.
* They have no real stake, so there is no risk for them, they will always make a profit, even if you only buy a copy yourself.

WRITING - 10

* Sometimes your work just isn't good enough, or just not yet. So you can damage any potential reputation by self publishing a sub par book.
* Having an experienced Agent to potentially be mean and tell you your book isn't good enough may not be nice, but it may still be needed.

WRITING - 11

* This also why Open Source can work so well, you are open to contructive advice on your product.
* Sometimes getting an email telling you that one of your functions is rubbish can help. If they tell you it's rubbish and suggest a fix, that can be awesome.

WRITING - 12

* Self Publishing of ebooks (speaking mainly of Amazon here) has no in built opportunity for community to develop at point of sale, although sites supporting it do exist.
* These sites do sometimes seem to exhibit a certain *them vs us*, mentality, which isn't helpful.
* Also, once a book is published, unlike software it cannot change.

WRITING - 13

* The kind of thinking Self publishers are tending towards now harmed the Free Software Foundation in its early days, eventually bringing the Open Source movement into existance out of pure neccesity.
* This is where self publishing, as it is now is most similer to the early days of Free Software development, unstructured, open to abuse and full of misinformation.

RELATING THIS TO SOFTWARE

* The problems are identical in both fields in all respects other than we are trying to sell a product that is 'Free' in a closed source dominated market.
* Lessons can be learned from the self publishing market.
* I think the main point is that oversight for quality is needed if an Open Source game is to stand a chance as a paid product.

FARMERS MARKETS - 1

* On the face of it, nothing like software engineering, but only on the face of it.
* Farmers markets provide an avenue for artisans or small farmers to:
  + Sell products direct to consumers.
  + Gain future direct customers through direct repeat purchases.
  + Meet other small producers.
* The key point here is that it is an opportunity for communities to develop, and for products to evolve as a result of those communities.

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FARMERS MARKETS - 2

* The Artisan food market is taking off again, people are becoming less satified with shelves full of identical, low quality products that use the names formally associated with higher quality.
* [Stichelton Dairy](http://www.stichelton.co.uk/) is a prime example of meeting this need. Most Stilton is made counter to the original recipe, making the Stilton name no longer really applicable, but it has been adopted to refer to the new recipes, so they can, and do, control it.

FARMERS MARKETS - 3

* Stichleton is actually *real* Stilton, but due to Joe Schneider's use of raw milk he can't call it Stilton. That Trademark is now too strictly controlled by large commercial interests who have legally defined what can be called Stilton now, and it doesn't include raw milk any more, even though originally it did.
* Joe is in fact very similer to an open source developer, since there was no recipe for him to work from, so he had to recreate the original Stilton recipe by experimentation.

FARMERS MARKETS - 4

* Artisan food makers have many of the same issues as Open Source Developers. They are competing in a niche market, often against overwhelming commercial competition. They also need to group together to be effective.
* The main difference currently is that Open Source is not usually sold, although this lecture and its precursor is about how to change that.

ACCESS TO PRODUCTS - 1

* Traditional games have plenty of sales avenues to choose from, such as Steam, GOG.com, or Mobile/OS App and Console Stores, Amazon and in normal shops.
* At present Open Source games are released in the same way as most other types of Open Source software.

ACCESS TO PRODUCTS - 2

* This means there is no easy way to promote them as things to exchange money for.
* You could of course put an open source product for sale on your own site, but without community to address criticism or consumer concerns, success would be hard.

CHANGING SOFTWARE LANDSCAPE - 1

* In the last decade the hardware side of computer science has changed fundamentally.
* Mobile Computing
* Better Internet availability.
* IOT is a thing now.

CHANGING SOFTWARE LANDSCAPE - 2

* Games have started to change, with smaller devs having great access to the mobile market.
* The closed source model still dominates the commercial games landscape, in spite of the increasing importance of Open Source in other software markets.
* Smaller devs/modellers/designers increasingly find that there is a direct way to make money from their work independant of big industry.
* Can Open Source solve all these problems? Almost certainly not.

HOW COULD IT BE DONE? - 1

* Initially, no open source game could have millions for development.
* If you can't afford to pay someone up front, then they would need a financial reward from the outcome of their work.
* This is analogous to Startups with no seed capital.

HOW COULD IT BE DONE? - 2

* If it were to be a job, people would need a source of income from somewhere.
* Games are complex, a place to initially meet and plan would be required. Many globally distributed Open Source organisations exist, we are working with two of them, so that can be managed.

HOW COULD IT BE DONE? - 3

* The fantasy of Startups with lots of money in a fancy building would need to be dropped.
* Small teams of hackers with minimal budgets, working from home or from office cafe's to a common goal would need to replace it (in fact this is how Apple started, only without the office cafe part as far as I know).
* Eric Raymond was the spokesperson for Open Source, promoting it. Open Source Games would need their equivilent, or many such people.

THE MAIN ISSUES

* The gaming public perception of Open Source games as games that are always free of financial cost for the end user would need to change.
* Piracy at least would be an irrelevence, piracy as it now exists cannot occur with Open Source.
* New models for game delivery, and the concept of games as product would need to be re-evaluated.

NLINE PLATFORM - 1

* A platform with a public front for browsing of products, such as the one provided by Steam could help.
* But people would want some element of ownership in the project too.

ONLINE PLATFORM - 2

* What features might an online presence for commercial Open Source Developmemt need? These are my thoughts.
  + Project Forums, instantiating a form of social network.
  + A donation based contribution system for interested parties (for non complete games).
  + Project Hosting (probably in partnership with someone like Gitlab or Github).
  + Firm community oversight by volunteers.
  + a formal payment scheme for completed games suited to the medium.
  1. Questions
  2. • Do you think the sale of open source games is viable now or in the near future? If you do, say why, but if you don’t, explain why not.
  3. • How do you think a current online game retailer, like Steam or GoG (for example) might approach the selling of Open Source games? Who do you think might be the best choice of those that exist now, or do you think none of them would be? Justify your answer.
  4. • If you were to set up a community for Open source games developers to collaborate, what would your priorities be? Provide a list with a breif eleboration for each point.