



3D Wire 2015

Gamification Report

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[GECON.es](http://gecon.es) (Fundación Iberoamericana del Conocimiento)

[Paramotion Films](http://paramotion.com)



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1 Executive Summary

This document is a general report on the implementation of gamification in 3D Wire 2015 event. As the second gamification experience in this event, we have delved deeply in the previous objectives (attracting public to less frequented areas and enhancing networking) and have proposed new ones (viralization of the event on social networks and improvement of the integration of international attendees). On the other hand we defined a set of research objectives related to the study of gamification in a prominently social place as an event. Most of the goals have been met and, therefore, we've drawn conclusions and recommendations for future editions of the event, also generalizable to other experiences of gamification especially in events.

This report details the methodology and working elements from the design phase, human resources and organization of production, to the implementation and tools used and the statistical treatment and analysis of data collected during the event. The dataset is available to the public for future academic research (write us at info@gecon.es)

Also, it is concluded that event's gamification potentially improves assistance to various program events, improves socialization and networking, improves media impact, improves fun factor and improves encouragement of the production team.



Picture 1. Ready, steady, go! Game Masters team (part of), ready for the challenge!

Source: GECON.es

2 Introduction

3D Wire is an annual event for animation and digital audiovisual production (New Media, ICT and Videogames) held in Segovia (Spain) that brings together lots of professionals, both national and international. The creator and organizer of the event is [Paramotion Films](#), a production company from Segovia and Madrid dedicated to the production of advertising films, short films, animation and digital postproduction. The objective with this event is the facilitation of networking, the supporting of new projects, the improvement of professional capacities and, ultimately, the stimulation of the conditions for the sector to evolve.

Fundación Iberoamericana del Conocimiento (from now on [GECON.es](#)) is a private foundation subject to Spanish legislation. The overall purpose and mission of GECON.es are the promotion and support for applied research and technology transfer, methodologies, knowledge and experiences related or complementary in gamification applied to education, tourism, environment, health and ICT.

In the previous edition we designed a gamification strategy that contributed to the already successful event and we published a report that was widely acclaimed ([link](#)). This year we wanted to go further in all aspects.

As in the previous edition, the gamification had specific objectives on which we have deepened and extended: to facilitate the discovery of certain areas of the venue, to encourage attendees to share their activity, to further improve networking, to further improve fun, etc. To do so, we've polished details of each quest and designed new experiences (some based on emergent mechanics identified back in 2014) that surely helped to improve the terrific atmosphere that permeates the venue.

In this edition we also took the opportunity to do some more experiments on gamification. We think it's very important to provide empirical evidence of operation and effectiveness of gamified projects ([link](#)), which is why we have improved the experimental methodology to respond with grater rigor and firmness to the hypothesis raised in the previous edition (i.e. association between gender and quest type).

This 3D Wire's edition took place between 8-11 October, 2015 (7th edition), in the Quintanar Palace, Segovia, with a rich program of conferences, screenings, workshops and meeting rooms.



Picture 2. These dates, Quintanar Palace trembles in emotion.

Source: <https://www.facebook.com/PalacioQuintanar>

3 Objectives

Gamification objectives seek to improve the following items:

- *POI (points of interest)*. To attract attendees to less frequented spaces that are important points of interest where activities are held.
- *Networking*. To strengthen communication between attendees, even from different professional sectors.
- *Participation*. To encourage participation to the diversity of activities offered in the event.
- *Atmosphere*. To create joy and funny emotions.
- *Virality*. To create situations where attendees are motivated to share their experience in social networks.
- *Profiling*. To profile attendees by using gamification as a user segmentation supporting tool.
- *Integral*. To integrate a maximum of profiles in the gamification (including diverse languages).

Gamification, though it has its theoretical foundation in other areas, lacks experimental studies that explain methodologies, results and circumstances¹. 3D Wire is an opportunity to enhance internal knowledge and disseminate the results of such an experience in real conditions.

The gamification business grows and there is a consensus that the technique works, but the reality is that it's difficult to find solid justifications on why gamification is effective and, moreover, in what circumstances. **It's necessary to connect theories with experiments and publish openly, both successful and unsuccessful results.**

That is why GECON.es understands the event as an opportunity for a small field of experimentation. In this sense, the **research objectives** of GECON.es for 3D Wire Gamification are:

- To study and evaluate the impact of gamification in events and other social interaction spaces. We were interested specifically in the assessment of the proposed components use as well as the designed mechanics and dynamics to, this way, generate knowledge relevant to this type of events and spaces.
- To study attendees' satisfaction in relation to gamification mechanics. Specifically we wanted to study the so-called badge fatigue² (already taken into account in this experience's conceptualization) as well as the fun factor, to evaluate the suitability of gamification in the field of events and social spaces, both informal and professional.
- To study the relationship between distinct social segments (gender, age, professional sector, etc.) and the adoption of gamification with the aim of profiling types of "gamers" in events.
- To evaluate the effectiveness of applied gamification. We are interested in being able to quantitatively assess the result of the proposed objectives.

To assess the objectives a number of hypotheses were generated during the analysis of the 2014 edition results. The methodology of that edition had limitations that prevented us to give firm answers. For this edition we have improved the experimental methodology to respond with greater rigor and firmness to the hypothesis based on last year's results:

H1. Association between fun and participation in gamification. We think gamified attendees perceive the event as more fun.

¹ Hamari, Juho, Jonna Koivisto, and Harri Sarsa. 2014. "Does Gamification Work? -- A Literature Review of Empirical Studies on Gamification." In *2014 47th Hawaii International Conference on System Sciences*, 3025–3034. IEEE. doi:10.1109/HICSS.2014.377.

² Bocska, S. (2012). Gamification Pitfalls: Badge Fatigue and Loyalty Backlash. Retrieved November 20, 2013, from <http://gamingbusinessreview.com/features/gamification-pitfalls-badge-fatigue-and-loyalty-backlash>

- H2. Association between interest and participation in gamification. We think gamified attendees perceive the event as more interesting.
- H3. Association between socialization and participation in gamification. We think gamified attendees socialize with more people.
- H4. Association between networking and participation in gamification. We think gamified attendees will achieve more professional contacts.
- H5. Association between gender and aesthetics of the OrkCubes and ElfCubes factions. We think that men identify more with the aesthetics of the OrkCubes faction and women identify more with the aesthetics of the ElfCubes faction.
- H6. Association between gender and competition. We think that men participate more intensively than women in competitive quest. We also believe that men still participate more intensively than women in competitive quest if the reward is immediate and not delayed.
- H7. Association between age and participation in gamification. We think that the young attendees participate more intensively in the gamification than older attendees.
- H8. Association between professional experience and participation in gamification. We think that less experienced professionals participate more intensively in gamification than those with more experience.
- H9. Association between gender and risk factors. We think that men participate more intensively than women in quests where there is a risk of losing what they gained (rupees).

Moreover, this opportunity allows us to explore other aspects such like the assessment of the components of gamification, specifically badges, or how genders engage in gamification when pushed beyond social conventions.

4 Project Description

4.1 Significant Differences with 2014 Edition

As in the previous edition, gamification had specific objectives on which we have deepened and extended: facilitate the discovery of certain areas of the venue, encourage attendees to share the activity, to further improve networking, to further improve fun, etc.

To do so, we've polished details of each quest and designed new experiences (some based on emergent mechanics identified in 2014) that surely will help to improve the terrific atmosphere that permeates the Quintanar Palace (the main venue).

Some of the innovations introduced are the introduction of digital elements in the quests, like using apps VINE and LINE. With LINE we wanted to expand what we already did during the 2015 Inngames event gamificación the report of it can be read at this [link](#), and as were very happy with it, we included it in #3DWire2015.

We have tried to introduce emerging mechanics detected last year (basically bet rupees to multiply the benefits) through new quests.

Another important aspect has been the internationalization. This year we have translated manuals and signage into English, given the significant influx of foreign visitors.

We have integrated the volunteer collaborators team not only in the execution of the event, but also during the design and analysis of results.

Last but not least, gamification activities lasted 3 days, instead of 2, to give room to attendees to engage with a higher diversity of quests.

4.2 Project timeframe

This year's project timetable has been very similar, although the gamification execution started one day before and lasted three days instead of two.

Gamification		3D Wire 2015					
	Before the event	07/10/2014	08/10/2014	09/10/2014	10/10/2014	11/10/2014	After the event
Design							
Organization							
Production							
Execution							
Analysis							
Dissemination							

4.3 Gamification Design

4.3.1 General Criteria

The general criteria defined for the event were:

- In general, there weren't gamified "extra" activities that would divert effort and time of attendees. We focused on gamifying activities that in any case attendees would be doing during the event. However for this edition, we included some activities solely addressed to create fun, participation and viralization, in line with the objectives defined.
- There wasn't an excessive load of work that, otherwise, could have lowered the engagement. We used analogic elements (stickers, metal badges, cardboards, etc.) and we minimized transactions, supporting all the management effort between collaborators.

- We opted for a gamification bounded to a basic level of interactions with attendees that would result very effective. This way, the idea of an immersive experience is strengthened, avoiding an invasive experience.
- We reused the storytelling elements for this edition. We used elements and terminology from medieval fantasy like Lord of the Rings, Game of Thrones, Zelda,... (i.e. rupees, elves & orks, etc.).
- We chose to introduce the need to use digital applications. These also served other purposes other than gamification, like keeping attendees updated on the event agenda and social network viralization of activities.

4.3.2 Attendees' Profiles

Based on information provided by 3D Wire's organization in 2014, we defined a taxonomy of attendees' profiles and their interests. The goal of it was to infer possible motivational factors to generate challenges to activate behaviors that would allow us achieve gamification objectives. The only difference in this edition was the lack pedagogic neither tourism conferences:

Player	Possible interests
Technical profiles: Animator Modeler Developer Screenwriter Concept Artist	- Show your work - Find colleagues - Technical Information - New Products - See other works - Finding Work - Exhibiting works
Business profiles: Entrepreneur	- Find Funding - Disseminate product - Find partners - Positioning
Investor	- Interesting Projects - Find Talent - Guarantees of return - Find Producers - Find Entrepreneurs - Gain exposure - Find new business models - Meet other investors (create network)
Producer	- Find talent - Get Investors - Linking Professionals - Show your projects - Find technical profiles - Evening activities - to mentor
Project Manager (initially won't be specifically gamified)	- Show your experience - Provide advice - Links professionals - Find colleagues - Technical Information - New Products - See other works - Finding Work - Exhibiting works
Marketing (initially won't be specifically gamified)	- Show your products - Give your brand presence - Donate Merchandising

- New Markets
- Testing of Products
- Find colleagues
- Find Investors

4.3.3 Gamification Framework

Besides internal design methodologies, there are several gamification frameworks which facilitate a lot the design process. In this case we used in-house knowledge & tools combined with other frameworks, highlighting the [Gamification Model Canvas](#) (in its [GameOn! Toolkit](#) format) by [Sergio Jiménez Arenas](#), a tool widely used and in evolution stage in collaboration with GECOn.es³.



Picture 3. Gamification Model Canvas (left) and GameOn! Toolkit. Gamificator's best tools!

Source: <http://www.gameonlab.es/>

In its more than two years of life the Gamification Model Canvas framework has proven to be one of the most clear and comprehensive frameworks currently available. The Gamification Model Canvas follows a methodology based on Playful Design and Design Thinking to generate solid proposals of gamification for highly diverse types of projects. Its agility and simplicity combined with the robustness of the concepts on which it is based has been the key to the success of this method of analysis and design, specially taking into account that when it was launched the gamification market was very immature.

The value of Gamification Model Canvas has been the providing of a powerful tool for a multitude of projects and initiatives when there were hardly defined guidelines to deal with gamification projects, especially those major projects. Furthermore, the extensive work of evangelization of [Sergio Jiménez](#), designer and head of the initiative, has been very useful in generating a community of users who have continued to contribute from their own experience and vision.

³ <http://gecon.es/gamification-model-canvas-evolution/>

4.3.4 Quests

Name	Covered objectives	Description	Benefits for the participant	Mechanics details
1. Avatar Profile (Pretty Face in '14 edition)	Networking Participation	<p>A quest for the players to define their avatar, skills, experiences, etc. so the accreditation doesn't only include their name and organization but also information about their profile and characteristics (RPG style).</p> <p>When the accreditation is complete attendees get their first badge, Avatar Profile, which can be pasted to the accreditation, and also a pouch and a rupee.</p> <p>We introduce a new element, the project Crowdfunder, besides project Backer</p> <p>Player manual text: <i>Give your character a face and enlist as ElfCube or OrkCube to begin your adventure in 3DWirefell. The more complete your character's credentials, the easier it will be to find like-minded souls to share feats, treasure and beers.</i></p> <p><i>Reward: Avatar Profile badge + 1 rupee.</i></p>	<ul style="list-style-type: none"> Information about the event gamification to improve networking and participation. Improvement of self-expression. Customization of the accreditation. The accreditation as a souvenir to remember the event. Rewards (badge, pouch and rupees). 	<ol style="list-style-type: none"> Faction battle is explained and faction sticker of participant's choice is handed, writing down the ID. Professional experience sticker is handed over: student, rookie or professional. Project crowdfunder and/or backer sticker is handed over. Avatar Profile badge is handed over, writing down the ID. Pouch and first rupee inside is handed over. The participant is suggested to further customize the accreditation in the creativity table, where professional skills and sectors can be defined, also encouraging him to draw his cube-avatar.
2. Dungeon Journey (Dungeons explorer in '14 ed.)	POI Networking Participation	<p>A quest for the players to visit the Showroom. Game Masters hand over the Dungeon's Journey badge to participants entering the room.</p> <p>Each Showroom stand will give rupees to participants who stop by.</p> <p>Player manual text: <i>Are you up to finding the dungeon where the most terrible creatures display their prowess? Hunt them down and win some rupees. Drop by the showroom, visit the stands and talk to the professionals showing off their fantastic work.</i></p> <p><i>Reward: Dungeon Journey badge + 1 rupee in each</i></p>	<ul style="list-style-type: none"> Know interesting projects in the Showroom. Surprise and interest. Rewards (badge, rupees). 	<ol style="list-style-type: none"> Dungeon Journey badge is handed over, writing down the ID. Ideally, when participants enter or exit the room. Game Masters will distribute rupees in each stand at the start of the day and write it down in the control sheet. Each stand is responsible of giving 1 rupee to each participant that stops by and is interesting in the project. At the end of the day, Game Masters will remove all rupees from the stands for re-deliver next day in the morning, adding more rupees if

		stand.		necessary and writing down the number of left rupees for each stand in the control sheet. 4. As far as possible, Game Masters should be aware of cheating (stands giving out more rupees than stated) or stands forgetting to give out rupees to participants.
3. The Wall (Quackery manager in '14 ed.)	Networking	<p>A quest for the players to get to know each other and network. It's based on a Wall where participants can indicate three types information with cardboards of 3 different colors: what do they offer, what do they need and projects that need crowdfunding. Game Masters will hand over The Wall badge and rupees.</p> <p>Player manual text: <i>The main courtyard of the 3DWireFell castle is the perfect place to exchange ideas and opinions. On the large noticeboard, you'll be able to find what you are looking for, or tell the world about your latest feats. Remember that to ask for something, you first have to offer something in return!</i></p> <p><i>Place a seek-and-offer note on the noticeboard of The Wall and, if you have a crowdfunding project, it will be very well received too.</i></p> <p><i>Reward: Badge for taking part and 1 rupee for every act you carry out.</i></p>	<ul style="list-style-type: none"> • To post requirements • To post offers. • To post projects • Find solutions. • Create hope and dreams. • Rewards (badge, rupees). 	<ol style="list-style-type: none"> 1. The Wall badge is handed on the first cardboard posted, writing down the ID. 2. 1 rupee is given for each cardboard, up to 3 (1 per offer, 1 per requirement, 1 per project). 3. Repetition is not allowed. <p>Note: cardboards will be readied by the Game Master and will be handed out to whoever wants to participate. Participants can exceed the maximum number of posts, but no rupees will be given for those.</p>
4. Vine Quests (new quest)	Viralization Atmosphere	<p>A quest for the players to take stop motion videos with Vine app and upload them to Twitter and/or Facebook using the #3dwire2015 hashtag and, optionally, #gamification. After a Game Master verification of the correct upload, a badge (1st video) and rupees will be given, up to 4 videos (we won't be able to control this, so will believe participant's words in good faith).</p>	<ul style="list-style-type: none"> • Fun and creativity space. • Social networking recognition (socialization and networking). • Rewards (badge, rupees). 	<ol style="list-style-type: none"> 1. A verification check of correct video upload is done by a GM. 2. Vine badge is handed over, writing down the ID. 3. 3 rupees are given for each video correctly uploaded up to 4 videos (we won't be able to control this, so will believe participant's words in

		<p>Player manual text: <i>As the legend tells, only those wizards who have mastered the art of stopmotion-ancy will be able to see out the Vine quest. Warning to the easily confused: this has nothing to do with the intake of wine.</i></p> <p>Reward: <i>Vine Badge + 3 rupees for each video uploaded to your favorite social websites, with a maximum of 4 videos.</i></p> <p>Signage text: <i>Use the Vine app and record a video pausing intermittently and make a stop motion with the elements you find at the table, share the result on the social media with the hashtag #3DWire2015 and show it to the GM of the tavern and get your reward.</i></p>		good faith).
5. Line Quests (new quest)	Participation	<p>LINE@ is going to be an information channel of 3D Wire which will keep participants up to date on the event's agenda, coffee breaks, quizzes and anything going on in the event.</p> <p>Players have the opportunity to answer event's quizzes and, automatically, Line@ checks if answers are correct or not and if it's has been one of the 5 quickest in doing it. If this is the case, the player gets a voucher in the smartphone, which can be redeemed for rupees and a badge in the tavern</p> <p>Game manual text: <i>Do you want to keep up to date in real time of everything happening at 3DWirefell and win even more rupees? Join the 3D Wire 2015 group on the Line app scanning the QR code where our domestic elves will keep you informed and send you challenges. Only suitable for those nuts about animation, videogames and 3D Wire veterans.</i></p>	<ul style="list-style-type: none"> • Real time information about the event's agenda. • Get to know curiosities about the event. • Create interest, curiosity, challenge. • Rewards (badge, rupees). 	<ol style="list-style-type: none"> 1. A verification check of the digital voucher is done by a GM. 2. The voucher is redeemed (cancelled) from the player's smartphone. 3. Line badge is handed over, writing down the ID, for the first time playing. 4. Two rupees are given for each correct answer.

		<i>Reward: Line Badge + 2 rupees for every coupon cashed in.</i>		
6. Selfie Wire (new quest)	Networking Viralization Atmosphere	<p>A quest for the players to get rupees and a badge for taking selfies and upload them to Twitter and/or Facebook using #3dwire2015 and, optionally, #gamification hashtags. To do so, players need to take pictures using costumes and recognizable elements of the event, with another player or even a GM.</p> <p>Game manual text: <i>Smarten yourself up and take your best selfie along with the swashbucklers who inhabit the 3DWirefell castle: Link, Ork, the Blue Knight or the VIPs taking part in the programme. immortalize your legend!</i></p> <p>Take a selfie with recognizable elements or people/characters from 3D Wire and upload it to a social network with the hashtag #3DWire2015</p> <p>Reward: <i>Selfie Wire Badge +1 rupee for every photo uploaded to your favorite social networks up to a maximum of 5 photos.</i></p> <p>Signage text: <i>Take a selfie of yourself and get rewards in the tavern!</i></p>	<ul style="list-style-type: none"> • Fun moment. • Pictures from the event to share. • Know other participants (socialization and networking). • Rewards (badge, rupees). 	<ol style="list-style-type: none"> 1. A verification check of correct photo upload is done by a GM. 2. Selfie Wire badge is handed over, writing down the ID. 3. 1 rupee is given for each photo up to 5 photos (we won't be able to control this, so will believe participant's words in good faith).
7. 3DWireFell Battle (same name as in '14 ed.)	Networking Viralization Atmosphere	<p>This quest tries to generate a territorial control dynamic between two factions (elfcubes vs orkubes) where rupee spending of each participant counts towards the faction that controls the tavern, using a crown to identify which is and players getting discounts on rewards.</p> <p>Game manual text: <i>The battle between ElfCubes and OrkCubes is back, and for the most important cause of all: treasures!</i></p>	<ul style="list-style-type: none"> • Fun, challenging and community fellowship moments. • Anecdotes and accomplishments to share in social networks. • Discounts on rewards. 	<ol style="list-style-type: none"> 1. Rupees spent in the tavern add faction points (1 rupee = 1 point) 2. ID and rewards bought is written down on a control sheet. 3. Randomly, a survey is done to participants. 4. Points are written on the scoreboards and, hourly, the total is written down on a control sheet. 5. The winning faction, according to the control sheet, gets the crown,

		<p><i>Win points for your team by spending rupees in the shop and see all the members of your side get discounts in the treasures of the tavern.</i></p> <p><i>Reward: The Clan which obtains most coins will gain a discount when cashing in rupees for prizes.</i></p>		<p>which is put on top of the faction scoreboard.</p> <p>6. Rewards prices are reduced for participants of the winning faction according the first digit of the price: 1 less rupee for prices between 10-19, 2 less rupees between 20-29, 3 less rupees between 30-39, etc.</p>
8. Enigmas (new quest)	POI Participation Atmosphere	<p>In this quest participants have to find parts of famous videogames or animation characters, which can be located in any place in the venue (i.e. a cap, a moustache and a pipe, who is? Mario!). Each part includes textual clues about the character.</p> <p>Players have to take photos of each part and show them to GM in the tavern. There are different badges for each day.</p> <p>Game manual text: <i>Famous heroes visit 3DWirefell each day and have lost some of their belongings.</i></p> <p><i>If you find the three objects of each hero and take a picture and find out who they belong to you will get your rewarded in the tavern. Each day there are different heroes!</i></p> <p><i>Reward: A new badge every day and 2 rupees for photographing and identifying each of the hidden personalities.</i></p>	<ul style="list-style-type: none"> • Fun, challenging moment. • Know other participants (socialization and networking). • Rewards (up to 3 badges, rupees). 	<p>1. Players need to discover which characters are. To validate the answer they have to take pictures of each part and show them to GMs in the tavern.</p> <p>2. 2 rupees are given for the discovery of the daily characters, and also a different badge is handed over depending on the day (enigma I, II and III badges), writing down the ID.</p> <p>Note: 5 characters (1 Thursday, 2 Friday and 2 Saturday), each one in 3 different parts. For each part there is a textual clue. The parts are not identical to the original, but similar.</p>
9. The Trickster (new quest)	Atmosphere	<p>In this quest players have to spend 2 rupees to choose any card on the table. The Game Master needs to give a colorful note to the game, offering a more or less rewarding result depending in what he can see in the card before showing it to the player, generating tension in the game.</p> <p>Game manual text: <i>Still not have enough rupees?</i></p>	<ul style="list-style-type: none"> • To introduce informal betting identified in '14 edition to achiever and low collaborator players. • Fun, challenging moment. • A chance to multiply rupees (or lose them). 	<p>1. The 12-card deck is shuffled.</p> <p>2. Players have to bet 2 rupees and chose a card on the board.</p> <p>3. The GM takes a peek at the card, and before showing it to the player he can offer an alternative outcome. If the card allows the player to replay, this card is taken out of the deck and the game</p>

		<p><i>You can find the gambling croupier in the square who will be delighted to reward you with more coins or else empty your bulging pockets for you.</i></p> <p><i>Place your bet in rupees and put your trust in the cards which hold in store either a happy or unfortunate future for your adventure...</i></p> <p><i>Reward: Trickster Badge + The cards will determine whether you win a prize or end up with a penalty.</i></p>		continues, without re-shuffling the deck.
10. Super Heroe Epic Cube (same name as in '14 ed.)	Atmosphere	<p>In this quest participants have to play the official app of the event, CubeQuest (Android and iOS available) and the GM needs to write down contact information. Daily winners are contacted, and the high scorer of the whole event gets the special prize.</p> <p>Game manual text: <i>Some wizards of the code of the EvilMind clan have created a palantiryalie (translation: game for palantir), and only the boldest hands and the sharpest brains will be rewarded with the crown of heroes...</i></p> <p><i>Play the official 3D Wire videogame for two minutes and if you end up with the daily highest score you come away with a prize.</i></p> <p><i>Reward: Super Epic Cube Hero Badge + 10 rupees for the maximum score on each day and a special prize for the maximum score over the three days.</i></p>	<ul style="list-style-type: none"> • Fun, challenging moment. • Rewards (badge, rupees and special prize). 	<ol style="list-style-type: none"> 1. The mechanics of the app are briefly explained and the player has 2 minutes to play. 2. Super Epic Cube badge is handed over, writing down the ID. 3. Contact information is written down on the control sheet and reward mechanics are explained (daily top scorer and overall top scorer). Rewards are given upon information on the following timetable: <ul style="list-style-type: none"> ➤ Thursday up to 19h ➤ Friday up to 14h ➤ Friday up to 19h ➤ Saturday up to 14h ➤ Saturday up to 19h 4. Winner is contacted and 10 rupees given. 5. The overall top scorer gets his prize in the event's closing ceremony. He is contacted and asked if he'll stay up to the ceremony, otherwise the prize goes to the next top scorer who can attend.
11. Unchi Quest (same name as in '14 ed.)	Networking Atmosphere	<p>In this quest participants have to complete absurd missions. They will carry an "unchi" identifier and these quests will be randomly given to many</p>	<ul style="list-style-type: none"> • Fun moment. • Know other participants (socialization and networking). 	<ol style="list-style-type: none"> 1. Player gets to blindly choose one of the missions. 2. An unchi key chain is handed over

		<p>participants at the same time for a higher inclusion and viralization.</p> <p>These quest are chained, where upon completion the player passes another unchi quest to another player.</p> <p>To validate the completion, GMs will ask for some evidence, such as social network photos, videos or the presence of a GM or anybody from the staff.</p> <p>Game manual test: <i>The secret quests will find you instead of you finding them...</i> <i>After finishing these, you can pass them on to your companions in arms to share the honor or the dishonor.</i></p> <p><i>Reward: Unchi Eater Badge + 2 rupees for every completed Quest</i></p>	<ul style="list-style-type: none"> • Curiosity and community fellowship. • Rewards (badge, rupees) 	<p>to the participant.</p> <ol style="list-style-type: none"> 3. Upon completion, tavern GMs have to validate the evidence. 4. Unchi badge is handed over and 2 rupees given, writing down the ID. 5. The player gets to blindly choose another mission, that will have to be completed by another participant of his choose.
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4.3.5 Rewards and Pricing

The list of rewards was defined by the event organization. To design it, rewards were distributed in very high, high, medium and low value, and prices (in rupees) were established accordingly. To price each item we forecasted 350 gamified attendees and a distribution between top active, very active, active, little active and very little active in relation to the activity level of activity and, therefore, to the amount of rupees acquisition.

As this was an analog experience with a limited set of people, coins and rewards, we had the necessity of generating a little economic model to be able to set prices for each reward. Starting with the attendees forecast we calculated the global number of rupees needed, the price of rewards and the number of rupees assigned to each Cube Quest. This was not a trivial thing to do: an unbalance between these may trigger negative effects in the experience, like a quick shortage of rewards.

The following rewards table shows the unit cost in rupees, the availability of each reward and the total number of rupees in the system.

Reward	Value	Quantity	Cost	Total
Art book "Arrugas"	Very high	2	80	160
Signed book "Pico Pico aventuras"	Very high	1	80	80
Book+DVD+stuff "Laboratoire d'images"	Very high	1	70	70
Art book "Blizzard"	Very high	1	65	65
Book "como se hizo Pocoyó"	Very high	1	60	60
Book + DVD "del trazo al pixel"	High	1	45	45
Big wood Cube	High	1	40	40
Poster concept designers	High	1	40	40
Spongebob backpack	Medium	1	35	35
Small wood cube	Medium	2	30	60
Book "Power up"	Medium	2	30	60
ElfCube white wine	Medium	2	25	50
3D Wire catalog kit	Medium	6	25	150
Poster "Atrapa la bandera"	Medium	2	25	50
UOC videogames books	Medium	2	25	50
T-shirt + pins 3D Wire	Medium	5	25	125
King's yellow bag	Medium	1	25	25
Imascono t-shirt	Medium	1	25	25
King's bag	Medium	1	20	20
King's socks	Medium	2	20	40
3D Wire beer(1 bottle)	Low	10	15	150
3D Wire 2015 catalog	Low	10	15	150
Mug	Low	12	15	180
Drink invite	Low	10	15	150
3D Goku puzzle	Low	1	15	15
King's umbrella	Low	1	15	15

Purse	Low	4	12	48
Book "Basque Films"	Low	3	12	36
Custom pins (10 pins pack)	Low	25	10	250
Plastic figures "atrapa la bandera"	Low	2	10	20
Metal case "gumball"	Low	1	10	10
Mario Bros cube can	Low	2	10	20
Earrings	Low	2	10	20
Unchi pendant	Low	1	10	10
Totoro speck of dust pendant	Low	1	10	10
Key chains	Low	10	6	60
Pins "annecy " from Pocoyo's creator	Low	20	5	100
Cube pin	Low	60	4	240
TOTAL		211		2734

Also the special reward for the overall SuperEpicHeroe winner was a Castilla y Leon food package, with a value higher than "very high" (couldn't be exchanged with rupees). The winner was the same guy as in the previous edition.

Higher prices were deliberately almost impossible to achieve by a single player (only if lucky in The Trickster). This seek to generate complicity and collaboration among participants.

4.4 Teams & Organization

4.4.1 Gamification Collaborators

We conducted a survey to recruit collaborators to support us in the gamification management. We used Google Forms and communicated it via 3D Wire and GECON.es webpages, Twitter, Linkedin, Google+ and Facebook. The definitive collaborator staff was:

Name	Support tasks	Twitter
Andreas Lieberoth	Research design guidance	@lieberothdk
Marta Fernández	Gamification execution	@mfrui80s
Miguel Simón Bermejo	Gamification execution	@Ohalland
Luis Vallejo Carretero	Gamification design & execution	@Sr_Vallejo
Oscar Luis Fermosel Arroyo	Gamification design	@oscartocha
Pablo Franco Corral	Gamification design & execution	@PABLS3
Ruth S. Contreras	Gamification design & execution	@ruthsofhia

A key difference in this edition, and thanks to the past GM feedback survey, was the involvement of collaborators from the start, meaning from the design phase to the data analysis. It has to be highlighted that all of the collaborators are gamification, serious games, etc. professionals.

After the event finished, GECON.es surveyed collaborators⁴ again, to find out their level of satisfaction and get feedback on the design of Gamification as well as get an overall assessment.

- Ratings on gamification design, management and perception are very high among all collaborators surveyed. The most highly rated aspects are the setting, the adequacy of the mechanics to achieve the objectives of the event, those quest involving social interaction and the immersion and involvement of the participants.

⁴ The survey was sent to collaborators who participated in the gamification execution phase.

- The least rated aspects are the need for mobile applications, the viral approach to gamification and the lesser adequacy of the Trickster quest to achieve any of the objectives. Also they believe that storytelling should be changed for future editions. Also they think that information to attendees should be dosed by creating a specific order of quest completion, and further integrate mechanics for cheaters so that the event benefits from these activities.

4.4.2 Paramotion Films team

Paramotion's team is the organizer of each 3D Wire edition. The support from them in the gamification design and pre-production tasks was total and crucial: conceptualization & storytelling, stickers' graphic design and production, artistic design and decoration of the scenery, support on Gamification's execution, etc. According to the directorship of Paramotion Films, the novelty effect of Gamification in the production of the event energized and engaged almost all the staff, in a way it "ludified" the work spirit and even they have participated in its the design.

A survey to the Paramotion Films team has been conducted (not totally published), highlighting the high satisfaction with the results and emphasizing the great fit between the event and the gamification.

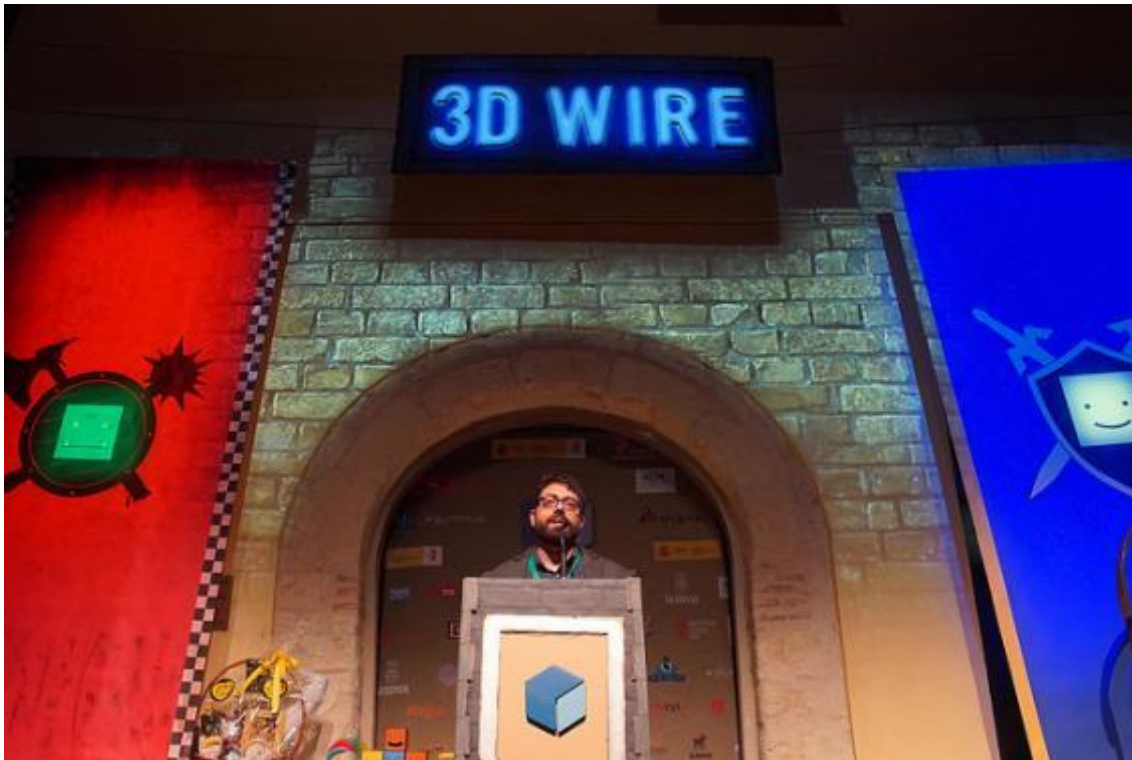
- What they most value is fun, the atmosphere, rewards and the engagement between the event and the gamification.
- What they least value is not being able to know in greater depth the gamification (i.e. participating in some way), the fact that the gamification was concentrated on the ground floor, the repetition of the storytelling (they advocate for a science fiction for next year) and they feel Line@ app is difficult to use.
- We highlight one of the answers explaining that animation professionals did not visit the videogames showroom, and videogames professionals did not visit the projection room, what constitutes a future opportunity for gamification.

4.5 Gamification Production

4.5.1 Art Direction

3D Wire production team designed and produced the fantasy styled decoration *motu proprio*, reusing some of the materials produced for the '14 edition, according to GECON's specifications (with 3D Wire participation) in the proposal document. The art direction was by Ali Larrey with the help of Alfonso Alemán, Miguel Junquera y Adrián Piqueras and several volunteers of 3D Wire with Paramotion Films team in charge of the graphics and design.

Some of the results can be seen in the following pictures (source: Paramotion Films / Nicolás Pinzón):



4.5.2 Gamified Accreditation

We kept the original 2014 design for the gamified accreditation, with small modifications to enhance aspects relevant to the objectives (i.e. a larger space to draw the avatar) and to add new characteristics to the gamification design (i.e. 9 badges spaces, instead of 6, to fit new quests).

The gamified accreditation of 3D Wire is the result of the “Cube Quest 1: Avatar profile” and follows a similar design as roleplaying games character sheets. It’s useful to accomplish the objective of networking, facilitating attendees to identify and evaluate between them in a visual, quick and easy way. On the other hand, the accreditation made the control of badges’ progress easier, as an experience memorial once the event is ended.

The accreditation personalization as well as the capacity to control and show the achieved badges brought the attendees closer by the means of emotional responses like curiosity, auto expression, storytelling and community sense. Proposed dynamics to encourage attendees to finish their gamified accreditation were identity, status, creativity and reward. Components were avatar personalization, skills, experience level, investment/funding type and badges.



Picture 4. Accreditation design: “Character” sheet and badge collection.



Picture 5. Attendees customizing their accreditation in the tavern and in the creativity table.

Source: Paramotion Films / Nicolás Pinzón

4.5.3 Stickers (Identifiers & Badges)

Given the accreditation requirements, the production team designed the following 3D Wire stickers, all in fantasy style. Most of them were designed for the 2014 edition and reused, given the good reception of gamification at an artistic level and the public familiarity with the fantasy style, as well as the logic optimization of existing resources.

Professional Sector: seven types of stickers to identify the sector (or sectors, up to three) where each attendant studies, works or fields of interest:



These stickers were placed in the creativity table, along with color pencils, pens and markers, as part of the Avatar Profile quest to customize the accreditation.

While the 7 types of stickers from the previous edition were reused, registration of participants took into account only 4 (animation, videogames, new media and transmedia & other), and results analysis takes into account the latter classification.

Experience level: three types of stickers to identify the level of experience of each attendee in the previously selected sector.



While the 3 types of stickers from the previous edition were reused, registration of participants took into account 4 types of professionals: students without experience, rookies with less than 1 year of experience, junior professionals with between 1 and 5 years of experience and senior professionals with more than 5 years of experience, and results analysis takes into account this division in 4 levels of professional experience.

Clan: two types of stickers to allow each attendee to choose faction (elfcubes or orkcubes) and participate in the 3DWireFell battle dynamic.



Crowdfunding: two types of stickers to identify if the attendee is actively involved in project (micro-) patronizing projects (backer) and / or seeking funding for their projects (crowdfunder)



Backer and Crowdfunder, who gives and who receives.

Badges: 11 badge-like stickers to recognize the completion of several of the Cube Quests.



From left to right and top to bottom: Avatar Profile (CQ1), Dungeons Journey (CQ2), The Wall (CQ3), Vine (CQ4), Line (CQ5), Selfie Wire (CQ6), Enigmas I,II,III (CQ8), SuperHeroEpicCube (CQ10), Unchi (CQ11)

4.5.4 Rupees (game currency)

Both two types of plastic rupees produced for the previous edition were reused: silver and golden ones, both with the 3D Wire logo printed. We defined the value of the golden coins as 5 silver coins, instead of the previous 10, to allow for a wider distribution. Fantasy-esque sackcloth pouches were also produced, allowing attendees to store and carry rupees.



Picture 6. A coffer with silver and golden rupees, and coin pouches as well.

Source: 3D Wire / Alberto Sen

4.5.5 Contacts in “The Wall” quests

We maintained the “Quackery Manager”, changing its name and adding a third color card. We placed a sackcloth board and colored cards allowing attendees to write down professional offers, requests and projects seeking funding, in a similar way as in space station bars or medieval taverns in role playing games.



Picture 7. “The Wall”: ¡the jobsite of 3D Wire!
Source: GECON.es / Flavio Escribano

4.5.6 Costumes in Selfie Wire quest

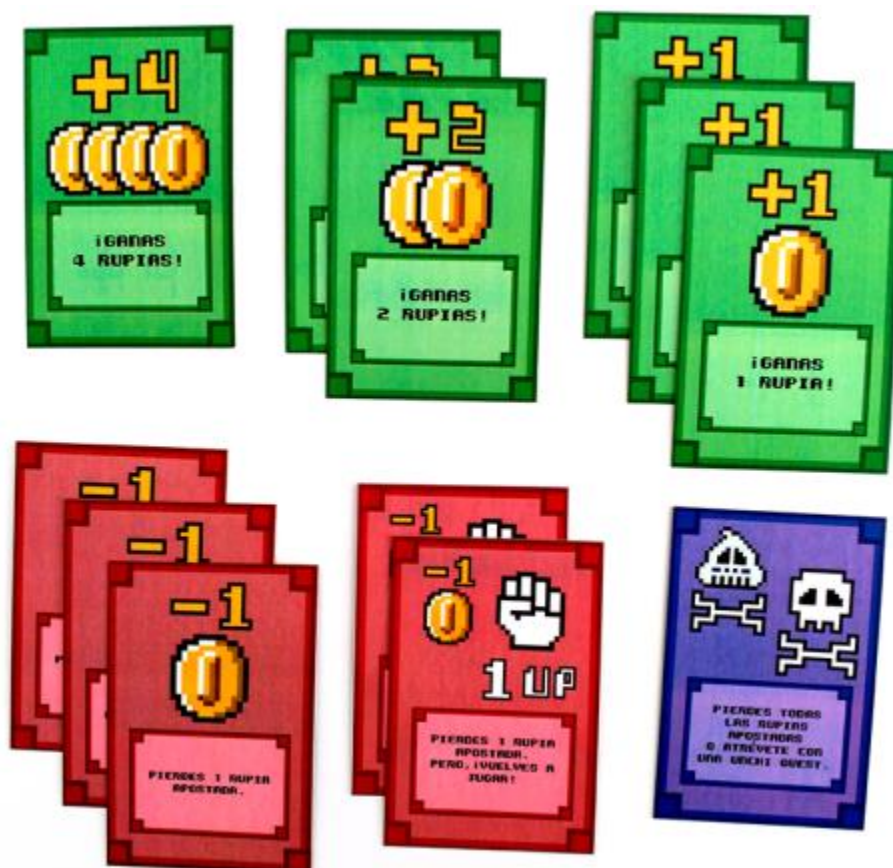
This new quest was focused on generating fun, networking and viralization through social media. EVA foam was used to create fantasy elements for attendees to dress up and take pictures. We did not skimp on details of armor and weapons cases, as can be seen in the following images:



Picture 8. Attrezzo and costumes for the Selfie Wire quest: the armory of 3D Wire!
Source: Paramotion Films / Nicolás Pinzón

4.5.7 Cards Game in The Trickster quests

This new quest responds to an emerging mechanic observed in the 2014 edition, in which participants bet rupees to win more rupees. For this edition we decided to create a mechanic for riskier attendees to bet their rupees against a Game Master. It was designed and produced as a small and simple betting game in card format.



Picture 9. The Trickster card deck.

We defined the card probability table as follows:

	Round 1	Round 2 (if you get the 1st new chance to play card)	Round 3 (if you get the 2nd change to play card)
You win 1 rupee (x3)	25,00%	27,27%	30,00%
You win 2 rupees (x2)	16,67%	18,18%	20,00%
You win 4 rupees (x1)	8,33%	9,09%	10,00%
You loose all bet rupees (x1)	8,33%	9,09%	10,00%
You loose 1 bet rupee (x3)	25,00%	27,27%	30,00%
You loose 1 bet rupee but you get a new chance to play (x2)	16,67%	9,09%	0,00%

The probability of obtaining a positive or negative card is 50/50 in the first round, which is modified up to 60/40 in the final round. Furthermore, given that the maximum bet is 2 rupees per game, positive cards allow to win more rupees (4 rupees) than what may be lost with negative cards (maximum 2 rupees).



Picture 10. Pablo, our master gambler, bluffing an unwary ElfCube!

Source: GECON.es / Flavio Escribano

Although rules were predefined, Game Masters themselves devised new ones during the event –double or nothing, highest ranked card, etc. –, even though we don't know for sure if the outcome probabilities changed much, they made the whole experience –for attendees and GMs themselves– more fun and exciting.

4.5.8 Characters in Enigmas quests

This new quest responds to the objectives of Points of Interest visiting, participation in the event agenda and overall atmosphere, as well as needs identified in the '14 edition attendee's survey. For this edition we designed and produced a mini game in which participants had to find parts of iconic characters of the world of animation, video games or movies, distributed throughout the venue, and get it right with their names. Each part was in made in EVA foam and was accompanied by a text clue.



Picture 11. Something here doesn't fit... Mario's cap and pipe and Sonic's sneakers... Heresy!

Source: GECON.es

This is a unique quest because we produced a set of three levelling badges, one for each set of characters and event's day.

Thursday	Characters	Parts	Clues
	Mario	Red cap	This character was born in 1981 although back then it was known as Jumpman and was a young carpenter who wanted to save his girlfriend Pauline.
		Moustache	Its creator, who in that moment was in charge of the design of the company's arcade machines, was chosen to design it because they were short staffed. Since then, he hasn't stopped creating games.
		Green pipe	This year is the character anniversary, since it has just turned 25 years old. In all this time he has participated in more than 200 adventures.

Friday	Characters	Parts	Clues
	Dr Ming (3D Wire's blue cube)	Blue square	It seems a cube, it seems a pixel: It's a BOXEL!
		Fu Manchu moustache	You will find its name on 3D Wire's social networks.
		Two black stripes	These are the eyes of an evil doctor.
	Jack Skellington (Nightmare before Christmas)	Bones	Its pet's name is a number. A special number which is neither positive nor negative.
		Santa hat	It was a 'special' Christmas.
		Bat bowtie	The nightmares are not always bad ones.

Saturday	Characters	Parts	Clues
	Sonic	Red sneakers	Its favorite food are chili dogs.
		Yellow ring	Its designer is also known as "Big Island".
		Blue spiky hair	Its first appearance was as a freshener hanging on a car windshield.
	Link	Sword	Its father created it by inspiration by the adventures he lived when he was a child getting lost in the woods or in caves near his home.
		Green hat	Many people confuse the name of this hero with the princess's name he often saves in its adventures.
		Rupee (diamond shaped coin)	It's not a very talkative hero, even though you can hear its voice each time he jumps or he receives a blow.

4.5.9 Unchi Quests

All unchi missions are designed to meet one or more of the objectives of the gamification, with the peculiarity of implying putting off the sense of the ridiculousness to a lesser or greater degree:

- *Interracial love (or, make love not war): Find someone in the enemy faction and dance. Shoot it and share in VINE / Twitter.*
- *Butt numbering: use your butt to drawn numbers in the air. GMs will tell you which number, and another participant will have to discover it!*
- *The minstrel of 3DWirefell: sing or hum a song from a videogame or an animated serie in front of a GM.*
- *Arthurian deed: make a GM laugh.*
- *Soul poet: invent some verses about 3D Wire and recite them in front of GM. They have to rhyme!*
- *False idols worshiper: ask an autograph to some 3DWirefell inhabitant and make him believe you're his greatest fan. Confessing is forbidden! Bring the autograph as the evidence form the GM.*

- *Dizzy tongue: do 5 spins and say a tongue twister in front of a GM.*
- *Ask for GM help...they said: find out the city of origin of 4 GMs (each GM can ask you to do a task to get that information: Tell a joke, imitate accents, dance, speak backwards, etc.*
- *Getting a kiss from someone in the organization and immortalize it with a selfie.*
- *Promote a showroom booth with a banner across the courtyard during the coffee break.*
- *Get a picture with Alfonso Fulgencio and Jose Luis Farias at once and upload it to Twitter with the hashtag #3dwire2015.*
- *Get 5 attendees to download Line app and publish "this is an unchi mission of <name>".*
- *Get 10 business cards and display them to a game master*



Picture 12. Players had to wear an unchi pendant, showing they were in a big mess...

Source: Paramotion Films

4.5.10 Rewards

In the previous edition we used a wall with rewards names and prices but most of the rewards weren't displayed. To improve participation this year we used a rewards showcase. Price tags were used, and when we ran out of a reward a "sold out" tag was put in place (we asked some participants to keep their rewards in the showcase to maintain the attractive appearance, giving them a voucher to pick it later).



Picture 13. Rewards showcase at the beginning. You can imagine how it ended.
Source: Paramotion Films



Picture 14. Who said elves are not power gamers? She took two of the most exclusive and expensive rewards!
Source: GECON.es / Flavio Escribano

4.5.11 Game Master & Player Manual

Two different manuals were written: one for the Game Masters team and one for attendees. The latter was translated from Spanish to English, a relevant aspect that shown up in the evaluation of results of the 2014 edition.

The manual for Game Masters explained in detail the mechanics of each Quest and details of rewards. It included a FAQ page.

The player manual gave a brief description of the Quests, omitting explicit details. This manual was very visual and adopted a fantasy aesthetic and typography.



Picture 15. Who reads manuals nowadays? This one is! it rocks!

4.5.12 Summary of Production Needs

Essentially, production necessities were similar to '14 edition, aside from new quests and changes to improve the experience both for attendees and GM team.

Quest	Production requirements	Game Master requirements
1. Avatar Profile (Pretty Face in previous ed.)	Badge Avatar profile Rupees sackcloth pouches Pencil cases Creativity table Gamificators table Elfcube sticker Orkcube sticker Back sticker Crowdfunder sticker Professional sticker Rookie sticker Student sticker Animation sticker New media sticker Transmedia sticker Videogames sticker Chairs Several color pencils, pens and markers	2-3 GM
2. Dungeon Journey (Dungeons explorer in previous ed.)	Badge Dungeons Journey Rupees sackcloth pouch Control sheet	1-2 GM
3. The Wall (Quackery manager in previous ed.)	Board and stand Badge The Wall Signage Cardboard cards	1 GM
4. Vine Quests (new)	Accessories to make stop motion videos Badge Vine Quests Instructions signboard Creation table Signage	Same GMs from Avatar Profile
5. Line Quests (new)	Badge Line Quests Quizzes Signage Pictures	Same GMs from Avatar Profile

6. Selfie Wire (new)	Atrezzo and costumes Badge Selfie Wire Instruction signboard Signage	Same GMs from The Trickster or SuperHeroEpic
7. 3DWireFell Battle (same name as in previous ed.)	Winning faction Crown Control sheet Scoreboards and marking pens to write down scores.	Same GMs from Avatar Profile
8. Enigmas (new)	Badge Enigmas level 1 Badge Enigmas level 2 Badge Enigmas level 3 Clues signboards Character parts	Same GMs from Avatar Profile
9. The trickster (new)	Card deck Table Table decoration Table rug Signage	1 GM
10. Super Heroe Epic Cube (same name as in previous ed.)	Apple iPad Badge Super Heroe 2' sandglass Control sheet Signage	1GM
11. Unchi Quest (same name as in previous ed.)	Flat unchi with shackle Quest cards	Same GMs from Avatar Profile
Other	Gamified accreditation Tavern atrezzo Price tags "Sold out" tag Faction flags GM special markers GM pens GMs shirts Line contents and communication calendar (event's agenda) GECON.es signage Web communication contents. Shields, torches, swords, axes, etc. Pencils and sharpen little machine GMs manual Player manual Machine plates Rupees container LINE signage Showcase for rewards	

5 Results

5.1 General Methodology

Data collection:

- To track gamified attendees' activities we devised a 3-digits ID in the accreditation that we wrote down in the space left when stickers were handed. This was used to count the number of stickers handed, allowing us to know the number of quests done and also by whom⁵.



Picture 16. IDs written in blank spaces left by handed stickers... or how to reinvent the wheel in the era of Data Mining!
Source: GECON.es

- To control rupees in each stand of the Showroom for Dungeons journey quest, we designed a paper control sheet where we wrote down the number of rupees handed in each stand and the number of rupees left at the end of the event. The format was as follows:

Thursday		Friday		Saturday	
Stand 1:					
Distributed rupees		Distributed rupees		Distributed rupees	
Left rupees		Left rupees		Left rupees	

- To control game points in SuperHeroEpic quest we designed a paper control sheet where we wrote down the time of play, points, ID and a telephone number to contact winners. The format was as follows:

Day	Time	Points	ID	Name	Telephone

⁵ The registration file is anonymized, we only know ID, gender, professional sectors and experience.

- To control Trickster quest games we designed a paper control sheet where we written down the time of play, rupees bet and rupees won/lost. The format was as follows:

Day	Time	ID	Bet	Win/loose

- To control rewards we designed a paper control sheet where we wrote down IDs and rewards bought. Also we did a random survey on some of them. The format was as follows:

Reward	Initial quantity	IDs

- To control exchanged rupees in 3DWireFell battle we designed a paper control sheet where we wrote down the cumulative, hourly, number of rupees, based on the number of points written in the tiny scoreboards. The format was as follows:

Thursday			Friday			Saturday		
	Elfs	Orks		Elfs	Orks		Elfs	Orks
<time>			<time>			<time>		



Picture 17. This year's result was very similar, elfcubes reinforced after the last and crushing defeat!
 Source: GECON.es

We also got data from [Line@](#) web interface as well as from surveys to attendees (one in-situ to gamified attendees, another post-event to all attendees), to the Game Masters and to Paramotion Films team.

The organization gave us access to the database of the registered attendees (anonymized) where, for each ID, there were characteristics of participants (age, sex, professional sector and professional experience).

The ID is a methodological improvement in this edition of the gamification that allows us to link individuals with gamification activity, something that could not be solved in the previous edition and undermined the ability to draw firm conclusions.

Data collection worked very well and managed to capture a sufficient data set allowing us to test our hypotheses. However, in this data set there are a few gaps due human error -justified- mainly to peaks of influx of attendees in which the GM team wrote some data incorrectly or forgot to hand out badges or write the ID. In any case such errors were to be expected in a manual data collection.

Data treatment:

We used a Google sheet to consolidate all data from the following sources:

- Quests paper control sheets
- Attendees registry
- Stickers handed to attendees
- In-situ survey to 3DWireFell battle participants
- Digital survey to gamified and non-gamified attendees
- Survey to Game Masters

This dataset is available sending us an email to info@gecon.es

Data analysis:

The total number of accredited attendees was 960, of which only a part had access to the gamification (it's a multi-day event distributed in many venues, and the gamification lasted 3 days and in the main venue) so from now on we'll call attendees only to those who had access to the gamification and this will be our study population, therefore the total number of cases reported in the dataset is $N = 484$. Some of these cases don't have all data, this is why we filtered accordingly to each test, stating for each test the number of valid test and the filtering strategy. Some clarification about the dataset:

- Of the 484 cases, the organization estimates that about 8-10 cases with ID did not attend or, if they did, haven't collected the accreditation. Given the uncertainty and the very low number, we will assume that all cases were attendees with ID.
- In addition, another 67 cases don't have ID and, according to the organization, correspond to attendees for whom IDs were generated, but was not correctly registered in the system and, among other consequences, we do not know if they participated in the gamification or not. These 67 cases are considered valid only if relevant to the test.
- We know the organization didn't always get the age via the registration website so in an undetermined % of cases, the organization deduced, best guessed it in situ, the moment attendees went to the general accreditation desk.

The confidence level for all experiments is set at the usual 95%. This is an indicator of the accuracy of the measurements as well as an indicator of how close to the estimated we would be if we repeated the experiments with individual groups of similar characteristics.

Some tests have been conducted with small samples to what would be recommended. In this sense, some of the findings, especially those statistically not very significant ones, should be taken as suggestions or clues and, in the future, try to make similar experiments with larger samples.

The software used for analysis was GNU PSPP-gdaa1fe version 0.8.5 for Windows 64 bit.

5.2 Participation indicators

The following graphs show descriptive information about the event, that is, an image of what happened from the point of view of data:

Gamified attendees

Attendees - Participation (n=435)

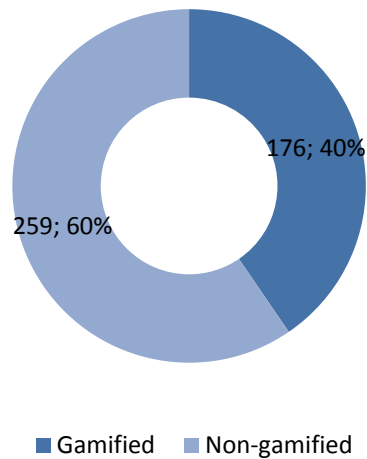


Figure 1. Number and proportion of gamified and non-gamified attendees. Valid cases, 435, include ID.

Gender

Gender - Participation (n=417)

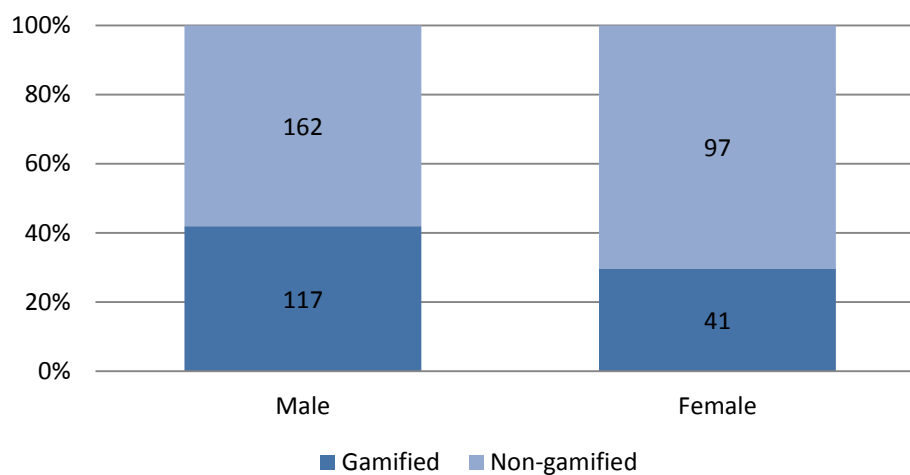


Figure 2. Number of attendees by gender, as well as their proportion between gamified and non-gamified. Valid cases, 417, include ID and gender.

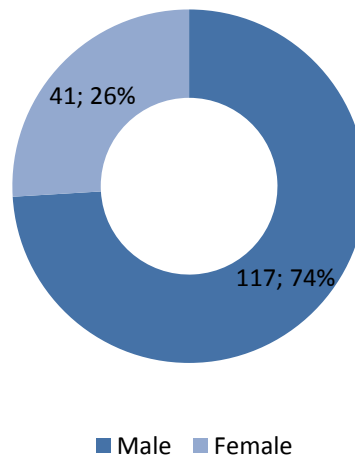
Gamified attendees gender (n=158)

Figure 3. Number and proportion of gamified attendees by gender. Valid cases, 158, include ID, gender and participation in any quest.

Many more men than women interacted with the gamification, but in proportion to the size of each gender shown in the previous chart, the difference is much smaller.

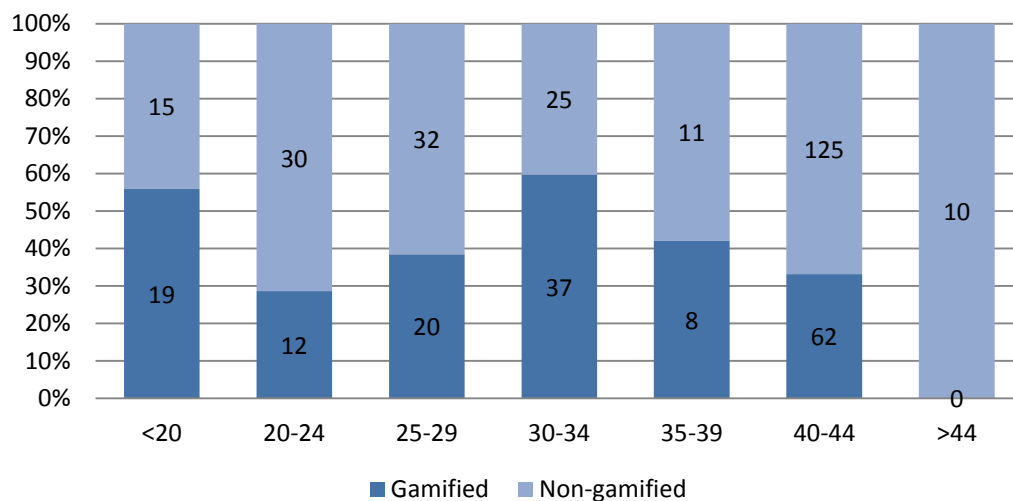
Age**Age - Participation (n=406)**

Figure 4. Number of attendees by age segment and participation in the gamification, as well as the proportion of gamified and non-gamified attendees by age segment. Valid cases, 406, include ID and age.

Overall average age was 33.14 ($SD = 8.47$), gamified attendees average age was 31.86 ($SD = 8.38$) and non-gamified attendees average age was 33.95 ($SD = 8.45$).

Results show that gamified attendees were slightly younger. Although the mode age is 40, the <20 and 30-34 segments, proportionally, were the most representative in the gamification.

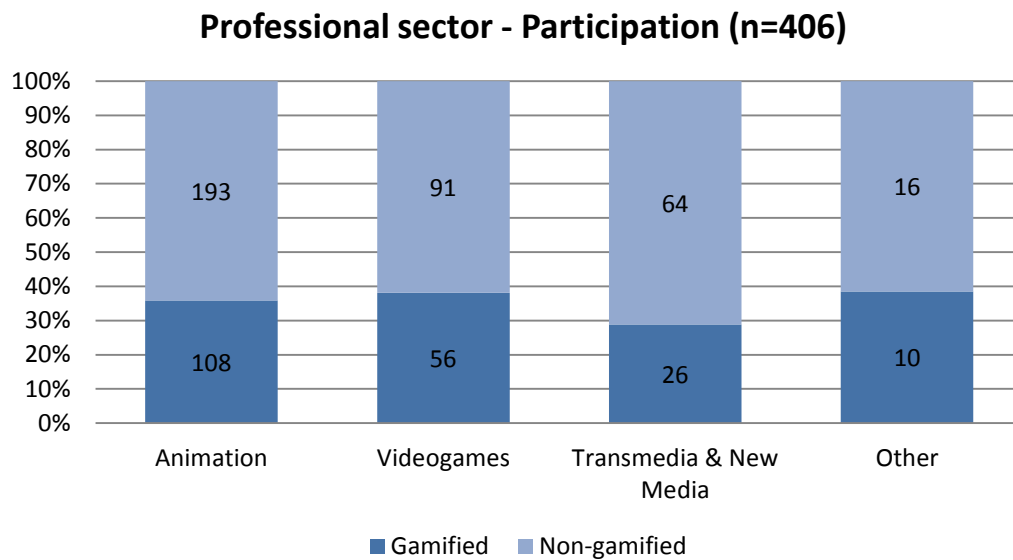
Professional sector

Figure 5. Number of attendees by professional sector and participation in the gamification, as well as the proportion of gamified and non-gamified attendees by sector. Valid cases, 406, include ID and any professional sector (up to 3 per ID).

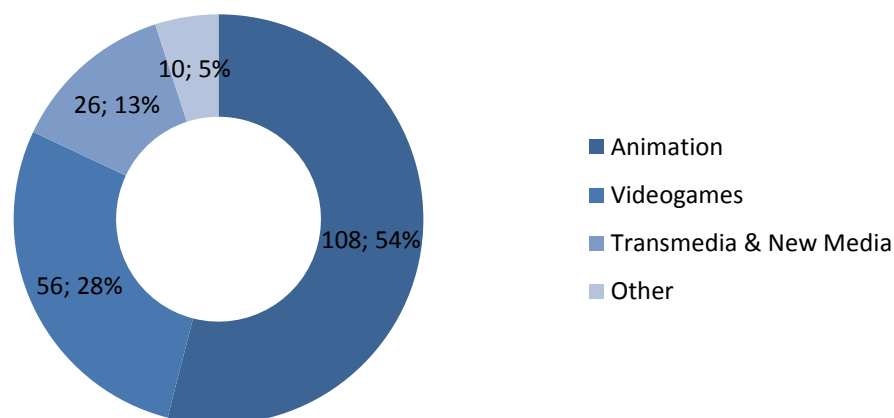
Gamified attendees professional sector (n=158)

Figure 6. Number and proportion of gamified attendees by professional sector. Valid cases, 158, include ID, any professional sector (up to 3 per ID) and participation in any quest.

Many more attendees came from the animation sector, but in proportion to the size of each sector, the representation is similar, if somewhat less in the Transmedia and New Media sector.

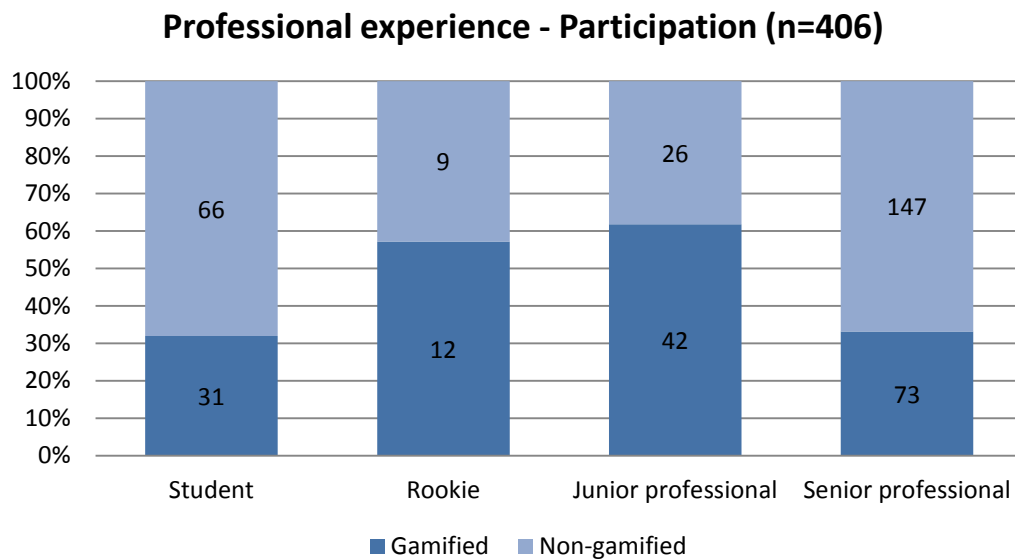
Professional experience

Figure 7. Number of attendees by professional experience and participation in the gamification, as well as the proportion of gamified and non-gamified attendees by professional experience. Valid cases, 406, include ID and professional experience.

Groups were defined as follows:

- Student: no professional experience.
- Rookie: less than 1 year of professional experience.
- Junior professional: between 1 and 5 years of professional experience.
- Senior professional: more than 5 years of professional experience.

Gamified attendees professional experience (n=158)

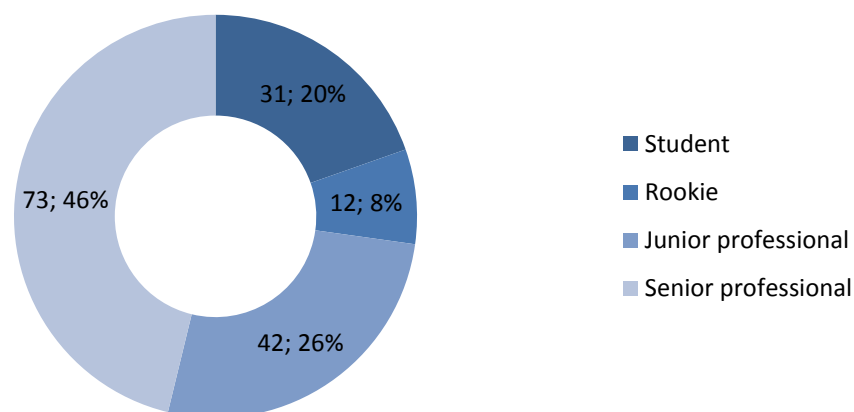


Figure 8. Number and proportion of gamified attendees by professional experience. Valid cases, 158, include ID, professional experience and participation in any quest.

Many more senior professionals participated in the gamification, however rookies and junior professionals were, proportionally to their segment, the most representative.

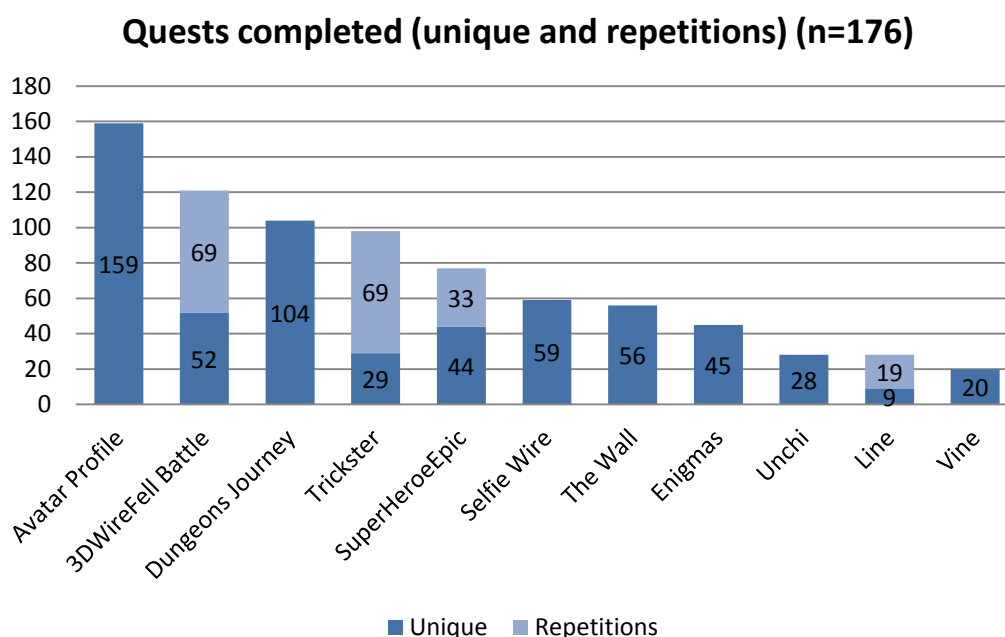
Number of quests

Figure 9. Number of quests completed: It shows the count of times played and repetition in cases where there was that possibility. Valid cases include ID and participation in any quest. Selfie Wire, Unchi and Vine quest allowed repetition, but we couldn't track beyond the first time played. Also, in Line quest, although we could track repetitions, we couldn't match each user to its ID.

Some aspects we want to highlight to compare figures with the previous edition:

- The number of overall attendees is very similar to the 2014 edition, however the proportion of these that participated in the gamification is slightly higher than the previous edition.
- The number of unique quests completed is 605 and 795 if we include repetitions. That means each gamified attendee ($n = 176$) completed an average of 3.4 and 4.5 quests. The figure would be higher if we could track repetitions for Selfie Wire, Unchi and Vine. We can compare reasonably well the unique quests figure and it represents a 23% increase in quests completed compared to 2014.
- Of the 176 gamified attendees, 159 completed Avatar Profile, which is the introductory quest. This means some attendees started in other parts of the event.
- Dungeons Journey quest had a similar reception to the previous edition. The rupees count shows 677 visits by gamified attendees to the 18 booths, a 6.7% increase from the previous edition, but was completed by 104 gamified attendees, a 16% decrease from 2014. However. The average visits per booth, 37.6, has remained very similar between editions (once corrected to the same number of booths).
- SuperEpicHeroe quest has been played a total of 77 times, an increase of 24% over the previous edition.
- The Wall quest has been completed 56 times, a decrease of 48% compared to the previous edition.
- Gamified attendees managed to get up to 1770 ± 140^6 rupees, of which 677 (35-41%) were handed in the showroom. In the previous edition between 49-61% of rupees were handed in the Showroom, this means that we have achieved a more even distribution of rupees between all the quests.

⁶ The uncertainty is given by the fact that some repeatable quests were tracked beyond the first time. In this regard, we take the total purchases (1636 rupees) as the minimum level, and the maximum obtainable rupees for one attendee (1911 rupees), including all repetitions of each quest, as the superior level.

- There were 211 rewards with a total price of 2734 rupees, and 130 attendees acquired 130 of them worth 1636 rupees, i.e. they spent 86-100% of rupees earned and these bought 61.6% of the rewards, distributed as follows:

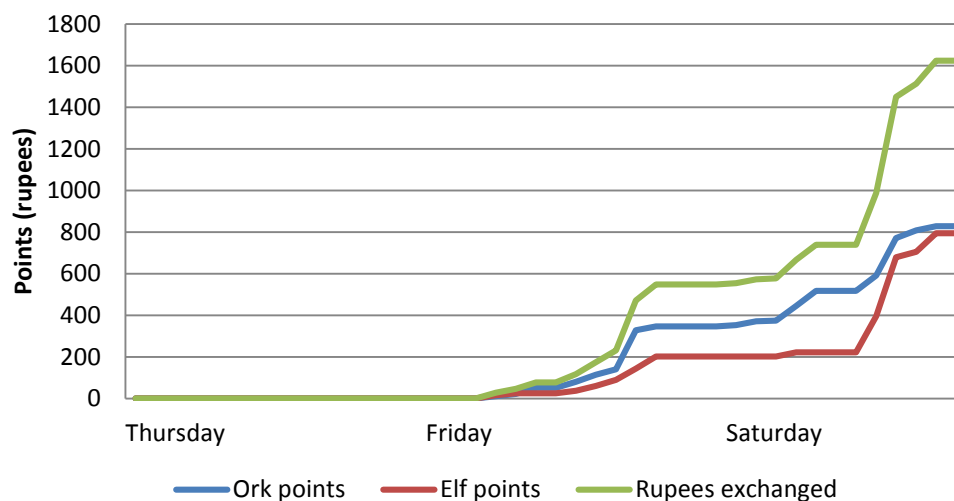
Reward Value	% rewards acquired
Very high	83.3%
High	80.0%
Medium	53.7%
Low	63.0%
TOTAL	61.6%

In the previous edition attendees spent only 59% of rupees and with them bought only 38% of the rewards. We think this happened because we have not announced properly that the gamification was to end on Saturday and attendees accumulated rupees to spend them on Sunday and, on the other hand, there was not a rewards case, just a rewards list. This year we communicated deadlines through loudspeakers and we used a showcase for the rewards, which increased the following ratios and this thanks to marketing and communication details:

	Ed. 2014	Ed. 2015
Rupees exchanged	59%	86-100%
Rewards bought	38%	61.6%

We have also managed to smooth the peaks of attendees who exchanged rupees for rewards in the tavern. The chart below shows the dynamics of each faction points. Since each point equals 1 rupee spent in the tavern, the sum of both lines gives us the dynamic of spending rupees resulting in a smoother and more linear slope than in the previous edition, indicating that rupee spending has been better distributed between days.

3DWireFell battle dynamics



5.3 Hypothesis Testing

In this section we apply statistical techniques that, unlike the prior description of indicators (the "picture" of what happened in the 3D Wire), allows us to test our hypotheses about demographics and engagement. Hypothesis test that generate statistically significant results allow us to generalize insights to a wider population⁷, and thus identify systematic relationships between design factors, participant characteristics and behavioral outcomes.

Several hypotheses concern variables like age and gender, not because we are particularly invested in stereotypes about e.g. female and male participants, but because statistical analyses now allow us to test some observations from 2014, and pragmatically because such variables are (nominally) quite neat categories, which allows for statistical group comparisons, and from there design considerations that can help us even out any unintentionally age-, gender- or otherwise group-asymmetrical elements in the gamification design.

H1, H2, H3 and H4 concerned the possible associations between fun, interest, socialization & networking and participation in gamification observed in 2014. In order to test the hypotheses that gamified attendees would rate these factors more highly, a survey was emailed to all attendees during the weeks following the end of the event, and two tests were performed.

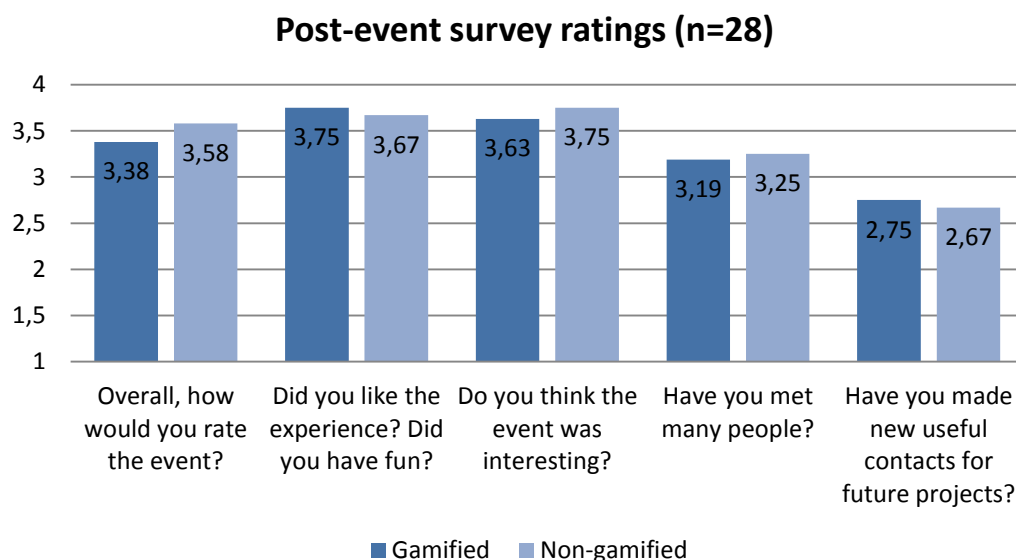


Figure 10. The relevant questions to the gamification objectives asked about the overall rating of the event, the fun factor, the interest factor, the socialization factor and the networking factor. We show the average rating in a rising scale from 1 to 4.

The scales show a high level of internal consistency, Cronbach alpha = 0.84. Data show a positive evaluation of the event in terms of overall rating, fun and interest, as well as in terms of socialization and networking, regardless of gamification participation⁸.

A Pearson correlation coefficient was computed to assess the relationship between overall rating and the rest of the factors. Results show strong significant correlations with fun factor ($r(26) = .61, p = .001$) and interest factor ($r(26) = .69, p < .001$), and medium significant correlations with socialization ($r(26) = .46, p = .015$) and networking ($r(26) = .43, p = .022$).

⁷ Statistical population, or universe, ie, the global group of individuals with similar demographic characteristics of the sample, that is individuals similar to these that attended 3DWire.

⁸ The last question (about networking) got into the survey as an open text field. We had to turn answers into a 1-4 scale.

Results suggest the overall rating of the event increases significantly with subjective experiences of fun, interest, socialization and/or networking.

Also, a series of independent-samples t-test were conducted to compare overall rating, fun factor, interest factor, socialization factor and networking factor with gamified and non-gamified attendees:

	Gamified		Non-gamified				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i> (26)	<i>p</i>	<i>Cohen's d</i>
Overall rating	3.38	0.62	3.58	0.51	-0.94	.353	-0.37
Fun factor	3.75	0.58	3.67	0.65	0.36	.723	0.14
Interest factor	3.63	0.81	3.75	0.45	-0.48	.634	-0.19
Socialization factor	3.19	0.91	3.25	0.87	-0.18	.856	-0.07
Networking factor	2.75	0.93	2.67	0.78	0.25	.804	0.10

Results, then, show no statistically significant differences between gamified and non-gamified attendees on ratings of these factors. These results might, however, arise from randomness or systematic differences not tested between the two groups (i.e. who signs up for gamification and why), leading us to hope that future studies can find clearer effects of the gamification on these factors.

H5 concerned the possible association of gender and preference for the aesthetics of OrkCubes and ElfCubes factions first observed in 2014. In order to test the hypothesis that males identified more with the OrkCubes faction and female with the ElfCubes faction, a chi-square test of independence was conducted $\chi^2(1, n = 142) = 4.41, p = .036, \Phi_{\text{Cramer}} = 0.18$.

Results show a weak but significant association between gender and faction: It was slightly more likely for males to choose the OrkCubes faction and for females the ElfCubes faction.

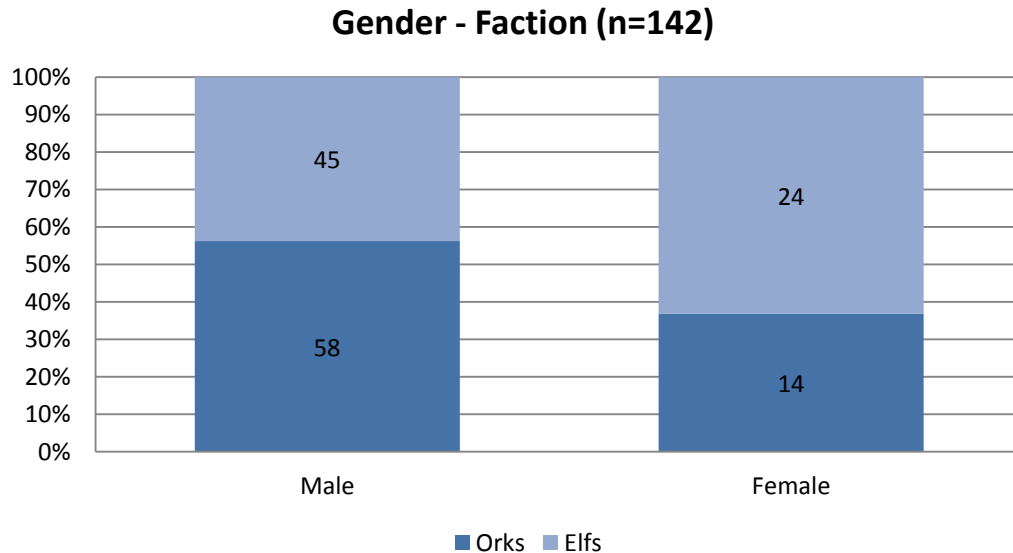


Figure 11. Number of gamified attendees by gender and chosen faction, as well as the faction ratio for each gender. Valid cases, 142, include gender and faction.

H6 concerned the possible association between gender and competition observed in 2014. In order to test the hypothesis that men participate more intensively than women in competitive quest⁹ and the hypothesis

⁹ Competitive quest are 3DWireFell battle, Line and SuperHeroEpic. 3DWireFell Battle and Line immediately deliver rewards and SuperHeroEpic delays part of the reward. However we couldn't control the number of times each participant played at Line and therefore we have only tested with 3DWireFell and SuperHeroEpic battle quest.

that male participate even more intensively than women in competitive quest if the reward is immediate and not delayed, two tests were conducted:

An independent-samples t-test was conducted to compare the number of times 3DWireFell battle quest was played by men and women. **No significant difference was found** between the number of times played by men ($M=2.34$, $SD=1.52$) and women ($M=2.39$, $SD=1.97$); $t(45) = -0.09$, $p = .932$, $d = -0.027$.

Gender - Participation in 3DWireFell battle (n=47)

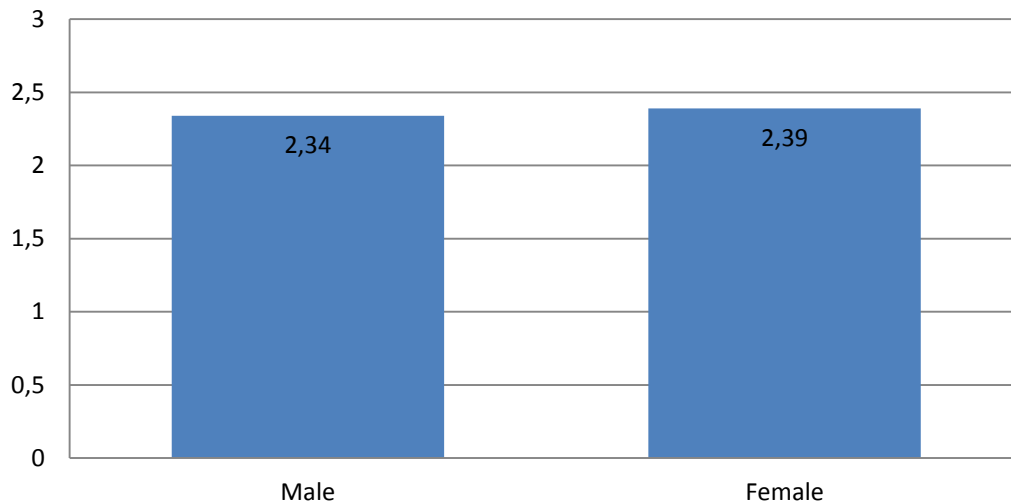


Figure 12. Average number of times played 3DWireFell battle quest by each gender. Valid cases, 47, include gender and participation in 3DWireFell battle quest.

An independent-samples t-test was also conducted to compare the number of times SuperHeroEpic quest was played by men and women. **No significant difference was found** between the number of times played by men ($M=1.76$, $SD=1.33$) and women ($M=1.75$, $SD=1.48$); $t(39) = 0.02$, $p = .982$, $d = 0.006$.

Gender - Participation in SuperHeroEpic (n=41)

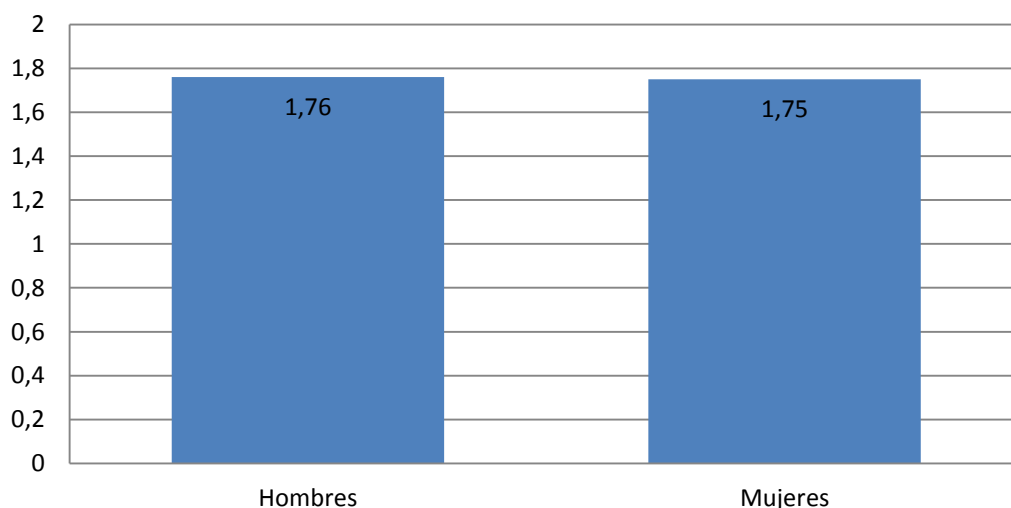


Figure 13. Average number of times played SuperHeroEpic quest by each gender. Valid cases, 41, include gender and participation in SuperHeroEpic quest.

Thus, no statistically significant relationships between gender and competitiveness were found. In any case the observed differences between males and females were too small to be deemed practically relevant.

H7 concerned the possible association between age and participation in gamification observed in 2014. In order to test the hypothesis that younger attendees participate more intensively in the gamification than older attendees, a Pearson correlation coefficient was computed to assess the relationship between age of participants in the gamification and the number of unique and total quests in which they participated¹⁰ (including repeats). There is a significant weak negative correlation between the two variables, $r(156) = -.33$, $p < .001$ in the case of unique quests and a significant weak negative correlation between the two variables, $r(156) = -.23$, $p = .003$ in the case of total quests.

Overall, results show a weak but significant negative correlation between age and number of quests done. Specifically, our results suggest that **a higher participant age is negatively correlated with the number of quests done, both in variety and quantity (incl. repetitions).** In other words, the younger the participant, the more energy spent on the gamification framework.

H8 concerned the possible association between professional experience and participation in gamification observed in 2014. In order to test the hypothesis that less experienced professionals participate more intensively in gamification than those with more experience, a Pearson correlation coefficient was computed to assess the relationship between professional experience of gamified attendees in the gamification and the number of unique and total quests in which they participated¹¹ (including repeats). There is a significant weak negative correlation between the two variables, $r(156) = -.35$, $p < .001$ in the case of unique quests and a significant weak negative correlation between the two variables, $r(156) = -.24$, $p = .002$ in the case of total quests.

Overall, results show a weak but significant negative correlation between professional experience and the number of quests done. Specifically, our results suggest that **an increase in the professional experience is slightly negatively correlated with the number of quests done, both in variety and quantity (incl. repetitions).** This may be a function of age, or vice versa. In other words, the less professionally experienced the participant, the more energy spent on the gamification framework.

H9 concerned the possible association between gender and risk aversion in gaming observed in some studies¹². In order to test the hypothesis that men participate more intensively than women in quests where there is a risk of losing what they have gained playing (rupees), an independent-samples t-test was conducted to compare the average number of times The Trickster quest was played by men and women. A significant difference was found between the number of times played by men ($M=4.73$, $SD=4.29$) and women ($M=1.73$, $SD=1.35$); $t(20.50) = 2.51$, $p = .021$, $d = 1.09$.

Results show a strong significant association between gender and risk willingness: It was more likely for males to keep betting their rupees than females.

¹⁰ Valid cases, 158, include age and participation in any quest.

¹¹ Valid cases, 158, include professional experience and participation in any quest.

¹² Harris, C. R., Jenkins, M., & Glaser, D. (2006). Gender Differences in Risk Assessment : Why do Women Take Fewer Risks than Men ? *Judgment and Decision Making*, 1(1), 48–63.

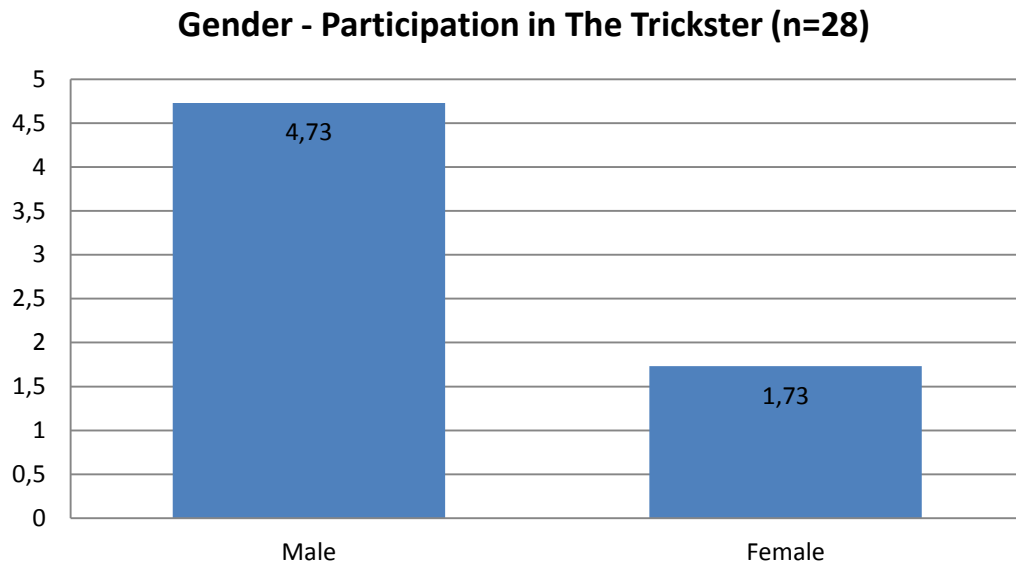


Figure 14. Average number of times The Trickster quest was played by gender. Valid cases, 28, include gender and participation in The Trickster quest.

Note: initially we also proposed a hypothesis to analyze the behavior of the gender variable in the Unchi quest. These quests asked attendees do absurd activities in public that tried to attempt to their sense of ridiculousness pushing them a little bit further from social conventions. However in the end we didn't create the required control sheet thus we couldn't capture data on repetition of Unchi quest.

5.4 Gamification components rating

On-site survey was conducted on a random sample of gamified attendees who participated in the quest 3DWireFell battle, that is, that exchanged rupees for rewards. The reason of doing so was to survey participants who did all the gamification circuit: quest -> badges and rupees -> exchange for rewards. The format of the data record sheet was as follows:

ID:

Day & time:

Reward redeemed:

Avatar profile	Dungeons Journey	The Wall	Vine	Line	Selfie Wire	Enigmas	Super epic	Brownie

Q1. We want to know what aspects of the gamification have motivated you the most. Rate the following items in order of importance on a rising scale from 1 to 4.

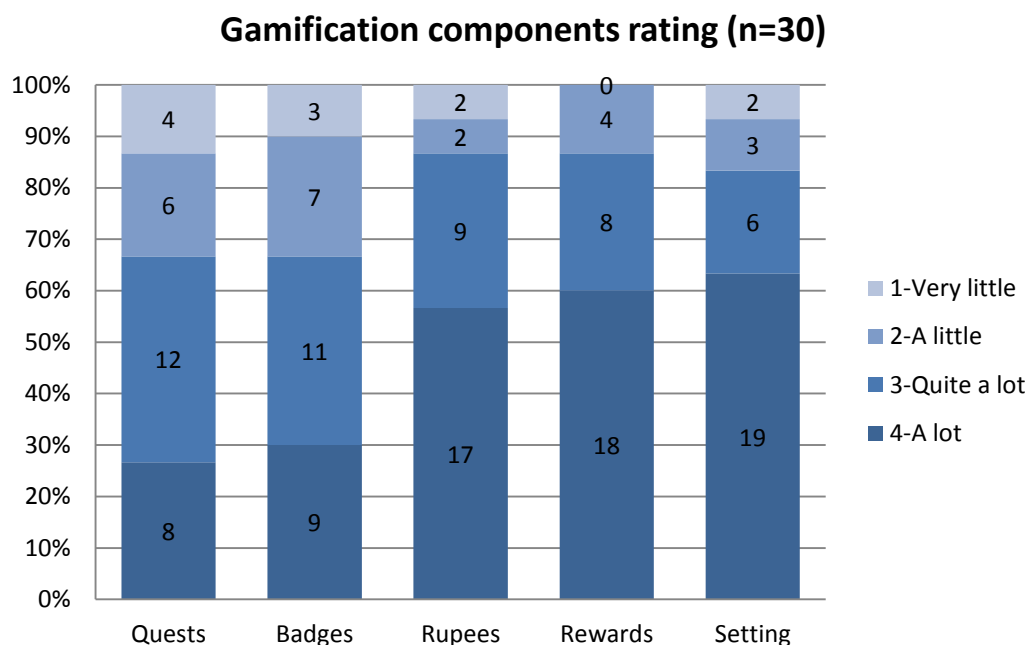


Figure 15. Rating frequencies for each gamification component.

The scales had only a low level of internal consistency, as shown by Cronbach alpha of 0.51. **Data show that the most highly rated components were the setting (the sets, storytelling, etc.), rewards and rupees. Quests and badges were rated slightly below that.**

Given our particular interest in understanding the behavior of participants in relation to the badges, a Pearson correlation coefficient was computed to assess the relationship between the rating of badges and the quantity of badges obtained. Results showed no notable correlation between the two variables, $r(28) = .32$, $p = .087$.

Although the correlation is not significant at the $p < .05$ threshold, it is significant at the slightly less conservative .10 level, suggesting that there is some relationship between motivation depending on the number of badges, which could be leveraged in the future, and investigated further.

Q2. What has motivated you the most to achieve the badges? Choose an answer.

This question allows us to investigate the nature of motivation specifically related to badges.

Motivational aspects of badges (n=30)

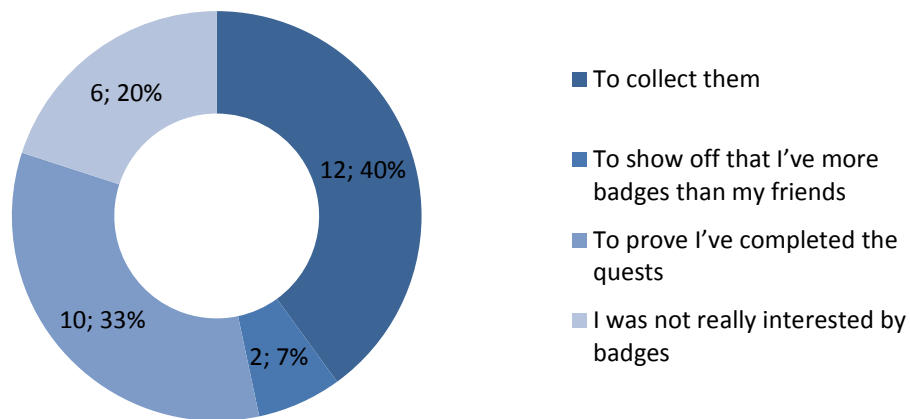


Figure 16. Frequency and proportion of answers.

To explore which is the relation between motivation and the number of badges obtained, we constructed the following table of frequencies and compute the Pearson correlation coefficient:

	Number of badges										
	2	3	4	5	6	7	8	9	r(6)	p	
To collect them	1	0	2	2	0	2	2	3	.60	.116	
To show off that I've more badges than my friends	0	0	0	1	0	1	0	0	.13	.766	
To prove I've completed the quests	0	1	1	4	4	0	0	0	-.13	.753	
I was not really interested by badges	0	2	0	2	2	0	0	0	-.28	.499	

Thus, no statistically significant relationships between number of badges and each of the motivational aspects were found. However we want to highlight that data suggest a strong positive correlation between motivation for badge collection and the number of badges, $r(6) = .60$, $p = .116$. This hints at relationships which might be leveraged more strongly in the future, or which future studies with larger populations might be able to measure with larger effect using clearer measures.

5.5 Media Impact

Below we detail the results of the media dissemination of the gamification of the event:

3D Wire and GECON.es websites

A press release was published [here](#) and [here](#).

Social networks

For this edition we did not define a specific gamification hashtag, instead we used to the general #3dwire2015 hashtag (also #3dwire was used). Quest design was geared towards high viralization to social networks.

We performed searches using 3dwire2015 and 3D Wire keywords from 15/08/2015 in Twitter, Facebook, Instagram and Vine, all of them social networks included in the gamification player manuals. We omitted results from Paramotion and Gecon.es or any other user related to the gamification design or production. We have taken into account only results with content directly related to the gamification, omitting results related to other aspects of the event.

	Posts	Re-posts
Twitter	73	91
Facebook	5	2
Instagram	13	
Vine	23	
TOTAL	114	93

Results are hardly comparable to the previous edition because metrics and channels are not the same. In 2014 only publications and republications on Twitter were taken into account.

Considering all analyzed social networks, we observe an increase in publications of 22.5% and a decrease in republications of 31.1%, both with respect to data obtained in 2014. Results suggest that gamification has increased the number of publications and channels in which it is published, at the expense of re-publications.

Excluding those websites which just replicated the press release, below we link websites, blogs and other media that explained in some way their experience with gamification at 3D Wire 2015:

- La Vanguardia: *Mercado 3D Wire revela época dorada de la animación y videojuegos en España* [link](#)
- Acción Cultural Española AC/E: *3D Wire 2015. Festival Internacional de Animación, Videojuegos y New Media* [link](#)
- El Correo de Burgos: *3D Wire facilita el contacto de jóvenes creadores de videojuegos y animación con televisiones y productores* [link](#)
- Finanzas.com: *Mercado 3D Wire revela época dorada de la animación y videojuegos en España* [link](#)
- Diario de Soria: *3D Wire facilita el contacto de jóvenes creadores de videojuegos y animación con televisiones y productores* [link](#)
- El Norte de Castilla: *La animación vive una época dorada y el 3D Wire es de ello* [link](#)
- DLastframe: *3D Wire 2015: Nuestra opinión* [link](#)
- Super Family Heroe [link](#)
- Observatori de Comunicació, Videojoc i Entreteniment (UAB): *3D Wire: Animación, Videojuegos y Nuevos Medios* [link](#)
- Sun Creature Studio in Spain [link](#)
- ¿Cómo se hace un videojuego?: *37- 3D WIRE 2015 CON @MRDIEGOV 1ª PARTE* [link](#)

5.6 Emerging Dynamics

Attendees generally followed the explicitly established mechanics to overcome the quests and get badges and rupees or advance clan scorings. However, some attendees throughout the event devised new ways to overcome obstacles, either by using implicitly designed mechanics or mechanics devised by themselves and out of control from the Gamification team.

Even though in this edition we designed The Trickster quest to address some of these situations, we still identified participants playing by their own rules, generally betting rupees to gain more rupees or directly tricking others into bad deals (selling unchi quests to unwary that though these could be exchanged by rupees in the tavern).

Seguido por Bitoon



Fran Tapia @Fran_T · 9 oct.

Aquí en la #3DWire2015 con @Ludipe @Androtiyas y @pixel_cream haciendo apuestas clandestinas con rupias



Picture 18. Clandestine betting in the showroom. People had fun, and we are ok with that!

Source: [Fran_T](#)

6 Objectives Evaluation

Objectives	Achieved?	Results
POI (points of interest). To attract attendees to less frequented spaces that are important points of interest where activities are held.	✓	<p>According to the organization, Showroom attendance has considerably grown since the introduction of gamification in 2014. It went from a lesser influx area to one of the key places of the venue; before 2014 there were many attendees who did not even find this area.</p> <p>Data show visits to the Showroom due gamification is similar to 2014, 677 visits to 18 booths, which means 37.6 visits to each booth. Moreover the new quest Enigmas has further stimulated attendees to visit the whole venue, including the Showroom, and Line quest kept attendees informed about the event's agenda in real time.</p>
Networking. To strengthen communication between attendees.	✓	<p>In this edition of 3D Wire we have emphasized socialization and networking, maintaining and enhancing those quests that proved beneficial for it and adding new activities that would facilitate the approach between attendees. From the gamified accreditation with avatar customization to The Wall offers and job demands to costumes photo uploading or new unchi quests specially designed to break down barriers between participants, gamification has been designed to bring people together, either by collaboration or competition.</p> <p>Data from the attendee's survey show a positive evaluation of the event in terms of socialization and/or networking, regardless of gamification participation. Results also suggest the overall rating of the event increases significantly with subjective experiences of socialization and/or networking.</p> <p>However results show no statistically significant differences between gamified and non-gamified attendees on the rating of these factors. These results might, however, arise from randomness or systematic differences not tested between the two groups (i.e. who signs up for gamification and why), leading us to hope that future studies can find clearer effects of the gamification on these factors.</p>
Participation. To encourage participation to the diversity of activities offered in the event.	✓	<p>One of the strengths of gamification in events is to facilitate assistance to various program activities. While we kept the main quest aimed to discover the showroom, we have introduced two new quests, Enigmas and Line, for attendees to explore the whole venue and to inform them in real time about the event's agenda.</p> <p>Data collected show that about 20% of gamified attendees participated in Enigmas quests, however in the case of Line the participation was a modest 5% approximately. Although efforts at communication were made to facilitate the use</p>

		<p>of Line, the introduction of such an application in this professional context has not been successful, in contrast to other documented examples where we reached 20% in student contexts and lower average ages¹³.</p> <p>On the other hand we have received feedback on surveys to attendees and Paramotion team telling us professional animators did not visit the videogames showroom and professional videogame designers did not visit the short films projection room, an opportunity that invites us to think for specific solutions to improve the situation in future editions.</p>
Atmosphere. To create joy and funny emotions.	✓	<p>3D Wire is an important event that, in our view, bases part of its success on the horizontality and sense of community. Thus, the fun factor is palpable throughout the event. One aspect we draw from the surveys conducted in the previous edition was that the audience wanted more quests and these to last more days. Perhaps the reason was closely related to fun and getting more rupees so they could buy more rewards. That is why this year we have gone from 8 to 11 quests and the experience lasted one more day.</p> <p>Data from the attendee's survey show a positive evaluation of the event in terms of fun, regardless of gamification participation. Results also suggest the overall rating of the event increases significantly with the subjective experience of fun.</p> <p>However results show no statistically significant differences between gamified and non-gamified attendees on the rating of this factor. These results might, however, arise from randomness or systematic differences not tested between the two groups (i.e. who signs up for gamification and why), leading us to hope that future studies can find clearer effects of the gamification on these factors.</p> <p>The fun factor as well as networking, are difficult to assess. In the two editions of 3D Wire we've had strong evidence at a qualitative level that gamification worked, and the scientific literature also points to it, although the experiment conducted did not find the same evidence. We must review the experimental design, the tools we have used (a Likert scale of more points instead of 5 would have helped?), stimulate the response rate of the survey, assess how gamified attendees fun influences the fun of the rest of attendees when sharing the same space and scenery and, in general, improve the methodology to achieve a better understanding of such factors..</p>
Virality. To create situations where attendees are motivated to share their experience in social networks.	✓	<p>The introduction of new rewards mechanics for interacting with social networks (upload pictures and videos) has improved the capacity of the event to reach further and in more channels.</p> <p>3 of the 11 quests (13.5%) introduced the viralization element. In this respect, we introduced this mechanic in a way</p>

¹³ <http://gecon.es/gamification-event-with-line/>

		<p>that was not a “must” requirement to enjoy the rest of quests.</p> <p>Data show a 22.5% increase in publications related to the gamification but also show a 31.1% decrease in re-publications, both compared to data obtained in 2014. Results suggest that viralization mechanics has increased the number of new publications and the channels in which attendees publish, at the expense of re-publications. This is well aligned with the necessity of sharing personal experiences in social networks and, at the same time, with the fading of the novelty factor of gamification¹⁴.</p>
Profiling. To profile attendees by using gamification as a user segmentation supporting tool.	✓	<p>Gamification is an excellent tool to gather event’s participation data beyond the accreditation register. Not only it allows collecting data in a much less intrusive way but provides data highly relevant to the design of events and to study behavior at the research level.</p> <p>Specifically it allows us to understand and even predict the behavior of segments of the population (by gender, age, professional sector, professional experience or others) to different gamification strategies, facilitating the design of future editions of the event or other spaces and activities where statistically similar populations are involved. In addition, this type of data allows the addition of new knowledge in the emerging field of research in gamification.</p>
Integral. To integrate a maximum of profiles in the gamification (including diverse languages).	✓	<p>Following results and feedback obtained in the 2014 edition, this year we placed greater emphasis on two key aspects of the communication of gamification in the event: the contents have been translated into English (the foreign participation is relevant), handing over manuals among participants and installing informative posters in both languages.</p> <p>Data show that participation in the gamification according to several demographic characteristics is very transversal. Results suggest that participants in the gamification are a representative sample of the overall attendance, and every demographic group has similarly participated in gamification, although a higher tendency among younger or less experienced is observed.</p>

¹⁴ <http://gecon.es/gamificacion-evidencias-de-su-efectividad-despues-del-hype/>

Research objectives	Achieved?	Results
<i>To study and evaluate the impact of Gamification in events and other social interaction spaces.</i>	✓	<p>3D Wire's gamification is, in many ways, integral. Although the quests are optional they influence all attendees, particularly thanks to the decoration and fantasy elements in all areas as well as the gamified accreditation model and the viralization of contents on social networks. The gamification design, on the other hand, is very focused on achieving event's objectives, like adding visibility to certain areas or improving networking among attendees. In this regard it supports the management of the event through playful dynamics.</p> <p>In particular, data collection has enabled us to perform a detailed analysis of gamification in events' dynamics. Data on different quest show that 40% of attendees were gamified and also engagement with the various proposed elements, reaching 795 quests done. This means that each of the 176 assistants engaged in an average of 4.5 quests.</p>
<i>To study attendees' satisfaction in relation to gamification mechanics.</i>	✓	<p>We had the opportunity to conduct a survey to several gamified attendees from which we highlights the following aspects:</p> <ul style="list-style-type: none"> • Data show the best rated components of the gamification (over 80% of respondents rated positively) have been the setting (the sets, the scenic storytelling, etc.), rewards and rupees. Quests and badges have been slightly less rated, a bit less than 70% of respondents rated them positively. • In particular, we were interested to explore further the relationship between the audience and badges. In this sense, data suggest that there may be a weak link between the number of badges that participants obtained and their rating of these, meaning the more badges achieved the better rating. • As for motivators, data suggest that there might be a strong link between the number of badges achieved and the collector desire, i.e. the more badges achieved the greater motivation to collect them. In this line, data has not revealed the emergence of so-called badge fatigue, an effect that suggests that there is a turning point from which excessive badges harm their valuation.
<i>To study the relationship between distinct social segments and the adoption of gamification.</i>	✓	<p>From demographics and its relationship with the gamification during the event we have been able to extract the following data:</p> <ul style="list-style-type: none"> • 40% of attendees participated in the gamification (176 attendees). • We observed that many more men than women interacted with the gamification, but in proportion to the size of each gender, the difference is much smaller. • Gamified attendees average age is 32, slightly younger than those who chosen not to participate. The most engaged groups were those younger than 20 and those aged between 30-34. • We observed many more Animation professionals than Videogames and Transmedia & New Media professionals engaged in the gamification. But in proportion to the size of each sector, the representation is similar, if somewhat less in the Transmedia & New Media sector.

- We observed many more senior professionals than students, rookies or junior professionals engaged with the gamification. However rookies and junior professionals were, proportionally to their segment, the most representative.

Moreover, the testing of the following hypotheses have allowed us to infer the following relationships about participants:

- Results show a weak but significant association between gender and faction: It was slightly more likely for males to choose the OrkCubes faction and for females the ElfCubes faction.
- No statistically significant relationships between gender and competitiveness were found. In any case the observed differences between males and females were too small to be deemed practically relevant.
- Results show a weak but significant negative correlation between age and number of quests done. Specifically, our results suggest that a higher participant age is negatively correlated with the number of quests done, both in variety and quantity.
- Results show a weak but significant negative correlation between professional experience and the number of quests done. Specifically, our results suggest that an increase in the professional experience is slightly negatively correlated with the number of quests done, both in variety and quantity. This may be a function of age, or vice versa.
- Results show a strong significant association between gender and risk willingness in gaming: It was more likely for males to keep betting their rupees than females.

To evaluate the effectiveness of applied gamification.



We have seen how gamification helps us to engage attendees in the event and study their behavior, allowing us to evaluate the effectiveness of it to achieve the objectives. In this edition we have improved the experimental method and tools and this has allowed us to both assess the achievement of the objectives and respond with more rigor, firmness and detail to the questions raised, both from a qualitative and quantitative point of view, allowing the extraction of generalizable knowledge about behavioral aspects beyond the event itself.

While some results have clearly shown that gamification has had a positive impact in achieving the objectives, it is also true that other results have shown less clear results or even have shown no statistically significant differences between gamified and non-gamified attendees. These less clear results, however, often point to relationships which might be leveraged more strongly in the future, or which future studies with larger populations might be able to measure with larger effect using clearer measures, thus helping to improve the assessment of the impact of gamification.

7 Conclusions

Benefits of gamification both for attendees and production team

Events are a perfect scenario to experiment with gamification techniques: in general events gather large groups of people for a set time (creating a space and timing different than in the workplace) with high levels of social interaction and a high willingness to learn, interact and have fun.

Thanks to 3D Wire we have been able to experiment –in two consecutive times– how the proposed gamification has affected the experience and overall satisfaction of the event for both participants and organizers. While our quantitative results partially support the qualitative results, we can assess several benefits which gamification, in a general way, can bring to events. Key aspects we'd like to highlight about the potential utility of gamification of events are:

- Improvement of assistance to various program events. Gamification can improve attendance flow to less frequented areas and communication of the event's agenda, increasing inflows at times less likely of attracting attendees. (page 39 & 50)
- Improvement of socialization and networking. Gamification can facilitate meetings and cooperation between attendees (and VIPS, product managers, etc.), either by stimulating a playful state of mind that predisposes to socialize or because by using elements like the gamified accreditation or quests that require cooperation, helps attendees to break the ice. (page 41 & 50)
- Improvement of media impact. Gamification, thanks to its innovative look –although the hype diminishes– and transversality of its application, can facilitate the generation of excitement and interest in the media, as well as easily sharable fun/significant situations in social networks by the participants themselves, enforced or not by quests mechanics. This can also improve the reach of the dissemination and the media interest in the project and its contents. (see page 48 & 51)
- Added fun to the event. Although gamification doesn't transform the event into a game, playful elements remains one of the great aspects that can enhance the experience and global rating of the event. In this sense gamification can generate fun by facilitating the previous benefits and, in turn, substantially increasing attendee loyalty. (page 41 & 51)
- Encouragement of the production team by including them in a meta-narrative and interaction layer over the production of a conventional event that keeps them motivated. (page 19)

About the integration of gamification in events

Gamification should be integrated within the event but not overshadow it. Gamification should not be the focus, but to support the objectives of the event and enhance the experience. Gamification is not the creation of a game but the application of game design elements in the event design, supporting its program requirements.

As a mostly analogic environment –although in this edition we included more digital elements–, the challenge is to integrate gamification in the event's flows and at the same time meet the requirements. In this sense, one criterion set at the beginning of the design was that gamification should not divert effort and time from the participants. We have to focus on gamifying activities and flows that different profiles usually would do (or should do) during the event, also helping to visualize all the agenda and venue space opportunities.

Importance and role of scenic storytelling

In some cases gamification requires a context and in ours this was the storytelling and the supporting elements. In this edition of 3D Wire, as in 2014, we've used a set with a fantasy aesthetic, with ElfCubes, OrkCubes, potions, dungeon exploration and factional battles.

We have been able to directly ask participants about their assessment of the various components of gamification and the set has been the highest rated.

Without these elements much of the power of immersion and commitment to the experience and the gamification would have been lost and would have become a more mechanical exercise. The storytelling has to be aligned with the audiences, who have to be familiar with the terminology, visual elements and even with the dynamics and mechanics.

About attendee profiling

We reiterate the importance of a good analysis of the potential public during the design phase. To do this the information available on previous registration processes was very useful. If, as in our case, we already have an annual series started, the profiling is more accurate and allows us to further improve the gamification strategy to the public.

About statistics

Data collected in an event like 3D Wire allow us to take a picture of what happened during the event as well as infer generalizable behavioral characteristics of the audience.

While collecting data on attendees is not a simple task, the use of game elements as intermediaries, such as coins or badges coupled with a strategy of "data mining" (digital and/or analog), provides and transforms the capacity of data collection of organizations.

That is why gamification is presented as a very useful tool for statistics, valid to analyze –among others– attendance, participation and user activities and complement the classic event's registry and monitoring.

The collected data set, inferences and knowledge generated by the different gamification experiments being shyly carried in the research world will gradually shed even more light on the value of gamification as a useful and effective technique in a more scientific way.

Open Access

As in 2014, we hope that this report and the collected dataset serve the gamification community and researchers to support their work. We believe that open access policies are the way to a more efficient and effective progress, both in terms of documents and data.

This dataset is available sending us an email to info@gecon.es

8 Credits & Authorship

GECON.es wishes to express our gratitude to the [Paramotion Films](#) staff, specially to its director José Luis Farias, for having entrusted us the gamification of 3D Wire for the second time, as well as the excellent collaborators team: [Andreas Lieberoth](#), [Marta Fernández](#), [Miguel Simón Bermejo](#), [Luis Vallejo](#), [Oscar Luis Femosel](#), [Pablo Franco Corral](#) and [Ruth Contreras](#), without them it wouldn't have been possible to develop a project like this and with this success. A gamified experience created by GECON.ES and Paramotion Films for 3DWire '15, the International Market of Animation, Videogames and New Media.

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