

A CALL FOR A WTO E-COMMERCE INITIATIVE

by

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A. Introduction

This paper proposes that the additional trade potential of electronic commerce is presently only partly realised and that the full benefit of electronic commerce can only materialise through an E-Commerce initiative of the World Trade Organisation (WTO). It is a fact that the existing WTO-Treaties have significantly contributed to the development of E-Commerce. Nevertheless, it is argued that one has not been aware of the true role of the WTO, namely the role of a promoter of electronic commerce development. The exploitation of the E-Commerce potential calls for a bundling and deepening of existing WTO-elements to be implemented without further delay.

This argument will be developed in three steps:

- 1) The first part shows the existence of a significant „untapped“ potential from E-Commerce (referred to as "E-Potential" in the following). The positive consequences from E-Commerce as well as the barriers to the realisation of this potential are analysed. This analysis shows that the WTO has an important role to play in the further development of E-Commerce.
- 2) The second part deals with existing treaties and actions of the WTO which constitute an important framework for harvesting the benefits of the E-Potential. This part is also used to uncover existing loopholes and weaknesses in the current trade framework. These loopholes and weaknesses are the point of departure for the proposed coherent WTO E-Commerce Initiative.
- 3) The third part summarises the elements of such an E-Commerce Initiative and tackles the question of what kind of specific implementation procedures must be chosen for trade negotiations. In the current WTO-debate there are almost no concrete proposals for realistic WTO-actions vis-à-vis E-Commerce, this paper is to be understood as a catalyst to such trade

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negotiations. At the same time the paper addresses specific problems which ask for the involvement of other international organisations such as the World Bank.

B. Untapped potential of Electronic Commerce

Most publications dealing with E-Commerce stress its welfare-increasing characteristics. By resorting to electronic trade media various types of innovations can be achieved: Process innovations (cost reductions through more efficient production procedures), product innovations (e.g. online financial services), but also market innovations (e.g. new markets as online-actions)¹ In general the physical and time-dependent distance between producer and consumer is bridged, market entry barriers are reduced and the competitiveness of the market is increased. These effects can be observed with national markets, yet the relative importance of E-Commerce may even be greater for the intensity of cross-border and hence international trade.

Forrester Research, for instance, argues that until the year 2004 approximately 1.4 trillion US\$ of exports will be traded online. This corresponds to the claim that in 2004 close to 18 % of global exports will be undertaken online². The percentage of GDP that could be subject to E-Commerce transactions may be as high as 30% for consumer goods and 36% for inputs³. At the same time the increasing electronic transactions in the value creation process is a growth driver of the IT-industries⁴.

In the trade with goods there is a significant potential in the business-to-business (B2B) segment. In the services sector the electronic trade with knowledge-intensive, digitisable services (i.e. consulting, patents, audio-visual) is very promising, between enterprises (B2B) as well as for private use. Moreover, the expected outsourcing of backoffice-functions (application services, bookkeeping, etc.) may lead to important efficiency gains. The parties who could especially benefit from the E-Potential are small- and medium-sized enterprises which are thus able to sell their goods and services on the world market⁵. A country-specific analysis reveals that industrial countries have been more active in using and benefiting from the E-Potential. Consequently, it is, in particular, the developing nations which may profit from tapping the potential behind E-Commerce⁶. Compared to the situation before E-Commerce, electronic trade provides firms of the developing nations with less cost-intensive means to set up efficient global marketing and open international distribution channels.

¹ Mann and Knight, 2000, p. 254, or Mann et al, 2000, chapter 1.

² See Forrester, 2000, p. 1.

³ See Schuknecht and Pérez-Esteve, 1999, p. 4.

⁴ See Executive Summary USA, 2000h.

⁵ OECD, 1999b.

⁶ Aitic, 1999; ITU, 1999.

It must be stressed that international E-Commerce does not only have positive welfare effects for the exporting countries, but also that its welfare-increasing characteristics translate into cheaper and quality-enhanced imports of products. Thus also developing countries benefit from this fact as they can profit from the facilitated import of better infrastructures, services and import goods in general.

Despite these findings the untapped trade potential of electronic commerce is hardly exhausted. At the present time one can speak of a very limited access and restricted use of electronic commerce in import or export business. Experts agree that only the US has known how to translate E-Potential into viable economic activities⁷. Considering the situation as a whole one can speak of a generally too low and too biased access to electronic commerce. As the World Intellectual Property Organization states in its latest primer on the topic only two percent of the world population are online⁸. Even only 950 million households in this world (65% of all households) have a telephone connection.⁹ Of the 45 million internet hosts operating in January 1999, roughly 96% are physically located in countries with high average incomes. However, the population of the latter countries represents only 16% of the world population. Unfortunately also global technological convergence remains utopian. In addition the gap between countries which have a high-quality access to the net and the countries which do not even have the necessary infrastructure grows rapidly¹⁰. The so-called „digital divide“, however, does not only bring into existence a clivage between industrialised and developing countries. The figures also show increasing intra-societal divides with respect to online access¹¹.

For further elaboration on the barriers to electronic commerce two important points must be considered: First, E-Commerce entails different *forms* of transactions: (i) the use of electronic media for information gathering and electronic order of goods which are subsequently delivered in the traditional physical form; (ii) the electronic delivery of digital goods or services; (iii) the trade of telecommunication and internet services themselves. The promising effect of a WTO E-Commerce initiative must be seen in the light of all three forms of transaction. Secondly, electronic commerce does not only rest on the use of the Internet but relies on an increasing portfolio of inextricable hardware- and service infrastructures. Hence the boundaries between the E-Commerce media (telephone, fax, standard or digital television, computer-based electronic systems, etc.) are blurred. In particular the new developments in mobile commerce show that the narrow conception of E-Commerce as personal-computer-based internet shopping must be questioned. From this techno-

⁷ Nezu, 2000, p 1 states that the effects of electronic trade have so far been restricted mainly to the USA, which makes the author say „To put the question bluntly, what caused the US economy to perform so well, and everyone else, from Tokyo to Toledo, to lag behind so badly?“

⁸ See WIPO, 2000, chapter IV: Differential Development and Access: Issues for Developing Countries

⁹ At the present time the most important connection with the Internet.

¹⁰ The World Bank Group, 2000.

¹¹ See OECD Observer, 2000, p.1 and ITU, 1999.

logical convergence and evolution one can deduce the important insight that the legal trade framework should, if ever possible, be technology-neutral. The discussion of transaction forms and infrastructure needs also sheds light on the fact how diversified the supply of hardware and information services must be so that the trade potential of E-Commerce can materialise (see table 1). In fact, hardware components, E-Commerce infrastructure services and content providers must be available.

Table 1: E-Commerce Infrastructure and Devices Components¹²

Hardware Infrastructure	E-Commerce Infrastructure Services			Content Providers
Router	1. Communication	2. IT-Services	3. Other Services	Information
Local loop	Basic telecom services ¹³	Search engines and browsers	Distribution and logistic services	Sale of products over the Internet (but physical delivery)
World-wide telecom connection	Internet Provision	Internet service provider	Other transport services	Audio-visual content
Computer hardware	Value-added telecom services ¹⁴	Internet portal	Financial and Insurance	Entertainment, News and Travelling
Internet Backbone		Packaging	Audio-visual	Financial services
		Additional services	Warehousing and Retail	Education
		Software	Franchising	Business Services ¹⁵

Considering all different forms of necessary E-Commerce elements, three main reasons for the suboptimal exhaustion of E-Potential can be found:

- 1) *Difficult or expensive access to the necessary IT-infrastructure goods:* for the time being the IT-infrastructure is underdeveloped in numerous countries¹⁶. Without a PC, a telephone and an access to the Internet Backbone, etc. one cannot access E-Commerce. The global trade of IT

¹² Source: Own compilation that takes Krancke, 2000; Choi et al, 1997; OECD, 2000b and Senti, 2000 into account. The table does not pretend to be complete.

¹³ Voice telephony, packet-switched/circuit-switched data transmission, telex, telegraph, facsimile, private leased circuit services and other (mobile, paging, satellite-based services, etc.).

¹⁴ Electronic Mail, voice mail, on-line information, electronic data interchange, enhanced facsimile, code and protocol conversion, etc.

¹⁵ medicine, legal, bookkeeping, advertising, accounting, management consulting, etc.

¹⁶ See introductory part in ITC, 1999.

goods faces a myriad of tariff and non-tariff trade barriers, which prevents an optimal distribution of these goods from materialising. A comprehensive and far-reaching market opening in the field of IT-goods is therefore a central claim of an E-Commerce Initiative. Furthermore, one must pay attention to the fact that most developing countries lack the resources to develop a reasonable infrastructure. In this case the market opening initiatives must be accompanied by infrastructure projects of the World Bank or other development agencies.

- 2) *Difficult or expensive access to the necessary telecommunication services:* there exists a lack of qualitative and cheap telecommunication services which guarantee access to the Internet. The high price that must be paid on unliberalised telecommunication markets also prevents the optimal use of electronic commerce¹⁷. Where the local loop is mostly still in the hands of a local incumbent ex-monopolist one cannot possibly speak of an open global telecommunication market. These incumbents use their market power to prevent the supply of services of potentially more competitive firms. Thereby the „open networks with free access to bottleneck facilities“, which are essential for electronic commerce, must be queried. Artificial entry barriers are created. The markets with such an uncompetitive structure are protected by a very restricted number of trade liberalisation steps which would permit international competition. In particular countries which are not able to build up their own telecommunication infrastructure would profit enormously from an import of telecommunication services. The strengthening of trade liberalisation commitments in the Fourth Protocol on basic telecommunications and its market access commitments with respect to other countries must therefore be an important point in an E-Commerce-Initiative.
- 3) *Insufficient market access commitments in services trade:* Services take up an increasingly important role in modern economies. There are also signs for more and more synergies between the goods and services sectors. Yet the international trade in services is still significantly less developed than trade in goods. The trade of infrastructure services but also the trade with online-services offering content are underdeveloped. In fields such as backoffice-functions, finance, consulting services or the medical sector one can only speak of a beginning of online content service trade¹⁸. The online trade with services could benefit from comparative advantages built on expertise and reputation which have been developed over the years. Moreover, trade in online services could enable countries to profit from lower wage costs in different parts of the world.

Unfortunately the trade with services faces insufficient market access commitments from the Uruguay Round and entry barriers from heterogeneous services regulation. In general the services sector is regulated in a much heavier way than the goods sector. Some of these regulations have well-founded objectives. However, one also encounters domestic regulations whose primary aim is protecting local markets from international competition. The heteroge-

¹⁷ See OECD, 2000d.

¹⁸ e.g insurance products can be used by way of the Internet without the insurer having an office in the respective country. For further examples see Mann, 1999, pp. 59 ff.

neity and intransparency of local regulations in important services sectors are also barriers to a realisation of untapped potential. Market access negotiations in the General Agreement of Trade in Services (GATS) must therefore be an integral part of an E-Commerce Initiative.

A somewhat different view concerning the barriers to electronic commerce is provided by the synoptic compilation of the OECD in table 2. In this periodically updated overview of the E-Commerce in relation to tasks of the international and regional supra-national organisations OECD points out that this trade does not only depend on the availability of hardware, but also on other „softer“ framework conditions (trust-related measures, consumer protection, etc.). In addition, also human capital (E-literacy) and aid for developing the infrastructure of poorer nations are in the interest of a universal participation¹⁹. The synopsis in table 2 shows that WTO has a natural and central role to play in the development and spreading of electronic commerce (see the underlined activities in the table).

Three arguments may strengthen this claim: First of all, if the WTO-treaties are properly specified and implemented, they guarantee access to electronic commerce: “Before users can engage in online commercial transactions, they must be able to access and use the network infrastructure”²⁰. Nobody questions that the access to electronic commerce, made possible by IT-goods, telecommunication and internet services, is a necessary condition to benefit from the E-Potential. Problems such as legal uncertainty and privacy protection, which can be categorised as „sufficient conditions“, can only create problems once the most basic form of access is guaranteed. Consequently, the above-mentioned hindrances to electronic commerce constitute the main electronic commerce barriers. Even though free trade and unfettered market mechanisms do not guarantee an optimal allocation and fair distribution of E-Commerce elements, these two factors form the pillars on which E-commerce rests.

Table 2: Tasks of international organisations in Electronic Commerce ²¹

Building Trust for Users and Consumers	Establishing Ground Rules for the Digital Marketplace	Enhancing the Information Infrastructure for Electronic Commerce	Maximising the Benefits
1. Protection of privacy and personal data	1. Commercial Law	1. <u>Access to and use of the information infrastructure</u>	1. <u>Economic and social impacts</u>
2. Secure infrastructures and technologies, authentication	2. Taxation	3. Internet governance / Domain Names	2. Small and Medium-sized Enterprises

¹⁹ Surely, there are much more firm-centered factors that would be very essential in the realisation of the E-Potential. To name just a few, there is a lacking existence of innovative new business models for the new economy. Also the necessary organisational adjustment of the concerned companies will last some time.

²⁰ See OECD, 1997 under „Barriers to Electronic Commerce“ (Internet Page mentioned in bibliography).

²¹ Sources: OECD, 1998; OECD, 1999c; OECD, 2001. There are also debates whether issues as data protection, taxation, etc. should be included on the WTO agenda (European Union: yes vs. USA: no).

and certification			
3. Consumer protection	3. <u>Financial issues, electronic payment and movement of goods</u>	4. Standards	3. Skills and Development
4. Other trust-related issues	4. <u>Trade policy and market access for goods and services</u>		4. <u>Ensuring global participation</u>
	5. <u>Intellectual Property</u>		

Secondly one should profit from the fact that the competence of WTO with respect to electronic commerce is clearly defined. It is a general problem with policy questions relating to the field of electronic commerce that it often proves difficult to assign specific policy roles to potential policy actors. Often it is debatable whether local, national, multilateral or international concepts for solutions are the correct policy anchor. Even if in the light of the global dimension of this medium it is agreed that international or multilateral organisations must take the policy lead, the OECD studies show that a clear competence distribution which would increase efficiency and transparency is almost impossible. Moreover, there are other uncertainties with respect to the *policy-level* in electronic commerce regulations. Namely, it is debatable whether state or private actors should be in charge of the regulation or self-regulation of E-Commerce. This uncertainty concerning policy-level and nature of policy actor does not exist for issues relating to international market access. It is not contested that the improved access to IT-goods via free trade, the liberalised access to telecommunications and online-services via free trade but also the internationally respected principles whose goal is to preserve open telecommunication networks are among the responsibilities of the WTO²².

Thirdly, two factors, namely the WTO-principles (non-discrimination, transparency, technology-neutrality and market openness) and the broad membership (as opposed to the OECD, which is only a forum of industrial countries²³), are particularly well fitted for the policy-questions of electronic commerce.

Despite the fact that our analysis shows that the WTO should assume an important role in the further development of electronic commerce, specific proposals of what these measures could look like are non-existent. It seems that the current political debate even lacks a solid consensus regarding the needs of such measures. The role of the WTO as platform for the realisation of the E-Potential may either be underestimated or simply the recognition of this fact does not lead to

²² The WTO has increasingly taken the role of the International Telecommunications Union (ITU) in the area of harmonization of the telecommunications regulation. See Drake, 2000, p. 125 and Aronson, 2000, p.187 for an elaboration of this point.

²³ As the last OECD Forum on Electronic Commerce has taken place in a non-OECD country (Dubai, U.A.E.), 16-17 January 2001, this may be a first move towards negotiations that entail non-OECD members.

coherent and logical follow-up actions. As a matter of fact, there have been no WTO-actions with significant content addressing the phenomenon of E-Commerce. Also, the discussion surrounding the trade issues of electronic commerce seems to leave the WTO settings for other fora (OECD²⁴, Global Business Dialogue, Transatlantic Dialogue). In our opinion this displacement of the dialogue away from the WTO confines is an erroneous attempt to come to terms with the problem.

In the following chapter the existing WTO-treaties and the actions undertaken by the WTO will be discussed in relation to their importance for the development of E-Commerce. A detailed analysis of the strengths and the weaknesses of the existing regulations may provide information regarding the requirements to be included in a later call for action.

C. Existing WTO Agreements and Initiatives for E-Commerce and their Weaknesses

E-Commerce has developed its dynamism only after the completion of the Uruguay Round. Consequently, the WTO-treaties do not contain specific clauses for electronic commerce. Nevertheless, there are a substantial number of WTO-elements of significant relevance. Before discussing the WTO-treaties we shall outline the results of the WTO work program, initiated in 1998. This order of procedure may not be chronologically correct but allows to analyse the WTO-treaties in the specific perspective of E-Commerce.

I. The WTO Work Program for Electronic Commerce

At the WTO Ministerial Conference in May 1998 two actions were decided dealing with E-Commerce issues²⁵. On the one hand, the WTO-ministers approved the rather vague wording of a text that the practice of a temporary duty-free moratorium on electronically delivered transaction would be continued²⁶. In principal, however, the Ministerial Conference in Seattle in 1999 should have ratified the continuation of the moratorium. After the unsuccessful break-off of the Seattle negotiations the future validity of the moratorium is uncertain. Even though the duty-free moratorium seems to be further applied, some countries have doubts as to the current legal binding of this statement²⁷.

²⁴ Even studies that analyze the suitability of the WTO treaties in the light of E-Commerce as for example OECD, 2000b; OECD, 2000c or studies that assess the implications of new media on trade policy OECD, 1999d have been created by the OECD. Thus, the OECD has taken up essential preparatory analyses that really fall under the responsibility of the WTO.

²⁵ See Senti, 2001.

²⁶ WTO, 1998a, p. 1: "We also declare that Members will continue their current practice of not imposing customs duties on electronic transmissions. When reporting to our third session, the General Council will review this declaration, the extension of which will be decided by consensus, taking account of the progress of the work program."

²⁷ Cf. Mann and Knight, 2000, p. 258.

On the other hand the relevant councils of the WTO (Council for Trade in Goods, Council for Trade in Services, Council for Trade-Related Aspects of Intellectual Property and the Committee on Trade and Development) were commissioned to develop a work program covering all trade-related aspects of E-Commerce. The goal of these reports is to analyse the effect of E-Commerce on the various Council responsibilities. These reports were to be ready by July 1999 and were intended to provide answers to three key questions:

- 1) How do existing trade agreements influence electronic commerce?
- 2) Are there any loopholes in existing trade legislation that must be filled?
- 3) Are there new fields of responsibility created by electronic commerce and which would confront WTO member states with new trade regulations?

Apart from the council-specific questions it was also the task of the working teams to identify problems which overlap the responsibilities of some of these four Councils and are therefore best dealt with in a comprehensive manner. The most important issue with cross-council importance is the question of categorisation, that is whether products which were usually sold as goods due to their link to a physical carrier and which can now be delivered online over the net (e.g. music or movies) shall now be treated under the legislation of the General Agreement on Tariffs and Trade (GATT) or the General Agreement on Trade in Services (GATS)²⁸. In other words, are online delivered products „products“ like the corresponding conventionally delivered goods linked to a carrier (CD, i.e.) or must they be reclassified²⁹. This question has been dealt with by all four Councils³⁰.

With respect to the different liberalisation commitments under GATT or GATS and the above mentioned duty-free moratorium on electronic transactions the answer to this question is of great practical relevance³¹. Opinions regarding this question were split. On the one side, the USA pointed out that the more advanced liberalisation stance of the GATT (with respect to the GATS) would make a GATT-categorisation much more liberal and hence beneficial. On the other side, the EU supported the argument that only a GATS-classification would make sense³². As will be shown below the WTO-members produced working papers on this central question; a decision, however, was not reached.

In addition to this classification issue, the Goods Council discussed possible market entry barriers that are related to electronic commerce, questioned the possibility of imposing duties on electronically traded goods and discussed advantages and disadvantages of standards in the E-Commerce field.

²⁸ If a good is ordered online but delivered physically, not the duty-free moratorium but the negotiated GATT tariff applies.

²⁹ Tinawi and Berkey, 1999, p. 22.

³⁰ WTO, 1999e; WTO, 1999g; WTO, 1999d; WTO, 1999c; WTO, 1998c; WTO, 1999h; WTO, 1998d .

³¹ Panagariya, 2000, p. 4.

³² Mann and Knight, 2000, p. 258.

The Services Council raised the question what kind of electronic services were covered only insufficiently by existing trade liberalisation commitments. As soon as an electronic transaction falls under the GATS one must also decide under what GATS mode the service is to be registered (see box 1 for an explanation of the different modes). Again the categorisation is crucial as the commitment schedules reveal different degrees of trade liberalisation which are dependent on the underlying mode. In reality, for example, countries mostly have more far-reaching market access and national treatment commitments under mode 2 and 3 than under the other two service delivery modes. This is due to the fact that mode 3 constrains the potential foreign service provider to establish physical presence in the host country and therefore subjects the service supplier to possible regulatory influence of national authorities. Both modes 2 and 3 do not entail a factual cross-border trade of services since the sender and the receiver of the service are present in the same physical location.

Box 1: The four GATS-Modes

The GATS describes four GATS-Modes for service delivery:

Mode 1: The service is exported from one member of the WTO to another member (i.e. an Indian software specialist with physical presence in India works for a Germany-based company).

Mode 2: The service is consumed in the country of origin of the service supplier but is consumed by a customer of a different nationality (German firm with headquarters in Germany but physically present in India to get software consulting on the spot).

Mode 3: The service is delivered by a firm of one WTO member country via a foreign subsidiary to another WTO-member (an Indian company with software know-how opens a branch in Germany to cater for the German market with its services).

Mode 4: The service is delivered by the physical presence of a national of one WTO-member country to another WTO member country (an Indian software expert comes to Germany to offer his consulting services on the spot).

In the case of online-services it is a point at issue if the classification shall be under mode 1 (cross-border trade) or mode 2 (consumption abroad). Drake and Nicolaidis point out that the classification decides upon the origin of legislation to be applied to the transaction (mode 1: transaction is subject to the legislation of the customer location; mode 2: transaction is subject to the legislation of the producer location)³³. With respect to consumer protection, mode 1 may hence be more desirable. However, the liberalisation commitments under mode 2 are more diversified because the signatories of the Uruguay Round probably did not foresee the E-Commerce dimension. Contrary to mode 2 mode 1 is not so liberal because the service-importing countries prefer the physical presence of the service supplier on domestic soil.

³³ Drake and Nicolaidis, 1999, p. 21.

Further questions of the Services Council were: Are the existing access guarantees in the GATS sufficient for Internet services? To be precise, the importance of the Reference Paper³⁴ to other industries than basic telecommunications was questioned. Which domestic regulations prevent a full realisation of electronic commerce? What consequences do new types of services have due to their difficult categorisation in existing treaties?

The TRIPS Council (Trade-Related Aspects of Intellectual Property Rights) analysed how the protection of copyrights, trademarks and other related rights can be preserved in electronic commerce transactions. The question was debated whether or not intellectual property without a physical carrier was sufficiently protected in an online-environment.

The Council for Trade and Development tried to unravel the E-Commerce implications for economic development. Special attention was paid to the so-called „Digital Divide“ which could foster existing tendencies of unequal participation in global economic prosperity.

In July 1999 the results of these Council consultations were made publicly available³⁵. In one important point the Councils reached a consensus: the different existing WTO-treaties with all their rights, obligations and country-specific commitments are applicable to the E-Commerce dimension. This conclusion can be drawn from the fact that the treaties do not differentiate according to the technological means by which the product is delivered. Rather the distinction is made along the product nature. This result can be seen as the greatest accomplishment of the WTO work program.

Concerning the remaining points less clarity could be achieved. There were numerous Council meetings producing interesting views and proposals which are reflected in the country statements or the final reports made to the General Council. Nevertheless, many questions were not sufficiently resolved. In principle the Councils neither have the right to fill loopholes in the current WTO-laws (therefore the meetings are not trade negotiations) nor do they have the right to widely interpret existing WTO-treaties. Hence, there is no sufficient clarity as to how the results reached by the Councils will translate into specific actions.

The fact that the Council meetings rather tend to produce an informal exchange of viewpoints than the achievement of negotiation deals is not criticised in this place. The successful agreements that have been reached within the OECD, for example, can certainly be attributed to the high informal information exchange between nations and industrial associations. These successful negotiations take place in subject-centred meetings without any pressure to achieve certain formal agreements. In the underlying case, however, the lacking negotiation target and certainly the absence of knowledge about how the results would feed into subsequent actions had a negative impact. Due to the fact that too many questions had a Council-overarching meaning, the fragmented discussion in the separate Councils created too much overlap and too few specific agreements. After the meetings the output of the Councils has never been transformed into formal

³⁴ The Reference Paper will be addressed later.

³⁵ WTO, 1999h;WTO, 1999g;WTO, 1999d;WTO, 1999e;WTO, 1999c;WTO, 1999b.

agreements or common positions. The conference in Seattle did not allow for actions concerning E-Commerce relevant issues.

But the WTO-member countries, especially the USA and other industrialised countries, have maintained their interest in decisions in the E-Commerce field and some general decisions become more urgent for practical reasons. Therefore in July 2000 the General Council asked the four Councils to take up their work from where they had left it in July 1999. Moreover, the Councils were asked to make recommendations as to how the General Council should deal with E-Commerce questions. To be precise, they were asked to deliver their new reports until December 2000.

The new reports of the WTO work program³⁶ basically repeat the conclusions taken in 1999 and do not make further recommendations³⁷. When this paper was written (February 2001), that is three years after the start of the WTO work program, there has been no significant development of current WTO commitments. Finally, setting aside the duty-free moratorium, there have been no new E-Commerce relevant actions until now.

It is even questioned whether or not the duty-free moratorium, either its prolongation or dismissal, should have been decided during the Seattle Round. The moratorium has never been a formal agreement with guaranteed enforcement by a dispute settlement process³⁸. Besides, the moratorium runs against the principle of technological-neutrality³⁹. One can counter-argue that only a fraction of tradable goods can be digitised⁴⁰ and that in the future the majority of electronic transactions will be services anyway. The latter can then be subject to market access barriers and discriminatory domestic regulations rather than tariffs.

As a matter of fact, there exists neither a consensus with respect to the classification issues (GATS or GATT?) nor has a decision been reached according to the relevant GATS-modes. It would also have been desirable to reach more clear-cut criteria for the distinction between goods and services. For the present the parties concerned maintain the status quo of uncertainty. The consequence is that in the case of disagreement between WTO members the dispute settlement body

³⁶ WTO, 2000a; WTO, 2000d; WTO, 2000e.

³⁷ „Members reaffirmed the continuing relevance of the earlier contribution of the Council for Trade in Goods to the General Council which was submitted by the Chairman of the CTG in July 1999 (document G/C/W/158). According to the mandate contained in document WT/L/274 (Work Program on Electronic Commerce), that contribution provides an overview on the discussion of the following issues..“, quoted from WTO, 2000a or „The Council's discussion on 6 October took as its starting-point the progress report which it had made to the General Council on 27 July 1999 (S/L/74). It was the general view that this report was still an accurate reflection of the thinking of Members on the subject, and that there was no need to re-open or repeat what was said in it.“, quoted in WTO, 2000e.

³⁸ These points were raised by the WTO-speaker on E-Commerce issues in a personal interview.

³⁹ „The economic implication is that preferential treatment of a particular mode of delivery could lead to trade-diversion from other modes. (..) The legal implication is that preferential treatment of electronic delivery puts into question the principle of technological neutrality.“ Mattoo A. and Schuknecht L., 2000, p. 20.

⁴⁰ Schuknecht and Pérez-Esteve, 1999, p. 5.

may be called upon to decide on general questions of rights and duties of the WTO member countries. Contrary to popular perceptions the dispute settlement process must not be used for this kind of fundamental decisions⁴¹.

It must again be emphasised that the absence of significant decisions in the WTO-forum has led to a displacement of the discussion towards the transatlantic dialogue or towards coalitions of the private sector⁴². Last of all, the existing WTO elements did not have a sufficiently active potential-releasing impact on electronic commerce. These existing elements will be discussed below.

II. E-Commerce Relevant Aspects in the Existing Treaties

The following parts of this paper will concentrate on the most important agreements and developments in the WTO treaties: GATT, GATS and TRIPS. It is obvious that also other WTO-elements (especially the Agreement on Technical Barriers to Trade) have significance for electronic commerce. This paper does not intend to give a detailed overview of all WTO-aspects that might be relevant for E-Commerce. Rather the paper tries to cover some ground for the preparation of further needed WTO-actions.

1. *The Information Technology Agreement (ITA) of the GATT framework*

To begin with a general remark about the GATT's relevance: in so far as goods are delivered in the traditional physical and not in the electronic mode, cross-border transactions are subject to the GATT-commitments and the country-specific tariff concessions. Thus the liberalised WTO-concessions with respect to goods trade fully apply to electronically ordered goods or goods that have been searched and found over electronic media. In other words, the use of electronic media to conclude contracts for cross-border goods trade does not evade the GATT concessions. A significant share of the contemporary electronic commerce transactions is hence considered as normal goods trade, which is subject to the GATT. If services are required in the ordering, storage or delivery process of the electronically ordered goods, these services are classified separately under the GATS.

The availability of technical infrastructure is crucial for the development of E-Commerce. This logic assigns a particular significance to the so-called Information Technology Agreement (ITA). At the WTO Ministerial Conference in 1996 the Ministers agreed to a common position with

⁴¹ Art 3:2 of the Dispute Settlement Understanding (DSU) states the following: "The dispute settlement system of the WTO is a central element in providing security and predictability to the multilateral trading system. The Members recognize that it serves to preserve the rights and obligations of Members under the covered agreements, and to clarify the existing provisions of those agreements in accordance with customary rules of interpretation of public international law. Recommendations and rulings of the DSB cannot add to or diminish the rights and obligations provided in the covered agreements." This imperative guideline can hardly be respected with the kinds of uncertainties faced with the rise of new trade media. Drake and Nicolaidis, 1999, p. 51 demonstrate the dangers of the lacking legitimacy, if the dispute settlement body has to take decisions in questions where the negotiating countries have left unbridgeable gaps in the WTO Agreements.

⁴² See, for example, GBDe, 2000 and Alliance for Global Business, 1999.

regard to trade in IT goods⁴³. Afterwards the signatory countries committed themselves to reduce their tariffs on IT-goods in four steps of 25% to reach a tariff-free policy by the year 2000. This obligation pertains to a common list of IT-products that was decided upon by the Member Countries. Together, the above declaration, the worked-out product list and the country-specific tariff-concessions regarding the commonly chosen IT-products constitute the ITA. Most importantly, the commitments are subject to the Most-Favoured Nation (MFN) principle. This negotiation package is not only interesting because it significantly liberalises trade in IT-goods, rather, the particular negotiation procedure is of interest in regard to the E-Commerce initiative proposed by this paper. Under the condition of sufficient participation of other trade partners, single WTO-members have committed themselves to liberalise their country tariff schedules outside of a great trade round. The tariff reductions are subject to the MFN-principle. In other words, all WTO-members, including the non-signatory nations, benefit from the tariff reductions. The fact that non-WTO members (Taiwan) may benefit from the ITA is noteworthy. It must be emphasised that this negotiation procedure has led to a rapid implementation of trade policy in a very important technology-oriented field without the formality of a big trade round which would necessitate a mandate and difficult negotiation packages.

Due to the fact that the 50 signatory countries are responsible for more than 95% of world trade in IT-goods (computer, telecommunication apparatus, semi-conductors, software, etc.) the WTO has laid the ground stone for more intensive trade and the distribution of IT-infrastructure necessary for E-Commerce. The ITA is applicable to a relatively large portfolio of products, which are defined in two annexes. Moreover, to allow for a transparent and unambiguous interpretation of the trade concessions, the signatory countries are obliged to reduce their classification divergences with respect to IT-goods. As these countries were aware of the rapid technological change in this goods segment, a committee⁴⁴ was founded in order to guarantee a permanent revision and update of the product coverage concerned. Therefore, both the widening of the product coverage and the treaty implementation are tasks of this committee. Most studies confirm that the ITA has created a global IT goods market with ensuing efficiency gains, a greater trade volume and cost reductions⁴⁵. These positive treaty characteristics do not only benefit E-Commerce but the increased spread of information technology also brings advantages to a wide range of production activities.

If one tries to evaluate the ITA with respect to possible improvements which would benefit the realisation of E-Potential, the following arguments must be raised:

- 1) To shed light on ITA's success, often WTO experts point out the fact that the treaty covers 95% of the existing world trade in IT-goods. This high coverage of IT-trade however is reached through the circumstance that import and export of IT-goods is extremely concentrated in a small set of countries. That is why this assessment is somewhat deceptive. A less

⁴³ To get an insight into the history of the ITA see Senti, 2001 or Wasescha and Schlagenhof, 1998, p. 114 ff.

⁴⁴ Committee of Participants on the Expansion of Trade in Information Technology Products.

⁴⁵ For a well-balanced analysis of the advantages and disadvantage of the ITA see ITC, 1999.

developed country which does not produce or export IT-goods would also profit from becoming a party to the treaty because it may then enjoy duty-free imports of IT-products. To tap the potential of E-Commerce, one must address the importance of the ITA for the potential IT-importers. Yet a glance at the list of signatory countries reveals that too few of the developing countries with a particular growing potential vis-à-vis IT-infrastructure have claimed access to the ITA. The negotiations have concentrated on the inclusion of a maximum number of IT-producing and consuming countries. In the interest of a more widely distributed participation in global electronic markets these efforts must be extended towards developing nations. In a world with rapid technological change the Infant-Industry Argument⁴⁶, which is often referred to by developing countries as a counter-argument against joining the ITA, can cause sizeable economic costs. As mentioned before IT-goods can be considered as a general purpose technology⁴⁷ which have important beneficial effects on all industrial and service sectors. Hence, technological backwardness in this field has far-reaching negative consequences.

- 2) Although a permanent update of the product coverage was decided when the treaty was concluded one cannot possibly speak of an automatic improvement of the treaty. Already the first steps taken to extend the product coverage of the ITA in 1997 and 1998 failed due to a lack of consensus of the signatory countries. These so-called ITA II negotiations thus lead to a standstill in July 1998 and have not been resumed since⁴⁸. This lacking flexibility leads to a situation where the product list cannot fast enough be adapted to the rapid technological progress. Thus a number of new IT-goods which are essential for the functioning of the Internet are not covered at all. The fact that goods in the overlapping area of communication and entertainment electronics (i.e. standard or digital TV) are not considered in the treaty does not take sufficient account of the multimedia dimension. Equally unsatisfactory is the fact that the goal to remove important divergences in the classification of goods between signatory countries has not been reached. Both the product list annexed to the ITA and the different interpretations of the classification by the member countries can be improved. To give an example, fibreglass cable falls under the duty-free convention of the ITA whereas fibreglass that is used in the telecommunications sector is not subject to the agreement⁴⁹.
- 3) Studies reveal that between 1989 and 1998 the number of non-tariff trade barriers in the trade of IT-goods have dramatically gained in importance⁵⁰. Among these trade barriers one can

⁴⁶ In 1999 the International Trade Centre (UNCTAD/WTO) has organized a consultation of developing countries, which proves that they see their nascent IT-industries (especially small-and medium sized firms) threatened by a full withdrawal of tariffs (zero bound tariff rates as called for by the ITA). See ITC, 1999, p. 85.

⁴⁷ According to Helpman, 1998, p. 3 "a drastic innovation qualifies as a general purpose technology if it has the potential for pervasive use in a wide range of sectors in ways that drastically change their modes of operation".

⁴⁸ WTO, 1998e.

⁴⁹ See Wasescha and Schlagenhof, 1998, p. 125 or GBDe, 2000 p. 2 for a critical discussion of the classification divergences.

⁵⁰ WTO, 2000c.

name administratively difficult and intransparent regulations of import licenses. But also the time-consuming and expensive certification and validation of technical standards can be a trade hindrance⁵¹. A new work program of the relevant committee⁵² will now take up the issue of non-tariff barriers in IT-trade. A list of all possible non-tariff trade barriers concerning IT-good will have to be available in March 2001. In a second phase efforts will be made to assess the economic costs as well as the costs associated with retarded economic development caused by these trade barriers. In a third phase, to be concluded in November 2001, the Committee will evaluate the results of the two preceding phases⁵³. Although these questions are currently being investigated and although the work program contains clear indications as to objectives and deadlines, these efforts can only be a first step in the reduction of the IT-trade barriers. It will be decisive what kind of mandates for trade negotiations will result from this work program.

Summing up one can say that the ITA creates good preconditions for the exploitation of the untapped E-potential. The signatory countries, however, have missed the opportunity to deepen and up-date their sometimes outdated commitments. Moreover, the treaty is still too much focused on the important producer and consumer countries. Not enough efforts were made to convince the developing countries of the multitude of advantages that are correlated with a low-cost admittance to global IT-markets. Finally, non-tariff barriers which are currently not dealt with by the ITA increasingly undermine ITA's objectives.

2. *E-Commerce and the General Agreement on Trade in Services (GATS)*

The GATS is of particular significance to E-Commerce for three reasons: first, the communication services which provide access to E-Commerce fall under the GATS. Second, the execution of an electronic transaction necessitates infrastructure services (distribution, payment, etc.) whose liberalisation equally falls under the GATS. Finally online commerce mainly takes place in services. The liberalisation of content-services (i.e. medical, legal, consulting, finance, etc.) is therefore a crucial prerequisite for the exploitation of E-Potential. These three elements are the subject of the analysis in the following paragraphs. Particular emphasis is laid on the communication services. Some introductory general remarks about the structure of the GATS may facilitate to put the various initiatives in their proper place.

a) The structure of the GATS

The GATS framework provides three different types of obligations: general obligations which are valid for all service sectors, general obligations which are applicable to those sectors where countries have entered specific commitments, as well as specific concessions which are included in lists according to service sectors and mode of service delivery (see box 1).

⁵¹ See WTO, 2000b.

⁵² Committee of Participants on the Expansion of Trade in Information Technology products (ITA).

⁵³ WTO Press Release, 2000.

The general obligations applying to all service sectors are: the most-favoured nation principle (with the possibility of temporarily limited exceptions) and the commitment to transparency. Of the general obligations which apply only to the sectors where country-specific commitments have been made the following points are especially relevant to E-Commerce: the requirement of reasonable, objective and impartial application of national regulations (Art. VI), behavioural constraints for monopolistic suppliers (Art. VIII), prohibition of constraints on payments related to service transactions (Art. XI), and the obligations imposed by the Telecommunication Annex.

The specific concessions of the country schedules relate to free market access and national treatment commitments. Where countries wish to deviate from these two principles of trade openness, they must list these deviations in their country schedules (negative listing). Restrictions which are not mentioned in the country schedules are not admissible. This way the GATS "ties" WTO members to their originally agreed deviations from the principle of free access to the markets and national treatment commitments as maximum admissible restrictions.

b) *Article VIII and the Telecommunication Annex*

By their anti-competitive market behaviour monopolistic suppliers can endanger the content of trade openness concessions (MFN and further commitments). Accordingly article VIII:2 states that suppliers with monopolistic rights must not impair the use of specific concessions in other sectors. If for instance a country has made market access commitments in Internet services, the local monopoly supplier of telephone services must not block market access by way of dominant behaviour⁵⁴.

In view of the acknowledged importance of telecommunication services for other service sectors, the access to public telecommunication networks was put down in a separate Telecommunication Annex. This annex states that any service supplier of any other Member is accorded access to and use of public telecommunication networks and services⁵⁵ on reasonable and non-discriminatory terms and conditions for the supply of a service included in the country schedule (Annex 5 a). This commitment does not concern free market access to the market for telecommunication services. With this guarantee for access to public telecom networks the Telecommunication Annex aims at safeguarding that the commitments made in other service sectors can actually be used by suppliers in foreign countries. For instance, if one country liberalised insurance services in its country schedule, a foreign insurance service supplier must be granted access to the public telecommunication networks and services.

c) *The Basic Telecommunications Agreement (Fourth Protocol)*

In most nations the telecommunications sectors have gone through a massive deregulation and privatisation process. Services that had formerly been provided by monopolists were handed

⁵⁴ Furthermore, Art. IX calls for sympathetic considerations with respect to consultations over business practices of service suppliers that may restrain competition and thereby restrict trade in services.

⁵⁵ Here basic and value-added telecommunications are meant.

over, step-by-step, to private suppliers. However, the Uruguay Round took place at a time when no international consensus on the desirable degree of trade openness for cross-border transactions in this sector existed. Therefore liberalisation commitments could only be realised step by step.

It has already been mentioned above that the GATS Telecommunication Annex requires that suppliers of services for which the member countries have entered specific commitments must be granted unimpeded access to the telecommunication services. Comparatively broad market access commitments could be achieved for the so-called value-added telecommunications during the Uruguay-Round. Yet no trade openness was achieved for basic telecommunication services.

Already during the ratification process of the WTO-treaties new negotiations on further trade liberalisation in the basic telecommunications market began. In the Fourth Protocol of February 1998 55 countries (the EU is counted as one country) decided to hand in country-specific commitment lists. Until 1999 14 further countries joined the Basic Telecommunications Agreement. With this agreement the members define their specific market access concessions for the basic telecommunication sector. Because the agreement is based on individual country lists, the extent and structure of the liberalisation in the various countries is rather heterogeneous. Nevertheless, national markets which are subject to this agreement cover more than 90 % of world trade in basic telecommunications. Ten countries made specific commitments for internet services. Due to the fact that mostly public or at least formerly monopolistic suppliers control the access to the internet over the local loop, the Fourth Protocol is of great importance for E-Commerce.

In addition to the market access concessions in the different basic telecom activities the countries adhere to competition policy principles put down in their country lists. For that matter the countries agreed on the so-called Reference Paper during the telecom negotiations. Although the countries have the possibility to schedule deviations from the Reference Paper, a rather uniform and coherent competition policy framework was established for the markets of the countries involved⁵⁶. The paper contains competition policy principles for the access to public telecommunication networks. To begin with, it defines the meaning of "essential facilities" and "major supplier". Further it provides for rules that shall prevent anti-competitive behaviour in the telecommunications sector. Moreover, the non-discriminatory, transparent access and interconnection with the public network or dominant supplier is obligatory. Even though each country has the right to maintain domestic regulations concerning universal service obligations, this right shall be used in a fair and non-discriminatory manner. The allocation of licenses but also the award of other scarce resources (numbers, frequencies, etc.) shall also be fair and non-discriminatory. Last of all, the Reference Paper demands the establishment of an independent regulatory agency which must supervise the observance of the above principles and the telecom markets in general.

This multilateral foundation of competition policy elements for telecommunication regulation is unique in its kind and could serve as a model for safeguarding market access commitments in

⁵⁶ Only the parts of the Reference Paper that the countries have taken in their individual country lists are enforceable. The Reference Paper itself does not have binding character. It merely served as model for the formulation of the different country lists.

other highly-regulated network industries with bottleneck facilities. Without exaggerating it may be said that the Reference Paper is a successful attempt to export regulatory practices of countries with long-standing experience and a tested regulatory structure (the USA in particular) to other countries⁵⁷. It is an established fact that the countries which have deregulated their telecommunication markets in compliance with the principles of this WTO-element will experience a positive effect on growth and development⁵⁸.

d) *Other E-Commerce relevant services*

Since an E-Commerce transaction ends with an order, payment and a possibly physical delivery, a myriad of other services are essential for electronic trade. Among these are payment facilities, security services, auction platforms, distribution, services of search engines and others. Without providing a detailed analysis of the individual commitment lists of the WTO member, one can draw the conclusion that these services, which are often complementary to physical goods trade, are submitted to comparatively few restrictions.

A similar picture emerges if one looks at the services which are the content of the electronic transactions. In particular trade with audio-visual services, for which the EU and most other WTO-members have not made any GATS commitments, is subject to important restrictions. The same holds for consulting services in highly regulated markets (e.g. medical or legal services) or for direct cross-border consumption-related financial services. There is still great potential for further liberalisation steps in the domain of content services.

The previous paragraphs showed in what form the issues of electronic trade were included into the framework of the GATS. The next three paragraphs will take up the three policy areas where further progress could strengthen electronic commerce significantly.

e) *Extension and deepening of the specific commitments*

The sector-specific commitments in the GATS country schedules are not yet liberalised enough and their trade promoting effect is limited. Few further commitments were entered after the Uruguay Round. Yet at that time this was nevertheless remarkable progress since with the GATS, for the first time, a multilateral regulatory structure for the trade in services was created. However, the industrialised countries made concessions only for half of their services sectors. Again only half of these commitments guarantee free market access. Very often the commitments made for mode 3 (local presence of the supplier of foreign services, see box 1) go further than for the E-commerce relevant modes 1 and 2. The transparency of the trade liberalisation is far from being optimal and the heterogeneity of market access conditions in different countries, sectors and modes of delivery

⁵⁷ Langenfurth, 1999 (chapter V) finds that the Reference Paper mirrors regulatory practices that had already been partly implemented in the USA and EU.

⁵⁸ See OECD, 1999a for a discussion of the deregulation effects{OECD 1998 22 /id}. The World Bank Group, 2000, p. 191, points out that this kind of trade liberalization coupled to competition policy elements convinces private parties to invest in the construction of local networks.

constitute a protectionist trade barrier⁵⁹. As a consequence Switzerland, for instance, has proposed to enact sector-specific minimum standards for commitments to increase trade openness and transparency⁶⁰. Based on this logic one could imagine that certain market access barriers should be completely excluded.

The claim for an extension of current country-specific trade concessions is a general priority in new services negotiations. But what has been outlined above may have made it clear that E-Commerce would especially benefit from additional trade liberalisation in the services sector. This holds true for the infrastructure services (telecommunications as well as the complementary infrastructure services referred to) and for the content services themselves. Especially in the content field there exists an enormous potential for further E-Commerce relevant concessions. This also applies to the area of “professional services” in highly regulated sectors (medicine, legal services)⁶¹ as well as to audio-visual services⁶². We are aware that these are politically very sensitive issues, but this should not keep us from giving our attention to areas with a high growth potential.

Considering the circumstance that especially developing countries could profit from their relatively low labour costs to export more content services (software, call centres, etc), industrialised countries should reduce the number of trade hindrances in this area⁶³. Reducing trade barriers in services would also benefit providers from industrial countries⁶⁴. The structure of existing commitments demonstrates how little attention has been paid to the influence of new media on global trade in services.

In the narrower field of telecommunication services the following demands are of immediate importance:

- 1) The specific commitments in basic telecommunications are often not neutral as to their technology. For instance they allow access to the telephone market only by way of certain specific technologies (e.g. radio, satellites) and exclude other technologies. In times of rapid technological change this has deleterious effects on the market positions of foreign service providers, as well as negative effects on the development of the domestic technology and telecommunication prices of the importing country.

⁵⁹ See Hoekman, 2000, pp. 132-33 and Hoekman and Messerlin, 2000, for an elaboration of the connection between service trade liberalization and domestic regulations.

⁶⁰ See WTO, 1999a for this suggestion.

⁶¹ OECD, 2000b, pp. 45-50.

⁶² Audio-visual services can be considered as infrastructure as well as content services. It is an established fact that the contemporary audio-visual sector is significantly different from the audio-visual sector that was subject of negotiations during the Uruguay Round. Even though one can expect an explosion of multimedia-products based on audio-visual services in the near future, it is one of the least liberalized sectors. See for instance Baumann, 1997; Acheson and Maule, 1999; Messerlin, 2000 .

⁶³ See ITC, 2000.

⁶⁴ Mattoo A. and Schuknecht L., 2000, p. 13.

- 2) Moreover there are too many restrictions concerning ownership rights and market access conditions which openly or indirectly discriminate against foreign service suppliers⁶⁵.
- 3) Today only few developing countries offer trade concessions in the areas of basic and value-added telecommunications. But a high-performance communication infrastructure is a precondition for the participation in an increasingly electronically-connected global market. Strategies have to be developed which convince countries with low quality or absent communications infrastructures to sign the Basic Telecommunications Agreement with significant liberalisation commitments.
- 4) Most countries have not made specific concessions on internet service providers or internet backbone operators. This is particularly deplorable in countries with telecommunication monopolists or other forms of restricted access to the Internet.
- 5) Finally it must be taken into consideration that a number of totally "new" internet-related services which have not yet found their way into national trade schedules have come into existence⁶⁶. This makes it questionable whether they are covered by existing classifications. In addition, Drake and Nicolaidis, 1999, pointed out that the Internet increasingly offers services bundling which can be badly represented in the sector-oriented schedules of the GATS.

Summing up, it can doubtless be said that a new liberalisation round within the GATS framework would create new business opportunities for E-Commerce.

f) Strengthening of the regulation discipline

The second relevant issue with respect to GATS concerns domestic regulations. Art. VI:1 says that in sectors with specific concessions the national regulations shall be applied in a reasonable, objective and impartial manner. The purpose of this article is to avoid that GATS commitments are undermined by protectionist domestic regulations. Until now, there is relatively little conflict because specific concessions have been made mostly for mode 3 (local presence) which guarantees that domestic regulation can be applied to foreign producers. Cross-border trade in services in mode 1 and 2 is still very limited.

There are, however, strong interest groups among the services industries which ask for more mode 1 and 2 commitments in the currently undertaken GATS 2000 negotiations. Obviously these interest groups see a large potential looming behind online services trade⁶⁷. As soon as more cross-

⁶⁵ Examples are: Foreign ownership restrictions, licensing standards, qualification requirements, exclusive rights, nationality and residency requirements, restriction to use monopoly network facilities, limits on foreign suppliers' activities, restrictions on legal type of activity.

⁶⁶ Webhosting, electronic authentication, data push services, etc.

⁶⁷ See for example the action program of the American Coalition of Service Industries (www.usci.org/groups/eit.htm) or the program of the yearly "World Services Congress" that will take place in October 2001 in Hong Kong (www.chamber.org.hk/wsc/program.html). Both will call for more service trade liberalization in the e-services domain.

border trade in these sectors will be achieved by new concessions, tension between domestic regulations and service sector commitments may arise⁶⁸. An insurance company offering its services over the Internet may be forced to comply with the country-specific heterogeneous regulation regimes of all the countries to which its offer is addressed.

There will be demands for sector-specific harmonisation of regulation. But it will also be increasingly difficult to recognise which domestic regulations follow legitimate policy objectives with well-balanced means and which regulations aim at protecting local markets from global competition. Especially the general exception paragraphs such as Art. XIV GATS, which allows exceptions from trade commitments to protect public morals, maintain public order, protect life or health or protect privacy etc., allow a wide range of interpretation to evade trade openness. The interpretation of Art VI will therefore deserve particular attention and enforcement. Only time will show whether Art. VI will suffice on its own to avoid a protectionist abuse of justified regulatory policies. Up to now, there have been no dispute settlement cases in connection with domestic service sector regulations. But there seem to exist an increasing number of new regulations which curtail the online-trade potential and the freedom of the World Wide Web⁶⁹. As it is still an impossible task to control or supervise content and information flows on the net, the current regulatory methods are less than well tuned. Hence a balanced relationship between regulatory aim and regulatory methods is hard to be found. This has negative consequences for E-Commerce and the regulatory responsibilities of the state⁷⁰.

g) Strengthening of the competition policy regulations

Despite the fact that the Telecommunication Annex and the Reference Paper have introduced competition policy elements into the GATS, a strengthening of these elements is highly desirable. Often the very vague formulation of the Reference Paper is being criticised. The terms used leave room for a wide interpretation, which endangers the legal security. Bronckers and Larouche for instance identify a lack of precision for nearly every paragraph that makes a consistent interpretation of the access and interconnection rights rather difficult⁷¹. The effect of this lacking sharpness in regulatory specifications is increased by the fact that WTO law has no direct effect and cannot be clarified by national courts. The WTO Dispute Settlement Body can only imperfectly fulfil this function. Besides it must not be forgotten that member states have not included the Reference Pa-

⁶⁸ See also Feketekuty, 2000a and Feketekuty, 2000b that states that the success of services trade liberalization is tightly related to regulatory reforms or international harmonization needs.

⁶⁹ See for example the recently published article in *Wirtschaftswoche*, 2000. The article sheds light on the circumstance that in particular EU Member States introduce domestic regulations that erect barriers to E-Commerce. In addition, *The Economist* describes how an increasing regulation of the Internet (especially the content regulation) diminishes the potential behind the information infrastructure and E-Commerce. *The Economist*, 2001.

⁷⁰ This problem arises when firms can escape the regulatory force of local governments with a displacement of their web-servers to less regulated countries.

⁷¹ Bronckers and Larouche, 1997, pp. 23-31.

per itself but their own version of the Reference Paper in their country schedules. A look into the country schedules shows that there are a significant number of countries that have accepted the Reference Paper only partly or not at all in their schedules⁷².

The problems with interpretation margins and insufficient regulatory specifications are also relevant with regard to GATS Art VI on domestic regulations⁷³. A case in point is the fact that WTO-members often complain about missing access to necessary bandwidths in other WTO-member countries⁷⁴. There are also disputes with respect to frequency allocation which cannot be resolved by the dispute settlement process.

Open networks are particularly important for E-Commerce development. For this reason the limitation of the Reference Paper to basic telecommunications is considered as insufficient⁷⁵. In the present time it is debatable whether or not the providers of communication services as, for instance, the Internet Service Provider, are covered by the principles of the Reference Paper at all⁷⁶. Even the Telecommunication Annex guarantees access to the "public" telecommunication network and its services only and says nothing about other rights of access. As the Internet also consists of parts of private networks, it is questionable whether the Reference Paper actually applies. All in all more multilateral regulations are needed to safeguard open networks for "new" and old communication service providers. This demand applies to both market access conditions and technological concepts. The model of the Reference Paper should be accepted generally in order to make multilateral regulation frameworks binding in an increasing number of service sectors.

As in other sectors the enforcement of the regulatory goals and methods is a serious problem. This can be due to weak efforts for implementation as well as to insufficient international control mechanisms. Often, however, developing countries simply lack the technical expertise and the financial means to establish such sophisticated regulatory institutions. Despite the fact that even then the conclusion of international treaties is meaningful, means and ways have to be found to help developing countries in their implementation⁷⁷.

⁷² On the other hand there are countries which have voluntarily committed to competition elements that go further than the Reference Paper. The individual country commitments are available on the WTO Internet page (www.wto.org).

⁷³ Warner, 2000, pp. 388-90.

⁷⁴ WTO, 1999f.

⁷⁵ See for example Drake and Nicolaidis, 1999, p. 28.

⁷⁶ On one side, the EU asserts that the Reference Paper also covers internet service providers. On the other side, the USA does not easily agree to this interpretation as the responsible American regulation authority (Federal Communication Commission- FCC) has always refused to categorize internet access services as basic telecommunications. The latter would have the consequence that the general rules on basic telecommunications would equally apply to the internet services. In the promise of a more rapid and successful development the American authorities have, until now, aimed at keeping the internet services regulation-free; see Drake, 2000{Drake & Nicolaidis 1999 77 /id}, p. 159.

⁷⁷ See the conclusions of Goldstein and O'Connor, 2000 p. 29.

3. *E-Commerce and the TRIPS (Trade Related Aspects of Intellectual Property Rights)*

It is obvious that the protection of intellectual property rights (IPR)– and therefore the TRIPS – is crucial for the development of E-Commerce. Next to the GATT and GATS, the TRIPS-agreement is one of the three pillars of the WTO-order. It integrates the existing WIPO-agreements (World Intellectual Property Organization) into international trade law, extends the scope of the related rights, formulates minimum standards and obliges the Member Countries to introduce an independent judicial appeal system. Beside these demands to enforce the property rights of immaterial goods by the individual states, the treaty contains two important multilateral reinforcements. The two central WTO principles of most-favoured nation treatment and national treatment equally apply to the TRIPS. Furthermore the dispute settlement process of the WTO can be invoked in case a member violates its TRIPS obligations.

There is consensus that the TRIPS, due to its technology neutral specification, can also be fully applied in the area of online services⁷⁸. In regard of electronic trade the following elements of the TRIPS can be further developed:

- 1) The positive deviations from the minimum TRIPS standards, rooted in numerous national laws on the protection of intellectual property, lead to heterogeneous commitments for the different member countries. This heterogeneity and the resulting lack of transparency are increased by the partly insufficient enforcement of the minimum standards. This is especially the case in developing countries, which either do not have the will or the resources to enforce the obligations they have undertaken.
- 2) The problem of heterogeneous rights and insufficient enforcement of minimum standards is not E-Commerce-specific but concerns international trade and investment activities in general. It is the global nature of E-Commerce, however, that makes these problems more apparent. The Global Business Dialogue considers the weak enforcement of existing treaties as a significant threat to E-Commerce⁷⁹.
- 3) Generally speaking the previously existing WIPO-agreements and the TRIPS are applicable to electronic transactions. Nevertheless E-Commerce requires special regulations which WIPO 1996 approved by the WIPO-Copyright Treaty (WCT) and the WIPO Performances and the Phonograms Treaty (WPPT) in 1996⁸⁰. These complementary agreements have not yet been integrated into the TRIPS-Treaty, which creates a specific gap in the area of electronic transactions⁸¹.

⁷⁸ WTO, 1999c.

⁷⁹ GBDe, 1999.

⁸⁰ Independently of the TRIPS, until the end of 1996 approximately 50 states (including the USA and the EU) had signed the WIPO-treaties.

⁸¹ See WTO, 1999e. Please note that this paper cannot fully discuss the implications of the information infrastructure on the applicability and the necessary improvements of IPRs. This will be the subject of a different paper.

D. E-Commerce Initiative of the WTO

The analysis of the existing WTO-framework supports the argument that this international organisation should play a more important role in the development of E-Commerce than it generally assumes. The efforts made so far do not sufficiently correspond to this role. The WTO work program for electronic commerce for example (compare section 2.1) has taken a very re-active rather than a pro-active stance towards electronic trade. The main issue was how the phenomenon of electronic trade could be integrated into existing agreements and to what extent the texts of such existing agreements had to be adapted. The deliberations did not lead to a clear mandate for further negotiations.

Apart from the moratorium on tax exemption of electronic transactions the last steps that led directly or indirectly to the expansion of E-Commerce were taken three and four years ago, namely the ITA in 1997 and the enactment of the Fourth Protocol in 1998. Even the validity of the moratorium was questioned after the break-off of Seattle negotiations. Currently there are no comprehensive new initiatives in sight.

Considering the great importance of E-Commerce for world-wide economic development this inactivity of WTO is to be deplored. This is especially true in regard of the developing countries. A concerted negotiation round could integrate the developing countries much better into the emerging global trade networks. The danger of an emerging "Digital Divide" should be a reason enough to take up the issue in the WTO as one of its priority topics.

The point of departure of an upcoming E-Commerce initiative must pay respect to the legal gaps that have been identified. The table included in section 3.1 sums up the points discussed in chapter 2. Section 3.2 will formulate the conditions a new E-Commerce initiative must fulfil. Section 3.3 points out several negotiation strategies and evaluates them in view of creating a coherent global trade framework for E-Commerce.

I. Content of an E-Commerce Initiative

Table 3 shows how existing treaties and commitments could be improved. Often the proposals extend existing commitments (alterations of the country-schedules, either individually or coordinated). With respect to other proposals it would seem desirable that negotiation parties could make a final decision on the interpretation of the texts of the treaties (e.g. concerning the categorisation of digitally delivered goods). Finally the table also contains proposals for actions which may require modifications or completion of the texts of treaties (e.g. if establishing a treaty on regulatory trade barriers for services would seem necessary).

Table 3: Compilation of the improvement suggestions with respect to the existing WTO treaties

Fundamental Questions	
WTO – ELEMENT	CALL FOR ACTION
Moratorium	<ul style="list-style-type: none"> The moratorium should be converted into a permanent formal agreement

Categorisation	<ul style="list-style-type: none"> • Categorisation of digitized goods: GATT or GATS?
	<ul style="list-style-type: none"> • Categorisation of online services within GATS: mode 1 or 2?
Necessity of Further Liberalisation of Trade	
WTO – ELEMENT	CALL FOR ACTION
GATT	
Information Technology Agreement	<ul style="list-style-type: none"> • Expansion of the ITA-agreement towards more WTO and non-WTO members
	<ul style="list-style-type: none"> • Actualisation of the product range, termination of classification divergences, abolishment of non-tariff trade barriers
GATS	
Trade in telecommunication services	<ul style="list-style-type: none"> • Extension of the Fourth Protocol commitments • Elimination of certain market entry barriers • Strengthening of the competition policy within the framework of the Reference Paper
Trade in other e-commerce-relevant infrastructure services	<ul style="list-style-type: none"> • More market entry and national treatment commitments in mode 1 and 2 • Introduction of a minimum commitment in mode 1 and 2 and Elimination of certain market entry barriers • Liberal classification of new infrastructure services
Trade of content-services in E-Commerce	<ul style="list-style-type: none"> • More market entry and national treatment commitments in mode 1 and 2 • Here especially the stimulation of the export of labour intensive services from developing countries to industrialised countries • Here especially the stimulation of the export of high quality services from industrialised to developing countries (medicine, education, etc.) • Introduction of a minimum commitment in mode 1 and 2 and Elimination of certain market entry barriers • Liberal classification of new infrastructure services
TRIPS	<ul style="list-style-type: none"> • Extension of TRIPS with the existing WIPO Agreements - WIPO copyright agreements (WCA) and the WIPO performances and phonograms treaty (WPPT) - that concern the protection of the intellectual property in the online-environment.
Necessity of Free Market Access in Network-Based Industries	
WTO – ELEMENT	CALL FOR ACTION
GATS	
Telecommunication Annex	<ul style="list-style-type: none"> • The appendix should not only be valid for public telecommunication networks, but should also explicitly ensure the access to other electronic networks

Reference Paper to the Basic Telecommunications Agreement	<ul style="list-style-type: none"> The Reference Paper only refers to basic telecommunications. An enlargement towards other telecommunication services should be examined.
Call for Action with Respect to Domestic Regulations	
WTO – ELEMENT	CALL FOR ACTION
GATS	
Art. VI (domestic regulation) and art. VII (recognition of qualifications)	<ul style="list-style-type: none"> In case of increased market openness via more mode 1 and 2 GATS commitments it may be necessary to supplement Art. VI and VII with an agreement that is to minimise technical trade barriers.

II. Requirement of a new E-Commerce Initiative

Few WTO Member Countries would refute the argument that there should much better use be made of the E-Commerce potential. Contrary to other trade issues where the negotiating parties hold rather diverging opinions (e.g. agriculture), the exploitation of the E-Potential seems to meet with general consensus. Despite this consensus no specific actions have been taken. This may be due to the fact that this subject is always discussed in connection with other interests and that the possibility of a concerted E-Commerce initiative has not yet been sufficiently investigated.

In drawing up such an E-Commerce initiative one should consider the following points:

- 1) It is decisive that the topic electronic trade is treated simultaneously in its GATT and GATS dimension. In doing so one can follow the recommendations made in section 2.1 on the WTO work program and the preparatory work by the different Councils can be used as a starting point for further negotiations.
- 2) It is equally important to have a clear mandate at the start of the negotiations. The goal is not a stock-taking of existing treaty rights and obligations but to initiate a process which liberates trade. Priority should thus be accorded to market opening on the basis of non-discriminatory treatment of domestic and foreign suppliers. Aspects such as authentication, internet contract law, protection of personal privacy and similar policy matters should not be connected with the negotiations for this WTO E-Commerce initiative. There are other more suitable fora for those discussions⁸². In a speech on 31 October 2000 the WTO Director General, Mike Moore, outlined his line of action, in particular he stressed that the responsibility of WTO for electronic trade was limited and restricted to certain specialised areas. This attitude ought to be supported. Most importantly, the WTO should not play the role of an internet regulator⁸³.

⁸² See for example GBDe, 2000, which mentions that other fora are better suited for these regulatory questions. Moreover, it calls for strict distribution of competencies.

⁸³ Moore, 2000, or WTO, 1998b.

- 3) It must be realised that most of the demanded liberalisation steps can be reached by a simple adaptation of GATT and GATS country schedules. An E-Commerce initiative would thus be a very “classic” negotiation round – if one does not consider that the concessions must extend to and affect many or all sectors. Most other considerations can be dealt with by decisions of the Ministerial Council or the General Council under Art IX:2 of the WTO Agreement, which specifies their possibilities in the interpretation of treaty law. Such decisions could complement a negotiation package of a concerted and comprehensive extension of country schedule commitments.
- 4) It must be kept in mind that the objective of the mandate for negotiations is not solely to achieve trade liberalisation but to create conditions so that all WTO-members can participate in the opportunities provided by electronic trade. This means that the WTO initiative must be embedded in an action program which includes the World Bank and the Trade Development Center (WTO/UNCTAD). For the developing countries more market openness must be linked to the development of the necessary infrastructure and the provision of education (E-literacy).
- 5) Finally, an E-Commerce initiative should be launched without delay. Hence it is dangerous to couple such an initiative with the fate of a next great WTO round. Of course it is desirable if this issue is attributed a prominent role at the WTO Ministerial Conference. Yet if the next months show that the prospects of the next round are not very promising, other means have to be found to bring up the subject of E-Commerce in the sense of a concerted initiative for negotiations.

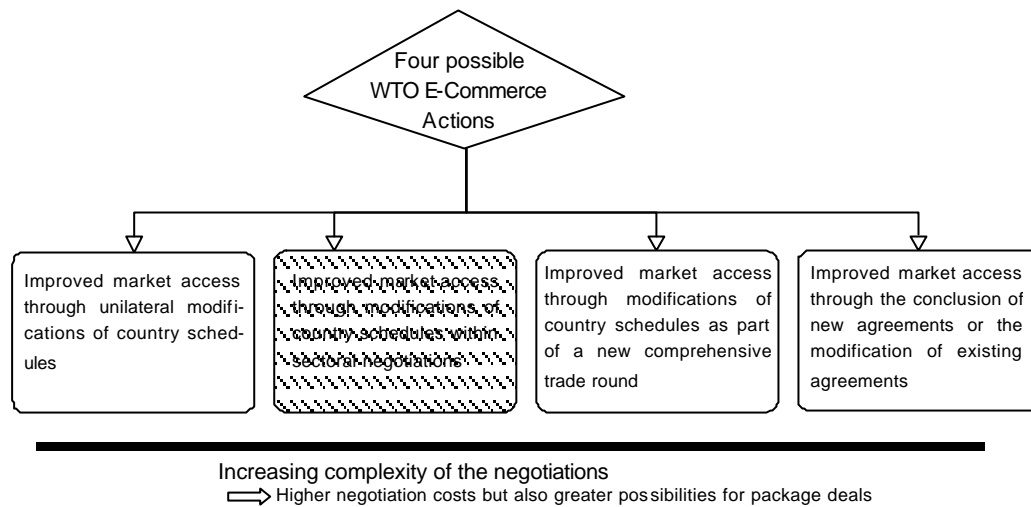
The objective is clear, namely that the WTO shall start negotiations which will result in a better use of the E-potential. To reach this aim additional concessions within the framework of the GATT and GATS are required, which can be negotiated as part of a great round be held in the very near future, launched by a Ministerial Conference, or as a separate initiative. The next Ministerial Conference at Qatar in the autumn of 2001 would be a suitable occasion to give the green light for the initiative.

III. Alternatives for an E-Commerce Initiative

Liberalisation steps within the WTO framework can be taken on different levels of negotiation. Figure 1 sums up four alternatives. First, every country can individually alter its commitment list in favour of more market access at any time. Second, such individual alterations of the country schedules can be reached by means of a co-ordinated initiative. This ensures a greater number of reciprocal trade concessions which achieve a higher degree of liberalisation than individual concessions. These are usually not made if they are not accompanied by similar actions of the trading partners. The market opening achieved by the Information Technology Agreement followed this latter pattern. Figure 1 below distinguishes between comprehensive negotiation rounds which, within the framework of the existing treaties, increase the trade commitments of all WTO Member Countries (third box from the left) and negotiations which lead to modifications of existing treaties (fourth

box). The latter phenomenon has been characteristic of the Uruguay Round. The objective of all previous rounds was to liberalise within the scope of existing treaties.

Figure 1: Four WTO E-Commerce Actions



How must the demands for more trade liberalisation in the field of E-Commerce be judged in the light of these four negotiation alternatives? First, the predominant number of the suggestions can be achieved by modifications in list of commitments of the individual countries. Modifications in the WTO treaties would only become necessary if a further liberalisation of trade in services - especially in mode 1 (cross-border service provision) and mode 2 (service by a natural person abroad without domicile) - would then be excessively restricted by subsequently implemented domestic regulations. It may well be that GATS Art. VI on domestic regulations does not provide a basis for sufficient protection from regulatory trade barriers in highly regulated service sectors. In this case it would make sense to conclude a complementary treaty on technical trade barriers (in analogy to the GATT agreement on technical barriers to trade). If necessary some issues concerning classification (in particular digitised transmission of content so far contained in goods) could be clarified by decisions of the Ministerial Council (Art IX:2 WTO Agreement).

If the main emphasis is on the modification of country schedules, it must be clarified what procedure may be most successful. The first alternative in Figure 1 can be excluded without much further explanation. Individual and uncoordinated steps of liberalisation cannot be expected for political reasons, although unilateral liberalisation would already produce great advantages. But Member Countries have not handed in important extensions of the commitments in the Basic Telecommunication Agreement, the value-added telecommunication sector or the E-Commerce relevant GATS schedules. Hence the search for the ideal negotiation stance really leads to comparing the two remaining alternatives, namely a big trade round which, explicitly, makes room for E-Commerce negotiations or a concerted action similar to the ITA-negotiations.

Reasons concerning the content and the political economy behind such negotiations speak in favour of making E-Commerce one of the topics of the next big trade round. The content-related

demands developed in this paper can be the starting point for the bundling of the relevant negotiation topics. It is essential that the structure of the negotiations is such that E-Commerce topics can be dealt with comprehensively, i.e. not only in view of one specific treaty but affecting different WTO treaties (GATS, GATT, TRIPS). For example the negotiations with respect to IT products must be co-ordinated with the corresponding GATS negotiations. As mentioned above the negotiations should be linked to development programs for developing countries which are supported by the World Bank and UNCTAD.

There are still many open questions with regard to a next big trade round. It cannot be excluded that for a considerable length of time WTO Members cannot agree on a mandate for negotiations that would include E-Commerce. Moore has demanded that the basic framework for the agenda of a new round of global trade liberalisation talks should be ready by the end of July 2001. Otherwise, a successful launch of a new round of talks at the next WTO Ministerial Conference, currently scheduled for 5-9 November 2001 in Qatar, cannot be guaranteed. He also wants a new round to be comprehensive instead of dealing with issues sector-by-sector⁸⁴. But even if both the round is started and the mandate makes E-Commerce a priority topic the negotiations will be particularly difficult. This is a realistic assessment as there is enormous political pressure in industrialised countries to include new trade topics in a next round (i.e. competition, environment, labour standards). Moreover, lacking consensus or massive protests against globalisation may again interrupt the preparation of the negotiations and the negotiations themselves. Therefore it may be very dangerous to link further liberalisation in the field of E-Commerce to the success of a next WTO trade round.

From this evaluation we draw the conclusion that preparations for a bundled E-Commerce initiative ought to be started as soon as possible. In case the next comprehensive trade round can be started in the autumn of 2001, this preparatory work may be of use. In case that such a round fails, the preparatory work might, in analogy to the ITA negotiations, be used for co-ordinated negotiations which would lead to modifications of the country schedules. The central question will be whether or not it will be possible to agree on a package deal which will yield a satisfactory number of steps of liberalisation and bring about a satisfactory balance between the interests of industrialised and developing countries. On account of the diversity of the issues of negotiations (see section 3.1) and the need for an infrastructure initiative of the World Bank and UNCTAD, we are rather optimistic that such a procedure might be very promising. Seen from an economic point of view such a procedure would doubtless be desirable.

⁸⁴ See Bridges Weekly Trade News Digest Vol. 5, Nr. 4, Feb. 6th 2001 under <http://www.ictsd.org/html/weekly/06-02-01.txt>.

Bibliography

1. **Acheson K and Maule C. 1999:** *Much ado about Culture- North American Trade Disputes* Studies in international Economics. Ann Arbor: The University of Michigan Press
2. **Aitic. 1999:** *Electronic commerce within the framework of the WTO: Implications for the less developed countries.* Agency for International Trade Information and Cooperation, <http://www.acici.org/aitic/documents/Notes/note5ang.html#3>.
3. **Alliance for Global Business. 1999:** *A Global Action Plan for Electronic Commerce.*, <http://www.giic.org/focus/ecommerce/agbecplan.html>
4. **Aronson J. 2000:** *After Seattle: Trade Negotiations and the New Economy.* In *Regulating the global Information Society*, ed. Marsden, C. London: Routledge
5. **Baumann H. 1997:** *Die Dienstleistungsfreiheit auf dem Gebiet der audiovisuellen Medien - im Rahmen des GATS im Spannungsfeld von Marktfreiheit und kultureller Selbstbestimmung der Europäischen Union.* Berlin: Duncker & Humblot GmbH, Berlin
6. **Bronckers M and Larouche P. 1997:** *Telecommunications Services and the WTO.* Journal of World Trade 31: 5-48
7. **Choi S, Stahl D, and Whinston A. 1997:** *The Economics of Electronic Commerce.* Indianapolis: Macmillan Technical Publishing
8. **Drake W. 2000:** *The international Telecoms Regime.* In *Regulating the global Information Society*, ed. Marsden, C. London: Routledge
9. **Drake W and Nicolaidis K. 1999:** *Global Electronic Commerce and the GATS: The "Millennium Round" and Beyond.* In *GATS 2000: New Directions in Services Trade Liberalisation*, ed. Sauv , P. and Stern, R. Washington: Brookings Institution Press
10. **Feketekuty G. 2000a:** *Assessing and Improving the Architecture of GATS.* In *gats 2000 new directions in services and trade liberalisation*, ed. Sauv , P. and Stern, R. Washington: The Brookings Institution
11. **Feketekuty G. 2000b:** *Regulatory Reform and Trade Liberalisation in Services.* In *gats 2000 new directions in services and trade liberalisation*, ed. Sauv , P. and Stern, R. Washington: The Brookings Institution
12. **Forrester. 2000:** *Sizing global online exports.*, Forrester Research, Report Series
13. **GBDe. 1999:** *Global Business Dialogue Workplan.* Global Business Dialogue on Electronic Commerce, www.gbde.org/media/papers/workplan.html.
14. **GBDe. 2000:** *Electronic Commerce and the WTO.* Global Business Dialogue on Electronic Commerce, www.GBDe.org/media/papers/GBDe_wto.html.

15. **Goldstein A and O'Connor D. 2000:** *E-commerce for development: prospects and policy issues*. OECD Development Centre, Paris, CD/Doc(00)8, Technical Papers
16. **Helpman E. 1998:** *General Purpose Technologies and Economic Growth*: MIT Press, Editor Helpman E., chapter 1
17. **Hoekman B. 2000:** *Toward a more balanced and comprehensive service agreement*. In *The WTO after Seattle*, ed. Schott, J. Washington: Institute for International Economics
18. **Hoekman B and Messerlin P. 2000:** *Liberalising Trade in Services: Reciprocal Negotiations and Regulatory Reform*. In *GATS 2000: New Directions in Services Trade Liberalisation*, ed. Sauv , P. and Stern, R. 487-508. Washington: Brookings Institution Press
19. **ITC. 1999:** *Trade in IT products and the WTO Agreements, Current Situation and views of exporters in developing countries*. International Trade Centre, Geneva
20. **ITC. 2000:** *Offshore Back Office Operations: Supplying Support Services to Global Markets*. ITC, Geneva
21. **ITU. 1999:** *Challenges to the Network: Internet for Development*. International Telecommunications Union, Geneva
22. **Krancke J. 2000:** *Marktordnung und Barrieren im grenz berschreitenden Handel mit Kommunikationsdienstleistungen: Dienstleistungen der Informationstechnologie*. Institut f r Weltwirtschaft, Kiel, Kiel Working Paper 1008
23. **Langenfurth M. 1999.** *Der globale Telekommunikationsmarkt- Telekommunikationsdienste als international handelbare Dienstleistung*. University of M nster- European doctoral theses series
24. **Mann CL. 1999:** *Electronic Commerce in Developing Countries*. Institute for International Economics, Washington
25. **Mann CL, Eckert SE, and Knight SC. 2000:** *Global Electronic Commerce- A policy primer* . Washington: Institute for International Economics
26. **Mann K and Knight S. 2000:** *Electronic Commerce in the WTO*. In *The WTO after Seattle*, ed. Schott, J. Washington: Institute for International Economics
27. **Mattoo A. and Schuknecht L. 2000:** *Trade Policies for Electronic Commerce*. World Bank, <http://www.cid.harvard.edu/cidtrade/Issues/ecommerce.html>, Working Paper
28. **Messerlin P. 2000.** *Regulating Culture: has it gone with the Wind?, 2000*
29. **Moore M. 2000:** *Opening Remarks, E-commerce Conference ITC*. WTO, Geneva, WTO News
30. **Nezu R. 2000:** *E-commerce: a revolution with power*. OECD Directorate for Science, Technology and Industry
31. **OECD. 1997:** *Dismantling the Barriers to Global Electronic Commerce.*, Internet Page of the OECD, www.oecd.org//dsti/sti/it/ec/prod/DISMANTL.HTML.

32. **OECD. 1998:** *Report on international and regional bodies: Activities and Initiatives in Electronic Commerce.* OECD Directorate for Science, Technology and Industry, SG/EC(98)10/Final, Ottawa Ministerial Conference
33. **OECD. 1999a:** *A review of market openness and trade in telecommunications.* OECD, Paris, DSTI/ICCP/TISP(99)5/Final
34. **OECD. 1999b:** *OECD Forum on Electronic Commerce- Report on the Forum.* OECD (Directorate for Science, Technology and Industry), Mr.Dryden, Paris, SG/EC(99)12
35. **OECD. 1999c:** *Revised Report on international and regional bodies: Activities and Initiatives in Electronic Commerce.* OECD Directorate for Science, Technology and Industry, SG/EC(99)5, OECD Forum on Electronic Commerce
36. **OECD. 1999d:** *Trade Policy Aspects of Electronic Commerce- Online Product Customisation.* Trade Directorate (Trade Committee of the OECD), Paris, TD/TC/WP(98)65/Final
37. **OECD. 2000a:** *Assessing Barriers to Trade in Services: Using Cluster Approaches to Specific Commitments for interdependent Services.* OECD, Working Party of the Trade Committee, Paris, TD/TC/WP(2000)9Final
38. **OECD. 2000b:** *Electronic Commerce- Existing GATS Commitments for online Supply of Services.* Trade Directorate (Trade Committee of the OECD), Paris, TD/TC/WP(99)37/Final
39. **OECD. 2000c:** *Electronic Commerce: initial Survey of unilateral Liberalisation and Facilitation Measures.* Trade Directorate (Trade Committee of the OECD), Paris, TD/TC/WP(99)38/Final
40. **OECD. 2000d:** *Local Access Pricing and E-commerce.* OECD, Paris, DSTI/ICCP/TISP(2000)1FINAL,DSTI, [http://www.oalis.oecd.org/oalis/2000doc.nsf/linkto/dsti-iccp-tisp\(2000\)1-final](http://www.oalis.oecd.org/oalis/2000doc.nsf/linkto/dsti-iccp-tisp(2000)1-final).
41. **OECD. 2001:** *Revised Report on international and regional bodies: Activities and Initiatives in Electronic Commerce.* OECD Directorate for Science, Technology and Industry, OECD Forum on Electronic Commerce.
42. **OECD Observer. 2000:** *The digital divide widens- a warning.* OECD Directorate for Science, Technology and Industry, <http://www.oecdobserver.org/news/fullstory.php/aid=165>.
43. **Panagariya A. 2000:** *E-commerce, WTO and developing Countries.* UNCTAD.
44. **Schuknecht L and Pérez-Esteve R. 1999:** *A Quantitative Assessment of Electronic Commerce.* WTO, Geneva, http://www.wto.org/english/tratop_e/ecom_e/erad9901.htm.
45. **Senti R. 2000:** *WTO - System und Funktionsweise der Welthandelsordnung.* Zürich: Schulthess Juristische Medien AG
46. **Senti R. 2001:** *Die Welthandelsordnung der Telekommunikation.* Aussenwirtschaft 56. Jahrgang (forthcoming)
47. **The Economist. 2001.** Stop Sign on the Web. The Economist. In Press on the 13.01.2001

48. **The World Bank Group. 2000:** *The Networking Revolution- Opportunities and Challenges for developing Countries*. World Bank, info Dev working paper
49. **Tinawi und Berkey, 1999:** *E-services and the WTO: The Adequacy of the Gats Classification Framework*. OECD (www.oecd.org) . Paris, OECD. 20-11-2000. <http://www.cid.harvard.edu/cidtrade/Issues/ecommerce.html>.
50. **USA. 2000:** *Digital Economy 2000*. Department of Commerce, www.ecommerce.gov/ede.
51. **Warner M. 2000:** *Competition Policy and GATS*. In *gats 2000 new directions in services and trade liberalisation*, ed. Sauvé, P. and Stern, R. Washington: The Brookings Institution
52. **Wasescha L and Schlagenhof M. 1998:** *Information Technology Agreement (ITA)- Towards a New Area of Sectorial Market Liberalisation in WTO*. Aussenwirtschaft (Swiss Review of International Economic Relations) Vol. 53: 113-127
53. **WIPO. 2000:** *A primer on Electronic Commerce and Intellectual Property Issues*. WIPO, WIPO/OLOA/EC/PRIMER
54. **Wirtschaftswoche. 2000.** Sauber und Leer- Europa rollt dem E-Commerce jede Menge Steine in den Weg- vorneweg Franzosen und Deutsche. *Wirtschaftswoche* Nr.49 (p.26 f.)
55. **WTO. 1998a:** *Declaration on Global Electronic Commerce*. Ministerial Conference, Geneva, WT/MIN(98)/DEC/2
56. **WTO. 1998b:** *Electronic commerce and the role of the WTO*. WTO, Geneva, Working Paper
57. **WTO. 1998c:** *Work programme on Electronic Commerce*. Council for Trade in Goods, G/C/W/128
58. **WTO. 1998d:** *Work Programme on Electronic Commerce*. Council for Trade in Goods, WT/L/274
59. **WTO. 1998e:** *WTO Press Release: ITA II Talks suspended.*, Press 110
60. **WTO. 1999a:** *Communication from Switzerland- Preparing for GATS 2000*. Council for Trade in Services, Council for Trade in Services, Geneva, S/C/W/103
61. **WTO. 1999b:** *Contribution by the Committee on Trade and Development to the WTO Work Programme on Electronic Commerce, Communication from the Chairperson*. Committee on Trade and Development, WT/COMTD/19
62. **WTO. 1999c:** *The Work Programme on Electronic Commerce - Background Note by the Secretariat*. Council for Trade-Related Aspects of Intellectual Property Rights, IP/C/W/128
63. **WTO. 1999d:** *Work Programme on Electronic Commerce- Information to the General Council*. Council for Trade in Goods, Geneva, G/C/W/158,
64. **WTO. 1999e:** *Work Programme on Electronic Commerce- Progress Report to the General Council*. Council for Trade-Related Aspects of Intellectual Property, Geneva, IP/C/18
65. **WTO. 1999f:** *Work Programme on Electronic Commerce- Submission by the US*. Council for Trade in Services, Council for Trade in Services, Geneva, WT/GC/16

66. **WTO. 1999g:** *Work Programme on Electronic Commerce-Interim Report to the General Council.* Council for Trade in Services, Geneva, S/C/8
67. **WTO. 1999h:** *Work Programme on Electronic Commerce.* Council for Trade in Goods, Geneva, **G/C/W/158**
68. **WTO. 2000a:** *Chairman's factual progress report to the General Council on the Work Programme on Electronic Commerce.* Council for Trade in Goods, **G/L/421**
69. **WTO. 2000b:** *Import Licensing for IT products: Canadian national experience paper.* WTO, Geneva, G/IT/9
70. **WTO. 2000c:** *Non-tariff measures work programme.* WTO, Committee of Participants on the Expansion of Trade in IT Products, Geneva, G/IT/19
71. **WTO. 2000d:** *Work Programme on Electronic Commerce-Progress Report by the Chairman to the General Council.* Council for Intellectual Property Rights, Geneva, IP/C/20
72. **WTO. 2000e:** *WTO Programme on Electronic Commerce: Oral Report by the Chairman of the Council for Trade in Services to the General Council on Electronic Commerce.* Council for Trade in Services, S/C/13
73. **WTO Press Release. 2000:** *ITA Committee approves work programme on non-tariff measures,* www.wto.org.