CHAPTER 2

Online delivered content: concept and business potential\(^1\)

Claudia Loebbecke and Claudio Huyskens

INTRODUCTION

Electronically traded online delivered content (ODC) is data, information and knowledge traded on the Internet or through other online means (Dewan et al., 2000). ODC includes online newspapers, magazines, blogs, music, podcasts, education, searchable databases, consulting, and eventually expertise and ideas.

When trading ODC, the full commercial cycle – offer, negotiation, order, delivery, payment – can be conducted via a network such as the

\(^1\) For an earlier and shorter version of this chapter see Loebbecke (1999b).
Internet. In addition to the issues inherent in trading physical goods on the Web, trading ODC on the Internet raises concerns such as version control, authentication of the product, control over intellectual property rights (IPR) (Meisel and Sullivan, 2002; Waller et al., 2002) and the development of profitable intra- and interorganizational business models (Werbach, 2000).

This chapter outlines the growing importance and possible business models for ODC. The chapter attempts to position electronic trading in ODC within the wider field of electronic commerce (Kalakota and Whinston, 1996; Loebbecke and Powell, 1999). It identifies its distinctive characteristics compared to other forms of trading content and to electronic trading in physical goods. Important ODC peculiarities are identified and analysed. Previous cases have already illustrated the initial application of the ODC concept (Loebbecke, 1999a). Current ODC offerings built from existing content are presented based on a current case of a medium-sized specialized publisher. The case shows how the coverage of value chain activities depends on the specific ODC offering. Financial impacts illustrate the success from adding ODC to the product or service portfolio. Finally, lessons learned from the case and some overall conclusions are outlined.

ONLINE DELIVERED CONTENT – THE CORE OF THE INTANGIBLE ECONOMY

A major characteristic of the Internet Economy (also commonly referred to as the Digital Economy or Information Society) is its shift to the intangible. The creation and manipulation of dematerialized content has become a major source of economic value (Wang et al., 1998) and this development further accelerates under the current buzzword of Web 2.0. This move to the intangible affects all sectors and activities. It profoundly transforms economic relationships and interactions, the way firms and markets are organized and the way in which transactions are carried out. It also leads to dissemination and reconfiguration of value chains (see Figure 2.1). However, the intangible economy is not limited to the Internet. Analogue technologies such as radio and television are also to be considered integral parts – and these are used to an increasing degree. Driven by technological convergence, further media integration is under way.

To some extent the intangible economy runs squarely against the conventional logic of economics. Intangible goods are not limited by
physical constraints and are not limited to traditional economic characteristics, such as 'durable', 'lumpy', 'unique' and 'scarce'. Instead, intangible goods can simultaneously be 'durable and ephemeral, lumpy and infinitely divisible, unique and ubiquitous, scarce and abundant' (Gelfand, 2004; Goldfinger, 1998). The business of purely intangible goods is radically different from conventional electronic commerce areas, which focus on trading or preparing to trade physical goods or hybrids between physical and intangible goods. Trading intangible goods has demanded adaptations in the way business is conducted. As a consequence, new business models have emerged and traditional business processes have been changed.

Classical economic theory does not usually address the issue of information, content or knowledge as a tradable good. The value of information is traditionally seen as derived exclusively from reducing uncertainty. In the Internet economy, however, information/content is simultaneously a production asset and a good.

From a supplier's perspective, the growing importance of intangible assets and the resulting complexity can be seen in the huge differences between book value and stock market values. These differences can partly be explained by the crucial role attributed to brands, content, publishing rights and intellectual capital, which may emerge via, be embedded in, or be stimulated by, ODC. The implied problem of pricing the value of information/content has so far received most attention in the context of managerial accounting when discussing the issues of: (1) consistent value measuring; and (2) the negligibility of costs for acquiring and creating intangible assets. In the rest of the chapter the concept of intangible assets will not be further pursued. However, suppliers' perspectives allow helpful insights into accounting and measuring aspects of intangible goods, and thus can well contribute to developing business models for electronically trading intangible goods and especially ODC.
The following focuses on intangible goods in general and ODC as one of its core representatives. The inherent logic of dematerialization is outlined in the context of ODC peculiarities.

**Online delivered content – a special kind of intangible good**

ODC is a particular kind of intangible good. In the literature, the term ‘intangibility’ refers to two rather different concepts. Levitt (1981) suggests that the terms ‘goods’ and ‘services’ be replaced by ‘tangibles’ and ‘intangibles’, and hence observes that, in their production and delivery mode, intangible products are highly people-intensive. This does not really match with a more recent interpretation of ‘intangibility’ aiming at non-material goods (but not services), often expressible in bits and bytes (Meinkoehn, 1998). While today most products contain intangible aspects such as know-how or brand recognition, this chapter considers ODC to be a counterexample of ‘all products have elements of tangibility and intangibility’ (Levitt, 1981: 101). ODC – by definition – has no tangible components.

Consequently, electronic infrastructure requirements for electronic trading (including delivery) in ODC are significantly higher than for electronic trading of tangible goods not delivered via the infrastructure (usually the Web). However, taking into account that no physical infrastructure is needed, the total infrastructure requirements for trading in ODC are comparatively low (and independent of the distance to be bridged).

**Online delivered content – a special kind of experience good**

Another common approach for clustering products is grouping them into ‘search goods’ and ‘experience goods’ (Peterson et al., 1997). The quality of search goods can be determined without actually using them. With experience goods quality is learned from experiencing the product, i.e. from using the good. Most forms of ODC belong to the group of experience goods – the quality of content is only learned from using/consuming it. However, treating ODC as an experience good (i.e. letting potential clients ‘experience’ ODC) implies giving the actual content away for free (i.e. not trading it) and, in all likelihood, counting on receiving revenue via some synergy mechanisms. Unfortunately, once a potential customer has experienced ODC, he has no more reason to buy it. Suppliers of ODC try to solve this dilemma by shifting ODC as much as possible into the category of search goods. Possible steps for this are establishing strong brand
reputation for Web sites, publishers, and so on, or offering abstracts, sample chapters or reviews as triggers to buy the whole product.

**TOWARDS A FRAMEWORK OF ONLINE DELIVERED CONTENT**

The above definition of ODC is derived from investigating the range of instances covered by Choi *et al.*'s (1997) description of the 'core of electronic commerce', also termed 'fully digital business'. They differentiate three dimensions: 'products', 'agents' (or players) and 'processes', which all are divided into 'physical' and 'digital'. This is shown in Figure 2.2.

The distinction between *physical* and *digital products* appears self-evident. According to Choi *et al.* 'anything that one can send and receive over the Internet has the potential to be a digital product' (1997: 62). Similarly, *agents* (or players) are 'sellers, buyers, intermediaries and other third parties such as governments and consumer advocacy groups' (p. 17). Physical players show up in person, digital players communicate via an electronic interface. For instance, electronic

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**Figure 2.2**
The core of electronic commerce (source: Choi *et al.*, 1997)
shoppers are considered to be digital players. The distinction between physical and digital processes depicted on the third axis seems to be as easy as the product dimension: 'visiting a store is a physical process, whereas searching on the Web is a digital process' (p. 17).

Regarding the product dimension, Choi et al.'s list of examples ranges from information in general, letters, postcards, credit card information, airline or concert tickets, to 'hybrid digital products' such as smart appliances. A good example for the latter is a Web-based navigation system that includes map information, and combined with Global Positioning (GPS) data and target specifications acts as a smart appliance. A more unusual, futuristic example is an intelligent toothbrush – this could take a sample of one's saliva, analyse selected aspects, transfer data to a connected server and start blinking in case of any unwanted bacteria.

In this context, the term 'digital' is clear. However, the term 'product' needs further clarification. As illustrated below, only some of the products falling under Choi et al.'s definition of digital products are also ODC.

To achieve this additional clarification of ODC, the introduction of a new dimension referring to the value of the digital product is suggested. It distinguishes 'bundled' or 'supported' versus 'unbundled' or 'stand-alone' digital products.

Traditionally, intangible goods were always bundled with some physical means. For centuries, content and physical medium were tightly linked, with the stronger value component being on the content side. Hence, the overall products were unique or reproducible only on a comparatively small scale (e.g. a theatre performance required a stage). Later storage and replication technologies have loosened the link between content and physical medium. As a result, goods with identical content appear in different forms and packages. For instance, certain songs appear on many different CD-ROMs, USB-enabled storage devices, and so on; news items can be printed in newspapers and magazines, shown on television, presented on a radio network or be distributed via an online network like the Internet. Thus, the importance of bundling content to a specific medium has decreased significantly with the emergence of the Internet.

The term 'ODC', as defined and applied here, is limited to 'unbundled', 'stand-alone' products consisting just of content/information. Hence, the term ODC implies that only the content is the object of a transaction – no physical product is shifted among suppliers, customers or other players.

The distinction between physical and digital players is more problematic. Even if players use a software-based agent, they are still a 'physical'
legal entity (person, company or institution). Online shoppers are also to be viewed as physical shoppers – just not located inside the store. Following Choi et al.’s (1997) concept there cannot be any combination of a physical player executing a digital process; the example of the online shopper shows that running a digital process also makes the player digital. Since this still implies physical players (who may be supported by software/a digital agent), this dimension will be omitted when clarifying the term ODC.

Concerning ‘processes’, we concur with Choi et al.’s differentiation of physical and digital processes. In the following, the focus is only on those ‘digital’ processes that are part of a complete ‘digital’ cycle executed — or at least executable — over the electronic infrastructure. Offline processes refer to those cases in which certain ‘sub’processes (e.g. product selection, production, market research, searches, ordering, payment, delivery or consumption) are not executed via the infrastructure.

Thus, the dimensions underpinning the proposed definition of ODC are as follows (see Figure 2.3). The ‘product dimension’ taken from Choi et al. is retained. A distinction between ‘bundled and unbundled value’ of the product traded is added. The ‘agent/player dimension’ is dropped, as it has no relevance to digital players. Finally the ‘process dimension’ is kept, stressing that digital processes are those in which all subprocesses are executed online. Strictly speaking, the idea of
unbundled value is implied in ‘online processes’ if the complete trading cycle also comprises product/value delivery. From a practical point of view, however, it is useful to stress the concept of unbundled product value separately. The following three examples further illustrate the ODC concept.

A first example is music. ODC refers to music that can be downloaded from virtual music stores such as Apple’s iTunes on the Web. Afterwards, with several restrictions, it can be added to storage media such as MP3 players, hard disks or optical media such as CD or DVD (Pachet, 2003). ODC does not include the ordering of suitable storage media to be delivered to one’s home, since ODC – by definition – refers only to the content and excludes the need for any physical medium.

A second example refers to databases offered by online bookstores and various kinds of content offered on Web pages maintained by television stations. The information/content contained in those Web sites is a form of ODC, even if it is not usually traded separately (Loebbecke et al., 1998). Possibilities for commercializing such content could be ‘pay per view’, ‘pay per page’ or ‘pay per time’ concepts. By trying to sell such content (instead of offering it for free and counting on positive impact on other product lines such as books or TV programmes) suppliers would rely on the actual value that potential customers associate with it (regarding pricing issues and limits of cross-subsidizing – see the next section).

The third example to be mentioned – tickets to planes, trains or concerts – is actually a counterexample. It shows that even though information is increasingly detached from traditionally physical products, not all this information automatically converts to ODC. The example illustrates the difference between digital products as analysed by Choi et al. (1997) and ODC as introduced above. Choi et al. suggest ‘digital products are not limited to information or “infotainment” products. All paper-based products, like posters, calendars, and all sorts of tickets … can be converted into or replaced by digital counterparts’ (1997: 20). While in the early days of the Web tickets were subject to security constraints and still physically printed (Loebbecke, 2003), today, train, plane or concert tickets can be ordered and received online. Current technology already allows individuals to either print tickets on their own printer or show up with an authorization code replacing the printed ticket. Thereby individuals have been taking over certain functions that travel agencies or event agencies used to genuinely fulfil in the past. However, for consumers this is not the full delivery cycle. Consumers do not pay for the piece of paper called a ticket, but for ‘being moved’ from A to B or for attending a concert/stage performance. Those services of ‘being moved’ or ‘concert performance’ are the actual values bought, and these will
never be delivered via any technical infrastructure (at least not within the limits of current imagination). Therefore, a ticket, even if bought and – with regard to the specific piece of paper – delivered over the Web does not represent unbundled, stand-alone value of content. It does not belong to ODC as understood in this chapter. (For simplicity reasons, this illustration leaves out the possibility of reselling a ticket and thus giving it a monetary function.)

**ONLINE DELIVERED CONTENT – CHARACTERISTICS AND CLASSIFICATION**

In general, ODC is characterized by three fundamental attributes (Choi et al., 1997; Goldfinger, 1997):

1. *Indestructibility/non-subtractivity.* The same ODC can be consumed repetitively either by the same consumer or by a different one. Consumption by one person does not reduce anyone else’s consumption.

2. *Transmutability.* ODC is easy to modify, thus leading to enormous product differentiation and customization.


As a consequence of these characteristics, exclusivity of ODC may be difficult to durably maintain. Sharing may be simultaneous or sequential and affects the allocation of property rights. While sellers of physical goods lose their property right, a seller of ODC may continue to hold it. Even ‘illegally sharing’ ODC often causes positive network externalities, which may even exceed the cost of sharing if caught. Once ODC has positive network externalities, control over reproduction and sharing is the primary objective of copyright protection.

Related to the issue of externalities is the issue of value generation. Often there is no direct link between a transaction and the generation of value. Furthermore, ODC value can hardly be measured solely in monetary terms. For instance, the appreciation of free television broadcasts could be measured in terms of viewing time and viewer numbers, while appreciation of academic papers (increasingly provided as ODC) may be measured in terms of the number of citations. Indirect value creation and the related problem of ODC value measurement lead
to the problem of adequately pricing ODC (discussed later in this chapter).

A next step is to classify ODC products, i.e. to look at different criteria for further distinguishing homogeneous kinds of products within the still rather broad category of ODC. Five dimensions for classifying general digital products are outlined by Choi et al. (1997): ‘transfer mode’, ‘timeliness’, ‘intensity in use’, ‘operational usage’ and ‘externalities’. These are analysed below for their relevance to ODC.

Transfer mode: delivered versus interactive products

ODC is, by definition, delivered. However, the differentiation between delivered and interactive transfer modes is becoming increasingly difficult. Notwithstanding, as long as content consumption is initiated based on a ‘pull approach’, this implies a certain degree of interactivity. Therefore, this chapter prefers to distinguish between ODC based on push and pull approaches. Further, those ODC products delivered via a pull approach can be further differentiated based on the degree of customization resulting from interactive communication. Clearly, these two dimensions are highly interdependent: push-based delivery excludes strong customization based on interactive communication; pull-based delivery allows for all degrees of customization.

Timeliness: time dependence versus time independence

ODC may be very time dependent (e.g. stock market information), rather time independent (e.g. dictionary information) or somewhere in the middle, e.g. street maps for drivers, hotel information and phone numbers. The criterion of ‘timeliness’ will be important for identifying homogeneous packages of ODC to be traded based on consistent business models.

Intensity in use: single-use versus multiple-use products

Similar to the previous criterion, ‘intensity in use’ is an important aspect for further classifying ODC. There is a significant overlap between ‘timeliness’ and ‘intensity in use’ – only rather time-independent ODC will be used more frequently, i.e. more intensively. However, the two criteria have different implications for trading.
Operational usage: executable program versus fixed document

Fixed documents delivered electronically are ODC. Executable programs are only counted as ODC if their focus is on the content execution provides. It may well be that a certain form of delivering content includes executable components. For instance, whenever users can determine the search function, the content includes some operational features in addition to the content in the narrow sense of the word.

Externalities: positive versus negative

Externalities refer to economic consequences that are not fully accounted for by the price or market system. Different kinds of externalities are a valid criterion for further classifying ODC. For example, positive network externalities imply that the value of the product increases the more people use it (e.g. academic papers or awareness-raising content about medical innovations). Negative externalities occur when the use of ODC is a zero-sum game. This means that whenever someone gains (from consuming ODC), someone else loses. Examples include all kinds of competitive content, e.g. for information related to research and development (R&D).

ONLINE DELIVERED CONTENT – ISSUES OF PRICING

Conventional pricing and transaction mechanisms are barely suitable for capturing the economic value of ODC. The price of a product normally consists of three elements: production (and logistics) costs, coordination costs and the profit margin (Benjamin and Wigand, 1995). Coordination costs include the transaction (or governance) costs of all the information processing necessary to coordinate the work of people and machines that perform the primary processes (Malone et al., 1987).

It is now becoming clear that – with variable production (and logistics) costs near zero, drastically reduced transactions costs due to information and communication technology (ICT) usage, and eroding profit margins in current business models – new concepts have to be put in place for determining ODC prices (Johnston and Mak, 2000).

Production costs cannot be used as a guideline for pricing since there is no link between input and output. Mass consumption does not require
mass production. Economies of scale are determined by consumption, not by production. Economies of scale in ODC production are limited, but economies of scale in ODC distribution can be significant due to a combination of high fixed costs of creating the necessary infrastructure and low variable costs of using it. Economies of scale in distribution are accentuated by consumption characteristics: consumers tend to use the supplier with the largest variety even though they typically take advantage of less than 5 per cent of the choice (Goldfinger, 1994).

Traditionally the pricing of content has been based on the delivery medium – mostly measured in convenience – rather than on actual quality (Goldfinger, 1997). For instance, the price of a book depends heavily on print quality and the number of pages, while the price for an excellent book is often the same as for a poor one. Electronic trading in ODC implies unbundling: content can be priced separately from the medium allowing for price differentiation based on the estimated value of the content. The unbundling, however, also raises problems. Administration becomes more complex, and cross-subsidies between profitable and non-profitable (but nonetheless desirable) content on offer diminish.

A consumer's willingness to pay is often influenced by consumption or non-consumption of other consumers. Accordingly, it is not an adequate approach to assess the value of ODC, given the ease of replication/sharing and associated externalities. Further, it is often difficult for the customer to determine whether it is worthwhile to obtain a given 'piece of ODC' without knowing its content (Schlee, 1996).

Furthermore, the pricing of ODC raises the fundamental issue of inherent volatility of valuation when the value of ODC is highly time sensitive. For example, stock market information may be worth millions in the morning and have little value in the afternoon.

The range of ODC pricing schemes has broadened and become more sophisticated since the early days of the Internet. The Internet provides a variety of possibilities for selling, sharing and giving away. Moreover, consumers can be charged based on the actual 'use of ODC' or based on fixed access charges. In addition, there are pricing models that imply giving actual goods away for free and then charging for complementary services, updates, and so on.

Offering ODC over an extended period of time has led to the establishment of electronic communities. Following Armstrong and Hagel (1996), value from electronic communities can be created in five different ways: usage fees, content fees, transactions (commissions), advertising and synergies with other parts of the business. Translating these opportunities for income to the narrower defined area of ODC, usage fees
models subsume ‘fixed subscriptions’, ‘paying per page’ or ‘paying per time period’ independent of the quality of the content. Content fees are often based on ‘fixed amounts per page’, but should tackle the issue of valuing the content (particularly for quality or relevance). Commissions and advertising income are triggered by attractive ODC on display. Strictly speaking, however, the subsequent income does not stem from ODC, but from either attracting customers to a page regardless of its content or from offering some ‘empty space’ for third party advertising in addition to the actual ODC offered (Loebbecke et al., 1998).

Economists have been developing theoretical solutions to the problem areas mentioned. However, some of the mechanisms developed (e.g. MacKie-Mason and Varian, 1995) demand an enormous amount of data, thus questioning the trade-off between allocative efficiency and operational cost effectiveness (Mitchell and Vogelsang, 1991).

ONLINE DELIVERED CONTENT – IMPACTS OF ABUNDANCE

While conventional logic of economics is concerned with scarcity, the dematerialization logic inherent in ODC is concerned with abundance (Goldfinger, 1997). ODC is extremely cheap to replicate and is not eliminated through consumption (i.e. it has non-subtractivity). The resulting abundance of production is followed by the abundance of accumulation leading to a dramatically expanding imbalance between supply and demand. Efficient management of ODC overload requires yet more information/content. Information about information has become a growing business – as examples of search engine business models illustrate.

Abundance and resulting ODC overload – the huge variety of ODC available to almost everybody – confront consumers with a dilemma. Customers want to take advantage of the increased choice of ODC, and at the same time they seek to minimize the costs of searching. In order to respond to the first objective, new modes of consumption have emerged: ‘zapping’, ‘browsing’ or ‘surfing’. These are characterized by a short attention span, latency, high frequency of switching and capriciousness. The distinction between consumption and non-consumption becomes difficult, rendering pricing problems even more intractable. The expanded choice of content makes consumer choice more difficult, thus continuously raising the cost of acquiring information about the content. To minimize these costs, choice is increasingly determined
by criteria other than product characteristics, e.g. brand familiarity or fashion (Goldfinger, 1997).

The traditional rationale for the existence of companies, as articulated by Coase and others, is the minimization of transaction costs (Coase, 1974; Williamson and Winter, 1993). This analysis is no longer generally valid. Not only has ICT dramatically reduced transaction costs, but the growing volume and importance of ICT-based intangible assets and artefacts has changed the nature of markets (Peterson et al., 1997).

While traditional interfirm linkages may be modelled by input/output analyses to measure the economic impact of each player in an interorganizational value chain or network, the intangible economy has introduced another linkage among companies – the ‘monitoring’ linkage (Goldfinger, 1997). Low transaction costs lead to an excessive volume of transactions that generate ‘noise’ rather than useful content. An abundance of products and services stimulates the development of activities whose purpose is to monitor, evaluate and explain their characteristics and performance.

CASE STUDY: FALK

The following case study analyses the transition of a German cartography specialist that has changed its focus from only providing traditional goods to a combination of traditional goods and ODC. Looking at the completed transition helps to put the theoretical contribution discussed above into perspective. Further, the case delivers implications on how to apply the ODC concept in practical terms.

The roots of Falk

In 1945, the company’s founder, Gerhard Falk, combined two ideas to satisfy the need for orientation support in the emerging large cities of the twentieth century. First, he noticed that the display of traditional cartographic techniques was not well suited for large cities where the display of every detail in the centre of the city was more important than the similar display of the outskirts. He developed a progressive scale that allowed the display of the centre of the city to be larger and in much more detail than the outskirts. Second, Gerhard Falk noticed that using a map in the city required easy handling of the map. Unfolding the entire map was not appropriate. He developed and patented a folding technique that allowed the user to skip through the map like a book, only unfolding a single area of interest.
Based on those two ideas, Falk expanded his company quickly from offering its first map illustrating the city of Hamburg in 1946 to other German cities. In 1950, Falk published its first foreign map, the map of Rome. In the 1990s, Falk became the largest city map publisher in the world.

In 1994, Falk started a new venture called GeoData (or Geographic Databases) focusing on publishing roadmaps. GeoData provided Falk's entry ticket into the later emerging navigation market. In 1998, Falk was bought by 'Mairs Geographischer Verlag' (Mairs Geographic Publishing) which, as of 2005, operates as MairDumont and ranks 11th in size (by revenue) among German book publishers.

**Falk's ODC offerings**

By the first half of the 1990s, cartographic raw data was recognized as a major asset. Falk started to digitize most of its maps, but did not shift all of its efforts into electronic maps. Instead, it maintained the traditional brands and map products. In parallel, it started Falk Marco Polo Interactive (FM-I), a subsidiary which concentrated on the exploitation of cartographic data in electronic products. Recently, FM-I has developed a broad portfolio of electronic products – a few are still bundled to storage or display media while others fit the ODC definition.

Falk Marco Polo Interactive licenses raw cartographic data to corporate customers for their respective applications. In this case, Falk's role in the value chain is restricted to content creation and – depending on specific requests – to parts of content packaging (see Figure 2.4). Similarly targeted at corporate customers, Falk Marco Polo Interactive offers the 'Falk Filialfinder' (Falk store locator) and the 'Falk Anfahrtsplaner' (Falk route planner), for corporate customers to integrate into their websites. The 'Filialfinder' allows companies to have all

![Figure 2.4](image)

*Falk's value chain for raw cartographic data offering (source: after European Commission, 1996)*
their outlets displayed in maps on their Web site. The ‘Anfahrtsplaner’ offers the opportunity to enter an address and subsequently receive the directions from that address to the corporate headquarters or any pre-specified company outlet. Concerning both products, additional address information of corporate customers is added to the cartographic data and then delivered online. Both products are prime examples of ODC offerings.

Falk Marco Polo Interactive also offers electronic products to end consumers. The ‘Falk Navigator’ series comprises of small GPS equipped handheld navigation devices. As physical handheld devices, the Navigator series cannot be classed as ODC though. However, software similar to that deployed in the navigator devices is combined with cartographic data and then offered for notebooks, mobile phones and personal digital assistants (PDAs). As Falk Marco Polo Interactive in this case sells the cartographic raw data together with the intelligent appliance – unattached from any physical device – it may be regarded as ODC.

Finally, Falk Marco Polo Interactive operates the Falk.de Web site with online route planning (http://www.falk.de). Users enter a starting point and a destination and the website displays the fastest or the shortest way to the destination along with a written description of the route. Users do not pay for this product; instead advertising customers pay for exposure to the users of Falk.de. With this offering, Falk covers the entire value chain from content creation to system and interface operation (see Figure 2.5).

Falk Marco Polo Interactive continues to acquire advertising customers for its product portfolio. It integrates the location information of advertising customers into the products. For example, car rental companies or hotel chains pay for having all their branches displayed in the maps.

In 2007, Falk Marco Polo Interactive does not plan to restrict its future navigation offerings. Future plans include those to expand services for travel preparations and for travel expense reports.

![Figure 2.5](source: after European Commission, 1996)
Financial impact of offering ODC

Following an increase of 68 per cent in 2003, Falk Marco Polo Interactive reported a revenue increase of almost 150 per cent from €4.1 million to €10.2 million in 2004 and a further rise to €26 million in 2005. This comes only nine years after launching the first experimental ODC services. However, this also includes revenues from the Navigator handheld device series. Overall, adding ODC products to its portfolio has proven to be successful for Falk. In 2005, its total sales increased by 23 per cent from €123 million to €160 million.

Lessons learned from Falk’s ODC experience

Traditionally, cartographic information and maps were sold to individuals that pay a price per good. On the Internet, free usage of content offerings has become very popular and introducing fees for content has been painful for several companies. The challenge for companies offering ODC lies in the acquisition of new revenue sources. Falk Marco Polo Interactive has selected fields to create revenue from:

- ODC is offered directly to corporate customers who can use, repackage and resell the content. Corporate customers pay directly; in B2B markets, no such for-free mentality exists.
- ODC is offered to individual users for free. Corporate advertising customers serve as a financing source. The success of such financing depends on the capability of integrating the advertising into the free content.

CONCLUSIONS

This chapter makes the point that within the wide field of e-commerce there are many fundamentally different products – both physical and digital – traded via various business models. One type of product defined here – online delivered content (ODC) – is particularly interesting. ODC is a good that is manufactured, delivered, supported and consumed via the Internet or similar networks. Typical examples of ODC are music, information and expert knowledge.

Traditional economic models based on scarcity and uniqueness leading to a market based on demand and supply do not apply to these types of products. Once created, ODC is extremely easy/cheap to
replicate. Furthermore, distribution costs are almost zero, and most other transaction costs—except perhaps marketing and sales—barely exist.

ODC characteristics and classification criteria have been discussed in some detail in this chapter. The purpose is to warrant a careful investigation of the nature of ODC. Such an investigation is important either for preparing a business plan for a new offering or for researching the nature of a particular ODC.

The free offering of ODC has become extremely popular in the Internet arena and a multitude of traditional bricks-and-mortar companies and emerging start-up companies have started trading. The solutions offered by the company Falk have been briefly discussed in this chapter. Falk has taken advantage of its existing content archives and has been successful in offering customers (new as well as established) the possibilities of buying ODC. Questions still exist concerning pricing mechanisms, security, protection of intellectual property rights, and so on, for which solutions still have to be found in order to make ODC a viable business proposition. Answers to those questions promise significant theoretical advancement and attractive business opportunities. With the steadily increasing volume of material on the Web—information, content and knowledge—it seems an economic waste not to profitably exploit these untapped resources.

REFERENCES


