Paid Content: From Free to Fee

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1 Introduction

Paid content has become a hotly debated issue since the dotcom crisis started in 2000. The predicted new economy did not become a lasting reality; Internet departments started to weigh heavily on the budgets of content creators; advertisements, whose volume had just started to grow, decreased dramatically. These developments were aggravated by the lack of proper micro-payment methods and technology to prevent illegal copying.

Yet it is rather remarkable that the issue of paid content is limited to the Internet. Before the Internet, paid content was not an issue for professional and consumer online services. For the providers of mobile content, there has never been a question of to pay or not to pay. It looks as if the Internet industry has created a ten year pause in paid content, before the pendulum now returns *from free to fee*. This chapter presents a short history of paid content, looks at the issue of what characterises valuable content, makes a categorisation, and shows developments in the field of content.

The issue of paid content will be limited to the discussion of content to be paid for and will not treat content supported by advertisements. Paid content will be treated along two lines: paid content on the Internet, and paid content for mobile services. This comparison is chosen intentionally as some content items – such as newspapers and magazines, music, or television broadcasts of sports – are fighting to get hold of the two platforms.

The reader should keep in mind that there has never been a discussion about paying for scientific, technical, and medical content as well as certain trade information. The issue of paid content concentrates now mainly on trade information and consumer content such as music, games, and movies. The figures presented in this report are concerned with new Internet sites and not with already existing information services such as Lexis-Nexis and Thomson Dialog.

Paid content has become an issue in the Internet world and concerns the payment for online forms of usually copyrighted content such as text, graphics (drawings, photographs, animations) as well as of downloads, streaming video, and audio.

2 Some History

The Internet originates from the military world, where the network Arpanet was developed as a means of communication. In time, university libraries and research institutes were allowed to link up to this network. When the military network finally turned into a mass medium, the Internet Service Providers (ISPs) blandly copied the network, its infrastructure and its habits. So no fees were paid for interconnection between networks; ISPs only had to put up a server, link it to the net, and get a rack of modems connected. They had a free ride. Then they started to compare themselves to media companies and set up editorial staffs. But this did not last long, as they discovered that creating content was expensive with no revenues coming in. So they started to accept the content offered by content providers for free or bought it at bulk prices; principally they did not care how the creation of content was paid for.

This Internet development was a break with the tradition of paid content. Since the beginning of online information distribution at the beginning of the 1970s, payment for professional, mostly textual content was normal. Besides access fees, depending on the speed of the modem, and fees for connected time levelled by vendors of ASCII databases such as Lexis-Nexis and Dialog, a copyright fee was collected by the information provider. The introduction of Videotext around 1980 gave rise to a mixed business model. Not only was it possible to call up text electronically, but also graphics, be it very crude ones. Thus, charging a fee for a frame/page was possible, while on the other hand it was also possible to have a page without a charge to be paid for by the advertiser. The French Minitel service with a lot of consumer content for example had free pages as well as pages bearing a fee, which was added to the telephone bill.

Therefore, when the Internet left the military barracks and the university libraries behind to become a mass medium, the problem of unpaid content started to show. For scientific and trade publishers like Elsevier this free content phenomenon became a dilemma. Besides having to adapt to a new technology, their Lexis-Nexis model of paid content came under pressure. In the end, neither Elsevier nor other professional information vendors gave any scientific information for free. By this they did not have to re-

educate their customers. The same path was followed by Thomson and Ovid Technologies, among others. The financial daily newspaper *Wall Street Journal*, which never gave the paper in electronic form away for free, decided for a subscription model from day one.

Until the year 2000, the Internet, however, basically worked according to the principle of the advertisement revenue model and with free content. But this started to change after the dotcom crash. In order to keep sites alive, money was needed and advertisements did not support these activities sufficiently. Publishers and other content providers started to valuate and monetise their content at last. Due to the harsh economic times, the movement *content from free to fee* has gained speed.

Compared to content on the Internet, content for mobile services has never been free. Mobile operators have asked money for all services to the extent that it is even hard to distribute content for mobile telephones for free.

> The issue of paid content, or rather the problem of unpaid content, arrived when the Internet, with its tradition of free circulation of content, left the military barracks and university libraries behind to become a mass medium.

3 Valuable Content

Before the rise of the Internet, content had a price, regardless whether it was text, graphics, music or video, in analogue or digital form. Content was bought by payment or by subscription, or content was paid for by advertisements. For print there was a value tier starting with scientific, technical and medical (STM) content as most expensive and without any advertisements, trade content as less expensive mixed with advertisements, consumer niche content and mixed with advertisements, but more expensive as consumer content. For movies there is the exploitation window: movie theatres first, then broadcast stations, and last the distribution to consumers on tape and DVD. Music does not have a value tier or exploitation window.

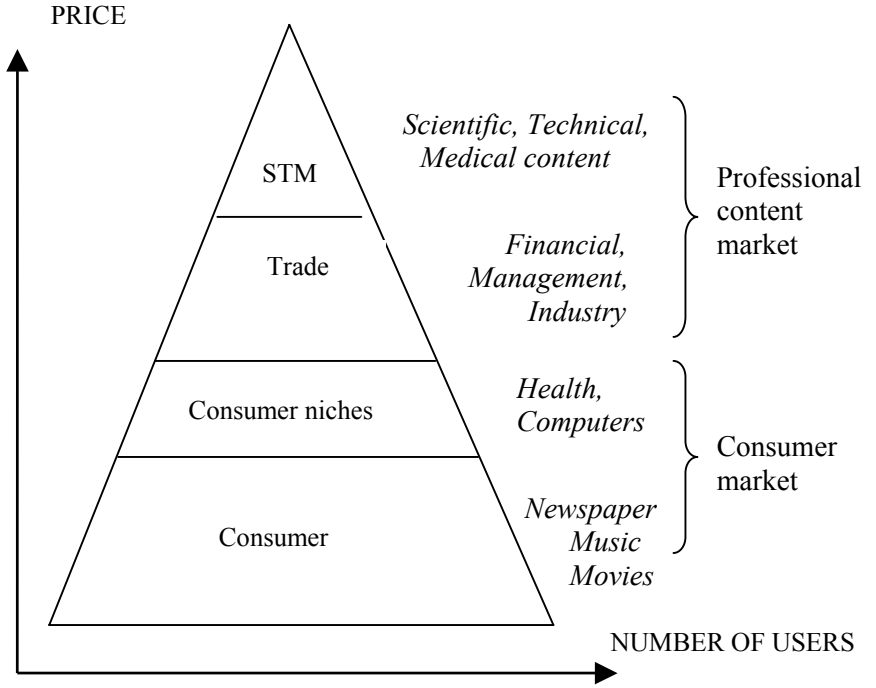

Fig. 1. Content value tier

With the introduction of the Internet, the notions of content "need to know" and "nice to know" disappeared as the users considered all content to be available on the Internet and for free. With the monetising of content three critical success factors for content return:

- *Uniqueness*: this factor rests on the example that the content service which can predict the price of gold, will be the champion;
- *Usability*: this factor is often overlooked by the content provider as they have been squeezed into technical concepts; the look and feel are important as well as the payment system processing payments;
- *Exclusiveness*: in order to sell content, an exclusive proposition has to be made.

4 Content Services Segmentation

The term "content" became popular in the 1990s. Until then, content was usually covered by the term 'information'. The term "content" was specifically used for digital content, online or offline

4.1 Content on the Internet

Content on the Internet started mainly as text information. However, the mono mode information changed rather speedily to multimedia content, rendering text, graphics, audio and video as well as combinations of these types. By now, content on the Internet has become the most favourite activity online, according to a monitor by OPA and Nielsen//NetRatings:

Table 1. Development of time spent on different online activities 2003-2004 (Source: OPA and Nielsen//NetRatings 2004)

Share of Time Spent Online (%)					
	Oct03	Jan04	Apr04	Jul04	Oct04
Commerce	16.5	17.0	16.4	15.2	15.8
Communications	45.2	44.2	43.1	41.6	39.8
Content	35.3	34.9	35.9	38.9	40.2
Search	3.0	3.8	4.6	4.2	4.3
% Change in Share of Time, Month-Over-Month					
	Oct03	Jan04	Apr04	Jul04	Oct04
Commerce	↑7.1	↓6.6	↓6.8	↓3.2	↑3.9
Communications	↓1.7	↑0.2	↓0.7	↓3.9	0.0
Content	↑2.0	↑2.6	↑0.8	↑6.6	↓2.0
Search	↓25.0	↑2.7	↑31.4	↓4.5	↑7.5

Note: Excludes .gov and .edu websites, as well as pornographic domains. *Percentage change* indicates the percentage increase or decrease from the previous month's value (September 2003 values not shown).

Recent surveys by the Online Publishers Association (OPA and ComScore 2004) and Jupiter Research (2004) show two completely incompatible categorisations of content. Only General News and Games in the categorisation of OPA/ComScore and General News and Archives as well as Online Games in Jupiter Research appear to come close.

Table 2. Categorisation of content (Sources: based on OPA and ComScore 2004, Jupiter Research 2003)

Category (OPA and ComScore)	Category (Jupiter Research)
Personals/Dating	General News and archives
Business/Investment	Audio/Video Entertainment
Entertainment/Lifestyle	Adult Entertainment
Research	Financial and Business News
Community-made Directories	Other Content (e.g. horoscope, sports, kids)
Personal Growth	Digital Music
General News	Online Games
Games	
Credit Help	
Greeting Cards	
Sports	

The categorisation of OPA and ComScore looks comprehensive as it also includes the category Research among others, but it has questionable categories such as Personals/Dating, Community-made Directories, and Personal Growth. The Jupiter Survey categorisation is too specific on the one hand with Adult Entertainment separated from Audio/Video Entertainment, while on the other hand using 'Other Content' as a waste paper basket including important categories such as Sports and Health.

The variety of these categorisations shows that a standard segmentation would make market research easier. It is clear that the segmentation should not be based on changing technology such as streaming audio, and video or PDF downloads. On the other hand, a more general category such as Community Content, including Personals/Dating, and personal weblogs should be included. Also, a category of Public Sector Content should be considered, as not all public sector information will be free.

4.2 Content for Mobile Services

Mobile services have two limitations in comparison to fixed line Internet, regardless whether it is dial-up, cable or ADSL. The speed of the mobile network is rather low, even in the GPRS mode; the speed might improve with UMTS/3G. The screen size is variable, ranging from a small screen to one for a PDA or one for a portable computer.

Portable computers can be considered as comparable to stand-alone computers. In case of Wi-Fi, the speed might be comparable or faster than

the fixed line connection. While the speed issue is similar to the portable computer, content destined for PDAs has to be adapted to the screen size.

For portable computers and PDAs, the same content services of fixed line Internet can apply. However, for mobile phones the services are different due to the size of the screen. Basically, frames can consist of maximally 160 characters. The new telephones ready for MMS can display a photograph plus some text.

Table 3. Mobile services (Source: Adapted from Pedersen 2003)

Communication services (pull)	**Transaction services**
Loyalty programmes	Discount tickets
Promotional campaigns	Payment via SMS
Marketing campaigns	Ordering via SMS
E-Mail	Ticketing systems
Information services (push)	**Entertainment services**
Personalised news	SMS quizzes and sweepstakes
Notification services	SMS games
Stock exchange information	Voting
Sport- and health information	Dating and chat services
Reminder services	Horoscopes and jokes
	MMS soap series
	Ringtones and logos

No workable segmentation of digital content for market research is available yet. This makes it difficult to distinguish pre-Internet segments, segments on the Internet, mobile segments, and new upcoming segments.

5 Content-Related Technology

Payment and digital rights management are two technology-related issues interlinked with online content. The easier money can be transferred from the buyer to the content provider, the more content will be sold. But payment systems as such are not enough. Providers will also want the guarantee by digital rights management that the content is not bought once and copied many times.

5.1 Payment Systems

Payment systems have held up the sales of content so far. Individual newspaper or magazine articles, songs or movies require small payments. But payment by credit card is expensive for such a small sum, while on the other hand micro-payment systems are not yet matured nor trusted enough.

a) Payment on the Internet

Billing and payment services have not been a strong feature of the Internet. So far only a few banks have become involved in the payment process on the Internet: a direct charge to the account is thus hardly made. The most successful means for payment is still the credit card. Of course, there is hesitation about the use of the credit card, and for a user the secure transaction methods are not always sufficient. Besides, regional habits of using plastic money is influencing payments online. Although one can subscribe to online content by credit card,. payments for an article from the archive or a music or video download are small. So micro-payments would fill the gap. This normally works with a debit account. The user transfers money from the bank to an account at the micro-payment service. Whenever the user buys an article, a song or a movie the sum of the account at the micro-payment service will decrease and the user will have to transfer money again when the amount has been used up. Another method of micro-payment uses a code and puts the charges on the telephone bill. A variation of this is the use of a scratch card; the user pays for the scratch card and enters the code when asked to pay for a song.

Up to the year 2000, micro-payments looked promising. In 1994, D. Chaum, an American working in the Netherlands, developed a trustworthy and non-reputable system for anonymous (micro-)payments, *DigiCash*, but it never got the confidence of the banks (Clark 1998). IBM developed the micro-payments system *MilliCent*, but this never became the standard system in the consumer market. It is only now that micro-payment systems hit the markets with *Switchpoint* from the telecom operator KPN in The Netherlands, *Firstgate* in Germany, *BT-Click&Buy* in the UK, and *PayPal* in the USA. In the USA, micro-payments under US$ 5 have steadily increased over the last 18 months; but they form a minority among all forms of payment, which mainly consist of subscription and mid-range payments (up to 50%). Other methods for small payments are reverse billing by mobile phones (you order a song through the Internet and pay by mobile phone), E-Wallets and scratch cards. In sum, one can say that the appliance of micro-payment systems is a matter of time. It is not only the user that has to get used to them, though, but also the content providers.

b) Payment for Mobile Content

Given the attitude towards paid content mobile companies have various ways of payment. One can pay through a pre-paid card or with the monthly bill of a subscription. But also the method of charging can differ: by item, by bundle (which is basically by the amount of KBs and not by the quality of the content) or by subscription, promising you regular updates.

Technically there are lots of developments. The Dutch KPN *Switchpoint* software, a payment system for content on the Internet, has been adapted for mobile usage, and is now used as *Switchpoint Mobile*. But whether this local system will be able to persist against the systems from big companies is questionable. The German market for mobile payment is already dominated by Vodafone and T-Mobile, and the foundation of a so-called Mobile Payment Services Association with members such as Telefonica Moviles, T-Mobile and Vodafone is already in sight. The objective of the new association will be an open solution for payment via mobile telephones across networks and across countries.

5.2 Digital Rights Management (DRM)

a) DRM on the Internet

Payment is not the only technical problem involved in the issue of paid content. Closely related is the issue of digital rights management. To the content provider, DRM is a means to protect the copyright of the content, and the opportunity to sell the content over and over again. To the buyer, DRM means that measures have been taken against piracy.

DRM is intended to secure rights during the production phase, as video and music clips get often stolen before the release and the distribution phase. The distribution phase is a complex problem as buyers might want to use the content on multiple platforms: buyers might want to read an article on PC as well as on PDA, or they might want to listen to a song on their PC, CD player or iPod.

DRM has thus proven to be difficult to apply. When in 2003 the music group BMG applied SunnCom's DRM software to audio CDs, the superficial technology solution was broken in a matter of days. More serious is the DRM work on watermarking and fingerprinting. Sony is developing a watermarking technology for video under the name Sony's Signet Screener. The German research institute Fraunhofer has developed the Light Weight Digital Rights Management (LWDRM) technology; content files (for example AAC or MP3-coded music files) protected by LWDRM are initially locked to the PC at the download stage, but users are then able

to transfer the tracks onto portable music players or to share them by digitally signing them, thus making LWDRM protected tracks traceable. Fingerprinting technology is currently of interest for broadcast monitoring.

But even if an agreement has been reached over DRM, different file formats used by the music companies will pose a problem. However, music companies and DRM developers have recognised this and are determined to solve this technical problem.

However, it is no longer only the article, the song or the movie which has to be protected. The next DRM challenge will be home networks. IBM has already presented xCP, a laboratory technology for authentication of device identities on home networks. Also Philips and Sony announced that their joint-venture InterTrust will provide a new DRM interoperable technology across PCs and consumer electronics devices.

Philips and Sony have an enormous influence in the consumer media electronics marketplace, and also have demonstrated their influence by bringing new media formats such as CD-ROM and DVD to the market successfully several times in the past. The release of this upcoming technology will likely trigger a platform war between Philips and Sony on the one hand and Microsoft on the other, with a handful of third parties, such as Apple and RealNetworks, also participating. Another group consisting of five electronics manufacturers, including Matsushita, has also announced to tackle this area.

b) DRM on Mobile Devices

The mobile sector has decided not to deal with content safety individually. Four members of the Open Mobile Alliance (OMA) have published technical guidelines. The technology, named *OMA DRM 2.0 Enabler Release*, will be embedded in the operating system of the new generation of mobile devices. Nokia, Intel, Matsushita and Samsung offer media companies to publish their content on mobile devices. A company has been set up to handle the licenses of the anti-copying technologies.

6 State-of-the-Art of Paid Content

6.1 Internet Content

The crucial question to start with is: which paid content is hot? In other words: which content is destined for economic exploitation? Several kinds of content are at the centre of attention: music, online newspapers and E-Magazines, games as well as movies.

a) Music

Music is the most heterogeneous section for paid content. There is a long struggle by the music industry to stem piracy, and it is far from over. The music industry had some judicial set backs recently as the peer-to-peer software of KaZaa was not ruled illegal; a view also supported by the Copyright Board of Canada, and concurring with the US decision in favour of Grokster and Morpheus. Therefore, the music industry and collecting societies will have to go after the uploaders personally, and/or opt for a levy on PC and other memory devices such as portable MP3 players.

Although legitimate online paid music services have been around since 2002, it was only with iTunes of Apple that people started to take these services seriously. Although the success might have come from trust in Apple on the one hand and fear for persecution by the music industry on the other it hand, it is more the usability of the service (pricing, method of payment – credit card or micro-payment-, use on more than one platform – Internet, CD-ROM, portable MP3 players) that impressed users.

The lesson to be learned from the music industry is that *a trustworthy and usable online content service must be offered in order to replace illegal copying*. Recently, the International Federation for the Phonographic Industry (IFPI) announced that the fight against online music piracy has "turned a corner" as a result of the increase in the number of legitimate online services now available and legal action against illicit downloading. New figures from the IFPI in June 2004 showed that 800 million illegally copied music files or tracks were available on the web, compared to 1.1 billion in June 2003 (IFPI 2004).

b) Online Newspapers and E-Magazines

For the print world it has taken a long time in order to figure out a paid content business model. Newspapers were given away for free, magazines hoped to be supported by advertisements, and E-Books struggled with proprietary software and single function devices. The position taken by the Wall Street Journal to ask money for its content was not followed by other publishers. Only after the dot-com crash newspaper owners started to realise that advertisements alone would never pay for the production costs and bring in extra revenues. From that point onwards, the newspapers turned their online versions into sites for which people have to register or to pay by subscription or per article, and started to distribute online newspapers themselves or through an electronic kiosk such as *NewsStand*.[1]

[1] See http://www.newsstand.com

The E-Magazines needed more time to find their way to paid content. But by now, magazine publishers have started to understand the game. Besides subscriptions by the publishers, third parties such as Zinio and Adobe offer E-Magazines in their digital version of the old-world kiosk.

E-Books have so far been a continuously promising phenomenon with proprietary hard- and software. The reading devices have not worked so far but electronic files might be a road into the future. For the time being, Adobe is making money out of this trend with its book and article shop.

c) Games

Online gaming is a promising content segment. Already with packaged broadband (CD-ROM), games were a favourite pastime. The second generation consoles such as the PlayStation II and X-box with their online connections will stimulate online services such as gaming portals. Another development in the gaming world is multi-player gaming, allowing a user to play against more than one user online. Also in this case, DRM will be essential as piracy by means of cables and chips will be an issue.

d) Movies

Movies have not been much of an issue yet. The long downloading times have scared off illegal copying at the scale of music so far. However, with ADSL and fibre optic cables, download times for movies have decreased dramatically. And as with music, peer-to-peer software for movies will come about, unless the film industry has found an answer to the demand in movie download services beforehand. At the moment, *MovieLink*, *CinemaNow*, and *MovieFlix* have licenses from the major studios, and offer movies in the formats of Microsoft Windows Media and RealNetworks.

e) Sports

Sports is a promising area, certainly even more so with the rise of broadband. Using the Internet to bridge time and space, certain international sports, e.g. cricket, hockey or American college football, draw already a loyal crowd of paying users.

f) Adult Entertainment

Adult entertainment has been part of the state-of-the-art and the misery of the Internet. The providers of adult entertainment have perfected the notion of sticky sites and pop-ups. They were also the first ones to accept credit cards and have now introduced micro-payments.

6.2 Mobile Services Content

Content for mobile services is developing slowly. Text-oriented content in the form of SMS is enjoying a certain degree of interest. Its successor WAP appears to be a failure as the service was presented as mobile Internet, but turned out to be a dressed down version of it. MMS has become a new feature for recording and distributing photographs with texts and short movies. With the new technologies of Wi-Fi and mobile WLAN connection with portable PCs, content hardly needs to be adapted for screen output. For PDAs and smart phones, however, screen outputs have to be adapted. PCs with cards for mobile services can download music, newspapers, and E-Magazines, games, (sports) broadcasts, and movies.

Internet content services are now on the trajectory from free to fee. The music business presently serves as a paradigm for copyrighted content.

7 Acceptance of Paid Content

Paid content is in the middle of the acceptance process. On the one hand, buyers of high quality STM and trade content are used to paying; usually the university or the company will pay. But on the other hand, Internet users have never had a tradition of paying for content. The process of accepting paying for content among this group can be measured by the resistance to paying, and by the amount of piracy of content. The resistance is most obvious in the music sector at the moment.

Three market research studies illustrate users' hesitation to pay for content services. AMR Interactive did research in Australia. It showed that 72% of the respondents have never paid for content on the Web, and 57% do not understand why they should (Lebihan 2002). This study is supported by the Pew Internet (2004) report carried out in the USA. This study comes up with 12% of the respondents willing to pay, while 36% will stop getting the information once they have to pay. An extensive German market survey (VDZ 2003) is, on the other hand, rather optimistic. It predicts that in 2005 the content sold in Germany will generate a total income of € 127 million. And more than 50% of the respondents are willing to pay for professional services such as financial content, databases, and news archives; unclear is whether the actual user pays or the company he/she works for.

Looking at content segments, some trends are prevalent. In the case of newspapers and magazines, many sites have experienced a dramatic drop

in unique visitors and page views when moving from an open site to a closed site i.e. paid services Installing payment for access to the site or for a download of the newspaper or magazine is thus similar to the example provided by the case of Ireland.com.

Ireland.com is the website of *The Irish Times of Dublin*. The newspaper started up its website in 1994 and has enjoyed much interest from all over the world, especially from Irish emigrants and their offspring. When the site converted to a paid access model in mid-2002, Ireland.com's monthly page views dropped from 30.4 million to under 7.1 million. As a free access site Ireland.com had 2.3 million unique visitors a month. But when articles were paid content, less than 10,000 users signed up, which is a conversion ratio of hardly 1%. Due to the drop in unique visitors and page views, the newspaper also lost revenues on its banner advertising.

Resistance to paid content is also evident with music and movies. Here, resistance translates into copying songs and films, mostly through peer-to-peer network services. Once bodies such as the Recording Industry Association of America (RIAA) and the collecting society BUMA/ STEMRA started court cases against downloading without payment, the amount of download started to decrease. In June 2003, still 35 million unique users downloaded music from the peer-to-peer music service KaZaA. By January 2004, with the RIAA having announced court cases against private downloaders, the number went down to 26 million. Contrary to this downturn, the legal music sites of *iTunes* Musicstore from Apple and Napster.com assembled 5.9 million downloaders in November 2003.

Another interesting aspect is the use of broadband. According to a survey by the Online Publishers Association together with ComScore (2003), it appears that broadband is a likely driver of increasing paid content revenues. Again the ISPs hope that broadband will offer them the opportunity to sell fast, faster and fastest Internet, and gain a share in content markets (e.g. Tiscali with OD2 in a music service). The following list highlights the relation of broadband and paid content (OPA and ComScore 2003):

- 59% of paid content purchasers have broadband access.
- Purchasers of paid content are 14% more likely to have broadband access to the Internet.
- 66.7% of Sports, Games & Entertainment category purchasers have broadband access.
- Paid content purchasers in all four major categories (Personals/Dating, Business Content/Investment, Entertainment/Lifestyle, Research) of this report exhibit greater broadband penetration than the total Internet audience.

Illegal downloading of digital content will not be stopped by court cases only. A legal service with a wide assortment, user friendly technology, and multiple platform use will need to be offered.

8 Revenues of Paid Content

Having demonstrated the problem of categorisation, it is difficult to compare revenue statistics and project them over years. For the Internet, the first statistics are being published right now. For content for mobile services, only a projection is available.

8.1 Internet Revenues

The available statistics present however only an indication of the global market. Since 2002, the OPA has published statistics about the US market. The OPA has ever since conducted quarterly surveys among its members. In 2003, the OPA has started a European chapter, which also is going to conduct quarterly surveys, most likely according to the same methodology developed in association with ComScore. So far, no report has been published on the European market by OPA-Europe.

Table 4. Content spending in the USA by category of content (x million) (Source: OPA and ComScore 2004)

Category	2001	2002	2003
Personals/Dating		302.1	449.5
Business/Investment		393.0	334.1
Entertainment/Lifestyle		227.5	214.0
Research		106,6	108,6
Community-made Directories		91.1	87.0
Personal Growth		44.3	90.7
General News		70.0	87.5
Games		72.0	73.0
Credit Help		40.4	36.6
Greeting Cards		36.2	40.6
Sports		30.3	38.2
Total	670 m	1.3 b	1.6 b

US consumers spent US$ 1.56 billion for online content in 2003. Online content spending in 2003 was up 18.8% in relation to the previous year. Table 4 breaks down the paid content spendings in the US by category. As pointed out before, the categories on which the statistics are based are dubious and limited by the participation of the OPA members. However, the report is more informative concerning the pricing models.

Table 5. Average subscription price in US$ by pricing model (Source: OPA and ComScore 2004).

	2001	2002	2003
Average Annual Subscription Amount	49.69	48.94	48.65
Average Monthly Subscription Amount	8.46	10.32	11.02
Average Single Payment Amount	17.89	22.64	21.67

An intriguing remark in the report is that micro-payments represent less than 1% of the total payments. A critical note is needed here: Either there were just few companies with micro-payments in the portfolio of screened companies or the analysed content was just not interesting enough. Other research from IDC indicates that 62% of individual content buyers worldwide produce only 8% of the content sales revenues, while companies and institutions generate 92%. Although the statistics do not corroborate each other, the trend is clear:

- Professional content still accounts for the majority of revenue;
- Subscriptions bring in the load of the content sales revenues, while companies and institutions bring up the money for content acquisition;
- Payment for consumer content is still at the beginning of its revenue stream.

Jupiter Research (2003) published a forecast for paid content revenues in Western Europe from 2002 to 2007 (see Table 6). When one compares Tables 4 and 6, it is clear that the revenues of paid content in Europe are far behind the USA. This is due to the amount of Internet users, but also to the attitude of Americans towards paying for information. Adult Entertainment is by far the leading category of paid content, receiving payments by credit cards and since 2003 also through micro-payments. However, the category adult entertainment will diminish in importance as audio/video entertainment, music, and video will overtake.

Table 6. Forecast for paid content (in € million) in Western Europe (Source: Jupiter Research 2003)

Content revenues	2002	2003	2004	2005	2006	2007
General news and archives	6	19	32	46	61	78
Audio/video entertainment	5	38	88	162	277	424
Adult entertainment	266	297	330	363	393	422
Financial and Business news	22	41	61	82	101	121
Other content (e.g. horoscope, sports, health, kids)	10	27	53	84	127	183
Digital music	9	26	65	136	285	550
Online games	43	96	176	285	418	589
Total content revenues	361	544	806	1158	1662	2366

8.2 Mobile Content Services

Many of the difficulties with paid content on the Internet do not exist for mobile services. From the beginning of mobile services onwards, people have learned to pay, whether this is for a SMS, WAP, I-mode, or MMS service.

Mobile services are also hampered by some features. One of the most important handicaps is that the development cycle of mobile technology is very fast. SMS has received competition from WAP, I-mode, MMS, Wi-Fi, and WLAN within the time span of less than five years. And 3G/UMTS has only just started. Despite this technology offensive, SMS might turn out to be the Teletext of the mobile world: primitive, easy to use, and effective, this while the new technologies do not get time to mature. And last but not least, a problem lies also in the lack of transparency in the mobile services sector with the multiplicity of content creators, content packagers, platform providers, transaction providers, and network providers.

What will be the share of mobile content for the mobile sector? In relative terms it will not be much. A study conducted by Andersen for the European Commission (EC 2002) indicates that network operators will

earn their money in 2005 by voice (€ 67.7 billion), personal data services such as SMS (€ 44.6 billion), and only € 5.4 billion from content. For the content provider, mobile content will yield some 6% of his total income. In a media forecast, the European market is still estimated at € 18.9 billion in 2006. Major categories are: News, Games, and Youth Fun (ringtones, logos). Even Financial info is relatively low on the scale, most likely because only stock prices are interesting to know when one is on the move.

This forecast is however only in the light of the present mobile services situation, but 3G/UMTS is about to get on the scene with the promises of content such as music, video, television, and games. Will people want to have it? A TNS market survey in Europe (2003) said that 42% of the present mobile users are interested in 3G, and more than 50% of this group is willing to pay more for 3G; for MMS, High-speed Internet, and E-Mails they were willing to pay € 6 to 10 more per month.

The crucial question remains whether personal communication such as SMS, MMS and E-Mails will prevail over content. In the same TNS survey, 77% of the respondents want to forward and receive E-Mails, and 77% want video phones. Regarding content, 47% of the respondents would like to download videos and music. These data point into the direction that personal communication will prevail over content.

9 Business Model

The term 'business model' is a much misused word. Quite often the term 'revenue model' would fit better, depending on the scope of the business. A business model for paid content concerns itself with payment for digital content. Such a business model has a set of components that is part of what people perceive as the business proposition.

1. *Content*: What type of content (text, audio or video or combinations); how unique is the content on the web; how valuable is the content.
2. *Infrastructure*: How is it presented on the web; can the user see a lead; is the content well-protected, but can it be transferred to other platforms (portable PCs, iPods, eBooks); how easy is the payment; how is the usability.
3. *Revenue*: Is it an acceptable price for the content; are there bundles possible; is there a subscription and a pay-as-you-go facility.
4. *Cooperation*: Are you listed in search engines; do other (usually unpaid) sites refer to your site; have a set of valuable links.

5. *Growth*: Do not show all content straight from the beginning; build up the introduction in steps.

A standard business model for paid content does not exist. What works for the Wall Street Journal does not necessarily work for the Financial Times. So whenever setting up a paid content site, one should look at comparable sites and the components in the model and formulate an own model with the five components in mind.

A good example of the struggle over the right business model can be found in the digital music business. With many illegal downloads of copyrighted music via peer-to-peer connections, music companies like Sony and EMI started their own download services. The business model restricted amongst others transfers of songs from the Internet to other media such as CD-ROM, and play-back devices like the iPOD; also their prices were hardly differentiated between a single song and an album of songs. When Apple marched in with the service iTunes in April 2003, another business model was presented. In conceiving and launching iTunes, Apple did two things right. First, it talked the major recording companies into licensing music to its service on less restrictive, more user-friendly terms than those that they offered other services. Thus users could create unencrypted MP3 versions of music tracks, for maximum portability, but they had to go through the trouble of burning a CD first. By putting up a speed bump for pirates, it avoided barriers that hampered legitimate users. Second, Apple turned the service iTunes into a traditional record store. By doing so, iTunes changed the paradigm, built by the music itself:

- no obligatory subscription to the service;
- availability of single songs or an album;
- acceptable price under US$1 a song;
- portability to other devices;
- a wide variety of songs, not limited by the offer of one company.

The business model is such a success that it is copied by many music services.

Newspapers have basically two business models. One model is to present headlines and have the user to register and to buy a subscription or to buy an article. Other newspapers like the *Washington Post* and the *Dutch Telegraaf* now have a digital edition – e.g. an E-Paper as a PDF – which can be bought by subscription or by the single issue.

Online games require other business models. Through several game portals, participation in a multi-player game can be bought. This can be on the

basis of time spent gaming, payment for a particular game or (micro-)-payment for downloading a game. In all three models the conditions differ.

There is no such thing as a standard business model in digital content.

10 Conclusions

Paid content is an issue for the Internet, but most likely a temporary issue. Before the introduction of the Internet, there was already a tradition of payment for online content. But when the Internet came out of the military barracks and university libraries, the ISPs were not paying for interconnection fees and hoped to compete with media companies. This led to a long phase of non-payment based on an advertisement business model. After the dotcom crash, ISPs scaled down their content services. However, paid content services are on the rise again due to the efforts of content providers; paid content services also seem to be helped by broadband, offering new opportunities.

Measuring the growth is rather difficult as there is no standard segmentation of online content requiring payment. But the few marketing research reports indicate that the resistance to paid content is decreasing. In fact, as the developments in the music recording industry show, payment for content will be accepted by the availability of a legal, user-friendly service in combination with legal action. However, legal action without a legal, user-friendly service is a waste of money.

Paid content is still growing ahead of economic indicators. This can be seen as a catching up phase. With the growth of services with proper payment and micro-payment facilities as well as digital rights management facilities, paid content will keep increasing ahead of the economic indicators.

Paid content has never been an issue in mobile content. From the first SMS services onwards, payment has always been required. In comparison to content on Internet, the opportunities for paid content on mobiles looks smaller than paid content on the Internet.

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Content Applications: Selected Cases