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Industry Classification Revision and the Content Sector

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SESSION 1 - Information Society

A B S T R A C T

This paper follows the conceptual approach proposed by Marc Aufrant in "Some Grass Roots Concepts To Describe And Measure Information Economy".

It discusses why it is suggested to define the content sector as "the group of ISIC industries primarily engaged in the publishing and/or the electronic distribution of content products".

In view of classification revisions, it offers three case studies leading to a proposal relating to a detailed classification of content industries. Using a service description matrix, it verifies the definition and classification consistencies.

Introduction

1. It was in Stockholm (1987!) that the Voorburg Group discussed for the first time, the idea of creating an information sector. At that time, statisticians were preparing a revision of industry classifications and the growing importance of information in the economy and society had already been underlined. Three papers were delivered at that meeting, making proposals about the definition of an information sector in terms of existing classifications[1]. Among these, the UK paper, based on a study commissioned by the Department of Trade and Industry, presented a list of recommendations, many of them being always topical; but, it did not propose "*a major reconstruction of the classification to group together an information sector*".

2. Ten years later, at the Voorburg Group meeting in Copenhagen, the US Census Bureau presented the reasons and the principles leading to the creation of an information sector in the new North American Industry Classification System (NAICS.)[2] Almost at that time, the Working Group on Indicators for the Information Society (WPIIS) at OECD, adopted the definition of the Information and Communication Technology (ICT) Sector. This sector *inter alia* groups industries producing electronic media on which information is disseminated or distributed. The question was then raised about the delineation of a closely related content sector which, along with ICT sector, would provide a well thought-out basis for analyses of the information economy; the same issue is now on the Information Society Working Group agenda at Eurostat.

3. While making first attempts to define a content sector, many criticisms were addressed to the inadequacy of existing classifications for lack of identification and description of new communication and information activities. At OECD, the objective of the WPIIS was to reach an agreement on the basis of the **existing** classifications in order to start the collection of internationally comparable data without any delay. In the prospect of the classification revisions, such a constraint no longer exists and the reflection can encompass the whole range of difficulties raised by new products, while still being informed by experience gained in collecting and comparing data from OECD member countries.

4. This paper first recalls the approach described at the last WPIIS meeting[3] and the main objections addressed by participants. Then, it proposes an enriched version of one of the six criteria used to select content sector industries. Consequences on existing classifications are discussed and finally, a first draft of the content sector is proposed.

I. Back to the sixth criterion

5. The general approach introduced in April at OECD by Canada and France started with the characterization of a content product using six criteria. The sixth criterion stipulated that "Its diffusion (*the diffusion of a content product*) requires the intervention of a publisher, that is of a publishing business." This led to the definition of the content sector as "the group of ISIC industries primarily engaged in **the publishing** of content products". This definition draws attention on the word "publishing" which was used on purpose rather than the more usual "producing". Doing so, the authors did not intend to limit the proposed content sector to those activities involved in publishing *stricto sensu* -but they also intended to extend it to activities which make content public. Such a broader meaning is evident if we refer to the etymology of the word "publishing".

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[1] The Information Sector and ISIC (CSO - UK). A note on publishing and information related categories in industrial and product classifications (Memo de Statistics Sweden - juillet 1987). Information Service Activities including Advertisement, Press Agency Services (Japon).
[2] Measuring the Information Sector in Census Bureau Programs - Thomas E. Zabelsky - U.S. Bureau of the Census (Copenhagen; 1997.)
[3] The Content Sector: Outline and Features. F. Gault, J.M. Nivlet, D. April, M. Aufrant. DSTI/ICCP/IIS (2001)5 - 9-Apr-2001.

6. According to that meaning, the "motion picture projection" industry (ISIC 9212) could be selected without any doubt as a content sector component, although this industry mainly displays content and does not create or compile content. To some extent, a similar rationale is more and more necessary to accept television broadcasters in the content sector as fewer and fewer of them actually produce programmes they disseminate.

7. A fundamental objection was made considering the "electronic delivery" of products as the major phenomenon induced by the new developments of ICT in general and the development of the Internet in particular. Although the "broadcast delivery" of content was explicitly mentioned in the list of industries proposed at the OECD meeting, nothing was said about the "point to point" delivery. The authors of the Franco-Canadian proposal also expressed doubts about the inclusion of "Data base activities" (ISIC 7240) and "News agency activities" (ISIC 9220), on grounds these industries did not fully satisfy the sixth criterion. After hesitation, they recommended the acceptance of these activities as borderline cases.

8. Nevertheless, using the word "publishing" in its broadest and unusual meaning would lead to consider a bookseller, a record dealer, etc. as "publishers", since all of them also make content public. Such an artificial use of a common word may create misunderstandings and confusion. Then, in order to fully solve the difficulty raised by the consideration of "electronic delivery", it seems much preferable not to rely on artificial concepts and on borderline cases.

9. Another way is more simple and effective. Instead of trying to adapt the "publisher" concept to a reality in which it does not fit, it is more simple to focus on what the existing concept cannot encompass and then, on the search for the missing concept. To solve this issue, a more effective justification will be developed, relying on general principles guiding the design of industrial classifications.

II. The publisher and the distributor

10. According to the terminology being worked out, the "publisher" has been described as the one who transfers the original content to a communication medium. "*This includes taking responsibility for all publishing related activities such as content editing, financing and marketing.*" Though essential, these functions are not always sufficient for content to reach its public, whether individual clients or audience. Furthermore, a unique agent rarely takes on all professional activities involved in the design and delivery of content product to public.

11. Generally speaking, content industries look to be organized along a similar chain of professional activities. In each content industry, **publishing and distribution represent fundamental activities**, whereas all others are then considered as supporting activities.

12. These key functions are **complementary**. Both contribute to the selection of content to be later delivered to public. The publisher selects what may be of interest to public from the vast amount of created content or informational raw materials. In many cases, the distributor also makes selections from published content. The first one is in close relation with creators and authors, the second one with clientele, readership or audience. The publisher takes a financial risk when marketing product but this risk is often shared with the distributor through various contractual arrangements.

13. Of course, the publishing and distribution activities may be taken in charge by the same agent. In the database activity, there are publishers, distributors and publishers/distributors. In the older cinema industry, both activities are in most cases, entrusted to different legal units but these units are often vertically integrated within a group. The following table points out which of these key activities are carried out by some selected ISIC industries.

ISIC	Industry	Function
2211	Publishing of books, brochures, musical books and other publications	Publisher
7240	Data base activities	Publisher/Distributor
9211	Motion picture and video production and distribution	Publisher/Distributor
9212	Motion picture projection	Distributor
9213	Radio and television activities	Publisher/Distributor
9220	News agency activities	Publisher/Distributor

According to these examples, the "publishing" activity may be taken on by a publisher when applied to printed matters, a producer when applied to audio-visual programmes or databases. These cases also suggest the "distribution" activity may be achieved by a cinema exhibitor, a broadcaster, a news agency or a database company…

14. So far, the concept of **distribution** is introduced. But, beyond illustrative examples reported above, it is still necessary to review which industries are involved in the distribution of content products. Here are concerned all sorts of content product trading activities: bookshop, record shop, news stand… and their corresponding wholesale, including press distribution. At this stage, it is also useful to consider the alternative distribution services such as content product renting and lending.

15. A first look at present classification is far from encouraging: at the more detailed level of ISIC, the trade in content goods appears under item trade in miscellaneous household goods and equipment, whether wholesale or retail. Content good renting is in a similar situation, hidden inside a category labelled renting of various personal and household goods (see table hereafter). The European NACE is a little more precise with one supplementary wholesale class and a single class for "Retail sale of books, newspapers and stationery" (NACE 5247.) The French NAF does not give any supplementary detail except an additional explanatory note about the inclusion of kiosk press sales in the NAF 52.4R (Retail sale of books, newspapers and stationery.)

ISIC	Industry	Explanatory note (extract)
5139	Wholesale of other household goods	Books, magazines, newspapers
5233	Retail sale of household appliances, articles and equipment	Records, music scores and tapes
5239	Other retail sale in specialized stores	Books, magazines, newspapers
5251	Retail sale via mail order houses	
7499	Other business activities n.e.c.	Press distribution
7130	Renting of personal and household goods n.e.c.	Books, journals and magazines, video tapes and records
9231	Library and archives activities	Lending of books, maps, periodicals, films, records, tapes

For a long time, content products have been distributed through various trade channels: retail sale via mail order houses is a well-known one for books, records and tapes, others being department of stores, canvassers, etc. The distribution channel of the press is, at least in France, specific: press sellers never own the newspapers and magazines that they distribute and act as commission agents. Though retail sales of press in kiosks or shops are classified in ISIC 5239, the intermediaries who supply retailers are in ISIC 7499 together with people delivering newspaper at home close to the "mailing list compilation" activity.

Library activities (ISIC 9231) appear in the above list just under ISIC 7130 since lending can be regarded as a form of renting. Of course, renting and lending may be considered as quite negligible at a macro-economic level, but it is not the case for the content economy.

16. The measurement of trade and delivery activities although never mentioned till now is important with respect to the content economy. Generally speaking, market size can be measured can be measured in reference to consumer level i.e. including commercial margins and imports. More precisely, such a measurement may be crucial as regard to the electronic delivery issue. It is often stated that the major phenomenon induced by the dramatic development of electronic communication lies in **new forms of distribution and delivery**. Content products are on the front line in so far as they can be put in electronic format and sent on networks without incurring the logistic costs of physical distribution. Then, one issue addressed now to the Majors of music and audio-visual industries is how they can launch new services while not destabilizing their own physical distribution network or their traditional partners. Such a dilemma supposes that the new mode of delivery is in competition with the previous physical one in the eyes of the consumer or the user, which is far from obvious. From now on, some argue that the usual distribution networks are doomed to collapse because of their lack of efficiency and competitiveness[4]. Whatever, it is clear that figures will be needed and, consequently, the activities listed above should be included in the study area of content.

The publisher and supporting activities

17. Before designing this study area, two issues remain to be tackled. A first one deals with the inclusion/exclusion of reproducing activities, namely printing and reproduction of records. Let us recall that the case of records reproduction was mentioned at the time of defining the ICT sector. Then, the OECD expert group concluded that the ISIC 2230 class should not be included among ICT industries and took the opportunity of re-examining that case after completion of the content definition. On the contrary, the case of printing has never been discussed. The only opinion expressed by the authors of the Franco-Canadian proposal was that these two sectors should be treated in a similar way. Although it is clear that these activities cannot be left out an information sector[5], one can hesitate between filing them near supporting media or just near content. At the INSEE meeting about classification revision, the printers supported strongly the second option. This opinion confirms one of the recommendations mentioned in the DTI report. It says that: "*While welcoming the move of publishing to the service sector, the PICT team were dismayed that it had not been accompanied by the elements of printing not related to publishing. The two industries are* ***closely linked*** *and are both important elements of the information sector.*" The question is whether this closeness is sufficient enough to remove all the hesitations. The debate is left open.

Considering related activities, the case of **telecommunications** has to be mentioned. It is sometimes proposed to include the part of telecommunications that deals with broadcasting within the audio-visual industries. Even if telecommunication broadcasting is a specific activity different from point-to-point telecommunications, which might justify the creation of a special class, it is clear that this activity is closer to transmission than to programming and scheduling. Just as it is not proposed to include any transportation activity along with trade, it is not proposed to include the transmission of the signal along with broadcasting distribution.

18. During the above-mentioned INSEE meeting, the case of **photography** has been raised by professionals. The photos authors' are classified with news agencies; laboratories acting as supporting industries are in ISIC 7494. Photos are an important input of magazine publishing and this is the reason why a number of photos agencies acquisitions has recently taken place in order to put

[4] Cf. for example, Content is not king. Andrew ODLYZKO.
http://firstmonday.org/issues/issue6_2/odlyzko/index.html

[5] In such a case, printing would stay among paper and wood industries! and records reproduction among radio, television and communication equipment and apparatus?

on-line databases of digitalized photos. Otherwise, photos can be published as postcards or in albums by traditional publishers. Then, the case of ISIC 7494 can be considered at the same time as ISIC 2221 and 2230.

19. The previous sixth criterion could now be enriched as “the group of ISIC industries primarily engaged in **the publishing and/or the distribution** of content products”. In the following list, related industries are pointed out with a question mark.

ISIC	Industry
2211	Publishing of books, brochures, musical books and other publications
2212	Publishing of newspapers, journals and periodicals
2213	Publishing of recorded media
2219	Other publishing
2221	Printing (?)
2230	Reproduction of recorded media (?)
7240	Data base activities
7494	Photographic activities (?)
9211	Motion picture and video production and distribution
9212	Motion picture projection
9213	Radio and television activities
9220	News agency activities
5139	Wholesale of other household goods (p)
5233	Retail sale of household appliances, articles and equipment (p)
5239	Other retail sale in specialized stores (p)
5251	Retail sale via mail order houses (p)
7499	Other business activities n.e.c. (p)
7130	Renting of personal and household goods n.e.c. (p)
9231	Library and archives activities

(p): partial

20. Of course, such a list is not candidate for the classification revision. The transfer of content trade activities, for example, from the trade sector would have more disadvantages than advantages. But it may be kept as the design of a study area and be proposed as an “alternate aggregate”. For the purpose of classification revision, it draws the attention to the lack of precision in the description of some distribution networks. If it were impossible to improve the situation in that field, then the problem would be transferred to products classification and structural business surveys.

III. The electronic distribution of content

21. The first attempts to address the “electronic content” issue were based on the idea that the definition of an “electronic content product” could simply be derived from the broader content product definition. Bearing in mind a content product was considered as the combination of a content with a communication medium; an “electronic content” product would therefore be defined as a content published and edited over an electronic communication medium. Though logical, this approach failed. The list of industries derived from this definition was not considered as irrelevant, but the ra-

tionale was not found convincing. Having introduced the concept of distribution in the previous section, it is now easier to restrict the preceding study area to the sector that we are aiming for in the context of classification revision.

22. For this purpose, it is proposed to select "the group of ISIC industries primarily engaged in **the publishing and/or the electronic distribution** of content products."

23. In such group, publishing may be electronic or not. But it only comprises content product distributors using electronic delivery mode. Here, "electronic distribution" includes "point-to-point" distribution such as the on-line delivery of an information service as well as "multipoint" distribution such as the broadcast of television programmes. The non-electronic distribution that mostly corresponds to trade in content goods is excluded and remains in usual trade industries. Then, the list of industries corresponding to the definition given in §22 is the list given in §19 minus trade activities.

24. Many criticisms were addressed to the attempted distinction between a "non-electronic content sector" and an "electronic content sector", arguing that the same content could be published by the same business in both electronic and non-electronic formats. This means the "electronic/non-electronic" quality is not a central characteristic of a content product; this quality only represents a delivery characteristic.

25. The exclusion of trade in content goods, whatever their format, implies trade activities relating to CDs, DVDs, videotapes and cassettes are all excluded from the sector defined in §22. This remark suggests a look at classification principles.

    If content is recorded on a physical medium, in electronic form or not, digitalized form or not, **it is a good** and its distribution is in most cases a trading activity[6]. But, when content is directly distributed by means of an electronic medium, whether delivered on-line or broadcast, it becomes **a non-physical product**, i.e. a service. Then, a basic principle of classification is **trade** only deals with goods.

    A corollary is that distribution of a service product is not classified within trade industry but close to the industry from which the distributed service originates: this is why cinema exhibition has never been classified as a trade but as a service adjacent to cinema production.

    Consequently, distributing CDs or cassettes is trade, distributing subscriptions to a pay-TV channel or to an information service is a distribution service which have to be respectively classified in the audio-visual sector and in the database sector.

    In conclusion, the proposal of grouping industries primarily engaged in publishing services together with their distributors is consistent with present classification principles.

26. On-line banking and stock exchange broking, booking on-line a travel ticket or a seat at the theatre, gambling and betting on-line, etc. are "non-content" services and consequently excluded from the definition stated in §22. Of course, industries selected according to the §22 definition can be involved in the above-mentioned activities, but only as secondary activities. If ordered on an electronic network, the sale in these services can be considered as e-commerce according to the OECD definition.

27. Symmetrically, the electronic distribution of content is not the exclusivity of content sector industries. A government agency can deliver an official report on its Website, a market research institute can publish a multi-client survey, etc. Concepts of secondary or in-house activity can also be applied here. If some measurement is needed in this domain, the relevant products have to be identified within the product classification and the business survey questionnaires must be adapted to fulfil the collection of the needed data.

[6] With some exceptions, as in France, the case of some press products mentioned above.

IV. A proposal for the design of a content sector

28. Having in mind the previous definition and the corresponding list based on the existing ISIC (see §19 above, trade activities excepted), a prerequisite to the design of a new list is to identify the gaps of the present classification. The issue raised by the emergence of new products and new industries stemmed from the most recent technology developments, is quite different: in this case, the market has not yet sifted out the real new products and industries among the potential ones. Filling in the gaps between classification and reality is an urgent task, though the premature creation of a new class bears a risk of being an irrelevant creation in the long run.

Existing classification gaps

29. As regards the ISIC content industries list, three points need urgent improvements, the lack of a class for “publishing video games” or more generally “publishing leisure software”, the ageing classification of audio-visual industries and some inadequacy of the “data base activities” class.

Leisure software publishing

30. Leisure software publishing is no longer an emerging activity: such title comes from the name of the French professional union, the “Leisure software publishers’ union[7]”, the members of which are mainly the video games publishers and also publishers of various products on CDs such as encyclopaedias, etc. According to professional figures, the size of their market is FF 5,5 billions, of which the video games segment accounts for about FF 4 billions.

    According to ISIC and NACE, video games and other off-line content products seem to be considered as “customized software” which leads to the filing of their publishers in “Software consultancy and supply” (ISIC and NACE 7220.) But “electronic games” and “video games” are explicitly mentioned under the ISIC 3694 or the NACE 36.50 heading, “Manufacture of games and toys.” As a result, at the moment, their business registration is far from clear: some of them are with game manufacturers, others with software publishers and others with video publishers (ISIC 9211.)

    The SELL said that the filing of this activity with toys and games manufacturers was understandable at the time of its emergence. Users of these games were kids but this is no longer true as more and more adults are users so that the public profile of video games is now close to the profile of cinema attendance. If they had a choice, these professionals would likely opt for joining a “publishing sector.”

    It is interesting to quote that professionals qualify by themselves the particular type of product that they publish as “**interactive content**.” In saying that, they mean that unlike audio-visual content, interactive content has no duration: no timing is enforced to the consumer who can make use of it, at its own rhythm, whenever he likes. Such products as video games, encyclopaedias etc. are like that while a radio or a television programme is scheduled and programmed for a given duration. Then they conclude that interactive content should be moved close to the sound content and the audio-visual content.

    Though such a rationale is useful, we will come back to it later, it must not confuse content products as diverse as a video game and an encyclopaedia. Uses are too different as are markets too. So it can be recommended to warrant separate identification of video game industry while other off-line interactive products need only to be mentioned in the explanatory notes of the corresponding publishing industry.

    Where to place a new video games class? Obviously it can no longer be near toys and games manufacturing. It cannot be left too in the computer industry, which is an ICT industry according to the OECD definition. In spite of the vicinity with sound and audio-visual content, it is hard to include it within the present audio-visual industries (ISIC 9211, 9212, and 9213) because of the opposition between interactive and audio-visual quoted above.

[7] Syndicat des Éditeurs de Logiciels de Loisir (SELL)

Finally, the best solution might be to place the new class in the vicinity of publishers and just close to the audio-visual industries. Obviously, this would be made easier by the preliminary creation of a content sector.

The ageing classification of audio-visual industries

31. Three ISIC classes are under consideration, namely “9211 - Motion picture and video production and distribution”, “9212 - Motion picture projection” and “9213 - Radio and television activities” according to Revision 3 headings. In ISIC Revision 2 issued in 1968[8], the situation was quite similar with three classes also, “9411 - Motion picture production”, “9412 - Motion picture distribution and projection” and “9413 - Radio and television broadcasting.” In addition to the transfer of distribution from movie projection to production, film and video reproduction were moved from movie production to manufacturing, renting of video tapes from distribution to renting services and radio and television programme transmission from broadcasting to telecommunications.

32. During the second half of the past century, many evolutions occurred in the audio-visual industries together with dramatic economic changes. In France only, the Radio Television Office was divided into several legal entities resulting in the distinction between radio and television, the emergence of a television programme industry, and so on (1974). The first premium channel was launched in 1984 with the initialization of a pay-TV market, commercial TV in 1986, cable TV in the 80s, satellite TV in the 90s with digitalization from 1997. Now the time has come for starting free-to-air digital broadcasting, the so-called interactive-TV and Internet access from the TV set. This brief historical account recalls first that, even in this industry, everything has not occurred within the past two, three or even five years… and also that its story is far from the end. Even if it is a small sector from a macro point of view - as a whole, the sector generates about 0.6-0.7% of the GDP - it is a crucial sector as a laboratory in which one can observe and try to make clear many of the ongoing technological changes. Accordingly an in-depth investigation of this sector is not superfluous!

33. Considering the hesitation regarding the place of movies and programmes distribution, it is suggested to separate the production and distribution activities as recommended by the DTI report and as it was done in the last version of the European NACE.

34. As regards the production industry, the question can be asked whether some further splitting would be necessary, between film and TV, between various kinds such as full-length films, cartoons, documentaries, fictions… or between “stock” and “flow” TV programmes[9]. This last distinction, which was introduced in the French audio-visual economic accounts, has been tested in the national classification. But professionals pointed out the difficulty to identify specialized activities within their industry. Therefore, the strategy for describing this domain can be to keep the whole production in one industry class together with a detailed list of products.

35. A special case can be made with cartoons or animated films. Animation producers summarize the description of their activity as “creating movement” instead of “catching movement”. It is a fact that this micro-industry represented by a professional syndicate presents some specificities when compared to other production activities: the market is often international or even worldwide; financing is particular, so are the production techniques, etc. At least two reasons may draw the attention on this industry: it is fast-growing and developing towards video game publishing and “advertainment” for the Websites of top commercial brands; also, the skills employed are quite similar to the ones employed in video game publishing.

    According to the Enterprise Annual Survey, the animation market is evaluated to FF 1,2 billion in 1999. That is not enough for justifying the creation of a separate class at present. But here is an additional argument in favour of the creation of a video game publishing class. Such a class could become the first piece of a larger set of activities dealing with the production of artificial pictures and interactive content.

[8] Statistical Papers, Series M, N° 4, Rev. 2 - United Nations

[9] Professionals call “stock” the ones, which are destined to be broadcast more than once; on the contrary, “flow” TV programmes such as news, varieties… are not rebroadcastable. The first ones are capitalized and then generally, are not fully depreciated at the time of their first broadcast.

36. Pay-TV is far from new. The pay-TV market has emerged and grown in various ways from country to country according to different technological and regulatory environment. In France, subscriptions are the second source of income of the television industry after advertising revenues but largely before licence fee. About one third of households subscribe to the premium channel Canal+ and/or to "bouquets" of specialized TV spending around FF 2,000 per year as an average. As terrestrial digital TV is going to be launched, surveys are requested in order to determine the right proportions of new paid or free channels which may be economically viable according to forecasted markets. Unfortunately few official figures are available; most of the existing international comparisons are not relevant.

The development of pay-TV has led to the creation of two separate industries closely related. One is "Channel publishing" which consists in creating a programme schedule and selling it to one or several distributors; another one is "Radio-TV services distribution" which consists in assembling the previous services into an offer delivered on cable, satellite or free-to-air and sold by subscription. In order to complete this description, a third actor broadcasts and/or transmits the signal but he is a telecommunication operator. The distinction between the carrier and the broadcaster or distributor is clear in the case of free-to-air TV: on one side, there is TDF, a subsidiary of France Télécom and on the other one, the channels, TF1, France2, etc. It is also clear in the case of satellite TV with the telecommunication operators, Astra, Eutelsat and the distributors of audio-visual "bouquets", TPS and Canal Satellite.

At first glance, the case of cable TV looks more ambiguous. The "French Association of Multi-service Networks Operators" has explained that "the core activity of its members is not a carrier activity but the assembling of services which will be further on distributed through a network." Then, "the local cable network corresponds to **a collective antenna[10].**" The cable terminal receives audio-visual programmes transmitted free-to-air and the telecommunications services via backbones. The systematic filing of these operators in the telecommunication industry taking no care of the nature of the services distributed has to be **reconsidered**. According to a classification principle, these service operators have to be classified close to the providers of the service that they distribute. The grouping of all radio-TV service distributors in a new ISIC class will allow a direct measure of the pay-TV market[11].

Along with the development of this market, these distributors have increased their offer with new video services: pay-per-view, near video on demand… and also new forms of television shopping, betting and gambling services and so on. All of these are products generally issued from secondary activities, more rarely from principal ones, the markets of which remain at present somewhat small. The main question here is to precise the borderline between audio-visual, trade and distribution services (see hereafter).

The inadequacy of the "data base activities" class

37. The gap between the results of a professional survey conducted in the context of the European MSSTUDY II project and the corresponding results of the Enterprise Annual Survey (EAS) has drawn the attention on the "data base activities" class (ISIC 7240). The first one dealt with the measurement of on line publishing market though the EAS surveyed the industry. The gap between the two results did not originate only from the difference in scopes of the two surveys, branch in the first case, sector in the second one. Another reason is that the class groups some large enterprises, which manage administrative functions of large groups such as doing the payroll, etc. together with on line publishers. Before transferring this industry to the content sector, this point has to be cleared up.

38. The explanatory note concerning the CPC group "843 On-line information provision services" gives an excellent description of the problem quoted above. It is mentioned that this subclass includes: database services; provision of information on Web-sites; provision of on-line data retrieval services from databases and other information, to all or limited number of users and provision of

[10] The French regulatory Authority, the "Conseil Supérieur de l'Audiovisuel" considers that theoretically the cable network is real as soon as two households are connected. De facto, only local networks with a hundred or more connected households have to be registered.

[11] For the purpose of international comparisons, the problem of the definition of a common list of products in this domain remains to be solved.

on-line information by content providers. Are excluded, provision of telecommunication net-services such as internet access services, necessary to access the databases or information holdings of information content providers, cf. 842; on-line access to Web-sites, cf. 842; services involving document searches, cf. 845; internet sales, cf. 623.

The kind of database services evoked above, which is rather a B2B service than provision of content could be left in the ICT sector and the three other items kept under the heading " On-line information providers". The term "provider" may be better than "publisher" in this case, in so far as "flow information" is concerned here.

The exclusions quoted in the CPC explanatory note draw a precise borderline with other ICT services and with e-commerce.

Some further investigation about this key sector would be very useful in order to identify more precise products. Professionals «content aggregating» more and more often call a B2B market is emerging for press review services. Traditionally, this service was internally provided in headquarters of large enterprises and organizations based on the private copy regulation. There are now many opportunities to outsource this function to a specialized information broker or to bring it up to date by purchasing an ad hoc software. After selection and scanning of the relevant articles in newspapers and periodicals, such software edits the electronic press review and can interface it with the documentation software of the enterprise for sorting and filing information and/or feeding the Intranet or the internal network of the enterprise. On one side, there are information providers such as press publishers… and on the other one, enterprises and organizations attempting to feed their Intranet with content at least or more ambitiously, to develop modern processes as economic intelligence: no doubt that there is a future for the "information broker"!

A proposal to design the content sector

39. To conclude this investigation, the following list is a first attempt to update "the group of industries primarily engaged in **the publishing and/or the electronic distribution** of content products" which has been proposed above.

XX Content sector

XXX Publishing Industries

XXXX Newspaper Publishers (including newspaper on line publishing)
XXXX Periodical Publishers (including on line publishing)
XXXX Book Publishers (including on line publishing)
XXXX Other Publishers (including the corresponding on line publishing)

XXX Video Games Production (including animated pictures production)

XXX Motion Picture and Video Industries

XXXX Motion Picture and Video Production
XXXX Motion Picture and Video Distribution
XXXX Supporting industries
XXXX Motion Picture and Video Exhibition

XXX Sound Recording Industries and Radio Services

XXXX Record Production
XXXX Music Publishers (including on line publishing)
XXXX Sound Recording Studios
XXXX Radio Broadcasting
XXXX On line Music Providing

XXX Broadcasting and Distribution of audio-visual services
XXXX Television Broadcasting
XXXX Channel publishing
XXXX Distribution of audio-visual services (scheduled and on demand services)

XXXX On line Information Providing
XXXX News Agencies

XXX Supporting industries
XXXX Printing
XXXX Reproduction of Recorded Media
XXXX Photo Laboratories

40. The structure of this list calls for some comments. New content products have been systematically filed according to the type of content delivered and not according to the type of supporting medium. Here is a fundamental issue: whether electronic or not, digitalized or not, on line or not, a newspaper, a magazine… remains a newspaper, a magazine… In a similar way, a radio station or a TV channel either broadcasted on satellite, cable… or delivered on line remains a radio or a TV service. Giving up this principle would lead to the risk of confusion shown in §26: if the priority is given to the supporting medium, then everything delivered on it can be filed in the same class[12]. Instead of focusing on a technology or a carrier characteristic, it is better to keep a guiding principle of classification especially in the domain of services: industry is skill, product is use.

41. At present, many new content product markets are far from having reached the critical size for justifying the creation of a corresponding industry. In terms of revision, the consequence is that it is sufficient to update explanatory notes of the industrial classification and update product classification.

42. Sound recording industries were joined together with Radio Services. The reality is that music is the first content provider of radio broadcasters and, symmetrically, that radio broadcasting is the first distributor of music, in terms of volume. Such a grouping strayed away from gathering together music and cinema as it can be suggested by the integrated structure of the Majors. But the economy of radio has no links with the economy of the other components of the audio-visual sector (television, cinema and video). Also markets are quite different: the music market can be considered now as globalized at a world level though the other audio-visual markets are far from being so with, in many countries, a significant independent production industry.

43. The creation of a special subset of supporting industries in order to solve the problem raised by the filing of printing, reproduction of recorded media and photo laboratories is open to debate. In addition to the above mentioned argument (see §17), a reason for doing so is the assumption that some convergence and reorganization of skills are under way along with technological changes. Such a subsector may then become an interesting area of investigation.

The emergence of new products

44. Regarding content, one of the puzzling phenomena often mentioned is that, more and more, the same content can be combined with various media and that, at the same time, a given medium can support a large variety of contents.

45. In the first case, such a variety may fit different uses. A typical example is the movie that can be shown in a cinema, broadcasted on television, registered on a videocassette. The degree of substitution between these uses is not absolutely null and for a new movie, the launching of these dif-

[12] Such a statement does not deny the idea that a new mass medium, after press, radio and television may appear. But this new mass medium will never be the Internet by itself, or any other communication technology. Internet will ever remain a carrier as the electromagnetic waves are. A website or a portal are possible candidates for being the media. Radio was created as a new mass medium when its economic model was found, in 1922 only, 30 years after the invention of broadcasting.

ferent versions may be organized in such a way that they do not harm one another. Anyway, this is not new and the corresponding industries are identified.

On the contrary, the CD has nowadays almost replaced the vinyl record. The market recognized that both had the same use and selected the first one: the degree of substitution between the two products and their use was 100%.

With emerging products, the difficulty is that the result of the competition between the new and the existing product is unknown at present. Will download replace partially or totally the physical distribution of musical records? Whatever and as regards to the classification issue, such questions lead to **the necessity of making clear the basic characteristics of content products**. One can recognize that much of the present confusion comes first from semantic shifts. For example, if any combination of sound and image is considered as audio-visual, then a lot of Websites are new audio-visual media. In the line with what has been done to distinguish content from "non-content", it will be necessary to precise what is a TV service, etc.

46. Crossing the distribution mode and the delivery mode leads to a typology of content products allowing for customer's use. In the table hereafter, the distribution mode is split between "trade" which results for the customer in a possibility of replay without restriction, "rent" which provides him with a restricted possibility of replay, the duration of which being limited in time. "Viewing" or "listening" excludes the replay except though free private copy. A main difference between "trade", "rent" an one side, and "viewing" or "listening" on the other one, is that the first are services **on demand** from consumer, the latter being **scheduled** by the service provider.

    The delivery may be "physical" which implies a physical move of the provider, the consumer, or the product through post mailing for example; it is "electronic" when the delivery of the product is on line or broadcast.

Distribution mode/	On demand		On supply
Delivery mode	Sale	Rent & exhibition	Scheduled Exhibition
Physical	Purchase in a store	Video cassette renting…	Cinema
Electronic	Commercial permanent download	PPV, VOD, Commercial temporary download or streaming	TV channels & Radio stations

47. Usual as well as new services can be classified within this table according to their basic economic characteristics and taking into account the new electronic delivery processes.

48. A doubled line divides "on demand" and "on supply" scheduled services: a cinema channel which broadcasts only movies is not a VOD or a PPV service; the first one is an alternative to another TV programme while the second can be considered as a form of rent.

49. According to the OECD definition of e-commerce, all the cells are theoretically and partially concerned with this particular form of trade. For the purpose of content analyses, it seems more interesting to consider the whole subset delineated by the thick black line. This subset includes all forms of "electronic delivery" plus the corresponding "non-trade" services[13].

[13] Of course, such a grouping is conventional, aiming at a better description of the content economy. Permanent downloading can also be included with trade and the downloaded content then considered as a good.

50. Peer-to-Peer (P2P), the process of music files exchange between “internautes” is the on line version of the “private copy” right and as such, stays on the margins of the economy of the content sector. Generated revenues are in terms of Internet access or royalties paid for the use of the specialized software which allows the participation to the P2P system. All of these are ICT services.

Conclusion

51. In addition to the reasons already mentioned within the OECD WPIIS project, the main argument supporting the idea of creating a content sector is the rather fair standard of economic and business statistics in this area. The author’s conviction is that such evidence results first from the scattering of content activities and products all over classifications. The presence of text publishing next to the paper and wood industries at the beginning of the ISIC list and of audio-visual producers and distributors among various household services at the end illustrates perfectly such dispersion. Although these two basic poles of the content industry share many common features, one is a manufacturing industry though the other is close to personal services as barbers and laundries! One produces a good, the other one a service: but both are often involved in **the creation of an intangible asset destined to generate further revenues through distribution of rights**.

52. Considering publishing from the sole manufacturing point of view gives a reduced picture of its economic activity. As regards this opinion, a quick look at the corresponding list of products is convincing. Exactly two products correspond to the press sector, a sector that is as large as the audio-visual sector. The list of “non-press” publishing products is somewhat larger but, as in the preceding case, does not allow the basic economic distinction between B2C products (novels, cartoons, etc.) and B2B legal, scientific and technical publishing for example. The case of CPC 4752, the CPC class which groups records, tapes and other recorded media for sound or other similarly recorded phenomena, irrespective of what is recorded, has already been examined. All kinds of published products are confused because they are carried on the same medium.

53. All these examples illustrate the fact that the description and the classification of content products according to the tangible properties of their supporting medium is most of the time insufficient and sometimes irrelevant. It is urgent to stop considering these products with the only help of the Harmonized System (HS) and to allow for their use. The simplest way for this radical change is to move the publishing and related industries from the manufacturing sector towards the service sector and to design the content products list according to their real market and no longer to the HS list. As the distinction between goods and services is somewhat formal, such a change will not induce a major upsetting of classifications.

54. The same assertion holds true with respect to the proposed changes in terms of new classes to create or of new structure of the preceding ISIC release. The major motivation for such changes is more justified by an updating need than by the imperative necessity of innovating due to dramatic technological developments. The rhythm of technological changes can go faster; the markets guided by individual and enterprise behaviours, grow at their own pace.

55. Not being an upset of present classification, the creation of a content sector will match the need of international comparability. One can observe that joining the ICT service sector already delineated by the OECD WPIIS together with the proposed content sector will make up the information sector already created in the NAICS by the North-American statisticians.

56. This paper is first an attempt to define a content sector in the future ISIC release. When it is time to pay attention to the product classification, a major issue will be to draw consequences from this first step in terms of rights classification (CPC 51).

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