This document is submitted to the Committee on Competition Law and Policy FOR DISCUSSION at its forthcoming meeting on 24-25 October 2000. It is the same as the attachment to the Chairman’s letter of June 30th (CLP/2000.89) concerning the mini-roundtable on electronic commerce.
I. Definition and Introduction

1. Considering all the publicity surrounding electronic commerce, it is useful to begin by asking what fundamentally is going on. The answer appears to be that the use of ubiquitous electronic networks to quickly transfer digitised information is significantly lowering the costs of finding, using and communicating information, lowering some transactions costs. These developments are expected to affect profoundly how businesses organise themselves and how they relate to other businesses and to final consumers. Faced with such a basic change, commentators have fashioned the somewhat vague label "electronic commerce" (e-commerce) to describe what is not so much an existing phenomenon as a process that will take years to work out.

2. Many broadly similar definitions have been offered for e-commerce. According to a recent OECD publication, it is:

   ...concerned specifically with business occurring over networks which use non-proprietary protocols that are established through an open standard setting process such as the Internet. As used here, the term 'business' broadly means all activity that generates value both within a firm (internally) and with suppliers and customers (externally). In this sense it would include internal networks (e.g. intranets) as well as networks that extend to a limited number of participants (e.g. extranets). Some of this activity may result in monetary transaction and some will not. [OECD (1999, 28)]

We adopt that definition but will focus here on Internet centred e-commerce.

3. The subsequent discussion will begin with a description of the infrastructure and process related to e-commerce, that is, the provision of facilities and services required to access and transmit information and to provide transactional services. Competition issues related to the infrastructure of the Internet have however largely been covered in previous roundtable discussions concerning telecommunications and broadcasting and other discussions on networks such as automatic teller machines. The focus of the paper is thus on "transaction e-commerce", defined as the use of e-commerce channels for the supply of goods and services to consumers and businesses.¹

4. It seems safe to assume that e-commerce has the potential to improve market efficiency, particularly if new intermediaries continue to develop in order to simplify information processing and to improve trust (i.e. assuring privacy plus a secure means of payment and reliable delivery). The magnitude of the gains will depend importantly on the degree of competition prevailing both in process and transaction e-commerce, so competition policy has an important role to play in the e-commerce "revolution".

II. Infrastructure related to E-Commerce

5. E-commerce infrastructure cannot be understood without a rough idea of what the Internet is and how it is accessed. At the most basic level, the Internet is a network of networks made possible by the
development of standardised protocols allowing any computer to exchange information with virtually any other computer. Most of the costs of providing Internet "backbone" are fixed in nature, provided the network is not congested. This is reflected in network charges in some countries so far being based mostly on access rather than usage. Since few of the backbone providers are able to provide full connectivity, they have arranged to grant access to one another’s networks. Access is provided either at zero charge through what are known as "peering" arrangements or in exchange for transit fees. The largest backbone owners (sometimes referred to as Tier 1 IP network providers) rely exclusively on peering. All others make use of both peering arrangements and transit fees, or transit fees alone. (The issue of network interconnection charges has been discussed earlier by the Committee or its Working Parties both in the context of telecommunications and automatic teller machines (ATMs).) Mergers among backbone providers has been an area of concern to competition authorities.

6. Interactive access to the Internet is provided either directly by the same companies owning the high speed links joining the various networks [i.e. the carrier Internet Service Providers (ISPs)], or indirectly through consumer ISPs who contract with the carrier ISPs for access. In addition to simple Internet connection, ISPs typically offer several other services such as electronic mail and the creation and maintenance of web sites. Competition concerns might arise over joint ownership of ISPs and broadband local access to Internet users, and joint ownership of ISPs and major content providers. (The issue of vertical integration between “pipes” and “content” was also raised in the discussions on broadcasting.)

7. Most customers currently connect with their ISP over standard telephone lines, thus there can be a concern that there is sufficient competition to provide the "last mile" to the client's premises. But that concern might be reduced where alternative connection is available via wireless telephony, through the cable TV network, or through dedicated broadband connection. These last three forms of connection could become significantly more important in the future. (These issues arise also in the telecommunications context.)

8. ISPs receive revenues from essentially five sources: a share of charges levied by whatever company is providing the final communications link to the consumer; access fees from their wholesale and retail subscribers; banner advertising; fees for providing live links to various sites; and revenues from any goods or services they themselves offer. The ISPs are competing to be, as much as possible, the main point of reference for their clients’ use of the Internet. They compete not just with each other but also with "portals" such as Yahoo! which do not have paying subscribers. So far, few if any of the ISPs have exclusive access to content that is so attractive that consumers would be willing to sacrifice general access to the Internet in order to obtain such content, but that could change. Another development that could change competition among ISPs has to do with the medium used to interact with the Internet. Currently that is overwhelmingly provided through personal computers, but third generation mobile telephony and the use of set-top boxes attached to standard TV sets could significantly erode that edge, and go on to affect the competitiveness of the various ISPs.

9. Consumer ISPs and portals are considerably less important for business to business (B2B) e-commerce than for the business to consumer variety (B2C). B2B exchanges typically have their own direct broadband access to the Internet, by-passing local loop providers as well as the consumer ISPs.

III. Transactions E-Commerce Issues

10. Transactions e-commerce includes business to business (B2B), business to consumer (B2C), and consumer to consumer (C2C - as in electronic auctions among final consumers). Most of the discussion in this paper will be focused, however, on B2B and B2C.
11. On the B2B side of things, e-commerce should have a considerable impact on the way companies do business. It will clearly change procurement practices as even small and medium sized enterprises, largely left out of the proprietary Electronic Data Interchange (EDI) systems, increasingly obtain the capacity to sell their wares on-line either directly to other businesses or over one of the new business exchanges. More fundamentally, B2B will affect how companies organise all activities from obtaining raw materials to selling to a final distributor. If things work as smoothly as some commentators expect, e-commerce could lead to a substantial degree of disintegration as companies take advantage of lower communication and co-ordination costs to specialise on what they do best in the value chain. At the same time and for the same reasons, e-commerce could increase the incidence and importance of joint ventures.

12. Concerning B2C, e-commerce may have its greatest influence on goods and services deliverable over the Internet (e.g. music, video, travel agency services including ticketing and computer software). It may have much less effect regarding goods normally requiring physical inspection before purchase, or for which immediate delivery is important.

13. Most of the competition issues arising in transaction e-commerce relate to various newly created intermediaries such as the B2B exchanges, B2C retailers, and electronic malls (including portals). There are also important intermediaries providing search and comparison-shop engines to facilitate finding and comparing goods and services on the Internet.

14. The competition concerns relating to transactions e-commerce and some various suggested questions for discussion are grouped below under three broad headings.

1. Market definition, price discrimination and predation

15. The first issue here concerns whether or not e-commerce constitutes a different market from traditional distributor activity. A subsidiary issue concerns the degree to which intermediated B2B competes with B2B over proprietary networks (e.g. EDI). On the B2C side, there is some evidence [see Goolsbee (2000)] that consumers are willing to switch to e-commerce vendors in order to escape sales taxes, suggesting that at least for some products, e-commerce and traditional outlets might be good substitutes for each other. In other products or for some groups of consumers, delivery problems or lack of trust in electronic payment (or simple unwillingness to pay in advance) could effectively divide markets.

16. Within e-commerce itself, market definitions may be difficult to make because price discrimination could become more widespread and important. This is because e-commerce enables sellers to more easily obtain and use information concerning consumer preferences and willingness to pay. E-commerce also makes it easier to disguise the existence of price discrimination and therefore reduces the probability that buyers could arbitrage among themselves. (On the other hand, it reduces the cost of buyers’ arbitraging among themselves, or indeed forming coalitions for joint purchasing.) E-commerce also opens up new avenues for price discrimination such as: quoting different prices to different consumers based either on user supplied information or records of a consumer’s previous behaviour; providing different web-site versions (i.e., a simpler, more convenient web site with higher prices could be offered along with a more complex or difficult to access site); and using time-consuming price matching processes or on-line auctions.

17. Where price discrimination has the effect of increasing quantities sold it may increases consumer welfare, but price discrimination could have a darker side. It could be used to lower the costs of a predation strategy or as a means of raising rivals’ costs.
Possible Issues for Discussion

1. What are the important factors determining whether or not e-commerce and traditional outlets (mainly wholesalers and retailers) are in the same market?

2. Since the Internet knows no boundaries, one might expect that e-commerce has or will considerably increase the size of geographic markets with subsequent benefits to competition. To what extent is this natural tendency being restricted because of various regulatory barriers, including regulations preserving inefficient delivery systems (both in telecommunications and in physical delivery)?

3. Some studies have shown that price dispersion in B2C, even for roughly homogeneous goods, is equal to or greater than in traditional distribution. This seems odd given that e-commerce is supposed to reduce search and comparison costs. Why is a significant degree of price dispersion sometimes found in e-commerce and does it indicate a lack of competition? If so, what can or should competition agencies do about it?

4. Why might less well known brands or generic goods likely be better or poorer substitutes for well-known brands in B2C? Why might B2C sellers have more or less negotiating power over suppliers than their bricks and mortar cousins?

5. If price discrimination is being used anti-competitively, why might one expect it to be easier or harder to apply competition law against it in e-commerce compared with traditional markets?

6. Are traditional distributors using anti-competitive means to protect themselves against e-commerce rivals? If so, what special difficulties, if any, have been encountered in bringing competition law to bear against such practices?

7. Network dominance

18. Network effects are clearly important in B2B exchanges because their value to both buyers and sellers depends on the liquidity they create for participants, which in turn depends on the number of buyers and sellers using the site. It should also be stressed that in B2B exchanges, there is a reasonable potential for two way interaction (i.e. the same enterprise could be acting as both a buyer and seller). Pure network effects could also arise in the B2C context if consumers are able to use the network to share experiences concerning goods and services purchased.
19. Added to the concentrating power of any network effects, brand recognition and trust advantages could amount to barriers to entry further favouring first entrants, especially as regards B2C. These additional effects could be considerably attenuated if traditional distributors prove able to transfer their brands and reputation to their virtual outlets. So far the evidence on that is mixed even for very able marketers such as Wal-Mart. The first mover advantages in both B2B and B2C could become quite significant if the parties owning them have the power to insist on exclusive arrangements. For example, if all the major buyers in a certain industry set up a B2B exchange and they all agree to buy only on that exchange, they could effectively force suppliers to participate in it. They could then take things a step further by insisting that the suppliers in turn agree to deal exclusively on the exchange. Both types of exclusivity could create a certain degree of market power for the exchange. This problem could also arise presumably outside the e-commerce domain but e-commerce may end up making such exclusivity either more profitable or harder to attack under competition law in instances where it proves to be anti-competitive. Boycotts have been addressed recently in Working Party No. 3, and the role of exclusivity requirements in joint ventures could be addressed in the upcoming Mini-roundtable on Joint Ventures.

20. In the short term, many players may be hoping to use B2B exchanges to increase either buyer or seller advantage. In the long term, however, participation is more likely to be motivated by opportunities to economise on procurement costs, in part by standardising the process and spreading certain fixed costs over a larger volume of business. Businesses may also save time and money by using B2B exchanges to link their information technology functions with those of other related businesses and simultaneously outsourcing the creation and maintenance of the software needed to do so. Depending on how this is done, the efficiencies reaped may or may not be offset by the negative effects of reduced competition through increased switching costs.

21. Network effects may make B2B and B2C networks "tippy" in the sense of greatly amplifying the importance of any head start or a small lead in market share, but this need not prove critical for competition provided that switching costs are low, or indeed if one can be a member of multiple networks. One must expect, however, that network owners will try to raise those costs through things like loyalty programs, patented interface design and transaction mechanisms (e.g. Amazon's convenient "one-click" ordering technology which securely stores billing and shipping information); use of proprietary standards; and the application of collaborative filtering tools. The latter are particularly interesting because they raise cross-cutting privacy and competition concerns.

Possible Issues for Discussion

1. What steps, including proprietary standard setting and other measures that might reduce interoperability, are being taken by e-commerce networks to increase the potential of network effects and first mover advantages to create and/or strengthen dominant positions? What are the arguments for and against competition offices taking action against such strategies? Do you have the legal tools to take such actions or is your agency basically powerless until after a dominant position, or something analogous, has been created?

2. Should competition agencies seek to influence the breadth of IPR protection being granted in relation to e-commerce? If yes, where does such intervention appear to be most warranted and how do you go about doing it?

3. To what extent can B2B exchanges justifiably insist on exclusive dealing in order to protect themselves against free-riding? How does the competition analysis of such exclusive dealing change, if at all, when ownership of a B2B exchange is restricted to its major participants?

4. Under what circumstances might B2B exchanges owned or controlled by their major participants be used to exclude or disadvantage rival sellers or buyers? Is such
ownership/control nevertheless desirable in order to reap important economies of scope and scale? To what extent are such economies substantially limited to the start up phase? If participant ownership/control poses competition problems, could and should competition agencies take action to break such links? Alternatively, should they require third party, independent management of the exchange, or require that ownership/control be spread among participants roughly in accordance with their transaction volumes? Should they instead rely on prohibiting anti-competitive conduct (i.e. become implicated in supervising terms of access), and hope that self-interest will ensure that ownership/control by the major participants will be abandoned in the long term? [The reference to self-interest is based on the presumption that buyers and sellers are more likely to patronise a B2B exchange that is independent rather than one dominated by a sub-set of the participants (especially if those are concentrated on one side of the market).]

5. Many if not most B2B exchanges and B2C retailers appear to be losing money. Has this resulted in complaints of predatory pricing and, if so, were prosecutions launched? Where there have been predatory pricing cases, was it particularly difficult to prove that predation was occurring?

3. Enhanced opportunities for co-ordinated effects (i.e. explicit and tacit collusion and oligopolistic parallel pricing)

22. Lower cost, more rapid communication is a double edged sword. In theory it permits buyers to be better informed concerning available options, especially if the advantages of the Internet are combined with electronic search and comparison engines (i.e. shopbots). At the same time, these changes make markets considerably more transparent, and as already noted, may facilitate price discrimination. In short, e-commerce may increase the incidence of co-ordinated effects because it affords sellers improved opportunities to detect and punish “cheating”. In most markets, especially as regards B2C, sellers will be able to respond to price changes considerably more rapidly than buyers. Frequent price changes could be used as a form of “cheap talk” even though the prices are actually, if only briefly, being offered to buyers. E-commerce may also directly facilitate reaching agreements or at least enhance mutual understanding through the “chat rooms” already functioning in some B2B exchanges. Properly designed, such chat rooms could be very difficult for competition authorities to monitor or investigate.

23. It is not simply by means of increased transparency in prices and other terms of sale that e-commerce could enhance various forms of collusion. B2B exchanges could afford businesses the ability to more easily track changes in rivals’ costs plus actual and planned output levels. Proper design could reduce these risks by restricting what participants could learn about each other and when they receive such information. The risks will be especially great, however, in cases where the exchanges are controlled by just sellers or just buyers.

24. Finally, where B2B exchanges are controlled by market participants, the need to interact in running the exchanges will afford further opportunities to more widely co-operate.

Possible Issues for Discussion

1. Under what circumstances, if any, should restrictions be placed on B2B and B2C exchanges to reduce the chances they will be associated with a higher incidence of co-ordinated effects?

2. What are the pros and cons of seeking to reduce any e-commerce enhanced co-ordinated effects by applying any or all of the following measures: requiring independent third party
management for participant owned exchanges; putting a time limit on participant ownership of B2B exchanges; suppressing chat rooms; otherwise restricting or forbidding direct information exchange within the buyer or seller groups; and erecting Chinese walls to prevent participants learning in a timely fashion about each other's activities.
NOTES

1. OFTEL/OFT (2000, para. 1.5)

2. As long as the value of a network is proportional to the size of the network, then the value of interconnection to each network’s set of subscribers is roughly equal even for very different sized networks. However, both the small and large network owners would like to have a chance to pocket the whole value of the interconnection rather than just an equal share of it. As Varian (1999, 8) put it: “...the threat of not interconnecting can be very valuable, since it can be used to induce another network to merge or be bought out.”

3. The WorldCom/MCI merger provides a good example of using merger review to prevent the emergence of a competition endangering dependence differential among backbone network providers. See Robinson (1999, 8).

4. Valentine (2000, n. 4) notes that: Cookies technology allows a web site server to place information about a consumer’s visits to the site on the consumer’s computer in a text file readable only to that web site server. The cookie assigns each consumer’s computer a unique identifier so that the consumer can be recognized in later visits to the site.

5. Smith, Bailey and Brynjolfsson (1999, 14, reference omitted) explain this as follows:

Collaborative filtering tools compare a customer’s purchase patterns [with those of] other like-minded customers to develop personalised recommendations based on a customer’s inferred tastes. Unlike most information used to evaluate homogeneous goods, personalised recommendations are specific to the customer and become more accurate as the customer interacts more with the system. Thus, under the current retailer-owned systems, customers may face a switching cost equal to the decline in the value of the recommendations when switching to another retailer. If the data on a customer’s tastes were owned by the customer and were portable from site to site, switching costs would be commensurately lower.
References


Ecommerce Times - this is a useful on-line news sheet covering e-commerce. It can be found at: http://www.ecommercetimes.com/news

The Economist (1999a) "When companies connect" - A special survey on B2B e-commerce, June 26

The Economist (1999b) "Frictions in cyberspace - Retailing on the Internet, it is said, is almost perfectly competitive. Really?", November 20, p. 112

The Economist (2000a) "Shopping around the Web - A Survey of E-Commerce ", February 26

The Economist (2000b) "A market for monopoly?" (June 17, 2000), pp. 75-76

European Commission (2000) "Les enjeux pour la concurrence dans les marchés fondés sur Internet", Gazette Européenne, June 24th


Sawhney, Mohanbir and Steven Kaplan (1999) "The Emerging Landscape of Business to Business E-Commerce", mimeo - was scheduled for publication in Business 2.0 Magazine (September)


Schmitz, Stefan W. (2000) "The Effects of Electronic Commerce on the Structure of Intermediation", Journal of Computer Mediated Communication (JCMC) Vol. 5, No. 3 (March) available at: "http://www.ascusc.org/jcmc/vol5/issue3/schmitz.html". There are also other interesting articles in this issue of JCMC (such as one by Steinfield, Chan and Kraut which explores the degree to which B2B will lead to more or less buyer lock-in), as well as in Vol. 1, No 3 (December 1995) available at "http://www.ascusc.org/jcmc"

