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Supplement to the Treatise

WOLFGANG RUNGE: TECHNOLOGY ENTREPRENEURSHIP

How to access the treatise is given at the end of this document.

Reference to this treatise will be made in the following form:
[Runge:page number(s), chapters (A.1.1) or other chunks, such as tables or figures].

To compare the entrepreneurship in the games business in the US and Germany to a certain degree references address the case of the US firm Zynga, Inc. [Runge:B.2]. For foundations of both the startups serial entrepreneurs played a key role.

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Gameforge AG

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The Market and Industry Environments

It is believed that play – like search, share and shop – as a general macrotrend "Leisure and Entertainment" would become one of the core activities on the Internet [Zynga 2011].

For firms there are *low barriers* to entry in the social game industry, and *competition* is intense. Some Internet game firms organize user access via other social networks; others are independent from other "auxiliary networks." An example for the first type is the US firm Zynga, Inc. which uses *widget application on social networking websites* such as Facebook.

A software widget is a generic type of software application comprising portable code intended for one or more different software platforms. The term often implies that either the application, user interface, or both, are light, meaning relatively simple and easy to use. A "*widget application*" is a third party application developed for an online social network platform, with the user interface or the entire application hosted by the network service [Wikipedia 2].

Online game developers and distributors who are primarily focused on *international markets* have to provide their games in a large number of *different languages* (20+) and have to take *cultural differences* into account.

Competitors that develop social games for social networks vary in size and include publicly-traded companies and privately-held companies. They also differ in diversified sets of *revenue sources*.

Concerning *technology* the Internet game providers face competition from developers of games for mobile and other platforms and games for dedicated, standalone boxed consoles (Sony, Microsoft or Nintendo – PlayStation 3, Xbox 360, Nintendo DS), and providers of games on data carriers or download services of games from networks. And one currently sees new mobile-game competitors to enter the market and existing competitors to allocate more resources to develop and market competing games and applications.

The market which provides access to games essentially free-of-charge or requires only small fees is *largely independent from economic recessions*. It can be expected that during a crisis people will go for savings regarding many various things, but some few dollars/euros will always be available for games which will (may) stabilize psychological dispositions. The recent Great Recession (end of 2007 to 2009) corroborated this assumption.

Concerning *constraints of operation and risk* all social networks process, store and use personal information and other data, which are subject to *national governmental regulation and other legal obligations* related to privacy. Hence, actual or perceived failure to comply with such obligations could harm the business. Software “bugs” is a special category of risk which affects user acceptance of games and retaining users.

In the online games industry, there are three separate categories:

1. Who makes the games? (the "Developers")
2. Who funds and markets the games? (the "Publishers")
3. Who supplies the games to the users? (the "Operators")

Operators take none of the up-front risk of a traditional publisher and focus instead on capitalizing on the game once it is made (usually by taking it to countries and languages that the original publisher cannot reach). Operators do not usually enter the scene until the game has already gone to market in at least one country.

The businesses of the publishers are to take the bulk of the risk by financing the game. If a game is fully developed, and launched, but fails to earn out, the developer makes no profit but no loss; the publisher, on the other hand, makes a net loss of whatever the development cost was, balanced against the game's revenue.

The (online) game industry emphasizes leisure, and in particular fun and relaxing. Incumbents have to create excitement and emotions of users and correspondingly visions and missions focus on

- We create worlds – every day. We initiate emotion – time and again. We connect people – globally.
  Connect joy of games free of charge, easy accessible at any time and anywhere, easy to get familiar with and high quality and technologically advanced (in German “Wir schaffen Spielwelten, die für alle Menschen leicht zugänglich sind und gleichzeitig großen Spielspaß und hohe Produktionsqualität zusammen bringen” – Gameforge AG)
- Connecting the world through games.
  Play – like search, share and shop – would become one of the core activities on the Internet.
  If we can make games simple, accessible and social the world will start playing (Zynga, Inc.).

These visions/missions including fun express *a player-centric approach*. Based on a study in the US [Burns 2006] *online players* exhibit six distinct groups based on time spent and motivation.

Broadly, there are *casual* and *hard-core players*, the first group often classified as players who play less than 10 hours per week, regardless of the game. The six segments identified are: Power Gamers who represent 11 percent of the gamer market, and 30 cents on the dollar on retail and online games.

- Social Gamers play games as a way to interact with friends.
- Leisure Gamers spend 58 hours per month playing mainly casual titles.
- Dormant Gamers have fewer opportunities to game because of scheduling issues with family, work or school.
- Incidental Gamers lack motivation and play out of boredom but spend 20 hours or more a month playing online games.
- Occasional Gamers play puzzle, word and board games almost exclusively.

Typical “core gamers” are male and between 15 and 29 years old. Game users exhibit a gender effect. For instance, there are relatively few high-quality games for women and children. The proportion of women as gamers accounts for ca. 30 percent. Basically, women are more interested in social interactions than competition, and also strategy games. Traditional games are shaped by competitive situations. One reason is that the majority of developers is men who develop games that they also like to play [Hauger and Kainzl 2010].

The user segmentation and related characteristics will differ for various countries to various extents. Fundamentally, there are differences between North America and Europe and Asia. The US game market is focused essentially on console games and games with high optical quality. In most other countries browser games predominate and many countries have not been serviced by the “classical” game industry. These were the interest of European and particularly German game startups providing games in the countries’ native languages.

The US is also the key market for console firms, such as Microsoft, Nintendo or Sony. The US contributes the biggest revenue per country for these firms [Hauger and Kainzl 2010]. Games have grown to become the second most popular online activity in the United States by time spent, even surpassing email [Zynga 2011].

Game providers have to *carefully track changes in user preferences* and, therefore, have to cling to “enforced” *innovation persistence* [Runge:ch. 4.2.3], constantly enhance, expand or upgrade the game with new features that paying players find attractive – and, continuously launch new games.

Due to low entry barriers *initial financing* for a firm offering a game may require relatively low investment which means a number of such firms can (are) founded via bootstrapping with own funds, 3F initial financing (”family, friends or fools”) or own/3F and low level debt financing as an LLC (GmbH). They may originate with the development of a game as a hobby or with an obsession and subsequent firm’s foundation (Gameforge AG). However, significant resources may be required for developing or acquiring additional games for the firm’s survival and growth.

With regard to resources most games will have been developed for less than €0.5 million for a simple game and can be expected to return a huge multiple of that over their lifetime. But for developing (or licensing) sophisticated games expenditures of €10 million are not unusual. Furthermore, to recover development cost as fast as possible expansion of game use in other countries with high growth potential is mandatory.

As other Internet firms in the social games business *revenue streams* are usually associated with the product/service offering as well as advertising (Gameforge and Zynga cases [Runge:ch. 3.4.1]).

If the game is free-of-charge, selected add-ons for gaming may require fees, from a few cents to several dollars/euros for users with premium or super-premium access. This introduces two types of playing, free-to-play (F2P) and pay-to-play (P2P).

> In this context a sort of “80:20 rule” applies: 1) A small percentage of players (around 10 percent) account for most of the revenue and 2) for large firms offering a number of games a small number of games generate the majority of revenues.

Generally, *non-advertisement revenues* result from subscription, premium accounts and "virtual goods" [Runge:Box I.16,ch. 3.4.1]. For social networks the business model works by offering a product or service free of charge (typically software, content, games or Web services) while charging a premium for advanced features, functionality, customization or related add-ons is called the "*freemium model*" ("free" and "premium"). For instance, revenue stems from selling features that give players an edge, such as virtual magic swords.

Free-to-play (F2P) [Weidemann 2009] refers to any video game that has the option of allowing its players to play without paying. The model was first popularly used in early massively multiplayer online (MMO) games targeted towards casual gamers, before finding wider adoption. Free-to-play can be positioned against pay-to-play (P2P), in which payment is required before using a service, and freemium means generally that a product or service is offered free of charge while a fee is charged for users to access premium features.

> The key issues, hence, are how successful F2P publishers are in converting free users (all their games can be played for free) into P2P or fremium users.

Various forms of F2P games include

- Browser-based games including Massively Multiplayer Online Games (MMOGs)
- Client-based MMOGs
- Social network-based games, for instance, using Facebook
- Casual games.

The German startup Gameforge AG covers browser-based and client-based MMOGs, Zynga, Inc. essentially the last two categories.

A *casual game* is a video game targeted at or used by a mass audience of casual gamers. Casual games are typically played on a personal computer online in Web browsers. Casual games tend to be those that have simpler game play and engaging game design; they also tend to offer users who come across the game to step in and play a game within minutes. They require no long-term time commitment or special skills to play, and there are comparatively low production and distribution costs for the producer.

The goal with casual games is to appeal to as wide of an audience as possible, including those that have normally fallen outside the traditional "gamer" profile. Casual games tend to be smaller in scope and more limited in terms of game play compared to console or AAA desktop titles, and with that comes lower end-user expectations about the casual game experience [Higgins].

The gaming press tends to use AAA to mean a really high quality game. Marketing folks will use it to refer solely to the advertising budget (which means the actual quality of the game is irrelevant). Producers usually will use it to mean both (high quality and a big marketing budget) – comparable with the "blockbuster model" of the pharmaceutical business [Runge 2006:173,193].

The firms' g*rowth strategies* comprise "continuous improvements" of existing games, developing and acquiring new games from others or independent developers, license-in of games, for instance, from Asia and acquisition of game firms and "development studios".

And to finance such capital-intense approaches startups have to turn relatively fast (after 3-5 years) to *venture capital* or even an *IPO at a stock exchange* – if not having representatives of these sources already on board from the beginning, such as Zynga, Inc. ([Runge:B.2]).

If one accepts social games to represent a new form of entertainment it is notable that social games will compete for attention of players with the other forms of entertainment (movies, books, newspapers, magazines, theater/shows and recorded music) that comprise the global entertainment industry. Entrepreneurship in this whole area would also include a startup like YouTube focusing on videos (now belonging to Google).

Intellectual property of the considered software areas is in the form of software code, patented technology and trade secrets that is used to develop the games and to enable them to run properly on multiple platforms. However, *copyright* are usually not enforceable if not the entire code, graphics or longer parts of text, but only single ideas or parts are used by others.

Other intellectual properties refer essentially to audio-visual elements, including graphics, music, story lines and interface design. Who later wants to protect the name of a game as a trademark should early think about how to name the game as trademarks are only protectable if they allow distinct differentiation.

Concerning *technology* a lucrative niche, Massively Multiplayer Online Games (MMOGs), has emerged, in particular, by online and browser-based approaches and using personal computers. Here, specifically German startups were about to exploit the lucrative niche (see below). MMOGs have only recently begun to break also into the mobile phone market.

Industry and market information (magnitude and growth rates) involves a number of commonly well-known assumptions and limitations and thus is essentially for gross orientations. Whereas in 2009 global sales of computer and console games via retail decreased by 8 percent, the number of browser game providers, their number of employees, products and revenues increased considerably. Market research firm Inside Network reported doubling of revenues with virtual goods in the US to exceed $1 billion and globally to from $5 billion to $7 billion [Freundorfer 2010].

The growth of casual gaming on social networking sites and smartphones has transformed online gaming into a mass market. The rise of the virtual goods revenue model [Runge:ch. 3.4.1.1], which allows people to play for free and later pay for individual items within the game or world, has also contributed to the growth of this market.

During the period of Gameforge’s startup and early development the revenue specifically generated from the sale of virtual goods has increased 245 percent from $2.1 billion in 2007 to $7.3 billion in 2010. In-Stat forecasted total virtual goods revenues would more than double by 2014 [Reportlinker 2011]. For the US it was forecasted that revenue from “virtual entities” of $510 million in 2010 will increase to $792 million by 2012 [Holt 2011].The core business, however, remains with sales of data carriers with or downloads of complete games.

Concerning market volume in Germany total sales of computer and video games (PC and console games and licensing of mobile games) amounted to €1.86 billion with the segment “data carriers and downloads” contributing €1.59 billion. Online and browser games accounted for €194 million (subscription and premium accounts), up 24 percent from 2009 (€156 million). Sales of “virtual goods and services” jumped 38 percent from 53 percent in 2009 (€53 million) to €73 million in 2010 [BIU 2011].

Market researchers forecasted strong growth of games on mobile platforms, such as smartphones, tablet PCs and mobile consoles. In 2010 in Germany 13 million game apps were downloaded [Fehrenbach 2011]. Games are the most popular category of applications on smartphones, representing approximately half of the time spent on smartphone applications in the US [Zynga 2011].

The key challenges of firms operating in the F2P social games industry comprise [Zynga 2011]

- Convert non-paying players into paying players and attract new paying players;
- Increase purchases by paying players;
- Retain paying players, especially higher paying players;
- Anticipate changes in the social game industry;
- Cost-effectively develop and launch games;
- Launch games and release enhancements that become popular;
- Develop and maintain a scalable, high-performance technology infrastructure that can efficiently and reliably handle increased player usage, fast load times and the deployment of new features and games;
- Process, store and use data in compliance with governmental regulation and other legal obligations related to privacy;
- Successfully compete with other companies that are currently in, or may in the future enter, the social game or entertainment industry;
- Hire, integrate and retain world class talent;
- Maintain adequate control of expenses;
- Successfully expand the business, especially internationally and in mobile games.

Key Metrics and “Gold Standards” of Video Game Software Markets

Growth and revenue models for commercialization of social networks including online games, particularly monetization tracking, refer to the following indicators.

- “Registered Users”
- “Active Users” (returning after first day and first login)
- “Active to pay”: How many actives pay = *Conversion Rate*
- MAU - Monthly Active Users
- DAU - Daily Active Users
- MUU - Monthly Unique Users
- PCCU Peak Concurrent Users
- ARPPU - Average Revenue per Paying User
- ARPU - Average Revenue per User
- CPA/CPL: Cost per Acquisition/Lead (of user)

For games, for instance, “registered users” means primarily all registered users having passed a registration process for all games. But, it may include players who did not delete their entries and there may also be millions who just made one trial of a game and did not come back.

Among the “The 15 Most Influential Games of the Decade” one found as No. 4 World of Warcraft (2004).

WoW emphasizing role play created a gold standard by which all other massively multiplayer games are measured. World of Warcraft (WoW) blew them all away, taking MMOs from niche pursuit to mainstream passion. “The MMORPG had its genesis in the ’90s. By grouping players into alliances and guilds, WoW created strong social circles among its devotees, who are so deeply involved in the culture that they attend the yearly BlizzCon convention. The game has influenced many other publishers to jump feet-first into the MMOG genre.” [Tracey 2009]

And one saw as No. 14 Happy Farm (2008).

Happy Farm, is a Chinese social network farming game and played predominantly by users in Mainland China and Taiwan that “inspired a dozen Facebook clones” – the biggest being Zynga's Farmville. “Happy Farm’s blend of planting, growing and harvesting crops turned out to be the simple game-design formula that had gigantic repercussions.” [Kohler 2009] It represents “social virtual worlds.”

Europe versus America

For social networks and computer/video games the national culture – and language – influences decisively the markets.

According to the founder of the German firm BigPoint "There are only existing two markets in America," "the console market and the Facebook market." [Sheffield 2010] The US has only one language, one government, one legal system, mostly one national culture and correspondingly attitudes of the population, and they have much easier access to (much) capital. Europe is fractured concerning size of the home market, language and partially also concerning payment solutions.

Therefore, concerning social networks and online games even Germany is rather small to start a related business and gain strength to go abroad. This is even true, if one considers all the German-speaking countries, Germany, Austria and Switzerland (the so called DACH-region) with ca. 100 million people.

“Americans want multiplayer action games, while Europeans care more about strategy and solo games. So to succeed in America, you need 3D.” [Sheffield 2010]

Bigpoint's Lessons from the US were [Sheffield 2010]:

- "Most of our games that were very successful in the rest of the world were not successful in America."
- “Though America is powerful in the social space, "the browser games market is dominated by foreigners." In order to succeed you have to "act as a local company."
- “The first thing is hire local heroes." "Hire only Americans.” Be cautions with audience mismatch, “so developers should be prepared to change everything.”
- “Using well-known IP helps to break into new markets, though, and helps with player retention.” The big problem we have is the churn rate," plus losing 90 percent of players after registration.”
- And if you want success in the US, you should develop games for the US only, not for worldwide. "Do casual, or hardcore 3D. Nothing in between. Nothing else is successful."

Gameforge AG

The company Gameforge AG from Karlsruhe (Germany) is a developer and publisher of games. It is currently the largest independent global provider of browser and downloadable client-based Massively Multiplayer Online Games (MMOGs).

Gameforge follows a “freemium model” for games on the Internet. Licensing of client-based MMOGs developed in Asia for the European market is via the wholly owned subsidiary Gameforge4D GmbH (operator role) which localizes these MMOGs in different languages and introduces the games in the respective markets.

Until 2011 Gameforge AG operated as a holding comprising (development) studios in Germany, Ticking Bomb Games GmbH (Hamburg), Rough Sea Games GmbH (Mannheim), Steroid Interactive GmbH (Mainz) and Inflammables GmbH (Heidelberg) as well as Gameforge Productions GmbH and Gameforge Productions Inc. (San Francisco).

In 2011, after having left Gameforge, its co-founder Klaas Kersting took over Rough Sea Games GmbH with almost all its employees into his new startup Flaregames GmbH. Also Steroid Interactive and Ticking Bomb Games were sold in 2011 [OGLABS 2011].

The Entrepreneur(s)

Gameforge was founded in 2003 by the *entrepreneurial pair* Klaas Kersting (born 1979) and Alexander Rösner (born 1980) as an LLC (GmbH) with both acting as Managing Directors (in German geschäftsführender Gesellschafter).

We shall put the emphasis on Klaas Kersting, as he will provide a case for a personal development from a first time entrepreneur to a serial entrepreneur (specifically, a start-over entrepreneur [Runge:ch. 2.1.2.4, Figure I.64]) and how the entrepreneurship process differs for his first and second firm. Furthermore, Alexander Rösner kept a low profile on the Internet or other media.

Klaas Kersting grew up in a family with a computer and network environment at home. When he was young there was already ARPAnet at home (a predecessor of the Internet [Runge 2006:345]). As his father worked at a university, he had access to the German universities’ research network.

Computer games have become his most intense hobby. Being uncertain about what to study he gained rather *diverse experiences* with regard to disciplines as he passed through periods focusing on business administration, history, law and communication science [Hauger and Kaizl 2010].

Finally, Kersting applied for a scholarship of KPMG, a global network of professional firms providing audit, tax and advisory services, and he got it. He turned to the study of international economics with a focus on information technology (particularly, project management and risk minimization of weaknesses of enterprise IT) at ABW (Akademie für Betriebswirtschaft und Welthandelssprachen Mannheim, Germany; Private School of Business Administration and Global Business Languages) [Hauger and Kaizl 2010].

Along with his study he spent much time with computer games. As a student he developed computer games together with friends. They launched their games on the Internet and included advertisements for commercialization. In this way Klaas could finance his study. And finally he encountered the decisive situation concerning commercialization via a firm of computer games: “I can do that also.” [Kersting 2012]

“Then I discovered that there are online games – and I thought: *I can do that better*.” [Anonymus 2009] In 2001, during his study, he started developing his own browser game “Wogen des Schicksals” (“Waves of Fate”) [Kersting 2009; Play Massive 2008].

Still during this study Kersting founded Gameforge GmbH in 2003 together with Alexander Rösner who had also developed a game, “OGame”. They started in Karlsruhe and later moved to the Karlsruhe Technology Park in the *environment of several large German Internet firms and access to talent of Karlsruhe University* (now KIT) known as the center of IT education in Germany, with two fully functional games which from the beginning generated cash flow. Kersting’s retrospective view of firm’s foundation was: “For sure, the best decision I made was to give up my secure job with KPMG and, instead, with Alexander Rösner to found Gameforge.” [Hüsing 2010]

In 2004 Klaas Kersting graduated from the private business school ABW [ABW 2009] with the degree of an International MBA (in German “Internationaler Betriebswirt”), using Gameforge as part of his thesis on the internationalization of an Internet business.

Based on the experience as a student with launching games having advertisements for income and though in the early days Gameforge used advertisements for revenues the online games of Gameforge now do not have any advertisement – seen as only a factor disturbing the game and fun.

Alexander Rösner studied Information Technology at the Technical University of Karlsruhe (now KIT) and completed his degree in 2003, graduating as a “Diplom-Informatiker” (Master of Computer Science, MCS). Whilst completing his studies, Rösner became a co-founder of the German Internet provider Schlund & Partner AG, which later merged with United Internet AG, a ca. €1.9 billion revenue (2009) Internet Service Provider (ISP) with two businesses and operating under various labels (one being now 1&1 Internet AG). Hence, Rösner appeared as a serial entrepreneur with industry experience. Subsequently Rösner became a director of the firm 1&1 Puretec, providing Internet page and domain registration.

In December 2003 he founded Gameforge together with Klaas Kersting. Rösner had developed Gameforge’s first product, the browser game “Ogame” in 2002. That means he gained considerable experience as an entrepreneur in the IT sector and how to survive the Dot-Com Recession. Furthermore, one could expect that Gameforge could take advantage from Rösner’s former business contacts and networking.

In 2011 the German magazine Computerwoche (of International Data Group (IDG), Boston, USA) positioned Alexander Rösner on number 42 of the 100 “most significant personalities of the German IT sector”.

The role distribution between Kersting and Rösner in Gameforge AG was reflected by their particular roles and responsibilities as the former one being CEO and the later one being CTO – with complementary commercial and technical orientations. Kersting is extrovert, whereas Rösner is more introvert. Both share values closely and are complementary which refers to the fact that Rösner is very organized, systematic and detail-oriented where Kersting is not, but always seeing the big picture [Kersting 2012].

Since then, Klaas Kersting has turned out to be a *serial entrepreneur* and, specifically an “*entrepreneur-investor*”. In 2010, after first changing to the Supervisory Board [Gameforge 2010] and then after having left Gameforge but keeping his stake in the later stock company Gameforge AG, he founded Flaregames GmbH in 2011.

Kersting emphasized that he left the company in mutual agreement – no trouble, no quarrel – to pursue new opportunities; and he would continue to serve amicably as a consultant to the company.

In 2011, referring to Kersting's experience in development of new social media and mobile applications, he was appointed to the Board of Directors of Beaufort Media. Kersting also invested an unspecified amount of money to become a shareholder of the company. Beaufort Media is an on-demand content company that intends to provide quality and informative content in a number of European languages on *commission of customers*. For instance, its content service Independent Publishing is based on an international network of over 8,000 authors, each with his/her own areas of expert knowledge, and editors. Not only text, but also video service is a target. For instance, its "helpful" portals provide product descriptions or a piece of advice ("how to" procedures) similar to the myriad of cooking receipts on the Web [Beaufort Media 2011].

In 2011 Kersting founded Flaregames GmbH again in Karlsruhe. It is interesting to observe how Kersting's new firm's foundation process used the experience of his first foundation to establish Flaregames [Kersting 2012].

He gathered a herd of experienced designers and developers, took over the team of Gameforge's developer studio Rough Sea Games GmbH and followed a "veterans approach" for the leadership or management team, respectively, concerning "creativity," technology as well as business augmented by gaining Bob Wallace, the owner of the consulting firm Strategy Alternatives as an advisor for management.

Flaregames is dedicated to create exciting and popular games for mobile devices, essentially to become a leading developer and publisher of Mobile Reality Games. "I am a born entrepreneur – what is the entrepreneurial challenge and is really fun is to make a big success out of a small project. And the bigger the firm becomes, the more the tasks of a managing director differ from those of a founder. Then, at a certain point of time, the drive to create something new will be overwhelming." He strives for independency and emphasizes the good feeling to work independently [Hüsing 2010].

Flaregames' focus on mobile "reality games" targets location-based gaming on smartphones and tablets. This new genre of "*Augmented Reality"* meshes the real world with virtual worlds or *vice versa*. The games shall feature deeper interaction than simple check-ins and Kersting stated "We see our games as the fusion of the real world and virtual world while delivering an entertaining experience woven into the daily routine of our players' lives."

At the new firm with 28 employees (Jan. 2012; {Kersting 2012} Kersting's co-founders included Andreas Suika, former lead game designer for Ubisoft Blue Byte, whose titles sold several million units. Suika is responsible for the overall game design of Flaregames' titles as Creative Director. Georg Broxtermann was also joining Flaregames, who was formerly business development director of GPS Mission. Bob Wallace, former chief strategy officer of Ensemble Studios (maker of Age of Empires), was joining the board and is consulting on strategic direction. Other co-founders are Matthias Schindler, Börje Sieling and Cem Aslan. Rivals of Flaregame included Rovio, Booyah and Greyarea. The company has raised $1 million from Kersting and it planned a new round in the fourth quarter of 2011 [Takahashi 2011b].

By 2012 Venture-Capitalist Accel Partners had invested additional €6 million in Flaregames. Already in May 2011 Accel got a stake of 3.2 percent of ownership in Flaregames and increased this to 17.7 percent by the end of the year [Kaczmarek 2012]. And the subsidiary of the German Telecom, T-Venture Investment contributed recently €2 million [Wasch 2013].

By 2012 Flaregames had their first successful games in the market, Ocean Tower (2 million downloads) and BraveSmart [Wasch 2013].

By 2013 Flaregames has become an international company developing games for smartphones and tablet-PCs. Games are developed for the Apple operating system iOS, but also Android. Employees (then 40) and the leadership team from various countries communicate only in English.

Its strategy game "Royal Revolt" has been recently launched also in Korean, Chinese and Russian and has been downloaded ca. 4.5 million times. Development of a rather good game takes approximately 6 months and €200,000 [Wasch 2013].

In the market Flargames' aim is to capture many users who pay little money rather than having few gamers spending much money [Wasch 2013].

Awards and Publicity

Gameforge has "unearthed a potential mass-market goldmine rather than a short-term niche." [Gibson 2008] And its successful development is documented by continuously getting various national and international awards and prizes [Gamforge 2010; Schmidt 2010]. Apart from the publicity for the firm, Klaas Kersting emphasized that the awards are an expression that the firm has done many things right, in particular, for different aspects, such as innovativeness, products, human resource management and sustainable growth [Hauger and Kaizl 2010].

2008:

"Red Herring 100 Europe"
"Deloitte Technology Fast 50 Rising Stars"
"Entrepreneur of the Year"

2009:

World Economic Forum "Technology Pioneer 2009"
Ikariam Best Browser Game (German Computer Game Award)
International Business Award "Most Innovative Company of the Year in Europe"

2010:

'TOP JOB' Employer of the Year in Germany
Great Place to Work® Institute Germany selects Gameforge as one of the best employers

2011:

The company won an International Stevie® Award in the Media category for the game portal Gameforge.com, and also received a Distinguished Honoree medal for Star Trek: Infinite Space.

Gameforge does not only provide an innovative and creative firm culture for its employees as shown by the awards. It is also pro-actively building up potentially new hires. In 2008 Gameforge signed a scholarship cooperation for the Information Technology/Game Development course at the private SRH Hochschule Heidelberg (SRH University of Applied Sciences Heidelberg).

Technology and Product Considerations

The technologies for MMOGs are components of a *man-machine system*. As they are about social interactions they require proper organization of technology, player's interactions, communication of players, entry into the game and help for players. Large communities will develop around the games.

Community Managers have to look after the communities via Internet. The experienced professionals will represent the games' publishers in the forums and games; they are looking after each game and providing globally high quality user support.

When at the beginning of the century online games encountered their lift off, market research firm Strategy Analytics reported that in 2006 the global online games market was already worth $4 billion with a rapidly expanding Massively Multiplayer Online Games market. It was projected that the market will grow with a compound annual growth rate (CAGR, [Runge:Equation I.10]) of 25.2 percent in the 2007-2011 forecast period to reach $11.8 billion by 2011 [Strategy Analytics 2007].

> The continued uptake of broadband services around the world was viewed as a main driver for sustained growth in the online games market [Strategy Analytics 2007]. And the PC was positioned as the clear leader when it comes to online gaming.

As Internet performance regarding speed of data transmission and browser technologies improve continuously also sophisticated 3D games can be presented through a browser.

DFC Intelligence's Online Game Market Forecasts reported estimates that overall worldwide revenue for online games (for both PC and consoles) would grow from $15.7 billion in 2010 to nearly $29 billion in 2016. DFC said this includes revenue from subscriptions, online usage, online in-game advertising and digital downloads. Online game revenue for the PC was expected to be near $23 billion in 2016, buying digital (“virtual”) goods would continue to grow at a rapid pace [Brightman 2011].

> Online game revenue for the PC “is being driven in large part by social networks like Facebook, which is also helping to expand the reach of PC games globally.” [Brightman 2011]

A massively multiplayer online game (MMOG) is a multiplayer video game and shares characteristics that make them different from other multiplayer online games [Wikipedia 6]. It is capable of supporting hundreds or thousands of players simultaneously around the world. By necessity, they are played on the Internet.

MMOGs host the large number of players in a single persistent *game world*, and all of those players can interact with each other at any given time, for instance, via a chat function. Players can cooperate and compete with each other on a large scale. However, single player game play is sometimes viable, although this may result in the player being unable to experience all content.

MMOGs create a persistent universe where the game milieu continues regardless of interaction. Since these games emphasize multiplayer gameplay, many have only basic single-player aspects and the artificial intelligence on the server is primarily designed to support group play. Hence, players cannot "finish" MMOGs in the typical sense of single-player games.

To support all those players, MMOGs need large-scale game worlds and servers to connect players to those worlds. Conventionally, a player is connected via a client program with the server. The client covers the data for the content (graphics, objects, music etc.); game mechanics is administered and processed by the server.

The history of modern Massively Multiplayer Online Role-Playing Games (MMORPGs) like World of Warcraft (WoW), and related virtual world genres such as the social virtual worlds traces directly back to the MUD genre which emerged at the beginnings of the 1990s. An MUD (originally Multi-User Dungeon, with later variants Multi-User Dimension and Multi-User Domain) is a multiplayer real-time virtual game world, with the term usually referring to text-based instances of these. Text orientation refers to output of the game as well as control with commands issued via a keyboard.

In the Western countries German startups were the forerunners of the online and browser MMOG games business, the largest being Gameforge AG (2010 revenues ca. €150 million; but cf. Table 4:) and Bigpoint GmbH (2010 revenues ca. €200 million [Lovell 2011]) operating freemium games on the browser or via downloadable clients. Their games run on almost any type of PC; there is no need for a high-performance computer. Concerning the role of console games it should be noted, however, that the newer game consoles, such as PlayStation 3, Xbox 360, Nintendo DS, can access the Internet and may therefore also run MMO games.

Currently, MMOGs can be found for most network-capable platforms, including the personal computer, video game console, or smartphones and other mobile devices.

In the period 2006-2011 Germany as a market has developed its own breed of successful, profitable businesses in a sub-sector of the games industry. “Investors such as Accel, Highland Capital and Doughty Hanson have backed businesses in the browser-based, social and mobile game sectors, betting that the freemium model, with its low barriers to entry for consumers and potentially high average revenue per user will be a better place for venture capital and private equity than the traditionally hit-driven business of AAA (game) development” [Lovell 2011] – comparable to the “blockbuster model” of the pharmaceutical business [Runge 2006].

Bigpoint, Gameforge and a number of other German startups have begun to take European MMO gaming in a different direction to either North America or Asia (where retail or large client MMOG downloads predominate) and have provided, in the period of just two to three years, a significant injection of energy and capital into the stuttering indigenous German games development and publishing market. They revolutionized the European MMOG market reaching unheard-of player numbers and generating unprecedented usage which dwarfs anything achieved by any of the more traditional retail-and-subscription MMOGs.

In 2008 Gameforge founded in 2003 was the seventh most popular worldwide and twice as big as World of Warcraft [Gibson 2008], the last one, a MMORPG, being viewed as the No. 4 of “The 15 Most Influential Games of the Decade” [Tracey 2009].

In 2011 VC firms (Summit Partners, TA Associates) acquired a majority stake in Bigpoint, founded in 2002, for €350 million, valuing the entire company at over €600 million [Lovell 2011; Rooney 2011]. Bigpoint turned over ca. €20 million in 2008 [Gibson 2008] and ca. €200 million in 2010 [Lovell 2011]. A person familiar with the matter suggested that at that time social-games giant Zynga might be interested in acquiring the company pre-IPO. The argument was: “Zynga is very aggressive and has the cash. Bigpoint would give them a presence outside of Facebook and a global footprint.” [Rooney 2011].

Bigpoint “makes money selling in-game virtual items, a business model of which it was a pioneer as early as 2003.” [Rooney 2011; Runge:BoxI.16]

Future developments of browser games as seen by Gameforge co-founder Klaas Kersting [Steinlechner 2008] stressed the disappearance of dedicated browser games. Instead, there will only be the category of “online games” as browser technology will allow addressing 3D-options and all resources of the computer. Hence, there will be no need to develop a client, which actually is an entry barrier.

The Business Idea, Opportunity and Foundation Process

One of Gameforge’s founders, Klaas Kersting, had been playing computer games as a hobby early on and as a student he developed computer games together with friends to reveal that one can make money with advertisements in computer games. Then, he came across with online games and thought: “*I can do that better*.” [Anonymus 2009] In 2001, during his study, he started developing his own browser game “Wogen des Schicksals” (“Waves of Fate”) as a hobby [Kersting 2009; Play Massive 2008]. On the other hand, in 2002 Alexander Rösner developed his first product, the browser game “Ogame” – also as a hobby. Later he remembered “At the beginning it was a hobby. At that time I did not expect such a fantastic success.” [Halac 2005].

After having revealed that one can make money with advertisements in online games Klaas Kersting searched the Internet for games to find Ogame. He sent a mail to Alexander Rösner which became the basis for a decision to found a firm Gameforge GmbH as a marketer of advertisements through online games. And they could run the startup having already two products for the online game market. Contrary to Rösner Kersting never had a real job, did never lead people and did never lead a firm [GamesBizz 2009]. He proceeded essentially by learning-by-doing or trial-and-error.

Kersting originally saw the opportunity just for the browser-based online game market. Seeing the potential that many people will detect browser games on the Internet for themselves to become part of a fantastic development he concluded:

> “Due to always better technical prerequisite, declining traffic prices and increasingly modern browser technology over the next few months there will be incredibly many activities – and I'm already looking forward to be part of these ” [San'Dreas 2004] – as a developer and publisher.

With their products Gameforge serviced two fundamental human needs, to communicate and to play. Furthermore, the rapid advance of broadband connections, especially in second-tier countries in Eastern Europe and Africa, favored the envisioned development as did the frustration of players about continuous upgrades of well-known console games without any social factor. It was

Kersting's conviction that interaction leads to more excitement of players than the most sophisticated graphics [Hauger and Kaizl 2010].

Quality and quantity of diverse game content was increasing. Fast internationalization and localization of games in countries like Poland, Turkey or Taiwan were central to opportunity identification.

Utilization of the enormous growth in terms of broadband Internet access to easily distribute MMOGs thereby created a new variety of games industry attracting millions of players in only a short period of time and merged the advantages of the World Wide Web with the fun people have when playing computer games. Gameforge has very early "unearthed a potential mass-market goldmine rather than a short-term niche." [Gibson 2008]

Kersting saw the disadvantages of computer games distributed via retail to be the high price and the surprise factor. Often a buyer is disappointed after the first play of the purchased game. Online gaming allows testing the game and, furthermore, online games are often free for use [Anonymus 2009].

Gameforge was profitable from day one of its existence (including at that time also advertisements) [Schmidt 2008] with OGame as the cash cow. Already in 2005 with 1.4 million active users OGame was the biggest and most successful browser game in the world [Halac 2005]. Based on two commercialized hobby projects and a positive cash flow from the beginning Gameforge could follow *organic growth*; there were always enough earnings to finance what was necessary [Hauger and Kaizl 2010].

To localize Gameforge in Karlsruhe (Germany) was essentially decided upon the fact that Alexander Rösner has his family in that city rather than a rational decision to take advantage from Rösner having studied in Karlruhe and the other important factors of Karlsruhe for German Internet firms given above.

Gameforge kept a low profile concerning organizational and financial details (revenues). Therefore, for the foundation as an LLC (GmbH) there are few facts conveniently to be revealed. Kersting financed his partnership in the LLC via a loan [Kersting 2012]. The two existing online games available at the start of the firm providing revenue from the beginning could be used for the capital contribution (in German Stammeinlage) of the GmbH [GameBizz 2009].

On the other hand, the literature reveals a further person as the company partner (in German Gesellschafter), Peter Rösner (cited as pensioner – Rentner, probably the father or uncle of Alexander). Hence, initial financing of Gameforge GmbH was through own financials and a 3F source – essentially "bootstrapping." Further growth proceeded during the "startup thrust phase" [Runge:ch. 4.3.2, Figure I.125] for three or four of existence years via cash flow.

The Gameforge startup is of the type "NTBF with production" (of games).

In the LLC Klaas Kersting was a director (in German Geschäftsführer) and company partner (in German Gesellschafter; then called, geschäftsführender Gesellschafter – Managing Director). Concerning roles Klaas Kersting acted as the CEO, Alexander Rösner as CTO.

Corporate Culture

Gameforge operates in a very fast changing environment. For instance, Klaas Kersting remarked that the tasks of his job changed every six months [GameBizz].

In 2010 Gameforge was "TOP JOB" Employer of the Year in Germany and Great Place to Work® Institute Germany selected Gameforge as one of the best employer which reflects corporate culture.

The firm's culture is largely determined if one regards Gameforge as part of the "creativity industry". This requires that people generate something with which they can identify themselves very emotionally. For many developers the game is "their baby."

This requires adequate basic conditions for the employees and their ability to give up. Formally, this includes full board from breakfast till dinner. Once a year all the firm's employees made a holiday together. Gameforge also employed two full-time masseuses who do nothing but massage the employees. Additionally Gameforge provides proper development and training opportunities [Hauger and Kaizl 2010].

The leadership team acknowledges and appreciates that Gameforge's success is unthinkable without its highly engaged and motivated staff. A well-balanced team of young, game-addicted people and experienced Internet professionals are the key essentials of a recipe for success.

To get a job with Gameforge means it must be fun for you to contemplate new games and implement them. People who need rigid structures do not fit the culture. The firm adapts to an always fast changing market and correspondingly resources including people must always be re-allocated fast.

Market Entry, Expansion and Diversification

The second strategic core business of Gameforge is publishing client-based MMOGs. Client-based games include software which can be found on the game's website. The game can also be downloaded, installed and played for free. It thus pioneered in the online games field and used the rapid growth of the Internet to establish a new games industry sector.

In 2004/2005 Gameforge was very successful with browser-based online MMOGs and saw the opportunity (for Europe) of publishing client-based MMOGs.

Kersting described the rationale [Emmert 2006] as follows.

- For online browser games and client-based MMOGs there are many parallels.
- The mechanisms that determine success or failure are largely identical.
- Gameforge has a huge user base and appropriate know-how which is an ideal prerequisite to enter the new field.

Therefore, already during the "startup thrust phase" [Runge 2011:ch. 4.3.2], in 2005 Gameforge founded Gameforge 4D GmbH as a wholly owned subsidiary for licensing and publishing client-based East Asian and American MMORPG in Europe. Founding director Carsten van Husen was an experienced person who already had published the first commercially successful East Asian MMORPG in Europe.

In 2006 Gameforge got the Korean online role-playing game *Metin2* to Europe, thereby publishing their first client-based game and further expansions relied essentially on Korean games. Metin2 provides a lucid product-oriented illustration of the fast success of Gameforge [Van Husen 2008]:

2nd quarter 2006	Licensing deal; title totally unknown in Europe; no big success in Korea
Dec. 2006	Commercially available via subscription in first language German
May 2007	Change to F2P play model
Jun. – Oct.	Roll-out in 8 language version
May 2008	1,150,000 active players
2nd quarter 2008	Further internationalization; top 5 Europe online title
Conversion	Visit to signup 15-25 percent
Paying users	Average spending: $26 per month (ARPPU)

Biggest communities are in Germany, France, Turkey, Italy, Poland and Spain.
"Metin2" has become the largest MMOG in Europe [Gameforge 2010], with more than 6 million active users [Stevie Awards 2011].

Corresponding key 2008 data for the game "Gladiatus" were: 2 million active users, paying users spend up to €15 per month, conversion rate (visits to signup 25-40 percent) [Van Husen 2008].

In the same year of founding Gameforge 4D GmbH in 2006 Gameforge founded its first subsidiary abroad, Gameforge SARL (Paris) in France. After purchasing the French development studio Nevrax Gameforge took over operations of the MMOG "The Saga of Ryzom"; it tried everything to save "Ryzom" from being closed down. Since its foundation Nevrax was never profitable [Emmert 2006].

Ryzom was a game totally different from the Korean products which Gameforge licensed so far. Gameforge was fully aware that Ryzom created an innovative “world” different from the classical “fantasy mediaeval world”. It was a sophisticated 3D game, the type Gameforge never developed though they had already run big projects. And it was assumed that Gameforge and Nevrax have advantageous complements: Gameforge had ca. 4.5 million active players, the proper technical infrastructure and billing system that lacked Nevrax and Gameforge could facilitate for the Nevrax team what it can do best – developing good games. The "Saga of Ryzom"-team had shown that it can develop innovative and witty games. Gameforge sees itself to be good at operation, publishing and marketing and the Ryzom team good at developing [Emmert 2006].

However, "The Saga of Ryzom" turned out to be only moderately successful and Ryzom was sold in 2009 [Wikipededia 2]. And there was another backlash. In 2008 Gameforge set up a subsidiary in the US to step into competition for the US online gamers. The chance Gameforge perceived was that on entry Gameforge was already bigger than any of the US competitors. Furthermore, installing servers in the US would bring better performance for American players. And, they decided to establish for all games a US-English language version (rather than the British-English one) [Schmidt 2008]. The company planed also to seek out US-based developers of full-scale MMOGs looking for a partner to localize and operate their games in Europe [Remo 2008]. However, Gameforge gave up this “adventure” [Hauger and Kaizl 2010].

The key identified rationales for the giving up the US presence: The US has the biggest worldwide markets for devices of electronics and entertainment. But Gameforge’s business model did not prevail due to game console dominance in the US and cultural barriers. Additionally a conclusion was that for their business no subsidiaries in the particular countries are necessary as they will get feedback from the markets through the communities to respond to expectations of the market [Hauger and Kaizl 2010].

One of the cultural differences between the US and Europe seems to be that computer gaming is seen in the US as entertainment and the US adopts new entertainment activities much faster than Europe. And in the US people spend money more readily than in Europe.

Fundamentally, Gameforge knew that it is important to establish browser games in the US as a genre [Schmidt 2010]. It boils down to increasing awareness. To make this kind of gameplay more popular Gameforge planned to bring more marketing, PR budget, and explain to people what these massively multiplayer browser-based games are. "Many people in the US … say they're mini-games – but this is a real world, where you can build your cities, build your armies, and if you log out and you log in the next day, your island is still there." And most of the content is social interaction with other players. It is not just doing quests to achieve something, but achieving things with friends or with an alliance [Remo 2008].

To follow their goals in the US a different strategy was executed.

Gameforge AG and Frogster Interactive Pictures AG (Berlin) signed a term sheet on an extensive cooperation. The two online games publishers agreed on the set-up of a joint venture company in the US in order to exploit there and in Canada the MMO game titles. Frogster should hold 25 percent of the shares of the US joint venture. According to own statements, Gameforge already owned a player base of more than two million registered users in the USA to whom the title shall be actively advertised from the start. Furthermore, Gameforge took a stake of ca. 25 percent in Frogster.

From the above description one can infer Gameforge to have shown that its leadership team can deal with obstacles and adversity and learn from failure and experiments.

Concerning growth in 2006 the privately owned Gameforge GmbH became a private stock company, Gameforge AG, a change of name and legal status that emphasizes the option to easier allow its sustained growth strategy. The AG legal form is more appropriate as it provides the necessary legal flexibility in the highly dynamic games market. Kersting became Chairman of the Board of Directors (in German Vorstandsvorsitzender) and CEO; GmbH company partner Peter Rösner (father or uncle of Alexander?) became a member of the Supervisory Board.

The founders used own financial resources to increase equity of the firm and stated their goal “now, as an AG, to expand its worldwide market leadership.” Also Eric Schätzlein became a member of the Supervisory Board. He was a co-founder and member of the Advisory Board of Denic eG and Chairman of the Board of Directors of Schlund & Partner AG (Alexander Rösner was a co-founder of) [Mediabiz 2006].

This strategy found its expression in the fact that soon, in 2007, the investment firm Accel Partners, which also invested in Facebook, acquired an “absolute” minority stake in Gameforge AG by estimated more than €10 million [Ihlenfeld 2007]. According to PriceWaterHouseCoopers [2008] the two founders own 90 percent of Gameforge, Accel Partners has 10 percent. Harry Nelis of Accel got a seat in the Supervisory Board.

According to Kersting financials were not the primary target of Gameforge. The strategic intentions of Gameforge which was heavily growing were expertise, know-how and contacts of the investor.

In 2007 Gameforge had already over 100 employees and through innovations a strong market position. To strengthen this position Gameforge needed a partner with a high reputation and large experience on the global level. And they got an experienced partner who knows how to build big businesses. Such a cooperation opens doors [Hüsing 2007].

Until 2010 the leadership/management team was:

Board of Directors	**Supervisory Board**
Klaas Kersting (CEO)	Eric Schätzlein (Deputy Chairman)
Alexander Rösner (CTO)	Peter Rösner
Christoph Jennen (CFO)	Harry William Nelis (Accel Partners)

By 2008 Gameforge moved to a new location, the Karlsruhe Technology Park. It became the first-mover in localizing online games to second row countries like Poland, Turkey or Greece. And there, players suddenly had the possibility to play online games in their native language which led to a huge growth.

Gameforge’s player structure by gender is given in Table 1. There is a continuous decline of age segments for male players, with the 15 – 34 years segments accounting for two thirds. For female players the differences between the segments are less pronounced and particularly the group of elder players is larger.

Table 1: Gameforge’s player structure by age and gender *) [Kersting 2009].

Age Segment (Years)	Male Player (Percent)	Female Players (Percent)
15 - 24	42	28
25 - 34	25	23
35 - 44	16	20
45 - 54	11	17
55+	6	11

*) Male : female ca. 70 : 30.

Germany became the most important market for Gameforge, though it contributes only ca. 10 percent to overall sales [Hauger and Kaizl 2010].

Gameforge used studios to develop new games and further develop existing ones. And by 2010 Gameforge had successfully moved from simple game developer to a major importer/operator of South Korean games and licensing other browser games. And they had created a large portfolio of games.

Characteristics of the Gameforge portfolio are [Schmidt 2010]:

- Games should support creativity of players.
- Games must keep sustainable fun.
- Games should cover a wide span of different genres to address a maximum of players (including male and female players).

Key development steps of the firm were:

2008:
Christoph Jennen leaves DocMorris and becomes Gameforge's CFO.
Gameforge takes over the development studio Occupa.
Gameforge founds the Hamburg development studio Ticking Bomb Games.

2009:
Gameforge founds the studio Steroid Interactive in Mainz.
Gameforge founds the studio Inflammables in Heidelberg.
Gameforge founds the Mannheim based studio Rough Sea Games.

2010:
Gameforge secures the worldwide exclusive license for Star Trek™ browser games and announced that the first game will be released in 2011.
In 2010 Klaas Kersting first moved to Gamefore's Supervisory Board; then he left the firm.

Until 2009 Gameforge followed essentially a strategy of organic growth by founding studios, continuously launching new games ("innovation persistence") and the founders expressed their intentions to keep their independence. Neither of the founders considered an exit from the firm [Schmidt 2010].

However, when the JV with Frogster Interactive Pictures AG ended, Gameforge entered also the *non-organic growth* strategy. Via its wholly owned subsidiary "Rubin 66" Gameforge took over Frogster stepwise. By the end of 2010 Gameforge became the majority owner of Frogster with a stake of 81.15 percent. In the first half of 2011 Gameforge held 92 percent of Frogster (having sales of ca. €25 million in 2010) und finally became the whole owner. Takeover amounted to estimated €75 million [Rungg and Wedel 2011].

> Together, Gameforge and Frogster were assumed to have formed the largest online games company in Europe in terms of the amount of players, number of employees and revenue.

Gameforge had quietly grown big and generally kept a low profile, compared to some of its rivals such as Bigpoint. Kersting recently said that Gameforge had more than $150 million in revenue by the time he left [Takahashi 2011a].

Apart from a stronger entry into the US market a further development direction of Gameforge targeted social networks, particularly Facebook where it would meet Zynga. Gameforge launched a game on Facebook already in 2010 [Hauger and Kaizl 2010].

Social networks functionality is to connect people and, therefore, connections via online games are a perfect match. Therefore, social networks were seen as a long-term expansion option for the Gameforge portfolio [Schmidt 2010].

Social networks usually provide a standard interface for which a contract is necessary. Hence, everyone can offer a game here. This is technically simple. But "catching" the players is a different story. Know-how is required for setting up motivation mechanisms in the network and processes that allow collecting players' feedback, assessing feedback and providing responses. Furthermore, marketing and monetization are important.

The September 2006 conversion of the GmbH (LLC) company into a private stock company with the name Gameforge AG generated a holding company for the wholly-owned subsidiaries Gameforge 4D GmbH, which since 2005 has been responsible for licensing and marketing client-based MMOGs, such as Metin2, and Gameforge Productions GmbH, which marketed browser games like OGame.

By the end of 2009 the structure of Gameforge AG as a holding and net income of constituting firms are shown in Table 2 (data from "Elekronischer Bundesanzeiger" – Electronic Federal Announcements). This would mean that for 2009 margins are in the region of 20-30 percent (cf. Table 4 for total revenue in 2009).

Table 2: Gameforge AG as a holding and net income of constituting firms by 2009.

Name	**Location**	**Share of Capital (%)**	**Equity**	**Net Income (€)**
Gameforge Productions GmbH 1)	Karlsruhe	100.0	2.379.820.17	24.402.215.03
Gameforge 4 D GmbH 1)	Karlsruhe	100.0	1.837.659.02	5.831.775.35
Palado GmbH	Karlsruhe	100.0	-56.085.14	-113.479.11
Ticking Bomb Games GmbH	Hamburg	75.4	-18.630.33	52.277.44
Chili Entertainment GmbH	Karlsruhe	75.3	139.107.57	92.300.41
Rough Sea Games GmbH	Mannheim	25.1	-8.999.47	-77.222.07
Steroid Interactive GmbH	Mainz	51.0	11.124.34	-13.875.66
Inflammables GmbH	Heidelberg	70.0	23.712.00	-1.288.00
Gameforge Productions Inc. 2)	San Francisco/USA	100.0	N.A.	N.A.

1) Net income before profit transfer; 2) for this firm there was no legal financial statement.

In November 2011 Gameforge announced a realignment of its internal structure. After the integration of Gameforge and Frogster the units "Client Games" and "Web Games" were replaced by the new units "Development" and "Publishing". In addition to structural measures, the workforce was reduced and adjusted and products stopped that fell short of expectations [Wikipedia 1].

Promoting Online Games – Portals and Viral Marketing

Activities and processes that are executed in large firms by corporate functions are organized by Gameforge usually by wholly owned subsidiaries. This refers, for instance, for development by studios, acquiring (in-licensing) and localizations of "external technologies" (games) and marketing. Since 2006 the wholly owned subsidiary palado GmbH ("Online Marketing") developed and implemented innovative and user segment tailored marketing instruments.

For marketing during its early years Gameforge followed "conventional" strategies. For instance, in 2005 Gameforge GmbH set up a strategic partnership with Gamigo. At that time Gamigo was a large games magazine for PC and console games, and then supposed to promote OGame. In 2008 “gamigo Magazin” was stopped and Gamigo was re-positioned. And instead an MMOG-Portal showed up with a focus on community-features and marketing of gamigo games. Gamigo had become a publisher of free-to-play online games, which can be played in the browser or in a game client.

The Asian online games market plays a technically and economically leading role, in particular Korea and China. After in Taiwan the Gameforge’s “OGame” attracted 60,000 active users in an extremely short time without any marketing. Gameforge saw the great potential for OGame [Gameforge 2006] – but also for the role of “*viral marketing.*”

Viral marketing [Wikipedia 3] is based on natural human behavior. It refers to the claim that a *satisfied customer* tells an average of three people about a product or service he/she likes, and eleven people about a product or service which he/she did not like. Hence, the focus of viral marketing programs is to identify individuals with high “social networking potential.” It is a *marketing technique that uses pre-existing social networks* to produce increases in brand awareness, through self-replicating viral processes, analogous to computer viruses.

Viral marketing is a marketing phenomenon that facilitates and encourages people to *pass along a marketing message voluntarily*. The online game scene, therefore, is predestined for viral promotions.

Marketers would say viral marketing describes any strategy that encourages individuals to pass on a marketing message to others, creating the *potential for exponential growth* in the message's exposure and influence. For viral marketing to work there are some basic elements that support it:

- Free of charge products or services
- Exploiting common motivations and behavior
- Utilizing existing communication networks
- Easy message transfer to others
- Scales easily from small to very large.

Gameforge revealed that a prerequisite for set up and sustainable success of viral marketing are the huge communities around the particular games. Correspondingly, there will be Community Management for Web games. *Community Managers* with long-term experience look after each game and guarantee high quality support for every user in his/her language.

Viral marketing is applicable as the design of games is to facilitate social interactions. The games represent always state-of-art and the developers make sure to add new features to keep fun of gaming. Furthermore, all the games are designed to fit the lingual and cultural needs of the respective markets. This basis allows cross-media and viral campaigns to address target groups appropriately.

Cross-media means, the same or minor variations of content placed or pushed onto different platforms in different forms or content produced alongside a main production and delivered on different platforms from the main production, here PC Internet/browser environment to smartphones or PC tablets.

In 2009 [Bloomberg 2009] Klaas Kersting, Alexander Rösner of Gamforge and Pim Schmitz, ex-Endemol media executive, arranged a €1 million ($1.3 mio.) round of initial funding for MMO Life B.V. – a Netherlands-based operator of regionalized and demographically-targeted portals for Massively Multiplayer Online Games Portals.

MMO Life’s family of portals should deliver news, reviews and rich-media demos for MMOs and MMORPGs throughout Western Europe and North America, and in several local languages. The funding would allow MMO Life B.V. to accelerate deployment of its network of gaming portals, build its team and make strategic third-party investments. The initial funding enabled MMO Life to deliver the right content to the right user and introduce MMO gaming to a new and wider audience. MMO Life’s portals would be the destination for casual and advanced gamers.

Some Remarks Concerning Obstacles and Problems

"The big issue for *traditional developers* is that they have to get their return on investment in the first two months," said Heiko Hubertz, CEO and founder of Bigpoint [Sheffield 2010].

There are many hurdles and obstacles when *publishing* a game. But according to Kersting they made most of the mistakes (in the first three years) and he continued: "hopefully we learned from them." [Emmert 2006] In 2010 Kersting corroborated this assessment that, indeed, "I cannot remember any situation in which there were really deeper problems." [Hüsing 2010] He admitted though, when they started it was not always easy. When they began to develop browser games, they were perceived as not being serious as browser games were not viewed as real computer games [Schmidt 2010].

Other issues concerned copyright and computer security.

- Issues of similarities of games or even copyright (parts of code, content, trademarks etc.) may occur. For instance, in 2007 an intense discussion emerged concerning OGame and the "similar" game SpacePioneers. Space Pioneers was developed as an F2P browser-based MMOG in 2004 as an alternative to OGame [Wikipedia 4] and was born out of a real life flight simulation program.
- In 2009 the firm encountered a distributed denial-of-service (DDoS)-attack of some Gameforge servers in their data center in Frankfurt (Germany) [Wikipedia 1] The DDoS resulting from a flood of incoming messages to the target system essentially forced it to shut down, thereby denying service to the system to legitimate users.

The risks concerning hacking and computer crime for game companies were also encountered by Sony [Gross 2011]. Sony's PlayStation Network (SPN), the gaming and entertainment platform knocked offline for weeks in spring 2011, had been hit again in October. The company detected an attempt to try a massive number of user IDs and passwords on its network. No credit card information (of subscribers) was accessed in the hack.

Their advice: "We want to take this opportunity to remind our consumers about the increasingly common threat of fraudulent activity online, as well as the importance of having a strong password and having a username/password combination that is not associated with other online services or sites." Sony "froze" 93.000 PSN-accounts.

Vision/Mission and Business Model

Vision

We create worlds. Every day.

Ensure our players can enjoy fantastic game worlds and outstanding gaming fun. However, it is our players who bring our worlds to life. Their imagination moulds our games, allowing us to continue developing them together.

We evoke emotions. Time and time again.

Fun is our players' top priority – and it's ours too. Playing is fascination and developing games is a passion.

We connect people. Worldwide.

Come together in 55 languages to make up the Gameforge community. People are the glue that bind the games together, transcending cultures, national borders and oceans.

Business Model

Key features of the F2P-business are [Weidemann 2009]:

- Business success is closely tied to game design
- Successful sale items are very dependent on the game type and genre
- Knowledge of economy basics is essential

- Thus F2P designers need to relearn
- That's why the classic industry "hasn't got it" yet.

Gameforge acts essentially as a *developer and publisher* of online games. Most of the games are based on a *micro-transaction "Freemium" revenue model* (Table 3) that allows unlimited free play and optional virtual entity or service purchase which is game play-enhancing. Virtual entity sales are since 2004 [Van Husen 2008]. "*Keep active users active*" is striving for new releases adding interesting game features [Kersting 2009]

Conversion of free to paying players tends to be below three percent but those that do pay can generate monthly ARPU of €10 to €20 (Average Revenue per User). The beauty of this model is, again, its accessibility, attracting all types of players from those only willing or be able to pay a few Euros to those wanting to spend hundreds of euros (dollars) in a single month [Gibson 2008].

Gameforge was *first-mover in localizing online games to second row countries* offering games in the native language. This led to a huge growth. In many countries, especially Eastern Europe and Africa, Gameforge still is the major, if not only, occupant of the local online games market.

Table 3: The cascading revenue basis of Gameforge AG [Van Husen 2008].

FREE OF CHARGE	Games can be played to their full extent with no time limits		
	More individually?		
	ITEM SALES	Better game control?	
	Cent Amounts	**PREMIUM ACCOUNT**	
		Cent Amounts	In-game advantages?
			MULTI-PREMIUM ACCOUNT
			Small €/$ Amounts

The revenue model ran through several approaches. After the start Gameforge was financed by online advertisements. Then they tried subscription models. And, finally, they ran several approaches in parallel. The ultimate model has turned out to be the economically most successful model for the firm and simultaneously the most "player friendly." And Kersting added: "The player him-/herself can choose whether at all or how much money he/she wants to spend. Previously, as a player, I always missed such a model." [Hauger and Kaizl 2010]

The basis of collecting revenues is interwoven with design principles of the games. According to Kersting, "We make only money, if our *customers identify themselves long term with a game*." Therefore, Gameforge makes sure that also users with a "small purse" get a chance. Particularly due to the large number of young players the selection of in-game virtual entities is such that also non-paying players can compete for the highest scores [Anonymus 2008].

The key for the business model is *scalability*.

Gameforge has *two core businesses*: massively multiplayer online browser- and client-based online games using the Internet. The client-based business refers to *in-licensing and localization*. Around 2010 Gameforge offered a broad portfolio of 20 browser- and client-based games for a worldwide audience.

As it is about social interactions (of players) the underlying technology is a *man-machine system of non-structured actions and activities* with man-machine and man-man interactions being of equal importance. Gameforge titles are designed to encourage player interactions within the game world. Its games are large social worlds with an emphasis on more complex game play with player-driven communication, alliances and trading.

Correspondingly, a portal “Gameforge.com” exists. Its original name MMOGAME.COM was changed in 2011 to mark a shift in the company’s umbrella brand strategy. The portal integrates all Gameforge games in a comprehensive community network [Gameforge 2010].

Communication among players is via chatting and (in 2008) 20 professional *Community Manager* as well as 9,000 dedicated players organized and administered the communication needs of the communities of players. *Community Manager* are looking after the communities via Internet and representing Gameforge in the chat-rooms, forums and games; the experienced professionals are looking after each game and organize globally special teams and high quality user support of the particular user in his/her language [Schmidt 2008; Gameforge 2010]. Additionally, these collect ideas and run in-game events and respond to player feedback and reports of failure. Gameforge targeted promotion of “country managers” from the user base having strong community interactions – according to the principle “users help users.” [Kersting 2009].

Advantages for Players (“Value Proposition”)

Play for free	Gameforge games are basically free of charge. Players pay neither for purchase nor (indefinite) usage. There are no subscriptions or hidden costs. All games can be played to their full extent for an unlimited time [Kersting 2009]
No distractions	No annoying in-game advertisements!
Individual enhancements	Small fees have to be paid only if players want to acquire game add-ons and premium features. Costs will never exceed weekly pocket-money allowances. Fees can be paid conveniently through channels according to preference.
Low barriers to game entry	Minimal technical requirements maximize the addressable market of computers and therefore players. Expensive game controllers or always the latest computer model are definitely not necessary. Most of the games are played in a browser using Flash, Java and plain HTML in contrast to the download-oriented Asian and North American MMO markets. This allows them to have appeal for frustrated gamers without the money to buy the sort of PCs needed for modern retail PC games.
Privacy	Gameforge games require just two things: A valid e-mail address and a discretionary password
State of the art	Gameforge always provides the most modern version of its games to all players without exception. New advanced versions of a game or completely new games are accessible by all Gameforge players – again without exception, free of charge, no time limit, guaranteed.
Broad localization (in-house [Van Husen 2008])	The low minimum hardware specification is particularly appealing to gamers especially in central and eastern European countries. This has enabled their services to tap into a vast base of players unable or unwilling to read or communicate in English (the default and, in most cases, only language used for most traditional MMOGs). In particular, for multiplayer games requiring much communication among players it is fundamental to use the same, mostly native language. Here, concerning localization, German culture is to view across its own language and culture; US culture is more restricted [Hauger and Kaizl 2010].

Stable and fast gaming technology	Provide best server technologies and response to incidents; multiple server configuration
Modes of payment	Flexible billing and easy selection of the preferred payment methodology as well as fast and transparent payment processing [Kersting 2009]. Gameforge offers a big variety of payment methods such as bank transfer, PaySafe-Card, SMS, phone, credit card or PayPal in more than 50 countries, always giving the player the possibility to pay the way he wants to. Any player can pay conveniently via an innovative self-developed payment system. For instance, already in 2007 it partnered with Moneybooker. Moneybookers is one of the world's online payment providers, and Klaas Kersting commented: "Gameforge always aims to offer its customers the best available payment solutions." [Moneybooker 2007].

Apart from billing methods and a large number of paying options for various virtual entities Gameforge followed also other methods of collecting revenues. For instance, it partnered with SponsorPay. The German startup SponsorPay GmbH, founded in 2009 and with ca. 40 employees in 2010 offers online gamers a payment system of acquiring virtual entities via a "detour." Virtual entities are financed by advertising partners ("Sponsors"). Instead of paying with their own money, gamers can complete one of the numerous offers from SponsorPay's advertising partners to get virtual currency or items for free in return. The online gamers have to complete ad offers which cost them some time, but no real money. Such an offer can be anything, from taking part in a market survey or downloading a free software program to ordering a trial subscription for a magazine [SponsorPay 2009].

According to Kersting, "As we are pursuing a long-term growth strategy which is based on high consumer satisfaction we are putting a high value on the transparency of advertising offers."

For advertisers, the innovative payment method opens up a whole new method of generating customer data and new leads. SponsorPay serves a large number of countries with native country managers and a localized product. It reaches currently across more than 100 countries. The possibility to receive premium content for "free" increases the game's attractiveness and player activity. And the game publisher is paid a commission by the advertiser for each completed offer and thereby receives his real euros.

Advantages for Gameforge

Gameforge stands for high-level game fun that is basically free of charge. At the same time the player only has to disclose but a few details about him-/herself – hardly an obstacle for entering the game. This combination – on a global scope – accounts for an immensely high number of players.

Economies of scale	Individual add-ons are affordable for any player, even in economic recessions
Sales of virtual entities	Gaming enhancements and customizations, individual outfits and weapons for players
Multi-premium accounts	Deliver small in-game advantages

Additionally, *value-exchange advertising* by SponsorPay has turned out to have a significant impact on Gameforge's business – expressed by increased conversion rates. It enables users to sample virtual currency or premium content for free. In a study conducted by Gameforge, 16.4 percent of non-paying users who completed at least one offer from SponsorPay converted to paying users within a 12-month period. Of the converted users, 3 percent purchased virtual currency or premium content more than 20 times in the same time span [Banerjea 2013].

For developing the first game and disregarding viral effects, according to BigPoint founder Hubertz [Sheffield 2010], a measure for a *successful game* is stopping “any game that's generating $100,000 or less."

“If you have revenue of $100,000, your average revenue per paying user is $10. There will be around 10,000 paying users then out of an active user base of 100,000, out of 10 million visitors to the page. He says that then your cost per lead is $1, and average cost per paying user is $100. Your total cost will be $1 million per month, for a loss of $900,000.”

"If you have to spend marketing dollars, you will not be profitable with a $100,000 product. … If you have a big portal and you have these users already, you don't have to spend as much money."

According to Hubertz to be more successful combine features of all types of games – “from browser to console to social … and develop cross-platform games,” iPad, browser, PlayStation 3. "It took us around a year to develop that game, and it took under a half million dollars," he said [Sheffield 2010].

In the second half of 2012 Gameforge also entered to the mobile games market [Wikipedia 1].

Competition

Concerning competition in the MMOG market, Gameforge is convinced to occupy a very strong position. In essence, their founders believe that even the German firm Bigpoint is far behind. According to Kersting, “Actually, we do not see any competitor which can even approximately keep up with us.” (in German: Tatsächlich sehen wir keinen Wettbewerber, der auch nur annähernd mit uns mithalten kann.) “The reason is that we very strongly focus on quality of the games, whereas others rather build brands and marketing engines.” “We are for sure by far the greatest in the online area.” [Hauger and Kaizl 2010]

Key Metrics

According to Heiko Hubertz, CEO and founder of Bigpoint, the online gaming revenue will account for over $24 billion in 2010 [Sheffield 2010]. Estimated revenue for the European F2P games market in 2010 was €400-500 million per year [Bidaux 2010].

Concerning browser games, Hubertz referred to what he calls the "magic 10." Ten percent of users generate 80 percent of the revenue. “The most revenue you’re generating out of people is around $100/month. Most users spend less than $2-5. But the power users spend $100 or more.”

“From the views on your page, only 10 percent register. Then only 10 percent of them are active, then only 10 percent of those people pay, and only 10 percent of them are heavy payers. ‘This is the biggest problem I've seen in online games so far. How do you convert these users?’” [Sheffield 2010] And what is the churn rate – how many leave per month?

Growth of *registered users* of Gameforge is given in Figure 1. Accordingly, Gamforge exhibits two periods of almost linear growth with the year 2007 as the separator. The entry of Accel as a (minority) investor coincides with this date and provides a turning point to a much more significant growth rate. The entry of an investor into a firm is seen generally as a “business bracket” leading mostly to increase of a firm’s growth [Runge:ch. 4.3.5].

Growth exhibits only a negligible effect regarding the 2009/2010 Great Recession. Hence, since its foundation in 2003 Gameforge shows continuous growth concerning the number of its registered users.

The development of year end data for the number of *employees at Gameforge’s headquarter* between 2007 and 2010 parallels closely that of the registered users.

Apart from the development of registered users Gameforge as a private company keeps a low profile. Therefore, the data presented in Table 4 have been collected from the cited references and show a certain degree of variance. Hence, the data should be viewed as “best estimates.”

Similar to the above described situation of Bigpoint's founder Hubertz, according to co-founder Klaas Kersting "95 percent of our users will never spend just a euro with us." [Hauger and Kaizl 2010] On the other hand, *conversion of free to paying players in Europe* tends to be below three percent but those that do pay can generate monthly ARPPU of €10 to €20 [Gibson 2008]. The various data for active users for the same year in Table 4 may be due to the fact that the number of active game users varies by season (Zynga, Inc. [Runge:B.2]) and correspondingly by date when these numbers are reported.

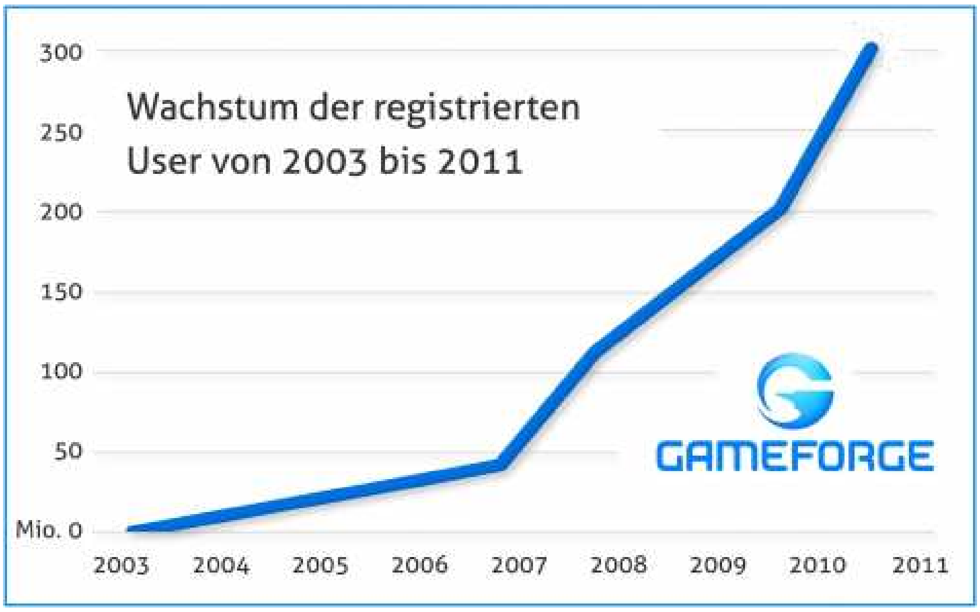

Figure 1: Growth of registered users 2003 -2011 (Wachstum der registrierten User von 2003 bis 2011): File last accessed 10/7/2011: http://www.rpgwelten.de/uploads/inline/pic-736.jpg.

Gameforge was profitable from day one of its existence and had already 1.4 million active users. in 2005.

Table 4: Developments of numbers of games, employees, users and revenues of Gameforge till 2011.

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Number of offered games	2		14		15		17	25
Localization: Different languages		8	40			50	>50	55
Employees at headquarter				100*	160 200 [1]	270+ 360 [1]	450*	500
Registered Users (mio.)	20		35	45	115	150	200	300
Active Users (mio.) – Average across a year			6; 4.5	11; 10	11	17	20	
Proportion of Active Users (in percent)			17	22	10	11	10	
Revenues (€., mio.). "best estimates" 3)				50	66	106 [2]	133 [2] (+25)	140 [2] (+25)

1) Year end data; 2) from Wikipdia 1, current and previous accessed in 2011 and [Steinlechner 2012]; 3) the (+ 25) reflect the possibility of additional revenue from Frogster.

Note 3 in Table 4 has some support. Rungg and Wendel [2011] report estimated €150 million for 2010. By 2011 Gameforge's revenue in 2010 were estimated to be €150 million or more by Takahashi [2011a]. Bidaux [2010] reports estimated revenue of €76 million in 2007/2008.

Growth of revenue from €133 million in 2010 to only €140 million (5.3 percent) in 2011 was rather small compared to the number of registered players which increased from 200 million (August 2010) to 300 million (August 2011) by a third. Obviously this result led to the dismissal of 100 employees in November 2011. Whether this is due to a general an increasing saturation of the entire industry [Wikipedia 1] or whether there are also effects of the Great Recession is not clear. The recession may be operative via a reduction of the proportion of paying users.

Gameforge's Timeline and Awards

Finally, below is a brief history of the company summarizing milestones. It covers also information on the awards Gameforge have won and games mentioned in the preceding pages.

2011
The MMOGame.com portal is renamed Gameforge.com, marking a shift in the company's umbrella brand strategy.

2010
TOP JOB distinguishes Gameforge as the best employer 2010 with the TOP-Arbeitgeber 2010 prize.

The Great Place to Work® Institute distinguishes Gameforge as one of the 100 best employers in Germany.

Co-founder Klaas Kersting leaves the company.

Gameforge secures the worldwide exclusive license for Star Trek™ browser games and announces that the first game will be released in 2011.

The Gameforge community reaches 200 Million registered players.

Gameforge announces its public takeover offer for Frogster AG and, by the end of the year, gains an 81.15 percent stake in Frogster AG.

Gameforge closes the year with around 450 employees at its main headquarters in Karlsruhe.

2009
Gameforge founds its own producing department and appoints industry veteran Ralf C. Adam as Executive Producer.

Gameforge receives the Technology Pioneer 2009 Award at the World Economic Forum.

Gameforge founds the Mannheim based studio Rough Sea Games.

Gameforge launches its recruitment campaign and starts looking for 200 new employees.

The International Business Awards honor Gameforge with the Most Innovative Company of the Year in Europe prize.

Gameforge founds the studio Steroid Interactive in Mainz.

Gameforge founds the studio Inflammables in Heidelberg.

Gameforge launches the game portal MMOGAME.COM and offers its customers an integrative community website for the first time.

Gameforge takes part in the G-Star exhibition in Korea with its own booth.

Gameforge closes the year with around 360 employees.

2008
Gameforge becomes a member of the G.A.M.E. Bundesverband der Entwickler von Computerspielen e.V. (Federal Association of Computer Game Developers).

The company relocates to the Technologiepark Karlsruhe.

Gameforge founds the Hamburg development studio Ticking Bomb Games.

Gameforge. as the only German game developer, wins the Red Herring 100 Europe.

Gameforge takes over the development studio Occupa.

Gameforge signs the first scholarship cooperation for the Information Technology/Game Development course at the SRH Hochschule Heidelberg (SRH University of Applied Sciences Heidelberg).

Klaas Kersting and Alexander Rösner are awarded the prize for Entrepreneur des Jahres (Entrepreneur of the Year).

Christoph Jennen leaves DocMorris and becomes Gameforge’s CFO.

Gameforge closes the year with over 200 employees.

2007
Investor Accel Partners acquires a stake in Gameforge.

Gameforge closes the year with over 100 employees.

2006
Gameforge gets the Asian online role-playing game Metin2 to Europe, thereby publishing their first client-based game.

Gameforge GmbH becomes Gameforge AG.

2005
Gameforge founds Gameforge 4D GmbH as a subsidiary for licensing and publishing client-based MMOs. Founding director is Carsten van Husen who already published the first commercially successful East Asian MMORPG in Europe in 2002

2003
Klaas Kersting and Alexander Rösner found Gameforge. The Karlsruhe Company is a pioneer in the online games field and uses the rapid growth of the Internet to establish a new games industry sector.

2002
Alexander Rösner programmed and releases the strategy browser game OGame.

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