

The Impact of the Brand in the Success of a Mobile Game: Comparative Analysis of Three Mobile J2ME Racing Games

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A short value chain, strong brand, strong game concept, broad porting, strong language support (EFIGS, i.e., English, French, Italian, German and Spanish), combined with short time to market and powerful global distribution machinery, are key components in building a successful mobile game and gaming business. But which of these components and factors affect success when success is defined as high revenue per download and high download volumes of the game? Or does the combination of all these factors decide the outcome? These are two central research questions in this study.

We specifically describe the effects of using a brand in the mobile games' value chain. The comparative analysis of three J2ME-branded racing games points to the fact that the brand has a significant impact on the value chain and the success of a game. The stronger the brand the shorter the value chain, and the higher the revenue per download and the download volume.

To some extent, a strong brand compensates for a lack in game quality, and even game porting. The other way around, we find that if the brand is weak even a good-quality game and very broad porting cannot compensate for the negative impact of a weak brand.

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INTRODUCTION

According to the Gartner research institute, almost 960 million mobile phones were sold in 2006. Handset sales follow the mobile content and mobile entertainment market, and the Juniper research organization sees this market, incorporating all forms of mobile entertainment including mobile games, TV, and music, as well as gambling and adult content, expanding to US \$47 billion in 2009 and US\$ 77 billion just two years later. The Juniper organization even believes that the mobile gaming and mobile TV markets will outperform mobile music over the coming years [MobileIndustry.biz. 2006].

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The mobile service and mobile entertainment industry is a fast-growing sector, which is one reason why brands have become more and more important. The game developers and distributors need to offer games that are easy to find and identify in the spectra of thousands of games on offer.

The brand is often the only concrete support the consumer has in making the decision to buy. A downloadable mobile game usually cost, depending on market and distribution channel, 3 to 6€ So the cost is 10 to 20 % of a console or PC game. But compared with buying a console or PC game, the information and the facts available are much more limited. The decision to buy is usually based on the images and pictures available on the Internet, TV or in commercials. Buying a mobile game is a purchase made more on impulse than buying a console or PC game.

There are two significant buying decisions before a mobile game can hit the market: first, the distributor buying decision, or the B2B buying decision, is primary; second, and later, comes the consumer buying decision, the B2C buying decision.

The B2B buying decision is based on facts as the game is tested and all the game features and the game quality are analyzed; in this phase the brand is less important. The distributor buying decision is based on a combination of many factors; basically game quality and game playability, handset support, known as game porting, language support, brand, and, of course, the market situation and demand for the kind of game concept offered. But if the brand is weak, the game is usually rejected without any closer game analysis.

We are going to examine the hypothesis that the brand affects the buying decisions for both B2B and B2C when choosing a downloadable Java game.

This article contributes to mobile software development by exploring the brand issue. The proof, according to our analysis, is that the effects of the brand in both the B2B and the B2C buying decisions can be seen from download volume and the revenue per download for the game.

THE CASE STUDY: BACKGROUND

This article was made possible by Sports Telecom, a company set up to generate the information needed for this study. In the following section we will describe the background and role of Sports Telecom, as well as describe in detail the brands linked to the mobile games that are compared and analyzed here.

Sports Telecom

Sports Telecom was founded in 2000 by Stenbacka (the author of this article) and Johansson (a former Formula 1 driver), with the aim of developing and launching a consumer-oriented mobile application based on telemetry data from running a LeMans, and later a Formula 1, car. The aim was to use the information and data generated by the application to analyze consumer behaviour and interest vis-a-vis an advanced sport application, one that could be implemented later in other sports.

The French IT consultancy firm Gagemini joined the project and developed a pilot application, which clearly proved that, at least from a technical viewpoint in a laboratory environment, the application was realistic. The idea was to then test and launch the application along with the organizers of the LeMans 24-hour race or with Formula 1.

The participants in the project soon realized that from a commercial and market point of view the application was far too advanced. There were not enough handsets and no real network that could handle the technology. There was also another very tricky problem, the organizers of the LeMans and Formula 1 races protected the information we

were planning to use in the application. We needed a license to launch the service and the price of that license, especially for Formula 1, turned out to be high, very high.

But perhaps most important discovery from the LeMans project was that the sport and entertainment industries are very protectionist: not a single picture, sound, video clip or other visual material could be distributed without a licensing agreement. So to develop a mobile service based on Formula 1 telemetry data would be very challenging. The Formula 1 administration controls all the commercial rights of teams and drivers. The project was not only affected by the market and technology but also by the “mission impossible” in obtaining permission. The Formula 1 administration indicated that the cost for mobile commercial rights could be counted in millions.

In 2002-2003, Sports Telecom changed its approach. As we learned that the LeMans application was basically useless without the right to use the brands, data, and information, we decided on a rights/brand-driven approach instead of one driven by technology.

Sports Telecom managed to get the world-wide rights for Formula 1 drivers, the brothers Michael and Ralf Schumacher. A series of different mobile phone products and services based on the two brands were planned. There were some mobile phone facials, or covers, SMS- based games and mobile graphics, such as mobile phone wallpapers and mobile phone logos. All services and products were market-oriented and adjusted for the market.

When the first services hit the market we realized that even though both brands were known from the Formula 1 scenes and the products were identical, except for the brand, there was a huge difference in demand. The Michael Schumacher-branded services and products sold very well, while the interest in the Ralf Schumacher-branded products and services was almost zero. The huge difference between these two brands can also be seen in the FIA Formula 1 Survey referred to in the next section.

It was the Schumacher project that propelled our interest in analyzing in detail the effects of branding. It also defined the scope of our research.

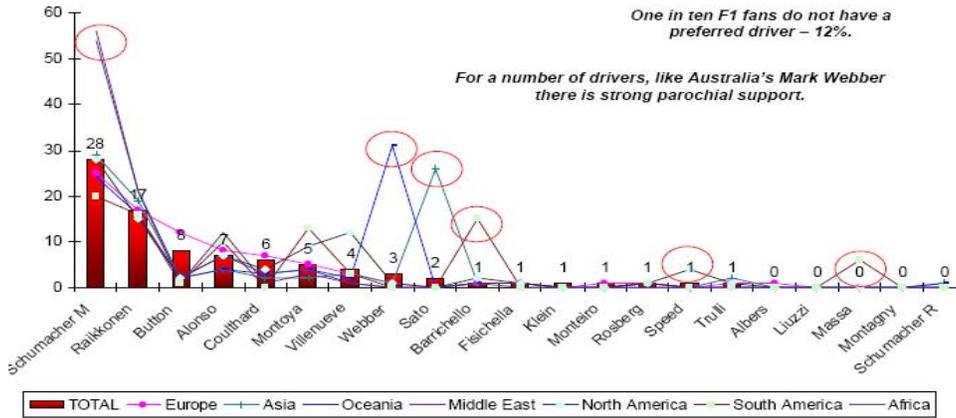
Research Scope

We have narrowed our scope to three branded mobile racing J2ME games (Java 2 Micro Edition). The games are based on the following brands: the Formula 1 driver Juan Pablo Montoya (www.jpmontoya.com); Formula 1 driver David Coulthard (www.redbullf1.com); and the Indy Racing League (IRL) driver Scott Dixon (www.scottdixon.com).

The J2ME racing and driving games are probably the most complete in the mobile games category, which is why we chose them. We chose only driver brands and no team brands to be able to make comparisons more easily. In terms of brand strength and brand rating the chosen brands belong to three different categories. This is important as we want to investigate how brands from different categories affect the mobile service value chain.

To determine the category each brand belongs to and how strong the brand is, we developed a brand- rating model, which rates the brands according to certain values, qualities, and characteristics, divided into three categories:

- (1) One-star (*) brands
- (2) Two-star (**) brands
- (3) Three-star (***) brands



Q7: Who is your favourite driver?
Base: N=91,834

Figure 1

The Scott Dixon game is rated as a (*) star brand; the David Coulthard as a (**) star brand; and JP Montoya as a (**+) brand. The (**+) rating for JP Montoya is due to the fact that he never became a globally known brand such as Michael Schumacher or David Beckham.

If we look at the latest FIA and AMD Formula 1 Survey [2006], in which over 90.000 fans in 180 countries answered Formula 1-related questions, we see that the now retired Michael Schumacher is by far the most popular driver. Of the brands in this study, in terms of popularity Coulthard is ranked fifth and Montoya sixth. Montoya's drop behind Coulthard is due to his decision to leave Formula 1 for Nascar, his poor results, and his inability to live up to the high hopes people still had for him in 2003.

The data we want to analyze is download volume and the revenue per download, which define the success of a game: the higher the download volume and revenue per download, the more successful the game. Success is defined as high revenue per download and high download volume.

The Games

All three games in the study are based on the Java, or J2ME, platform. Java is a very useful platform as most of the mass-market phones are capable of using it. But before we describe the games, we need to address the role of game porting.

All three games in this article were developed and launched in many markets. So the data is based on quantitative information such as sales and revenues and on qualitative information such as comments from distributors and developers and discussions and interviews with distributors and developers.

Porting

Porting is a critical task in the development of games for mobile devices. The high diversity of devices requires correspondingly customized versions of a single game [Alves et al. 2005].

Nokia is one of the companies launching 30 or more new phone models each year. To attain global reach, a game needs to have broad porting. Optimal porting would include

all platforms, not only J2ME, but BREW (Binary Runtime Environment), Symbian, and i-Mode; we will focus on J2ME.

A significant number of different mobile devices are produced and sold because there are segments of the market with distinct needs and financial resources that demand them. Hence game developers and publishers should adapt their games to comply with the specific requirements of each target device [Alves et al. 2005].

Without going too deeply into technicalities, let's take a look at the main reasons why porting is necessary:

- different devices feature a variety of user interfaces like screen size, number of colours, pixel size, sound, and keyboard layout;
- devices differ in execution, available memory, and maximum application size;
- devices have different profiles (MIDP 1.0 and MIDP 2.0);
- there are different implementations of the same profile in J2ME;
- there are a variety of proprietary APIs and optional packages;
- there are device-specific bugs; and
- different international requirements such as language

As a result, developers are frequently forced to develop dozens of variants of a single game, optimized for different types of devices, operators, and languages [Alves et al. 2005].

Operators/carriers especially are putting pressure on game developers so that games and services can be ported to large numbers of phone models in all the major languages (EFIGS – English, French, Italian, German and Spanish). Table I shows the list of phone models that a mobile game publisher requires game developers to cover (as of December 2006). The list shows the requirements of operators/carriers, portals, and other distributors.

Table I

Noki	Motor	SonyE	Sharp	Siem	Sams	Sagem	Panas	LG	NEC	Tosh	Alca	Huaw
3510i	V220	K300i	GX10	S55	E700	MYV65	VS3	C1100	E616	803	OT565	U526
6610	V300	K500i	GX20	C65	E810	MYV76		C1200				
7600	V980	K700i	GX25	CL75	D500	MYV85		U8110				
6020	E1000	K750i	902	CX65	E720			KG800				
7260	A1000	S700i		SXG75	D600			U400				
6230	L6	T610			Z540							
6101		M600i			Z105							
6230i					Z500							
7650					X820							
3650												
3660												
6600												
N90												
6630												
6270												
N71												
5500												
E61												
7373												
19	6	7	4	5	9	3	1	5	1	1	1	1

Source: Sports Telecom

As we can see from the list, Nokia is dominant: a third of the 63 handset models is a Nokia. For the developer or publisher the porting process can be a very costly: an Indian porting specialist, Small-Devices, gives a price of 500 USD for each device, including handset testing. The total porting cost for a game for all the devices on the list would exceed 30.000 USD; porting costs vary, but it is difficult to get a price less than 200 USD per handset.

Tim Clise, chief technical officer for Ideaworks 3D, says porting costs are still holding back the mobile gaming industry from reaching its full potential: “We`re still seeing Java porting costs being up to 50 per cent of the total game development budget” [MobileIndustry.biz. 2006].

In October 2006 the Scandinavian operator Telenor (www.telenor.com) registered 811 different mobile phone models used on Telenor, Djuice, and Sonofon portals in the Nordic Wap market [<http://cpa.telenor.no/cpa/terminaler.pdf>]. But it is by no means necessary, or possible, to cover all these models. The cost would be too high and would take too much time, as time to market and time to money is a critical factor in game development.

But note that out of the 811 models there are 32 phone models, not even 4%, with a market share of 71,62%. Of these models 16 (50%) are Nokia, and 12 (37.5%) are Sony Ericsson. These two phone manufacturers earn almost 90% of the sales.

The 32 phones with a market share exceeding 1% are listed in Table II. To some extent this fact supports the assumption that to have acceptable handset coverage it is not necessary to port a game to more than the approximately 63 phone models listed by Kiloo. If we look at the list, the 70 phone models with the highest sales have a market share of 88,47%.

Table II

Most used terminals on Telenor, Djuice, and Sonofon portals in the Telenor Nordic Wap market in October 2006			
Phone model	Percentage	Phone model	Percentage
Nokia 6230i	7.73 %	Samsung E730	1.52 %
SonyEricsson K700i	5.58 %	Nokia 6680	1.52 %
SonyEricsson T630	4.61 %	SonyEricsson W800i	1.46 %
SonyEricsson W810i	4.20 %	Nokia 6230	1.44 %
SonyEricsson K750i	4.16 %	Nokia 6020	1.38 %
Nokia 5140i	3.66 %	SonyEricsson K500i	1.36 %
Nokia N70-1	3.44 %	SonyEricsson W600i	1.35 %
Nokia 6280	2.55 %	Siemens C75	1.28 %
Nokia 6233	2.51 %	Nokia N73	1.23 %
SonyEricsson K600i	2.41 %	Nokia 6111	1.18 %
SonyEricsson K800i	2.28 %	Siemens C 72	1.11 %
Sony Ericsson K610i	2.23 %	Samsung D600E	1.09 %
Nokia 6101	2.11 %	SonyEricsson T610	1.07 %
Nokia 3510i	2.06 %	Nokia 6070	1.07 %
Nokia 6103	1.77 %	Nokia 6610i	1.03 %
Nokia 3220	1.72 %	SonyEricsson Z530i	1.03 %

<http://cpa.telenor.no/cpa/terminaler.pdf>

But the lifecycle of a game is much longer than one month; our estimate is that it can be up to 14 to 20 months if the game is launched world-wide. During that life cycle many different phone models will be launched. It is also necessary to note that the phone models will vary from market to market. It is difficult to say what the optimal handset coverage should be, but our estimate is that a game that is going world-wide needs to be ported to approximately 200 to 300 different handset models.

Net Revenue

Before we look at different value chains, we should describe the concept of “net revenue” in more detail. Net revenue is often defined as “the revenue left after distributor and developer/content provider costs,” which is the definition we use in this article. In principle, it is the revenue left to the brand or, if there is also a licensee, the revenue left to the brand and the licensee to share.

In this article we analyze the net revenue. We will not examine the revenue split between Sports Telecom and the brand, as this is irrelevant. Further, in this article net revenue is defined as 50% share of the content provider revenue.

The Value Chain

Historically, value chains in the wireless industry were simple. In pre-cellular days (until 1983), network operators managed the whole value chain of wireless markets. 1G brought equipment manufacturers into the wireless value chain, and the development from a simple market structure to complicated and fractured markets began [Steinbock 2003].

In this context we understand the value chain as going from the brand, to the game developer and distribution network, and finally to the consumer downloading the game.

There are different options when it comes to a value chain, as the brand can also play the role of publisher and buy the rights to develop the game. The distributor can be a portal and be the licensee and also buy the development of the game. But as all three games in this article have the same value chain structure, we will focus on the value chain structure described above.

The revenue split varies; but in this article, to make it possible to compare the games, the revenue split in all phases of the value chain is 50/50. This is also an important demarcation: the alternative would be that the distributor or publisher or even an aggregator buys the rights to develop the game. In such a case the revenue split is used only in some of the phases of the value chain.

The revenue generated through the value chain to the brand and to the developer depends very much on the structure, and especially the length, of the value chain. As different sales’ aggregators and portals are added to the chain, the revenue per download to the brand and developer is affected negatively. The goal is to have as straightforward and short a value chain as possible. This is one of the critical issues in the success of the game.

Two Significant Buying Decisions

The established marketing theory says that B2B markets are different from B2C markets in terms of user requirements and behaviours, and therefore business should tailor their marketing to a mixed strategy in order to meet the needs of each of these two markets. The Vlachos and Vrechopoulos [2004] study suggests that there are no big differences in buying criteria between music professionals, that is, people who work in the generic music industry value chain, and those of music consumers; the mobile music service requirements are almost identical for both. The most important buying criterion for music

professionals and consumers is content (i.e., “good sound/image quality” and “variety of music songs/video clips”) [Vlachos and Vrechopoulos 2004].

In the value chain for mobile games there are two significant buying decisions: first the B2B decision made by the distributor, usually an operator/carrier, handset manufacturer, or portal, and second the B2C decision made by the consumer downloading the game.

We have not analyzed in depth the buying criteria for the two participants in the value chain mentioned below, but we have learned that if the brand is weak or the game category is not interesting, operator/carrier and handset manufacturers especially tend to reject the game without any further analysis. If the brand is strong the game may be accepted, even though its quality does not reach the minimum level required for acceptance.

A very common remark, especially from operators/carriers, is that the brand and the quality of the game need to be at the same high level; this is becoming more and more important.

Different Value Chains

A downloadable Java game usually costs 3 to 6€ To the consumer (who is usually between 18 to 34 years of age), the most common price in Europe is 5€ [Gamesindustry.biz.2006]. Half of the revenue usually goes to the operator/carrier of the mobile network in each country. The remaining half of the revenue is shared between the content provider/publisher and the brand.

For the end consumer the price varies from market to market: in markets like India and China the download price is much lower than in Europe.

If we assume that the download price of a game is 5€ then 40 to 50% goes to the operator/carrier, sometimes also called the distributor. This is inevitable, because the operator owns the network and the mobile infrastructure. To make it easy, we assume the operator takes 50% or 2,5€ of the download price. The remainder, 2,5€ is shared between the developer/publisher and the brand.

In Figure 2, we have neither aggregators nor portals, so it can be seen as quite optimal. The brand is left with 1,25€ per download, a revenue that can be considered acceptable.

The distribution of a game is very often a mix of different value chains and distributors. There are many reasons for using sales aggregators, companies that sell content through a network of distributors. The most typical reason is the difficulty in getting direct operator agreements. For example, in China it is impossible for a foreign company to have a direct operator agreement due to political and legislative reasons. The

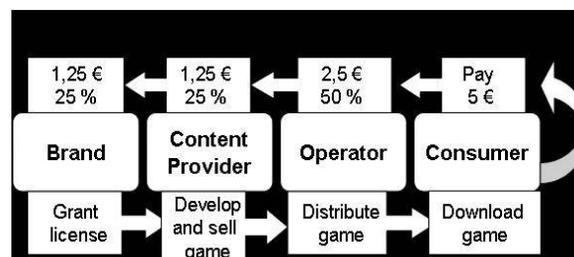


Figure 2

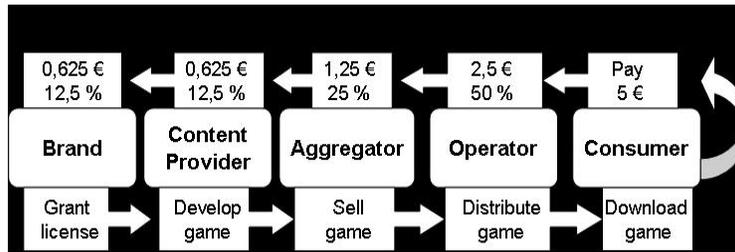


Figure 3

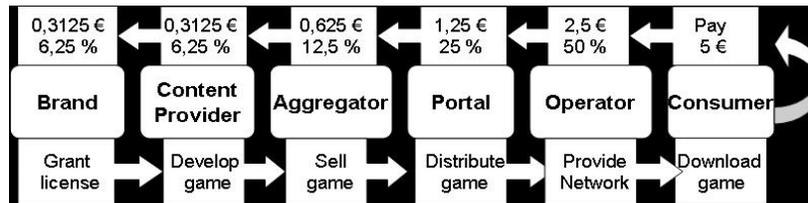


Figure 4

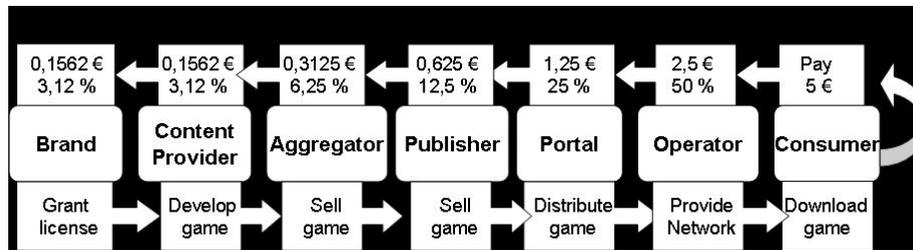


Figure 5

agreement is made with a sales aggregator who handles the sales for operators such as China Mobile and Unicom.

Using an aggregator causes the revenue per download to the brand to drop. Content developers that use aggregators hope that the revenue drop will be compensated for by higher volume.

As we can see from Figure 3, a sales aggregator has been added and caused the net revenue to drop to 0,625€ per download; although this level is still acceptable.

As we continue to add partners to the value chain, we see that the net revenue continues to drop. The value chains in Figures 4 and 5 include an aggregator and a sales portal as well as a separate publisher.

We can see that as the chain gets longer changes occur that affect the net revenue. When the revenue share model contains aggregators and portals, there is not much left to share once net revenue is reached. Revenue depends on the agreements as to how it is to be split among the content provider and aggregator and between the portal and aggregator or operator. This discussion gives an idea of how much the revenue split can vary between a direct operator agreement and an indirect distribution via aggregators and portals.

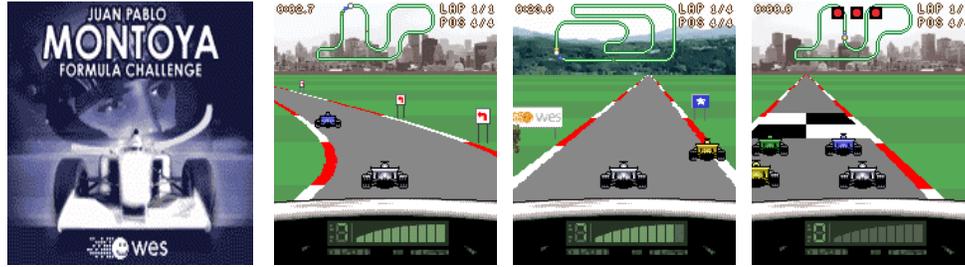


Fig. 6. Juan Pablo Montoya Formula Challenge screen shots.

JP Montoya Formula Challenge Mobile Game

The first game to be analyzed is the JP Montoya Formula Challenge Java game. In 2003, Sports Telecom signed an agreement with the Colombian Formula 1 star Juan Pablo Montoya, who now races at Nascar in the US. He came to Formula 1 from the Indy Racing League where he won the championship and also the legendary Indy 500 race. At that time, he was rated very highly by his fans and the public who considered him the next world champion. When the agreement was signed Montoya's brand rating was very high. He was one of the top sports brands in the Hispanic community both in Europe, USA, and in the Latin America.

The Juan Pablo Montoya Formula Challenge Java game was produced by the Finnish content provider Wes (www.wes.fi).

Porting and Distribution

The game was ported to 18 different Nokia handset models—and even in 2003 this must have been seen as very narrow porting. The narrow porting was partly compensated for by the fact that Nokia became the main distributor of the game. The game went live in September 2003 via Nokia in Finland, followed by launches via Nokia in the UK, Austria, Sweden, Switzerland, Norway, Italy, Germany, and Denmark.

In October 2003, the game was launched by T-Mobile in the Czech Republic, by Vodafone in Portugal, Telefonica in Spain, and Proximus in Belgium. In January 2004, the game went live via Nokia in Poland, via TDC in Denmark, TIM in Italy, portal Jamba in Germany, followed by Nokia in Asia, Australia, and India.

The distribution network was built around Nokia, but with the support of direct operator distribution. There were only a few aggregator and portal channels, which suggest that the brand was strong enough to attract both Nokia and direct operators in distributing the game and supporting its sales; Nokia also promoted the game on its global web sites.

Net Revenue and Download Volumes

Table III shows that the total sales or downloads during a 15 month period was almost 60.000 games, for a monthly average of 3980 downloads. The total revenue after distribution costs was 50134,28€, the monthly revenue after distribution was on average 3342,28€, the average revenue per download was 0,84€ This must be considered good. The revenue per download dropped towards the end of the lifecycle of the game as a result of the Asian countries coming in later. Early on, the average revenue per download was close to 1,0€ per download. The total net revenue with a 50/50 split was 25.067€ which makes an average net revenue per month of 1671,33€, the net revenue per download was on average 0,42€

Table III

REVENUE STRUCTURE					
JUAN PABLO MONTOYA FORMULA CHALLENGE Mobile Game					
2003-2005					
	Pcs sold	CP Revenue*	Rev/Dow	Net Revenue	Rev/Dow
November	7044	6746,64	0,96	3373,32	0,48
December	6355	5782,75	0,91	2891,38	0,45
January	5625	5744,24	1,02	2872,12	0,51
February	4687	4831,00	1,03	2415,50	0,52
March	7466	5203,82	0,70	2601,91	0,35
April	5303	4423,35	0,83	2211,68	0,42
May	4195	3555,55	0,85	1777,78	0,42
June	2607	2074,60	0,80	1037,30	0,40
July	1891	2200,66	1,16	1100,33	0,58
August	1886	1746,80	0,93	873,40	0,46
September	1061	1280,93	1,21	640,47	0,60
October	666	689,15	1,03	344,58	0,52
November	2154	1048,02	0,49	524,01	0,24
December	8256	3741,40	0,45	1870,70	0,23
January 05	354	1065,37	3,01	532,69	1,50
GRAND TOTAL	59550	50134,28	0,84	25067,14	0,42

* = Content Provider/Developer revenue

Source: Sports Telecom

Scott Dixon Mobile Racing Game

In April 2005, Sports Telecom, together with games' developer Tracebit (www.tracebit.com), launched a game based on the 2003 Indy Racing League Champion, Scott Dixon from New Zealand. Scott Dixon had had a difficult year after his championship winning season, and at the time the game was launched his brand rating was low. Dixon was a known brand in his home country and in Australia, but in Europe hardly anyone knew him outside the racing community.

The Scott Dixon Racing game was the first Indy 500-type oval racing game on the market. It was offered to operators in Europe, but the usual question was: "Scott Dixon, who is he?" The game concept itself was highly rated but the brand was not, which prevented the game from obtaining broad and direct distribution by operators.

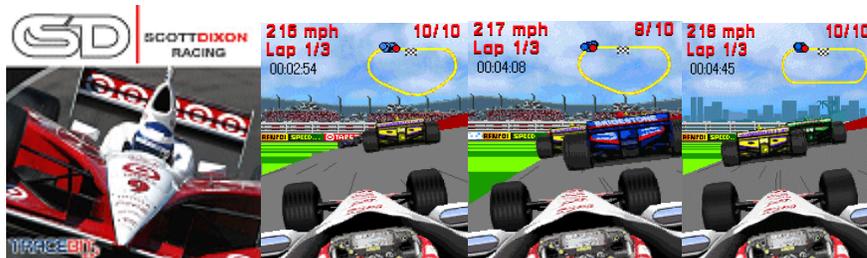


Fig 7. Screen shots from Scott Dixon Racing Mobile game.

Table IV

REVENUE STRUCTURE					
SCOTT DIXON RACING Mobile Game					
2005-2006					
	Pcs sold	CP Revenue*	Rev/Dow	Net Revenue	Rev/Dow
April	102	85,2	0,84	42,6	0,42
May	1648	1249,65	0,76	624,825	0,38
June	1478	1138,02	0,77	569,01	0,38
July	1281	1007,18	0,79	503,59	0,39
August	1967	819,64	0,42	409,82	0,21
September	1291	866,01	0,67	433,005	0,34
October	1853	600,92	0,32	300,46	0,16
November	2023	702,92	0,35	351,46	0,17
December	3575	1183,33	0,33	591,665	0,17
January	2518	944,70	0,38	472,35	0,19
February	2222	949,65	0,43	474,825	0,21
March	1239	572,73	0,46	286,365	0,23
April	1192	587,54	0,49	293,77	0,25
May	1737	1145,17	0,66	572,585	0,33
June	1078	320,45	0,30	160,225	0,15
July	507	262,45	0,52	131,225	0,26
August	581	266,07	0,46	133,035	0,23
September	313	143,29	0,46	71,645	0,23
TOTAL	26605	12844,92	0,48	6422,46	0,24

* = Content Provider/Developer revenue

Source: Sports Telecom

Porting and Distribution

Via Sonofon, the game went live in Denmark in mid-April 2005; T-Mobile launched the game in Hungary next; and Belgian Telnet, Finnish Elisa, and Movilife of Paraguay were among the few operator distributors.

The game was ported to a total of 464 different handset models (44 LG, 74 Motorola, 6 NEC, 104 Nokia, 1 Panasonic, 5 Philips, 11 Sagem, 122 Samsung, 5 Sanyo, 11 Sharp, 32 Siemens and 49 SonyEricsson). So porting was very wide.

The main distribution of the Scott Dixon Racing game was to take place via different portals and trough sales aggregators around the world. But the game was rejected by many operators due to its unknown brand.

Net Revenue and Download Volumes

In Table IV we see that the total sales or downloads since April 2005 were 26600 games sold; the monthly sales of games have been on average 1478. The total revenue left after distribution costs so far are 12844€, the monthly revenue after distribution is on average 676€, and the average revenue per download 0,48€. The total net revenue is 6422,46€ and on average is 0,24€ per download. Note that the Q32006 sales figures are still incomplete.

The David Coulthard GP Mobile Game

The David Coulthard GP mobile Java game, developed by Tracebit (www.tracebit.com), and partly based on the same game engine as the Scott Dixon Racing game, was published in mid-January 2006. According to the latest FIA Formula 1 Survey [FIA and AMD Formula 1 Survey 2006], David Coulthard is the world's fourth most popular Formula 1 driver. During his ten years in Formula 1, he scored over 500 points, 13 wins,

Table V

REVENUE STRUCTURE					
DAVID COULTHARD GP Mobile Game					
2006					
	Pcs sold	CP Revenue	Rev/Dow	Net Revenue	Rev/Dow
January	229	266,98	1,17	133,49	0,58
February	1107	1117,56	1,01	558,78	0,50
March	4193	4324,76	1,03	2162,38	0,52
April	3101	2255,84	0,73	1127,92	0,36
May	2711	1190,03	0,44	595,02	0,22
June	3599	1367,27	0,38	683,64	0,19
July	3440	1567,70	0,46	783,85	0,23
August	1867	958,92	0,51	479,46	0,26
September	609	300,93	0,49	150,47	0,25
TOTAL	20856	13349,99	0,64	6675,00	0,32

* = Content Provider/Developer revenue

Source: Sports Telecom

and 61 podium finishes. He is the fourth highest point scorer in Grand Prix history. In 2007, Coulthard is starting his second season for the Red Bull Racing Formula 1 team.

When the game came on offer, the first comments and indications from distributors were that David Coulthard is a strong brand, but somewhat on his way out of Formula 1. In the UK and many other countries, the feedback on the brand was though very positive.

Porting and Distribution

The first operator to launch the game was Elisa in Finland. Publisher Tracebit managed to negotiate a direct operator distribution for the UK via Orange. But it soon turned out that even though David Coulthard was seen as a strong brand, it did not have a global reach, and not nearly the reach of JP Montoya. Only a few direct operator/carrier distribution agreements were signed. The feedback on the game was good but the feedback on the brand was mixed. The game was ported to a total of 300 handsets; this porting must be seen as sufficient.

Net Revenue and Download Volumes

Since the launch of the game, the David Coulthard GP has reached a total sales volume of almost 21000 games; see Table V. Note that the Q32006 sales figures are incomplete. The average monthly sale is 2317 games. So far the game has brought in 13350€ in revenue; an average 0,64€ per download. Total net revenue is 6675€, an average of 0,32€ per download.

Comparisons

When we compare the three games in Table VI, we can clearly see the difference between a good brand and a less good brand. Even though the JPM Formula Challenge game was ported to only 18 handsets and the game was average the brand in combination with one strong distributor, Nokia, resulted in good sales and quite high revenue per download.

The Scott Dixon game was ported to over 460 handset models, but even this could not compensate for the weak brand and weak distribution. The Coulthard game, ported to 300 handsets, is doing quite well, but not as well as hoped.

Table VI

Brand	Brand Rating	Game Porting	Sales period	Total Downloads	Net Revenue	NR per download
JP Montoya	***+	18	15 months	59550	25067 €	0,42 €
David Coulthard	**	300	9 months	20856	6675 €	0,32 €
Scott Dixon	*	464	18 months	26605	6422 €	0,24 €

Source: Sports Telecom

In Table VII we eliminated the months that did not show the whole truth regarding download volumes: In the JP Montoya game case this was Jan. 2005; in the Scott Dixon case, April 2005; and Q3 in 2006. In the David Coulthard case we eliminated January and September 2006.

Table VII

Brand	Brand Rating	Game Porting	Sales period	Total Downloads	Net Revenue	NR per download
JP Montoya	***+	18	14 months	59196	24535 €	0,41 €
David Coulthard	**	300	7 months	20018	6392 €	0,32 €
Scott Dixon	*	464	14 months	25102	6045 €	0,24 €

Source: Sports Telecom

CONCLUSION

The brand differs and affects success--defined as high download volume and high revenue per download of a mobile Java game. As we see from the net revenue comparisons, there are significant differences among the three games analyzed here. JP Montoya was strong enough as a brand to attract a major global distributor such as Nokia. This compensated for the poor porting, and to some extent, even for the bad quality of the game. With broad porting and good game quality, the JP Montoya Formula Challenge would probably have sold over 100.000 downloads, and more.

The David Coulthard and the Scott Dixon games are still live on the market. But we now know that both games were not strong enough to attract major operators and handset manufacturers. In fact, there are a few direct operator/carrier distribution agreements in place, but the download volumes are still low and the support from the distributors poor.

In terms of game quality, both the Scott Dixon and the David Coulthard games must be considered average. The porting is broad for both games, but does not affect the sales volumes much. The reaction among customers, especially operators, was that the brands are not strong enough, and so the games were rejected by operators/carriers for support and distribution.

Many of the most successful mobile games that sell millions of copies are branded. At the 3GSM World Congress 2007 in Barcelona, the 12th Annual GSM Association Global

Mobile Award was given to the I-Plays-branded game *The Fast and the Furious*. The game has reached six million downloads-- a very impressive download volume.

We have learned that the brand makes a difference, both on B2B and B2C level, but for a game to be really successful all elements, such as playability, quality in all aspects, distribution, porting, language support, and a short value chain need to be in place. This is becoming more and more important.

REFERENCES

- ALVES, V., VITAL, H., DAMASCENO, A., CARDIM, I., SAMPAIO, P., BORBA, P., AND RAMALHO, G. 2005. Comparative analysis of porting strategies in J2ME games. In *Proceedings of the 21st IEEE International Conference on Software Maintenance (ICSM 05)*
- FIA and AMD Formula 1 Survey. 2006.
Gamesindustry.biz, 22.8.2006.
- MobileIndustry.biz, 30.11.2006.
MobileIndustry.biz, 26.10.2006.
- STEINBOCK, D. 2003. Globalization of wireless value system: from geographic to strategic advantages. *Telecommunications Policy*, 27/2003, 207-235.
- VLACHOS, P. AND VRECHOPOULOS, A. 2004. Emerging customer trends towards mobile music services. In *Proceedings of the International Conference on Electronic Commerce* (Oct.), 25-27.
<http://cpa.telenor.no/cpa/terminaler.pdf>, Oct. 2006.

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