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NEUES TEAM MIT BEWÄHRTEM KONZEPT

Computec Media kauft das Objekt Making Games – diese Nachricht dürfte so manchen von Ihnen Mitte April sicherlich unvorbereitet getroffen haben. Und so mancher von Ihnen fragt sich nun vielleicht, was das wohl für die Making Games und alles, was dazu gehört wie zum Beispiel Key Players oder Making Games Talents bedeuten mag? Um es kurz zu machen: Im Grunde erst einmal nichts, außer dass sich der im Impressum genannte Verlag ändert und auch die Zusammensetzung des Teams in den kommenden Monaten angepasst wird. Davon abgesehen wollen wir aber das, was Webedia bzw. ehemals IDG aufgebaut haben, genauso fortführen wie bisher und versuchen die Making Games und Co. auch in den kommenden Jahren noch erfolgreich fortzuführen oder sogar erfolgreicher zu machen. Denn während bisher gerade einmal zwei Redakteure alle Projekte stemmten, können wir auf ein großes B2B-Team zurückgreifen, haben Event-Experten (Aruba) für die Talents-Veranstaltungen und so weiter. Außerdem soll der Übergang von Webedia an Computec so reibungslos wie möglich verlaufen und daher bleibt uns der bisherige Managing Editor Sebastian Weber noch einige Monate unterstützend erhalten und hat somit nach wie vor ein offenes Ohr für Ihre Anliegen und Artikelvorschläge. Denn wie bisher soll das Magazin Making Games tiefgründige Einblicke in die Entwicklung von Spielen geben und von Ihren Erfahrungen und Erkenntnissen profitieren. So setzen wir auch künftig auf Ihre hochwertigen Gastbeiträge und spannenden Einsichten in Ihren Arbeitsalltag.

Mit erfahrenen Partnern in die Zukunft

Deshalb hilft die externe Expertise ungemein, Making Games auf erfolgreiche Beine zu stellen und da geht es uns nicht anders, als Ihnen, wenn Sie Ihre Produkte in unbekannten Märkten veröffentlichen wollen – um den Bogen zur aktuellen Ausgabe zu schlagen. Märkte wie China, Russland oder Brasilien haben häufig ganz andere Anforderungen als Sie es vielleicht aus den traditionellen westlichen Territorien kennen. In China (Seite 22 und Seite 30) bestimmt staatliche Zensur die Inhalte von Spielen, aber auch die Kommunikation unter den Spielern. Russland mag vor allem den PC oder Kriegsspiele (Seite 27) und Brasilien ist zwar ein riesiger Markt, die Nutzer sind aber nicht immer am Puls der technologischen Zeit (Seite 32). Es gibt also viele Fallstricke, die für einen erfolgreichen Release in verschiedensten Märkten eine Rolle spielen und oftmals ist ein erfahrener Partner ratsam. Daher hoffen wir, dass die Beiträge unserer Experten zum Thema »Culture Shock« Ihnen eine genauso große Hilfe beim Spiele-Release sind wie die Webedia-Kollegen uns bei der Produktion der ersten Making-Games-Ausgaben unter Computec-Flagge.

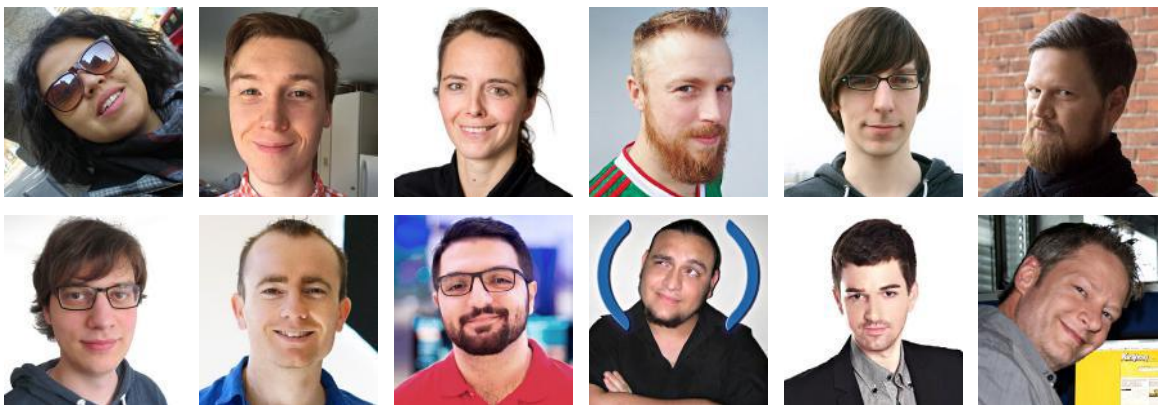
Viel Spaß mit der aktuellen Ausgabe!

das Team von Making Games

Dirk Gooding
ist Chefredakteur
vom Making Games Magazin.



»Wir wollen Making Games und Co. auch in den kommenden Jahren noch erfolgreich fortführen oder sogar erfolgreicher machen.«



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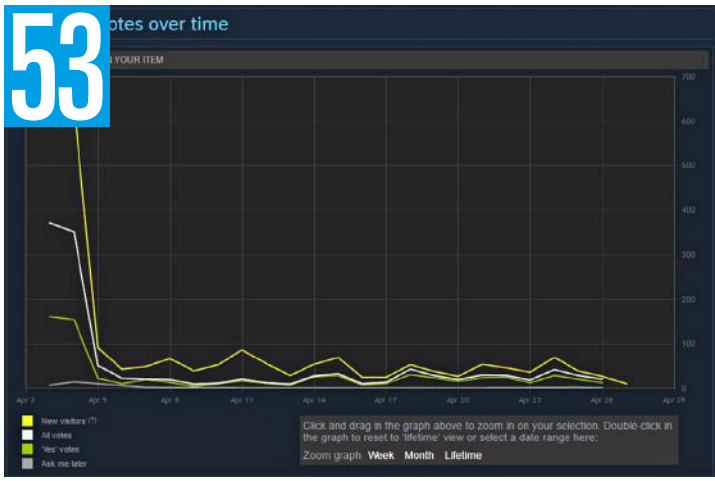
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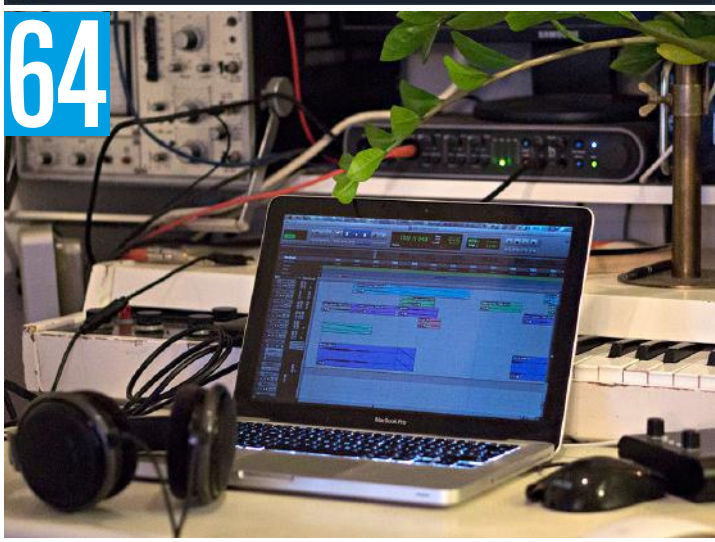
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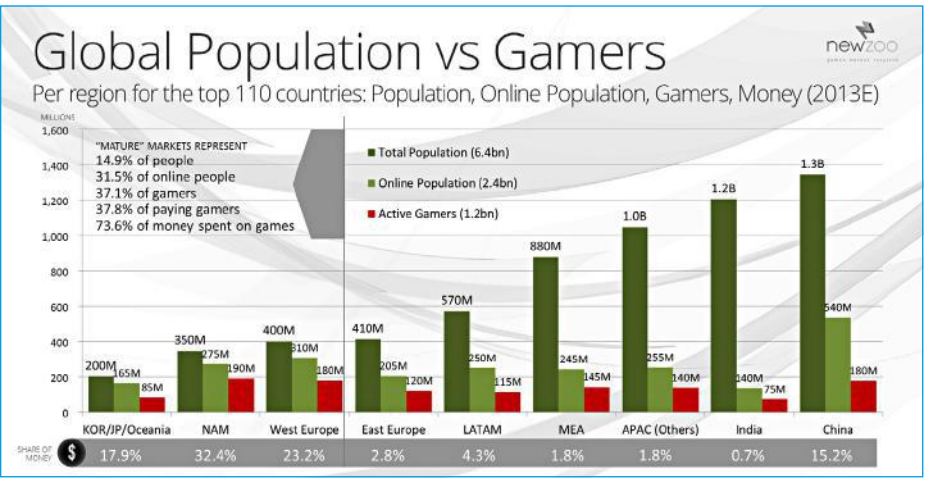
















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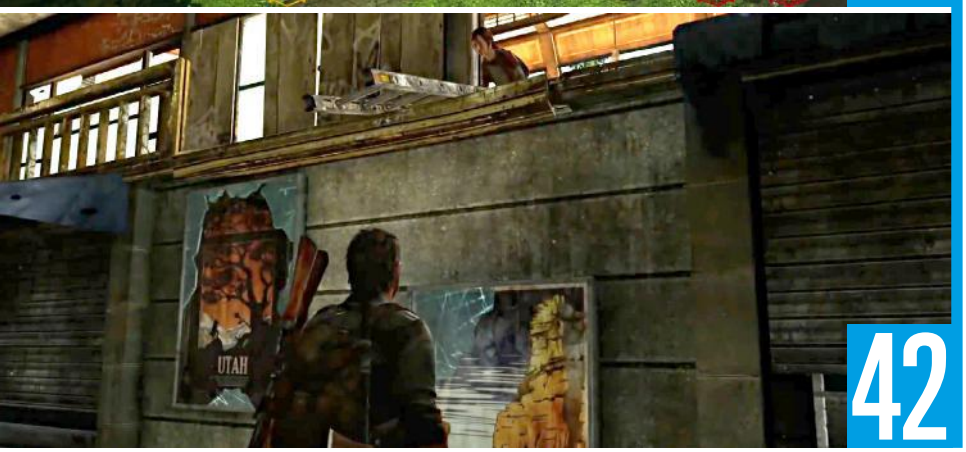
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Die Branche im Überblick



GAME BUNDESVERBAND WÄHLT NEUEN VORSTAND

Ende April hat der Game Bundesverband e.V. im Rahmen einer ordentlichen Mitgliederversammlung einen neuen Vorstand gewählt. Dr. Florian Stadlbauer (Deck 13) legte sein Amt als Vorstandsvorsitzender aus persönlichen Gründen nieder und an seine Stelle wurde Stefan Marcinek gewählt. Marcinek ist einer der Gründer der Kalypso Media Group aus Worms, von der er Ende 2015 seine Firmenanteile verkaufte, um sich neuen Herausforderungen zu widmen. Außerdem organisiert Marcinek die kostenlose Entwicklungskonferenz GermanDevDays, die Ende Mai erstmals in Frankfurt stattfand. Stellvertretende Vorsitzende ist fortan Dr. Linda Breitlauch von der FH Trier. Ebenfalls neu in den Game-Vorstand gewählt wurde Johannes Roth, Gründer und Geschäftsführer des Münchner Entwicklers Mimimi Productions. Carsten Fichtelmann (Daedalic Entertainment) und Ramak Molavi (GameDuell) wurden in ihren Ämtern bestätigt. Hendrick Lesser (Remote Control Productions) verlässt indes den Vorstand, kümmert sich aber weiterhin um die Koordination der internationalen Beziehungen des Verbands und zählt zum Führungskreis.

Stefan Marcinek unterstrich nach seiner Wahl die Notwendigkeit einer mittelständisch geprägten, aus der Mitte der Branche kommende Interessenvertretung. Die deutsche Branche charakterisiert sich durch kleine und mittlere Unternehmen. Der Game ist daher gefordert, Politik und Gesellschaft aufzuzeigen, welche Potentiale in der Branche stecken und welchen Herausforderungen sich gerade deutsche Entwickler stellen müssen. Johannes Roth möchte durch sein Mitwirken vor allem die individuellen Bedarfssituationen und Perspektiven von kleineren Entwicklern in die Verbandsarbeit einbringen, damit die jungen Talente auch in Zukunft zum Erfolg der deutschen Games-Branche beitragen können und sich mit dem Standort Deutschland verbunden fühlen.

Die Position des Geschäftsführers bekleidet weiterhin Thorsten Unger, Kai Bodensiek bleibt Justitiar ebenso wie Timm Walter weiterhin die Leitung der Geschäftsstelle innehat und Tobias Heim sich um den Mitgliederservice kümmert.

Beinahe zeitlich meldete der Game zudem, dass der Verband drei neue Mitglieder und einen neuen Partner verzeichnen kann. Schon seit Ende Januar sind Garlic Games Media und das Institute of Learning Design and Management der Steinbeis Hochschule Berlin mit an Bord. Im April stießen Treffpunkt Idee und als Partner GameUp! Rheinland-Pfalz dazu.

Sebastian Weber

WWW.makinggames.biz
aktuelle News und Gerüchte

SCHALKE 04 ÜBERNIMMT E-SPORT-TEAM



Der Fußballverein Schalke 04 hat Mitte Mai das E-Sport-Team Elements übernommen, das auf »League of Legends« spezialisiert ist. Moritz Beckers-Schwarz, der Geschäftsführer von Schalke 04, begründete den Schritt damit, dass E-Sport in den vergangenen Jahren kontinuierlich an Professionalität gewonnen habe und hier gerade League of Legends positiv hervorzuheben sei. Schalke ist somit der erste traditionelle Sportverein, der in den digitalen Sport investiert. Tim Reichert, der ab sofort bei Schalke für E-Sport zuständig ist, geht jedoch davon aus, dass bald weitere Vereine in das vielversprechende Geschäftsfeld einsteigen dürften – immerhin ist der VfL Wolfsburg seit 2015 bei »FIFA« aktiv. Reichert sieht vor allem drei interessante Geschäftsbereiche für seinen Verein im E-Sport: Sponsoring, Vermarktungseinnahmen und Merchandise. Dazu passt die Ankündigung der ProSiebenSat.1 Media AG, die ebenfalls Mitte Mai abgegeben wurde, dass der Sender plante, seit dem 01. Juni auf seinem Sender ProSieben MAXX eine E-Sport-Sendung auszustrahlen – auch wenn diese sich zunächst nur um »Counter-Strike: Global Offensive« drehen wird.

BIU.Dev BIU.Net making games

NEUE TERMINE FÜR »BIU ACADEMY«-WEBINARE STEHEN FEST

Die Webinar-Reihe »BIU Academy«, die der Bundesverband Interaktive Unterhaltungssoftware in Kooperation mit Making Games im Januar 2016 gestartet hat, widmet sich als nächstes dem Thema Spieleentwicklungs- und Publishing-Verträge.

»BIU Academy« in Kooperation mit Making Games ist eine Webinar-Reihe für Entwickler, Gründer und Interessierte; eine Weiterbildungsmaßnahme ohne Reisekosten zu allen Themen rund um Spieleentwicklung und -vermarktung, zum Beispiel Business Modelle, Design, Management, Legal, Marketing und viele mehr.

- **Länge**: 60 Minuten
- **Monatlich; Dienstags** um 17:00 Uhr
- **Preis**: 19,00 EUR
  (für Mitglieder des BIU-Netzwerks kostenfrei)
- **Aktuelle Informationen unter**:
  www.biu-online.de
  Facebook: BIUeV
  Twitter: BIU_eV

Die siebte Webinar-Veranstaltung widmet sich dem Thema **»Spieleentwicklungs- und Publishing-Verträge«**. Das Webinar findet am **Dienstag, 05.07.2016 um 17:00 Uhr** statt.

In seinem Webinar gibt Referent Konstantin Ewald einen Überblick über die wichtigsten Regelungen in Spieleentwicklungs- und Publishing-Verträgen. Welche Leistungen schulde ich als Entwickler in einem Entwicklungsvertrag? Was passiert, wenn ich zu spät liefere oder der Publisher das Spiel nicht abnimmt? Wie schütze ich mein geistiges Eigentum und was muss ich bei der Ausgestaltung von Rechteklauseln beachten? Welches Engagement kann ich von meinem Publisher verlangen? Was passiert nach der Veröffentlichung meines Online- oder Mobile Games? Wer kümmert sich um das Spiel und was muss ich im Vertrag beachten?

Konstantin Ewald ist Rechtsanwalt und Partner in der internationalen Kanzlei Osborne Clarke. Einen besonderen Schwerpunkt seiner Tätigkeit stellt seit vielen Jahren die umfassende Beratung von Unternehmen jeder Größe aus der Spieleindustrie dar. Er veröffentlicht regelmäßig zu Themen aus dem Bereich des IT-Rechts sowie zu Rechtsfragen der Computer- und Videospieleindustrie. Er ist Autor des ersten Fachbuches zu Rechtsfragen im Zusammenhang mit Mobile Apps und betreibt seit einigen Jahren das Blog www.spielerecht.de. Auf Twitter findet man ihn unter @Spielerecht.



Konstantin Ewald
Rechtsanwalt und Partner bei Osborne Clarke.



Christopher Hecht
Freier Game Designer bei Game Design Geek

Termine 2016

Termin	Thema	Referent
05. Juli	**Spieleentwicklungs- und Publishing-Verträge**	**Konstantin Ewald** (Osborne Clarke)
Juli	**Pitching: »How to stay calm«** (English)	**Noch nicht bekannt**
August	**gamescom** (Webinar-Pause)	
06. September	**Monetarisierung von Free2Play-Spielen**	**Christopher Hecht** (Freier Game Designer bei Game Design Geek)

Änderungen vorbehalten

FOKUS GAME
ENTSCHEIDE DICH!

Timm Walter mit einer (kurzen) Liebeserklärung an The Witcher 3 und die Entscheidungsfreiheit in Spielen – Achtung, Spoiler!



Timm Walter
ist Leiter der Geschäftsstelle des GAME Bundesverband der deutschen Games-Branche e.V.

Timm Walter ist Politikwissenschaftler und kümmert sich als Leiter der Geschäftsstelle um das operative Geschäft des GAME. Vor seiner Zeit im Verband konnte er weitreichende Erfahrungen in der Politik und der Medienbranche sowie im Vereinswesen sammeln.

Ende April war es vollbracht und ich sah, über ein Jahr nach dem Release, endlich den Abspann von »The Witcher 3«. Geralt schaffte es auf Level 39 und das Böse war besiegt. Der einsame Wolf zog in den Abspann. »Einsam« ist hierbei das richtige Stichwort. Mein Hexer ritt weder mit Triss in den Sonnenuntergang noch wurde er mit Yen alt, und auch Ciri entschied sich für ihren eigenen Weg. Von den drei möglichen Enden mit insgesamt 36 (!) kleineren bis mittleren Variationen hatte ich also die »Lonesome Rider«-Version erspielt – die allerdings immerhin im bestmöglichen Ausgang.

Beliebt, aber aufwendig

The Witcher 3 lässt uns alle naselang wichtige oder auch minder wichtige Entscheidungen treffen, die nicht nur den Storyverlauf und die jeweiligen Enden beeinflussen, sondern ebenso, wie sich die Welt entwickelt. Die Entscheidungen sind dabei mal mehr, mal weniger offensichtlich und haben so gut wie immer eines gemeinsam: Es gibt kein Richtig oder Falsch, sondern einfach nur meinen Weg. So wie ich spiele, so wie ich bin, so sind auch mein Hexer, meine Spielwelt und mein Ende. Das ist natürlich total super und sorgt für einen enorm hohen Wiederspielwert, das ist aber vor allem auch eines: extrem aufwendig für die Entwickler. CD Projekt Red, die polnischen Entwickler hinter der Witcher-Reihe, haben sich nicht vor dieser Mühe gedrückt und bewusst eben diesen Weg eingeschlagen. Und das mit einem beeindruckenden Erfolg, selten waren sich Presse und Fans so einig.

»The Witcher 3« stellt den Spieler immer wieder vor große und kleine Entscheidungen, die den Verlauf der Geschichte und somit das Ende bestimmen – genau diese Freiheit fehlt vielen Blockbustern allerdings.



Dass Entscheidungsfreiheit bei den Spielern ankommt, sollte eigentlich keine allzu große Überraschung darstellen. Immerhin sind Games als interaktives Medium prädestiniert dafür, eine Geschichte nicht nur linear zu erzählen – dafür haben wir traditionelle Formate wie TV und Film –, sondern sie eben auch direkt zu beeinflussen. Warum also gibt es in dieser Branche trotzdem so wenige Ausnahmen von der klassischen Erzählstruktur? Vor allem mit Blick auf die erfolgreichsten Titel der letzten Jahre?

Es wird Zeit, die Möglichkeiten auszuschöpfen!

»Call of Duty«? Geradliniger als ein Lineal! »GTA V«? Super Story, super Spiel, aber die einzige Entscheidungsfreiheit beschränkt sich auf den Inhalt weniger Missionen ohne Einfluss auf den Storybogen. »The Last of Us«, »Uncharted«, »Tomb Raider«, »Red Dead Redemption«, um nur einige zu nennen, sind alles tolle Spiele. Doch sie alle sind mehr oder weniger klassisch erzählt. Natürlich gibt es auch Ausnahmen, irgendwo, aber im AAA-Bereich fehlt schon seit langer Zeit die Motivation, etwas zu wagen und die Möglichkeiten des Mediums voll auszuschöpfen. Und nein, dass meine NPC-Begleiterin zwischen Tanktop oder einem Bikini als Outfit für die nächste gefährliche Mission wählen kann oder, dass ich am Ende meines Abenteuers zwischen Rot, Grün und Blau wählen muss (und damit die meisten meiner Entscheidungen über den Haufen werfe), ist nicht die Art von Wahlmöglichkeiten, von der ich hier spreche. Das sind bestenfalls lieblose und unkreative Versuche.

Alle Welt redet gerade von VR und nie da gewesenen Möglichkeiten für Games, speziell im Narrativen. Dabei wird vergessen, dass wir es bis heute noch nicht einmal geschafft haben, die vorhandenen Mittel sinnig zu nutzen. Vielleicht ist es endlich an der Zeit, das Medium »Game« als das zu sehen, was es ist: ein interaktives Erlebnis, das vor allem vom Mittendrin-Gefühl lebt. Immersion wirkt immer noch am besten, wenn ich den Eindruck habe, selbst zu handeln und nicht nur einer starren, unflexiblen Story zu folgen. Eben genau wie bei meinem Hexer. Oder eurem. Oder jedem anderen da draußen. **Timm Walter**



EPIC GAMES ERÖFFNET BÜRO IN BERLIN

Mitte April hat Epic Games, das Unternehmen hinter der Unreal Engine aber auch bekannten Spielen wie »Unreal Tournament«, ein neues Europa-Büro in Berlin eröffnet. Die Leitung der neuen Außenstelle übernehmen Paw Larsen und Sergey Galyonkin. Larsen hatte zuvor die Rolle des E-Sports Publishing Managers bei »League of Legends«-Entwickler Riot Games inne und kümmert sich künftig um alle Publishing-Aktivitäten von Epic in Westeuropa. Galyonkin betreibt die bekannte Website SteamSpy und arbeitete zuvor als Senior Analyst für »World of Tanks«-Entwickler Wargaming.net und verantwortet ab sofort das Publishing-Geschäft von Epic Games in Osteuropa. Epics Präsident Paul Meegan begründete den Schritt damit, dass dem Unternehmen sowohl die Europäische als auch die russische Community am Herzen liege und der beste Service für die Spieler nur gewährleistet werden könne, wenn Epic vor Ort erreichbar sei.

Vier Fragen an ...

Paw Larsen
ist Managing Director European Publishing bei Epic Games GmbH.



Making Games Warum hat Epic Games Deutschland für seinen Standort ausgewählt?
Paw Larsen Nach reichlichen Überlegungen und unter Abwägung zahlreicher Faktoren, an welchem Standort wir unser europäisches und russisches Publishing Office eröffnen möchten, haben wir uns für Deutschland entschieden. Grund hierfür ist unter anderem die zentrale Lage von Deutschland innerhalb Europas und die Tatsache, dass Deutschland einer der größten europäischen Märkte für die Spielebranche ist.

Making Games Was sprach für Berlin als Sitz?
Paw Larsen Als für uns letztendlich Deutschland als Standort für unser europäisches Publishing Office feststand, lag Berlin als neue Wahlheimat für uns aus mehreren Gründen auf der Hand. Die Stadt durchläuft über die letzten Jahre hinweg eine unglaubliche Entwicklung, die nicht nur große, wohl etablierte Unternehmen, sondern auch eine Vielzahl an IT- und Gaming-Startups anzieht. Für eine Firma wie Epic, mit sehr ambitionierten Wachstumsplänen, ist es entscheidend, Zugang zu internationalen Top-Talenten zu haben, um erfolgreich zu sein. Als internationales Unternehmen, mit Angestellten aus aller Welt, ist es sehr wichtig für uns, in einer pulsierenden Großstadt zu sein, die für all unsere Angestellten etwas zu bieten hat.

Making Games Wie sehen eure Zukunftspläne für das Berliner Büro aus?
Paw Larsen In der nahen Zukunft werden wir uns ausschließlich darauf fokussieren, von Epic entwickelte Spiele wie »Paragon«, »Fortnite«, »Unreal Tournament« und »SpyJinx« zu publishen. Betrachtet man jedoch unsere ambitionierten Ziele für diese Titel, wird das Publishing-Team eine beträchtliche Größe haben. Wie groß unser Team letztendlich wird, hängt von vielen Faktoren ab und langfristig wird man sehen, wohin die Reise für uns geht.

Making Games Was waren für dich persönlich die Gründe, den neuen Standort zu leiten?
Paw Larsen Nachdem ich Paragon gespielt habe und in Anbetracht der enorm hohen Qualität der in der Vergangenheit von Epic herausgebrachten Produkte, war es eine leichte Entscheidung für mich. Die ambitionierten Ziele und die Strategie für den europäischen Markt sind für mich mit einer der Hauptgründe, die diese Herausforderung spannend und interessant gemacht haben. Was ich erwarte? In dem stark umkämpften MOBA-Genre erfolgreich zu sein und dieses darüber hinaus neu zu definieren. Wir haben uns bewusst dazu entschieden, ein europäisches Publishing-Team aufzubauen, um sicherzustellen, dass auch die Stimmen der Spieler in Europa gehört und berücksichtigt werden.

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Ort Köln, The New Yorker/Dock.One
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Thema Konferenz
Kosten 59 bis 521 Euro
Homepage www.respawngathering.com

gamescom
Ort Köln, KoelnMesse
Termin 17. bis 21. August 2016
Thema Messe
Kosten 13 bis 82 Euro
Homepage www.gamescom-cologne.com

SEPTEMBER 2016

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IFA
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Tokyo Game Show
Ort Tokyo, Makuhari Messe
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Thema Messe
Kosten 793 bis 7.048 Euro
Homepage expo.nikkeibp.co.jp/tgs/2015/exhibition/english

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Disney stampft Disney Infinity ein und schließt Avalanche Software

Mitte Mai hat Disney Interactive bekannt gegeben, dass das Unternehmen die Marke »Disney Infinity« auf Eis legt, das hauseigene Entwicklerstudio Avalanche Software schließt und sich künftig nur noch auf die Lizensierung seiner Marken konzentrieren wird. Diese Umstrukturierung soll laut offiziellen Angaben rund 147 Millionen Dollar kosten, der Schliessung von Avanlanche Software (nicht zu verwechseln mit den »Just Cause«-Machern Avalanche Studios) fielen 300 Mitarbeiter zum Opfer. Fortan sollen Disney-Marken vor allem von Lizenznehmern für die Konsolen und PCs umgesetzt werden, wie etwa »Star Wars« über Electronic Arts. Disney wird selbst nur noch Mobile-Titel veröffentlichen. Obwohl Disney zuletzt einen Umsatz von 2,1 Milliarden Dollar gemeldet hatte, rund 35 Millionen Dollar mehr als im Vorjahr, hatte Disney Infinity mit sinkenden Verkaufszahlen zu kämpfen. Bisher ist nicht bekannt, wie sich die Einstellung auf den Support des Produkts auswirkt, zu dem zuletzt im März ein Playset namens »Marvel Battlegrounds« erschien.

Skydance Media kauft The Workshop



Das amerikanische Medienunternehmen Skydance Media, unter anderem bekannt als Produktionsfirma für Hollywood-Filme wie »Star Trek: Into Darkness«, »Terminator: Genisys« oder »World War Z«, hat Anfang Mai das Entwicklerstudio The Workshop aufgekauft und teilweise in Skydance Interactive umfirmiert. The Workshop wurde 2008 von einem der Mitgründer und einigen ehemaligen Mitarbeitern von Treyarch (»Call of Duty: Black Ops 3«) gegründet und entwickelte unter anderem an »The Evil Within« und »Brothers: A Tale of Two Sons« mit. Unter dem Label The Workshop sollen in Zukunft weiterhin hochwertige Spiele für Konsole und Co. entstehen, während Skydance Interactive sich vor allem auf VR-Inhalte für Oculus, HTC Vive und PlayStation VR konzentrieren wird. Inwiefern die Filminhalte von Skydance die VR-Inhalte bestimmen sollen, blieb schwammig und es wurde nur angedeutet, dass die verschiedenen Abteilungen von Skydance zusammenarbeiten.

Ehemaliger Präsident von Rockstar North verklagt GTA-Entwickler



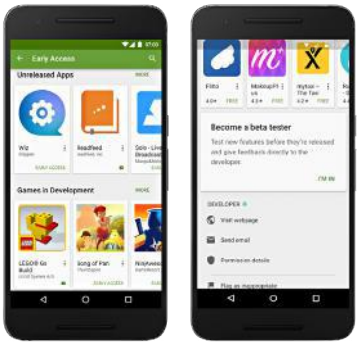
Mitte April wurde bekannt, dass Leslie Benzies seinen früheren Arbeitgeber Rockstar Games und den Mutterkonzern Take Two auf 150 Millionen Dollar an nicht bezahlten Tantiemen verklagt. Diese Forderung entstammt einer Übereinkunft zwischen den Rockstar-Gründern Dan und Sam Houser sowie Benzies mit Take Two aus dem Jahr 2008, dass die drei Rockstar-Manager am Umsatz der Spiele beteiligt werden. Rockstar hatte sich nach offiziellen Aussagen am 01. April von Benzies getrennt, da dieser nach einem Sabbatjahr nach dem Release von »GTA V« nicht mehr zur Arbeit erschienen sei. Benzies wiederum behauptet, dass er ausgesperrt worden sei und bei seiner Rückkehr keine Möglichkeit mehr gehabt hätte, in das Gebäude von Rockstar North zu gelangen, da seine Schlüsselkarte deaktiviert worden war. Welche Version dabei der Wahrheit entspricht, wird ein Gericht klären müssen. Benzies strebe aber nach eigener Aussage eine friedliche Übereinkunft an.

Benzies hatte zuletzt die Position des Präsidenten von Rockstar North inne und arbeitete als Producer an »GTA 3«, »GTA: Vice City«, »GTA: San Andreas«, »GTA IV«, »GTA V« und »GTA Online«.



Nintendo NX kommt im März 2017 auf den Markt

Ende April hat Nintendo die Bombe im Rahmen seines Jahresberichts 2016 platzen lassen und später über Twitter offiziell bestätigt: Die bislang Nintendo NX genannte Konsole des japanischen Konzerns kommt im März 2017 auf den Markt. Wann die Konsole der Öffentlichkeit vorgestellt wird, bleibt bisher unklar. Auf der E3 2016 – das gab Nintendo direkt bekannt – lag der Fokus nur auf dem neuen »Zelda«, das ebenfalls erst 2017 parallel für Wii U und Nintendo NX erscheinen soll. Ob die Konsole später im Jahr, etwa auf der gamescom oder der Tokyo Game Show enthüllt wird oder Nintendo gar ein eigenes Event dafür plant, stand bis zum Redaktionsschluss nicht fest. Nintendos Präsident Tatsumi Kimishima entkräftete außerdem die Gerüchte, dass die NX-Konsole die Wii U oder den Nintendo 3DS ersetzen sollten. Mit der Konsole wolle man ein brandneues Konzept verfolgen und Videospiele weiterhin als Kernfokus der eigenen Geschäftsfelder behandeln.



Google Play startet Early-Access-Sektion

Ende Mai hat Google angekündigt, dass es seinen App Store Google Play um eine Early-Access-Funktion erweitern will, die an dieselbe Funktionalität von Steam erinnert, sich aber doch unterscheidet: Dabei handelt es sich um einen Bereich im Play Store in dem vom Unternehmen ausgesuchte Apps vorgestellt werden, die sich noch in der Beta-Phase befinden. Generell möchte es Google den Entwicklern, die Beta-Tests durchführen, einfacher machen, dass ihre Apps gefunden werden. Offene Beta-Versionen sollen daher künftig regulär in den Suchergebnissen aufgelistet werden, Kunden können diese dann einfach wie jede andere App installieren und auch über den Play Store Feedback an die Entwickler schicken. Die Early-Access-Sektion ist daher eher ein Highlight-Bereich mit redaktionellen Empfehlungen.



Softbank will angeblich Anteile an Supercell abstoßen

Mitte Mai hat Bloomberg unter Berufung auf eine anonyme Quelle gemeldet, dass der japanische Konzern Softbank seine Anteile an Supercell (»Clash of Clans« und »Clash Royale«) abstoßen will. Softbank hatte im Jahr 2013 51 Prozent der Supercell-Aktien für einen Preis von 1,5 Milliarden Dollar erstanden und 2015 weitere 22 Prozenz im Wert von 1,2 Milliarden gekauft. Supercell hat aktuell einen Firmenwert von rund 5 Milliarden Dollar.

Grund für den geplanten Verkauf der Anteile solle sein, dass Supercell den Erfolg von Clash of Clans in Japan bisher nicht wiederholen konnte, dem Heimatland von Softbank. Sueprcell habe seit den Investitionen von Softbank – durch die viele Studiomitglieder über Nacht Millionäre wurden – außerdem keine Anstrengungen unternommen, um Steuern einzusparen, sondern die regulären Zahlungen an die finnische Staatskasse als Dankeschön für die Unterstützung angesehen.

Ubisoft und Patrice Désilets einigen sich über 1666: Amsterdam

Das Spiel »1666: Amsterdam« aus der Feder des »Assassin's Creed«-Erfinders Patrice Désilets hat eine bewegte Geschichte hinter sich, doch Ende April haben sich Publisher Ubisoft und Désilets nach rund drei Jahren Streitigkeiten geeinigt und die Rechte am Spiel gehen wieder an den Entwickler zurück. Hintergrund: Désilets hatte einst für Ubisoft gearbeitet und war unter anderem maßgeblich am Konzept der ersten Assassin's-Creed-Teile beteiligt. Er verließ das Unternehmen im Jahr 2010 schließlich – angeblich nicht auf freundschaftlicher Basis – und heuerte bei einem neuen THQ Studio in Montreal an. Dort nahm er die Arbeit an 1666: Amsterdam auf. Als THQ im Jahr 2012 insolvent ging, kaufte ausgerechnet Ubisoft dieses Studio auf, sodass Désilets wieder bei seinem alten Arbeitgeber angestellt war. Das Verhältnis hielt aber nur kurz, Ubisoft entließ Désilets im Mai 2013 und legte das Spiel auf Eis. Seit diesem Zeitpunkt stritten der französische Publisher und der Entwickler.

Professur (m | w) für den Fachbereich Game Design

Zum 01.10.2016 sucht der Fachbereich GAME DESIGN an der MD.H zwei Professuren (m | w) für je eine halbe Stelle in den Fachgebieten GAME ART bzw. GAME DEVELOPMENT

STANDORT DÜSSELDORF
Professur (m | w) in dem Fachgebiet GAME ART
in Teilzeit, ab 01. Oktober 2016

Schwerpunkte
- 3D Artwork in Games
- Character-Konzeption / Character-Design
- Skribble und Kreativ-Techniken
- Modellierung & Animation
- 3D Workflow Techniken
- 3D Konstruktionstechniken
- 3D Game-Engines
- Klassisches und digitales Artworks
- Concept Art

Einstellungsvoraussetzungen
- Abgeschlossenes Hochschulstudium
- Nachweis einer besonderen künstlerischen Befähigung
- Pädagogische Eignung, dokumentiert durch Lehr- und Praxiserfahrungen
- Berufserfahrung (mindestens fünf Jahre, davon drei Jahre außerhalb des Hochschulbetriebs in der Praxis)
- Team und Kommunikationsfähigkeit
- Offenheit für neue Entwicklungen und Kreativität

STANDORT BERLIN
Professur (m | w) im Fachgebiet GAME DEVELOPMENT
in Teil- oder Vollzeit, ab 01. Oktober 2016

Schwerpunkte
- Engineprogrammierung
- Echtzeitvisualisierung
- Künstliche Intelligenz
- Physiksimulation
- Implementierung von Spielmechaniken

Dabei werden fundierte anwendungsbezogene wie auch analytische Kenntnisse vorausgesetzt.

Einstellungsvoraussetzungen
- Abgeschlossenes Hochschulstudium
- Promotion
- Pädagogische Eignung, dokumentiert durch Lehr- und Praxiserfahrungen
- Berufserfahrung (mindestens fünf Jahre, davon drei Jahre ausserhalb des Hochschulbetriebs in der Praxis)
- Team- und Kommunikationsfähigkeit
- Offenheit für neue Entwicklungen und Kreativität

Ihre Aufgaben
Zum Tätigkeitsbereich gehört die Durchführung von Lehrveranstaltungen im Bereich GAME ART bzw. GAME DEVELOPMENT und die Unterstützung der Studierenden bei der Umsetzung ihrer Projektarbeiten. Neben der Initiierung von praxisbezogenen Industrie- sowie Forschungsprojekten ist auch die Mitarbeit bei der Entwicklung des Fachbereichs Game Design und die akademische Selbstverwaltung erwünscht.

Über uns
Der Studiengang Game Design befasst sich mit allen Aspekten der Entwicklung von Computerspielen. Von der Konzeption, Gestaltung, Dramaturgie, Technologie, Vermarktung und auch gesellschaftspolitischen und philosophischen Fragestellungen.

Die Mediadesign Hochschule ist eine private, staatlich anerkannte Hochschule für Design und Informatik. An den Studienstandorten Berlin, Düsseldorf und München studieren junge Nachwuchstalente in kreativen Studiengängen, die gezielt auf die Anforderungen eines sich rasant entwickelnden Arbeitsmarktes zugeschnitten sind.

Die Studiengänge enden mit einem staatlich anerkannten Bachelor- oder Masterabschluss. Professoren und Dozenten aus der Fachpraxis, unzählige Praxisprojekte mit Partnern aus der Wirtschaft, Studiengänge mit individueller Betreuung und enge Branchenkontakte sichern den beruflichen Erfolg der MD.H Absolventen.

Bewerbung
Ihre Bewerbungsunterlagen senden Sie bitte bis spätestens 30. Juli 2016 an die angegebene Adresse oder per E-Mail an bewerbung@mediadesign.de.

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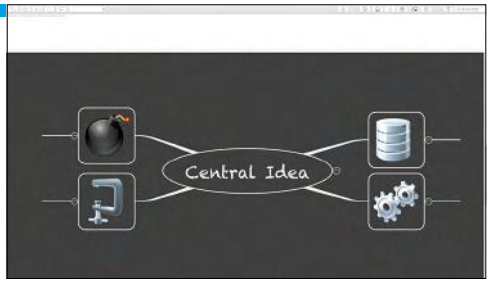
TOOLS

Keine guten Werkzeuge – keine guten Spiele! Experten aus der Branche sagen ihre Meinung zu aktuellen Programm-Updates sowie neuen Tools und verraten ihre persönlichen Software-Geheimtipps.

iTHOUGHTS WWW.TOKETAWARE.COM/ITHOUGHTS-NEW-HOME



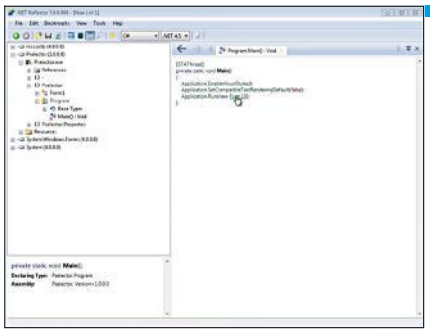
Mark Intelmann
ist Head of Game Design bei Deep Silver Fishlabs.



iThoughts ist ein praktisches Tool zur Erstellung von Mindmaps, das dank Cloud-Integration die Arbeit auf unterschiedlichen Geräten ermöglicht.

Features planen, Meetings zusammenfassen, Ideen sammeln – Mindmaps helfen ungemein dabei, Gedanken zu strukturieren. Die meisten Tools hierfür liefern jedoch keine zufriedenstellende Kompatibilität zwischen mobiler und stationärer Hardware. iThoughts hingegen ist sowohl für iPad/iPhone als auch für Mac erhältlich. Sehr viele Formate können im- und exportiert werden, inklusive aller wichtigen Bild- und Textformate. Als mir beispielsweise zu Hause die Idee für das Boss-Feature in »Galaxy on Fire 3 – Manticore« gekommen ist, habe ich sie auf der Zugfahrt zum Büro auf dem iPad skizziert und dann am Arbeitsplatz am Mac final ausgearbeitet. Bei diesem Prozess sind sämtliche Funktionen kompatibel und der Datenaustausch erfolgt bequem über die Cloud. So konnte ich dem Team das fertige Feature direkt präsentieren. Ich benutze iThoughts in sämtlichen Phasen eines Projekts und würde nur ungern darauf verzichten müssen.

.NET REFLECTOR WWW.RED-GATE.COM/PRODUCTS/DOTNET-DEVELOPMENT/REFLECTOR



With .NET Reflector you can easily browse assemblies, analyze methods and even display your source code in different .NET languages.

When you, as a software developer, work with the .NET Framework, .NET Reflector is an invaluable tool that helps you to analyze, understand and debug .NET assemblies. You can easily browse assemblies, analyze methods and even display the source code in different .NET languages or in low-level intermediate language (IL) format. This gives you a deep understanding on how your own and any third-party code works. With the optional Visual Studio integration, you can even debug and step into third-party assemblies. There are plenty of add-ins available for .NET Reflector that enable you to diff and visualize assemblies. At InnoGames, we use .NET Reflector mainly for understanding the internals of .NET Framework classes. We are also able to reduce the amount of memory allocations and boxing/unboxing operations with the help of .NET Reflector.



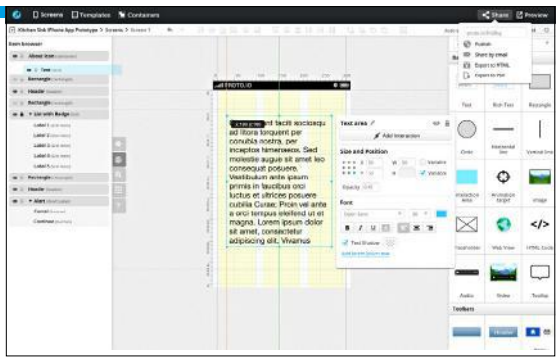
Gero Gerber
ist Senior Software Developer bei InnoGames.

PROTIO.IO HTTPS://PROTO.IO/



Marc Sodermanns
ist Technical UI Designer bei Blue Byte.

Protio.io is a very good tool to create Prototypes that feel real. You can create fully-interactive high-fidelity prototypes that look and work exactly like your app should. No coding required. Protio.io is designed specifically for mobile use and can simulate everything an app can do. That includes interactive touch gestures, screen transitions and animations. It is perhaps the only mobile prototyping tool that allows users to create realistic, sharable prototypes that work as a real app should and experience their prototype on the actual device. It is 100 percent web-based and offers an intuitive drag-and-drop User Interface, with no coding required. It is ideal for User Experience professionals, Interaction Designers, Mobile Designers, Coders, and app enthusiasts.



Protio.io is a very good tool to create Prototypes that feel real.

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WHY LOCALIZING YOUR GAME FOR EMERGING MARKETS MAKES SENSE

Carolina Silvandersson analyzes markets like China, India, Russia or Brazil and explains why localizing your game for those is a perfect idea, how to do it right and which games are popular there anyways.



Carolina Silvandersson is Inbound and Content Marketing Manager at LocalizeDirect.

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There are 1.2 billion mobile gamers in Asia. Over 50 percent of the worldwide mobile games revenue comes from Asia. 90 percent of the Asian revenue comes from: China, Japan and South Korea. The Asian markets are too big for a Western game developer or publisher to ignore. Here are some tips of what you should think of when reaching out to the Asian giants.

Why localize your Game into Chinese?

The Chinese games market is HUGE. In 2015, China is expected to surpass the U.S. and become the largest games market in the world. Out of the total estimated Chinese game revenue of 22.2 billion Dollars in 2015, mobile gaming will contribute 6.1 billion Dollars. The majority of the revenue comes from PC games. As mobile games growth is slowing down in the west, China's is expected to grow at an impressive 19 percent in 2015E.



Especially MMORPGs like »World of Warcraft« are very popular in China, but Free2Play MMOs increasingly edge out those that you have to pay for.

What Type of Games do well in China?

Favorite Chinese mobile genres are Puzzle, Casual, Social and Racing games. Free2Play MMOs increasingly edge out Pay2Play MMO titles like »World of Warcraft« on PC. The Free2Play model is estimated to hold 80 percent of the Chinese MMO market by 2017.

How do you localize your Game into Chinese?

There are two different sets of Chinese characters used in writing, and you need to decide which ones to localize into. Simplified Chinese characters are used in mainland China and Singapore. Traditional characters are used in Taiwan, Hong Kong and by overseas Chinese. The vast majority of developers choose to go into simplified, and some also add on support for traditional.

Text Size Considerations

Chinese is just like English a typically compact language. The amount of characters is normally less than in English but as they are more complicated it is advised to output the text in a larger font. This requires larger vertical spacing than the English version. Horizontally, even with larger font, Chinese usually comes in somewhat shorter than the English text.

80,000 Font Characters – yikes!

The main issue implementing Chinese localization is how to deal with the font. There are some 80,000 characters in Chinese and an understanding of around 5,000 to 6,000 are typically needed to be a person at average literacy level. A minimum of 2,000 would allow the reader to understand most publications. In a game where you may have bitmap fonts this can pose a memory problem. One usual approach is to scan the translated text and output all unique Chinese characters on a large bitmap and then use this bitmap as font reference. This way you only have to spend memory on actually used characters. This approach has the downside that it does not work for dynamic text that can

change – such as player generated names as the input might introduce characters that are not supported. Another approach is to use a system font provided by the OS if available.

Why localize your Game into Japanese?

Japan is the 3rd largest games market in the world when looking at revenues. 59 percent of the gamers spend money on games. The average amount spent on games is 312.97 Dollars per year, which makes the Japanese game spenders the highest spenders in the world.

Games that do well in Japan

Role playing is by far the no 1 genre in Japan. Traditionally card games have dominated the game market. Casual and simulation games rank high.

Simulation gamers are high spenders; simulation games rank high in Top Grossing, but fairly low in Top Free (www.metaps.com). Japanese fans tend to get really into things they like, and find investing in their favorite games worthwhile.

Portable Devices

Portable devices are growing. The main reason is that consumers have a lot of time to kill when commuting, and take to opportunity to play their favorite game. Capcom's »Monster Hunter« a great success in Japan, pushed the portable device market forward.

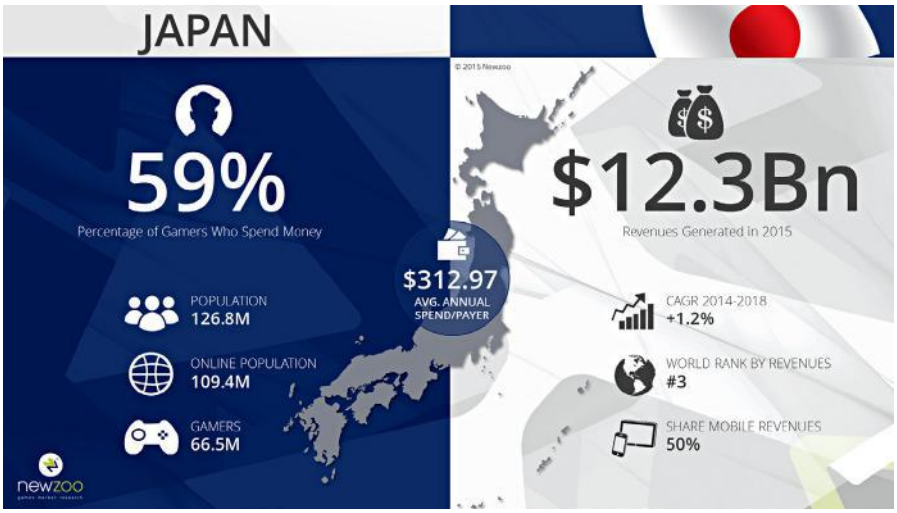
One third of Japanese gamers own an iPhone. iOS is the main platform choice for Japanese gamers. Puzzle was the largest Google Play genre.

How do you localize your Game into Japanese?

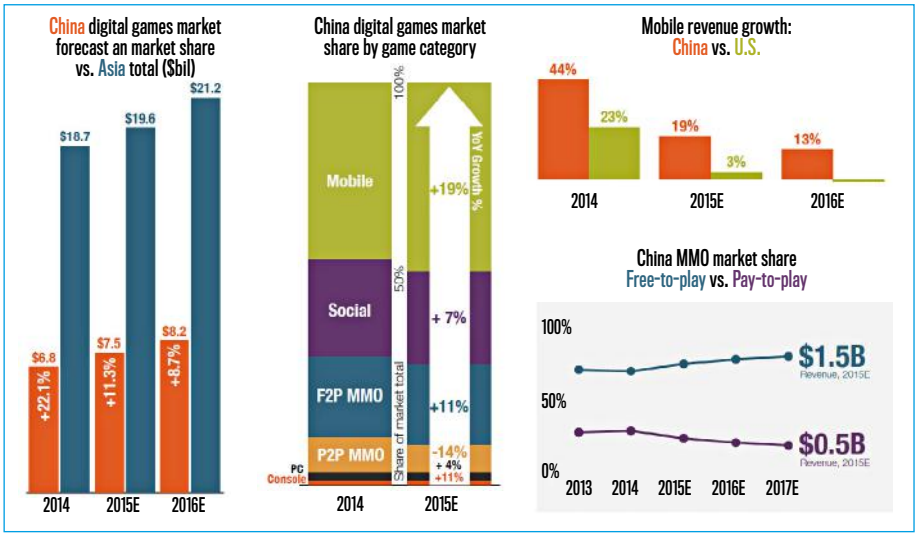
It's not possible to translate into Japanese. The text needs to be localized. Cultural requirements and norms must be considered, and developers need, from the start, to prepare the app for internationalization with local time, name format, date formats and flexible text segments. English source language tends to be pretty informal, which makes a direct translation for the Japanese market impossible – the text would be too rude then. Imperative form is too strong in Japanese and might give the wrong impression.



A graph that shows the Chinese gaming market in detail (Source: Newzoo.com)



A graph that shows the Japanese gaming market in detail (Source: Newzoo.com)



Several graphs from a study by Superdata that show how the Chinese market is expected to develop in the near future.

	A	B	C	D	E	F
1	Description	Speaker	Receiver	Character limit	English Source text	Japanese
2	Dialogue in the field between elder combatant and his younger protege'	Anna	Eric		How are you	
3						
4						
5						
6	Links to the game or app					
7						
8	Print screens and images from the game or app					
9						
10						

For a solid translation into Japanese, you should provide the translator with the context of the text as well as the characters' gender.

Symbols and colors are important connotations in Japan. Four (4) sounds like death and four items in a package is negative, and purple means danger. Perfection is key to make it at the Japanese market; if not perfect, then the product, app or game, isn't trustworthy, nor the person trying to sell it.

Gender related Localization Issues

When localizing into Japanese, the text needs some extra preparations. Japanese requires strict rules on who is the speaker and who is the receiver to translate properly.

Gender related localization issues will make a male character speak in a female tone and a woman with a male voice. In Japanese this makes the game plain and not enjoyable to play.

Having a place holder is a good tip. In Japanese the order is: Subject + Object + Verb, but that's not applied in English. A sentence like »I game play« sounds odd in English, but that's the order in Japanese. To make the translations better, put a placeholder in the source text:

»Eric has destroyed Anna's bases and gained {xxxxx}«, because then the Japanese translator can translate the string properly and mark the placeholder at the right spot:

»Eric has destroyed Anna's bases and {xxxxx} gained.«

Should you localize into Japanese?

If your game or app is suitable for the Japanese market, then you don't want to miss the 3rd largest market in the world.

Korean Game Revenues are Impressive

Even though the Asian market is huge, the game market has been difficult to monetize. In terms of Geography, South Korea is rather small compared to a giant like China, but revenues are very impressive.

Revenues generated in 2015 are estimated to be 4 billion Dollars. Let's compare this with large game markets like Germany, United Kingdom, Australia, and France – all with revenues below 4 billion Dollars. With an increase of 4.5 percent from the previous year, this will make South Korea the 4th largest game market in the world.

The typical Korean gamer's attitude is changing. They no longer primarily purchase games from Korean developers, which means that the door has opened to non-Korean game makers. The historical reason for the close connections with homegrown games is that a solid strong infrastructure created a market for complex graphics.

The new era, with a busy mobile market, creates a new route for other game types. The best part: The door to the Korean market is opening. In order to gain access and take a slice of the Korean gamer pie, game localization is necessary. The Korean game market is growing both in downloads and revenue. A translation into Korean is a good investment if you want to reach the Asian continent.

Why is that? Well since 2013, the Korean app market has demonstrated impressive growth. The Korean Mobile App market has grown by 795 percent since 2013 and is predicted to continue to skyrocket.

- Revenues 2015: 4 billion Dollars
- Increase of 4,5 percent
- 4th largest game market in the world

Korean Gamers are high Spenders

Of the 25 million gamers, almost 14 million spend money on games. However, of most importance here is the fact that the average amount a Korean gamer spends on games is 290 Dollars per year; this makes the Korean gamers the second highest spenders in the world.

It doesn't seem to have a stop in revenue increases in South Korea. The following years total revenues will continue to grow annually with 2.6 percent.

The Korean Mobile Market is growing at high speed

Korean consumers are fast adopters. On average, 73 percent of Koreans have a smartphone which is the second highest smartphone penetration in the world. When looking at the segment of people under 44 years old, the average number is actually 98 percent that use a smartphone. Korea is the world's top country in terms of 4G, with a LTE reach of 50 percent.

The average Korean gamer has 40 installed apps, has used 11 apps in the last 30 days and paid for 3 of them. Popular genres for men are MMORPG, or RPG and adventure games. Women also play RPG, but also Puzzle, Web Board Games and Casual Games.

- Second highest smartphone penetration in the world
- MMORPG or RPG adventure games
- Casual games

Many Koreans commute using public transportation. You can see all ages, from youngsters to seniors, playing different games when travelling. Seoul Station's internet connectivity is pretty powerful at 150 mbps. This period, when moving from one spot to another, is the perfect opportunity for Korean gamers to play their favorite game. It also shows that the mobile market, still in it's infancy, has the possibility of growing fast and quickly in the near future. Korean gamers prefer Free2Play games, but freemium is the business model to choose for a



»Candy Crush«, »Minecraft«, »Terraria« and »Clash of Clans« are good examples of Western games that are very successful in Korea.

developer aiming the Korean game market. 90 percent of total revenue is derived from in-app purchases. When Koreans spend money on in-game purchases it is to beat a tough level or get extra lives.

Freemium Team Games are the Winners

Why is that? The Korean traditions are the opposite of Western ones. In the USA, and parts of Europe, individual performance is rewarded. That is not the case in Korea. In Korea, and many Asian countries, the social aspect is very important and working as a group is vital.

Games that allow the players to cooperate, and the gamer to play with a team, or to invite others to join the game, are the winners. In-app purchases that allow the gamers to communicate with others, are the games with a high ROI.

That is why in-game purchases are so effective in Korea. Because they let the gamers continue to play the game, even though the gamer is running out of lives. The other members of the team are waiting to progress in the game, and to let them down is not a fun thing to do, the purchase is a given.

Kakao Messenger

Android has the majority with a 85 percent of the operating systems in use, and Google Play a great amount of the revenue. The tricky part to succeed in Korea: a social component in the game is necessary. Almost every smartphone sold in Korea uses a messaging system called Kakao. And many top selling apps are from Kakao. With a base of over 100 million users, KakaoTalk has the capability of taking a small game and distributing it to a huge number of people. KakaoTalk is an important piece of the social factor when releasing a game in Korea – Korean gamers share scores, invite friends to play, and a good game promoter will leverage virtual money to buy more in-game features.

Localization

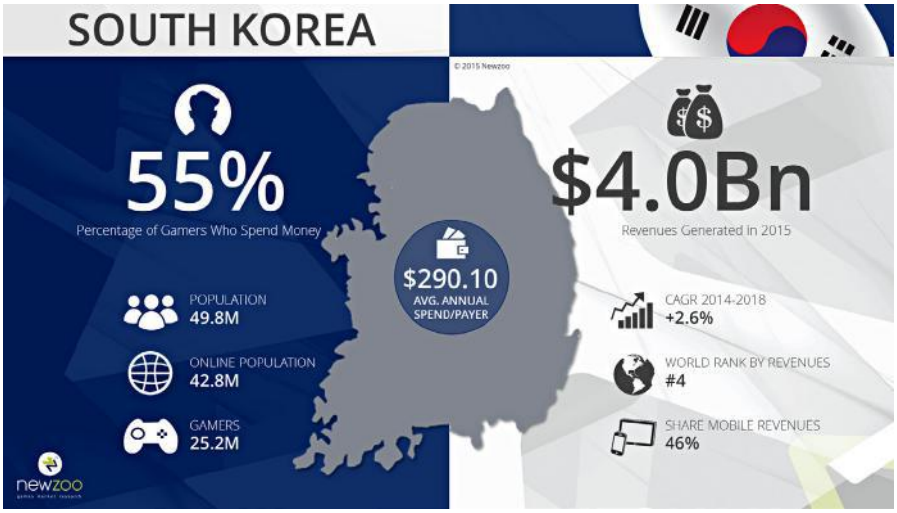
The Korean alphabet is known as Hangul in South Korea. It consists of 24 consonants and vowel letters grouped in blocks. Every block consists of two to six letters, including at least one consonant and one vowel. The text is written from left to right, or from top down.

The images in the game also need to be localized. Upgrade your images and make them more Korean friendly.

Country	REVENUE generated in 2015	SPEND PAYER average
France	$2.5 B	$164
UK	$3.5 B	$160
Australia	$1.2 B	$176
Germany	$3.7 B	$158

Source: Newzoo.com

A study by Newzoo found that many Western countries can't compete with Asian countries in terms of revenue generated but also not in terms of the average spending per player.

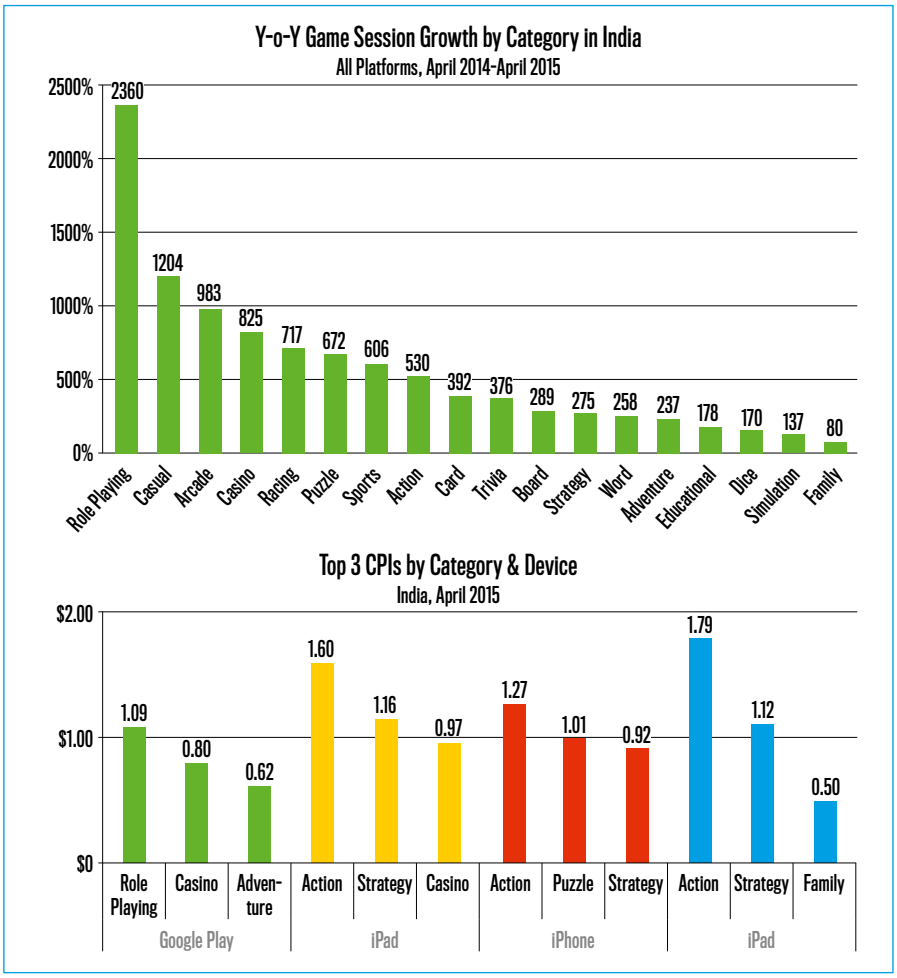


A graph that shows the Korean gaming market in detail (Source: Newzoo.com)

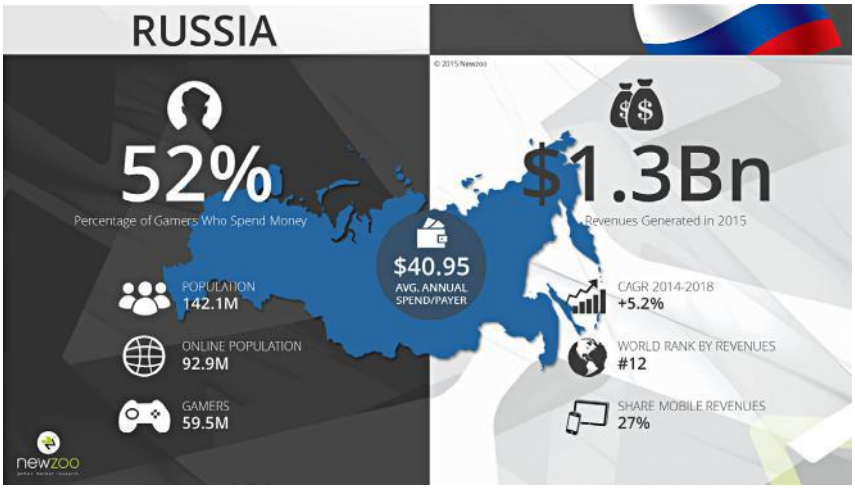
Why localize your Game for the Indian Market?

The Western game market growth might have slowed down a bit, but Eastwards the market is accelerating. India is one of these fast growing game markets, we dig deeper into this fast growing opportunity.

India is a huge market, full of young people. The country houses 1.3 billion citizens. Two



Studies by Chartboost show the most popular genres in India as well as the Cost per Install for the most popular genres on various devices.



A graph that shows the Russian gaming market in detail (Source: Newzoo.com)

third of them are under 35 years old, and many of them extremely interested in technology. The mobile evolution is one of the fastest growing mobile markets in the world, and the data prices cheapest in the world. Cell phones have made games more accessible, and more importantly: acceptable.

Games that do well in India

With low PC penetration and almost no experience in video games, India jumped right into mobile gaming. Generally, PC games were developed for male teenagers, and restrictions in PC homes stopped youngsters spending more time playing games. With 200 million mobile users, a broader market with young girls and boys, and even seniors, was born. Moms are playing mobile games and they influence their children to do the same. There is a great will to buy smartphones, so mobile Android games and apps are key. Top genres are action, strategy, casino, puzzle and RPG.

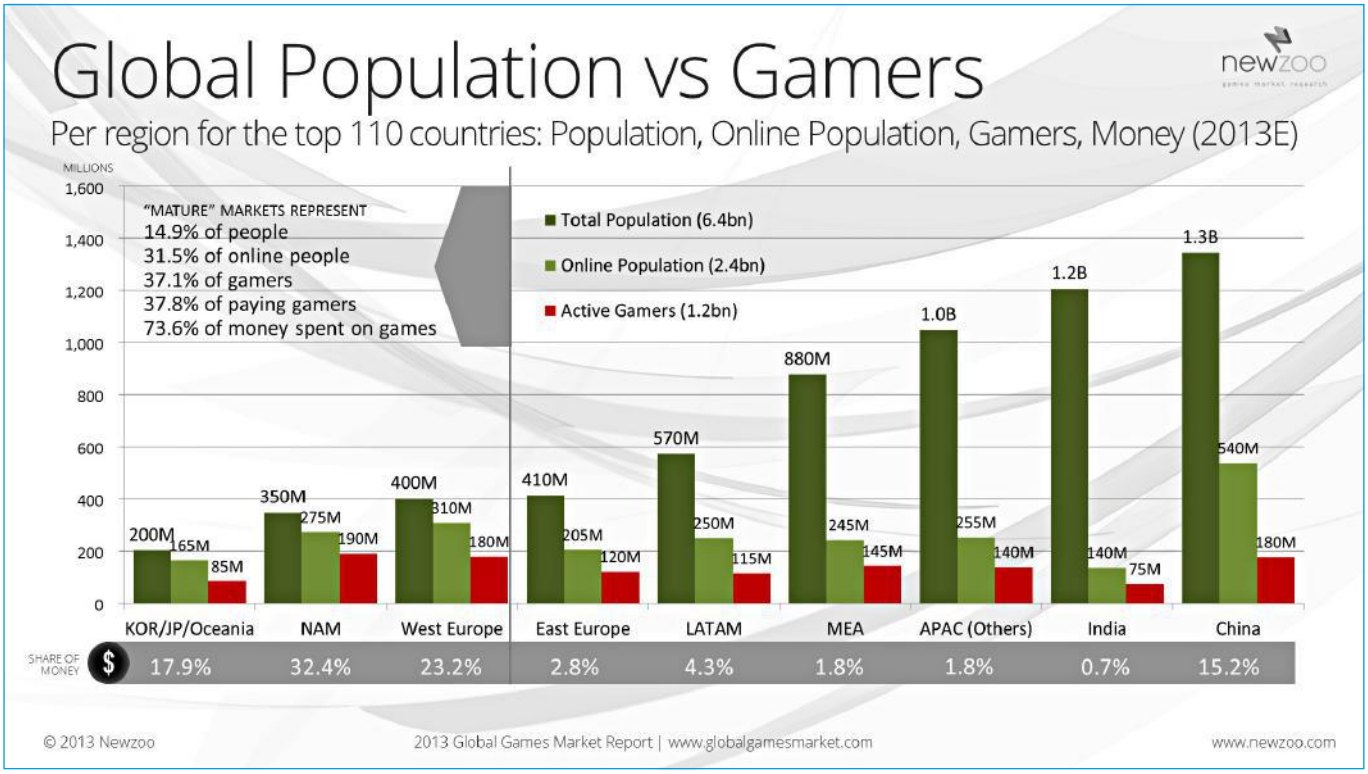
The Mobile Game Market in India

Historically the growth in India has been slow. The Indian game market is just beginning to take off, but there's still a long way to go. The space for growth is huge, and India has the ability to become an important game market.

Phone users are about to upgrade to a smartphone, and estimations show that the 181 million people mobile player base, will more than double in 2018. India is the fastest growing smartphone market, and 3G is estimated to grow 62 percent annually.

India welcomes foreign games. The majority of top downloads are from foreign publishers. There are only a few domestic publishers in India. This makes the Indian market a perfect match for your game or app.

Make sure to have a Free2Play version of your app or game. You could also include ads in the app to increase short term revenue. Eventually you will be able to release and create revenue from a paid app in India. In the largest cities, users are willing to pay when downloading a game or app, but in rural areas this is not possible yet. Only 2 percent of people in India own a credit card. Factors such as bad or low internet connection speeds are affecting the user experience. Keep this in mind when launching an app in India: remove heavy graphics and make the game or app functional to try to combat poor internet speed.



In 2013 a study by Newzoo showed that there were 75 million active gamers in India. Today this number increased to 181 million already and is expected to more than double until 2018.





Within the PC segment MMO games with short battle sessions such as »World of Tanks« or »Warface« are the most popular ones in Russia.

In India, social proof and word of mouth is the secret to increasing downloads. Make sure your app or game is social media friendly.

Should you localize your Game for India?

The Indian market is huge, full of young people eager to get to know the game market and learn more about game development. Even though paid apps and games are few in number, the segment will grow. Remember: India's such a large country, so even if it is just a small number paying for apps, the total revenue can be huge.

Get your share of the Indian market now, because once monetization starts, you want to be a part of it.

»Indian« isn't the language to translate into though. Hindi is the largest language in India followed by Urdu, Bengali, Telugu, Tamil and others.

Why localize your Game into Russian?

A Russian translation of your game should be a part of your market plan. There are 260 million people speaking Russian worldwide, which makes it the 6th largest language. The App market is the 5th largest in the world.

Think of Russia as a mixture of Europe and Asia. The key to entering the Russian game market is to localize your app or game. The Russian games market is predicted to grow by 5.2 percent annually. Revenues generated in 2015 were at 1.3 billion Dollars. This means: Russia is an important market. To succeed in the Russian market, you need to localize because localized games earn more than the English ones.

Russian gamer numbers have increased over the last few years. One reason is the larger number of platforms available, but more important is the greater availability of internet access. The smartphone penetration is around 55 percent and set to grow to over 70 percent in the next few years. In Russia, 20 percent of smartphones are Samsung, and 10 percent Apple. Android is the most popular operating system with 80 percent of the market. iOS has 10 percent of the market share. Looking at both downloads and revenue, Google Play is growing faster than App Store.

Games that do well in Russia

Russian is the second largest language on Steam and it keeps growing. A Steam game should definitely be translated into Russian. Online PC games are more popular than console games. 17 percent play video games on the smartphone. Within the PC segment MMO games, especially short battle sessions, are the most popular. Top MMO games in Russia are »World of Tanks«, »Warface« and »Perfect World«, to name a few. The market share of MMO games is 27 percent. Compare this with console games with a 4 percent market share. Other favorite genres are social and casual web games. The Russian smartphone user has 23 apps installed per average, of them 9 apps used last 30 days, and 4 paid apps installed on average.

The Necessity of Localization in Russia

Russian is one of the most complex languages in the world to translate into. The translator needs to be very skilled with excellent knowledge of the Russian culture, language, and history, but also up to date with the current language since many words in modern businesses are English loanwords. Sometimes game localization is referred to as an art; the translator has to imagine the game to find the perfect translation. In Russia this is even more true. It is not possible with a word to word translation; the translator has to interpret the text, find a context and make a game translation that suits the Russian game market. Professional translators aren't enough; it has to be professional game translators, skilled to capture the dialogue, slang, humor, and most importantly create the culture that fits the regional game market.

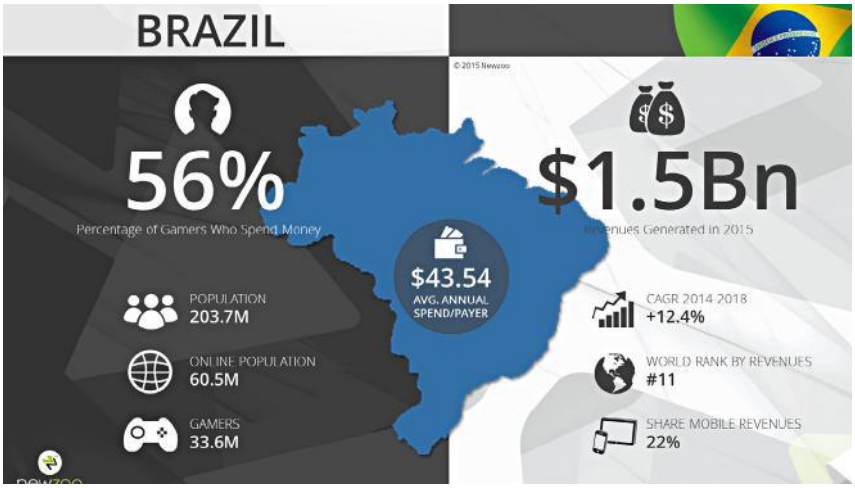
How do you localize your Game into Russian?

It is not possible to translate from English to Russian word by word: what's being localized to Russian is the meaning. Provide reference materials, so the entire context can be understood. That is a challenge. Actually challenge is a good example of why sometimes it is difficult to translate into Russian. Russia doesn't have the history with competition between individuals like America, so the word challenge has different words in Russian depending on

About LocalizeDirect

LocalizeDirect has more than 20 years of experience in Game Development and localization. LocalizeDirect has developed platforms and management systems to make localization easier, and a seamless part of game development, around the world. LocalizeDirect's localization platforms have received industry recognition and are used by an increasing number of development teams worldwide. The market challenges around the world differ, and with professional expert translators LocalizeDirect is well equipped to meet those different needs. Reach a larger market with game translation.

LOCALIZE DIRECT



A graph that shows the Brazilian gaming market in detail (Source: Newzoo.com)

the circumstances. The same goes with fun. Americans have fun all the time: on a boat, at the club, or fun playing a video game. How fun is being translated in Russian depends on the situation, there isn't a general »fun« translation.

The Noun

In Russian, the noun and the adjectives relating to it are gender and time sensitive. This means the endings change depending on the person, time and situation. To start there are six noun declensions. The Noun also has three different genders. And the noun changes its ending depending on when it happened or when it will happen, and to whom this certain thing will happen. A pretty neutral word like »Dear« is impossible to translate into Russian since the Russian translator needs to consider the gender.

The Characters

The modern Russian alphabet uses 33 letters from the Cyrillic script. And two of the letters do not have a sound. They just decide the sound of the letters before.

The amount of characters and words will normally expand compared with the English source. That is an important thing to consider. Provide the translator with character limits where needed.

Conclusion

Is it worth the effort? Yes. The Russian game market is growing. Russian gamers want their favorite games to be translated into their language. Many gamers in Russia have online discussions where they point out games they wish to be translated. In upcoming countries like Russia with large game markets, a preference for the native language, and where the English proficiency is moderate, the Return of Investment translating a game is high. Give it a try. Start by just translating the description. When downloads increase then translate the in-game texts. Get a free translation quote by contacting us.

Why localize your Game into Brazilian Portuguese?

The Brazilian game market is the 5th largest in the world. Brazil accounts for one of the biggest game revenue shares in Latin America with an annual growth of 7.6 percent.

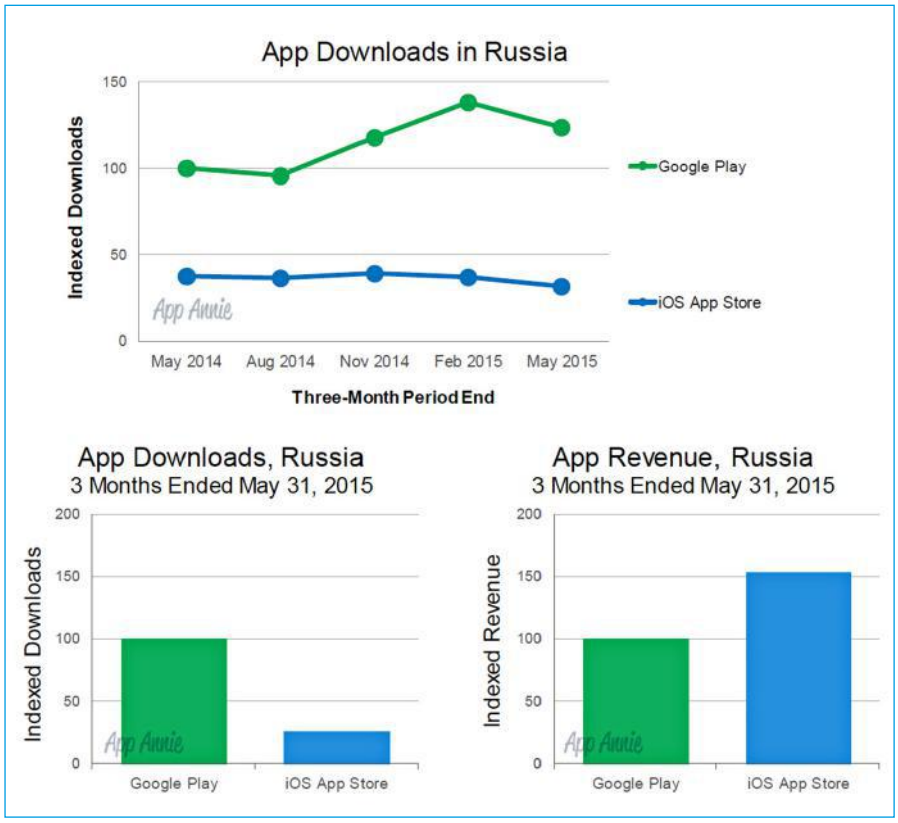
To penetrate the Brazilian game market and get a piece of the market share, game localization is key. You need to enter the Brazilian game market, then attract and retain those Brazilian gamers. Brazil is a country with a strong cultural and historical heritage, and relatively low English proficiency. Because of this, game localization into Brazilian Portuguese is a good investment. Are you thinking of reusing your Portuguese translation? Don't. You'll learn why in a minute.

What Type of Games do well in Brazil?

Brazilians have a long tradition of playing games. Before internet gaming, playing cards, board games and bingo was a neat way of spending some time together. The tradition of combining joy with competition is one explanation of why the video game industry is growing incredibly fast in Brazil. Games aimed at the Brazilian game market need to have a good story. Adventure games, action games and car racing are the most popular genres, but, as it is Brazil, soccer games are always a winner.

The Market

Brazilian gamers are willing to download paid games. In the past Brazil has dealt with problems like piracy, and the game industry



Studies by App Annie show that the most revenue in Russia is made on iOS while download numbers are much higher on Google Play.

with high tax burdens. Much has changed. The Brazilian console production has released some of the tax burden, followed by a growing game industry and desire for entertainment. From being a game country where most gamers download Free2Play games, 35.4 percent of the video games players paid for the games. Most Brazilian gamers play on their smartphones. 82 percent prefer the mobile phone, 71 percent the PC and 56 percent the console. Android is by far the most popular operating system in Brazil. 75 percent of all games are played on an Android device. iOS has 11 percent of the market and Windows 7 percent. 75 percent of smartphone gamers only download free games.

Steam

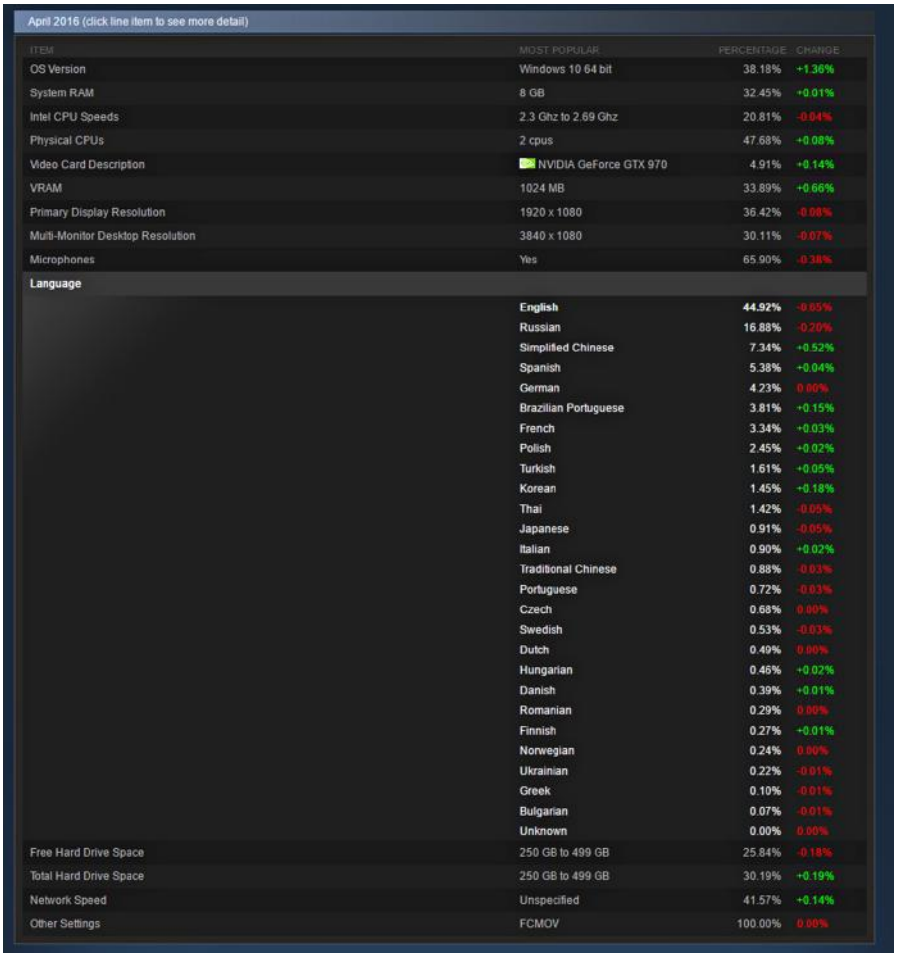
71 percent of Brazilian gamers are PC players. The last year this segment has increased by 17 percent and shows no signs of slowing down in the near future. Excluding English, Brazilian Portuguese is the 5th largest language on Steam which makes Brazilian Portuguese a good choice when choosing languages to translate a Steam game into.

The Necessity of Localization in Brazil

Brazil's game industry is growing. According to App Annie, when it comes to downloads, Brazil is the largest BRIC country for Google Play (BRIC: acronym for an association of five major emerging national economies: Brazil, Russia, India, China and South Africa); only the United States download more. The English proficiency is however relatively low in Brazil. Only 11 percent communicate in English. As access to the internet grows, many children and young adults play video games. A large market, increasing incomes, and a growing technical infrastructure will give a translation into Brazilian Portuguese a potentially high return on investment.

Why not just Portuguese?

The distance between Europe and Latin America isn't just the geographical split created by a huge ocean; the cultural, historical and modern heritage differs, and with this the evolution of a language into two different variants. The language differences between Brazilian Portuguese and European Portuguese are essential: some words are spelled differently, Brazilians make verbs out of nouns or condense expressions and many words aren't the same.



The hardware survey at Steam in April 2016 showed that Brazilian Portuguese is even more used than traditional Portuguese - therefore investing in a proper localization might make sense.

be localized into Brazilian Portuguese. This is even more important if you are aiming the game at younger people or children.

When translating from English into Brazilian Portuguese the words get wider. Leave enough room to allow space for long translations when designing your game. There are also several accented letters in Brazilian and European Portuguese. Before localizing make sure your game has international character encoding (UTF-8) and accepts frequently used letters like ê and ô.

Conclusion

The Brazilian game market will continue to grow annually by 12.4 percent and requirements to entering the market have relaxed. The Brazilian games market is relatively new and the potential to break through is high. But to achieve high downloads and access the wider population you need to localize your game into Brazilian Portuguese. **Carolina Silvandersson**

Dicionário inglês-português

English	Brazilian Portuguese	European Portuguese
Change User	Alterar usuário	Alterar utilizador
Bus	Ônibus	Autocarro
You	Você	Tu

Brazilian Portuguese has also incorporated throughout the time words from African and Native American origins in the vocabulary. The difference is vital. To make a game appeal to Brazilian gamers and to give them the same experience as the original version, it needs to



FAST AND FURIOUS

MARKETING IN THE WORLD'S BIGGEST GAMING ECONOMY

NetEase is one of the biggest publishers in China that helps foreigners to set foot in this unknown territory. Tom Van Dam gives advice on what you should think of when aiming for this special market.



Tom Van Dam
is Head of
Mobile Business Development
at NetEase China.

Tom is an energetic Dutchman living in China since 2009 and loves to combine Western and Eastern ways of doing things. Currently working to bring the best of China's mobile games to the rest of the world and provide Chinese players with the best mobile games the world has to offer. Tom leads the overseas business team at NetEase China, which is one of the world's largest game companies, yet a hidden gem to most people outside China.

Over the years I have at various points delivered general advice about entering the Chinese market and how studios and publishers may have to adapt to the challenging and dissimilar environment. On the Business Development side of things here at NetEase, that is indeed my job. But on this occasion I'd like to be a little more specific and home in on one of the elements of the process, with some added expertise from one of our Marketing Directors, Kevin Xu.

First, a little background and some key things to consider when it comes to the market.

The State of Play

In a nation that has only relatively recently seen prosperity and the massive influx of industry that has come with it, citizen spending in China is vital to keep things booming. This need is made even stronger by a recent decline in international trade, leading the government to focus on and encourage domestic consumption.

A single app will let you buy plane and train tickets, pay your household utility bills, make micro-investments on the stock market, order taxis and shop online for anything from imported groceries to a brand new suit. Little wonder then that 76.1 percent of the population shops on their smartphone as a study by Mastercard found. Where in the West we had to adapt our methods, this is a country where the rise of consumerism came hand-in-hand with the rise of the internet.

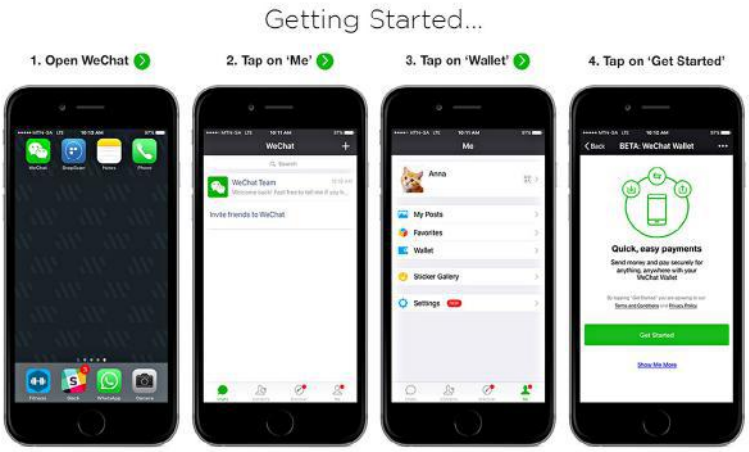
This connectivity makes for a playing field in which word of mouth and a short, fast burst of activity are key to marketing a product.





A distinctive, unique art style has its place in the Chinese market, evidenced by the rare success of certain Western premium titles here, such as »Limbo« and »Monument Valley«.





WeChat is the biggest social media platform in China and should be considered right from the beginning as a marketing tool as western services such as Facebook or Twitter are not available in China.

When it comes to games, the saturation and subsequent fierce competition in the market aggravates this and does away with the idea of a slow-growth tactic.

BAT and other dominant Platforms

It's vital to know not just the market and your competitors, but the top companies within China that could form the basis of your marketing platform, depending on how you proceed. Collectively known as BAT, Baidu, Alibaba and Tencent are the top three internet kingmakers and are far more than the equivalents of Google, Amazon and Facebook that many in the West inevitably characterize them as being.

- Baidu offers a similar suite of products to Google (with the notable exception of email) and also made its name as a search engine but operates quite differently in various ways.
- Alibaba, originally a B2B platform, has diversified hugely and now owns a group of different digital commerce platforms (B2C, C2C) and the prolific payment service, Alipay.
- Tencent will no doubt be familiar to you, but in this context it's not its games we need to emphasize, but it biggest social media platform, WeChat. We'll come onto the importance of social media in more detail later, but it should be known that WeChat leads the way in social media in China. Visitors to the country will know this – the request to connect on WeChat can come as quickly as a handshake.

QR Codes are Part of the Deal

After a brief rise and fall that many see now as nothing more than a misguided marketing fad, QR codes have largely fallen out of use in the West (although some are beginning to notice a new emerging trend). This is not the case in China at all. Almost everything a consumer comes into contact with has a code; the desired result of nearly every call to action is a scan and, unlike the Western equivalents of circa 2011, a scan will efficiently lead to the next step in the conversion funnel.

Beyond just marketing, a huge number of games are distributed this way, helping speed up the process of purchasing and owning, leading to a far greater download volume and making for an easy win directly from ads.

Social is King

An element of sociability will very likely increase the odds of a game's performance in the charts; this is obvious just taking a look at which games are most successful for the longest amount of time. Social gameplay has become engrained in the Chinese psyche, along with the Free2Play monetization model, making for an environment in which money spent on cosmetic attributes just for the sake of showing off to fellow players isn't seen as so strange, and a Pay2Win mentality doesn't receive nearly the level of ire that it might in the West. We'll make a comparison with my home market in **figure 1**.

It may seem obvious to say, but still worth pointing out that any social element or »shareability« cannot focus around Facebook or Twitter. Neither can be accessed in China, inside the »Great Firewall«, and will be completely useless. Focus instead on optimization for WeChat, EasyChat, Weibo and the like. In a country where consumer rating and word of mouth counts for so much, these are also the right places to spend a generous chunk of your marketing budget.

Successes are Recognizable, Simple and High Quality

One constantly sees it across movies, TV and games with the number of sequels a popular IP has the ability to spawn, from the »Saw«-series to »Call of Duty« and »Final Fantasy«. Sequels help refine the sometimes boundary-pushing ideas of an original IP, but more than that they help establish the IP itself and stamp it into the hearts and minds of the public consciousness.

The report »Deconstructing Tablet and Mobile Gaming« of EEDAR MGF 2016 states: »Chinese mobile gamers emphasize distinct elements of a particular title – GRAPHICAL QUALITY and CONTROLS – when selecting games to play.

83 percent indicate they are receptive to branding in games (the most among regions).

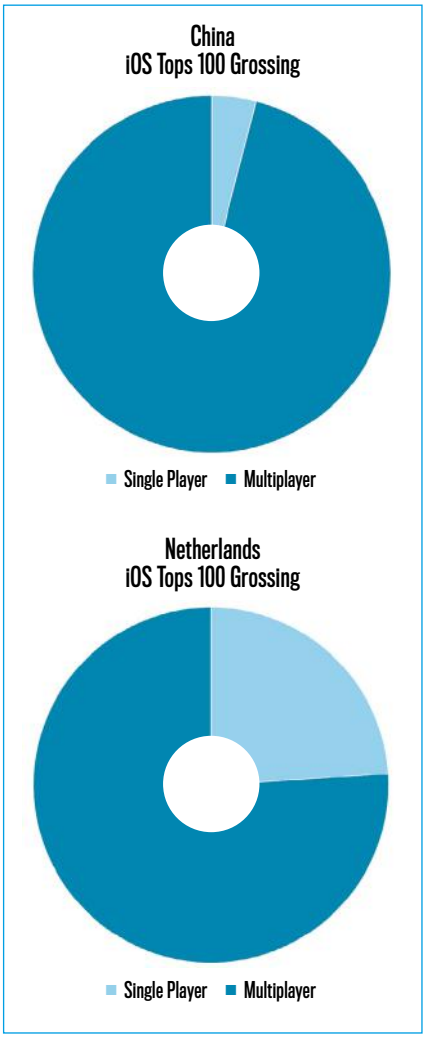


Figure 1: Only 4 out of 100 games in the Chinese Top 100 Grossing iOS charts are built without multiplayer at their core, while in the Netherlands almost a quarter of the top 100 are. (Source: App Annie)



Figure 2: »Ghost Story« is currently No. 1 in the iOS downloads charts, incidentally published by NetEase. »Glory of the King« is No. 2 in the iOS download charts.

In addition to MOBILE brands, Chinese mobile gamers are most influenced to download by the following brand types:

- Movies
- PC / Console Games
- Products«

In this way China is similar to western countries in that an established IP can be critical to the success of a title – perhaps more so due to the saturated market.

This is perhaps more useful if you're reading as a publisher, but even as a development studio it may be worth investing in the rights of a known IP to approach the market with something recognized, or perhaps start in the market taking on development work for an IP rights-holder.

High graphical quality also makes for a higher chance of downloading, according to Chinese players. A distinctive, unique art style has its place in this market (evidenced by the rare success of certain Western premium titles here, such as »Limbo« and »Monument Valley«), but overall fidelity is a must. This can be seen in **figure 2**, with the games occupying the top two positions in the download charts currently.

In a marketing sense this also highlights the need, one that is universal, for good quality assets that show the game off in its very best light.

Chinese players also value a simplistic control scheme. With the more hardcore players, and crucially the higher spenders, playing for potentially six hours at a time, fiddly controls aren't a tempting proposition. Autoplay and strategy are essentially held in higher regard that dexterity and reaction speed, such as in racing titles and shooters.



Weibo, WeChat, QQ and EasyChat are the top social networking services in China.

All this comes as opposed to North American audiences, who are most influenced by price, wanting to get the best deal in initial payments. This reflects an obvious difference; that of Free2Play hasn't quite reached domination status there in downloads (however much it's recognized to make more money), while in China the biggest gaming audience, including the hardcore, resides on mobile.

How to market your Game

Now, looking specifically at marketing a game, let me first point out that this is not a fixed deal; there is always room for movement, an option B. You can come at launching your game in China for a number of different angles, whether testing the waters and putting your product out to market with minimal effort from yourself, forming a relationship with a partner and letting them take care of things, or going all-in and establishing your long term presence in the country. Naturally, your marketing strategy will be different for each of those scenarios.

That said, one thing seems to ring true across all aspects if you're looking for success:

It's all in the (hard) Launch

Games that enter high in the charts tend to stick there before beginning their inevitable decline (aside from a jump in downloads around the first few versions); it's rare to see a game enter in a low position and climb just due to building word of mouth, a tactic that could be a little more familiar in the West.

Similarly, beyond announcements and some limited community management it's rare to see much of a build-up in hype ahead of launch here. For the most part the immediate launch period is where all of the action happens, and certainly where most of the budget is spent.

Indeed, that budget itself is decided relatively late on in the development cycle of the game; only once the Beta testing is over will most publishers really commit to giving the game its marketing budget, which is sometimes only a week or so ahead of release. With Beta testing run in a similar way to distributing a game in its completed phase, by advertising with distributers albeit on a far smaller

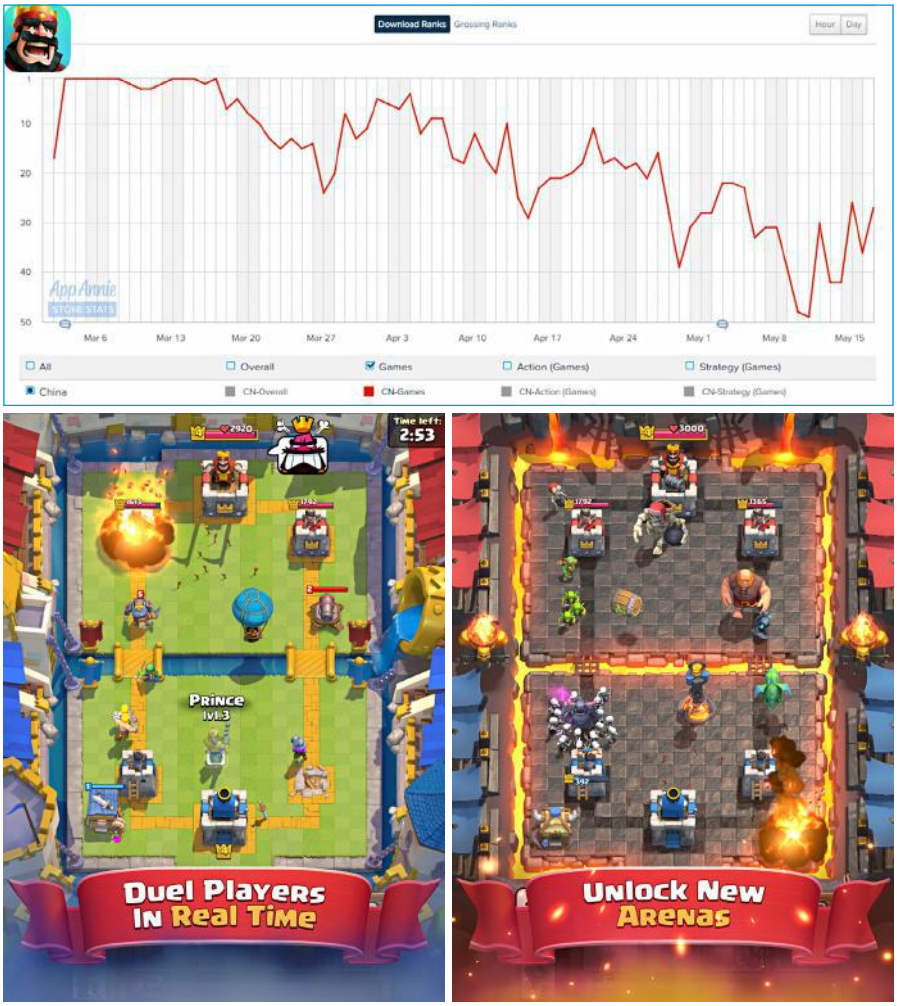
scale, this should provide a good indication of how much the game will need pushing and how. This is particularly worth noting if you're a developer that has partnered with a company in China; by the end of the final scheduled Beta test make sure your numbers are high and clear, as that will be a strong influence in how much marketing spend they decide to commit to with you.

In the same way, soft launches are also very rare; the Chinese market is an isolated one with unique behavioral characteristics, unlikely to be replicated on a smaller scale elsewhere. With such ease of access from so many unauthorized Android channels and the constant risk of piracy, a soft launch would expose you and could easily run out of your control. On top of that, it would detract from the all-important launch day hype that publishers rely on and the market has now completely adapted to.

The rapid change from day-to-day in China, as well as escalating advertising costs, means that your window for media spend is very small, and that within this window you will need to touch on every possible platform you can to deliver one concentrated hit to your players.

On one hand this will bring users that feeling that this game is big and it's everywhere and should be downloaded and tried immediately, this being possible, encouraged and very much normalized by the prolific use of QR codes I mentioned earlier.

On the other hand, it should help convince media of the same thing, as well as raising profile on the various app stores without necessarily having to directly target them editorially (remember in China there are literally hundreds of Android outlets), in turn stimulating more downloads.



Due to brand recognition and a short, concentrated marketing campaign, »Clash Royale« shot to No. 1 position, as the trend goes, before starting its decline.



Similarly, Chinese title »Legend of Zu« shot to No. 1 within a day before beginning a decline, but displays a slight increase in downloads timed with the release of a new version of the game.

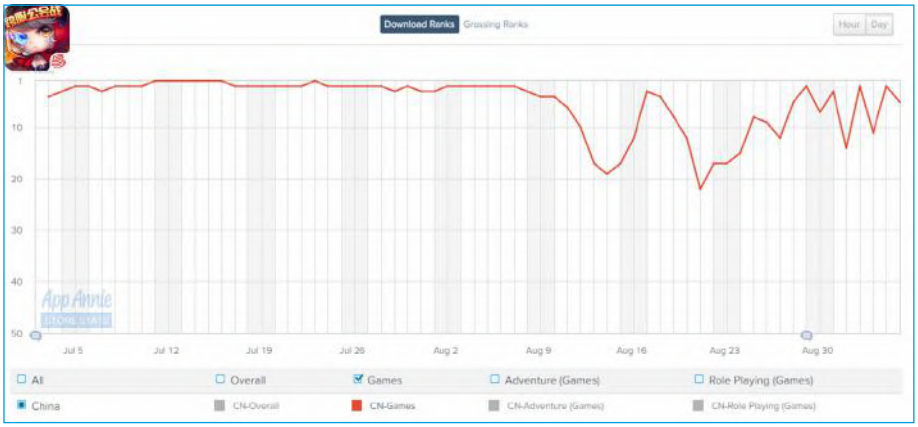


Platforms

We at NetEase are lucky when it comes to available platforms from which to market a game; not only is NetEase one of the largest games publishers in China, but it cut its teeth on internet services and consequently is one of the largest email providers in the country, owns one of the most popular news portals and has a wide variety of other popular apps under its belt as well. This means that, potentially, an enormous amount of advertising is available to a game via these services (that in turn are doubling as distribution platforms and helping cut costs from expensive Android outlets, but that's another article ...).

Unless you're partnered with us though, that's little help to you, other than as a comparison; certainly though I would recommend looking into a licensing deal with someone that has this kind of internal resources – studios based within China often do this themselves even though they have a regional leg up on their foreign counterparts from the start.

Take for example Chinese dev studio Network Technology Co., Beijing. Despite knowing the inner-workings of the market, being in a position to really break through on their own, even with a great title, was too expensive to consider when so much success depends on hitting the numerous channels and making sure there's a strong presence across as much media as possible. Once they partnered with us though, they were able to





Using owned platforms, »Wonder Hero« had an excellent launch.

About NetEase Games

NetEase is a leading Internet technology company based in China. Founded in June 1997 by William Ding, the company has developed some of the most popular online services in China across a wide range of areas. In particular, NetEase has enormous strength in game development and publishing, proudly operating China's top mobile titles and partnering with Blizzard Entertainment to publish their hit games.

NetEase is also famous for its leading email service, with over 800 million registered users, its popular web portal 163.com and its cross-border e-commerce platform Kaola. NetEase has over 13,000 employees and has offices in Beijing, Guangzhou, Hangzhou, Shanghai, Tokyo, San Francisco and Seoul.

NetEase Games

use our owned media to great success – their title »Wonder Hero« was a launch hit domestically and now has a presence in Hong Kong, Korea and Vietnam among others.

But without this kind of platform and captive audience readily available, you'll have to rely on other methods. Paying for a product spokesperson also has its benefits, with celebrity status holding a lot of sway in China and not carrying the stigma that has come with reality television and misplaced product affiliation over the years in the West (in Korea this is actually the number one method consumers hear about new games). It may also be a good idea to invest in other methods of more easily facilitating distribution, such as putting some more cash towards specific app stores that are carrying your game, in order to up your presence at the correct locations and spur more on-the-spot downloads.

Social media is also vital to the marketing and distribution of a game, whether that's down to advertising and having a presence on the various networks or motivating players to talk about it via word of mouth. The latter is especially vital; according to the EEDAR MGF Asia 2016 report, »Deconstructing Mobile and Tablet Gaming«, Chinese gamers are the most vocal in the world in terms of sharing games, with 82 percent indicating that they actively share recommendations and experiences. Chinese gamers list »seeing posts from friends on social media« among their top five methods of discovering a title, in contrast to gamers in competing markets, the U.S., Japan and South Korea.

It follows then, that making everything shareable and quick is key, bringing us back around to the prolific use of QR codes; ultimately it all fits conveniently into a loop in this nation where consoles have never really got off the ground and PC gaming is beginning to wane in the face of the behemoth mobile industry.

Final Words

No one will tell you that the Chinese market is an easy one to navigate; there's every chance you'll need help with the procedure, which is where ourselves at NetEase come in. But as we've noted in other contexts before, and indeed here in marketing as a piece of the whole project, if you're willing to go all-in with dedication, long-term commitment and a willingness to change your tactics, the world's biggest gaming market could hold great promise for you. **Tom Van Dam**

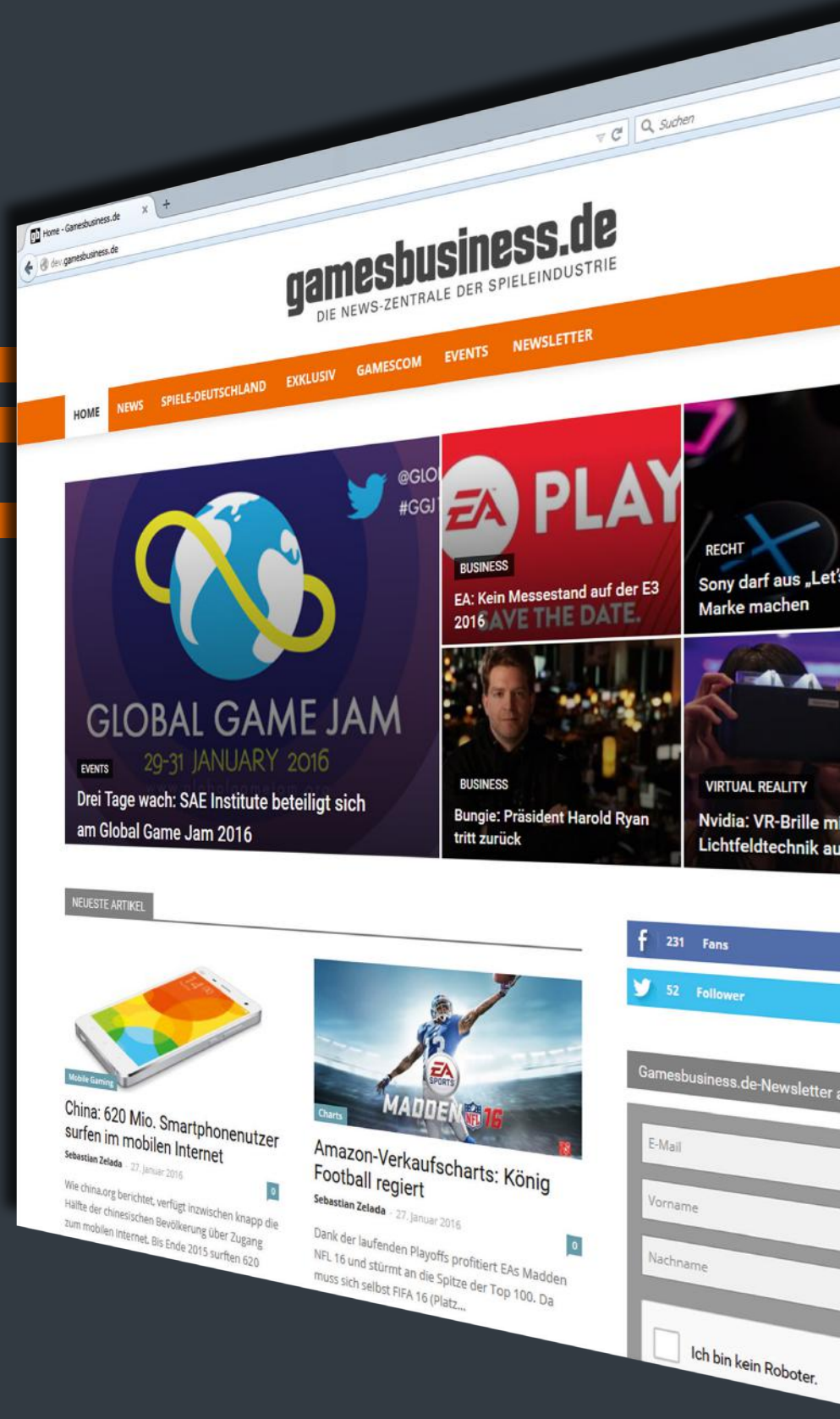
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THE RUSSIAN GAMES MARKET

If publishers and developers think of Russia, they often think of piracy. Gevorg Akopyan has some advice on how to prevent copyright infringement and what Russian gamers like and expect from games.



Gevorg Akopyan
is Marketing and Business Development Manager at SoftClub.

Gevorg has been in the games industry for 6 years now, starting as a game journalist at Mail.ru to later on lead Russia's most influential specialist outlet, Igromania, as an editorial director through web, social, mobile and print channels. In 2016 Gevorg has joined the team of SoftClub - Russia's biggest game distributor and localizer.

When you start a conversation about the Russian games market most people think either about excellent but complicated air flight simulators or crazy games like »Stalin vs. Martians«. Oh, and there is »Tetris« with almost half a billion sold copies (officially).

Some publishers strongly believe that their games are not appealing to the Russian audience or, to contrary, they are confident that their title will sell hundreds of thousand copies. Though, it is always hard to predict whether the game is going be successful or not, in this piece I'll try to list six features that will make it easier for your title to get into Russia's top grossing lists.

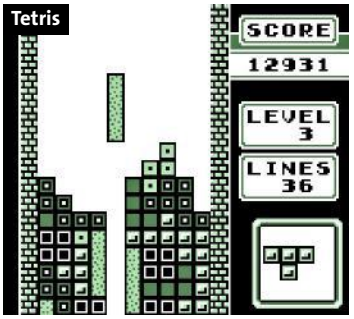
1. Localize your Game

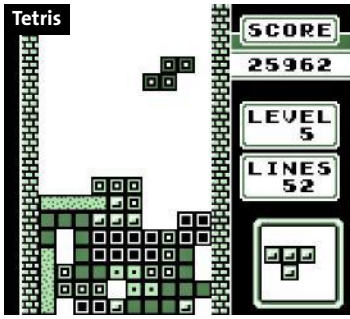
I know, it is a pretty obvious one. Everybody knows this. But few studios do this.

People enjoy taking adventures in a friendlier environment, and what says »you're welcome« better than the language you grow up with. Smaller publishers usually think that they will be happy with only English speaking audience, but they don't know how small it actually is. This is because they work in IT – a very high educated industry where people usually know 2-3 languages or more, whereas when it comes to general audience, this is different. And this is far more different in Russia where most people outside Moscow rarely know English well enough to play through an entire game. So when you put your product on the Russian Steam store without at least









If people think about the Russian games market, they often think of somehow crazy games like »Stalin vs. Martians« or the legendary hit »Tetris«.



Russian gamers do like the same AAA games as the rest of the world does. But an evergreen theme that always is promising high sales is WW2 like in those examples.

localized subtitles, you automatically get tons of negative user reviews because your game »is too complicated to understand«, »too boring« and, the most beautiful, because »just localize it, you non respectful jerks!«

In today's industry where almost every studio is trying to implement a story in their games it is crucial to communicate your message to the player. To do this you both need to speak the same language. Horosho?

2. Release your Game simultaneously

Russia has one of the most sophisticated gaming communities in the world. Local gamers need to have the newest game the day it is released in other countries. If a localized version isn't available right away, the game is going to be translated (badly) by enthusiasts and pirated (heavily) by everybody else. If the game is released three weeks later compared to other regions you can lose up to 50 percent of sales.

If that sounds barbaric to you, just imagine how it would feel like if all of a sudden the newest episode of »Game of Thrones« wasn't available in your country for a week after premiere, whilst the rest of the world was enjoying it. And this happens even with long awaited games from popular AAA series. No wonder developers lose potential customers.

Remember what Gabe Newell said five years ago: »The people who are telling you that Russians pirate everything, are the people who wait six months to localize their product into Russian. It doesn't take much in terms of providing a better service to make pirates a non-issue.«

Mr. Newell was right. In the following five years Russian Steam market has grown significantly. This is the reason for my third point in this article.

3. Don't forget about PC

Russia is huge on PC. Console market is slowly getting stronger despite recent financial crisis (which is still in full strength, by the way), but if your title doesn't belong to an A-list franchise and you still want to sell hundreds of thousand copies, make a PC version. According to the research done by Mail.ru, Russia's IT giant and online games operator, more than 61 percent of active Internet users who play games prefer to do it on PC.

Still not convinced? That is probably because you don't know that Russian Steam market is the second biggest in the world after the U.S. according to Steam Spy. It is the second biggest in all terms: number of users, number of owned games by a single user, active players, play time etc. So make a PC version, please. It will also help you boost console version's sales, too. PC gamers usually generate all the buzz on the Internet in Russia so there is a chance that console gamers will hear about your game and buy it for the platform they own.

4. Work with Media

There is a lot of discussion about the impact that the press and so called new media can have on a game's success. Some developers think that a great game will sell no matter what and they are probably right, but if you want to sell hundreds of thousand copies, influence on game's reception and communicate a certain point, you need to work with the press.

First of all – press releases do work. As a former editorial director of the most influential Russian gaming outlet, I know that editors need them. For most media this is the best way to get information. They read press releases, they address questions to PR managers regarding certain statements, they request comments and they publish it.

You can hire a copywriter or an agency to create press releases for you, although I suggest you do it yourself if you are an indie developer. But make sure you localize all press releases as well. By sending out a press release in English you lose about a half of potential coverage. Why? Unfortunately, some editors just don't know any English and some of them are reluctant to the idea of reading emails from people they don't know. But the most crucial reason why they don't care is that they have too much work to do as it is – editorials are always understaffed. Reading through some press releases in English regarding unknown titles is not their priority. I understand that some developers will get offended by this – »How do they dare to not recognize MY game?« But it is what it is. And it'll get even worse over the next few years.

With new media it's even worse. Bloggers cover only those games that come to their attention, and their attention span is incredibly short.

So if you want to get a lot of coverage from the press and new media, consider hiring a local agency. It is rather cheap, but tremendously effective. They'll localize all the assets and communicate them to the right press the right way; they'll organize interviews and encourage stories, take on community management (Steam threads moderation is always a pain) and more.

5. The Setting should be appealing

Russians prefer certain settings and genres, don't expect for an American football simulator or a JRPG to sell hundreds of thousand copies. At the same time if you have a quality strategy, first person shooter or a tactics game set in WW2-period, you are almost golden. Local developers and publishers know that, which is why they've produced lots of games about WW2 over the years. A lot of them had poor critical reception but that did not stop them from selling big numbers. There are quite a few globally acclaimed game series set in WW2 that came from CIS countries though. Titles like »Blitzkrieg«, »Silent Storm«, »IL-2 Sturmovik« and »Men of War« are well known in Europe.

As of today many development studios have closed due to financial crisis of 2008, but that does not necessarily mean that the demand for war games is over. Russians tend to like realistic settings more than others, and WW2 is their favorite – mostly because the Second World War had a strong impact on many generations of ex-USSR countries.

Of course this is changing and global trends touch Russian market as well as any other, nowadays top selling charts are more or less similar to Europe's, but WW2 games are still popular, although they've adapted to market's needs and went online. The best examples of this transition are hugely successful Free2Play online games like »War Thunder« and »World of Tanks«. So ...

6. ... consider making (publishing) a Free2Play Game

The financial crisis made ruble's purchasing power weaker, prices went up and as a result Free2Play titles, which were doing great as it is, became even more popular amongst Russians. So if you really understand how





Free2Play is a good way to approach the Russian games market as the financial crisis is still affecting gamers there. »War Thunder« and »World of Tanks« are two successful examples.





Another Free2Play game that is doing very well is »Warface«. The mixture of FPS, realistic setting and PC as a platform is the perfect combination, generating a revenue of 100 million Dollars per year for Crytek

Free2Play works and you think you can develop a game with smart monetization, consider marketing it in Russia.

The tricky part is that F2P audience is very divided. Different researches claim that close to 45 percent of online players regularly make purchases, but the vast majority of revenue comes from only 8 percent of the players. So make sure that you have lots of premium content to offer that will not break the game.

One of the examples of a good marketing thinking is »Warface«. The game was mostly produced by Crytek Kiev (although Seoul and Frankfurt offices took part) with an understanding what Russians like. This is a) a Free2Play b) first person shooter c) with great graphics d) for PC e) in realistic modern war setting f) with real licensed guns. It makes more than 100 million Dollars each year.

Of course there is no 100 percent formula to success to anything in life, especially in such an unpredictable industry as games. But learning about the regions you are releasing your game in and being smart about your actions will always pay out. So ... Be wise.

Gevorg Akopyan





MAUERSTÜRMER

WIE BLACK FOREST GAMES MIT ROGUE STORMERS CHINA EROBERT HAT

Adrian Goersch erklärt, welche Chancen der chinesische Markt für einen deutschen Entwickler mit sich bringt und welche Fallstricke es gleichzeitig zu beachten gilt.



Adrian Goersch ist Mitgründer und Geschäftsführer von Black Forest Games.

Adrian ist bei Black Forest Games vor allem für Selfpublishing, Finanzen und Marketing/PR verantwortlich.

Black Forest Games ist ein unabhängiger Spieleentwickler aus dem Süden Deutschlands, direkt an der französischen Grenze. In all unseren Geschäftsbereichen – Work for hire, Non-Game Simulations und Selfpublishing – sind wir auf hochwertige 3D-Grafiken spezialisiert. Unsere Spiele richten sich an Core Gamer, unsere selbstfinanzierten Titel sind für ihren hohen Schwierigkeitsgrad berüchtigt und beliebt.

Der schwierige Kampf um Aufmerksamkeit

Vor vier Jahren haben wir mit »Giana Sisters: Twisted Dreams« einen sehr erfolgreichen Titel veröffentlicht und wollen mit dem jetzt veröffentlichten Titel »Rogue Stormers« diesen Erfolg wiederholen. Doch die Zeiten haben sich geändert, insbesondere auf unserer Lead-Plattform Steam.



Der wesentliche Punkt, wenn man einen Titel in China veröffentlichen möchte, ist eine chinesische Lokalisierung mit chinesischen Schriftzeichen. Ebenfalls wichtig: auch die Shop-Beschreibung zu lokalisieren.

Im Jahr 2012, dem Jahr des Releases von Giana Sisters, wurden auf Steam 375 weitere Spiele veröffentlicht. 2015 waren es bereits 2.984 und 2016 waren zum Zeitpunkt des Rogue-Stormers-Starts Ende April bereits knapp 1.300 Spiele veröffentlicht worden. Früher riefen wir bei unserem Ansprechpartner bei Valve an und handelten ein schönes Feature aus, schon gab es wieder einen Peak in den Verkaufszahlen. Heute läuft das alles systemgesteuert und die wirklich guten Feature-Plätze sind rar gesät.

Auch der Kampf um Pressecoverage ist extrem schwer geworden. Da muss man schon mal einen Kickstarter in den Sand setzen, sich mit einem Modelabel rechtlich rumschlagen oder die Hosen runterlassen, um überhaupt etwas Berichterstattung zu bekommen. Verständlich, bei der Flut von Spielen.

China als Alternative

Für uns stellte sich mit Rogue Stormers also die Frage, was tun? Die Antwort, zumindest für Black Forest Games: Lasst uns nach China gehen beziehungsweise den chinesischen Markt angehen. Valve hat den Markt vor einiger Zeit für sich entdeckt und lokale Zahlungsmethoden sowie die chinesische Währung eingeführt. Dadurch hat sich China zum neuntgrößten geografischen Markt auf Steam entwickelt, Tendenz steigend.

Wir haben bereits eine kleine Historie mit dem chinesischen Markt. Giana Sisters: Twisted Dreams war als Launchtitel für den chinesischen Start der PlayStation 4 vorgesehen. Die größte Hürde, die es vor einem China-Release zu nehmen gilt, ist das Passieren der staatlichen Zensur. Im Fall von Giana Sisters übernahm das glücklicherweise Sony. Letztlich kam es dann doch zu politischen Verzögerungen für reine Download-Titel und es reichte zum Launch nicht. Doch mittlerweile ist Giana Sisters auch in China releast.





»Rogue Stormers« ist ein Run&Gun-Spiel, dessen Absatzmarkt Black Forest Games aufgrund der fehlenden Vorgeschichte einer bekannten IP und des rougelike-lite Ansatzes eher außerhalb von Deutschland sieht.

Für Steam stellt sich die Problematik der Zensurfreigabe nicht. Der wesentliche Punkt hier ist eine chinesische Lokalisierung mit chinesischen Schriftzeichen. Aus unserer Sicht wichtig: auch die Shop-Beschreibung zu lokalisieren.

Wir sind noch weitergegangen und haben einen chinesischen Community-Manager angeheuert, um sich um chinesische Anfragen und Kommentare auf Steam zu kümmern. Das ist von der chinesischen Community sehr gut aufgenommen worden.

Was uns sehr geholfen hat, ist die Unterstützung unseres chinesischen Kooperationspartners Fuze. Wieder ein Blick zurück: Vor einiger Zeit wurden wir von Fuze kontaktiert. Das chinesische Unternehmen suchte Content für seine neue Konsole, Release 2016. Wir haben über Giana Sisters gesprochen und sind in die Verhandlungen eingestiegen. Diese Vertragsverhandlungen waren eine ganz besondere Erfahrung. Obwohl über die Kernpunkte des Vertrages schnell Einigkeit herrschte, ging es bezüglich Details scheinbar unendlich hin und her. Nach unserem Gefühl wurde für jede noch so kleine Änderung wiederum eine andere Änderung gewünscht. Ich ordne das als kulturelle Unterschiede ein. Am Ende ist es zu einem guten Vertrag gekommen, in dessen Zuge wir auch gleich über Rogue Stormers gesprochen haben.

Fuze half uns beim Verfassen und Verteilen einer chinesischen Pressemeldung und vermittelte uns sogar einen chinesischen Let's Player.

Der Launch

Am 21. April 2016 wurde Rogue Stormers auf Steam gelauncht. Der Start verlief erst einmal holprig. Pressemeldung, Marketing, Social-Media-Posts und andere Shop-Partner waren alle auf 19:00 Uhr CEST ausgerichtet. Beim Drücken des Release-Knopfes gab es jedoch eine Fehlermeldung. Noch schlimmer: Das Spiel wurde mit 120 Prozent Rabatt in allen Listen angezeigt und war selbst auf Steam nicht mehr erhältlich. Steam konnte das zum Glück in ungefähr zwei Stunden korrigieren.

Dann ging es tatsächlich los. Aufgrund einer relativ langen Early-Access-Phase von fast zwei Jahren rechneten wir nicht mit einem großen Peak in den Verkäufen. Für uns war vor allem die geografische Verteilung der Käufer spannend. Hier wieder der Vergleich mit Giana Sisters, den wir natürlich intern immer ziehen: Das war ein recht »deutscher« Titel, das heißt, die Marke ist vor allem im deutschsprachigen Raum bekannt. Dementsprechend ist dort die Länderverteilung bei den Verkäufen. USA und Deutschland sind mit jeweils gleichen Teilen die besten Märkte, obwohl die USA von den potenziellen Spielern einen zehnmal größeren Anteil haben müssten. Rogue Stormers, das war uns von vornherein bewusst, ist wesentlich internationaler. Der Titel hat keine Vorgeschichte und der roguelike-lite Ansatz ist außerhalb Deutschlands um einiges beliebter als in unserem Heimmarkt. Auf einen größeren Anteil internationaler Spieler waren wir also vorbereitet. Spannend war die Frage, wie es mit China aussah.

Mit den ersten Zahlen war klar, dass unsere Strategie aufging: Etwa 40 Prozent aller Einheiten gehen nach China, mehr als doppelt so viele wie in die USA. Das bedeutet unter anderem, dass die Onlineserver immer voll sind. Wenn die Chinesen schlafen gehen, fangen die Europäer an zu spielen und werden dann von den Amerikanern abgelöst. Das bedeutet aber auch, chinesische Forenbeiträge zu beantworten, Patch-Notes in Chinesisch zu veröffentlichen und die ein oder andere technische Schwierigkeit zu meistern. Wir hatten zum Beispiel ein Problem mit Crashes, deren Ursache wir zunächst nicht identifizieren konnten. Schließlich fanden wir heraus, dass es mit Daten-Ordnern zusammenhing, deren Bezeichnung chinesische Schriftzeichen enthielt. **Adrian Goersch**





»Giana Sisters: Twisted Dreams« war als Launchtitel für den chinesischen Start der PlayStation 4 vorgesehen. Das klappte zwar nicht, aber inzwischen ist das vor allem in Deutschland bekannte Jump&Run auch auf dem chinesischen Mark erhältlich.

Über Black Forest Games:

Black Forest Games ist ein Studio mit 35 Mitarbeitern, das am Rande des Schwarzwaldes in Offenburg gelegen ist. Entwickelt werden vor allem Core Games für PC und Konsolen. Als erster deutscher Spieleentwickler führte Black Forest Games 2012 eine erfolgreiche Kickstarter-Kampagne für das Spiel Giana Sisters: Twisted Dreams durch. Zuletzt wurde das Run&Gun-Spiel Rogue Stormers auf Steam veröffentlicht.



GAMES IN BRAZIL

Talita Rhein and Philipp Keydel do know Brazil very well and provide a deep look into the country's society and how it affects gamers and the ever growing games industry – creating both difficulties as well as a lot of opportunities at the same time.



Talita Rhein
is Freelance Marketing Consultant, Project Manager and Writer.

Born and raised in São Paulo, she works as Marketing Consultant, Project Manager and Writer. As an 80's born gamer, she loves 2D and platform games. Contact her at talita@talitarhein.com or follow her on Twitter: @diretodoalem.



Philipp Keydel
is International Operations Manager at Pipa Studios.

Philipp Keydel lives in São Paulo. He is owner of »file work« (www.file-work.com), makes games with indies all over the world, and manages international operations for Pipa Studios. Born in Germany and a trained lawyer, his passions are art and software development. Contact him at: phil@file-work.com.

With Brazil's impressive development in the last decade, its game industry has received increasing international attention. Still, the industry's rapid development, as well as factors such as the country's enormous size, complex social structure, rough history and multifaceted culture can make it difficult to comprehensively understand its peculiarities, leaving outsiders wondering what to think of Brazil's game industry and its future. This article aims at shedding some light on the most important facts about games in Brazil.

Playing Games

Gamers

Games are booming in Brazil. Despite legally only having access to the international video games market since some 20 years[1], games are now as ubiquitous as they are in industrial nations. A large part that is thanks to digital distribution: availability of games has improved drastically in a country where imported goods are not always easy to get. The most notable presence of games in everyday life is people playing games on mobile devices.

Close to 100 million, or about half of all Brazilians play games regularly, even though only a minority considers themselves »gamers«[2]. The number of hardcore gamers is estimated at 45 to 50 million[3]. The age of Brazilian gamers is fairly distributed: the largest group, 25 to 34 years old, making up for about a third of gamers, followed by 16 to 24 year olds (31.5 percent), and roughly a quarter being 35 to 54 years old[4]. Slightly more than half of Brazilian gamers are female[5]. As in the rest of the world, »second and third generation gamers« are more and more common, with more than 80 percent of gaming parents starting to play video games with their kids[6].

Brazil celebrates a consumption culture, mainly inspired by western industrial nations. Therefore, gaming preferences correspond with those in the rest of the western world. Unlike Asian sales charts, the ones from Brazil strongly resemble those from the U.S. or Europe. For example, »GTA V« and »FIFA 15« were some of the most successful launches in 2014[7]. »Counter-Strike: Global Offensive«, »Dota 2« and »Team Fortress 2« are among the most played games on Steam. More than half of Brazilian gamers state they often play online[8].

Society

Brazil is in many ways what you would expect. People are known for being friendly, happy and relaxed. Food, weather and nature are marvelous, and music is everywhere. It is easy to start conversations and getting to know people, who are very social, expressive and spontaneous. But Brazil sadly also confirms less beautiful

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stereotypes: wealth, power, education and perspectives of a person are linked to skin color, gender and ancestry to a depressing degree, violence against women (and in general) is widespread and politics is struggling with fulfilling the standards of a democracy, being dominated by the same ruling class for centuries. It is also a country of stark contrast, fine nuances, and surprising contradictions. For example, despite the ease of social interaction, many aspects of everyday life in Brazil can be unnecessarily complicated (»complicado« is one of Brazilians' favorite words, as is »difícil«). People and institutions are mostly contacted by phone; a way usually leads through call-center hell. Often, personal presence is required without the need for it being obvious, as when picking up monthly metro tickets at the station, or literally just handing in paperwork to public administration. It is sometimes possible to send a representative or courier – but mailing things often is not. In contrast, most everyday necessities can be ordered by phone: all kinds of food, water, gas, foreign currency and insurance contracts.

The intensity of Brazilians' social life is famous. It is commonly lived without restraint in the internet, especially social media, which allows the entire nation to live events together. The internet is the most important means of communication, used to spread news, social events, opinions and memes at stunning speeds.

Due to overwhelming popularity, most major players in social media have dependencies in Brazil: Google, Facebook (with a separate office for Instagram), Twitter, BuzzFeed, Huffington Post, and more. When messaging service WhatsApp was forced by judicial orders to shut down their service for a day, Brazilians came close to panicking, and its competitor Telegram was the most downloaded app in the country.

Even if gaming on social media is losing popularity[10], communications about and around games seems more intense than in other countries: be it in-game, via support, or the social media presences of games, Brazilians deeply enjoy human interaction.

On the downside (for some), trolling is celebrated as an art form, and has won international fame in the web. Take Mark Zuckerberg's Facebook account[11], or »Everybody hates Chris«'s star Tyler James Williams' Instagram account as examples to get the idea of what's going on[12] – even the Islamic State's threats against Brazil were met with »zueira«[13] (zueira: Brazilian Portuguese for joke/prank). In online gaming, Brazilians are often feared by anyone who shares servers with them for their intense communication, usually not understandable for other players, the relentlessness of their trolling efforts, and their indifference to disciplinary measures.

Infrastructure

Brazil's infrastructure is a showcase example of a developing country. With more than 200 million people, Latin America's most populous country and the world's 5th largest, boasts 7,500 kilometers of beach.

It shares borders with all but two countries in South America. Brazil is the only country in Latin America to speak Portuguese. Most of its neighbors speak Spanish, unlike most Brazilians. The level of English varies, but many Brazilians are a little shy to speak it much. In spite of their usually very intense interest in foreign countries, especially the U.S. and European countries, speaking Portuguese helps greatly in all communication.

Transportation has its problems, but all larger cities have working airports, and busses link cities over distances from a few to a few thousand kilometers on regular schedules, on streets that are generally in usable condition.

Electricity is available and mostly stable (even if its installation is sometimes adventurous), but lightning strikes during the rainy season regularly lead to power cuts. At least in more densly populated areas, landline internet connections aren't bad, and high speed connections available. Mobile connections are relatively costly, while offering poor coverage and bandwidth. About half of Brazilians have access to the internet[14].





Sale charts in Brazil strongly resemble those from the U.S. or Europe. »GTA V« and »FIFA 15« were some of the most successful launches in 2014.

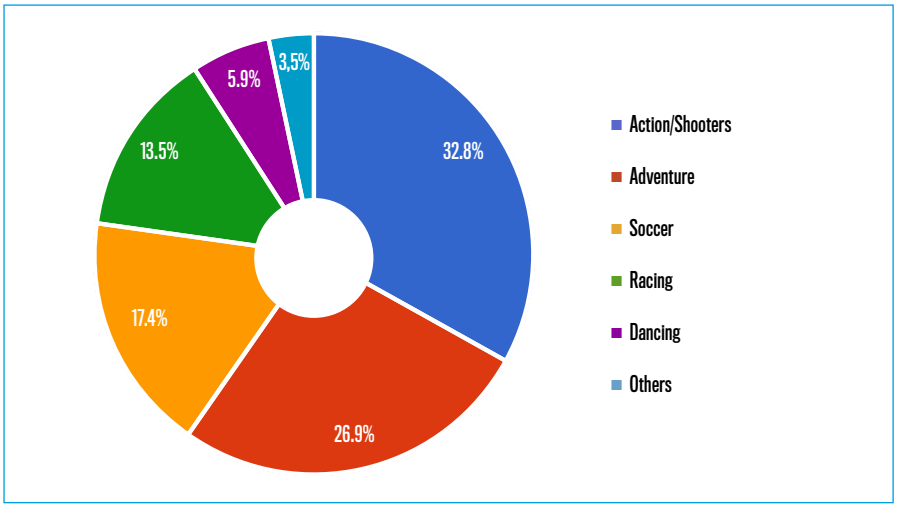
The most severe problems for development regarding infrastructure are caused by poor service, lack of competition on the providers' side, and lobbyists pushing political projects, such as bandwidth limitations for basic contracts (one provider's president explicitly named gamers' excessive usage of bandwidth as a reason for his efforts to limit accesses[15]). This is symptomatic for the fact that Brazil has always been ruled by oligarchies: from agriculture to telecommunications to transportation, a few big players dominate their market, and customer satisfaction is not always a top priority.

Another interesting problem was the 2014/2015 water crisis in São Paulo, caused by decades of mismanagement. Fortunate amounts of rainfall solved the crisis later in 2015, but the affair goes to show that there are quite a few growing pains that can potentially spring up any time.

Overall, Brazil is improving its infrastructure on all fronts, but to truly close up to the industrial countries, it wants foreign investments. The country is struggling with this since its boom has cooled off. The recent months of political turmoil and an unelected interim president that seems unable to shake off the stench of corruption might not make Brazil more attractive in the eyes of some of investors.

Technology

Interest in new technology is great. However, high costs of imports and little domestic production result in limited availability and a slower growth of technological progress. Most things are available, at least in metropolitan areas, but acquiring them can require more efforts, and the prices for electronics and technology tend to be higher than in industrial countries. Adding to this is the fact that from 2014 to 2015, the Brazilian Real lost about 40 percent of its value compared to the U.S. Dollar and the Euro, making purchases abroad even more costly. Interestingly, widespread tech savviness brought Brazilians a very competent scene for hardware repair.



The chart shows the favorite genres amongst Brazilian gamers[9].

About 60 percent of all Brazilians have smartphones, roughly half of them newer than one year[16], off-brand models being popular as are the latest iPhones. More than nine out of ten smartphone users play on their device[17], and games are the most downloaded category of apps[18]. Most smartphone users connect to the internet through Wi-Fi hotspots[19], which are widespread. 3G data connections are often unreliable, but more than three out of four smartphone users use them at least once a year[20].

Android outnumbers iOS as the second most popular mobile operating system by about 7:1[21], but the latter has been catching up in the last few years[22].

On the gaming platform Steam, Brazil makes up for 2.6 percent of global traffic[23]. Even though at least in metropolitan areas, current-gen consoles are available, the PlayStation 3 and Xbox 360 remain popular and sell for around 300 Dollars[24] and 250 Dollars[25] respectively.

Gaming platforms

Smartphones are the most important gaming platform in Brazil – whether judged by market share or distribution, revenue, growth rates, or general consensus about their potential. More than four in five Brazilian gamers play on their smartphones, up some 10 percent from 2013[26]. Widespread distribution favors this platform, as does its focus on games that do not require an initial purchase. »Freemium« games make out about 75 percent of games downloaded onto smartphones in Brazil[27]. Smartphone gamers spend about 30 Brazilian Real, or just under 10 Dollars per month on apps[28].

With more than three quarters of gamers owning devices of more than one platform[29], the next most widely distributed gaming platform is PC. Formerly the most prevalent platform, it more or less switched market share with mobile devices since 2013: then, more than 80 percent of Brazilian gamers were using the platform. Now, some 70 percent of Brazilian gamers play on PC – about two thirds only play on laptops, about a quarter only on desktop computers[30].

Gaming consoles rank 3rd, with just over half of Brazilian gamers stating to own (at least) one, down from about two thirds in 2013[31]. Among Brazilian consoles, the last generation models still dominate the market. Xbox 360 is the most common, followed by the PlayStation 2, a console no longer in production – the PlayStation 3 and 4 only rank on 3rd and 4th place, respectively.

The main reason for the prevalence of last generation consoles is certainly the infamously high prices of gaming consoles due to high taxation of imported entertainment electronics in Brazil – something that is in the process of changing slowly due to the increase in gaming consoles manufacturing in Brazil, taxed at a lower rate[33]. Still, the price difference has led to a widespread popularity amongst Brazilians to acquire consoles by

buying them abroad on international travels[34]. The market shares differ from what players cite as their favorite gaming console (see charts on the following page).

Almost 40 percent of Brazilian gamers state they play on tablets, up from just above 30 percent compared to 2013[36]. Some 70 percent of those devices run Android, about 20 percent iOS[37].

In contrast, as personal preference is concerned, a third of Brazilian gamers cite smartphones as their favorite platform, followed by 30 percent for PC; just slightly less prefer PCs, and around 5 percent tablets[38].

Making Games

Almost everyone agrees that game development in Brazil is just beginning. There are currently some 200 game companies in Brazil[39] – a dramatic increase from the 42 counted in 2008, and little reason to expect anything but further growth.

The typical Brazilian studio is young and small. Half of all Brazilian game companies have been founded in the last four years[40]. Many offer other products like advertising or educational games and other services besides developing games, and about three quarters of companies report annual revenues around or below 100,000 Dollars[41].

The country's legal system is fairly well-developed, although too complex to provide access for everyone. Widespread street sale of obviously unlicensed copies of media and branded products display little fear of lawsuits. However, the domestic industry suffers less from infringement on copyrights and brands, most Brazilian games being »freemium«. There exists a sometimes surprisingly effective consumer protection agency.

Censorship does currently not exist to any noteworthy extent. Sales restrictions are rare, mostly citing violent content, and usually only affecting physical sales. And even though religious extremists regularly undertake political efforts to introduce measures that could amount to censorship, they remain a minority, and none of those are expected to bear fruits in the near future.

More than 80 percent of Brazilian game developers make games for PC and browsers, more than 75 percent develop for mobile devices. There is as of yet no Brazilian blockbuster AAA console or PC game. The reasons for this are certainly many.

Challenges

One of the most cited challenges is the scarcity of specialists: The industry's youth means also that there are few veterans with lots of experience. Making things worse is the fact that whenever talent emerges, temptation is great to emigrate to countries with more established scenes, higher salaries, bigger projects, and international talents, luring many a Brazilian dev away from home. »This especially affects game design: To become good, a game designer needs experience, and we don't have many projects in Brazil that offer that kind of experience. And they have no one to learn from either: the good ones all go abroad«, says Reginaldo Valadares, of Rovio, and Brazilian industry veteran of almost two decades. This also leads to making games being less known and respected as a profession – again, especially game design: »Many



»Counter-Strike: Global Offensive«, »Dota 2« and »Team Fortress 2« are among the most played games on Steam.

people don't even know what we do. They think we're artists«, explains Gabriela Araújo, from Fira Soft in Brasilia.

Private investors are not easy to find – domestic ones aren't very aware of the industry, and foreigners aren't very aware of Brazil, or shy away from it after several attempts of establishing operations failed at the beginning of the decade.

State and federal governments are also not very supportive of the games industry. With conservatives assuming power, outlook for cultural programs is bleak (the Ministry of Culture has already been scrapped by the interim president, who is expected to introduce austerity measures). Bureaucracy for opening companies is chokingly laborious, unnecessarily complicated and frustratingly slow. Without expert knowledge or professional help, it is all but impossible to open a company. Taxes on wages and products are comparatively high, and there are no programs like tax incentives or direct development support. Labor law can be bizarrely confusing, and is commonly circumvented by contracting workers as freelancers – a policy that doesn't make the often not well-paid profession any more attractive.

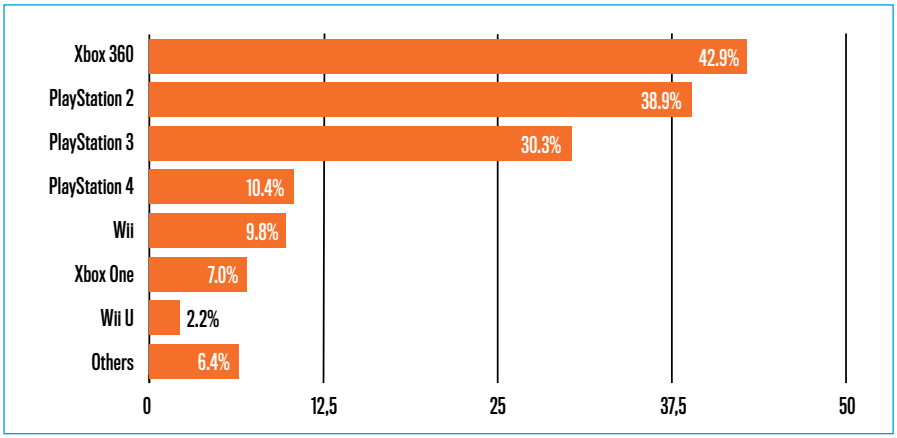
Access to technology, while having improved significantly with the advent of digital distribution, is still something Latin America struggles with: struggles with: development hardware is harder to get, licenses for development tools often have to be paid in U.S. dollars and are therefore relatively more expensive, if Brazilian payment methods are even accepted, and localization poses greater problems than in industrialized nations – the region's developers often suffer from mere lack of awareness of their existence. Unlicensed, or »pirated« products sometimes fill the resulting gaps, suggesting that the practice is not always only abuse of inherent properties of digital media to exploit values without contributing to their creation. Sometimes, it seems, piracy is also merely an effect of distribution efforts not meeting the necessities of consumers.

While Brazilians do spend a lot of money on games, most of it goes abroad. Says Terri Vellman, São Paulo based developer of »Heavy Bullets«: »The media is mostly focused on international titles, as is the public – even titles focusing on Brazil don't get the amount of attention international ones do«. Caio Henrique of Reload Games agrees: »As an indie, you will fail if you focus on the domestic market – unless if you give your game away for free and manage to get a lot of attention«. Unable to compete with international blockbusters, opportunities for domestic titles are mostly limited to niche products.

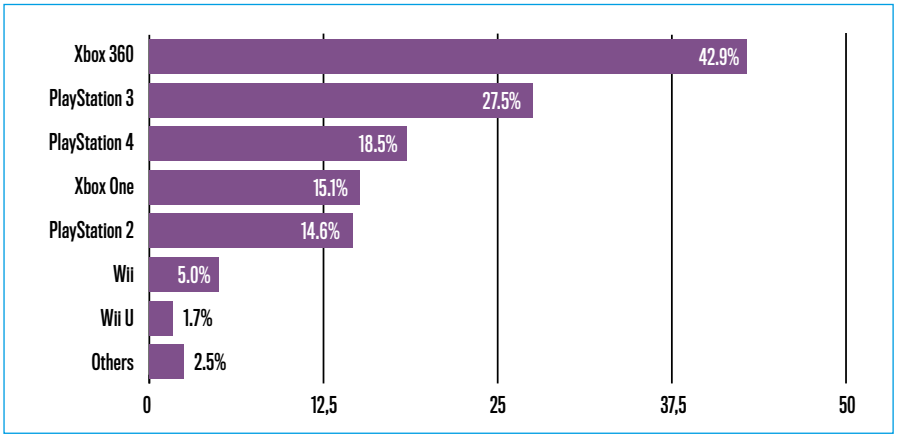
Administrative areas are affected as well: less experience, education and access to tools results in innovations being adapted later. Cultural factors, such as a more relaxed approach to meeting times, deadlines or standardized processes, as well as less fluency in English make larger and more complex operations much more challenging. For example, agile project management and solid QA processes are not very common.

While being a woman doesn't make things easier for developers all over the world, widespread misogyny in Brazil doesn't spare the industry. »If making games is difficult in Brazil, as is being a woman making games, then imagine how it is making games as a woman in Brazil«, says Gabriela Araújo. Also, the situation for LGBT people is certainly not better in a country with a rich LGBT culture, but also one of the highest rates of homophobic murders in the world. Even with the first professional gamers now coming out as openly gay[42], googling »LGBT game devs brazil«, still returned no results at all on May 18, 2016.

Finally, Brazil is far away from the world's software development hotspots, which makes travelling there expensive, and gaining international visibility harder. This in turn inhibits cooperation with sales platforms, advertising providers and networking in general. Further, there are no impulses from neighboring regions. There is the aforementioned language barrier, and neighboring countries suffer from the same problems Brazil does,



Market shares of consoles in Brazil, in percent. The sum exceeding 100 percent is a result of people owning more than one console[32].



Players' favorite consoles. Sum exceeding 100 percent is due to participants citing several devices[35].

and then some: Argentina's public finances chaos makes international trade ridiculously difficult, and Venezuela's national economy is currently disintegrating.

All these challenges and difficulties often enough also reinforce each other: later access to technology leads to a less experienced workforce, which results in talents moving abroad. As a consequence, growth in the entire region is slower, and its industry not yet able to fully compete with games development in industrial nations.

Still, there are plenty of reasons to believe that the situation for making games in Brazil is improving.

Opportunities

The industry's growth means also that it is maturing. In recent years, many game-focused schools have been opened, and educational institutions started to offer courses. Even if the quality of these offers is not always undisputed, they are met with a lot of interest and enthusiasm by young people, promising a new generation of creators very closely connected to their target audience.

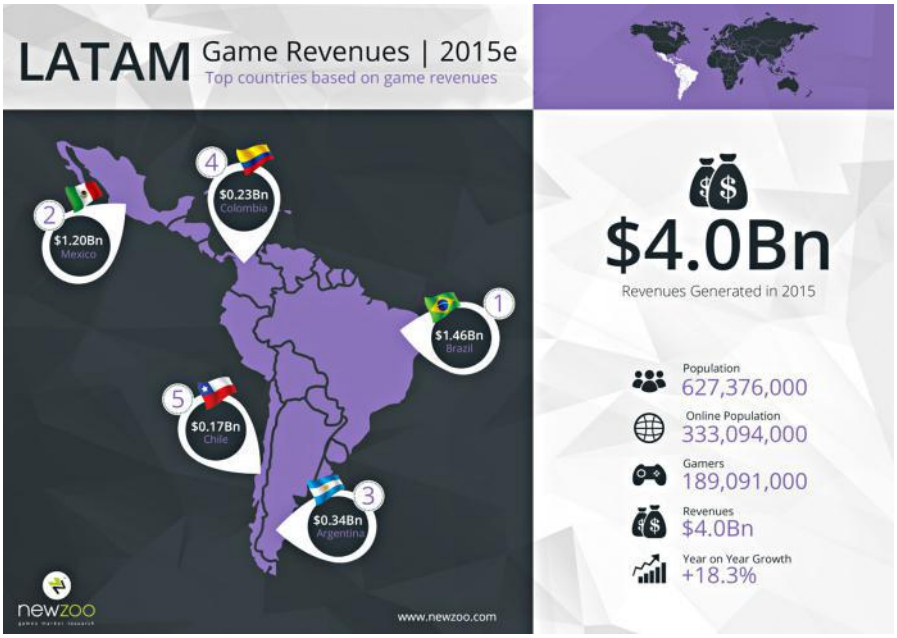
For developers in Brazil, digital distribution means much more than the increase in convenience developers all over the world enjoy: They now find themselves in a new era, in which for the first time they are able to center their energies and creativity on their product, not on the acquisition of tools. Meanwhile, some tool developers like the multiplatform engines Unreal and Unity have shown real efforts to popularize their technology in Brazil, organizing workshops and tech presentations to promote their products, which already enjoy considerable popularity due to licensing models requiring no initial cost, and no licensing fees at all for projects not generating much revenue.

Smaller operations have proven successful in the recent years[43]. They adapt better to new opportunities and trends due to higher flexibility, allowing them to react faster and to experiment with innovations.

Brazil as a market is also not as consolidated as in industrialized nations. »Gaining attention domestically as a developer can be easier«, state João Brandt and Lucas Mattos from the Belo Horizonte based studio »Longhat House«, and add: »Even if this doesn't count for much internationally«. There still is plenty of terrain to conquer, especially for smaller regional and niche games.

Thriving in adverse conditions, Brazilian professionals are forced to be versatile and spontaneous. They put their heart in their work, and are used to tons of over hours, short deadlines, poor briefings, and last minute change requests. People are open to innovations and want to make things work.

As a result of their many hardships and united by their passion, proven by the mere fact of having chosen their profession, devs have further formed a very lively community.



Organized mostly in internet forums and social media groups, they help each other out, share their experiences with new technologies, and handling obstacles. Brazilian openness and the traditional ease of conversation is of help: it is very easy to get in touch with developers, and they show genuine interest in helping each other by sharing information. Generally, Latin American devs feeling close to their culture is a strong point of the region: »Our local culture as source of inspiration has always been a positive influence in my projects – you shouldn't underestimate it«, states Juan Linietsky, of the Godot Engine team in Buenos Aires, Argentina.

Brazil gets a lot of regional attention: it boasts Latin America's highest number of game related studios and revenues. At least in more densely populated areas, such as Brazil's south, physical encounters are easier. São Paulo hosts the annual Brazil Game Show which, while smaller than other global industry events, is Latin America's largest industry event and features most global players. The city further hosts the Brazil Independent Games festival, Latin America's most important indie event, and numerous events as smaller festivals, workshops, game jams and meet ups.

One of the most fascinating aspects of games development in Brazil, and Latin America as a whole, is the artistic sphere. Culture is very vivid and a fundamental part of everyday life.

Brazil's history is extremely rich in culture and art: Native American, European and African roots have been the foundation of an incredible diversity of music, crafts, fine art, films and street art, to cite but a few. Contemporary and digital art draw from this resource, and the results are great. In many major cities, public walls are allowed to be painted freely, which brings the concrete jungle to vibrant life. Modern music features elements of Brazil's cultural



Studies from Newzoo (above) and Superdata (lower graph) show the Latin American games market in detail.

heritage, as does fashion. Games are beginning to follow this example (see **figure 1**).

Difficulties also often enough offer opportunities: Political upheaval, social tensions, inequality and discrimination, injustice, corruption and manipulation have always been a part of Latin America's history, and art has always facilitated a channel for public communication. Games are now joining in: Dilma Rousseff's run against her impeachment was responded to with »Super Impeachment Rampage«, and a parliamentarian spitting at a colleague for honoring a torturer and shouting homophobic insults was »recreated« as a mini-game. Argentinian developers »Shittygames« affirm that a tense climate offers a great source for inspiration, social dialogue, and motivation to express oneself.



Figure 1: »Iemanjá«, an Orisha spirit from the Afro-Brazilian Umbanda religion, interpreted in pixel art by artist Manu Lopes.

Lastly, Brazilian infrastructure might not be great, but it is decent enough, and set on a clear path to growth. And even if all this is not enough to attract foreign investment, at least the current low of the Brazilian Real might.

Selling Games

The Brazilian video games sales were estimated at around 1.5 to 2.5 billion Dollars in 2015[44], up significantly from 1.2 billion in 2014[45]. Globally, this makes not much of a dent – estimated at 81.5 billion Dollars in revenue in 2014, Brazil's share was around 1.5 percent[46] , scoring the country's revenue 11th place of the world[47]. Once again, these numbers are growing.

Ubisoft, EA, Blizzard, Microsoft, Sony and Disney all have offices in São Paulo. While some of them have scaled back operations significantly, and others left the country at the beginning of this century when activities did not show the success that was hoped for, now, especially ventures that include digital distribution and social aspects are meeting considerable success in Brazil.

Physical distribution can sometimes still be challenging in Brazil. Ebay doesn't exist, Amazon is not very popular, reliable online shops are few, and especially outside the larger cities, there are not many physical stores specialized on a great variety of games – less densely populated areas have less demand for them, as do poorer areas. Unauthorized distribution of games, or the »black market«, has always played an important role in the distribution of games in Brazil. More than one in five Brazilian gamers state to get their games this way[48], comparable with games bought on travels abroad – but estimates claim up to 80 percent of digital copies are unlicensed[49].

Only with the rise of digital distribution, this is changing, and radically so. Today, few online offers are unavailable in Brazil[50], and prices are often lower than in industrialized countries[51]. With prices still high compared to incomes, they are the most important factor in purchase decisions[52]. Free2Play titles are wildly popular: »League of Legends« developer Riot has an office in São Paulo, with strong focus on community communication and eSports. While boxed games still account for roughly half of all games sold in Brazil, online purchases account for about 40 percent[53]. Steam makes up for about 10 percent of PC sales[54], used games for about 5 percent of all sales[55].

»Bringing money in and out of the country requires a ton of paperwork«, says Tim Werner, of PrimeroPay in São Paulo. International credit cards, which make up the bulk of transactions for purchasing games in Brazil and Latin America[56], are not easy to get – especially for young people, and they are necessary for some online payment methods[57]. A payment method unique to Brazil, but very popular, is the »Boleto« (»ticket«). It is a transfer instruction on paper, which can be printed out in case of an online purchase. It can then be paid at many institutions like banks, ATMs, post offices, and lottery stores, in which case the emitter of the Boleto gets notified of the payment. Almost 10 percent of Brazilian gamers cite Boleto and cash payments as their preference[58]. When Steam started accepting popular Brazilian payment providers Boleto and BoaCompra as payment methods at the end of 2012[59], the share of Steam users with system language set to »Brazilian Portuguese« rose from less than a quarter of a percent, placing 21st[60] of all users, more than tenfold to 2.6 percent, taking 7th place, in the following year[61]. Currently, it ranks 6th, with 3.8 percent.[62]

The volume of sales in Brazil has led to bigger titles being completely translated[63]. Cultural compatibility with traditional western game markets and the absence of legal requirements do not oblige localization to make substantial changes regarding content. Rather, it is advisable to respect the difference between Portuguese and Brazilian Portuguese when translating to help players relate to a game. Brazilian localization today is usually done in Brazil. Still, barely more than half of Brazilian gamers find localizations well done[64]. When Brazilian rock singer »Pitty« did voice acting for a character in Netherrealm's most recent edition of the »Mortal Kombat«-series, the result was so poorly received that videos of it went viral[65] (admittedly not the most uncommon thing to happen in Brazil).

When it comes to communication, Brazilians' affinity to it should by all means not be under-



Presumably unlicensed copies of software development tools on a street vendor's display in São Paulo.





Brazil's history is extremely rich in culture and art: You can find street art like these from São Paulo everywhere and public walls are even free to be painted.

estimated. Marketing, PR, support and CRM, can demand more resources than in most European countries – for example, TV commercials can even be more expensive than in Europe. Good communication is vital to maintain visibility, and to avoid PR nightmares. It also offers developers and publishers the possibility to be in touch more closely with their customers, to get their feedback faster and in more detail, and also get the chance to direct themselves to their fan-bases. In exchange, Brazilians tend to be more forgiving and understanding for challenges and shortcomings on the provider's side, given that communication is done well.

Other obstacles remain: similarly, to game development, distribution in Brazil struggles with not having access to all tools and features that are offered to U.S. or European competitors. Says Pedro Moraes from Pipa Studios: »New analytics tools for marketing, sales modalities and other features and innovations might not be available on sales platforms for Brazilian users at first. Losing the advantage of early access hurts us not only for the time features are not available. It also means that once we get them, they are no longer new, and we lose the advantage of being the first ones to use them«. While markets react, Brazilians risk arriving late to the party.

Lastly, the growth of sales of games in Brazil has steadily increased with the emergence of a middle class, helped by many social programs in recent decades. With this policy under review due to the recent political turmoil, it remains to hope that Brazil chooses wisely between the path to progress, and the return to oligarchical structures, which date back to very dark days in Brazil's history, and the effects of which the young nation has not fully been able to shake off until today.

Conclusion

The games industry in Brazil certainly has to face many challenges, and caution and skepticism are by no means a mistake. Like other emerging countries, a lot of barriers still have to be overcome to allow the industry to truly establish itself. Brazil might be an uncertain bet, but has many possibilities to turn the game in a positive direction. Many of the difficulties that have curbed development for a long time are now fading away, and a growing number of young and talented professionals is gaining experience in the area, ready to face the challenges. Only time will bring certainty, but advantages might be greater for those who act now. Brazilians are used to deal with the difficulties, and a helping hand from an experienced outsider holds a lot of promising potential. However, the cooperation should be done carefully – many complex social, economic and political issues have to be considered, and cultural peculiarities respected. And then there are many opportunities for misunderstandings because of cultural differences: if Brazilians don't hear from you in a while, they might assume the project you were working on has been discontinued and cease activities. On the other side, asking for a status update without engaging in a bit of small talk will make you seem distant and even unlikeable. Be sure to have partners familiar with peculiarities of the tropical market when making a move – it's not hard to get in touch. Just be prepared for a little zueira: don't try to fight it, or call for moderation – the saying goes »a zueira não tem limites«, it has no limits. It is probably best to just accept and maybe even enjoy it, as many Brazilians do. With a bit of luck, it can even create positive buzz.

Talita Rhein, Philipp Keydel

References

If you want to have a deeper look at the references that are mentioned within the text, please visit **www.makinggames.biz/gamesinbrazil**. There you will find a collection of all links that are marked in this article



SUBVERTING PLAYER EXPECTATION

Subverting the player's expectation has potential for making an impactful story beat, communicating the emotional feel and narrative to the player, creating compelling puzzles and at the same time making a game less predictable and more engaging.



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Pete is an experienced level designer with a passion for narrative driven AAA single player games, currently working at Guerrilla Cambridge on »RIGS: Mechanised Combat League« for PlayStation®VR. He has experience working on first-person shooting games, having also worked on »Killzone Mercenary« for the PlayStation®Vita, and »Killzone: Shadow Fall« for the PlayStation®4.

Within this article I will discuss how in games we can alter mechanics and gameplay to make the game engaging and to keep it from becoming predictable. We can do something different to what the players are expecting in order to maintain their interest and grab their attention.

Subverting expectation is a basic theory of game and screenwriting when we talk about plots and storylines. However, for the purposes of this article I will be talking about mixing up established mechanis to achieve differences in gameplay and emotional responses, rather than plot twists. As games are an interactive medium, they have many more opportunities for playing with expectation rather than just relying on cut-scenes or through the plot.

I have done many talks and presentations to universities about making levels for AAA games and the design rules we have for creating these. As these were aimed at a student level, I only spoke about the established rule set we can use for creating satisfying experiences; I was teaching the foundations.



Figure 1: The surprise introduction of the dog enemy in »Resident Evil« makes it memorable.

However, every time I delivered a presentation about the foundations of game design I almost always had a question about how to stop levels from becoming predictable if you were always following these rules. I was rather impressed with these questions and I thought my responses should be addressed as a whole subject in themselves, rather than being skimmed over quickly to allow for further questions from other students. My answers always started with »You should break the rules ...« and went on to discuss subverting player expectation.



Figure 2: The »Dead Space« workbench scare introduces an enemy after a menu.



Figure 3: The dentist jump-scare in »Bioshock« surprises the players when they turn around after a menu.

Difference between Surprise and Subverting Expectation

When you create something unexpected for the player, there is a difference between surprise and subverting expectation that I want to clarify. We are all familiar with surprises in games or films; the plot twist you didn't see coming or the jump scare in a horror movie. This, however, is not what I am referring to when I talk about subverting expectation, which instead is doing something different to what was learnt to be expected. It's the difference between the »Wow, I wasn't expecting that!« of a shock or surprise, and »Wow, I was expecting something different to happen« of a pattern being broken.

This is not to say that they don't both have their benefits of course; surprises in games can be a payoff for a long period of suspense and jump-scares can be the frightening moments in horror games. Some of the most memorable moments in games have been because of a surprise. For example, the famous introduction of the dogs in »Resident Evil« (**figure 1**) makes the player jump when they crash through the windows and start attacking. The player thought they were in an otherwise safe location and coupled with the dip in the music right before the abrupt change and the manner in which they arrive, it makes this moment very impactful.

An example of a slightly more fuzzy classification is the work bench scare in »Dead Space« (**figure 2**). In this example the player has learnt that when they use a work bench they go into a menu screen, during which time they are safe from attacks. They have, however, been warned at the start that they should clear out any enemies in an area before using the work benches.

Later on in the game the player finds one of the work benches and uses it as normal. However, when they exit out of the menu an enemy is spawned next to them, taking them by surprise.

Although a slightly blurry classification, I would not describe this as a subversion of expectation. You could argue that the pattern of being safe when using workbenches is broken, but I'd suggest this was more of a jump-scare used in a place where they knew the player was least expecting it. This is because the game added an enemy during a lull in the pacing, rather than changing a mechanic the player has got used to. The inclusion of this enemy is used to set the tone of the world as somewhere you should always be cautious as danger could always be lurking; this is a surprise designed to give the player a brief scare.



Joel boosting Ellie up to the level above in »The Last of Us«: one of the mechanics we will look at.

The same can be said about the dentist in »Bioshock« (**figure 3**) who is standing behind the player when they turn around after using a menu which is displayed on picking up a new item. This, like the Dead Space example, doesn't change the interaction with the menu but rather includes a scare during a lull in pacing when the player least suspects it, in what they had previously regarded as a safe area.

These are both successful examples of making the player jump by introducing a surprise when they least expected it. The subtle difference, which is why I wouldn't describe these as subversion of expectation, is that they weren't changing an existing pattern other than one of negative space; that is that nothing had usually happened during these interactions with the menus.

Had these examples changed the mechanic of interacting with the menu itself (for example, if both these attacks had happened inside the menu, rather than after it) then this would have been a clear classification of subversion of expectation. However, they don't change

Spoilers!

Warning: This text contains spoilers for »The Last of Us«, »Batman: Arkham Knight«, »Bioshock«, »Dead Space« and »Resident Evil«

the pattern of what the menu mechanic does, but rather they add an additional jump-scare afterwards. Therefore I would say these are unexpected surprises, rather than subversion of expectation.

Subverting player expectation with game mechanics is breaking an established pattern, rather than just including a moment that shocks the player.

You have to know the Rules, before you break the Rules

As a designer you need to carefully establish your rules and patterns within your game before you can consider breaking them. If you try and subvert the player's expectation before they have a full understanding of the mechanics and rule set, then you run the risk of the player becoming confused and frustrated by muddying their understanding of these patterns. For example, if you always opened a treasure chest and received some loot, the player understands the pattern of this object's behaviour and develops a connection to this as a gameplay symbol. However, if early on, say the second time you encounter the treasure chest, it exploded instead, the player wouldn't know if this was going to happen again, if this was a one off, if 50 per cent of the time this was likely to happen, or even if this was the new pattern for the chest and the first opening was the one off.

The smallest pattern you can have is a sequence of 3. For example if you have a numerical sequence that goes 1 then 2 you can't know for sure if the next number in the sequence is 3 (and thus the pattern is incremental) or if its 4 (and the pattern is therefore doubling the previous number). It's not until you have the third number that you can understand the pattern (**figure 4**).

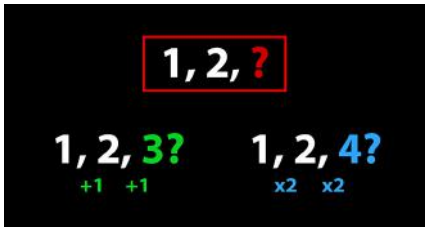


Figure 4: It's not until you have the third number that you can understand the pattern of this sequence of 3.

If you want to consider breaking a gameplay pattern then you should not do it until the player has experienced the pattern at least three times already. Ideally, you should leave it as long as possible before you change it so that the player has plenty of time to settle in with your rules and becomes complacent that this won't change. This is because the biggest impacts and compelling changes come, as with twists in a film, when the player is least expecting it.



Figure 5: Ellie sat in the bus depot, seemingly distant and not engaging in conversation.

Clear and Concise

When you use subversion of expectation, the result must be clear, concise and sudden. If your reveal is unclear or it's too hard to understand what has happened then this saps all the drama out of it. Similar to a punch line in a joke, if someone has to take a while to figure it out or the joke has to be explained, it's not funny.

If the player has to figure out the subversion then you'll have lost the impact you were aiming for. It is also important for the reveal to be immediate, obvious and concise to ensure the player doesn't become confused or frustrated.

Not just for Reducing Predictability

Subverting expectation is not just useful for keeping a game from becoming predictable. It can also be used for making a story beat as impactful as possible, for selling the emotional feel to the player through gameplay, or for creating an interesting puzzle.

Three examples I'll be looking at are the failed boost with a vacant Ellie in »The Last of Us«, the Joker ambush in »Batman: Arkham Knight« and the breaking ladder puzzle in The Last of Us.

Subverting an Established Pattern

The Last of Us has a great example of subverting an established pattern in order to communicate to the player the state of mind of the buddy character. This is an extremely powerful way of communicating the story as the control remains in the player's hands rather than relying on cut-scenes or dialogue alone.

The mechanic that is used is the buddy-boost, where previously in the game the player boosted a buddy character (Ellie or others) up to a location that they cannot get to without help. This blocks progression until the buddy is lifted up to the higher location and then retrieves an object (such as a ladder) that allows the player to advance.

At the point in the game when the subversion is introduced, the player has used this boost mechanic many times with the same result. It takes place in the last quarter of the game, so they will have used the mechanic far more than 3 times, which further instils in the player what to expect when using the boost.

When the player arrives in the abandoned bus station with Ellie, she is very quiet and doesn't really engage in conversation. Seeming to be distant, she sits down on some seating in the middle of the area (**figure 5**). This helps the setup that Ellie has become more distant and jaded since the harrowing events preceding this point (in particular surviving the kidnapping by the cannibal group and killing the leader David), although it doesn't solidify this point to the player



Figure 6: The player identifies the ladder.

on its own. Crucially, this lack of conversation and her actions don't foreshadow the subversion that is about to happen, which is important so that the event remains unpredictable in order to have the most impact.

The player sees a ladder on a ledge above (**figure 6**), which up until now they have always used for progressing to the next area. When they go to interact with it, they adopt the standard pose for boosting Ellie up to the level above to grab the ladder. However, the player stays in the position for longer than expected, until the character Joel realises that Ellie hasn't arrived for the boost (**figure 7**). The camera moves round to reveal that Ellie hasn't heard Joel calling for her and is still sat on the seating in the middle of the room; it's immediately clear to the player why the boost hasn't worked.

After being called again Ellie wanders over to the player and they get to try the boost again. This time the boost works as it always has done and Ellie retrieves the ladder to pass down to the player. However, here Naughty Dog introduces a second subversion to further communicate Ellie's state of mind. Instead of passing the ladder down to the player as she always has, she gets distracted by something that the player cannot see and drops the ladder to the floor as she runs off (**figure 8**). The player therefore has to add in the additional actions of picking up the ladder and placing it against the wall before they can progress to follow Ellie (**figure 9**).

This extra effort experiments with the player's tolerance by making them do more actions than are usually necessary. This is fitting with the emotion that is intended; the relationship between a surrogate parent with a distant teenager who is easily distracted. This is far more powerful an experience for the player than simply watching it in a cut-scene or being »told the plot« through dialogue as they get to play out these actions rather than just observing them.

Furthermore, the subsequent event is in emotional contrast to the failed boost as the reason for Ellie being distracted and running off was that she had spotted wild giraffes outside. When the players follows her, they get to see a giraffe eating and Ellie can pet it (**figure 10**); this brings back her joy and excitement as it is the closest thing to a traditional childhood that she ever gets to experience throughout the game. This is in complete contrast to her being distant and quiet as she reflected on her previous experiences surviving the cannibal kidnapping.

What's great about the use of subversion is that the mechanic is not usually used to explicitly tell story beats, however, here it has been used in a creative way to communicate the emotion of the characters which supports the overarching story.

Setting up a New Pattern to Break

The previous example was based on changing established patterns later in the game, but what if you want to use subversion earlier on? For example, in order to make a main story beat that sets the game's tone as impactful as possible?

In Batman: Arkham Knight they achieve this by setting up a new pattern for a specific set piece using the rule of 3, then after this is established they add a fourth element to the pattern which contains the twist and the story beat.

The narrative is that Batman infiltrates ACE chemicals to find the antagonist, Scarecrow. When he finds him, the Scarecrow evades capture and traps Batman inside a small room full of »Fear Toxin«. This nerve agent is going to be released into Gotham, affecting thousands of people, so Batman attempts to stop the nerve agent being released by dispensing neutralising agent. This unfortunately means exposing himself to much more dangerous



Figure 8: Ellie retrieves the ladder, but drops it and runs off instead of giving it to the player.



Figure 9: The player has to pick the ladder up from the floor and place it against the wall in order to progress.



Figure 10: Ellie gets to pet the giraffe.



Figure 7: The player starts the boost, but Ellie doesn't arrive.



Figure 11: The housing that contains the four canisters in »Batman: Arkham Knight«.



Figure 12: The player moves slowly so that the volatile canisters don't explode.





Figure 13: The player doesn't have control of the camera when Batman turns around after removing a canister from the housing.



Figure 14: The subversion of expectation; the Joker appears and shoots Batman.

levels of the toxin, which could cause him to be driven insane. The twist comes at the end of this set piece when, instead of managing to dispense all the neutralising agent and stop the toxin's release, a hallucination of The Joker appears and shoots Batman. This sets the rest of the game up to imply that Batman has been affected by the »Fear Toxin«.

The mechanic used in this set piece is only used in this part of the game. There are four canisters of neutralising agent, which the player has to remove from their housings and place in receptacles on the opposite side of the locked room (**figure 11**). When removing the volatile canisters, the player cannot move them too fast, otherwise they will explode and the player will die. Once a canister is removed, the player must slowly walk across the room whilst maintaining a reduced speed (**figure 12**), then insert them into one of the receptacles. Once this is done, the player must return to the start and extract the next canister.

When a canister has been removed there is an animation where Batman turns around and faces away from the housing (**figure 13**). Although this doesn't seem necessary (as the player is usually capable of turning the camera around by themselves), this animation is used for integrating the subversion. Once the player has removed three canisters, they understand the pattern and assume the next and last canister will follow the same standard. When the player removes the fourth canister, the same turning animation is played, however, this time instead of being able to then move again with the canister, a hallucination (although the player doesn't know this at the time) of The Joker is revealed during the camera's turn and he shoots Batman in the head, ending the sequence and cutting to black (**figure 14**).

The mechanic of removing the volatile canisters and then subsequently moving them is slow and brings the pacing down by the reduction in speed. When I played this, the duration of the sequence was fairly long due to the restricted movement speed, and as a result I was beginning to lose focus on the task. However, this is cleverly what the developer Rocksteady intended on, slowing the pacing down and repeating the same task so that as a player I had become complacent with the mechanic. This allows the subversion of the story beat to have the biggest impact as the moment it happens it's a big shock, which is in contrast to the preceding pacing; it gives the player a big surprise, leaving the greatest impression. Subversion has to be sudden and obvious to not only be clear and concise to the player, but also to have the most impact.

Subverting Expectation within Puzzle Design

There is another great example of breaking an established pattern in The Last of Us, but this time it has a different use other than for storyline or narrative reasons. It is used to create a compelling puzzle that feels new whilst using existing mechanics the player has used throughout the game.

The mechanic that is changed is the use of climbing a ladder. The puzzles in The Last of Us are usually for progression blocking rather than the game being puzzle orientated like that of, say, »Portal«. A typical puzzle would have been something like finding a way to get up on to an otherwise unreachable ledge. This is where the ladder would come in, as it is used to allow the player to climb up to heights they cannot traverse to. The puzzle element would be to try and get the ladder, sometimes by boosting Ellie to places the player's character Joel cannot get to. As this puzzle which includes the subversion is near the very end of the game, the player has used the ladder climbing mechanic many times before. Not only is the player familiar with how to interact with it, but it is also an excellent place to change this mechanic in order for the puzzle to feel fresh. This is because the puzzles in the game usually have a small number of steps needed to solve them, which means there are a limited number of variations in which the mechanics can be used.

When the player arrives in the location of the puzzle they have a goal and motivation for getting to the hospital (**figure 15**), which is visible in the distance through a hole in the building's roof. The player then discovers that they cannot get across to the exit due to there being both a gap that is too big to jump over and water that Ellie cannot cross (**figure 16**).

A ladder can be seen up near the ceiling that is too high to climb to, but it is clear that it can be reached from the other side of the water. A pallet can also be seen, which is useful for transporting Ellie across water and this is when the player has the epiphany moment where the solution becomes clear; they must get the pallet so they can transport Ellie across the water and then she can release the ladder down to the player (**figure 17**).

The player then takes steps to find access to the pallet and begins to put the solution into place. Interestingly, the time it takes to get to the pallet is fairly long considering the size of the puzzle and as such the player has a longer period between figuring out the solution and getting the satisfaction of completing it.

When the player does get Ellie across the water using the pallet, she runs up to the top of the ladder and releases it to extend down to Joel (**figure 18**). At this point the player thinks that they have completed the puzzle and all that is left is to climb the ladder and exit the area. However, when the player goes to use the ladder it breaks off in their hands (**figure 19**). This is different to what has happened with the ladder before this point and the change in mechanic is immediately obvious. It is made clear as to what has happened through anima-



Figure 15: The goal and motivation of the puzzle is shown at the start - to get across the water to the hospital in the distance.



Figure 16: The problem that needs solving is how to get both the player and Ellie across the water.



Figure 17: The players get the pallet that they can use to transport Ellie across the water.

tion, sound effects and dialogue between the characters and furthermore the player is left with the ladder in their hands.

Prior to this point in the puzzle there is potential for the player to switch off and not be paying full attention once they thought they'd solved the puzzle. However, due to this subversion they are now fully engaged again as they have to figure out an alternative solution to the puzzle with new elements that need consideration (**figure 20**). This change in mechanic allows this area to be two puzzles for the price of one.

The following solution, once the player has figured it out, is thankfully fairly simple and quick to complete, given the extended actions that built up to this moment. This ensures that the final payoff is not too far from the player, given that they originally thought they were about to complete the puzzle. The player uses the ladder to climb up to an area they hadn't been able to get to before, allowing them to cut out the longer section used before in getting to the pallet. From here, where the pallet once was, they can drop the ladder down and place it across the gap that was too big for the player to jump at the start (**figure 21**). This is the final part of the solution and the player can now traverse across this gap and leave the area with Ellie.

The use of subversion in a puzzle requires more cognitive effort from the player. Usually, once they have worked out the solution to the puzzle, it isn't as stimulating when the only thing left to do is follow the actions through, especially if those actions take a while to complete. Subversion ensures the puzzle remains compelling, as well as creating two opportunities for the player to both feel clever for figuring out the solution and get the feeling of satisfaction on completing it.

Summary

Subverting the player's expectation has potential for making an impactful story beat, communicating the emotional feel and narrative to the player and creating compelling puzzles. Its use makes a game less predictable and more engaging. As developers we must understand that to break the rules and turn the expectation on its head, we must first make sure the player understands the patterns of the mechanics. This is achieved by using the rule of three before introducing any twist. This works for subversion both late in the game, but also for twists near the start of the game by including the rule of three before a fourth surprise. We must also be mindful that for the biggest surprise to the player, and thus the biggest impact, we shouldn't foreshadow the subversion as this makes it predictable and removes the potential for drama.

At the moment we reveal the subversion we must make sure this is instant. In the examples we've looked at, the Joker is immediately shown on screen when the camera moves round. In The Last of Us the camera pans round straight away to reveal why the boost hasn't worked. When the ladder breaks in the puzzle it happens in the centre of the screen and remains in the players hands. Failing to have a sudden reveal removes the drama from the event and can lead to the player being confused.

We have seen in the examples used here that mechanics which were not created solely for telling the story can be used in a creative way, complementing traditional story telling methods in a way that no other medium can. As game developers we can leverage their use in places that would benefit from an impactful and memorable moment that the player not only gets to see, but gets to play.

Pete Ellis



Figure 18: Ellie releasing the ladder down to Joel should be the solution to the puzzle.



Figure 19: When the player tries to climb the ladder it breaks away from the wall.



Figure 20: The player now has an extra element to consider for completing the puzzle.



Figure 21: Placing the ladder across the gap at the start solves the puzzle.

POOR MAN'S SKY
EXPERIMENTS WITH PROCEDURAL CHARACTER GENERATION

Procedural generation of content is quite popular for terrain and game worlds nowadays, but procedural character generation brings along a lot of problems. Yanko Oliveira explains how he solved them.



The Invocation Toy is the first prototype from »Bestiarium«.



Yanko Oliveira
is Client Side Developer at Goodgame Studios.

Yanko Oliveira started out as an indie developer during his Computer Science studies at the Federal University of Rio de Janeiro, releasing mobile and Leap Motion games, then went on to work at Aquiris, Brazil's top game studio. Nowadays, he's living in Hamburg, Germany, working at Goodgame Studios.
After treating his wife's arachnophobia with his master thesis game, he now focuses on experimental prototypes in his free time, still releasing his indie ventures as deVoid Games.
You can follow the development of his personal projects at yankooliveira.tumblr.com, yanko.itch.io and on Twitter (@yankooliveira).

Procedural generation was always something I have been into. I used to blame »Diablo II«: Those compound names paired with color coding resonated with me on a deeper level, maybe, even though that seems to be frowned upon by designers nowadays. Whoever judges me for adding that kind of stuff to my games, I preemptively forgive your unintended hypocrisy if you enjoy mediocre games just because they're made with pixel art.

After becoming a developer, however, I realized that what really interests me in procedural generation is being surprised by something that I made. It's impossible to design and build a game from scratch and not know its every detail, so procgen helps a bit with that: Even if it's only as deep as a party trick, you can still have a giggle with some unexpected turn of events. Too bad that is also the bane of procgen: Its novelty wears off as soon as you start seeing the patterns and every »happening« turns into more of the same – if everything is special, then nothing is.

On last year's #procjam (a game jam for all procedurally generated things), I created a procedural chess game, where in every match you have a different set of pieces, with different rules. After making a generator for lathe-sculpted mahogany chess pieces, I took the next logical step: trying to bite more than I can chew. My current personal project, »Bestiarium«, is deeply dependent on procedural creature generation. Where do you even start with that? Looking for good references, of course.

Nowadays we have good examples of procedural generation, from the omnipresent »Minecraft« to the niche experience of »Dwarf Fortress«, but both make the visual part more manageable with »lo-fi« graphics. Before those, we had armies of mashed up animals in »Impossible Creatures« (that were modelled using bezier patches), and »Spore« that solved the conundrum of infinitely varied 3D creatures with metaballs and procedural animation. In the near future, we'll have »No Man's Sky«, whose very engine is built from the ground up with procedural generation in mind. All of that leads me to the great question: What the hell was I thinking?

This article is about some of my current experiments in the area of procedural 3D character generation. It will contain some Unity3D-C#-snippets, but the concepts can be applied to any game engine. There's a »Demon Invocation Prototype« that implements them at http://yanko.itch.io; it might be interesting to play around with it to see them in action. So excuse the programmer art, and let's begin!

Part 1: Variations on a Theme

I started by looking into modular characters, but I ended up with a problem: Modularity creates



Some of the several possible variations present in the Invocation Prototype, using blend shapes, bone scaling and gradient maps.

seams, so it looks great on clothed characters (it's easy to hide a seam for hands in shirt sleeves, for the torso in the pants etc.). In Bestiarium, however, I want naked, organic creatures, so the borders between parts have to look seamless. There are two possible approaches to this: making sure that the edges of the objects align and shade seamlessly, or morphing a creature's mesh using blend shapes. Let's start with the latter, simply because it's the easiest approach.

Blend shapes are your go-to solution for character customization in most 3D games. In my case, however, it wasn't about creating »Ugly Shepard«, but wholly different creatures. For my test, from a base model, I made a different set of ears, a head with features that were less exaggerated, a muscular body and one with a belly more akin to mine.

In a nutshell, blend shapes simply interpolate between equivalent vertex positions in two meshes, that's why the vertex number and indexes need to be the same for a proper result. Unity supports blend shapes natively, so I simply had to export the mesh with the proper targets. Randomizing the interpolation values gives you good results, and with meshes that are different enough, you can do a lot. However, for the level of variation that I wanted to achieve, the creations were too generic – it looked like all the imps were distant cousins, and not different creatures. I could try to push the models to more extreme variations, but that would end up being a workflow hassle that would maybe not scale that well in the long run. In any case, if you just want some varied cannon fodder for your action game or NPCs to walk around your RPG world, this usually will be enough for you.

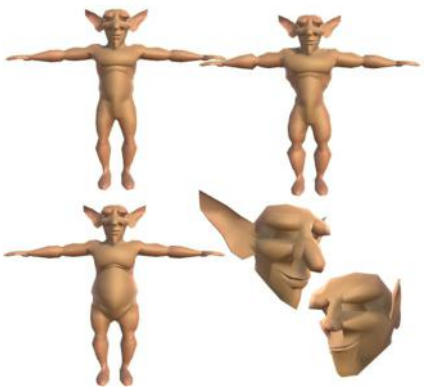
Part 2: Size matters

The most important thing for a character to be discernible from others and to have a strong visual impact is its silhouette. That means that, if I want to generate hundreds of different creatures for a player to discover, their shape will have to drastically change sometimes. Changing proportions of the body parts can completely transform a character's silhouette, so another technique I tried out was re-scaling a bunch of bones randomly to see what came out of it. Obviously leaving the scale completely random will generate undesirable results, so you should use minimum and maximum values that work well with your base model.

One thing you have to remember is that your bones will be in a hierarchy, so if you resize the parent in runtime, you will also scale the children accordingly. This means you will have to do the opposite operation in the children, to make sure they stay the same size as before. To achieve that, you could use something similar to this:

```
private float ScaleLimb
(List<Transform> bones, float scale)
{
   for (int i = 0; i < bones.Count; i++)
   {
      bones[i].localScale = new Vector3
      (scale, scale, scale);
      foreach (Transform t in bones[i])
      {
         t.localScale = Vector3.one * 1 / scale;
      }
   }
   return scale;
}
```

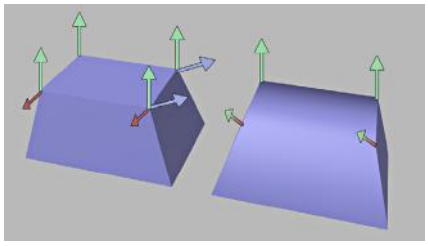
But that leads to another problem: The algorithm is making legs shorter and longer, so some of the characters will either have their feet up in the air, or under the ground level. One way to fix this, is checking the distance from the bottom of the foot bone to the ground plane and offsetting the whole mesh by that distance. Here's a trick, though: Unity has a function for SkinnedMeshRenderers called BakeMesh that dumps the current state of your mesh into a new one. I was already using that



The base mesh on the top left and its morph targets.

for other things, so while I went through the baked mesh's vertices, I cached the one with the bottom-most Y coordinate, and then offset the root transform with that amount. Kind of dirty, but saved me a lot of time back then.

Adding the bone scaling technique to the blend shape is a huge improvement towards creatures that seem to be of different »species«. However, the amplitude of the scaling needs to be carefully balanced to avoid either creating very similar results, or exaggerating so much that your models break. Also, this really depends on how good the skinning is. Exploring this direction, you might even have different pre-defined archetypes: Some characters could have a smaller variance for the legs and a bigger one for arms to create hulking, alien gorillas, or the opposite for tiny-armed creatures that would make a T-Rex blush.



On the object in the left, you have flat shading because of the diverging normals. On the one in the right, you have a single normal, and the smooth gradient.

Part 3: Cadavre Exquis

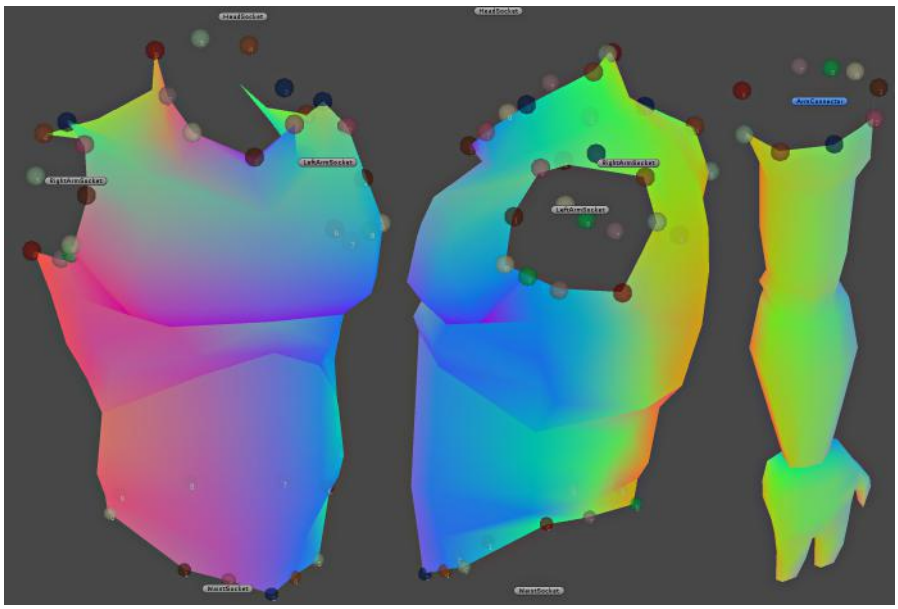
In my case, after staring at the generator running for several days, I realized that I would still need more freedom to vary the designs than morphing meshes would give me. That could only come from joining radically different models together for body parts – and, in my case, seamlessly. So let's step back and review some fundamentals, then.

All meshes are comprised of triangles, and those triangles are defined by vertices. Triangles are one sided, so you need a normal to define which direction a triangle is facing. However, in a game engine, the normals aren't stored per triangle, but per vertex. This allows you to interpolate between the triangle's vertex normals to create the effect of smooth shading. If you have a mesh that is to be rendered smoothly, but you want some hard edges, you need to add extra vertices to that edge, so that you can define neighboring triangles that visually share an edge, but seemingly face different directions because the way the gradients end up being calculated. That means that on a given model we could have more than one vertex in the position that we see only one. Vertex duplication is also used for things like UV Maps.

This means that if I'm joining two separate meshes together, I have to make sure that the triangles line up (i.e. the edge's vertices are in the exact same position), and also that the normals create a smooth gradient between these neighboring triangles. But we have to keep in mind that the vertex in a given position might actually be duplicated for shading or UV mapping purposes. So how to adjust all of that automatically while not breaking anything?

I did experiment with automatic methods, but couldn't get one that would fit all my needs, namely keeping some of the hard edges and being as little CPU-intensive as possible at run-time. My solution ended up involving manually tagging the vertices in both edges, and the vertices from one object would be transported to the equivalent position on the other one, then the normals would be copied from the host object to the one that was latching into it.

To achieve that, I created the Vertex Tag. A Vertex Tag is a sphere that fetches all vertices of a given mesh that might exist within its radius. With that I can, outside of runtime, cache all the vertex indices of what I visually classify as »a vertex in the edge« – i.e. a translation between what I'm talking about when I think of a vertex and how Unity represents it internally, and I don't even have to worry if those are actually multiple vertices.



Views of the torso and arms rigged with Vertex Tags. Their index is defined by their order in the hierarchy for easier reordering.

```
public void GetVertices() {
    VertexIndexes = new List<int>();

    Vector3[] vertices = GetTargetMesh().
    vertices;
    Transform trans = GetTargetTransform();
    for (int i = 0; i < vertices.Length; i++) {
        Vector3 worldPos = trans.Transform-
        Point(vertices[i]);
        if (Vector3.Distance(worldPos,
        transform.position) < Radius) {
            VertexIndexes.Add(i);
        }
    }
}
```

As you can see, this is not optimized at all, but that's not an issue because we're not supposed to do that in runtime. By caching the information offline, however, we actually save a lot of time because instead of having to iterate through all the vertices, we only look at the few referenced by the Tag.

One very important tip about Unity specifically is that whenever you use any of the getter ar-

rays in a mesh (e.g. to fetch its vertices, normals etc.), you're actually creating a duplicate of the data, so make sure to cache it before iterating.

Next, we need something to control a group of tags: a Socket. A Socket is comprised of several vertex tags, and it defines where parts should »connect« in space. That way, we use the sockets to position the objects themselves (in a way that they properly align), and then can command all the tags to join the proper vertices. Right now, joining acts on the tagged vertices only (so the further apart the objects are, the more deformation it causes), but it would even be possible to think about something like using verlet integration to smoothly »drag« the neighboring vertices along. In my case, that seems like overkill, and if you really need something like that, maybe it's worth it looking into metaballs or laplacian surfaces.

One big advantage of this Socket system over automatic methods is that it can be improved by creating rules that allow sockets with different amounts of vertex tags to connect: if there are more vertex tags on the host object, you might force the host object itself to change, or you can make all the extra vertex tags of the guest object to go to the same tag in the host object. Obviously, the best thing is trying to keep the amount either equal in both sides, or very close to that, but you could still make an arm grow out of what should be a neck.

If you want to only have a limb model and mirror it to attach to the other side of the creature's body, keep in mind that if you do it by setting its scale to -1 in one of the directions, you'll most likely have to adjust your normals too:

```
public void MirrorNormals()
{
    Mesh mesh = Mesh.Instantiate
    (GetTargetMesh());
    mesh.name = GetTargetMesh().name;
    Vector3[] normals = mesh.normals;
    for (int i = 0; i < normals.Length; i++)
    {
        normals[i].x *= -1;
    }
    mesh.normals = normals;
    SetTargetMesh(mesh);
}
```

There is some debug code in which I can see the direction normals are pointing and the position of vertices, but my biggest friend has been a shader that paints the model based on the vertex normals.

Unlike blend shapes, the sockets allowed me a greater freedom in the design of different creature parts, since I'm not stuck to limiting myself to small modifications to a single base mesh. But this freedom comes with a price: if you have body parts that need different skeletons, you will also need to merge the bones together and make sure the animations also merge – that is actually the current puzzle I'm trying to solve. However, if you can use the same rig for all possibilities, you are probably on the way to having an immense amount of variations by combining these techniques. But it doesn't hurt adding a bit more to the mix, right?

Part 4: There is more than one Way to skin an Imp

You didn't expect me not to have some form of color variations in here, right? The biggest problem is that if you simply tint your model's diffuse texture, you will probably lose a lot of color information – since tinting is done via multiplication, your whites will become 100 percent the tinted color, so unless your creature is made of metal (metallic object highlights have the same color as the object's color), it won't look that good.

Ok, so let's focus on those two things: multiplications and percentages. There's a lot of ways to represent a color: RGB, HSL, HSV ... but in all of them, you can always extract a 0 to 1 value, which is essentially a percentage from »none« to »full value« in a color channel. Whatever that represents in the end, it's still a [0,1] that you can play around with.

Gradient mapping is a very good technique that you can use instead of simple multiplication tinting. What you do is provide a gradient and sample it based on a value from 0 to 1. You can do a lot of cool stuff with it, including texturing your characters.

Granted, that's pretty easy to do with an adjustment layer in Photoshop, but how to do that in runtime? Shaders to the rescue! There's another thing that goes from 0 to 1, and that's UV coordinates. This means we can directly translate a color channel value to the UV coordinate of a ramp texture (i.e. a gradient baked down into a texture), sampling the pixel in the secondary (ramp) texture based on the value of the main (diffuse) one.

In your shader, you'll have something like:

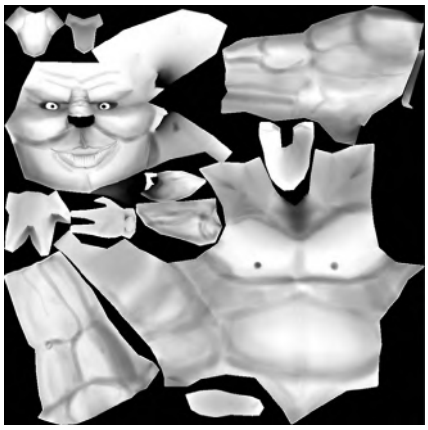
```
float greyscale = tex2D(_MainTex, IN.uv_MainTex).r;
float3 colored = tex2D(_Gradient, float2(greyscale, 0.5)).rgb;
```

Which roughly means »let's read the red channel of the main diffuse texture into a float using the UV coordinates from the input, then let's use that value as an UV coordinate to read out the ramp texture and get our final color«. Did I mention I love color coding? I love color coding.

With that, we have a color tint and we don't necessarily lose our white highlight areas. But ... that still looks kind of bland. That's because we have a monochromatic palette, and no colors that complement it. This is the point where I really started missing the old school graphics, where you could have 50 ninjas in »Mortal Kombat« by simply switching their palettes. So how could we have palettes in our 3D texture?



Being an »abstraction layer« to the mesh, the socket system allows some creative flexibility.





With the grayscale diffuse map and a blue ramp, we get the final result without losing the whites.

It would be easy, if I just wanted to have one extra color: Creating a mask texture and tinting the pixels using that mask would suffice. But what, if we wanted to have several different colors? So far we have one diffuse texture and one ramp texture – would we then have to add one extra texture for each mask?

One experiment I made was having a multi-mask within one single channel: Each area would have a different shade of gray, and that would also be used to read from a ramp texture. Since there's filtering going around, we can't really have all different 256 values, because the graphics card will blend neighboring pixels, but we could in theory at least have more than one. I tested with three and it was enough for a lot of variation, although it did contain some leaking, because of filtering; that's something I plan on looking into a bit more in the future. However, if you go for an old-school pixelated look, that should work perfectly – just do pixel art textures and set their Filtering Mode to Point if you're using Unity.

So we're down to one diffuse, one mask and two ramps (four against six if we had three different masks), right? Wrong. Remember: We're talking a single channel, so this means we can actually write both the diffuse AND the masks into one RGBA texture, simply using one channel for each. And that even leaves us one extra channel to play with, if we want to keep Alpha for transparency! This means, if we wanted to only have two masked parts, we could even ditch the whole palette technique and the second ramp texture, the same, if we had no transparency and wanted three masks: Instead of using the pixels from the channel and doing the gradient trick, we'd use one mask per channel, then simply use color parameters in the shader to tint each one.

We have a shader that we can cram stuff into, so all we must do is make sure we have enough gradients to create variety. This means either making a bunch of pre-made ramp textures in your texturing program or ...

Part 5: Gotta bake 'em all!

Unity has a very nice Gradient class, which is also serializable. This gives us the option of actually generating our gradients in runtime as well, with the possibility of also randomizing them. Then we simply have to bake the gradient into a ramp texture, which is quite simple:

```
private Texture2D GetTextureFromGradient(Gradient gradient) {
    Texture2D tex = new Texture2D((int)FinalTexSize.x, (int)FinalTexSize.y);
    tex.filterMode = FilterMode.Bilinear;
    Color32[] rampColors = new Color32[(int)FinalTexSize.x];
    float increment = 1 / FinalTexSize.x;
    for (int i = 0; i < FinalTexSize.x; i++)
    {
        rampColors[i] = gradient.Evaluate(increment * i);
    }

    tex.SetPixels32(rampColors);
    tex.Apply();

    return tex;
}
```

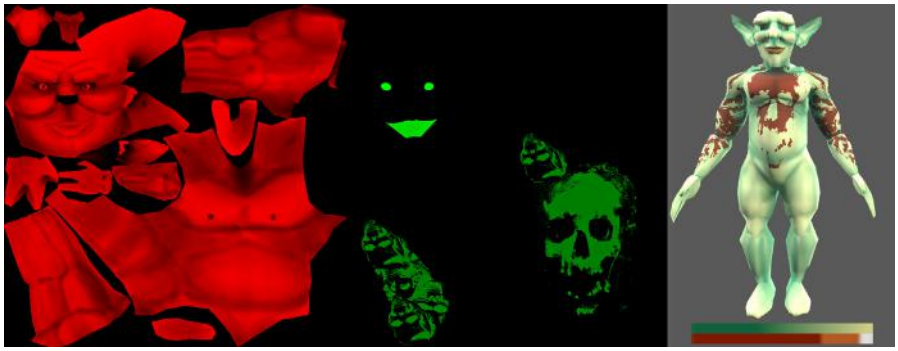
There are quite a few techniques for generating procedural palettes, but you can also pre-generate them, either by hand or by automatically extracting them from concept art for example. For my prototype ... well, let's just say that even though I'm a SEGA kid, I have to admit the competition is a very good source to farm creature palettes automatically from.

Epilogue

It's been quite a ride trying to figure out techniques that work to bring my ideas to life, and I haven't got all answers yet, although with every step I found out better (and worse) ways to approach these problems. Procedural generation in the end is about iteration, about »sculpting« your algorithms until they get to a point where they have varied results, but also achieve what you need them to. However, design always come first; unlucky of me to have the itch to make a prototype that ties procedural creatures to the core gameplay itself – but it's important to prove or disprove the concept as quickly as possible, hence some cutting corners here and there.

Right now, I'll dive into trying to find good solutions for rigging and animating these little devils, so if you want to find out what results I get, feel free to keep an eye on my personal blog and twitter. Who knows what creature I'll end up conjuring!

Yanko Oliveira



Red and green channels, the gradients used and the result they produce.

GREENLIGHTING A NICHE GAME

THE LONG JOURNEY AHEAD

Succeeding at Greenlight can be hard, but it can be especially hard if you are working on a very niche game. Mega Dwarf looks back at their campaign and give tips how to get your game on Steam.

First I will start with a disclaimer: This isn't a typical Greenlight post mortem, so if you're looking for basic tips on Greenlight or don't know what Greenlight is, then I advise checking out some of the other great post mortems out there before reading this one. This post mortem is to explain how we, Mega Dwarf, got our very niche game through Greenlight in a relatively short period of time; 24 Days.

Our game is »God of Word«, a word game where you use words to defeat enemies, set within a Greek Mythological theme. Just to tell you how niche our market was, there are only three other games really similar on Steam: »Letter Quest: Grimm's Journey«, »Words for Evil«, and »Bookworm Adventures«. All of which are great games, and I really do advise anyone who likes word games to check them out. Two of these games, Letter Quest and Words for Evil, went through the Greenlight process themselves and were successful. But in the five months leading up to our announcement on Greenlight, there were only two other word games that were posted on Greenlight: »Slide Ride Arcade« and »Elusive Words«. So this gives you a general idea of how niche we're talking when it comes to word games on Steam.

Setting up the Greenlight Page

I'm going to work through this post mortem in the same order that we worked through our Greenlight process. So let's assume you've got a niche game that you're ready to put on Greenlight, you've already got your social media set up, a website, press kit, and a small following. The two next steps are to set up your Greenlight page, and prepare e-mails for the press and YouTubers/Streamers.

I'll start with the Greenlight page, as we have a couple of quick tips for setting it up. Some people may already know, but you do have the option to set up your Greenlight page, and preview it before launching it. The page will be private, so you can modify it and check for errors before putting it live. So feel free to set things up in advance and make sure everything is loading properly and you have all the minimum requirements before actually going live. Secondly, everyone now knows that you should have a gif as your branding image, but we learned an interesting fact about that branding image. Steam claims that there is a 1 Megabyte size limit on that image, whether it's a gif or picture, but that's not the real limit. For example, our gif was 2 Megabyte large and worked just fine, and we've investigated gifs from other campaigns to find them as large as 3 Megabytes. So if you want more quality out of your gif, want it longer, or generally can't fit it below 1 Megabyte, don't worry, you don't have to. Just keep in mind that the larger it is, the longer it'll take to load, so people with slower internet connections might have trouble seeing your gif at all if it's too large.

Getting Press Coverage and putting the Game live

I don't have much to add on the topic of sending out e-mails to the press for your Greenlight project, so I'll just say that although it doesn't garner many votes, I still think it's a good practice, if only to read a nice article or two about your game. Though I will say that you should make sure to send out all of your press e-mails together and as soon as possible, because no press wants to cover old news. We'll include the press list that we used in the section »Further reading« of the article; do with it as you please.

Time to put your game live on Greenlight, before you do, here's a couple tips for you involving when you should post. We went live at 11 am Eastern time on a Monday, and everything went

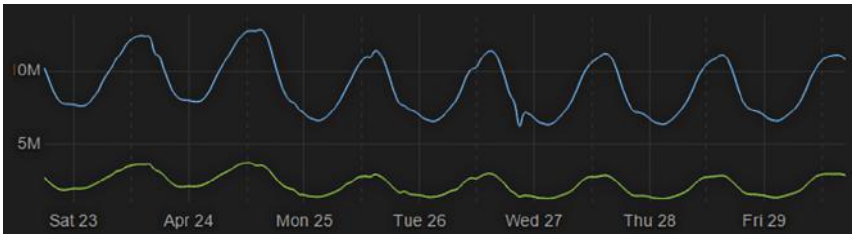


Daniel Batoff
is Co-Founder, Programmer, and Designer at Mega Dwarf.

Daniel graduated from the Game Development program at Algonquin College in Ottawa. After years of working as a Development Tester at EA and Ubisoft, Daniel banded together with Evan Buchanan and Steven Grove to form Mega Dwarf. He focuses on making fun games that he would enjoy playing.



This image shows the icon for God of Word which Mega Dwarf decided to be an animated gif. This can bring attention to your campaign as long as you are not surrounded by other animated icons.



This graph shows the peaks in Steam traffic and that around 2 pm each day the most users are active on Steam.

fine, but I feel as though there could be a better time and day to go live. According to Steam stats, the time when the most users are on Steam are Saturday and Sunday around 2 pm Eastern time. So you would have to assume that more people would visit Greenlight if there are more people online; but this is just a theory so take it with a grain of salt. The other thing I want to mention here is that older post mortems will say that you stay on the front page for 48 hours, and that's when you get the most views/votes for your game. However, these days there are a lot more games going live on a daily basis than there used to be, and that our game was only on the front page for 27 hours.

The other thing to keep in mind when posting your game, is where to post it. And by that I mean, what games are before and after your game on the front page. The whole point of making your branding image into a gif is to have it stand out from all the other games on the front page that don't have gifs. But if your gif is right between two other gifs, well then it will have a lot harder time standing out since there is a lot of movement going on around it. We made sure that several games before us were static images before posting, and unluckily for us, the game that went up after us was a very flashy gif; but of course there is nothing you can do to avoid games posted after you.

There are two other factors you want to try to avoid posting your game after, and that's an extremely popular/polished game, or a game in a language that your game doesn't support. In our case, without realizing it, we posted directly after an extremely popular Turkish game. And when I say extremely popular, I'm talking 30,000+ likes on Facebook before even posting on Greenlight. So when that many people are coming to vote for a game on Greenlight, and then stumble upon your game only to find out it doesn't support their language, you're going to encounter a good number of No votes.

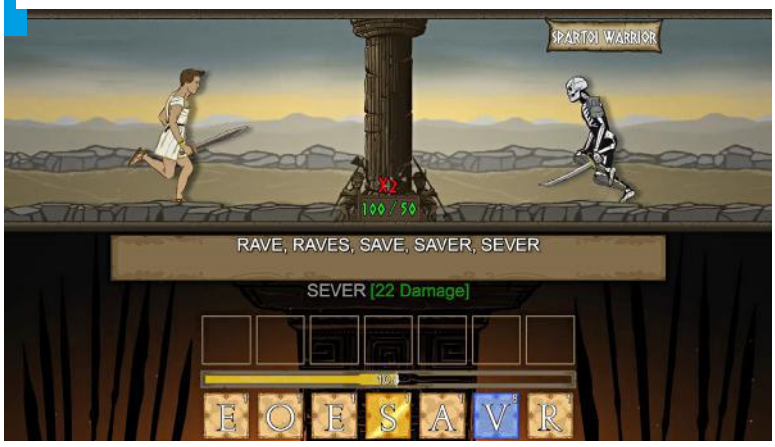
No Votes and how to deal with them

So speaking of No votes, I want to go into a bit of detail on how positivity breeds positivity, and negativity breeds negativity. When people are looking to vote for a game, a lot of the time they watch a bit of the trailer, and then go to check out the comment section before deciding how they're going to vote. If they see a comment section filled with positive comments, it'll increase your chance at a Yes vote, and vice versa. We've seen some very solid games that unfortunately got a few negative comments at the start of their campaign, and they're now buried despite being a solid overall product.

So how do you combat this? It's not easy, but we'll start at the beginning of your campaign. Obviously you're going to reach out to your social media at the start of your campaign. You're going to want to promote that they not only vote for you, but also leave a comment. You want to have some nice comments to start out your campaign when hundreds of random people are coming to check it out. As for things you don't want to do, firstly, don't comment yourself, it's in bad taste, people can find out and it won't end well. Secondly, don't delete negative comments, I know this is common knowledge but just don't. How do you fight back against negative comments? Respond to them in a polite manner if it's a criticism you can respond to. If it's just someone saying something mean, then ignore it and work hard to get other people to come to your page and write positive comments to bury the negativity.

This is a really interesting topic, because we saw a few examples in our Greenlight comments that back this theory up. First of all, we did receive one »negative« comment, telling us that Bookworm was a better game. This fell into the category of comments that we can't really respond to, we just had to ignore. But unfortu-

God of Word by Mega Dwarf is a word game where you have to defeat enemies by typing words, set within a Greek Mythological theme.





nately, the damage was done; after that comment was posted, we saw an increase in No vote percentage that we hadn't seen before. So trust me when I say you've got to work hard to get negative comments off your page fast. The other interesting thing we noticed was twice during our campaign, people wrote rather unique positive comments, which were then followed up by nearly identical comments from several other people. It's clear that comments, positive or negative, have a strong effect on people's perspectives, whether they mean it to or not.

Three Marketing Tools to promote your Game

At this point you're live on Greenlight, sent out press e-mails, did your social media posts, asked friends and family to check you out, all the most basic ways to get views. But it is a couple days into your campaign, and the views are stagnant because you're no longer on the front page so nobody is finding your game, what do you do? Well, we all know that most of your views come from Steam, so we took a three step approach to getting views and votes on our game, and it worked brilliantly. We pursued three different marketing plans, first was to get our game into as many Greenlight Collections as we could. Second was to have our game advertised in as many Steam Groups as we could. And finally, message as many Steam Users as we could, who we knew liked word games. I'll go in depth on each of these methods momentarily, but first I want to give a little forewarning about this method.

All of these methods will involve adding random Steam users as friends before you can talk to them about your proposal. A significant number of Steam users won't add accounts that are level 0 or 1, a lot won't even add users that aren't level 10+, so this is important to address as soon as possible. If you're a small company working on your first game like us, then you probably just set up your Steam account, and your company account is at level 0. There are a lot of ways to get this account's level up to 10, which is where you should be before you start messaging people. First of all, each account can gain experience by completing the Community Leader Badge, which will grant you 500 XP, equal to 5 levels on Steam. All you have to do is complete 28 of the 29 community based tasks to get this experience, and 5 levels goes a long way. This costs some money, but then you should buy a few games on the account, even if it's just a 5 Dollar bundle. You need to have spent 5 Dollars on the account to be able to vote on Greenlight anyways, and every vote matters, so you might as well vote on the company account, too. With those games you now own, you should get the Collector badge, worth another 100+ XP. Then just buy a few sets of trading cards for one of the games you own to get enough XP to reach level 10. Along with looking like a more legit account, every level you gain lets you add an additional five friends. Steam accounts start with a 250 friends limit, adding 50 for the 10 levels you'll gain, and 50 more for linking your Facebook account to your Steam account nets you 350 available friends; trust me, this will help a lot. I will mention now that we didn't level up our account before messaging people, so that could explain why a lot of users didn't add us as their friend, as you'll see in the stats on the left.

Steam Collections

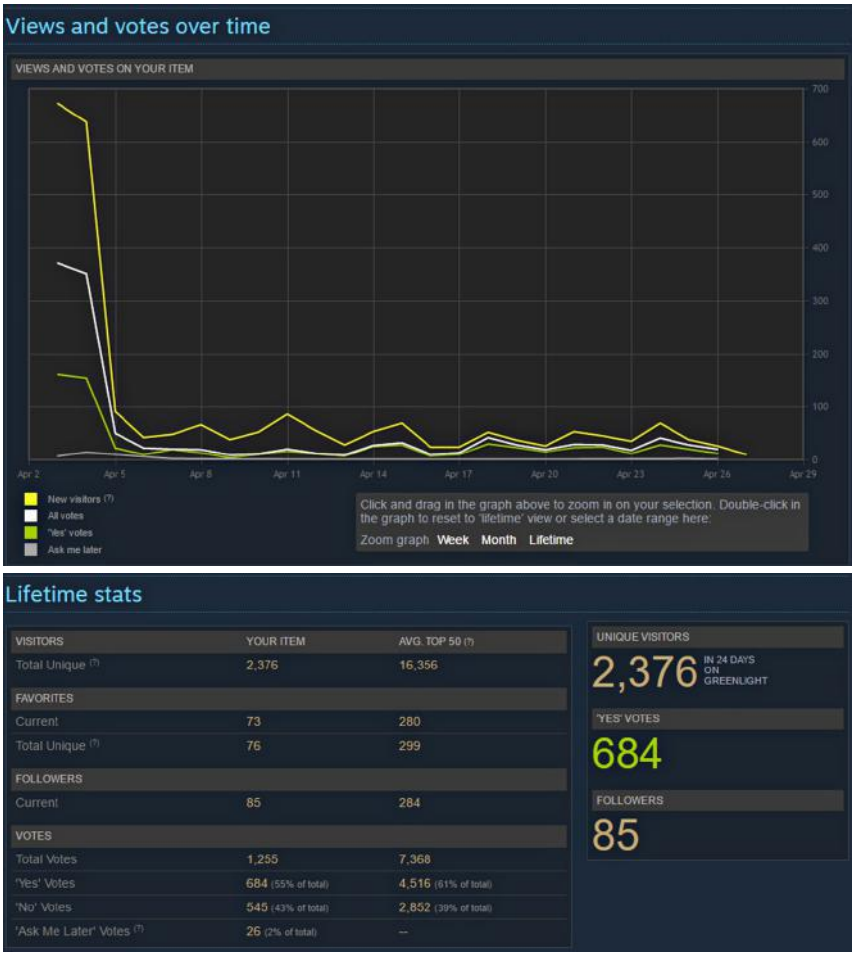
Now that you have a legit account and can add a ton of friends, it's time to look into the various options to get votes. We started with Steam Collections, as the Collections you are a part of will be displayed on your Greenlight page, and again, give you some legitimacy. We went through every single Greenlight collection that was rated three to five stars, checked to see if the Collection had been updated recently, and if it looked like our game would fit the theme, we added the creator of the Collection as a friend, and waited. We also went through the Popular Lately Collections and added those users as well. All in all, we added 42 users to discuss adding us to their Collections, 18 accepted our friend requests, and of those, 12 added us to their collections. I don't believe we got a lot of votes or even views based on those Collections we were added to, other than the 12 people who added us, who all voted for us themselves.



Only two similar games, namely »Slide Ride Arcade« and »Elusive Words«, tried to pass Greenlight in 2016 before Mega Dwarf.

Steam Groups

Next up, Steam Groups. There is an immense number of Groups on Steam, some of which have over 100,000 users in them. We actually found out about Groups from an owner of one of the Collections, who offered to make us a Mod of his group and post about our game in an announcement. His group has about 10,000 users in it, and after posting the announcement we saw about 30 Yes votes come from the post. With that success we ended up looking through over 5,000 Steam groups to see if any would be interested in posting an announcement about our game. We sent out 54 friend requests for users who were admins of various groups, and ended up being allowed to post an announcement in seven groups. Typically, in the other groups we netted about five to ten Yes votes per announcement, for a total of between 60 to 90 Yes votes. The important thing to note here, is that you



The final graph and stats of Mega Dwarf's Greenlight campaign show that the most visitors and votes are made within the first few days.

want to be able to post an announcement in the group, not a discussion or comment. An announcement actually sends a pop-up to every user in the group who is online, letting them know that an announcement was posted; whereas for a comment or discussion post they would have to actively go to the group and look for it. I'll also point out that there will be groups that will ask for keys in return for being able to post announcements, or even ask for a percentage of sales in exchange for promoting your game. We didn't personally partake in any of these options, as we've seen that come back to hurt some games, since you aren't supposed to exchange keys for votes according to the Steam Guidelines.

Messaging Players directly

Then it was on to our idea that we haven't heard any other Greenlight project do before, and that's directly messaging Steam users who liked games like ours. Like I mentioned before, our game is very niche, so niche that there are only three games similar. Though there are two Bookworm games, and a Remastered version of Letter Quest for a total of five games. So we went through literally every single person who wrote reviews on those games, and added them to a massive excel sheet. We removed anyone who wrote negative reviews, anyone who had a private profile, and anyone who hadn't been online in more than a week. All in all, we had an Excel sheet of 530 users who we knew liked word games. Remember how we said you'd need those 350 friend slots earlier? This is why. We sent out friend requests to all 530 people, not all at once, but still. The net result of adding 530 people, and a couple weeks of messaging people to talk about our game, was 152 Yes votes.

I'll go into a bit more depth about this method, because there's a lot to talk about, and it's not something I've heard of any other game doing ever. First of all, we were rather concerned that people might be upset at us for adding them and asking them to look at our Greenlight page. It turns out, a significant number of people were really glad we messaged them, and were really impressed by our idea to add people who liked word games. With 152 Yes votes, we only actually had 13 people who accepted our friend requests and weren't interested. And of those 152 Yes votes, we had a lot of people share our game with their friends, which definitely raised our Yes votes as well. There are three other huge benefits from this method. In messaging people who are passionate about word games, and in directly talking to them, we got a lot of comments on our Greenlight page. We got 85 comments on our Greenlight page, and 55 of them came from people we messaged directly about word games. We think comments are a major factor that Steam looks into when greenlighting games, so this was a big boom for us. We also got more than half of our followers from the people we messaged directly. Most importantly though, we got an immense amount of feedback and playtesting from these individuals, which is priceless in the game development process. A lot of people offered their assistance in Beta testing, localizing, or just generally promoting our game. It was a great community building experience, and I absolutely believe that other niche games that need help making it through the Greenlight process, should message people that liked games similar to theirs on Steam.



The Outcome for Mega Dwarf

After all of that work, 24 days of pretty much non-stop messaging users to talk about our game, we were Greenlit. According to GreenDB we were at about 170th place when we were Greenlit, sitting at about 68 percent of the way to the top 100, had 684 Yes votes, 545 No votes, and 26 Ask me Later votes. Do you need to be in the top 100 to be Greenlit? Absolutely not. Do you need 1,000 Yes votes? Nope. Is it a walk in the park to get Greenlit? No it is not. From our first 21ish days of being on the front page we got 328 Yes votes. From collections, groups, and directly messaging people we got somewhere between 200 to 250 Yes votes. So in the other 22 days on Greenlight, we only naturally got 100 to 150 Yes votes. If we hadn't have spent all the time messaging people, we'd be setting at around 434 Yes votes, and nowhere close to being Greenlit.

I want to address a theory that was mentioned in another Greenlight-Post-Mortem, called »The 50 Shades of Green«. The theory is that if you get above 50 percent Yes votes, then Steam will promote your game by placing it in users' voting queues. We investigated this theory during our campaign and we think it's only partially correct. The voting queue tends to be ten games for each user, normally with seven highly rated games, and three newly released games. As far as we can tell, all of the highly rated games had very positive Yes/No ratios, and were always part of the top 150 games on Greenlight. We kept a close eye on our views/votes during several key periods of time: when we had more Yes notes than No votes, when we had 50 percent of our overall votes be Yes votes, and when we achieved a 4-star rating on GreenDB (which translates to 56 percent of Yes/No votes combined being Yes votes). We didn't see any influx of votes or views during any of these moments. We also checked on some other games using GreenDB and saw some games with the 4-star rating only get four to eight views in a 24-hour period. However, games with a 4-star rating that were inside the top 150 games did seem to be being featured and got dozens of views during the same 24-hour period. As far as I can tell, if you've got a good enough ratio to be being featured in voting queues, you're probably already going to get Greenlit, because you're likely in the top 150 at that point.

Final Words

I want to wrap this up by thanking everyone who helped us make it through Greenlight. It was a long and difficult process, but the excitement that people showed for our game makes us really excited to get it done. If anyone has any additional questions about Greenlight, game development, or anything related to our game, feel free to send us an e-mail at contact@megadwarf.ca or visit our website at www.megadwarf.ca.

To Summarize:

- You can preview your Greenlight page before having it go live.
- Your Branding Image/Gif can be more than the stated 1MB.
- You can use our press list for sending out e-mails (see Further Reading).
- Pick your time wisely as you'll only be on the front page for a little more than 24 hours.
- Avoid posting your game after a foreign game or a very popular game.
- Positive comments breed positive results, so motivate people to post comments.
- Create a company Steam account and get it to Level 10.
- Try to get added to a few Greenlight collections for views and to look legit.
- Join Groups and ask to be allowed to post announcements.
- Find other games similar to yours, and directly message people who liked those games.
- You don't need to be in the Top 150 to be Greenlit.
- »50 Shades of Green« isn't a thing unfortunately.

Daniel Batoff

Further Reading

Please find some useful links here:

- Mega Dwarf's press list: **www.makinggames.biz/megadwarfpresslist**
- Pixelprospector – Great resource for all things marketing: **www.makinggames.biz/pixelprospector**
- Gif Optimization (Pro tip, put Dither to 99%, reduces size big time without reducing quality): **www.makinggames.biz/gifoptimization**
- GreenDB – great site to track your Greenlight progress: **www.makinggames.biz/greendb**

God of Word is a very niche game and Mega Dwarf could only find three similar games on Steam in the first place.







THE PATH TO THE PERFECT GAME IDEA

Before the production of a game can start, you first need to know what kind of game you are up for. Marcel Zons from InnoGames describes an easy to follow way to a perfect game idea.



Marcel Zons
is Game Designer
at InnoGames.

Marcel Zons is a game designer at InnoGames, one of the world's leading developers and providers of online games. With close to four years of experience in the company, he is currently working in the development of an upcoming mobile strategy game. Before joining InnoGames, Zons had his own indie studio for 1.5 years and attended the University of Applied Sciences in Flensburg. At the early age of 13 Marcel began working on his first own pen-and-paper role-playing game and at age 14 he designed his first PC game utilizing the RPG Maker.

Did you ever struggle to create a rock-solid game idea? In this article, InnoGames' game designer Marcel Zons will explain his experiences and findings in detail to provide a structured path to achieve this goal.

Introduction

Every company that has to release new games on a regular basis will face some problems when it comes to the first steps of a new title; with achieving the right game idea being the most important!



Choosing the right team to collaborate on a game idea is an important first step.

InnoGames has quite a decent history of creating new games. While many failures and successes happened along the way, we collected many experiences and lessons. As a result, our approaches evolved and became more structured and result oriented!

In this article, I want to share these findings to help other teams get a game idea in a shorter time and move to the production stage with more confidence.

Of course, the path which I am going to present is not the »single best way« of creating a game idea or rough concept. Yet, chances are you will want to take over at least a few aspects and incorporate them into your existing structure.

The Team

The starting point of a game idea is the team that will collaborate on it. There are a few things to consider regarding your »idea team«.

Team Size

Before you start seeking the perfect game idea, make sure that you start off with the right team size. Many companies opt to let a single person begin the endeavor, in most cases a game designer. This has a few, major downsides:

- A single person lacks a second (and dedicated) person to challenge all ideas and thoughts.
- Since that person will probably have a single profession (i.e. producing, game design etc.), they are prone to disregard other aspects of development or business.

- »Islands of knowledge« are never a good thing. What if that person gets sick, goes on vacation or even leaves the company? They would take all vision-keeping with him / her.

On the other hand, having too many people on the team can also be harmful. For instance, brainstorming meetings, which will be important at that stage, cannot be productive with too many people involved.

From my experience, the golden middle is best. Have a team of about five people (+ or - 2) of different professions, who are also willing to work and learn interdisciplinary!

Utilize the whole Team

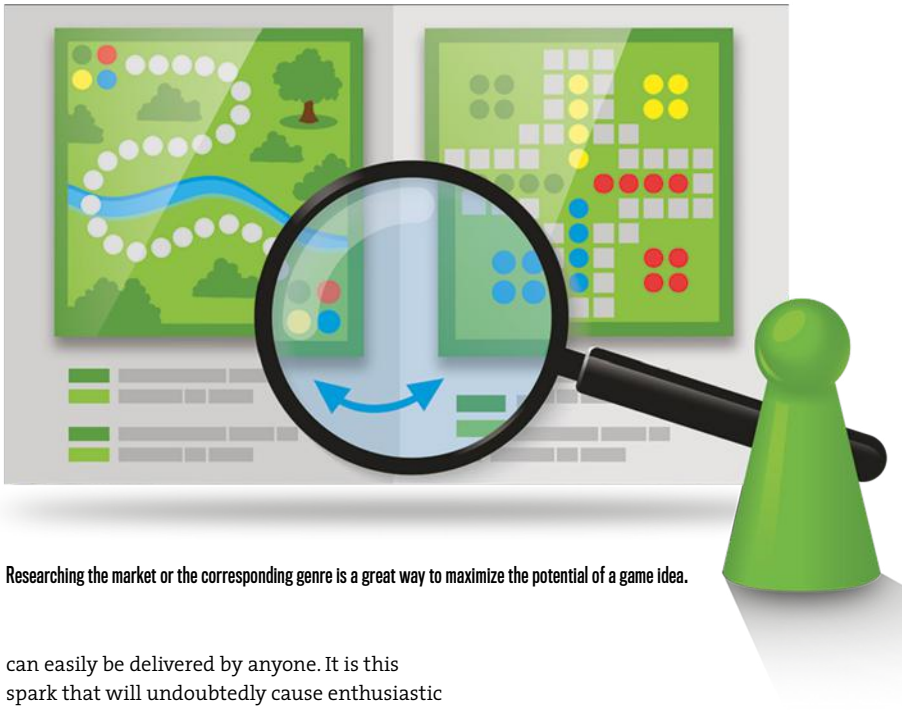
Everyone in the team should not only feel involved, but be involved. At this stage, the team should slightly forget about their individual professions. All the tasks and steps, which will be described in this article, should be undertaken by the whole team to the furthest extent possible.

This interdisciplinary way of working opens up several advantages:

- Vision-keeping is equal. Everyone is on the same boat when it comes to the passion and knowledge of a shared game idea.
- All team members get to learn something new and build up state-of-the-art knowledge. This helps to understand the current business better and to work more effectively as a team (in the future).
- Brainstorming meetings and elaboration on game ideas becomes more efficient, as all team members learn to speak the same »language« (i.e. programmers get to understand Free2Play KPIs or game designers learn the restrictions of a given game engine).

Another reason why utilizing the whole team is great, is because anyone can have promising game ideas.

Sure, it's usually creative directors, producers or game designers who help flesh out the exact workings of a game concept, but the initial spark, the thing that makes a game idea cool, can easily be delivered by anyone. It is this spark that will undoubtedly cause enthusiastic discussions among the team, leading to even more awesome aspects to iterate on.



Researching the market or the corresponding genre is a great way to maximize the potential of a game idea.

Game Research

Before the team starts fleshing out ideas for game concepts, you will want them to build up solid knowledge about the market or the corresponding genre. Hopefully, the team is given quite some time frame and leeway to do so!

In this stage, the team will simply play existing games (successful and failed ones), make notes and evaluate them together. The one simple and powerful reason on why to do game research is: to maximize potential.

With solid knowledge of the given genre or market, the team will be able to avoid pitfalls (others have made) and to better highlight strengths of its produced game ideas.

Play Games of a certain Type

Before getting your hands on »game research«, make sure to limit the pool of valid games. Most companies already know the genre they want to create a game in. Some-





Did the chosen art style of a game fit perfectly to all its needs, like readability of characters, atmosphere etc.? Asking these questions will provide more certainty when looking for an art style for your upcoming game.



times there are even some additional, strategic goals provided by management.

If nothing is specified, the team should aim for a game or genre it has expertise in and passion for. However, don't narrow down the pool of available games too much.

For instance, if your filter is: »Strategy games like Game of War«, you will only review a lot of clones (or at least very similar games). This will limit yourself from having a look at other sets of game features that might fit to your game idea just as well.

From my experience, only filtering by genre should be enough to set a focus but to keep enough leeway for many different approaches.

Analyze Their Weaknesses and Strengths

This is the important part that will help the team build up an important understanding of the different aspects. Analyze what the researched games have done really well or particularly bad in certain areas:

- **UX and UI:** Maybe the tested game would be a lot better with a less cumbersome UI. Or it has achieved such a clever UX! In any case, digging into this will yield interesting insights that will help to avoid pitfalls in the future of development.
- **Art Style:** Did the chosen art style of a game fit perfectly to all its needs, like readability of characters, atmosphere etc.? Asking these questions will provide more certainty when looking for an art style for your upcoming game.
- **Game Play:** Analyzing and evaluating the game play of a tested game will probably consume the most time. Look for game loops that felt especially good. Did some features seem to be really off and awkward? If so, what might be the reason?

The more questions you ask yourselves and answer (in most cases with educated guesses) the more expertise the team will build up. Of course there are more areas, like technology or monetization that you might want to have a look at if applicable.

Find Things They have in Common – and Understand

As soon as there is a decent list of analyzed games, it is time to look for aspects those games largely have in common: Do these games possess the same cornerstones?

Investing time into this question will deliver a good understanding about the minimum requirements to deliver a game within a given genre.

Although this question might look trivial at first, once you really engage it, you will probably see discussions arising within your team. Is feature XY really something that every game within that genre needs? If so, what is the purpose and why is it expected by the target audience?

Having those answers ready will not only make you more confident and believable when pitching the game idea, but it will also help you develop the game with more focus, knowing what is important and what is not.

As a second step, you can start building a catalogue of knowledge and write down general findings, assumptions, as well as »Do's and Don'ts« concerning different game features, art-styles, UX questions etc.

If done well, you can hand over this knowledge base to other teams in the future that will be looking for a new game idea as well, therefore saving them some time.

It is recommended to present the gathered knowledge to the whole team on a regular basis. Chances are that the other team members might have something to add to a given piece of knowledge, or that a written down assumption is being challenged – with the resulting discussion leading to important, additional insights.

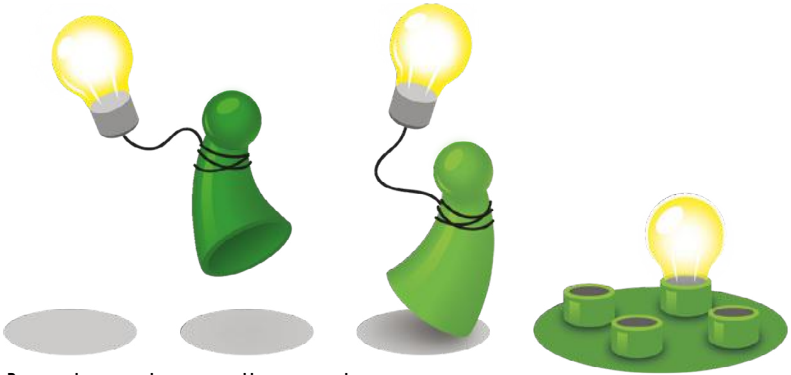
Small Ideas

The team will have interesting ideas regularly, but usually they will not be too tangible and focus on one main aspect. Finding and collecting small game ideas is an ongoing thing and it will naturally happen even when the team is doing research (since they are inspired by the games they play). There should be a process to handle those ideas and to keep them from slipping into the realm of oblivion.

My current team, for instance, collects all game ideas on a single wiki-page. The author of the idea is allowed to provide a mood picture, cite a few highlights (why his / her idea is so cool) and a description with a maximum of 300 letters. The reason for this limitation being that it should only revolve around a single USP (unique selling point).

One of these games gets pitched every morning, with questions allowed by the audience. Afterwards, everyone (apart from the presenting person) rates the potential or coolness of that idea with one, two or three stars. Those who provided a rather low rating explain their doubts, with the presenting person being able to deliver counter-arguments.

After everyone was able to correct his / her rating once, we write down the average rating in that wiki-page. The games that received the



Do not stick to every idea in your pool but iterate on them.

best rating will be used in later iterations of our development!

At this stage though, it is important to only rate the idea and its potential. Doubts concerning technology, art or scope should not be taken into account, yet.

Iterating on Ideas

Once there is a pool of promising small ideas and your research is already at a level to be considered »rock-solid«, it is time to move on and start to iterate on them.

Do not stick to every idea in your pool, even if there is someone in the team being extremely passionate about it. Should you take an approach like us (with the rating of small ideas), set a minimum target rating for each idea to be considered for further evaluation.

Evolutionize, do not Revolutionize

If you have been in the games industry for a while, this saying should be familiar to you. As I mentioned earlier, the small ideas will usually revolve around a certain USP.

When you start developing an idea as a first rough concept, do not go overboard with this USP. Build a concept with widely known gameplay elements and utilize the proposed USP to add one or two major innovations to it.

Otherwise it will be very difficult to evaluate the target audience. Even the findings from your previous game research will not be applicable anymore and you will lose all the benefits your knowledge base has to offer.

Form Micro-Teams

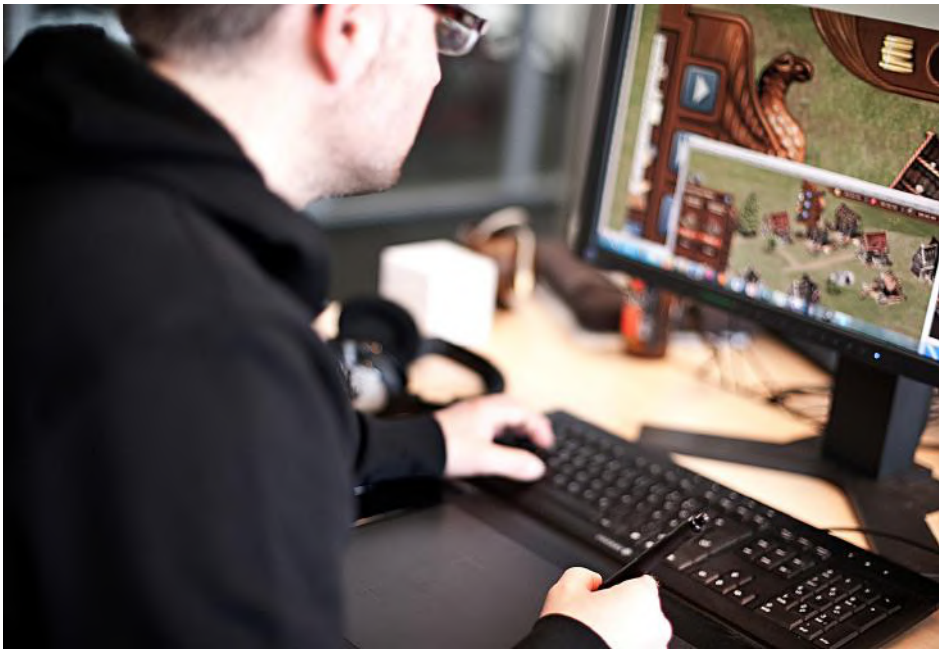
As you will have multiple ideas floating around, it can make sense to split your team into micro-teams of two to three people, with each team fleshing out a rough concept for a single idea.

Forming micro-teams can be tricky, as you will want the involved team members to be passionate or at least interested in the given idea, and at the same time, you need to have a different array of professions involved to consider different aspects of the rough concept in an educated manner.

As a rough concept should already support a neat game loop and have all the features nicely intertwined, it is recommended to have at least one game designer (or similar) in each micro-team. An artist helps in creating mockups, evaluating different, valid art styles for that game and painting some mood pictures.

Programmers will usually flourish in the next step (prototyping), but depending on personal skills, the programmer can take over other tasks, like doing more dedicated research or challenging the game design.

Micro-teams are great, because on the one hand they are small enough to do brainstorming meetings efficiently, have short ways of communication and can quickly take decisions. On the other hand, they are big enough to avoid those »islands of knowledge« and usually sport one representative of each field of profession.

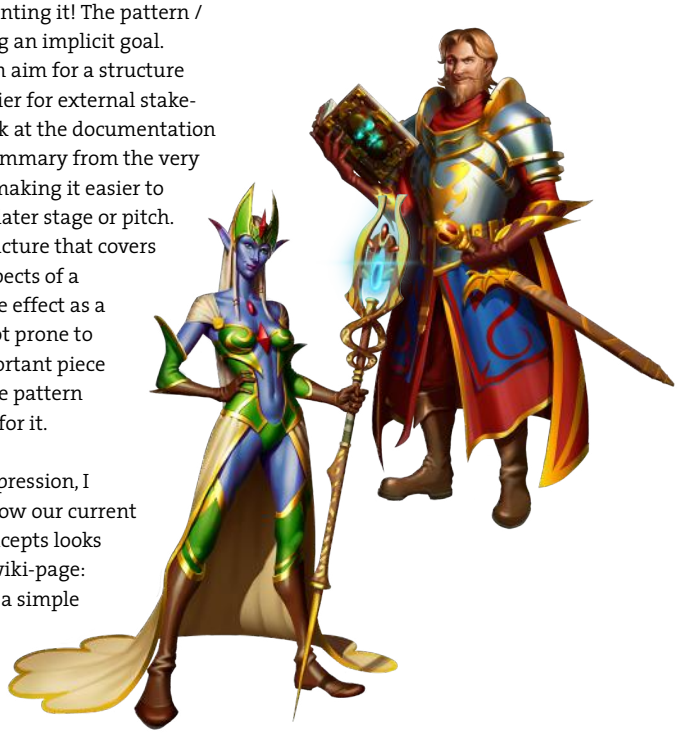


Although this can usually be proven by creating mockups or videos faking the gameplay, sometimes it is necessary to test a special art style within the boundaries of actual gameplay.

Keep Track in a structured Form

When documenting the rough concepts, flesh out a structure or a pattern all concepts have to follow. The team should agree on a structure together, as everyone will have to work with it. The reasons to do this are:

- **Comparability:** When going through the concepts later, it is easier to compare certain aspects without searching too long (i.e. if you want to read through the highlights / USPs of each concept)
- **Efficiency:** Knowing exactly how a rough concept would have to look like in the end will simply make it easier to begin thinking about it and documenting it! The pattern / structure is providing an implicit goal.
- **Presentation:** You can aim for a structure that will make it easier for external stakeholders to have a look at the documentation and extract a nice summary from the very top of it, effectively making it easier to sell the concept at a later stage or pitch.
- **Completeness:** A structure that covers all the important aspects of a concept has the same effect as a check-list. You are not prone to forget about an important piece of information, as the pattern will already ask you for it.



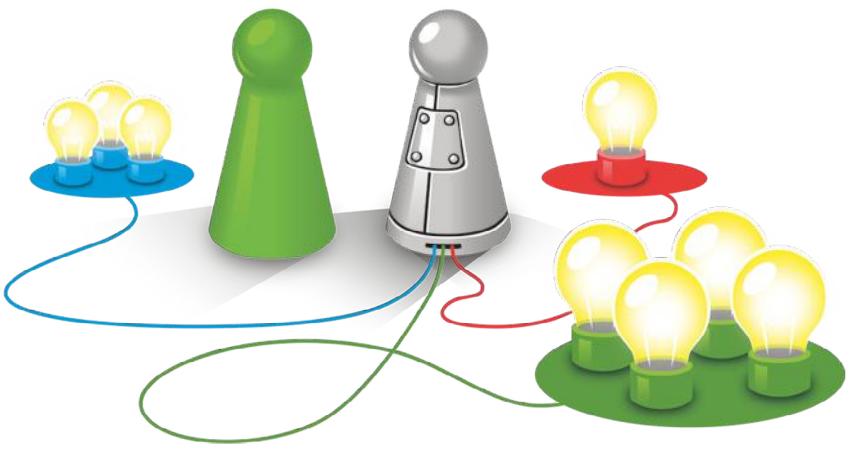
To give you a better impression, I would like to explain how our current structure for rough concepts looks like, utilizing a single wiki-page:

1. **General facts:** This is a simple table containing the following information:



- **Name:** The working title of the game idea. Having a name makes internal communication a whole lot easier and it is the first requirement to build-up hype.
- **Genre:** Is it going to be an RPG, strategy game, sports game? Of course, if your team is supposed to only operate within a single genre, you can cite sub-genres here, e.g. »Tactical Turn-Based Strategy«.
- **Setting:** This is usually a proposition that works well with the given game play, not a final fact. The setting may change during pre-production, when art- and game design department evaluate it further.
- **Inspiration:** If there were games that inspired the corresponding game idea, mention them here. It will immediately evoke an expectation for how the game might be like and enhance the basic understanding of it.
- **Platform:** What are the desired platforms to release the game on? PC and PS4? Smartphones and tablets? Mention it here. External stakeholders will appreciate this bit of information.
- **Elevator Pitch:** Describe the game idea with three to five sentences as enthusiastically and positive as possible. This will nurture interest for other people to read the rest of the concept and it will help you get to know what the biggest strengths of the concept are.
- **Highlights of the Game:** A simple list that quickly summarizes all the highlights. Yes, there might be overlapping pieces of information with the elevator pitch. In any case, repeating the strengths of the concept a bit differently will only help to evoke enthusiasm.

2. **Concept summary:** A full-blown summary of the game idea. Do not mention every yet-known detail, but at least cover all the important features, describe how they are connected and what the player will do. The summary will help you to plug your mind back into the game idea as soon as you pick up the concept a few weeks later.



A prototype is a better proof for a concept than any written concept at all.

3. **Features in more detail:** At the end of the documentation, every feature has its own section, describing its core functionality, as well as additional thoughts which might be helpful during production. In some cases, it can even be helpful to show example content (i.e. outline a few characters and their abilities) to improve the understanding of the game. Especially mockups and mood pictures should be added here, as plain text is boring after reading a few rough concepts. You will probably need visual material anyway, for instance if you want to spice up your game pitch. Explaining the features in more detail is taking the biggest bulk of the whole documentation.

Working on the rough concepts can take quite some time. At some point, you will want to prepare a pitch and present the idea to corresponding stakeholders. According to their feedback, the game idea will either die or you can expand on it, adding more details or changing a few things.

Prototyping

If you want to find your perfect game idea, it is inevitable to create various prototypes. A prototype is a better proof for a concept than any written concept at all!

Before starting to develop a prototype, however, it is vital to set one or two goals to achieve, not more. Limiting yourself will set the right amount of focus and it prevents getting lost to tweak the prototype for months, accidentally getting close to creating half the game or an alpha version. Here is my list of viable goals:

- **UX:** Especially if you aim to create a mobile game, or if the game idea requires unconventional ways of player input, the prototype is supposed to check whether the game's controls feel natural or not.
- **Fun:** The game idea sounds fun on paper, but will it actually be entertaining? Sometimes we are wrong about such assumptions and it is better to prototype the core mechanics if they are really something new.
- **Pacing / Complexity:** Are the core mechanics just about the right amount of challenge for the desired target audience? Maybe the game ends up with too much micromanagement or there is not enough potential mastery for hard-core players.
- **Visuals / Art style:** Although this can usually be proven by creating mockups or videos faking the gameplay, sometimes it is necessary to test a special art style within the boundaries of actual gameplay, i.e. in regards of readability of characters or actions within the environment.
- **Performance / Technical Feasibility:** Sometimes, a game idea may end up to be very demanding on the hardware-side of things or it requires an experimental technology. Maybe









Even though you aim for a genre or type of game that seems traditional, you have to test and iterate on every idea your team might have to make it perfect.

there are a lot of highly detailed entities to be shown or a complex visual effect is vital for the game's atmosphere. A performance-prototype aims to prove if your team could potentially tackle the challenge. However, this kind of prototype is not always necessary at this early stage of development and might be more suitable towards pre-production (once the team and stakeholders already have decided for a game concept).

It is important to choose the technology that leads to the fastest results. You do not necessarily have to use the same game engine that the team will be using during production.

Quite often have I heard of teams that take over the code from their prototypes to the final game. Since you want to have a functional prototype as soon as possible, no good architecture of code can be expected at this point. Therefore it is never advised to take over any program files!

From the Idea to the Pre-Production

Once you have committed on one of your rough concepts, you are ready to start with the pre-production of your promising game!

During this stage, you have to take the rough concept to the next level. Surely, there were some uncertainties left and questions might have risen after the pitch.

It's also worth looking at other aspects that are part of a game's success:

- How did competitors do the marketing communication for their game?
- What was the competitor's business model or pricing? For Free2Play games, this kind of research can be quite lengthy. But it will help you in selling the right items within the game at the best price point.
- How could you expand the game at later stages? It's worth having a strategy, or at least ideas, for expansions, DLCs, patches, etc.

Of course, you will also flesh out additional game features during pre-production, i.e. meta-features which were not too important to grasp the core of the game idea while writing the rough concept.

However, as this article isn't supposed to dig too deep into the pre-production / production stage of games, there is only one thing left to say:

Good luck in finding your perfect game idea! **Marcel Zons**



CREATING SOUND AND MUSIC IN HORROR GAMES



Music and sound is a very important but at the same time often neglected part of storytelling in videogames. Niklas Swanberg from Stroboskop Games Studio explains, how music and sound can influence a player's subconscious and how designers can create them.



Niklas Swanberg
is Founder and Owner
of Stroboskop Game Studio.

Niklas Swanberg is the owner of horror game studio Stroboskop, located in Stockholm, Sweden. He is currently working on a remastered version of »Sylvio« and the sequel »Sylvio 2«.
You can follow the progress via
www.patreon.com/stroboskop
@stroboskops

With this article I am about to tell you something you probably already know. Having good music and sound in video games is very important. Yet I think we're on different pages, because I believe it to be VERY important. If not the MOST important thing. And here is why:

The visuals in a game mostly talk to your conscious mind. We can immediately notice a beautiful object in a game. We are used to talk about the visuals in life, we have a lot of words to describe what we see. We can easily define what something looks like (»the clouds look fluffy and grey-white«) but it tends to be much harder with sounds (»it sounds weird«). Why is that? Because sound mostly talks to our unconscious mind. It takes the highway around your brain, right into the feels. And that is why it is such an important tool in storytelling, and that is also why it's repeatedly neglected by game producers not familiar with the powers of audio.

In 2015, I released the horror game »Sylvio« on Steam. It is a game about an EVP-recorder in a shut-down park, and the core gameplay revolves around recording ghosts and analyzing tapes. When creating the game concept, I was inspired by the backwards talking in the dream sequence scene of »Twin Peaks« and miscellaneous EVP recordings on YouTube. The player controls the playback, playing the sounds in different speeds, revealing hidden words and clues. You have the ability to boost the volume from your microphone, revealing for instance voices in the static, distant music or heavy breathing behind a door.

Before developing games, I worked a long time as a composer and sound designer for stage productions. Theatre audio and game audio have a lot in common. There is no timeline (as in e.g. film), so you're creating a world for the actors or players to exist in. You need to come up with clever ways to dissolve and progress your atmospheres, because there are few hard cuts during the story telling. I.e. the space is constant, and noticeable changes in sound can ruin the immersion. There's no way to know how fast the player will progress, so you need to create an atmosphere that works for both one minute







Theatre audio and game audio have a lot in common. There is no timeline (as in film), so you're creating a world for the actors or players.

and one hour. All sounds and atmospheres are triggered by the player, which means a sound design needs to be heavily planned ahead.

In this article I'd like to talk about some of my own ideas and experiences regarding sound and music in video games, and give a few simple tips on how to create a thought-through sound experience.

The Camouflage and the Subconscious

I've read somewhere that it's the first second of a note that defines what instrument is being played. If you would for instance cut away the first part of a recorded flute playing one note, it'd be hard to hear what instrument it was. On the same note, if someone hears the first second of a flute playing, the listener will know it's a flute and will not pay any more conscious attention to it. Voila, we have access to the listener's subconscious area, and we can start manipulating that note into something else. This concept works exceptionally well when creating game sound atmospheres.

Say the player walks into a kitchen, and there's a big fridge humming loudly. As soon as we've seen the fridge and connected it to the sound, the conscious mind will pay no more attention to it. Next, the player opens a locker. Slowly transforming that fridge sound into something else will communicate with the player subconsciously, telling him something is changing, or something is not right. But the player himself probably won't know why. If we had slapped a sound right when he opened the locker, the sound would have been experienced consciously, and it wouldn't have worked as well.

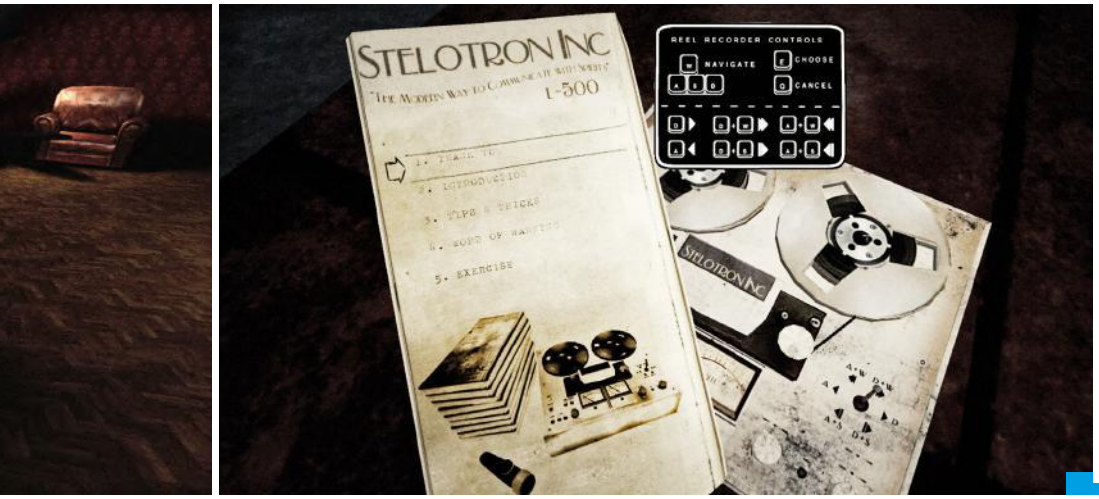
Talking about slapping, beginning an atmosphere is always tricky. It's easier when the player is in a dense sound atmosphere, but often times you'll want to start an atmosphere from a near complete silence. Usually you would just create a fade, but it's a boring and somewhat ugly way to do it. An ideal way is to camouflage the beginning with another, unrelated short sound. This could be anything, but the louder it is, the better it will work. Something like an explosion works best, because it is loud and has a tail, which creates a natural crossfade into the new atmosphere. But anything is better than nothing. You might trigger the atmosphere on a sound from the player's gun. You might time it with a distinct place in the music, or opening a door, or a loud burst of wind.

If you're unable to find a good camouflage sound, doorways are your friends. A crossfade into a new atmosphere usually works fine when walking between two rooms. Because it's something we're used to from real life, it won't feel unnatural. When done right, it can even be a magnificent tension builder, giving a new location that special vibe you're looking for.

In the first level of Sylvio the player falls through a skylight into an old restaurant. The window crash was a great camouflage to kill the heavy wind from outside, and replace it with an eerie damp silence with an old ventilation fan.

Texturing a Sound

We've all heard the lonely, out of tune piano in horror productions. There's a reason why. A great way to create horror is by distorting something that is considered safe and familiar. By taking a piano and bending the pitch, we transform it into something we're not in control of, hence making it scary. I would like to say that this phenomenon works on ALL sound and mu-



»Sylvio« is a game about an EVP-recorder in a shut-down park, and the core gameplay revolves around recording ghosts and analyzing tapes.

sic. I like to call it texturing a sound, by adding layers or effects to familiar sounds. This is where your creativity sets the limits. Sometimes the sounds I create consist of ten different sounds, all working in different parts of the spectrum.

People aren't used to question what they hear. If they see a car, they will hear a car, even though you've mostly used the sound of a hair dryer. Take advantage of this when creating your sounds. If a door sounds to weak, add the sound of pouring gravel, or boiling water, or a screaming horse. Audio production is simple that way, as long as you have a dominant sound, additions won't make it less believable, only give it a stronger personality. The key to good sound texturing is treating it as a puzzle. Use levels, aggressive EQ and pitch to make the sounds fit together. In this process it might be tempting to use a reverb to smoothen the transitions. But don't.

Reverb is the only thing that you can't really get away clean for tampering with. Humans are experts on detecting when a room doesn't feel right, or two sounds with different reverbs are mixed wrongly. Always try to work with »dry« sounds, adding reverb in the very end, or most preferably inside the game engine.

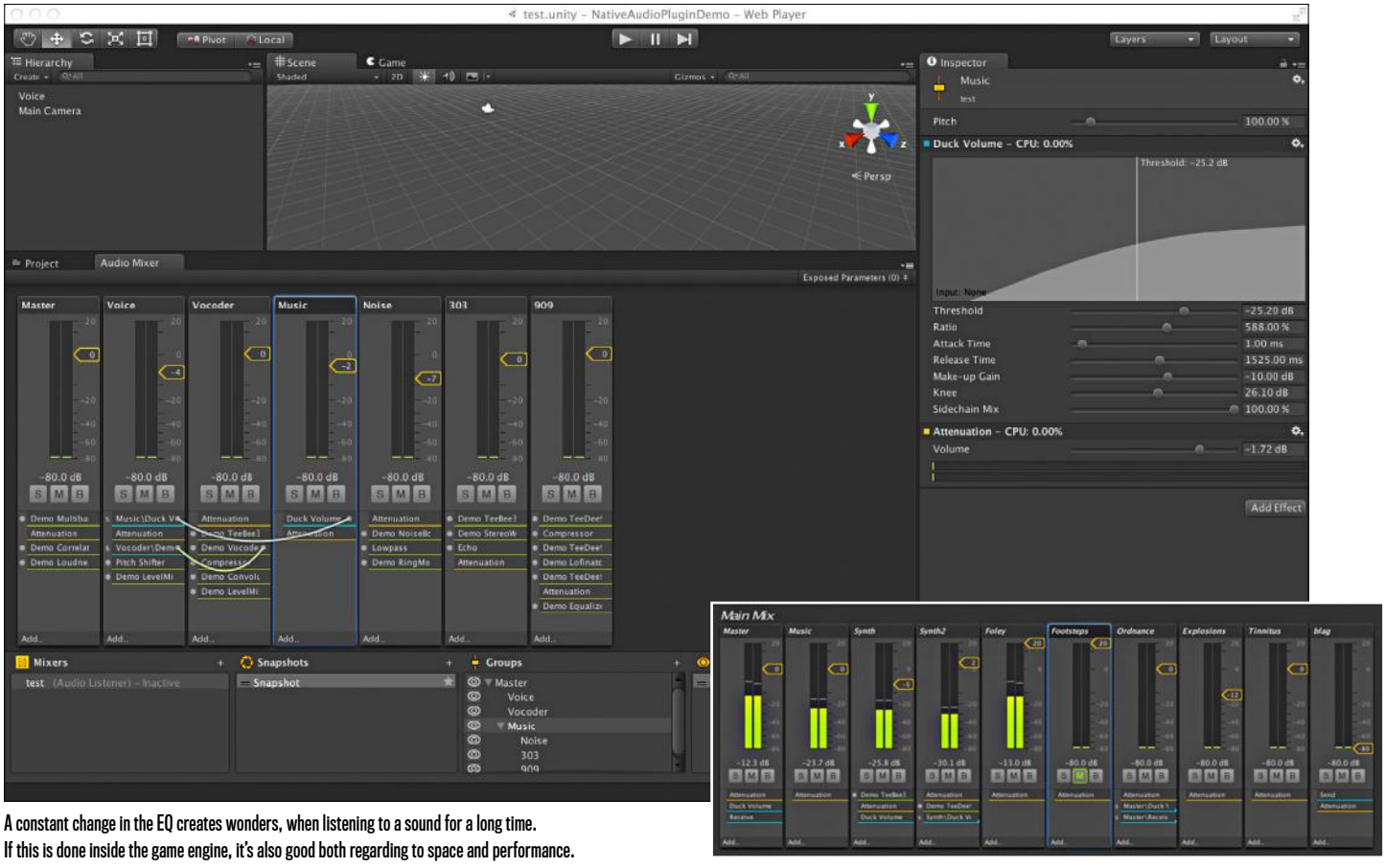
With that said, changing the reverb under special circumstances can be very powerful. If you for instance need to create a dense, electric tension, create a fast fade from an atmosphere with lots of reverb to something completely dry and numb. Everything inside that space for the next seconds will be considered VERY important to the player. It's a nifty little trick to use on rare occasions.

In Sylvio the player will run into enemies in the form of shadow figures. Whenever these appear, the music will disappear and a deep rumbling noise will take its place. It is the dominant sound of a forest fire, but textured with a number of different sounds, where calm, chirping birds being the most noticeable. The contrast of a threatening loud rumble and chirping birds takes advantage of the distortion trick, using something familiar in a different context, creating a horrifying sensation.

Using the Techno Filter Sweep Trick

Say you want to create a factory atmosphere. A constant, monotone machine sound. Well, you can't. One minute after listening to that sound the player will go nuts. You need to set the mood during the first 30 seconds or so, and then you'll have to start adjusting. If a sound is too monotone, it will eventually break immersion and the player will hear it consciously. If you start fading down the volume that will also be too apparent.

In these cases, you have two possibilities: Either you have a number of different machine sounds, which you slowly cross fade in-between. Or you'll use a filter sweep, constantly adjusting the high-, low- and mid-tones of the sound. Kind of like the sweep break used in techno, but 50 times slower. A constant change in the EQ creates wonders, when listening to a



A constant change in the EQ creates wonders, when listening to a sound for a long time.
If this is done inside the game engine, it's also good both regarding to space and performance.

sound for a long time. If this is done inside the game engine, it's also good both regarding to space and performance.

Slowly blocking different parts of the EQ spectrum can also be a great way to adjust volume, and of course when adjusting the sound depending on distance. Sounds far away consist of less high- and mid-tones, and a well-designed fall-off curve makes wonders for a great immersion. But still, if it's a loud source, I recommend creating sounds in at least three different distance stages and cross-fade in between them. Sounds from far away are heavily colored by the location you're in, and simply adding a high-pass filter is like darkening a picture to make it look like night. Sometimes it works fine, sometimes the sun in the picture will give you away. Every situation is unique.

In Sylvio, you'll spend a lot of time in the woods. I have seven different forest wind atmospheres, ranging from very calm to storm. These will constantly shift during gameplay in a randomized order, and are connected to how the trees move. They all have specific characterizations, making the game sound as varied as possible. In tandem with different themes of music, the sound design will be perceived fresh and original for a long duration of time.

The Place of Music

Writing music for games is an entirely different thing than just writing music. It has to melt into everything else, giving support to what is happening, but never telling the whole story. As ordinary music sits right in front of your face, the game music should always be a part of the background.

Every composer works differently, but I'd like to throw in some pointers:

Using a reoccurring theme melody is a wonderful way to tie everything together. Think of the theme as a refrain, and the other parts of the game music like verses, leading to that refrain. It should speak about the beginning, the end and the main character (whatever it may be). The other parts are there to speak about factors influencing that main character. They can be wildly different in style, but they all need to be the children of that main theme. I.e. the notes in the melodies need to reflect the main theme in one way or another. The only time it's a good idea to break away from the theme is when describing a character in the story. By contrasting that music with the main theme, you'll give that character an edge and sense of importance.

Use instruments that conjoin with the sound design of the game. An electric synth bass might capture that industrial mood you're after. A cello played with a bow might resonate with an old house in the woods. Maybe you can tweak some of the longer notes, so that they sound like a part of the wind sound effect. Percussion might be the easiest to tinker with, a rhythmic beat has the ability to sound like almost anything without standing out too much or being weird.



Always try to work with »dry« sounds, adding reverb in the very end, or most preferably inside the game engine.

Always import a gameplay video of the game when you start composing. You need to see those visuals to be able to find the mood, otherwise it's just like working with a blindfold. When the theme is set and you're comfortably standing inside the game universe, stop using video tracks and just create things, putting them into the game later. It's wonderful to surprise yourself during gameplay. You can learn a lot from random chance.

Work with contrasts. Using monotone music before a melodic part is a great way to amplify emotion. Switching soothing music for dead silence is another. Try to envision your music as a body, and put it into your game. Does it fit? What if you made it smaller? Bigger? What if you replace the head with a shiny orb? Every game is different, and the only way to know what will work is through trial and error.

In Sylvio the music is very calm. I like the way disturbing atmospheres clash with soothing music. It puts the player in a state of confusion, making them loose their sense of control. All music is based on the main theme, except an upbeat country-inspired theme, used for portraying the antagonist.

Some Last Words

Don't give up and safe it – unless you're out of time. A good sound design progress will be bad, bad, bad until it's amazing. And often times you won't even know how you got there.

The music and sound design should be part of the same sound universe. It needs to be consistent, find its mood from the very start and stick to it. A well-crafted sound will give the game a personality. A game can be visually stunning, but without a proper sound design it WILL feel dull and boring. It will be like a Hollywood actor without a good script, or an Ice Cream Sundae without taste.

When games get a proper sound treatment, that is when the magic happens. When a snow storm is portrayed with superior audio, when the ending is amplified by a great theme, when the gun firing in your hand feels like it's about to burst open. That is when you'll experience amazing gaming, and without good sound that chance is lost. It's as simple as that.

Niklas Swanberg



People aren't used to question what they hear. If they see a car, they will hear a car, even though you've mostly used the sound of a hair dryer.



In Sylvio the player will run into enemies. Whenever these appear, the music will disappear and a deep rumbling noise will take its place. It is the dominant sound of a forest fire, but textured with a number of different sounds, where calm, chirping birds being the most noticeable



WHY PLAYERS UNDERSTAND GAMES
THE POWER OF ACCESSIBILITY

The right balance of challenge for the player and accessibility is key for a great game, as a fun game that is not understood correctly will still frustrate the player.



Simon Sterz
is a Game Designer, who recently graduated from Mediadesign College in Berlin.

Simon is a recent Game Design graduate from Mediadesign College Berlin. With 1.5 years of experience as Intern and Working Student at Crenetic and GameDuell, he has already developed many game design concepts and turned a lot of them into digital prototypes for Android and PC - professionally and privately. While using his time after graduation to further improve his game design, prototyping and storytelling skills, he is currently looking forward to new professional challenges in those fields.

Accessibility is one (if not the) key aspect that makes a player like a game or not. It is therefore crucial for every game designer to keep in mind not only the mechanics of the game, but how accessible it is to players. A fun game that is not understood (»accessed« for that matter) by anyone is a waste of time for both the designer and the player.

With this in mind, it is notable that accessibility consists of not just complexity and difficulty, although these play the most important part. It also includes how well the theme or genre is liked by a player, must even take into account the technical difficulties a player may encounter depending on the situation he/she is playing in (like the platform a game is offered on), the screen size and lighting. It should also be pointed out that accessibility does not mean easy or simple. It means adjusting game design to fit the taste of players better, which could be more difficult (see »Dark Souls«) or more complex (see »Hearthstone«).

The focus lies entirely on the control a game designer has over the amount of perceived complexity and the perceived difficulty.

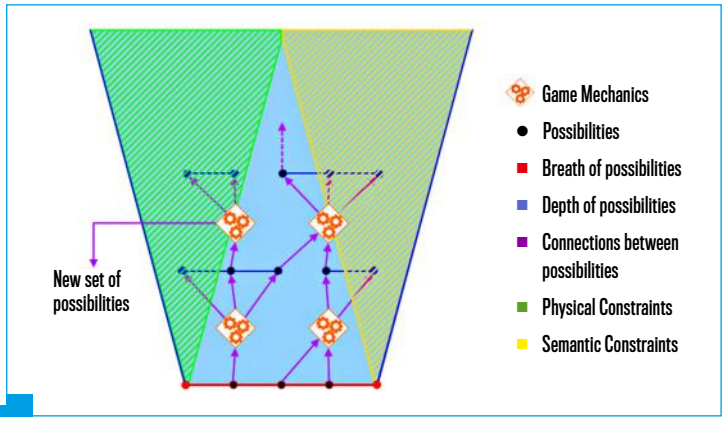
While not the main topic here, level design is too important to overlook it. It is valuable for game designers to understand the possibilities a level designer has to change the perceived complexity and/or difficulty of their game.

Definitions

Before accessibility can be discussed in a meaningful way, let's have a look at what components make up the perception of difficulty and complexity in games. It is important to differentiate the perceived from the true in both cases, as most players will only notice the perceivable difficulty and complexity of any given game.

The table in **figure 1** shortly names and explains the components that make up the perceived difficulty and complexity.

Now that everyone is on the same page about difficulty and complexity, accessibility and the impact it has on these two can be discussed.



A simplified diagram that visualizes how the components for the perceived complexity are connected.

Accessibility	Components of perceived difficulty	Components of perceived complexity
Similarities to familiar games **Description:** Information players do not need to gain/Player experience **Example:** »Match three«-games are usually very similar	**True difficulty** **Description:** What makes an action actually difficult **Example:** Aiming with the mouse; Reacting fast	**Breadth of possibilities** **Description:** Amount of choices in each moment **Example:** Choosing a faction
Natural mappings **Description:** Most basic understandings everyone has **Example:** Increase in size => Increase; Difference in color => Difference	**Player skill** **Description:** How trained a player is to overcome the true difficulty **Example:** Handling the camera in a 3D environment	**Depth of possibilities** **Description:** Variations of outcomes **Example:** Decision trees
Constant feedback on a granular level **Description:** Visual and auditive feedback to player actions **Example:** Blood in »Super Meat Boy«	**Frequency of new challenges** **Description:** How often players have to learn how to master a new challenge **Example:** Game Collection (high) vs. Arcade (low)	**Connections between possibilities** **Description:** How Breadth & Depth are connected **Example:** All Game Mechanics
Help to set appropriate goals **Description:** Usage of a player's mental models about the world to explain an in-game situation **Example:** Finish line icon	**Skill level required to overcome challenges** **Description:** How well a player must perform an action **Example:** Needed jump distance compared to maximum jump distance	**Physical constraints** **Description:** Possibilities that are not considered due to the player's basic knowledge of physics. **Example:** Impossibility to jump in a confined space
Natural constraints **Description:** Actions that are illogical to do **Example:** Trying to fit a square box in a round hole	**Opportunities to improve necessary skills** **Description:** How often players can train their skills **Example:** Safe Zones like in »Super Mario Galaxies«	**Semantic constraints** **Description:** Possibilities that are not considered due to the meaning of the situation. **Example:** Eating while fighting
Cultural constraints **Description:** Actions that are unacceptable/ unusual from the player's cultural background **Example:** Running away while in conversation	**Expectation of difficulty for a challenge** **Description:** Perception adjustment based on experience **Example:** Boss fights	**Standardization of possibility sets** **Description:** Repetition of the same situation leads to faster problem solving skills **Example:** Base building in strategy games; tutorials
Procedural knowledge **Description:** Knowledge of how something is done **Example:** Hostage rescue scenario in »Counter Strike«	**Mistake/punishment ratio & loss of progress** **Description:** Harshness of punishment **Example:** Permadeath vs. Sandbox	
Declarative knowledge **Description:** Knowledge of how something works **Example:** Guns in First Person Shooters		

Figure 1: Table that shortly names and explains the components that make up the perceived difficulty and complexity.

First of all, what makes a game design accessible in general? The table above will explain its components in short.

So how do these parameters affect the perceived difficulty and complexity? As stated earlier, level design and other factors not directly linked to the game design play an important role (and are marked in green in **figure 2**), but game design still accounts for most of it. The table in **figure 2** shows the strongest parameter combinations – games are a very broad medium, and the impact parameters have on each other may vary from game to game, but this is a reasonable start when analyzing a game.



Blizzard's card game »Hearthstone« will serve as an example to analyze accessibility of a game and how to use some simple tricks to have games perceived as less complex.

Taking Hearthstone as an Example

When analyzing a game for the discussed parameters, a practical example to go through first should be very helpful. In this case, »Hearthstone« will serve as a positive example on how to make a game accessible.

Please note that the deckbuilding is not part of this analysis, which rather focuses on gameplay.

Difficulty

The skills required from players of Hearthstone do almost never exceed the skills required to do anything on the device it is played on. All interactions during gameplay are done with the left mouse button (or, on a touch device, touch input), and consist of clicking and dragging. An exception to the introductory statement is basic addition and subtraction, which rarely ever exceeds numbers greater than ten. This has almost more to do with pattern recognition, as players try to make the most out of their cards by matching the damage they can do to the amount of hit point the enemy's minions have, or, on a greater scale, try to categorize gameplay situations and their respective solutions. It can be said that, in general, the true difficulty of Hearthstone is extremely low to the point that it almost does not exist. There is no action in the game the player has to perform that is based on skills other than basic math when calculating the outcome of an action and memorizing of her own deck to know what she may be able to do in later turns. It is rather the understanding of the complexity of the game's mechanics that has the player perceive it as more or less difficult.

The perceived difficulty, however, changes that perspective to a certain degree. After a short tutorial, players are expected to handle every challenge the game could possibly provide. Due to its nature of it being a multiplayer card battle, each and every deck could be encountered. Players can face plenty new challenges all at once whenever they start a new playing session, which ramps up the perceived difficulty.

Another side aspect of the multiplayer nature of the game is the fact that the skill level required to overcome challenges can vary indefinitely. To put it graphically: There is no curve of increasing difficulty, but something more like a zigzag line.

Since it is, besides the solo mode, always another player playing against you, there is no assurance that a player is matched in a way that you have time to accustom yourself to challenges first and then move on to more difficult challenges. On the other hand, each game has the potential to give the opportunities of improving all necessary skills. Thus, it can be perceived as a lack of opportunities at first and a great amount of opportunities the more experience players gain.

While it is impossible for players to make any assumption on the difficulty of the entire gameplay session, they can at least get a feeling for the difficulty to come based on their experience during a session. If certain cards are placed, you can assume what the course of the next couple turns may be.

But after, all it is only the result of the entire gameplay session that has any value to the player's progress. That means that the mistake/punishment ratio can be fairly high. If a player succeeds in the end, he/she will get the same reward as if he/she made no mistake at all. On the other hand, if he/she has only done one crucial mistake, he/she receives the same great punishment as if he/she made every mistake possible: The loss of the invested time altogether, as there are no rewards for simply playing.

Complexity

The gameplay itself, while still being very complex, has a much smaller possibility space.

The breadth of possibilities is compiled from the amount of mana available to the player, which increases over time, the amount of cards in his/her hands, the placed minions on the playing field on both his/her and the opponents side as well as the usage of his/her hero ability. With a maximum amount of ten cards on hand, seven minions on either side and ten

Impacts of perceived difficulty	Impacts on perceived complexity
True difficulty **Affected by:** Constant feedback on a granular level **Affected how:** Shows players exactly where the difficulty is	**Breadth of possibilities** **Affected by:** Declarative & procedural knowledge **Affected how:** Lets players understand their choices
Player skill **Affected by:** Similarities to familiar games **Affected how:** Lets players rely on previously acquired skills	**Depth of possibilities** **Affected by:** Declarative & procedural knowledge **Affected how:** Lets players anticipate outcomes
Frequency of new challenges **Affected by:** **Complexity** **Affected how:** Changes the imagined possibilities how a challenge can be overcome	**Connections between possibilities** **Affected by:** **Real-time understandable system** **Affected how:** Expands a player's mental model about a game
Skill level required to overcome challenges **Affected by:** Constant feedback on a granular level; **Indicate/show solution** **Affected how:** Puts focus on the skill the player needs to improve	**Physical constraints** **Affected by:** Natural constraints **Affected how:** Expands noticed constraints
Opportunities to improve necessary skills **Affected by:** **Safe environments; Complexity** **Affected how:** Provides opportunities	**Semantic constraints** **Affected by:** Cultural constraints **Affected how:** Expands noticed constraints
Expectation of difficulty for a challenge **Affected by:** Natural mappings **Affected how:** Lets players have a more precise expectation	**Standardization of possibility sets** **Affected by:** **Internalization** **Affected how:** Relieves the players mind from thinking about standard situations
Mistake/punishment ratio & loss of progress **Affected by:** Help to set appropriate goals; **Replayability** **Affected how:** Allows the player to avoid mistakes and learn from mistakes	

Figure 2: A table that shows the strongest parameter combinations.

mana eventually available, there is a potential breadth of possibilities of roughly more than one hundred. This amount, though, is barely ever achieved, and players rarely have to deal with a breadth of more than fifty. Still, the breadth of the possibility sets is very wide.

The depth of the possibility sets is comparably sized. The order in which actions are executed can change the state of the current playing session to a high degree. This may be due to the drawing of more cards or because the player triggered a so-called »secret« card played by his/her opponent while it was his/her turn. Thus it can be said that the possibility sets the player is facing are usually very deep.

The properties of the cards in Hearthstone make up the plentiful connections between the possibilities. The connections between the possibilities are of such great importance to players that they are frequently referred to as synergies, with the increased understanding about them increasing the fun for players. Each individual property is stated openly for the player (and, once played, for the opponent as well) in text to read on the card.

The standardization of possibility sets comes automatically from playing repeatedly with the same deck(s). Once a deck has been created, players can re-use it as many times as they wish, coming to a greater understanding of how their deck works best and how it is played best.

Independently from the used deck, players will also repeatedly face similar situations during gameplay, like the enemy placing a very strong minion or having lots of weak minions. Put together with the knowledge he/she has gained about his/her deck, the semantic constraints a player has internalized increase over time.

There is a singular physical constraint players can notice while playing the game. The player can see the thickness of the remaining deck of both his/her and the opponent, which visibly indicates how many cards he/she and the opponent have left.

Accessibility

When it comes to gameplay, Hearthstone fails to support the player to set appropriate goals.



The game board of Hearthstone is structured very easily so that the player can see all relevant information on first sight.

Besides the overarching goal of each session to reduce the opposing avatars hitpoints to zero, there is no help given regarding what problem should be tackled first, what the player should be trying to achieve in a particular turn and how he/she can overcome a presented challenge. It is only through learning that players recognize a problem and its possible solutions.

At the same time, a player has always access to his/her current options. Declarative knowledge of how cards work is entirely unnecessary for the player to remember, as all necessary information are always visible and can be enlarged to be read more easily. The fact that the player does not necessarily have to remember any of the cards abilities, but can always rely on each card always displaying everything he/she needs to know, greatly increases accessibility.

Procedural knowledge is gained only through experience. The fact that decks are re-used is a great help for that. The increased ability to handle the complexity over time through understanding the connections between possibilities and having used a standardized set of possibilities multiple times, comes from



Blizzard is very good at using known color patterns. Greenish things symbolize minions who are ready for orders or improved stats, while reddish things show badly influenced stats etc.

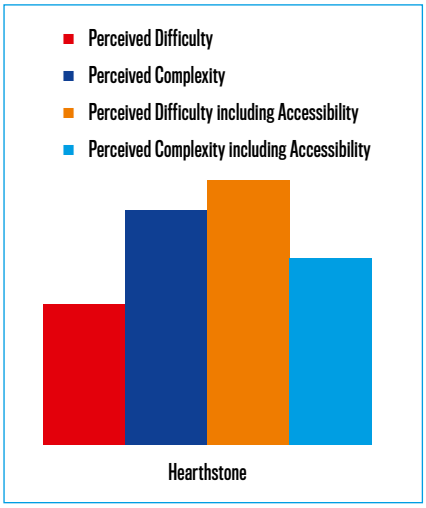


Figure 3: A graph that shows the amounts of Perceived Difficulty, Perceived Complexity, Perceived Difficulty including Accessibility and Perceived Complexity including Accessibility.

players iterating on their deck by exchanging few cards and trying them out. Another aspect that helps players acquire more procedural knowledge is that they can always see exactly what their opponent is doing, as well as the fact that they have the same cards available in different situations each play session.

The learning of all this knowledge is an extension of what the player can already understand from the usage of the constraints in the game. It is a natural constraint that tells him/her that players can visibly see when there is no more room for further minions to be placed, as the width of the playing field is limited and each placed minion takes up a certain amount of space.

The usage of cultural constraints in form of colors helps the player to make a quicker analysis of the situation he/she is in. Generally, the values that display the attack and the hitpoints of a minion are displayed in white. If they are less than usual, this number turns red, if they are more, they turn green. This is important as it gives the player immediate information what minions could be healed or be otherwise impacted by cards with certain requirements.

This is intuitive as green usually refers to something good, while red refers to something bad. Another example is cards with the shape of a shield to signal that this minion is defending the others by not allowing anyone attack non-shielded minions, as well as cards that are visible behind fog to indicate that they cannot be attacked as they are »invisible« to the opponent.

The frequent use of natural mappings is also of help to the player. Cards that have an effect on them have a glittering animation placed on top of them, making them stand out as special. Cards that can be played get a green edge so they stand out from others. That edge turns yellow if a card has requirements which are met, making it noticeably different from the green ones.



Once a deck has been created, players can re-use it as many times as they wish, coming to a greater understanding of how their deck works best and how it is played best.

The increased volume in which an audience is cheering when damage is done signals the player the amount of damage he/she has just done (besides the number being displayed), just as the difference in size of minions and avatars clearly indicate their importance for the game.

Besides the increase in volume when attacking, there is a vast amount of feedback the player receives. Every single action a player or the system can do or trigger is animated to a granular level. This goes from cards flying from the deck into the player's hand, to the large display of any played card, to the glowing of a card whose requirements have just been met and therefore some special effect has been activated, to objects even outside the playing field being clickable and giving a noticeable response. The granular level in which a player receives feedback for every single action in the game is something Hearthstone really excels at and provides the most accessibility.

This feedback is an important aspect to enable players who are unfamiliar with collectible card games altogether to understand how the connections between the possibilities work. But it provides players who are familiar with digital or non-digital collectible card games with the necessary information to understand the connections that are specific to Hearthstone just as well, even though the game will be more accessible to them to begin with.

Conclusion

Hearthstone can be perceived as a fairly difficult game. Even though the average player skill is higher than required and the true difficulty is very low, the other factors contribute to a more difficult perception. (A)

The high complexity of Hearthstone lies mostly in the nature of it being a collectible card game. As all such games, it has a very wide and very deep set of possibilities, with many connections among them. (B)

Combined with the accessibility of Hearthstone, the difficulty may appear even higher than the complexity of the game to players, as it is not as difficult as it is complex, but decreases complexity more than it does decrease difficulty. (C)

It is difficult to assign weight to individual parameters – consider the graph in figure 3 as an indicator of all of them combined.

Guide to accessible Game Design

Every game design, in general, should aim to be accessible, since a game that is not accessible at all will not be played at all. It has been thoroughly discussed what makes games of various complexity and difficulty more accessible or less accessible, but it is worthwhile to summarize these factors into a short guide to help game designers improve the accessibility of their games. Obviously, following this guide will not guarantee an accessible game design.

1. Knowing the Target Audience is Key

In order to provide good accessibility, it is of the utmost importance that it is known to the designer what skills the players he/she is building games for possess and what they expect out of a game.

An important aspect of knowing what they expect out of a game is knowing what they expect and what investments will be required of them. Just because the player has the necessary skills to progress in a game, he/she does not necessarily want to make use of them, if he/she is looking for a more relaxed experience. But, it is possible that players are looking for a challenge, something that brings their skills to a limit and are willing to invest a lot of effort. This can also be the case if the theme is very fitting to their taste.

The skills of the target audience make up the foundation of possible innovations. If the target audience is barely skilled in anything necessary to play the game, this may either not be the right target audience or the right time to innovate. On the other hand, if the target audience can be expected to know most of the skills necessary to progress in the game very well, it may even be necessary to, while relying on the assumed skill-set, increase complexity and/or difficulty in order not to bore these players.

2. Knowing the wanted Perceived Difficulty and Complexity allows reasonable Adjustments

By knowing the target audience for a game, it becomes much easier to anticipate how difficult players will perceive that game. This provides game designers with knowledge about the ability of players to deal with the true difficulty of a game as well as the expectations they have for the difficulty of individual challenges.

Depending on the willingness to invest in a game it can be derived how difficult and complex that game should be perceived as. Some factors that make up the perceived difficulty or complexity are hard to change, as they make up the core game mechanics or the whole concept relies on them in other ways (theme, for example). All the other factors can be adjusted to meet the perceived difficulty and complexity that is wanted from a design standpoint. Using the methods applied in this paper, it is possible to pinpoint the factors that can most easily be changed to increase or decrease the perceived difficulty and complexity.

3. Improving is more accessible than Innovation by Nature

The more developed the assumed, necessary skills for a game are, the more room there is for innovation. Since it is only logical that players have varying skills, a lower assumed set of necessary skills will make a game more accessible to a larger audience, which can be seen as increasing accessibility altogether.

It can be said that, in general, games that meet the players' expectations are by nature more accessible. If the players' mental model about a new game is just expanded and does not need to be overthrown, the amount of things they will actively have to remember will be smaller. Players in general will always have to memorize everything they did not expect the first time they encountered it. This can be reduced by standardization or even internalizations, but in the beginning, it is best to have the player have as little of these »surprises« as possible, so that he/she can get used to them while experiencing mostly what he/she is expecting.

4. Iterating and Testing is obligatory

As it is the case with all assumptions, they can be wrong to varying degrees. It is therefore not enough to analyze and take the aforementioned tips into account, but to still test it with actual users. Good assumptions and thorough analyses can only save time, but never reflect experiencing of playing a game altogether.

Simon Sterz

Perceived Difficulty

Factor	Impact
Average player skill	Change of aspect: Decrease
Frequency of new challenges	Change of aspect: Increase
True difficulty	Change of aspect: Decrease
Skill level required to overcome challenges	Change of aspect: Irrelevant
Opportunities to improve necessary skills	Change of aspect: Irrelevant
Expectation of difficulty for a challenge	Change of aspect: Irrelevant
Mistakes/Punishment ratio	Change of aspect: Irrelevant
Loss of progress	Change of aspect: Increase

A: Even though the average player skill is higher than required and the difficulty is low, other factors contribute to a more difficult perception.

Perceived Complexity

Factor	Impact
Breadth of possibilities	Change of aspect: Increase
Depth of possibilities	Change of aspect: Increase
Connections between possibilities	Change of aspect: Increase
Standardization of possibility sets	Change of aspect: Irrelevant
Physical constraints	Change of aspect: Increase
Semantic constraints	Change of aspect: Irrelevant

B: The high complexity of Hearthstone lies mostly in the nature of it being a collectible card game.

Accessibility

Factor	Perceived difficulty	Perceived complexity
Helps set appropriate goals	Change of aspect: Increase	Change of aspect: Increase
Natural constraints	Change of aspect: Increase	Change of aspect: Increase
Cultural constraints	Change of aspect: Increase	Change of aspect: Decrease
Declarative knowledge	Change of aspect: Increase	Change of aspect: Decrease
Procedural knowledge	Change of aspect: Increase	Change of aspect: Increase
Natural mappings	Change of aspect: Increase	Change of aspect: Decrease
Familiarities of similar games	Change of aspect: Irrelevant	Change of aspect: Decrease
Constant feedback on a granular level	Change of aspect: Increase	Change of aspect: Decrease

C: Combined with the accessibility of Hearthstone, the difficulty may appear even higher than the complexity.

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K1010 Media		Erkelenzdamm 59-61	10999	Berlin	030 / 57709936	info@k1010.de
keen games		Dreieichstraße 59	60594	Frankfurt am Main	069 / 66058838	info@keengames.com
King Art	key player	Tiefer 5	28195	Bremen	0421 / 322760	contact@kingart.de
KORION Simulation		Mömpelgardstraße 16	71640	Ludwigsburg	07141 / 3898231	info@korion.de
kr3m.media		Kaiserstraße 158	76133	Karlsruhe	0721 / 18395918	
Kritzelkratz 3000		Dieselstraße 2-6	97082	Würzburg	0931 / 3536091	info@kritzelkratz.de
kunst-stoff		Kottbusser Damm 73	10967	Berlin	030 / 23457178	info@kunst-stoff.de
Limbic Entertainment		Heinrich-Hertz-Straße 21	63225	Langen	06103 / 5019780	info@limbic-entertainment.de
MADE		Alter Schlachthof 39	76131	Karlsruhe	0721 / 78809460	
MaDe Games GbR Neetix - Wycislik		Hochstraße 34	41334	Nettetal		info@madegames.com
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Media Seasons		Liviastraße 6	4105	Leipzig	0341 / 2156752	contact@mediaseasons.com
Mex IT		Mallinckrodtstraße 320	44147	Dortmund	0231 / 58680722	mex@mex-solutions.com
Mimimi Productions		Berg-am-Laim-Straße 64	81673	München	089 / 809115070	info@mimimi-productions.de
Mind Elevator Games		Prenzlauer Promenade 190	13189	Berlin	030 / 91744394	info@mindelevatorgames.com
mobivention		Gottfried-Hagen-Straße 24	51105	Köln	0221 / 6778110	info@mobivention.com
Moonbyte Games		Wormser Landstraße 17	67346	Speyer	06232 / 8774482	info@moonbytegames.com
NeoBird		Südwestpark 37-41	90449	Nürnberg	0911 / 3092097	info@neobird.de
netmin games		Philipp-Reis-Straße 6	55129	Mainz	06131 / 507896	schreiber@netmin.de
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online4ever Limited		Manitiusstraße 6	1067	Dresden	0351/ 2063875	info@online4ever.biz
OFM - OnlineFussballManager	key player	Eupener Straße 60	50933	Köln	0221 / 88892920	office@onlinefussballmanager.de
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Pappuga		Fürther Straße 212	90429	Nürnberg	0911 / 32378310	info@pappuga.com
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Piranha Bytes		Ruhrallee 63	45138	Essen	0201 / 806720	info.nospam@piranha-bytes.com
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playzo		Heinrich-Herz- Straße 6	64295	Darmstadt	06151 / 6673700	info@playzo.biz
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Pop Rocket Studios GmbH		Forsmannstraße 8b	22303	Hamburg	040 / 68878691	info@poprocket.com
Procontis		Am Bauhof 18	64807	Dieburg	06071 / 430111	sales@procontis.de
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Quadriga Games		August-Bebel-Straße 27	14482	Potsdam	0331 / 23189660	info@quadrigagames.com
Rat King Entertainment		Robert-Franz-Ring 3	06108	Halle	0345 / 6141741	mail@ratking.de
Ravensburger Digital		Kaflerstraße 8	81241	München	089 / 12228180	tellme@ravensburger-digital.com
Reality Twist		Berg-Am-Laim-Straße 64	81673	München	089 / 380129500	mail@reality-twist.com
Realmforge Studios		Hofer Straße 15	81737	München	089 / 55069134	info@realmforgestudios.com
RedMoon Studios		Dieselstrasse 16	86368	Gersthofen	0821 / 45598000	info@redmoonstudios.de
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remote control productions	key player	Karlstraße 68	80335	München	089 / 21020570	info@r-control.de
RockABByte		Schaafenstraße 25	50676	Köln	0221 / 80147950	info@rockabyte.com
SAFKAS Development		Schulze-Delitzsch-Straße 39	04315	Leipzig		mail@safkas.de
Sandbox		Bornholmer Strasse 71	10439	Berlin	030 / 40045181	info@sandbox-interactive.com
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Skunk Brothers		Dieselstraße 12	61191	Rosbach		hello@skunkbrothers.de
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Snapjaw Games		Dieselstrasse 7	50259	Pulheim	02238 / 4785813	info@snapjawgames.com
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SpinBottle Games		Weidkamp 3	45355	Essen	0201 / 1789614	info@spinbottlegames.com
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Splitscreen Studios		Neuer Kamp 30	20357	Hamburg		info@splitscreenstudios.com
Springwald Software		Alter Eistreff 36	44789	Bochum	0700 / 777464925	info@springwald.de
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stillalive studios		Rosengasse 1	A-6020	Innsbruck	+43 / 650 / 3468942	info@stillalive-studios.com
Stratosphere Games	key player	Gormannstraße 14	10119	Berlin	0177 / 7887699	info@stratosphere-games.com
Studio Fizbin		Hoferstraße 20	71636	Ludwigsburg	07141 / 9923866	hello@studio-fizbin.de
Sunlight Games		Im Klapperhof 7-23	50670	Köln	0221 / 16823466	kontakt@sunlight-games.com
symbiCrowd		In der Schleh 27	5224	Eschweiler	0152 / 55878044	apps@symbicrowd.de
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TG Nord		Große Düwelstraße 28	30171	Hannover	0511 / 9409208	mail@tg-nord.com
the Good Evil		Gilbachstraße 22	50672	Köln	0221 / 16894248	hello@thegoodevil.com
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Travian Games		Wilhelm-Wagenfeld-Straße 22	80807	München	089 / 3249150	mail@traviangames.com
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V-Play		Kolonitzgasse 9/11-14	A-1030	Wien		team@v-play.net
Wolpertinger Games		Karlstraße 68	80335	München	089 / 210205700	contact@wolpertingergames.com
wooga		Saarbrücker Straße 38	10405	Berlin	030 / 32505294	info@wooga.com
Xendex		Mariahilfer Strasse 176/6	A-1150	Wien	+43 / 1 / 89080090	office@xendex.com
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YAGER Development	key player	Pfuelstraße 5	10997	Berlin	030 / 69597660	contact@yager.de
YEPS! GmbH		Methweg 22	50823	Köln	0221 / 30191824	kontakt@yeps.de
zeitland media & games		Mathildenstraße 10/1	71638	Ludwigsburg	07141 / 5050565	contact@zeitland.com
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Z-Software		Lindemannstrasse 81	44137	Dortmund	0231 / 33015031	contact@z-software.net

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ad2games	key player	Rosenstraße 17	10178	Berlin	030 / 240888221	info@ad2games.com
Aeria Games Europe	key player	Schlesische Straße 27, Aufgang C	10997	Berlin		info@aeriagames.com
Aerosoft		Lindberghring 12	33142	Büren	02955 / 760310	info@aerosoft.de
Application Systems Heidelberg		Pleikartsförsterhof 4/1	69124	Heidelberg	06221 / 300002	kontakt@application-systems.de
AppLift		Rosenstraße 17	10178	Berlin	030 / 240888208	info@applift.com
astragon Software		Limitenstrasse 64-78	41236	Mönchengladbach	02166 / 146450	info@astragon.de
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BHV		Novesiastraße 60	41564	Kaarst	02131 / 76501	info@bhv.de
Bigpoint		Drehbahn 47-48	20354	Hamburg	040 / 8814130	info@bigpoint.net
bitComposer Entertainment		Mergenthalerallee 79-81	65760	Eschborn	06196 / 7793810	info@bit-composer.com
Capcom Entertainment Germany GmbH		Borselstraße 20	22765	Hamburg	040 / 6965620	info@capcomeuro.de
Covus Crobo	key player	Schwedter Straße 263	10119	Berlin		info@crobo.com
Crimson Cow		Tarpen 40, Haus 5	22419	Hamburg	040 / 59355237	info@crimsoncow.de
Crytek	key player	Grüneburgweg 16-18	60322	Frankfurt am Main	069 / 21977660	cryengine@crytek.com
Daedalic Entertainment	key player	Papenreye 53-Workport Unit 2	22453	Hamburg	040 / 43261270	info@daedalic.de
Deck13 Interactive		Gutleutstraße 82	60329	Frankfurt am Main	069 / 71671660	info@deck13.com
dreamfab		Domplatz 3	93047	Regensburg	0941 / 569591520	
dtp entertainment		Goldbekplatz 3-5	22303	Hamburg	040 / 6699100	info@dtp-entertainment.com
dtp young entertainment		Goldbekplatz 3-5	22303	Hamburg	040 / 6699100	info@dtp-young.com
Electronic Arts		Im Zollhafen 15-17	50678	Köln	0221 / 975820	
European Games Group	key player	Wiener Platz 7	81667	München		contact@gamesgroup.eu
EuroVideo Medien		Bavariafilmplatz 7 / Gebäude 33	82031	Grünwald	089 / 96244442	info@eurovideo.de
flashpoint	key player	Valvo Park - Haus 5c / Tarpen 40	22419	Hamburg	040 / 710060	info@flashpoint.de
GameDuell		Taubenstraße 24-25	10117	Berlin	030 / 288768211	impressum@gameduell.de
Gameforge	key player	Albert-Nestler-Straße 8	76131	Karlsruhe	0721 / 3548080	info@gameforge.de
GameGenetics	key player	Alte Jakobstraße 85-86	10179	Berlin	030 / 922512769	info@gamegenetics.de
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GameTwist		Mariahilfer Straße 47/1/102	1060	Wien	+43 / 1494 / 5056	3rdparty@gametwist.com
GamesInFlames		Karlstraße 68	80335	München	089 / 210205715	info@gamesinflames.com
gamigo	key player	Behringstraße 16b	22765	Hamburg	040 / 4118850	info@gamigo.com
Halycon Media		An der Autobahn 24	23858	Reinfeld	04533 / 61090	infomail@halycon.de
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HitFox Group		Rosenstraße 17	10178	Berlin	030 / 240888200	info@hitfoxgroup.com

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Infernum Productions		Uhlandstraße 175	10719	Berlin	030 / 91201090	contact@infernum.com
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Intenium		Neuer Pferdemarkt 1	20359	Hamburg	040 / 25494296	info@intenium.de
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Millform		Kummelenstrasse 20	CH-4104	Oberwil/BL	+41 / 61 / 7220712	werner.sala@millform.ch
mixtvision Digital	key player	Leopoldstraße 25	80802	München	089 / 383770925	kontakt@mixtvision.de
Morphicon Limited	key player	Lindwurmstraße 88	80337	München	089 / 45235460	info@morphicon.de
NBG		Brunnfeld 2-6	93133	Burglengenfeld	09471 / 70170	info@nbg-online.de
Nintendo		Nintendo Center	63760	Grossostheim	06026 / 9500	info@nintendo.de
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Novitas		Frankfurter Straße 2	38122	Braunschweig	02574 / 9270	kontakt@greenpepper.de
Phenomedia		An der Sandkull 81a	47445	Moers	02327 / 9970	info@phenomedia.com
Playa Games	key player	Alstertor 9	20095	Hamburg	040 / 76793220	info@playa-games.com
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ProSiebenSat.1 Games		Medienallee 6	85774	Unterföhring	089 / 950710	info@sevengames.de
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Reality Twist		Berg-Am-Laim-Straße 64	81673	München	089 / 380129500	mail@reality-twist.com
redspotgames		Postfach 310464	80104	München	089 / 4036370	info@redspotgames.com
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S.A.D.		Rötelbachstraße 91	89079	Ulm	07305 / 96290	kontakt@s-a-d.de
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SERU		Industriestraße 8	24589	Nortorf	04392 / 84900	info@seru.de
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Square Enix		Domstraße 17	20095	Hamburg	040 / 30633400	
Take-Two Interactive	key player	Agnesstraße 14	80798	München	089 / 278220	info@take2.de
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Tivola Publishing		Oeverseestraße 10-12	22769	Hamburg	040 / 7070063	mail@tivola.de
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Traffic Captain		Wendenstraße 21b	20097	Hamburg	040 / 23706800	info@trafficcaptain.com
Travian Games		Wilhelm-Wagenfeld-Straße 22	80807	München	089 / 3249150	mail@traviangames.com
Ubisoft	key player	Adlerstraße 74	40211	Düsseldorf	0211 / 338000	info@ubisoft.de
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upjers	key player	Hafenstraße 13	96052	Bamberg	0951 / 510908100	mail@upjers.com
YEPS! GmbH		Methweg 22	50823	Köln	0221 / 30191824	kontakt@yeps.de
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BIU	key player	Charlottenstraße 62	10179	Berlin	030 / 24087790	info@biu-online.de
BIU.Dev/BIU.Net	key player	Charlottenstraße 62	10117	Berlin	030 / 24087790	info@biu-online.de
FilmFernsehFonds Bayern	key player	Sonnenstraße 21	80331	München	089 / 5446020	filmfoerderung@fff-bayern.de
Film- und Medienstiftung NRW	key player	Kaistrasse 14	40221	Düsseldorf	0211 / 9305000	info@filmstiftung.de
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gamearea FRM		Holzhausenstraße 22	60322	Frankfurt am Main	069 / 94419441	info@gamearea-frm.de
gamecity:Hamburg	key player	Habichtstraße 41	22305	Hamburg	040 / 2270190	info@gamecity-hamburg.de
GAMEplaces		Hanauer Landstraße 126-128	60314	Frankfurt am Main	069 / 21236214	manuela.schiffner@gameplaces.de
games.net berlinbrandenburg	key player	Ackerstraße 3A	10115	Berlin	030 / 24628570	games.net@medianet-bb.de
GDI.Ruhr		Kreuzstraße 1	45468	Mülheim an der Ruhr	0208 / 69801520	info@games-ruhr.com
Hessen-IT		Abraham-Lincoln-Straße 38 - 42	65189	Wiesbaden	0611 / 7748481	info@hessen-it.de
medienboard berlin-brandenburg	key player	August-Bebel-Straße 26-53	14482	Potsdam-Babelsberg	0331 / 743870	info@medienboard.de
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nordmedia	key player	Expo-Plaza 1	30539	Hannover	0511 / 1234560	info@nordmedia.de
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ÖVUS		Aichhorngaße 14	A-1120	Wien	+43 / 1810 / 328912	office@ovus.at
Stiftung Digitale Spielkultur		Torstraße 6	10119	Berlin	030 / 29049290	kontakt@stiftung-digitale-spielekultur.de
USK	key player	Torstraße 6	10119	Berlin	030 / 24088660	kontakt@usk.de
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EDUCATION

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BTK - Hochschule für Gestaltung		Bernburger Straße 24-25	10963	Berlin	030 / 338539510	berlin@btk-fh.de
Cologne Game Lab / Fachhochschule Köln		Ubierring 40	50678	Köln	0221 / 82753095	info@colognegamelab.de
Designhochschule Schwerin		Bergstraße 38	19055	Schwerin	0385 / 5559775	info@designschule.de
EC Europa Campus		Lyonerstraße 34	60528	Frankfurt am Main	0621 / 8425660	
FH OÖ Studienbetriebs GmbH		Softwarepark 11	A-4232	Hagenberg	+43 (0) 5080420	info@fh-hagenberg.at
FH Trier		Schneidershof	54293	Trier	0651 / 8103345	sek@informatik.fh-trier.de
FH Technikum Wien		Mariahilfer Straße 37-39	1060	Wien	+43 / 1 / 588390	info@technikum-wien.at
FH Salzburg		Urstein Süd 1	A-5412	Puch/Hallein	+43 / 50 / 22110	press@fh-salzburg.ac.at
Games Academy Berlin	key player	Rungestrasse 20	10179	Berlin	030 / 29779120	info@games-academy.de
Games Academy Frankfurt	key player	Hanauer Landstraße 146	60314	Frankfurt	069 / 42696460	info@games-academy.de
Gesellschaft für Personalentwicklung und Bildung		Beuthstraße 7-8	10117	Berlin	030 / 9339480	gpb-berlin@gpb-berlin.de
Hochschule Harz		Friedrichstrasse 57-59	38855	Wernigerode	03943 / 659100	dackermann@hs-harz.de
Hochschule Mittweida (FH)		Technikumplatz 17	09648	Mittweida		kontakt@hs-mittweida.de
HTW Berlin		Wilhelminenhofstraße 75a	12459	Berlin	030 / 50190	
Macromedia Akademie		Elsenheimerstraße 63	80687	München	089 / 96160800	ausbildung@macromedia.de
Macromedia Akademie		Naststraße 11	70376	Stuttgart	0711 / 2807380	info.stgt@macromedia.de
Macromedia Akademie		Brüderstraße 17	50667	Köln	0221 / 3108223	akademie.koeln@macromedia.de

EDUCATION

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mAHS, media Akademie - Hochschule Stuttgart		Tübinger Straße 12-16	70178	Stuttgart	0711 / 925430	info@media-hs.de
Mediadesign Hochschule	key player	Lindenstraße 20-25	10969	Berlin	030 / 3992660	info-ber@mediadesign-fh.de
Mediadesign Hochschule	key player	Werdener Straße 4	40227	Düsseldorf	0211 / 1793930	info-dus@mediadesign-fh.de
Mediadesign Hochschule	key player	Claudius-Keller-Straße 7	81669	München	089 / 4506050	info-muc@mediadesign-fh.de
S4G School for Games		Gubener Straße 47	10243	Berlin	030 / 96595244	info@school4games.net
SAE Institute Berlin	key player	Soltauer Straße18-22	13509	Berlin	030 / 43094470	berlin@sae.edu
SAE Institute Bochum	key player	Metzstraße 23	44793	Bochum	0234 / 93451310	bochum@sae.edu
SAE Institute Frankfurt	key player	Homburger Landstraße 182	60435	Frankfurt am Main	069 / 543262	frankfurt@sae.edu
SAE Institute Hamburg	key player	Feldstraße 66	20359	Hamburg	040 / 23688080	hamburg@sae.edu
SAE Institute Köln	key player	Medienzentr. Ost, Carlswerkstr. 11c	51063	Köln	0221 / 9541220	koeln@sae.edu
SAE Institute Leipzig	key player	Dittrichring 10	40109	Leipzig,	0341 / 3085160	leipzig@sae.edu
SAE Institute München	key player	Bayerwaldstraße 43	81737	München	089 / 89068771	muenchen.sae.edu
SAE Institute Stuttgart	key player	Stuttgarter Straße 23	70469	Stuttgart	0711 / 81473690	stuttgart@sae.edu
SRH Fachschulen		Bonhoefferstraße 1	69123	Heidelberg	06221 / 884225	it.heidelberg@fachschulen.srh.de
SRH Hochschule Heidelberg	key player	Ludwig-Guttmann-Straße 6	69123	Heidelberg	06221 / 882790	Daniel.Goerlich@Hochschule-Heidelberg.de
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Anakan (Lokalisation)		Pfuelstraße 5	10997	Berlin	030 / 531420450	ana@anakan.de
Aruba Events		Kreuzstraße 1-3	45468	Mülheim an der Ruhr	0208 / 6982608	infos@aruba-events.de
arvato games task force		Carl-Bertelsmann-Straße 161F	33332	Gütersloh	05241 / 803074	kontakt@gamestaskforce.de
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Die Hobrechts (Game Thinking)		Hobrechtstraße 65	12047	Berlin	030 / 62901232	info@diehobrechts.de
Dr. Behrmann & Härtel Rechtsanwälte		Kantstraße 98	10627	Berlin	030 / 319984910	info@behrmannhaertel.de
Buschbaum Media & PR		Emanuel-Leutze Straße 21	40547	Düsseldorf	0211 / 5988140	presse@buschbaum-media.com
Clans.de (Network)		Pinnasberg 47	20359	Hamburg	040 / 78800990	info@clans.de
CULTURETRANSLATE		Lyoner Straße 34	60528	Frankfurt am Main	069 / 659998000	info@culturetranslate.de
DELASOCIAL		Christoph-Probst-Weg 31	20251	Hamburg	040 / 87979890	contact@delasocial.com
Digital River		Vogelsanger Straße 78	50823	Köln	0221 / 310 88614	sales@digitalriver.com
Effective Media		Josef-Haumann-Straße 10	44866	Bochum	02327 / 22310	info@effective-media.de
Frankfurter Buchmesse		Reineckstraße 3	60313	Frankfurt am Main	069 / 21020	info@book-fair.com
Freaks 4U Gaming		An der Spreeschanze 10	13599	Berlin	030 / 41719113	info@freaks4u.de
Friedmann Kommunikation		Schanzenstraße 36	51063	Köln	0221 / 5348710	info@fr-k.de
Gärtner PR		Destouchesstraße 68	80796	München	089 / 30766854	info@gaertner-pr.de
Game Developers Conference Europe	key player	Kaiser-Wilhelm-Straße 30	12247	Berlin	030 / 34622644	carsten.kohlenbeck@ubm.com
gamescom	key player	Messeplatz 1	50679	Köln	0221 / 8213894	info@koelnmesse.de
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Games Quality		Zum Wasserwerk 15	15537	Erkner	03362 / 885688	info@games-quality.com
Gamify Now!		Karlstraße 68	80335	München	089 / 210205715	info@gamify-now.de
GAMINSIDE		Kaiserstraße 2-4	1070	Wien	+43 / 0676 / 5379776	info@gaminside.com
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GlobaLoc	key player	Storkower Straße 158	10407	Berlin	030 / 428075780	info@globaloc.de
GRAEF Rechtsanwälte		Jungfrauenthal 8	20149	Hamburg	040 / 80600090	www.graef.eu
HoneyTracks (Game Analytics)		Schelling Straße 35	80799	München	089 / 28723995	info@honeytracks.com
IEM Consulting (Business Development, Finanzierung)		Hanauer Landstraße 192	60314	Frankfurt am Main	069 / 15346479	info@iem-consulting.com
IHDE & Partner (Rechtsberatung)		Schoenhauser Allee 10-11	10119	Berlin	030 / 44318660	berlin@onlinelaw.de
INPROMO		Gasstraße 6a	22761	Hamburg	040 / 23881771	kontakt@inpromo.de
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Marchsreiter Communications		Guldeinstraße 41a	80339	München	089 / 51919942	dm@marchsreiter.com
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Partnertrans (Lokalisation)		Leipziger Straße 28	40822	Mettmann	02104 / 172660	info@partnertrans.com
paysafecard.com Wertmarken		Am Europlatz 2	1120	Wien	+43 / 1 / 72083800	sales@paysafecard.com
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Quinke Networks (PR, Marketing)		Bei den Mühren 70	20457	Hamburg	040 / 43093949	mail@quinke.com
remote control productions (Producing)		Sendlinger-Tor-Platz 6	80336	München	089 / 210205700	info@r-control.de
Rode + Mathé (Rechtsberatung)		Henriettenweg 4	20259	Hamburg	040 / 43270432	info@rodemathe.de
ROESSLER PR (Marketing, PR, Consulting)		Walter-Leiske-Straße 2	60320	Frankfurt am Main	069 / 514461	communicate@roesslerpr.de
S&H Entertainment Localization (Lokalisation)		Weidenstraße 10a	82110	Germering	089 / 80076290	stefan@shentloc.com
SCC (Crossmedia)		Orleansstraße 5a	81669	München	089 / 33094660	info@scc-feld.de
Schanz International (Consulting)		Bgm.-Oberhettinger-Straße 2a	67146	Deidesheim	06326 / 6010	info@schanzgames.com
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Selected Minds (Personalberatung)		Walther-Rathenau-Straße 16	64521	Groß-Gerau	06152 / 1871830	info@selected-minds.de
Serious Games Conference		Expo Plaza 1	30539	Hannover	0511 / 1234560	sgc@nordmedia.de
Sputnic Consulting		Ehrenbergerstr. 11	98693	Ilmenau	03677 7996990	media@sputnic-consulting.com
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Translation-Taxi		Beusselstraße 28	10553	Berlin	030 / 28371428	info@translation-taxi.com
Turtle Entertainment (eSport)		Siegburger Straße 189	50679	Köln	0221 / 8804490	info@turtle-entertainment.de
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Visibility Communications (PR, Text)		Wichertstraße 16/17	10439	Berlin	030 / 58859941	hi@visi.bi
waza!		Sonnenallee 70	12045	Berlin	0178 / 5223697	jannot@wazaservices.de
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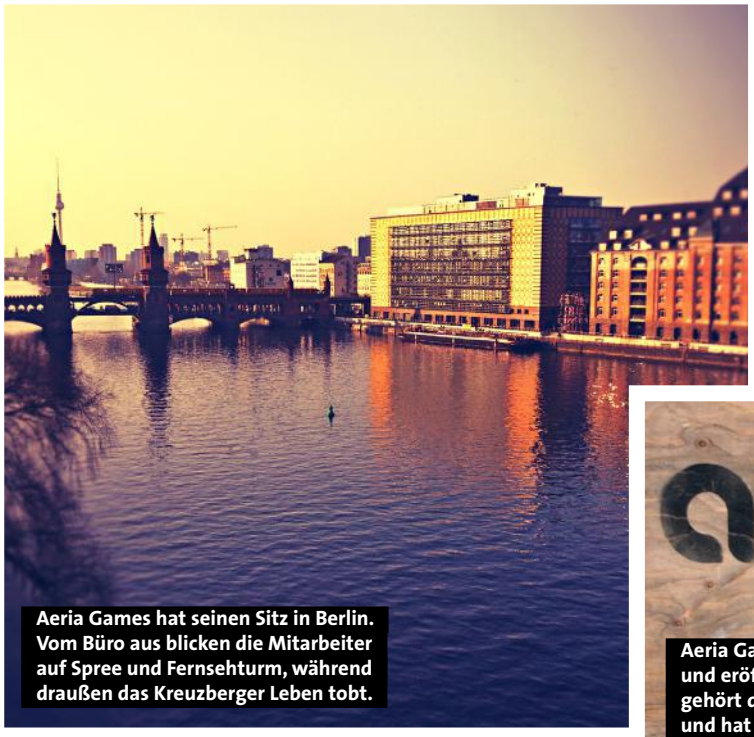
TECHNICAL SERVICE

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Akamai Technologies		Betastraße 10B	85774	Unterföhring	089 / 94006308	contact-germany@akamai.com
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Augmented Minds		Fasangartenstraße 134	81549	München	089 / 69386904	info@augmented-minds.com
BiteTheBytes (Middleware)		St. Gallener Straße 9	36039	Fulda	0661 / 2006899	info@bitethebytes.com
B.TON Medien (Audio, Musik)		Luise-Ullrich-Straße 4	82031	Grünwald	089 / 189425490	mix@bton.de
Centroid (Motion Capturing)		Schlesische Straße 27	10997	Berlin	030 / 69807474	sven.bergmann@centroidanimation.com
Chromatrix (Mobile Gaming)		Kalkofenstraße 2	72411	Bodelshausen	07471 / 740828	info@chromatrix.com
Codecult (3D-Engine)		Kemnastraße 21a	44866	Bochum	02327 / 35474	info@codecult.com
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Creature Factory		Graefestraße 33	10967	Berlin	030 / 26301330	info@creature-factory.com
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DICO Deutschland	key player	Freiburger Straße 5	51107	Köln	0221 / 20430504	info@dico4u.com
Doublesmith (Art/Animation)		Ranzonigasse 3/3	A-3100	St. Pölten	+43 / 699 / 19447880	mail@doublesmith.com
Dutyfarm		Oranienstraße 6	10997	Berlin	030 / 30368430	info@dutyfarm.com
Dynamedion (Sounddesign)		Barbarossaring 8	55118	Mainz	06131 / 5847895	info@dynamedion.com
eurosimtec		Merowingerplatz 1	40225	Düsseldorf	0211 / 3018560	info@eurosimtec.de
Exit Games (Network Engine)		Hongkongstraße 7	20457	Hamburg	040 / 4135960	business@exitgames.com
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fadeout (Audio Design)		Austraße 6	CH-4153	Reinach	+41 / 7 / 92793244	info@fadeout.ch
fatfoogoo		Mariahilferstraße 50	A-1070	Wien	+43 / 1 / 23622970	office@fatfoogoo.com
Flow Studios		Gustav-Meyer-Allee 25	13355	Berlin	030 / 80929203	info@flow-studios.eu
Games Quality (Quality Assurance)		Zum Wasserwerk 15	15537	Erkner	03362 / 885688	info@games-quality.com
Global Producer (Production)		Hauptstraße 172	51143	Köln	02203 / 97722400	getintouch@global-producer.com
Glare Studios (Grafik)		Mansteinstraße 18	20253	Hamburg	02307 / 4388404	contact@glarestudios.de
Goal Games		Feurigstraße 54	10827	Berlin	030 / 78957102	info@goal-games.de
GreenMamba-Studios (Animation)		Aloysstraße 7	48249	Dülmen	02594 / 7928217	info@greenmamba-studios.de
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Havok		Arbachtalstraße 6	72800	Eningen	0712 / 1986993	info@havok.com
Intulo (3D, Animation)		Lindholz 89	31139	Hildesheim	05121 / 2944022	info@intulo.de
Keuthen		Robert-Koch-Straße 41	55129	Mainz	06131 / 880890	info@keuthen.net
Konsole Labs	key player	Gritznerstraße 42	12163	Berlin	030 / 23634838	info@konsole-labs.com
Lingoona (Lokalisations-Middleware)	key player	Hildastraße 38	68723	Plankstadt	06202 / 4095030	info@lingoona.com
Living Liquid Software		Langer Weg 15	A-6020	Innsbruck	+43 / 0 / 512263535	info@livingliquid.com
metricminds (Grafik)		Rüsselsheimer Straße 22	60326	Frankfurt am Main	069 / 7593380	info@metricminds.com
MobileBits (Mobile Engine)		Lerchenstraße 28	22767	Hamburg	040 / 33429566	info@mobilebits.de
morro images (Grafik)		August-Bebel-Straße 27	14482	Potsdam-Babelsberg	0331 / 97996610	info@morroimages.com
Nevigo (Tools & Middleware)		Lyrenstraße 13	44866	Bochum	02327 / 8369840	info@nevigo.com
Periscope Studio (Audio)		Am Diebsteich 55	22761	Hamburg	040 / 31811767	info@periscopestudio.de
Phenomatics (XNA-Entwicklung, Consulting)		Hafenstrasse 47-51	A-4020	Linz/Donau	+43 / 732 / 90155230	office@phenomatics.com
PiXABLE STUDIOS	key player	Buchenstraße 16b	01097	Dresden	0351 / 56341360	info@pixable.de
Polyce (Grafik)		Littenstraße 106/107	10179	Berlin	0178 / 3592560	info@polyce.de
Polygonfabrik (Grafik)		Friesenstraße 21	28203	Bremen		kontakt@polygonfabrik.de
Project-C (HYDRA)		Dorfstraße 50	29336	Nienhagen	05144 / 6988871	kontakt@project-c.eu
Rabcat Computer Graphics (Grafik)		Fernkorngasse 10	A-1100	Wien	+43 / 1 / 5237425	mail@rabcat.com
Razer (Hardware)		Winterhuder Weg 82	22085	Hamburg	040 / 419299300	
Rocketbox Studios (Grafik)		Leonhardtstraße 10	30175	Hannover	0511 / 8984384	info@rocketbox.de
Spinor (3D-Engine)		Agnes-Pockels-Bogen 1	80992	München	089 / 54043980	spinor@spinor.com
The Light Works (Grafik)		Otto-Hahn-Straße 7	50997	Köln	02236 / 967322	info@thelightworks.com
ToBringAlive (Animation, Design)		Ostmarkstraße 49	48145	Münster	0251 / 392312	angerbauer@tobringalive.com
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TON & SPOT audiodesign (Sound)		Immanuelkirchstraße 15	10405	Berlin	030 / 92129727	post@ton-und-spot.de
Toygardens Media (Grafik, Video)		Walderseestraße 54	30163	Hannover	0511 / 33659800	akunze@toygardens.com
VCC Perfect Pictures (Grafik, Video)		Doormannsweg 43	20259	Hamburg	040 / 431690	hamburg@vcc.de
Versant (Data Management)		Wiesenkamp 22b	22359	Hamburg	040 / 609900	info@versant.com
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Z-Ground Illustration (Grafik)		Oeltzenstraße 17	30169	Hannover	0511 / 1696959	jz@z-ground.com
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Ein Tag bei ...
AERIA GAMES



Aeria Games hat seinen Sitz in Berlin. Vom Büro aus blicken die Mitarbeiter auf Spree und Fernsehturm, während draußen das Kreuzberger Leben tobt.



Vom anderen Ufer der Spree aus hat man einen fantastischen Blick auf den denkmalgeschützten Speicher, in welchem sich die Büros befinden. Aeria Games hat mit seinen 320 Mitarbeitern mehrere Etagen belegt.



Aeria Games wurde 2006 in den USA gegründet und eröffnete 2008 das Berliner Büro. Seit 2014 gehört das Unternehmen zu ProSiebenSat.1 und hat damit auch seinen Hauptsitz aus Santa Clara in die deutsche Hauptstadt verlagert.



Der so genannte Groundfloor, in dem Product Management und Customer Service beherbergt sind: Zwischen den Säulen mit den Unternehmenswerten sind 50 Leute für die Zufriedenheit der Spieler verantwortlich.



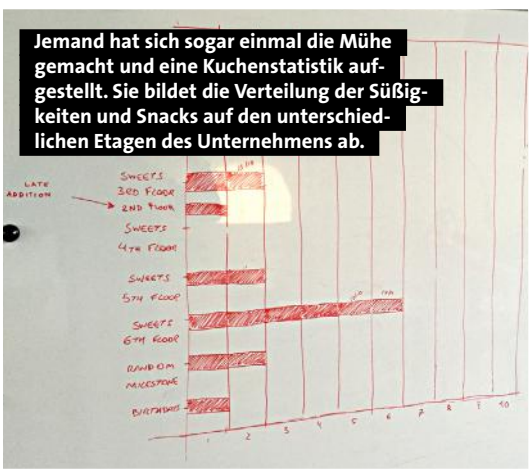
Neben Shiatsu und Meditation gibt es jeden Tag frisches Obst und Gemüse vom Biobauern. Einmal pro Quartal hat jedes Team zudem ein Budget für Teamausflüge zur Verfügung.



Meetings können durchaus auch bequem gestaltet werden. Das Aeria-Büro wurde 2013 sogar von Office Snapshots ausgezeichnet.



»Sharing is Caring« – frei nach diesem Motto ist fast jeder Tag ein Feiertag und es gibt Kuchen und Snacks von und für Kollegen. Dieses Foto entstand während eines internen Backwettbewerbs.



Jemand hat sich sogar einmal die Mühe gemacht und eine Kuchenstatistik aufgestellt. Sie bildet die Verteilung der Süßigkeiten und Snacks auf den unterschiedlichen Etagen des Unternehmens ab.

Aeria Games ist einer der großen Publisher für Mobile- und Browser-Games in Deutschland. Hier gewährt das Berliner Unternehmen Einblicke in seine Räumlichkeiten, in denen mehr als 300 Mitarbeiter beschäftigt sind.

Fotos: © Aeria Games / Max Threlfall



Als Publisher bringt Aeria Games erfolgreiche Free2Play-Spiele aus Asien nach Europa und Nordamerika. Diese werden nicht nur übersetzt, sondern in ihrem Wesen der westlichen Kultur angepasst, damit sie den Geschmack der hiesigen Spieler treffen.



Bei der Übertragung der Spiele spielt die Grafik natürlich eine große Rolle: Entwürfe zieren deshalb die Wände in den entsprechenden Abteilungen.



Der Frauenanteil bei Aeria beträgt 32 Prozent – ungewöhnlich für eine immer noch von Männern dominierte Branche. Im Unternehmen arbeiten zudem Leute aus 44 Nationen. Diversität wird groß geschrieben.



Neue Mitarbeiter bekommen einen Buddy, der sie mit der Unternehmenskultur vertraut macht. Die Unternehmenssprache ist Englisch. Für alle, die ihre Sprachfähigkeiten trainieren wollen, gibt es Deutsch- und Englischunterricht im Unternehmen.



Seit Anfang des Jahres hat Aeria Games ein neues Führungsteam. Mit Oliver Strutynski (r.) und Tom Nichols (l.) kam eine neue Ausrichtung. Während das Unternehmen in der Vergangenheit bei Spielern nicht immer den besten Ruf hatte, ist eine Säule der neuen Strategie »Player Experience«. Die Zufriedenheit der Spieler steht nun an vorderster Stelle.



Auch wenn es vielleicht anders aussieht: Was hier passiert, ist nur Spaß. Für einen selbst gedrehten Trailer zum Launch von »Echo of Soul« im letzten Jahr legten sich die Mitarbeiter ins Zeug.



Weil Pausen wichtig sind: Die Küchen auf den unterschiedlichen Etagen sind so gestaltet, dass sich alle wohlfühlen.



Die Kaffeemaschine hat den Namen Helmut und beantwortet manchmal Fragen auf Twitter.



Die Mitarbeiter engagieren sich auch neben der Arbeit für das Unternehmen. Ein Social-Event-Team kümmert sich um Veranstaltungen wie Kinoabende oder Retro-Gaming-Events und das Green Team sorgt dafür, dass der Umweltschutz nicht in Vergessenheit gerät.



Zurzeit hat Aeria Games 19 Spiele für PC, Handy und Browser im Portfolio. Im Februar ging »Dawn of Gods« an den Start, der Fußball-Manager »Goal One« wird anlässlich der EM auch in Frankreich und Großbritannien auf den Markt gebracht und vor Kurzem hat Aeria mit der Lizensierung von »Bless« ein AAA-Game an Land gezogen.

MAKING GAMES VORSCHAU

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Making-of Master of Orion

Vor rund einem Jahr kündigte Wargaming.net, bisher bekannt für »World of Tanks« und Co., einen Reboot der legendären Strategie-Reihe an. Im Making of blickt Entwickler NGD Studios zusammen mit den beteiligten Veteranen der Serie auf die Arbeiten an »Master of Orion: Conquer the Stars« zurück und erklärt, wie man ein solch altes Spiel in die Neuzeit portiert und wie man Kenner und Neueinsteiger gleichzeitig glücklich macht. Außerdem stehen Grafik, Game Design und Technik sowie Wargamings Neuausrichtung im Fokus.

Weitere Themen

Best Practice Geschäftsmodelle

Der ehemals für Browsergames bekannte Entwickler InnoGames blickt zurück und erklärt, wie die Neuausrichtung auf den Mobile-Markt verlief.

Case Study zu Teamstrukturen

Denis Rogic, ehemaliger Art Director bei Goodgame Studios, erläutert wie Leadership und Teamstrukturen in einem großen Studio funktionieren.

Best Practice Mobile Game Technologies

Sollte eine Firma eigene Tools für die Entwicklung verwenden oder sich die Mühe sparen und vorhandene Werkzeuge nutzen? Unser Experte klärt auf.

IMPRESSUM

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Gemäß der EU-Verordnung Nr. 524/2013 sind wir verpflichtet, darauf hinzuweisen, dass die Europäische Kommission (voraussichtlich ab dem 15.02.2016) unter http://ec.europa.eu/consumers/odr/ eine Plattform zur außergerichtlichen Online-Streitbeilegung (sog. OS-Plattform) betreibt.

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Respawn tears down the usual structure of any typical conference - even the lecture rooms. To give attendees a maximum of transparency, speakers present their talks at open stages. The sound is broadcasted to headsets, similar to a silent disco. Everyone can tune into the different channels at any given time, and thus decide which session is of main interest to them, on the fly. It is this casual and informal atmosphere, that lets our attendees meet on eye level and allows a unique mixup between different sectors of the industry. It is also a relaxed start into a demanding gamescom week.

Since 2014 Respawn has partnered up with GDC Europe. GDC Europe allows all Respawn Pass Holders* access to the Exhibit Hall on Monday and Tuesday.

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