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While we may have an intuitive understanding of what game jams are, in this introductory chapter we will break things down a bit to give the reader a more fundamental understanding of the game jam movement and its history. We also look at the typical elements of a game jams, identify different types of game jams, and finally take a quick look at why we jam and examine attempts at formal definitions.

## **1** Introduction

Though it may seem like an unwise idea, in this chapter we aim to explain in definite terms what game jams are, and to provide some ideas for what can go into a local framework for creating the activity. The easy answer of course is that a game jam is what you want it to be — any time-limited event with at least one person focused on creating a game or part of one, qualifies. You can probably even find game jams that don't fit that description, but it frequently looks something like 1.

However before we answer that question, in section 2 we dive into the history of game jams and take a look at how game jams have evolved over time. After having talked about a lot of different game jams in the history section, we dissect the different elements that can go into a jam, and describe each element in detail in section 3.

Of course jams not only differentiate themselves by elements such as duration, theme, whether there are awards or not, and so on, but also by the spirit and context of the jam — who created it, why did they do it, where is is located, and so forth. We'll take a look at different types of jams in section 4.

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Fig. 1 A typical in-person game jam held at a university. Photo by Foaad Khosmood

Section 5 examines the benefits of game jams, and then, having gained some background and a good understanding of game jams, we are ready to talk about game jam definitions in section 6.

## 2 A Short History of Game Jams

Game jams, of course, existed before someone came up with the term. Lai et al. [25] and The Game Jam Guide [11] give an overview of the history of the game jams. In his book, Handmade Pixels, Jesper Juul also contributes details of the birth of the game jam movement [22]. Here we provide our own summary of the history of game jams.

Game jams, or at least game jam-like events existed before the term was invented. Newspaper archives in the US reveal several references to "game making sessions" in context of the federally funded "Follow Through" project [33] designed to evaluate best models for teaching disadvantaged students at the early elementary school level. At least one of the models being evaluated, "Interdependent Learning Model" sponsored by New York University [33], involved paper-based table-top games to be developed by committees of parents and teachers meeting at the local level. The earliest reference we found to one of these sessions is from 1974 Marshfield,



GAME PLAN — Mrs. Anne Morrison, center, kindergarten teacher at Nathan Hale School in New Brunswick, and Mrs. Sari Dodd, left, and Mrs. Jean Taylor, mothers of kindergarteners, show one result of game-making session.

The ice-cream cone illustration will be used to teach reading. Other games Mrs. Morrison and mothers of her pupils made will, like the cone game, be used for individualized instruction in reading and math.

Fig. 2 An educational game making session as part of project Follow Through. Photo and caption from Central New Jersey Home News (New Brunswick, New Jersey), March 10, 1976 [2]

# ••••• The Computers ••••

Prepare your game for one of the following computers, in the format indicated. (We apologize if your computer is not on this list, but we are limited to those to which we have access.) Games **must** be submitted in the appropriate form.

Apple II, Atari 800, Commodore PET/CBM, IBM Personal Com- puter, Radio Shack TRS-80 Models I or III	5-inch disk only	
Commodore VIC, Radio Shack TRS-80 Color Computer	cassette tape	
Radio Shack TRS-80 Model II	TRSDOS 8-inch disk	
CP/M with "plain vanilla" ter- minal (ie: no special features)	standard 8-inch disk	

Fig. 3 BYTE game contest, hardware compatibility requirements, December 1981 issue [4]

Wisconsin [1]. Other sessions from New Brunswick, New Jersey (1976) [2] and Modesto, California (1977) [3] were also covered by local newspapers.

Some early computing magazines offered game creation contests that had much in common with modern game jams. One of the earliest was a Byte Magazine contest in December 1981. Contestants were asked to send in their game on floppy disk or cassette tape depending on the system. Although no content restrictions were mentioned, there were technical constraints as seen in Fig. 3. The Rainbow, which was a magazine for TRS-80 Color Computer announced an adventure game contest (what we now call "interactive fiction") in 1982 [5]. Computer Gamer also ran an adventure game contest in 1986 [6]. An annual competition using Softworks' Adventure Gaming Toolkit (AGT) started on CompuServe Gamer's Forum online in 1986 and continued until 1993. It's demise lead to the Interactive Fiction Competition in 1995 [29]. Though they never used the term "game jam", they did call the submissions "games".

A few years later in 1999, NaNoWriMo (National Novel-Writing Month) started as a time-limited writing challenge. The Allegro Speedhack, which ran between 1999 and 2015 is another event which is not called a game jam, but does have many of the hallmarks of one, such as a set duration for making the application and an ethos of sharing. While Allegro is a middleware designed for making creations such as games and demos, it can be used for other things, and there is no requirement in the Allegro Speedhack rules that participants make a game.

The Indie Game Jam was the first event to use the term "game jam". The game jam took place in Oakland, California from the 15th to 18th of March 2002 and was attended by 14 game developers, who made 12 games in all. Focus was on technology and programmers in the sense that all developers had to use the same game engine (made by the organisers) to make their game jam game. The games were then shown and discussed at the Experimental Gameplay Workshop <sup>1</sup> at the annual Game Developers Conference (GDC) held in San Francisco. Indie Game Jam 1 was held February 28 to March 3, 2003 with 17 jammers. Famously, the first two Indie Game Jams were attended by many jammers who would later go on to become celebrated indie developers in the own right, such as Chris Hecker, Sean Barrett, Atman Binstock, Jonathan Blow, Doug Church, Ken Demarest, Ryan Ellis, Chaim Gingold, Robin Hunicke, Casey Muratori, Randy Smith and Robin Walker.

Though Indie Game Jam 0 was the first, a few other game jams were created that same year (2002). The Lithuania (LT) Game Jam was inspired by the Indie Game Jam and kept the very programmer-centric focus. Ludum Dare <sup>2</sup> was the first online only game jam. Today, Ludum Dare consists of two parts, one is a competition, while only the other is called a game jam. The competition part requires the game to be made by a single person.

Four years later in 2006, what would later become two of the biggest game jams of the scene appeared: Nordic Game Jam (NGJ) and Toronto Game Jam (TOJam). While earlier game jams such as the LT Game Jam and the Indie Game Jam, were

<sup>&</sup>lt;sup>1</sup> http://www.experimental-gameplay.org/, accessed on 15 January 2022

<sup>&</sup>lt;sup>2</sup> https://ldjam.com/, Accessed: 15 January 2022

very technical and programmer focused, NGJ and TOJam came to symbolise a new wave of game jams that emphasised team work and the social aspects of jamming. NGJ also introduced new elements such as ice breakers, idea pitching sessions, team forming and keynotes. NGJ grew to be one of the biggest single-site game jams in the world, with more than 900 participants. The Nordic Game Jam was inspired by some of the ideas of the Indie Game Jam, for example sharing the ideas and games (originally the organisers of the Indie Game Jam meant to release the game jam games via the GPL license). Initially NGJ participants had to upload their games under the Creative Commons License, including source code and assets. This is one of the ideas which was adopted by the Global Game Jam, when it based its game jam template on the Nordic Game Jam. During the following years, many local game jams sprung up all over the world, connecting game developers in local communities and bringing the spotlight upon emerging and under-represented voices.

The Global Game Jam, which later became the world's largest game jam had its first event in 2009. It was multi-site meaning a game jam with several locations that jam at the same time, but under the common name or brand of a single jam. The template used for the sites for the Global Game Jam was based on the Nordic Game Jam. This includes how a theme was used to level the playing field for ideation, sharing of games, releasing source code and assets, pitching session, team formation exercises, ice breakers, length of the game jam, and so forth.

Other jams have since had a similar multi-site model, including the Health Games Challenge in 2010 as well as the Fukushima Game Jam since 2012.

At this point, game jams had become more and more widespread, and specialised. One such type of game jam are those that offer jammers a unique space or way of game jamming — game jams that are part of the *experience economy* [28]. For example, the Train Jam is a game jam that took place on a train going from Chicago, Illinois to Emeryville, California. The attendees were mostly attendees of the annual Game Developers Conference (GDC) in San Francisco, and so the train packed full of jammers would arrive just the day before the conference started. Other examples of experience economy game jams are the Pirate Jam (which takes place on a sail boat in South East Asia), the Castle Game Jam (game jamming in a medieval castle in Sweden), LocomoJam (jamming on a train going from Brisbane via Sydney to Melbourne in Australia), Amaze Train Jam (jamming on a train from Johannesburg to Cape Town in South Africa), GDC Plane Jam (jamming on a plane going to GDC), Bus Jam (jamming on bus travelling between GGJ sites in Finland), Splash Jam (jamming on a ferry in Norway) and Jam Bike (two people jamming on a bike while cycling 600 km on a tandem bike).

In their article on Two Decades Of Game Jams, Lai et al. [25] separate jams into prejams and 4 historic waves; game jams as niche/personal spaces, game jams as regional communal spaces, internationally synchronised game jams and game jams as part of the experience economy. Their analyses of the waves are not complete and end around 2015. There has been an explosion of game jams since then, and there is definitely room for further analysis, possibly including different phenomena appearing in parallel.

We have only described a small subset of game jam types so far. We will cover an overview of some of these game jam types later on in this chapter, while other chapters in this book will provide more in-depth coverage.

## 3 Elements of a Game Jam

Most game jams have at least some common elements; a time-limit and a theme or specific idea to try out. Many game jams add extra elements such as extra voluntary constraints <sup>3</sup>, group forming, ice breakers, pitching sessions, stand up meetings, accommodation, catering, jury & audience awards, presentations of the games and even playable mini-exhibitions of the games.

As we've seen earlier, nearly any opportunity to work on a game, new or existing, can be called a game jam. However, many events add extra elements. Some of these elements, are common to many types of events, while others are more specific to game jams. Some of these elements will also be elaborated more upon in later chapters. The elements we will cover here are:

- Accommodation
- Awards
- Catering
- Codes of Conduct
- Extra types of Games
- Games Presentations
- Group Forming
- Hardware & Software
- Ice Breakers
- Internet
- Keynote Speakers
- Location Physical / Online
- Security
- Sponsorships
- Standup Meetings
- Tutorials & Workshops
- Theme
- Voluntary Constraints

<sup>&</sup>lt;sup>3</sup> The diversifiers of the Global Game Jam is an example of extra non-compulsory constraints that experienced jammers might want to add on, to give themselves an extra challenge https://globalgamejam.org/global-game-jam-diversifiers.

## **3.1** Accommodation

Some popular game jams, get a lot of visitors from outside the geographic area where they are located, or even from other countries. In these cases, they often try to build a list of nearby hotels or hostels, and some cases reach out and negotiate discounts on behalf of game jammers. Game jams typically attract a large portion of students, hobbyists and indie game developers. Thus if jammers need to overnight, access to cheap or even free accommodation becomes important. Some game jams also arrange for sleeping rooms on-site, though in such cases arranging for codes of conduct (section 3.4) and showers become even more important than usual. Sleeping on-site might also be seen as promoting crunch. Crunch is a word usually indicating intense times of work, and has been prevalent in the games industry, for shorter and sometimes longer periods of time. In recent years, studios using crunch has faced a lot of backlash. See Chapter Seven for more on the issue of crunch.

Lastly some organisers might also try to offer couch-surfing like accommodation, though in this case, again trust is required as well as codes of conduct.

## 3.2 Awards

Having awards at game jams can often be controversial. Most game jams tend to promote a sense of community and camaraderie, something not always compatible with a competitive spirit. Thus, the game jams that do have competitions, tend to make sure they are held in a spirit of friendliness.

The most common types of awards are jury's & the participants' awards. The former tends to be more controversial, as some game jammers do get upset at having people who did not participate in the jam, and who they do not consider a peer, come in and judge their game. One reason to have a jury's award, is that a place on the jury committee is often requested by sponsors, as this gives them a first look at interesting games and talented jammers.

## 3.3 Catering

Some venues provide catering. The Nordic Game Jam has done this with great success. For example, providing breakfast at a set time entices jammers to come in early. Providing meal breaks, also give jammers an excuse to step away from their games and get a fresh perspective on their games, while it provides organisers with an opportunity to build up a sense of community by getting people to mingle and talk. Having set meal times with healthy or at least varied food, can also help disrupt the stereotypical image of geeks that work all night under crunch like conditions while eating tons of snacks and fast-food.

One downside of providing food is the added expenses, so unless the food can be sponsored or otherwise be provided for free, catering does tend to increase the ticket prices of game jams.

## 3.4 Code of Conduct

There has been increased attention paid to creating safe spaces in recent years, as organisers have attempted to grow their sites and provide events that feel inviting for a more diverse audience.

These codes of conduct often boil down to more or less *behave nicely towards others*. It is helpful to have a more elaborate text that clearly states the behaviours that will not be tolerated at the event. These rules should not only be available online, but also be printed and hung in clearly visible locations, as well as presented to all participants at the start of the event. This has the advantage of setting the tone of the event, and providing reassurance to those who might need it.

An example code of conduct can be found on the Global Game Jam website<sup>4</sup>. The code of conduct should be accompanied by instructions on how to contact the organisers for help.



Fig. 4 Analog Game Jam held at FDG 2015 in Monterey, California. Photo by Allan Fowler

<sup>4</sup> https://globalgamejam.org/inclusiveness-policy-and-code-conduct

## 3.5 Types of Games

Most game jams only encourage game jammers to submit games digitally, as these tend to be the easiest to handle logistically and are easy to present if final presentations are held. Other types of games such as board games have risen in popularity at game jams, though organisers should make sure they can properly support such types of games before allowing them to be made, as otherwise it can result in jammers having a frustrating experience. Things to consider by organisers, include instructions on how to submit a board game, how to show it at final presentations after the jam, and providing materials for quick prototyping.

In a similar manner, some game jams also encourage jammers to submit physical games / pervasive games (such as basketball, hide & seek, etc), games requiring extra custom hardware, limited-experience games where the true experience is not reproducible, and so forth. Only the imagination sets the limit for what kind of games can be made at a game jam.

#### **3.6 Games Presentations**

Having the jammers present their games in a common showcase is a great way to end a game jam; the jammers get to celebrate what they have just been through and show their newly created games to their peers, while everyone gets an overview of what has been created during the jam.

The model originated at jams such as the Indie Game Jam and revolves around having presentations after the game jam, where each team takes turn to show off their game to everyone else. These presentations will often be time-boxed (for example 10 minutes), in order to make sure there is time for everyone to show off their game. If the jam has awards, the central presentations are usually followed by voting and a small award show.

As jams have grown in size, it has become unfeasible for some sites to have central presentations where each team take turns showing their game to everyone in the room. The Nordic Game Jam initially tried a model where there would be a set of tiered rounds of elimination, before a number of finalist would go on to the central presentations. This model however, ended up being unsatisfying for some jammers, as it meant not everyone would be able to have a look at the games they'd like to see.

Some jams which have either grown too big or in some cases, because they don't like the competition aspect, set up a central post-jam exhibition of all the games. This can either be immediately after the game submissions deadline, as with the central presentations model, or some time after – some jams prefer to give the jammers a chance to rest, and prepare before showing their games to everyone else. Some game jams still let booth visitors vote on the games during the exhibition.

#### 3.7 Group Forming

Depending on one's personality, it can be intimidating to go to a jam where one doesn't know anyone. For example, how can you find a group if you don't know anyone? Unless you are a multi-talented person, it is difficult to make a game on your own. Most often, games need to be made by teams. This holds especially true for game jams, where there is so little time available, and thus specialisation can be a necessity. At the same time, from the organisers' side, there is an interest in making sure that participants enjoy the jam.

A common group forming method, popularised by the Nordic Game Jam, and later Global Game Jam, is pitching. Pitching combines ideation with group forming. This and another method is described in detail by Højsted [21].

There are of course many other ways of creating groups. Some jams also encourage pre-formed groups. The important takeaway is that games are usually made in groups, and game jams are best experienced as part of one.

#### 3.8 Hardware & Software

Some game jams also provide hardware and/or software. This holds mostly true for educational institutions and internal jams at private companies. Educational institutions have usually already reserved a set of computers for use by students, which can often be temporarily reserved for jam purposes. Sometimes that repurposing can involve negotiating with the IT department.

Similarly, as will be described in more detail elsewhere in this book, many companies have also started doing jams. In these cases, employees will often be using their work computers.

#### 3.9 Ice Breakers

To help jammers relax, form groups and network more easily some game jams have ice breaker sessions. This was made popular by the Nordic Game Jam.

#### 3.10 Internet

Many game development tools are available online for download, as are source code repositories such as Github [19], Bitbucket [7], Dropbox [15] and many others that make sharing of code and other assets relatively straightforward. While in the case of a physical site, it is entirely possible for jammers to do without internet; share resources via USB sticks, look up things on their phones, etc., having internet access

makes things a lot easier and requires less planning from the jammers. For example, without on-site internet jammers will have to install the right software before coming to the jam, or bring what they need on installable media.

Today, some game jams such as the Train Jam utilise the potential lack of connectivity as an extra constraint. The game jam distribute some software to jammers via USB sticks, but jammers will need to prepare and install extra software beforehand. Code and asset changes are usually shared among team members via USB sticks.



Fig. 5 An employee of a local sponsor (IFixit Corporation) delivering the sponsor keynote for Global Game Jam 2014 at Cal Poly. Photo by Foaad Khosmoood

## 3.11 Keynote Speakers

It has become popular to have motivational speakers at game jams. These can be useful not only for motivating the jammers in general, but also for setting the mood or genre of the jam. For example, if it is a game jam focused on designing Serious Games or Games for a Purpose, a jam might have a keynote at the beginning with a game designer who has experience in that area.

If the jam has sponsors, a common ask from them is to give a keynote. See Fig. 5.

#### 3.12 Location - Physical / Online

Not all game jams are physical events. In fact, even before the covid-19 online game jams were highly popular. The important thing is to have a central place where jammers can communicate with each other, and the organisers with the jammers. Though this can be done via email if the jam is online, it is better to have a central website for submissions and a dedicated application or site for communications, for example Discord [13], Gather [18] or Slack [31].

## 3.13 Security

Security is an issue both with online- as well as physical game jams. For physical game jams, if it takes place in a private company or at an educational institution there might be on-site security. In all cases, it is recommended there are always organisers on-site for as long as the game jam is open.

Harassment can be a real issue not only for physical jams, but also for online ones, as in the latter case, perpetrators might feel more safe hiding in front of their computer. Many online jams therefore still require jammers to sign up pre-jam and utilise authenticated accounts, to limit access to crucial resources.

## 3.14 Sponsorships

Though, a game jam can easily be arranged for absolute nothing, organisers might want to offer extra amenities such as internet (which might require the rental of mobile hotspots), t-shirts or other apparel with the game jam logo, website hosting, venue and furniture rental, food, etc. These can get expensive, and the most common way for game jams to raise funds for these expenses are through sponsorships and/or attendance fees.

## 3.15 Standup Meetings

This is something that works best with game jams that run over a few days at least. Some game jams arrange check-in meetings, typically at the beginning of the day or around lunch time, where the teams take turns sharing their progress with the other teams. This is typically a good opportunity to share ideas, get feedback, talk about things that went wrong or right, and so on. These meetings also work well as an opportunity for teams to advertise for extra help, for example, sound designers can often be in short supply at game jams, and thus tend to work across teams.

These meetings are also a good opportunity for the game jam organisers to gauge how the different teams are doing in their project and if they need assistance in any way.

## 3.16 Tutorials & Workshops

Game jams offer a great opportunity for learning new skills. Thus some game jams also offer workshops, either during or just before the event. This can be workshops or tutorials anything related to game development (or not). Some common ideas are game design workshops, talks introducing game engines or a session on how to use a certain technical resource such as APIs to cloud services.

If the jam has sponsors, a common ask from them is to give a tutorial or workshop about their organisation or technology. This is especially true if the sponsor makes some kind of middleware that jammers can use for making games.

## **3.17 Theme**

Many game jams offer a central theme. A theme creates a common challenge for all the jammers, and has the added advantage of leveling the playing field as much as possible as it becomes hard to prepare something from home. Themes are most often kept secret until the beginning of the game jam. This is most often done to discourage jammers from coming into the jam with a complete game, or making significant progress in design or development of a certain game beforehand, which would directly take away from the game jam experience.

## 3.18 Voluntary Constraints

The Global Game Jam offers an extra set of voluntary constraints, called diversifiers<sup>5</sup>. These diversifiers work as extra voluntary constraints that experienced jammers can pick as well as functioning as extra search criteria on the Global Game Jam website.

## 4 Types of Game Jams

Though most games jams are characterised by the elements described in section 3, jams can also differ in other ways, for example by the purpose of the jam. While many game jams exist without a stated purpose, other game jams have been created

<sup>5</sup> https://globalgamejam.org/global-game-jam-diversifiers

with for very specific reason that can influence how they are organised, the theme, where they are located, who is encouraged to attend and so forth. A more complete overview of different types of game jams than what we give here, can be found in Lai et al. [25].

Lai et al. [25] provides a list of game jams focused on inclusivity such as Boob Jam, XX Game Jam, Lyst, Women's Game Jam and more. There are many other examples of purposeful game jams such as the Anti-fascist game jam or the News Jam. One of the longest game jams for a purpose is the Fukushima Game Jam, which was created in the wake of the earthquake that caused a tsunami and the following Fukushima nuclear disaster in 2011. The Fukushima game jam has since become a recurrent annual game jam.

One simply needs to take a glance at the Itch.io list of game jams for more of ideas on purposeful game jams. At the time of writing their game jam calendar includes game jams with names such as the Historically Accurate Game Jam and Game Jam for Good (supporting the British Red Cross).

Game jams have also been used as activism, a way of providing commentary on happenings in the games industry, such as Candy Jam, Flappy Jam and Moly Jam. Candy Jam happened when the game company King [23], complained about the trademarking of the game The Banner Saga [32], because King also had a game with the word Saga in it – Candy Crush Saga. Candy Jam was created as a kind of playful protest against King's protectionism and encouraged jammers to make games which featured candy. Moly Jam is named after Peter Molyneux, the game designer behind games such as Populous, Syndicate, Theme Park, Dungeon Keeper, Black & White, Fable and more. Peter Molyneux was even according to himself, famous for over-promising. Molyjam was born out of the satirical twitter account "What would Molydeux"<sup>6</sup> parodying Molyneux.

Another common reason for game jamming is to carve out a space for trying out a new technology. Middleware producers often put on jams to promote their technology. Examples are the Epic Mega Jam, Google Stadia Play Anywhere Game Jam, Quantum Jam, and Oculus' VR Jam.

Promoting Science Technology Engineering and Mathematics (STEM) in education has become important for many governments, as they see those areas as important for creating a competitive workforce and economy in a time dominated by digital technology. Sometimes arts is added to that acronym and STEM becomes STEAM. Game jams are often utilised for promoting STE(A)M education. In fact, Fowler [16] argues for using game jams and hackathons as informal spaces for promoting STEM. Examples of game jams for promoting or encouraging jammers to get involved in STE(A)M includes a game jam summer camp arranged by Fowler & Schreiber [17], the Indie Galactic Game Jam and the United Kingdom Royal Society's Summer of Science game jam.

Game jams can also often be found in more commercial settings such as at game expos and conferences (Develop Brighton, EGX Rezzed, Pocket Gamer Connect and GamesCom). Many game companies have also started using game jams internally,

<sup>6</sup> https://twitter.com/molyjam

either for idea generation or as a sort of reward or motivational experience, where employees can try their hands on something or even in a completely different role. Games can often take years to develop, so an opportunity to work on something different can be a very welcome diversion. Bossa Studios [10] and Double Fine [14] are two companies that have been very vocal about their use of game jams. Double Fine has even gone so far as to commercialise the game jam experience itself, by letting the public pay to vote for the favourite games made at the jam. The most voted prototypes could then go on to be fully developed as games.

Lastly there are also meta jams, game jams about game jams that play with the concept itself. For example, the Zero Hour Game Jam (0h Game Jam) is a game jam that lasts exactly one hour, and starts at 1 AM one the day when some European countries change from summertime to wintertime. Because the clock is set one hour back on this day in these countries, the game jams starts at 1 AM and finishes at 1 AM.

## 5 Why We Jam

In this section, we consider the benefits of game jams, perceived and real, as we dig into why people organise and go to game jams.

Looking first at organisers rather than the jammers, there can be many motivations for organising a game jam. One reason can be to make a game jam with a purpose, for example to promote a charity, a special cause, trying out a specific game engine, and so on. Different types of game jams are given in section 4, which can function as initial catalysts for ideas for game jams. Organising the game jam itself might not be the main be the motivation for creating a game jam. The author of this chapter, for example, started organising game jams because they wanted to meet other game developers, as well as create and be part of a community. Likewise Aurava et al. [8] surveyed Finnish teachers and concluded that educators do think that game jams can be a good way of teaching soft skills such as communication and collaboration.

Now that game jams have become so prolific, many students join game jams either because it is part of their programs of study or because it has been recommended to them for getting a job. Several studies have been made on what motivates jammers. Game companies can be very portfolio focused in their hiring, so for someone with no professional game development experience, game jams can be a good way to start building a portfolio.

Focusing on the 2013 edition of the Nordic Game Jam (NGJ), Reng et al. [30] wondered: "Why would so many young people travel from all over Europe, and pay a fairly large sum of money to do what they in principle could do for free every day of the year in their own home? And what is it about a game jam that can motivate and engage its participants so much that they return year after year?" They found that while learning and getting more experience were primary motivating factors, socialising and networking were important as well. In this context it is important to

remember that NGJ is a game jam that places a lot of emphasis on social factors, so jammers might automatically self-select in this regard.

Making a large survey of participants of GGJ 2018, Melo et al. [9] divided jammers depending on how much background in game development they had: none, students, indie, hobbyists, professional or others. They also categorised possible motivations into four groups; personal, technical, social and business. They found that students and hobbyists were motivated by tech compared to professionals, while students are the least directed by social factors. Indie developers were the ones who were the most influenced by social factors. Overall among all participants, the ordering of the motivations were (from most to least) personal, social, technical and business.

Having an outside perspective on game jams, Musil et al. [27] argue for applying game jams to other types of software development than just games. They highlight typical game jams features such as rapid prototyping, participatory design and multidisciplinarity, and argue that game jams can be considered a "potential enrichment of current software development processes." Along a similar vein, looking at the beneficial side effects of participating in game jams, Contreras-Espinosa and Eguia-Gomez [12] focused on how game jams can potentially teach jammers 21st century skills such as learning, communicating, collaboration and problem solving.

## 6 Game Jam Definitions

As part of looking at all the different elements, and exactly what constitutes a game jam, we will examine several attempts from academics at pinning down the definition of game jams. While the exact definition is not important when you want to organise or attend an event, the definition becomes important if we want to establish a common language when we talk or write about jams. Also, things like the difference between game jams and hackathons become important in that instance.

Musil [27] et al. noted seven attributes that they found characterise game jams — the goal is to rapidly prototype small games, there is a theme, everyone who can produce something for the game can participate, there is a time limit, team creation at the jam is encouraged, the events are soft- and hardware agnostic and there is a public presentation with judging. We might be able to recognise some of these elements such as a theme, time limit and presentations from section 3.

Kultima [24] analysed 20 papers on game jams and from them, distilled a definition on game jams as "accelerated, constrained and opportunistic game creation events with public exposure".

"Accelerated" means that most jammers see game jams as an opportunity for prototyping a game idea, a feature or some new functionality. This does not always have to be the case though. One example of this is the Depth Jam<sup>7</sup>. According to the Depth Jam website, Chris Hecker and Jonathan Blow long had some reservations

<sup>7</sup> https://www.chrishecker.com/The\_Depth\_Jam

about game jams, which culminated in a speech by Hecker at the annual Game Developers Conference<sup>8</sup> (GDC) entitled Please Finish Your Game<sup>9</sup>. In this talk, Hecker critised how there was too much focus on how long a game took to develop, instead of focusing on how good a game turned out. The indication being that many games are developed too quickly, resulting in shallow game play. Hecker felt that popularity of game jams in the indie community was partly to blame for this shallowness. In contrast to this was a game like Braid<sup>10</sup>, which is a game that explores time manipulation as a mechanic quite thoroughly. Blow's followup game, The Witness<sup>11</sup> features a similar depth. Inspired by this criticism, the pair organised The Depth Jam, and invited two other indie game developers — Daniel Benmergui & Marc ten Bosch — to participate with them. Instead of prototyping a whole game, the point of the Depth Jam was to focus on a single element or mechanic and improve that.

Game Jams are nearly always "constrained" as nearly all of them are constrained in time. Of the three attributes — "accelerated, constrained and opportunistic" this one is the most difficult to find an exception to. One could argue that without the time-limit, a game jam would just be seen as regular game development focused on producing a first playable prototype. The game jams that come closest to breaking this rule are probably the Year Long Game Jam, or the now defunct Experimental Gameplay Project, which ran for a month at a time, but the participants were only allowed to spend a total of seven days on their game.

Lastly, just like Musil described game jams as typically having public presentations, "public exposure" is also part of Kultima's definition, though many game jams exist which do not have any public exposure. An example of this are internal game jams such as those organised by King or Bossa Studios. However, public exposure is part of many games jams, if not most, and thus also feature often in academic descriptions of them. Public exposure may just have been a regular element in the papers that Kultima analysed, when she distilled her definition.

Locke et al. [26] took a more artistic point of view on game jams, as they established a framework that "establishes a theoretical basis with which to analyse game jams as disruptive, performative processes that result in original creative artefacts". Though the lenses and starting points are different, there is some overlap between Locke et al. and Kultima's work, as they both require a public presence. Locke et al. talk about a "performative process" which require some sort of "public exposure".

While Kultima proposed a standalone definition, Grace [20] instead compared hackathons to game jams. Grace argues that hackathons focuses more on the end result — the artifact that the participants create — while game jams on the other hand are more process oriented. By being process oriented, the focus is less on the

<sup>8</sup> https://gdconf.com/

<sup>9</sup> https://www.youtube.com/watch?v=f6ta63pbc6Q

<sup>10</sup> https://en.wikipedia.org/wiki/Braid\_(video\_game)

<sup>11</sup> https://en.wikipedia.org/wiki/The\_Witness\_(2016\_video\_game)

game itself, but rather on the learning outcomes and the experiences that are had during the game jam.

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