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A reality check to defining eCommerce



A REALITY CHECK TO DEFINING E-COMMERCE

Statistics Canada

Electronic Commerce Definition Project

Acknowledgement

This report has been prepared by CGI Inc. The project was supported by Industry Canada, which is the Canadian government department responsible, through the Electronic Commerce Task Force, for electronic commerce policy development.

The reason for the study was to provide background information for the work on developing definitions of electronic commerce in Canada and at the OECD. Participants in the OECD Ministerial meeting on electronic commerce, held in Ottawa in October 1998, recognized the need for definitions to support the collection of data which could then be used in the development of policy in this dynamic and economically important area. The Information, Computing and Communications Policy Committee (ICCP) of the OECD referred the task of developing definitions, for statistical purposes, to its Working Party on Indicators for the Information Society (WPIIS).

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Socio-Economic Indicators of 'Connectedness' Project

The objective of this project is to improve knowledge of the economic activities conducted electronically by;

- improving data on the production and the use of information and communication technology (ICT) products by the business, household and public sectors;
- developing new and improved surveys and uses of administrative data; and,
- analysing and disseminating the findings.

The rationale for this work is the rapidly changing economic, technological and regulatory environment which has direct and immediate implications for policy development, and the need to work in partnership to produce timely information to illuminate policy issues.

The work of the socio-economic indicators of 'connectedness' Project is grouped around three major areas: **Electronic Commerce**, which covers economy-wide activities; **Core Industries**, which focuses on specific, key information and communication technology industries; and, **Co-ordination and Analysis** to synthesize and disseminate all output, as well as to conduct research in new areas.

Industry Canada and Statistics Canada act as Partners for the purpose of this agreement. Statistics Canada is responsible for the statistical implementation of the project. Industry Canada will provide policy issues that need to be addressed and will contribute to the liaison with relevant industries, and to process review.



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Electronic Commerce Definition Project

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A reality check to defining eCommerce	1
Preface	5
Introduction - The reality imperative	7
Executive Summary	8
Project Objectives	10
Methodology	11
Context in which eCommerce takes place	12
Defining eCommerce	16
Case studies	20
Measurement methodology	32
Conclusions	34
Appendix A - eCommerce Questionnaire	35

PREFACE

This project was undertaken to assess whether selected respondents could provide information on electronic commerce that could be used in the production of official statistics. The respondents, selected by the contractor, came from firms that are leading in the use and the application of electronic commerce and they were asked to comment on possible definitions of the activity and on the practicality of providing meaningful data. The results are reported in this study.

The reason for the study was to provide background information for the work on developing definitions of electronic commerce in Canada and at the OECD. Participants in



the OECD Ministerial meeting on electronic commerce, held in Ottawa in October 1998, recognized the need for definitions to support the collection of data which could then be used in the development of policy in this dynamic and economically important area. The Information, Computing and Communications Policy Committee (ICCP) of the OECD referred the task of developing definitions, for statistical purposes, to its Working Party on Indicators for the Information Society (WPIIS). The OECD also hosted a Workshop on Electronic Commerce in Paris on April 21, 1999 and this was an opportunity for industry representatives, policy makers, and statisticians to compare their requirements for information on electronic commerce and to move towards international comparability of such information. This study is a contribution by that work.

This project was supported by Industry Canada, which is the Canadian government department responsible, through the Electronic Commerce Task Force, for electronic commerce policy development. The contact person is Richard Simpson (Simpson.Richard@ic.gc.ca), Director General responsible for the research program of the Task Force into the economics of electronic commerce.

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The report is available electronically in

English <http://www.statcan.ca/english/research/scilist.htm>
and

French http://www.statcan.ca/francais/research/scilist_f.htm

INTRODUCTION - THE REALITY IMPERATIVE

Since its inception, defining Electronic Commerce has been the source of much debate. From very broad all-encompassing definitions to very precise ones, the scope of the definitions varies widely depending on the source.

As achieving consensus in defining the Internet might have seemed futile just a few years ago, so stands Electronic Commerce today. As with any new concept, defining Electronic Commerce is bound to lead to controversy.

We are confident however that a realistic, easily understood, and measurable definition can be provided by using broad enough terms to withstand the test of time, in addition to being narrow enough to convey the concept of Electronic Commerce objectively.



EXECUTIVE SUMMARY

Although very few people have clearly defined Electronic Commerce, most would agree however that it is pervasive across all industries.



“eCommerce is commerce using computers“

Software Developer

Electronic Commerce descriptions vary wildly depending on their origin. Often positioned for marketing purpose, eCommerce definitions have mostly proven supportive of specific commercial imperatives more than practical measuring purpose.

From CGI’s industry leaders survey, we had to establish a clear distinction between Electronic Commerce (eCommerce) and Electronic Business (eBusiness). In doing so, consensus was rapidly achieved.

In this respect we defined eBusiness as:

Activities carried over computer-mediated channels.

From this, we can derive the following eCommerce definition:

Transactions carried over computer-mediated channels that comprise the transfer of ownership or the entitlement to use tangible or intangible assets.

eCommerce is thus a subset of eBusiness activities.

The notion of transactions, computer-mediation, channels and trigger events were found to be key concepts in defining eCommerce. These notions – more than any other – were prominent with all interviewed.

Also, eCommerce is perceived to be a complementary channel to more traditional ones like the telephone or print. Industry measures eCommerce activity by the amount of revenue it generates, just as it does with any other available channel. No other measurement criterion was accorded such unanimity.

PROJECT OBJECTIVES

Early in 1999, Statistics Canada requested CGI to provide a working definition of eCommerce that has practical applicability in industry. A successful definition would make sense in practical terms as well as being measurable in a variety of industries both in Canada and abroad.

Three deliverables in scope for this project were released in April 1999:

1. A working definition of eCommerce.
2. Summary of the case study findings that includes a list of questions used for the interviews.
3. Guidelines for the measurement of Electronic Commerce activity.

METHODOLOGY

This study was conducted from February to April 1999. Richard St-Pierre, Director and Senior Consultant in Electronic Commerce at CGI, acted as the Principal for this project

The approach was devised as to fulfill two primary concerns: the practical applicability and measurability of the eCommerce definition.

As a first step, interviews with key Statistics Canada personnel were performed in order to assess the exact project scope and the preferred modality for data collection.

Secondly, the Principal completed in-depth interviews with key industry players to derive case studies covering the following industry sectors:

- Financial Industry, namely banking;
- Information Technology Integrator;
- Software Developer;
- Telecommunication Industry;
- Travel Industry.

Lastly, *Synergy Groups* formed of CGI's experts were put together to test preliminary key findings of the report and to ensure applicability and validity of the definition across all industries.

CONTEXT IN WHICH eCOMMERCE TAKES PLACE

By nature Electronic Commerce seems to be a self defining concept.

Why then has such controversy arisen?

First, the advent of Electronic Commerce (eCommerce) is creating a new category of economic activity. As such, corporations have much to gain through establishing a stronghold in this new channel. Economic growth is at stake. As a result, major players in this industry are bringing their own definition, driven by marketing imperatives. These strategies are devised to take advantage of the digitalization of the economy.



“If we take the “e” out of eCommerce and eBusiness we are left with what the concept is really about.”

Senior executive
IT Integrator

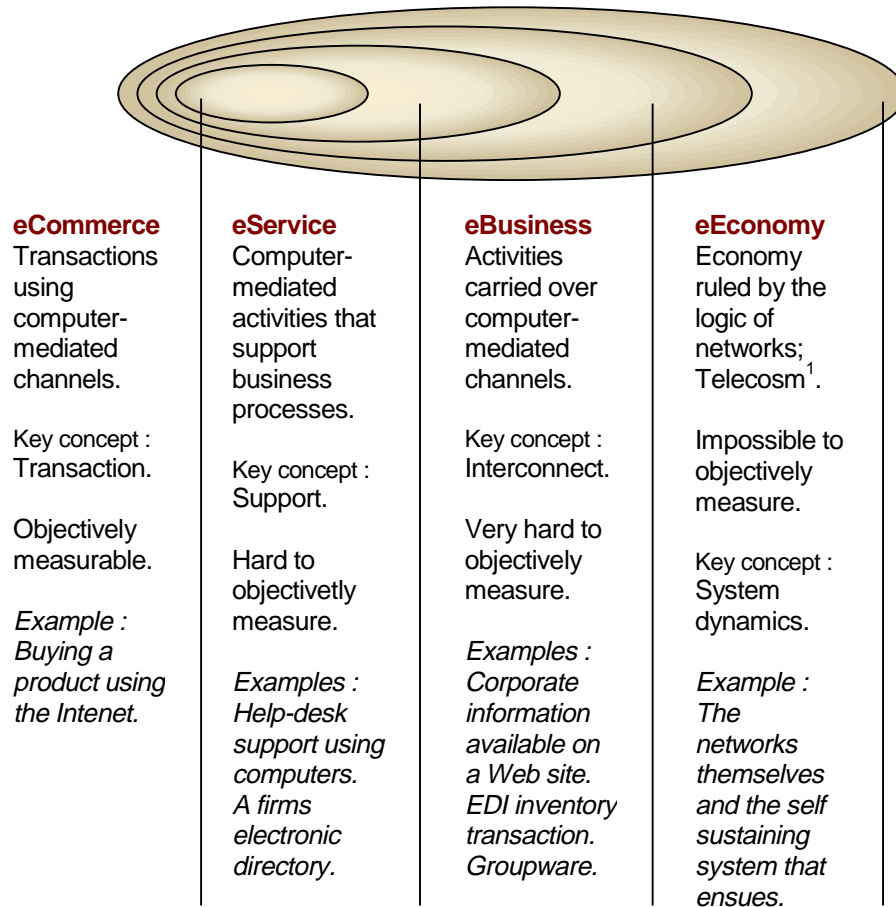
A firm’s perception of eCommerce is far from abstract. From our interviews, the necessity to increase the organization’s value by using this specific channel stood out.

Secondly, as with any new concept, the understandings of what the terminology means are as diverse as the individuals involved. Hence it is often confused or misused.

For some, the Internet, Electronic Data Interchange (EDI), eBusiness, eEconomy, Web, eCommerce, eServices are used interchangeably. It is difficult in that respect to reach an agreement on eCommerce itself. eCommerce must be understood in a larger context that includes new enterprise capabilities, as well as a dramatically new economic environment.

One of the first steps in our industry leader’s survey was to established a clear distinction between each concept, more specifically between eCommerce and eBusiness. In doing so, a consensus on a definition was achieved.

The following diagram depicts the differences between each concept:



eCommerce is thus a subset of *eService* carried out by *eBusiness* in the *eEconomy*.

In the industry *eCommerce* is broadly considered as a specific electronic channel complementary, rarely exclusive, to more traditional channels. The notion of channel by itself focuses the underlying purpose of *eCommerce*, to increase the companies market penetration, to increase its market share. *eBusiness* on the other hand is most often depicted as serving to increase a company's market presence from an image standpoint.

¹ Telecom, George Guilder, June 1999

Corporations are witnessing a channel shift from traditional channels to electronic channels. They are using these new channels because they are afraid of losing customers.

eCommerce is not considered as a tool. It is a way to conduct business. Consequently, it is important to differentiate the channel itself from the transport mechanism. The



Web browser, the personal computer, the television set, the fax and the telephone just happen to share the same communication medium – the copper wire – it does not mean that eCommerce transactions are carried through these channels.

Furthermore, most consider that eCommerce applications need to tie into back-end systems to satisfy real time transactions required by on-line customers.

Lastly, eCommerce is often associated with the exchange of goods. More specifically the ownership of the goods passes from one party to the other. So an electronic transaction exists when the commitment to transfer ownership is acquired online. This eliminates from eCommerce the accounting of all the transactions that are limited to searching products using electronic media while the transfer of ownership happens using other channels i.e. looking at a catalogue on the Web and completing the purchase by phone.

Special note concerning financial activities

From our interviews we could observe that the financial aspect of the transaction was often misunderstood. Usually no clear distinction between the commercial activity and the underlying financial implication was made. They were often mixed-up or considered one and the same.

“Performing an *Interac* transaction is an eCommerce activity in itself but must remain distinct from what is being purchased.”

Senior executive
Telecommunication
Industry

We must stress that the commitment component of a transaction is not necessarily concurrent with its financial counterpart. These represent two specific transactions. Both are eCommerce transactions in their own right; One for the goods, one for the payment.

The capability to carry out a payment over an electronic channel is a service in itself. It is one of the main value-added services of the banking system. So, from a payment perspective the eCommerce activity is not the purchase of the goods but the ability to carry out electronically the payment transaction. This transaction is usually handled by the financial institution and is worth a few cents. This is the amount that should be accounted for in when looking at the financial component of eCommerce activity.

DEFINING eCOMMERCE

The foundation of the eCommerce definition stems from two words: *Electronic* and *Commerce*. The term *Electronic* implies that the activity is carried through the use of bits as opposed to atoms. *Commerce* on the other hand is applicable in both the realms of bits and atoms and traditionally implies mercantile activity of some sort.

Although most would agree with such a broad definition, measuring eCommerce activity would be close to impossible. From CGI's industry survey we can narrow down the eCommerce definition as being:

Transactions carried over computer-mediated channels that comprise the transfer of ownership or the entitlement to use tangible or intangible assets.

In French:

Transactions utilisant des canaux informatisés incluant le transfert de propriété ou le droit d'utilisation d'actifs tangibles ou intangibles.

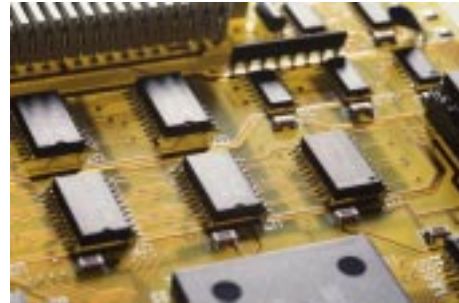
First and foremost, eCommerce is best described as a “transaction” as opposed to simply being an activity of some sort. All surveyed unanimously acknowledge this fact. Furthermore, the term “activity” was mostly used when referring to eBusiness.

Broadly defined, a transaction is an event that takes place at a specific moment in time. It is finite in nature in that it has a clear start and finish. Thus it can be differentiated among all sorts of activities and more importantly it can be measured.

Transactions carried over computer-mediated channels that comprise the transfer of ownership or the entitlement to use tangible or intangible assets.

As previously stated, the term *Electronic* in eCommerce implies that the activity is carried through the use of bits rather than atoms. As opposed to simply looking at a TV set the eCommerce activity must be carried through the use of computers; thus the term “computer-mediated”. Here again, all the respondents to the survey unanimously recognized that eCommerce transactions require computer-mediation.

Although humans take part in entering and receiving data, they mostly remain outside the actual transaction process.



Furthermore, the notion of “channel” was often alluded to. Industry segments the means by which they can communicate into silos, and labels them “channels”. Print, Radio or TV broadcasts and the Internet are all considered channels. eCommerce – particularly when associated with the Internet – is viewed as a complementary channel to reach potential customers. The notion of “channel-shift” was also mentioned regarding the cannibalization of one channel by another – Users “shift” from a traditional channel like the telephone to use newly available channels made available by eCommerce.

Transactions carried over computer-mediated channels that comprise the transfer of ownership or the entitlement to use tangible or intangible assets.

In order to be measurable – to be able to account for each specific transaction – there needs to be a specific point where all parties can agree that a transaction has occurred; a *trigger event*. This characterizes the moment at which the players commit to an explicit or tacit contract.

This trigger event is outlined in the “transfer of ownership or the entitlement to use”. At this point, the transaction involves committing to acquire goods or making use of a specific service in the finite time the transaction takes place.

One of the simplest examples of this is the “Submit” button when completing a purchase using Web pages. Although tacit in most cases, upon pressing the “Submit” button the user commits to fulfilling the payment obligation and the seller commits to delivering the goods or services.



An important factor for a transaction to qualify as an eCommerce transaction is that it must *include* this committal process using the computer-mediated channel. Browsing an on-line catalogue and ordering the final product over the telephone does not, under this definition, constitute an eCommerce transaction.

Transactions carried over computer-mediated channels that comprise the transfer of ownership or the entitlement to use **tangible or intangible assets.**

Goods or services – or a combination of the two – can be transacted over computer-mediated channels. They constitute assets that are “tangible or intangible”.

Books are tangible assets, packaged software is an intangible asset, as are services such as on-line information and specific software solutions to client problems.

In addition, all services consumed when the transaction takes place fall in this category.

CASE STUDIES

We chose five companies – all users of eCommerce technologies – to conduct our study. They were specifically selected for their experience in the eCommerce arena as well as being representative of their corresponding industry segment. All firms address both local and international markets. They can be considered major players in their respective industry.

The following case studies do not represent verbatim records of our interviews nor do they account for every topic discussed as too much redundancy would result. They do, however, summarize each of these players' specific eCommerce undertaking².

Financial Institutions

“We have been doing eCommerce for a long time. Banking depends on it.”

Senior executive
Financial Institution

We do have many eCommerce activities at our Bank. Some of which are currently available to our customers and some of which are in the planning stage.

We have been doing eCommerce for a long time. Banking depends on it. We consider eCommerce to be most of what the banking business is about. Although the advent of the Internet has been fairly recent, banking has been tightly meshed with computerized transactions for a long time.

It is only recently that we ventured on the Internet with the emergence of the World Wide Web. But electronic channels like ATMs, POS (Point Of Sale) terminals, IVR (Interactive Voice Response) and dedicated data links have been part of our daily activities for some years now.

² The views expressed in the following commentaries do not necessarily represent the official public position of each company.

Do we consider that using a Visa credit card at Eatons as an eCommerce transaction? Yes. The service provided by the bank to Eatons is an eCommerce activity, not the physical purchase that is taking place. The cashier enters the transaction information using the POS terminal and sends/receives the information to be processed using telecommunication systems. The transaction occurs between at least two computers: One that sits in the POS terminal and one at the bank's end. Eaton gets charged by the financial institution on a per transaction basis to have access to this service. The amount of the purchase is irrelevant. Money is not the asset in this case, the service is. Money is simply what is being processed.

By extension we do not think that we should account for the market value of all the transactions happening in the financial markets. Such a measure would be in the trillions of dollars. We do think however, that we must account for the service provided by the banks – in this case the capability to use the financial network.



The capability to exchange money using electronic means represents one of the bank's value added services. As in the case of credit card settlement, the eCommerce transaction is the capacity to use the service, not the amount on the check that is being processed.

We think the definition also depends on where we consider the transaction is taking place; "Where does the transaction lie?" Is it within or outside the company's boundary? Hence we have to define what "outside" means in the context where everything is settled in a virtual environment.

The line between customer and supplier exchanging goods is usually quite straight forward to establish. When talking about financial transactions however, most end up being carried through without any human intervention. We think only those transactions involving external parties should be accounted.

Information Technology Integrator

If we take the “e” out of eCommerce and eBusiness we are left with what the concept is really about: The businessman does business; The merchant does commerce. Commerce is a transaction between a buyer and seller that includes the transfer of goods or services against a specific currency. This currency can be dollars, coupons, redeemable points, barter, etc.

eBusiness encompasses all electronic exchanges including workgroup software, videoconferencing, backbone management, etc. eCommerce on the other hand is more focused on specific transactions.

The buying / selling process can be summarized as follows:

1. The buyer searches for opportunities;
2. The buyer browses for selection;
3. The buyer selects the goods / services;
4. The buyer purchases (commits to buying); The seller accepts the transaction;
5. The seller delivers the goods / services;
6. The buyer receives the goods / services;
7. The seller supports / maintains.

Conceptually at least, all these steps can be carried through using eBusiness principles. What's more, item 4 - the purchase – represents a trigger point that indicates the commitment of both parties involved in the transaction: The buyer commits to buying as the seller commits to sell.

These steps can be carried out through traditional as well as electronic means. This is eBusiness. If the transaction itself (item 4) is carried over electronic channels, then it is eCommerce. Web enabled interfaces, and electronic interfaces, replace human intervention. They represent electronically encoded business rules that were traditionally carried out by individuals.

To this day, most of these electronic activities involve the use of EDI or the Internet. PCS phones or standard TV sets do not fall in the eBusiness category yet since the user cannot commit to the transaction using this same channel.

“PCS phones or standard TV sets do not fall in the eBusiness category yet since the user cannot commit to the transaction using this same channel.”

Senior executive
Integrator

Besides the channel itself we must also break down the steps of the transaction. Buying a book using Amazon.com for example, involves at least two eCommerce transactions; first when the customer submits his request and secondly when the financial transaction is processed. In fact, even if the customer entered all the necessary information before submitting his order, the latter step happens in the back-end and involves a process between Amazon.com and its bank.

In this last scenario, the parties engage in buying - selling activities using a tacit contract. Not all eCommerce activities are based on such implicit contracts. In the case of EDI transactions, the rules binding the two parties are usually quite explicit.

Another case of eCommerce transactions that are not usually thought of is the one with a zero dollar value. Ordering a free brochure using the Web would be most representative. There is an ownership transfer of a product from the supplier to the buyer, the price though is simply left at zero. This transaction should be accounted for in terms of the number of orders processed but total revenue for these would remain zero.

Email should also be considered as eCommerce activities when a contractual commitment is obtained using this channel. For example, when we receive a purchase order by email, we act upon it. Although not legally recognized, we consider it as good as if it was a signed contract.

EDI is yet another eCommerce activity even if not all EDI transactions fit under this category. For example, looking at a supplier's inventory using EDI messages would certainly fit under the eBusiness banner but cannot be considered eCommerce in itself. By extension, a supplier looking at a buyer's inventory is not eCommerce either. But if that supplier has committed to automatically replenishing the buyer's inventory when it gets below a certain level, updating the buyer inventory should be considered eCommerce since the ownership of the goods has changed hands. The bill the buyer receives proves it.



Gross revenue is the one of the best eCommerce measurement units. This applies to any channel for that matter.

Revenue from electronic channels is one of the key metrics to establish ROI (Return On Investment). The soundness of most eCommerce ventures is evaluated against that parameter.

Software Developer

From a commercial perspective we make no distinction between eCommerce and eBusiness. It would blur our marketing message.

Conceptually, on the other hand, we view eCommerce simply as another means to do Commerce i.e. buying, selling and trading assets.

Business in this case is considered to be the exchange of information in preparation for commerce. Commerce would thus be a sub-component of business as eCommerce can be regarded as a subset of eBusiness.

The “e” in front of the word eCommerce means that there is a level of computer mediation in the transaction that is taking place. It can be over the Internet or any VAN (Value Added Network) like the ones traditionally used to carry EDI messages. Human intervention is only required to enter or retrieve information from the device that is being used. The computers handle the transaction. Soon vending machines and appliances of all kinds could fall into this category.

Is an agent-operated catalogue ordering system eCommerce? I doubt it. VRU (Voice Response Unit) however would certainly fall into the eCommerce category. When asked to “Please press 1 to place an order” by a VRU system, the user is interacting with that system. Some sophisticated VRU systems can handle purchases without any human intervention in the process.

“Faxing is not an eCommerce activity. No commercial activity takes place between the two fax machines [...] It is a medium, not a transactional system.”

Senior consultant
Software Developer

Faxing is not an eCommerce activity. No commercial activity takes place between the two fax machines. They simply act as gateways between two locations. It is a medium, not a transactional system. What binds two parties into a contract is the signature on the sheet of paper, not how it is sent to the other party. Similarly, videoconferencing falls under the same description. eBusiness takes place during videoconferencing, not eCommerce. It is simply another communication mechanism to do business.

The platform of eCommerce is the transaction. But what is a transaction? From a system's perspective a transaction is a unit of work. It begins and finishes at a specific moment in time. In order to consider a transaction to be eCommerce, there must be some sort of trigger event that would clearly define that a transaction has taken place. On the Internet this event could be associated with the "Submit" button being pressed by the user. Once this button is pressed, the very nature of the transaction has changed. The relationship between both parties has evolved from this action.

Question: Do you consider the following online features as eCommerce activities? Yes / No

- Company directories, No
- Database access to company information, No
- Standard company documents/templates, No
- Marketing materials/brochures, No
- Bulletin boards, No
- E-mail, No
- Access to the Internet, No
- Customer Orders, Yes
- Customer payments, Yes
- Supplier Orders, Yes
- Supplier payments, Yes

Question: Which of the following best describes eCommerce?

- A. All activities based on the electronic processing and transmission of data, including text, sound and video.
- B. All commercial transactions taking place electronically (telephone, fax, TV, EDI, Internet, etc).
- C. Business transaction including the transfer of ownership occurring over electronic networks such as but not limited to the Internet.
- D. Internet-based retail sales.

If we forget the fax, the second definition – B – would be the most appropriate one in my mind. It is also visionary as some of the suggested channels are not “eCommerce enabled” at this stage. On the other hand, this definition would render measuring eCommerce activity close to impossible. So I have to choose the third definition – C – for practical purposes.

Referring to the definition of what is a transaction, measuring eCommerce activity can be based on two elements: 1. The number of units of work; 2. The size of work. If we translate this in commercial terms, we get a number of transactions and the dollar value pertaining to these transactions.

Bandwidth, on the other hand, does not seem to be a very precise measurement unit. It would be very hard to distinguish between eBusiness and eCommerce not to mention that some voice messages are starting to use data channels. As well bandwidth could suggest by how much eCommerce is growing but in itself would not show a strong correlation with eCommerce activity.

Telecommunication industry

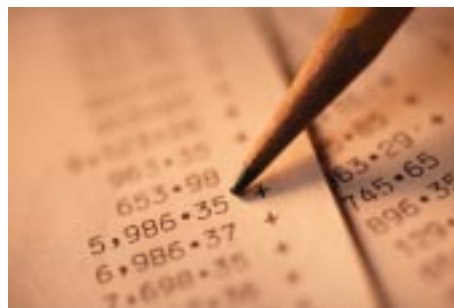
eBusiness implies the exchange of information. eCommerce is more focused, it entails transacting using computers and involves some form of commitment or payment.

We classify eCommerce activities into four types:

- Retail: Where there is not necessarily a formal relationship between parties. The exchange is free form and most commitments are implicit.
- Commercial: A semi-structured relationships involving two or more parties like in the case of lending.
- Auctions: Also a semi-structured relationship but this one is usually ephemeral.
- Business-to-business: The relationship here is structured and spans a longer time frame. Often transactions are predefined and explicit as in the case of EDI exchanges.

It is important to dissociate eCommerce activity from the transport mechanism. From this we can conclude that the fax is probably not an eCommerce tool. The same applies to taking orders over the telephone. Telephone transactions using IVR (Interactive Voice Response) systems however are clearly eCommerce activities.

Is submitting an income tax statement an eCommerce activity?
Probably not. An income tax statement is mostly information that gets passed on from the taxpayer to the government. Submitting an income tax statement does not grant the consumer any privilege other than having fulfilled



legal obligation. The statement is simply sent using proprietary networks. It is not electronically processed as such.

There are many eCommerce channels beyond the Internet. One interesting case would be the point of sale terminal next to the cash register at the store. Performing an *Interac* transaction is an eCommerce activity in itself but must remain distinct from what is being purchased. It is the service that is rendered by the bank that should be accounted for, not the amount of the purchase.

The number of orders, the revenues generated from the transactions and the value of the goods transacted are all eCommerce measurement units. As previously mentioned, it is important to distinguish the nature of the transaction from the transport mechanism it uses.

We would not consider intra-corporate exchanges as something that should be accounted for in the eCommerce measurement. eCommerce should only involve external parties conducting commercial transactions.

Travel industry

As a major player in the airline industry, we are always on the lookout to provide our customers with greater access to our services. From a product distribution perspective – selling tickets – the Internet remains our sole eCommerce channel. We have extensive expansion plans which will enable eCommerce activities to be carried through multiple electronic channels – Display phone, cellular digital phone, kiosks, a combination of voice recognition / IVR systems are all potential eCommerce channels.

Alongside the promotion of the airline and its services, the primary purpose of our group is to sell tickets. Every business-proven channel will be used.

For us the notion of channel is very important as each group's activities depend on it. Most notably we have the traditional groups i.e. travel agencies, airport counters, telephone help desk in conjunction with electronic channel limited the to Internet at this time.



We are witnessing the cannibalization of our own traditional channels. Paper tickets are being cannibalized by the electronic tickets. That is a good thing. Electronic tickets provide greater convenience to our customers and have a lower handling costs for the airline. Everybody wins.

For us, booking an airline ticket using the Internet is eCommerce.

Question: Which of the following best describes eCommerce?

- A. All activities based on the electronic processing and transmission of data, including text, sound and video.
- B. All commercial transactions taking place electronically (telephone, fax, TV, EDI, Internet, etc).
- C. Business transaction including the transfer of ownership occurring over electronic networks such as but not limited to the Internet.
- D. Internet-based retail sales.

We have to go with “C”. Definition “A” is too broad. Definition “D” is too narrow. Definition “B” is interesting but includes the fax, telephone and TV which are not eCommerce channels in our mind. The telephone could be counted in if the transaction takes place using an IVR type system.

We account for eCommerce activity as with all other channels. We look at the revenues generated by all channels. eCommerce is considered to be one among many channels we sell tickets through. We do not account differently for eCommerce than for other channels.

MEASUREMENT METHODOLOGY

Should eCommerce be measured? The answer from the industry was a resounding “yes”. As players are struggling to make sense of this emerging new channel, they are avid seekers of benchmarking data and best practice approaches. We are convinced that more rigorous / factual data is necessary not only to promote but also to sustain the economic development of this efficient transaction medium.

In order to devise a clear measurement methodology we once more refer to the very nature of eCommerce; it is commerce carried over computer-mediated channels.



Thus similar measurement rules to the ones existing in more traditional channels should be applied. Not only would it simplify data gathering and accounting, it would also guarantee comparability of eCommerce metrics against other channels.

Although formulated using different approaches, the unanimous real life metric for eCommerce is “revenues”. As with other channels, industry’s primary goal in using such a channel is the revenue it generates.

Referring to the definition of what a transaction is, measuring eCommerce activity can be based on two elements: 1. The number of units of work; and 2. The size of the work. If we translate this in commercial terms, we get a number of transactions and the amount of dollars pertaining to these transactions.

“Revenue from electronic channels is one of the key metrics to establish ROI (Return On Investment). The soundness of most eCommerce ventures is evaluated against that parameter.”

Senior executive
IT Integrator

Bandwidth on the other hand does not seem to be a very precise measurement unit. It would be very hard to distinguish between eBusiness and eCommerce not to mention that some voice messages are starting to use data channels as well. Bandwidth however could suggest how much eCommerce is growing but in itself would not show a strong correlation with eCommerce activity.

The number of orders, the revenues generated from the transactions and the value of the goods transacted are all eCommerce measurement units. As previously mentioned, it is important to distinguish the nature of the transaction from the transport mechanism it uses.

We would not consider intra-corporate exchanges as something that should be accounted for in the eCommerce measurement. eCommerce should only involve external parties conducting commercial transactions.

CONCLUSIONS

eCommerce is in its infancy, yet we already have no control over its evolution. The economic and business advantages are too great, the commitment of industry leaders is already too strong, the benefits to consumers too significant. eCommerce will expand whether we define it appropriately or not.

Whole new business models are emerging as established boundaries are fading, but the underlying notion of commerce remains. Clear distinction however should be made between eBusiness and eCommerce.



eCommerce activity should be measured as it is poised to become a primary commercial activity channel. It should focus on providing enabling data elements, as is currently done with traditional commercial channels. Revenue is the driver behind eCommerce development, so that should be its primary measurement unit.

APPENDIX A - eCOMMERCE QUESTIONNAIRE

Considering the limited number of companies interviewed the following questionnaire was used as a starting point to our discussion.

Defining eCommerce

- 1) What is eCommerce for you?
- 2) Do you consider your company is performing eCommerce activities?
- 3) What distinction do you make between eCommerce and electronic business?
- 4) Should electronically performed transactions between two companies, for example inventory adjustments, be considered eCommerce activities?
- 5) Is eCommerce strictly limited to the Internet?
- 6) Is eCommerce a larger category than just Web-based commerce?
- 7) Do you consider that eCommerce encompasses all electronic means (Internet, EDI, private networks, etc)?
- 8) Are you currently using EDI?
- 9) Is a credit card transaction at the local grocery store an eCommerce transaction?
- 10) Are online customer service and support eCommerce activities?
- 11) Is a catalog available on the Internet eCommerce?
- 12) Is making a catalog available on the Internet without the functionality to buy from it eCommerce?
- 13) If a consumer selects a product over the Internet and then buys the product using more traditional channels, such as the phone or in person an eCommerce transaction?
- 14) Should electronic transactions between two users of a same company be considered eCommerce activities?

15) Videoconferencing uses electronic means. Should this be considered eCommerce activity?

16) For you, is there a specific action that needs to take place to consider the transaction to be eCommerce activity?

17) Do you consider the following online features as eCommerce activities? Yes / No

- Company directories
- Database access to company information
- Standard company documents/templates
- Marketing materials/brochures
- Bulletin boards
- E-mail
- Access to the Internet
- Customer orders
- Customer payments
- Supplier orders
- Supplier payments

18) Which of the following describes best eCommerce?

- A. All activities based on the electronic processing and transmission of data, including text, sound and video.
- B. All commercial transactions taking place electronically (telephone, fax, TV, EDI, Internet, etc).
- C. Business transaction including the transfer of ownership occurring over electronic networks such as but not limited to the Internet.
- D. Internet-based retail sales.

Measurement

- 19)** How do you think eCommerce activity should be measured?
- 20)** In your industry, is eCommerce something that is worth tracking?
- 21)** How are you tracking eCommerce transactions?
- 22)** What is your measurement unit for your eCommerce transactions?
- 23)** Do you see the need to measure the purchases you make using eCommerce?
- 24)** Do you see the need to measure how much you sell using eCommerce?
- 25)** Are you able to measure the value of purchases done through electronic channels?
- 26)** How do you measure the value of purchases done through electronic channels?
- 27)** Do you have the ability to measure telecommunication bandwidth used by your current eCommerce infrastructure?
- 28)** If you use EDI, can you track how many messages are being exchanged?

Miscellaneous

- 29)** Is adoption of Electronic Commerce a major factor in your company's strategy?
- 30)** Does the company introduce its eCommerce technology on an ad-hoc basis, as opposed to a planned strategy?
- 31)** Which department is ultimately responsible for eCommerce in your organization?
- 32)** Are you performing buy-side or sell-side transactions using eCommerce?

- 33)** What ratio of your suppliers do you perceive are ready to perform eCommerce?
- 34)** How much of your purchasing department's activity is performed using eCommerce?
- 35)** Do you think widespread adoption and success of Electronic Commerce needs public endorsement and significant input from governments?

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