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**PROSPECTS for CARICOM SERVICES EXPORTS
IN INFORMATION AND COMMUNICATIONS TECHNOLOGY:
Trade and Investment Issues**

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Abbreviations

| | |
|---------|---|
| ARCOS | The Americas Region Caribbean Optical Ring System |
| BTA | Basic Telecommunications Agreement |
| CANTO | Caribbean Association of National Telecommunications Operators |
| CARICOM | Caribbean Common Market |
| CET | Common External Tariff |
| CPE | Customer Premise Equipment |
| CSME | CARICOM Single Market and Economy |
| CT | Consumption Tax |
| C&W | Cable and Wireless |
| CSME | Caribbean Single Market Economy |
| DECMS | Digital Eastern Caribbean Microwave System |
| ECFS | Eastern Caribbean Fiber System |
| ECLAC | Economic Commission for Latin America and the Caribbean |
| EDI | Electronic Data Interchange |
| EU | European Union |
| FTAA | Free Trade Areas of the Americas |
| GATS | General Agreement on Trade in Services |
| GCT | General Consumption Tax |
| GII | Global Information Infrastructure |
| ICANN | Internet Corporation for Assigned Numbers and Names |
| IDB | International Development Bank |
| ISIC | International Standard Industrial Classification |
| ITA | Information Technology Agreement |
| ITC | International Trade Center |
| ITU | International Telecommunications Union |
| JIT | Just In Time (Inventory System) |
| NTM | Non-Tariff Measures |
| OECD | Organization for Economic Co-operation and Development |
| OECS | Organization of Eastern Caribbean States |
| PSTN | Public Switched Telephone Network |
| RNM | Regional Negotiating Machinery |
| TNC | Transnational Corporations |
| TRIPS | Trade Related Aspects of Intellectual Property Rights |
| UNCPC | United National Central Product Codes |
| UNCTAD | United Nations Conference for Trade and Development |
| UNESCO | United Nations Educational Scientific and Cultural Organization |
| VAT | Value Added Tax |
| VSATS | Very Small Aperture Terminals |
| WIPO | World Intellectual Property Report |
| WTO | World Trade Organization |

EXECUTIVE SUMMARY

Overview

The potential for information and communications technologies to promote economic development is receiving increasing recognition and attention from CARICOM countries. As Transnational Corporations look towards building truly global networks and outsourcing information and processing services to lower cost countries, the Caribbean has emerged as a potential area for outsourced operations, possessing many of the key incentives for investment.

The Information and Communication Technologies industry however often proves difficult to define and therefore much less to understand. As such its role in economic growth and social change while not a moving target has often been discussed in terms of providing socio-economic benefits and making governments more efficient. The scope and application of ICT however is much broader. It is a strategic industry in itself, a key generic application spanning all industries and services, and is an essential infrastructure that facilitates cost savings while improving efficiency and productivity.

As CARICOM countries examine the need for structural transformation of their economies and search for alternative economic sectors in the wake of deteriorating terms of trade for its traditional primary commodities, ICT has become increasingly attractive. To add to this, research over the past several years provided some indication of the potential of this sector for the Caribbean and since then the region has begun to look seriously at the prospects held by ICT. The major markets for ICT however reside outside the region and primarily in larger countries. In addition, the international (external) trade policy agenda has changed significantly and new negotiations on many fronts may have wide reaching implications for policy making as it relates to this sector. CARICOM countries therefore need to carefully deliberate its strategic approach to ICT to ensure that it fits within the regional and national objectives for broader development while securing any ICT development related objectives.

Any consideration for developing an ICT services export sector however demands an examination and assessment of (i) the industry; (2) the multilateral trade agenda (WTO) as well as any pluri-lateral or regional trade arrangements (FTAA); and (3) CARICOM's preparedness to engage therein. As a result the CARICOM Secretariat has been working at the regional level aimed at establishing an ICT strategy and was mandated to present a regional strategy at the next inter-sessional meeting in early 2003. As a part of the exercise supporting the Secretariat's efforts a region-wide e-readiness assessment exercise was conducted. The Caribbean Regional Negotiating Machinery (CRNM) has taken it one step further and is now examining the prospects for ICT service exports as part of a broader initiative to support preparation for undertaking external trade negotiations.

The challenges are daunting. To be sure, the Caribbean countries are at different stages of policy development and the region suffers from inconsistent policy approaches, there are weak regulatory capacities, monopoly operators in telecommunications and low levels of network penetration, and the region faces a wide and complex agenda of negotiations in the areas of services. Nonetheless, the attractiveness of ICT as a new economic sector with its attendant and spill over benefits remains and the region seems to have embraced the opportunity to forge new

economic paradigms. CARICOM's approach from here on out has to be commensurate with the development needs of the region. The real challenge will be in articulating a regional framework for action that would allow promotion of the region's interests as it relates to ICT service exports in such a fashion that it allows individual CARICOM countries' pursuit of their national objectives while simultaneously developing intra-regional coordination and mitigating the effects of rapid liberalization in key ICT areas.

Recommendations

While the disparity and variety among CARICOM states defy a prescribed cookie cutter approach to ICT, this paper suggests specific activities that would encourage national and regional ICT development and support the region's ICT export aspirations. These include:

- ✓ National commitment to selective intervention to accelerate the pace of ICT diffusion at the national level by determining national development objectives and developing a related country ICT Strategy which is underpinned by a *user oriented strategy* that focuses on:
 - building out the national information infrastructure and making it as accessible as possible to user industries
- ✓ Development of an e-commerce strategy, the overall goal of which is to create an Internet-based gateway to serve entrepreneurs as well as to educate on the importance of using e-commerce services;
- ✓ Determine and implement reforms and complementary investment initiatives such as:
Telecoms Reform, Competition Policies, Technical Standards, Customs Harmonization Issues, Human Capacity Development Issues, Security Legislation, Investment Incentives and tax treatment, Consumer Protection Legislation, Intellectual Property Rights, E-Commerce facilitation
- ✓ Identify the attendant national trade agenda
 - Determine what CARICOM's interests in the WTO and FTAA services negotiations are, in particular as it relates to ICT services exports and conduct an analysis of these especially with regards to Article XIX (negotiating progressive liberalization of specific commitments);
 - Identify those ICT products and services that CARICOM has an interest in and believes it will produce more efficiently in the future and seek to open these markets both within the FTAA and the WTO;
 - Identify within the specific commitments of the key target markets for ICT services exports under the WTO what the obstacle are to such exports from CARICOM and seek to address those within the WTO and to influence their exclusion within the FTAA;

- Review and analyze the proposals within the current GATS negotiations of relevance to ICT services exports in particular as it relates to those WTO members who have an export interest in such service sectors;
- Review and analyze the submissions on horizontal commitments including Mode 4 (movement of natural persons) in light of the need to develop ICT related skills and competencies across and within the region;
- Initiate a study to analyze the implications of e-commerce classification on the export of ICT service from CARICOM;
- **Improve Market Access in Telecoms.** Members should adopt a phased in approach to market access for telecoms services, but not beyond a two year period. Access in modes 1,2,3 and 4 need to be considered for basic telecoms, data transmission, leased circuits, fixed and mobile satellite systems and services, cellular telephony, mobile data services and internet service provisioning. Accede to the ITA and submit a schedule of concessions that include those items necessary to build out the telecoms infrastructure, support exports and provide affordable end user equipment. These include telecommunications equipment, cabling, software, parts, computers, modems, printers, etc.
- Seek credit within the WTO for any autonomous liberalization undertaken by CARICOM countries in particular as it relates to telecommunications services given this industry's strategic importance for ICT services exports;
- Approach external services negotiations with a view to establishing cooperative efforts and strategic linkages and leverage more human and capital resources to become more engaged in, understand, and take advantage of the various negotiation processes;

Conclusions

CARICOM has expressed a real interest in ICT, including services exports and in this regard need to know what are the prospects for the sector. It's a question that begs a complex response. Consider the facts:

1. CARICOM wishes to pursue ICT services export as a regional development policy
2. As a potential supplier it is significantly late in the game
3. However it does have significant comparative advantages that can be channeled to exploit the opportunities in ICT

But

4. The situation differs from country to country, and the region generally cannot be classified as e-ready. The number of domestic regulatory, infrastructural, capacity, and trade issues that have not been addressed, in some cases even put on the agenda, are significant. Additionally the issues here defy a band-aid approach.

5. Getting into the game, requires first learning how to play by the rules and then how to exploit the rules to CARICOM's advantage. Simultaneously substantial domestic and regional issues which continue to plague the region's development need to be addressed. Central among these is a reluctance to cede sovereignty in favor of a more harmonized approach to policy.
6. Unless this issue is centrally addressed, CARICOM members will make individual inroads in the ICT services sector but the region and particularly collective representation in international forums will be significantly compromised.

Success in pursuing an ICT sector will depend on (1) the recognition for a balanced approach to the issues as it will inevitably result in an economic paradigm shift with far reaching implications for many if not all of the CARICOM states; (2) the need to address the considerable supply side constraints which are critical to the ICT industry (for example skilled labor, free movement of persons, regulatory structures, etc.); (3) adopting the right strategic approach for facilitating public-private sector collaboration as it relates to ICT services, training and capacity development, and trade and negotiations; and (4) tailoring such approaches to the economic and development realities of the constituent countries of CARICOM.

1.0 Background

Understanding and using information and communications technology (ICT) to improve competitiveness is becoming an imperative imposed by international markets. In international trade the way traditional businesses function has been radically transformed. Large companies are looking to outsource information processing services to lower cost countries using direct electronic communications. For the countries offering lower cost alternatives, this practice translates directly either into direct investment, joint ventures or local supplier opportunities.

Beyond investment and growth opportunities spawned by multinationals, the benefits of ICT and Internet technology for the local market and economy are significant. For example, local businesses can reduce costs by sourcing more effectively, collaborating with other companies to introduce product and service innovations, acquire intellectual property or develop new Internet enabled marketing and distribution channels. Interestingly, the International Trade Center (ITC) notes that despite being hampered by “patchy infrastructure, narrow bandwidth, limited computer ownership and relatively high costs of internet access”¹, many businesses in developing countries have succeeded in developing innovations that have secured them good markets in services, software development and back office operations. Furthermore all indications are, according to the (ITC), that electronic commerce and e-facilitated trade are bound to grow.

The Caribbean remains a potential area for outsourced operations of multinationals, possessing many of the key incentives for investment. For example, it offers relatively affordable labor costs, exhibits linguistic and cultural affinities with the major markets (USA & EU), provides a literate, English speaking human resource base that is available for employment, and that is trainable in computer-related skills, and offers a suitable environment for investment.² Additionally, the governments are stable and the political systems similar. For North American multinationals these combine to constitute significant potential advantages and costs savings.

Though there has been an expressed interest in developing the ICT sector in the Caribbean, as of January 2003 none of the members was signatory to the ITA agreement or had made commitments in computer and related technology sub-sectors under the GATS, though most, if not all, were signatory to the WTO Agreement on Basic Telecommunications and some had made “...commitments to permit the supply of...‘value added’ telecommunications services.”³

Research in the 1990’s provided some indication of the potential for growth and development of the ICT sector in the Caribbean. Since then the OECS countries have been attempting to develop their ICT sector and there has been significant growth in this sector in both Barbados and Jamaica. However, the trade policy agenda has changed significantly and new negotiations on several fronts may have implications for policymaking with regard to this sector.

¹ E-Trade Bridge for LDC, A Programme for e-facilitated trade development, ITC, May 18, 2001

² Robert Schware and Susan Hume noted many of these in their paper ‘The Global Information Industry and the Eastern Caribbean, Advanced Technology Assessment System (ATAS): Information Technology for Development (UNCTAD: Geneva/ New York, 1995), pages 497-500.

³ Guide to the Uruguay Round Agreement, page 178.

Furthermore, it is worthy to note that in order to take advantage of the opportunities offered by the information society there are conditions that must be met first, and that developing countries are not always in a position to do so.

The purpose of this paper is to discuss and assess the challenges to CARICOM deriving from these various negotiating forums and processes for services⁴ in particular as it relates to CARICOM service exports in information and communications technology and to provide recommendations on how CARICOM as a region should approach impending negotiations. (Refer to Annex 1 for Terms of Reference).

2.0 The Global ICT Industry

2.1 Defining ICT

The interaction and rapid evolution of its component parts, often make it difficult to arrive at a succinct, tight definition for ICTs. One way to define ICTs is the systems responsible for inspiring the profound changes occurring in the world's social, political, legal and economic environments. In its broadest sense ICTs are typically understood to be those systems "that receive, manipulate and process information and facilitate communication between two parties."⁵ Included within the purview of ICTs then are computers and related equipment and broadcasting technologies (TV, radio). But it is the use of these embedded within a communications network, that identifies ICT. Thus the network of networks – the internet is the defining component in the ICT equation.

The development of ICTs took quite a long time but the pace of change has accelerated significantly during the past decade. "The scope of recent changes has been the result of the interaction of a number of independent but simultaneous processes that have significantly reduced the cost of transmitting information and the cost of computer hardware. All of this has permitted the formation of a "virtuous cycle" of technological innovations in different areas⁶ and the convergence of telecommunications, informatics, radio and telecasting industries into an integrated (information, communication and entertainment) capability to process images, sound, text and data and to transmit them instantaneously to any location on the planet."⁷

The role of ICTs in economic growth and social change has received considerable attention in recent years; particularly in the creation of the new information society and related new economy. To focus the policy debate and understand ICTs' impact on economies and societies, a precise definition that allows for reliable and comprehensive indicators and measurement is necessary.

⁴ For an assessment of the challenges to CARICOM countries resulting from the various negotiating forums and processes see Majluf, Luis Abugattas "WTO and FTAA Services Trade Negotiations: Challenges for Developing Countries with Special Reference to CARICOM," CRNM, April 2001.

⁵ Roadmaps Towards An Information Society In Latin American and the Caribbean, ECLAC, 13th December 2002

⁶ Over the last 20 years the cost of voice circuit has dropped by a ratio of nearly 1:10,000, The replacement of copper cable with fibre optics, which broad about a significant increase in information density and the declining costs of microprocessor-based computing devices that permitted the development of cellular telephony and PCS systems.

⁷ Latin America and the Caribbean in the Transition to a Knowledge-Based Society: An agenda for Public Policy, ECLAC/CEPAL, June 2000..

In 1998 the OECD member countries agreed to define the ICT sector as a “combination of manufacturing and services industries that capture, transmit and display data and information electronically.”⁸ This definition based on the International Standard Industrial Classification of all economic activities (ISIC Rev 3)⁹, was considered to be a first step toward obtaining some initial measurements of ICT sector core indicators. Using the ISIC definition as a guide then, ICT is supplied by and can be measured by the activity in three broad sectors: telecommunications, manufacturing and services¹⁰. Broken down into its component parts, the ICT sectors are:

ICT Related Sub-sectors

| <u>Manufacturing</u> | <u>Services – Goods related</u> | <u>Services – Intangible</u> |
|---|---|---|
| <ul style="list-style-type: none"> • Office, accounting and computer machinery • Insulated wire and cable • Electronic valves and tubes and other electronic components • Television and radio transmitters and apparatus for line telephony and line telegraphy • Television and radio receivers, sound or video recording or reproducing apparatus and associated goods • Instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process equipment • Industrial process equipment | <ul style="list-style-type: none"> • Wholesale of machinery, equipment and supplies • Renting of office machinery and equipment (including computers) | <p style="text-align: center;">¹¹<i>Telecommunications</i></p> <ul style="list-style-type: none"> • Voice telephone services • Packet switched data services • Circuit switched data transmission services • Telex services • Telegraph services • Facsimile services • Private leased circuit services • Electronic mail • Voicemail • Online information and database retrieval • Electronic data exchange • Enhanced value added facsimile services • Code and protocol conversion • Online information and/or data processing inc. transaction processing • Other <p style="text-align: center;"><i>Computer and related activities</i></p> <ul style="list-style-type: none"> • Consultancy Services related to the installation of computer hardware |

⁸ Measuring the Information Economy, OECD 2002, www.oecd.org/sti/measuring-infoeconomy.

⁹ (ISIC) is arranged so that entities can be classified according to the activity they carry out. It is considered a basic tool for studying economic phenomena and is promulgated by the UN and its related agencies and used extensively in measurement of economic activity. There is an ISIC Rev 3.1, released March 2002, however there was only a minor modification to the ICT sector in this revision, which was a split of ISIC classification 5150.

¹⁰ Methods based on identification of products and services have also been applied. However given the extreme pace of product/service development and obsolescence in the IT industry, this proved a challenging prospect indeed.

¹¹ As these are the areas that interest this work, sub- sector definition required and defined according to the UN CPC Code

Manufacturing**Services – Goods related****Services – Intangible**

- Software implementation services
- Data processing services
- Database services
- Other

Banking & other Financial Services

- All payment and money transmission services
- Provision and transfer of financial information, and financial data processing and related software by providers of other financial services

Yet, to define ICTs as merely the convergence of related industrial sectors, does not capture the promise of the ICT revolution. ICTs constitute not only infrastructure and hardware but also data, information and knowledge. Infrastructure without the necessary skill to convert data to information and information to knowledge and incorporate its use into social and economic processes is not ICT. Thus, ICTs imply a skilled human resource component so that the knowledge that is coded and transmitted via computer and communications networks can be adapted to fit the needs of its users (informatics). For the purposes of this paper, this is the context within which ICT is discussed.

Within the context of development, ICT is usually considered in accordance with the two established economic perspectives i.e. the supply side and the demand side. The former considers those issues that affect the production of the goods and services sectors that make up the ICT industry. The latter considers the diffusion and utilization of ICT goods and services in the economy. Both have the potential to significantly contribute to the development objectives of nation states and in fact it is widely agreed that the two are inextricably interwoven and fundamental to development. However, it is the supply side issues that are the central focus of this paper and the attendant trade and investment issues associated with greater participation of CARICOM countries in the export of ICT services

2.2 Global Industry Size and Structure

The global ICT market grew from \$1.3 trillion¹² in 1993 to over \$2.4 trillion in 2001¹³, an annual compounded growth rate of 7.6%¹⁴. North America i.e. (United States, its territories and Canada) remains the world's largest ICT market with \$874 billion in ICT spending in 2001. While telecommunications has traditionally dominated ICT spending, the software segment has increased by over 100% between 1995 and 2001. Telecommunications growth was considerably less at 56%. In fact in 2001, services spending surpassed hardware or manufacturing for the first

¹² All figures are reported in US dollars

¹³ This is the latest complete year for which data was available.

¹⁴ The Digital Planet 2002, The Global Information Economy, World Information Technology and Services Alliance (WITSA), February 2002.

time. Additionally outsourcing service grew at over 80% between 1995 and 2001. See Table 1 for total spending by sector and region.

Table 1: Total ICT Spending by Sector and Region

| Region | Telecom | Software | IT services ¹⁵ | IT Hardware | Internal ¹⁶ |
|------------------------|-----------|----------|---------------------------|-------------|------------------------|
| Spending (US Mil) | \$1037877 | \$196237 | \$425660 | \$376199 | \$345,500 |
| W. Europe | 38.1% | 9.4% | 18.6% | 15.4% | 18.5% |
| N. America | 33.2% | 11.8% | 24.5% | 16.8% | 13.7% |
| Mid East & Africa | 6.4% | 12.4% | 25.4% | 35.7% | 20.2% |
| L. America & Caribbean | 67.2% | 3.0% | 8.8% | 13.6% | 7.3% |
| E. Europe | 53.8% | 5.6% | 9.0% | 19.1% | 12.5% |
| Asia Pacific | 60.7% | 3.9% | 7.5% | 20.4% | 7.5% |
| Japan | 55.2% | 3.4% | 12.8% | 12.1% | 16.6% |

(Source: Digital Planet 2002)

In 2001 several trends in the ICT marketplace converged to slow the pace of spending: economic recession, stock market contraction, international terrorism and September 11th, widespread business caution and project deferrals and an oversupply of telecommunications capacity. Nevertheless while the slowdown in spending was quite pronounced, the data suggests that countries in the developing world, e.g. China and Eastern Europe, are committed to modernization through ICT investment.

Imports and Exports

The main exporters and importers continue to be the United States, Canada, the EU and Japan. Singapore, Hong Kong, Korea, China, Malaysia, Thailand and Ireland are among the largest net exporters, while the EU, Canada and the US are the largest net importers. Transnational corporations (TNCs) continue to hold a large share of the production and investment in the ICT sector. Of the leading 100 TNCs in 1999, 20 were in the electronics/telecommunications/computer sectors. Among those seven originated in the United States and EU respectively and six in Japan. Refer to Annex II for specifics.

OECD Performance¹⁷

The OECD countries represent the largest producers, exporters and importers of ICT in the world. According to the Digital Planet 2002, in 2001, the top ten information economies, mostly OECD countries¹⁸, represented almost 80% of the global ICT market.

¹⁵ Services in this context relates to IT services provided to a corporation by an external agent or corporation, above and beyond the services provided by an internal team. These services cut across all of the computer and related services

¹⁶ Internal spending is that spending on ICT no paid to a vendor but performed by internal company employees. While not a part of trade statistics, it is considered as part of the available market and potentially available for trade.

¹⁷ This section relies heavily on the OECD paper 'Measuring the Information Economy, OECD, 2002

¹⁸ For example, the United States, Japan, Germany, United Kingdom, France, China, Italy, Canada, Brazil, Australia. The exceptions are China and Brazil

Among OECD countries, rapid growth is especially apparent in Northern European countries (Finland, Sweden, Norway, the Netherlands and the United Kingdom). In 2000, ICT value added represented between 5% and 16.5% of total business sector value added. With the exception of Ireland (where computing and office equipment accounts for over 10% of manufacturing value added), the largest contribution to economic activity typically comes from the manufacture of telecommunications equipment. At the same time, there is an obvious increase in the contribution of computer and related services, mainly software services. Software consultancy accounts for between 60% and 80% of computer services. ICT Services such as telecommunications and computer services, generally constitute between 70 and 90% of total ICT sector value added.

In 2000, business research and development expenditure in the ICT manufacturing sector was approximately \$USD 111 billion, while for the ICT services industries, expenditure was at or above USD \$21 billion. However ICT related expenditure on R&D expanded much more rapidly in the services industries, 14% vs 6% for manufacturing R&D expenditures. The United States ICT sector performs approximately 50% of OECD-wide R&D spending by the ICT manufacturing sector, followed by Japan.

Trade in ICT goods for OECD countries increased from an average 12% of OECD-wide trade in goods in the 1990s to 20% in 2000. ICT imports were roughly 18% of all OECD imports and ICT exports roughly 17% of all OECD exports. In 2001 however the share of ICT manufacturing in total manufacture trade dropped significantly for the majority of OECD countries (on average 2.4% since 2000. Ireland with an increase of 3.5% was the exception). Among OECD countries, the composition of ICT sector exports changed somewhat over the past decade. The share of office and computing machinery fell from 39% in 1990 to 31% in 2000, while the share of radio, TV and communication equipment increased from 44% in 1990s to just under 56% in 2000.

Cross-border mergers, acquisitions and alliances are important components of the ICT sector in OECD countries and mergers and acquisitions in particular account for a significant share of cross-border capital flows. For example in computer manufacturing and the manufacture of electronic equipment almost all production in Ireland and Hungary is performed by foreign affiliates. In the case of computer services, foreign affiliates play a substantial role as well, as in the case of Belgium, Norway and the UK. In terms of R&D, Ireland again benefits the most from foreign affiliates. In large OECD countries, such as France and the United Kingdom, a considerable share of R&D in ICT manufacturing is due to foreign affiliates, a sign that many firms are establishing R&D laboratories outside their home countries. Thus far however the majority of the ICT sector alliances occur within the OECD community.

2.3 The Future of ICT

In 2001, World trade decreased by 1.5% down from an expansion of 11% the previous year. For the first time since 1982 world trade growth was negative.¹⁹ While there are several

¹⁹ International Trade Statistics, 2002, WTO.

contributing factors, the sharp contraction in non-residential (foreign) fixed investment in North America in 2001 (-3%) was according to the WTO, a “key feature explaining the slowdown in world trade and in particular that of capital goods.” The main reason for the contraction in foreign fixed investment was “the burst of the IT bubble”²⁰. Among the IT component industries the semi-conductor industry was particularly affected. For the first time in fifteen years there was also a drop in personal computer unit sales and even sales of mobile phone sets stagnated. In fact world exports of all three major IT product groups i.e. computers, telecom equipment and semiconductors and transistors fell at double digit rates.²¹ Exports of semiconductors and other electronic components shrank by more than one fifth. The weaker demand for IT products had dramatic repercussions on those Asian countries that have built up IT industries and specialized in the exports of IT products. In fact, for the first time in thirty years, countries like Singapore and China recorded a recession.

“Some of the factors that affected trade in 2001 carried over into 2002 and prevented the international economic recovery from gaining momentum”²². In the beginning of 2002, global economic activity strengthened and the world market started to recover from the first quarter onwards²³. The recovery was “vigorous” in the US and the major exporters of IT products in East Asia benefited directly. However slower growth in OECD countries, low levels of fixed investment and oil prices, and lagging growth in both Western Europe and Japan prevented trade from approaching the levels of the 1990s. Yet the forecasts of 2001, which suggested that growth would pick up in 2003, still appear valid, though the strength and durability of the expected recovery are, as yet hard to predict.”²⁴

Despite the global economic slowdown and the noticeable drop in ICT manufacturing in 2001/2002, the forecast for ICT recovery is encouraging. This is so, say the authors of the Digital Planet 2002, because ICT, unlike other technologies “knows few limitations or resource constraints. What the mind can fathom ICT can generally be used to create.”²⁵ According to the same report, the pace of expansion of ICT will be accelerated by a number of factors:

- Continued global build out of the Internet, with new means of access created using wireless networks, high speed broadband technologies and a multitude of intelligent devices
- Consensus on issues like intellectual property protection, interface standards and practices that will speed the delivery of broadband-enabled digital content and services in ways large and small
- Privatisation of government owned infrastructure and the opening of markets to international investment

²⁰ *ibid*

²¹ International Trade Statistics, 2002, WTO

²² Latin America and the Caribbean in the World Economy, 2001-2002 edition, ECLAS 2002

²³ International Trade Statistics, 2002, WTO

²⁴ Latin America and Caribbean in the World Economy, *op cit.*,

²⁵ Digital Planet 2002, *ibid* pg 19.

- Transformation of business models and the global adoption of e-business based exchanges, auctions, integrated supply chains etc.
- Harmonization of international laws and regulations on policy issues like taxation privacy and security
- Emergence of major new ICT markets on the world stage including China, Poland, India and Brazil.

3.0 The Caribbean in the World Economy

“As business and trade become truly globalised, the requirements for national competitiveness are changing. Once it was sufficient to provide scarce commodities, out-of-season produce or cheap manufactured goods for the markets of more advanced European or American economies. Today, progress in transport and information technology makes virtually all products and services from all countries available to any purchaser on the globe.”²⁶

Even though one of the main public policy objectives among CARICOM countries in recent years has been to structurally transform their economies based on a planned approach to absorption of technological advancements, according to ECLAC, “trade flows to and from the Caribbean have nonetheless failed to consolidate a virtuous circle of investment and growth.”²⁷

3.1 Merchandise Trade

In 2001, the Caribbean Countries witnessed considerable declines in export volume that reflected the slide in the prices of sugar, rice, bananas and petroleum and petroleum products. According to ECLAC, the impact of the slump in sugar prices, which could be traced to an oversupply in US markets was strongest by far in Jamaica, Belize, Guyana and Barbados, while the instability of petroleum prices had a direct effect on Trinidad and Tobago. Information available for 2002 suggests an “uneven picture” since exports from Belize, Guyana and Trinidad and Tobago began to recover, while those from Suriname and Barbados continued to fall.

3.2 Services

Commercial Services contribute between 50 – 80% of total trade in goods and services in the Caribbean Community. In 2001, travel, tourism and entertainment were drastically affected by the new international environment that emerged after September 11, contracting commercial services exports by 3.8% in the CARICOM countries. In 2002, ECLAC estimates that in the Latin America and Caribbean region, regional exports in commercial services shrank by another 1.6%, with the sharpest downturn taking place in the CARICOM countries. This is attributable

²⁶ Schware R., Hume S., Prospects for Information Service Exports from the English-Speaking Caribbean, The World Bank, Latin America and Caribbean Region, Informatics and Telecommunications Industry and Energy Department, Finance and Private Sector Development, March 1996.

²⁷ Latin America and the Caribbean in the World Economy 2001-2002, ECLAC, *ibid*, pg. 11

not only to the decline in the number of tourists from the US, Canada and Europe but also the consequences of tropical storms which affected the cruise ship sector.

3.3 Current Account Balance

In 2001/02, in most of the Caribbean economies the rise in merchandise imports kept trade deficits at high levels, with the most serious cases being Jamaica, Belize, Antigua and Barbuda, Saint Vincent and the Grenadines, Grenada and Saint Kitts and Nevis. The only Caribbean countries that ran a surplus were Suriname and Trinidad and Tobago, and these were not as robust as the 2000 levels. Given the contraction in tourism revenues, the usual surplus in the service account failed to offset the deficits in the merchandise accounts.

The international economic downturn has demonstrated that economies like those of the Caribbean, heavily dependent on export earnings from just a few products or markets are more vulnerable than those with diversified exports. And while the attempts to diversify their economies have realized changes in export specialization for the region, according to ECLAC the changes continue to reflect their “static comparative advantages, i.e. unskilled labour, and abundant resources.”²⁸ In a world redefined by a new global economy that places increasingly more value on intellectual, creative and innovative capital and less on optimization of physical labor (particularly unskilled) and financial capital; and where export levels reflect the increasing importance of comparative advantages based on skilled labor and enabling environments, CARICOM member states should recognize the need to urgently reassess their comparative advantages, and reprioritise to accommodate the demands of the new economy.

4.0 Opportunities for Developing Countries in ICT

For developing countries, the opportunities spawned by trade and investment in the ICT sector depend significantly on the national approach to ICT. The ICT industry offers developing countries the opportunity not only to respond to market opportunities in developed countries but also to use ICT as an enabler of development to expand national capacity and create domestic spill over effects and niche opportunities. For example, in its approach to ICT, a developing country can decide to exploit the opportunities available in developing ICT as a production sector; i.e. policies are designed to encourage the development or strengthening of ICT-related industries such as computer hardware, software, telecommunications equipment and ICT-enabled services; or it can approach ICT as an enabler of socio-economic development i.e. cross-sector policies are employed to harness the uniqueness of ICT to accelerate the wider development process.²⁹ The two broad approaches are not mutually exclusive; and many developing countries start off with a focus on the production sector and later, as development objectives were refined, adopted the policies of a more holistic approach. According to the experts, this occurred not as a deliberate strategic approach to ICT however, but rather because of a greater appreciation for the potential of ICT, at different stages of the development process.

²⁸ Latin America and the Caribbean . . . ibid

²⁹ Digital Opportunity Initiative, Creating a Development Dynamic, www.opt-init.org/framework/pages/2.3.2.html.

A country's overall approach to ICT will significantly influence the strategic focus adopted by the country. For example an export/supply led focus usually accompanies the approach to exploit the opportunities in the productive sector, while a more expansive focus, emphasizing global positioning and/or development goals are usually associated with a strategy that uses ICT as an enabler of socio-economic development. The difference in the approaches is mostly perspective. Both approaches have the potential to positively impact developing countries, depending on their local comparative advantages.

While the linkages in national approaches to ICT are hard to ignore, the perspective of most concern to this paper is the one associated with an export-led approach, and specifically within the realm of services and so these parameters narrow subsequent ICT discussion.

4.1 Opportunities in the Export Market

While developed countries are likely to maintain core competencies in high-technology areas, the experts agree that developing countries can find export opportunities in several key sub-sectors of the ICT services sector. These opportunities however are almost exclusively tied to the activities of multinationals, and their strategies to invest and/or outsource operations to partners in countries with favourable investment climates.

Services Exporting

Improved technology is bringing down processing costs and increasing the demand for information handling. A popular trend in developed countries is to reengineer work flows for improved operational results e.g. eliminate time, cost and delays, support a particular level of service goals and minimize intermediate stocks and distribution points. Most of this activity focuses on using Just In Time (JIT) systems, Electronic Data Interchange (EDI) and various other forms of electronic commerce.³⁰ The efficiencies associated with outsourcing have encouraged many TNC to view data entry and information processing as areas that could be most profitably provided by a third party. For developing countries, this globalisation of services presents unprecedented opportunities and challenges.

According to a World Bank Report³¹ published in 1996, the informatics industry is estimated to be worth over \$US 400 billion in North America and US \$1 trillion globally and, between 1995 and 2001, outsourcing services is estimated to have grown by over 80%.³² The professional services segment which includes project management, software requirements analysis and design, contract programming, data processing, education and training, was expected to increase at an annual average rate of 15%, in subsequent years. India, Ireland, Pakistan and the Philippines are examples of countries that have successfully enabled their software industries to capture a larger share of the global software market.

³⁰ Schwarc R., Hume S., Prospects for Information Service Exports from the English Speaking Caribbean, The World Bank, March 1996.

³¹ Ibid.,

³² Digital Planet 2002.

Back-office service activities such as routine administrative tasks, customer service and technical support functions are also prime examples of services that can be outsourced offshore. Measurement of trade in commercial services suffers many deficiencies and according to the World Bank there are no precise estimates of the size of the market for offshore services that can be captured by developing countries. Additionally the fact that a significant share of these types of transactions take place intra-firm, clouds the picture even more. However according to the same report, rough estimates suggest that 1-5% of the employment in services in industrial countries may be internationally contestable by developing countries.³³

The services for hire by the computer software and services market can be said to form a continuum, the exploitation of which depends significantly on skill level and access to technology. At the low end of the continuum are simple data entry functions e.g., processing magazine subscriptions or credit card applications. At the high end, significant judgment, knowledge and technology may be required as software customisation or package and product development may be the task at hand. In between, there are various tasks that require various levels of judgement, knowledge and technology. While the market for computer software and services can be segmented in several ways it is underscored by one key fact, all information processing services increase in value as incremental skills and technology are added to labour.³⁴ See Annex III for a brief overview of the jobs available in the ICT services sector.

5.0 ICT Sector Requirements

Irrespective of the selected ICT strategy approach, there are four core requirements necessary for development of an ICT sector. These are:

Table 2: Core Requirements of ICT

| Infrastructure Framework | Human Capacity |
|--|---|
| A core communications and technology network infrastructure, with relative ubiquity of access, capacity and “low” cost. | Establishment of a critical mass of knowledge workers, with emphasis on technical skills |
| Policy Framework | Enterprise (Legal Framework) |
| Support of a transparent and inclusive policy process and strengthening institutional capacity to implement and enforce policies | Improving access to financial capital, facilitating access to global and local markets, enforcing appropriate tax and property rights regimes, enabling efficient business processes, consumer protection, privacy protection and stimulating |

³³ Primo Braga, Carlos “The Impact of the Internationalization of Services on Developing Countries,” 1998 <http://www.worldbank.org/fandd/english/0396/articles/070396.htm>.

³⁴ Schware *et al*, op cit,

| | |
|--|--|
| | domestic demand for ICT. Transparency and predictability of regulatory implementation, rule of law |
|--|--|

However, it is the rare developing country indeed that can assume simultaneous action in these areas. Development gains can be achieved through intervention in any one of these areas and it is imperative to acknowledge the practical limitations faced by development efforts. Each of these areas implies a multiplicity of issues and considerations that tax the capacities of developing countries. Thus, priorities have to be established in accordance with a nation's short, medium and long-term development objectives. For example, the Caribbean remains a potential area for outsourced operations of multinationals, possessing many of the key incentives for investment. It offers relatively affordable labor costs, exhibits linguistic and cultural affinities with the USA & EU, provides a literate, English-speaking human resource base that is available for employment, and that is trainable in computer related skills, and offers a suitable environment for investment.³⁵ Additionally, the governments are stable and the political systems similar. For North American multinationals these combine to constitute significant potential advantages and costs savings.

If, given the assessment of its comparative advantages, CARICOM countries decide to pursue an export led approach to ICTs then, the region's government has to adopt the necessary intervention strategies to satisfy the market requirements and establish the region as a competitive services supplier. The issues are complex and diverse and can be analysed from many perspectives. However, the ICT sub-sector selected by the region as its niche implies the attraction and embrace of foreign direct investment not only to improve the export infrastructure, but also to provide the opportunities for growth. Thus, there is an urgent need to examine the international trade and investment issues to determine domestic and negotiating positions for CARICOM.

6.0 An Overview of CARICOM & ICT

In the 1990s the need for the countries of the Caribbean to diversify their economies became more and more imperative. Geographically small and isolated, and with small population sizes, any attempts at economic diversification essentially meant that these countries would in fact undertake economic-paradigm shifts, as the various territories move away from being primarily agriculture oriented and towards a greater mixture of services and agriculture. Within that context, ICTs, tourism and offshore financial services, as potential productive and economic sectors became increasingly attractive.

Although the reasons for exploring ICT were initially premised on the need to sculpt new economic paradigms and sectors for growth and development, the factors which drove that exploration were limited to *inter alia* accelerating the pace of public sector reform, improving

³⁵ Robert Schware and Susan Hume noted many of these in their paper 'The Global Information Industry and the Eastern Caribbean' ATAS pages 497-500.

human capital and providing some value added services to other sectors, and not necessarily to developing the ICT as a productive sector in and of itself. In fact many of the Caribbean countries articulated their interests in an ICT sector in terms of creating more and higher income jobs. As one report noted "...many countries adopted a posture of accommodation, opting to position themselves to take advantage of the United States quest for cheap data entry and other basic services."³⁶

Nonetheless, ICTs had been recognized by governments across the Caribbean as being of economic viability and many "... countries were attempting to craft a reasoned, structured response to the opportunities created by the ICT revolution."³⁷

In 2001 the CARICOM Secretariat concluded a Country Framework Analysis for CARICOM States on their e-Readiness for e-Business; a major step towards developing a regional ICT strategy. The exercise, conducted by A. Didar Singh, assessed the e-readiness capabilities for CARICOM countries in six key areas: *infrastructure, policy, legal, human capacity, ebusiness environment, and international & regional*. This study, along with several others, contributed significantly to the undertaking at hand.

Discussion of any state of readiness for the ICT Services Exports industry in the region though, demands doing so through a 'compound optic'. The individual frameworks must not only be understood in terms of what they reflect individually but also how they combine to form one reality. In this sense the synergies of the various frameworks and their impacts on each other is crucial.

Providing a succinct overview of CARICOM member country's relationship with the key elements of ICT is an ambitious task indeed. The number of countries involved and ICT disparity among countries and within categories leave any attempt at categorization and or comparisons, open to severe criticism and debate. However some attempt at categorisation, based on available information is worth the effort if only to provide an impetus for discussion. Relying heavily on the available e-readiness study, Table 3 below, attempts to provide a loose review of member countries ICT readiness using the four key requirements defined in section 5.0 above. The ratings are based on regional comparisons and not on comparisons with ICT readiness in the wider world. A discussion explaining some of the specifics within each category follows.

Table 3 - Overview of CARICOM Member ICT Readiness

| Country | Infrastructure Framework (Connectivity and Cost) | Policy Framework ICT Policies | Legal Framework (Security and Privacy) | International and Regional Framework |
|---------------------|--|-------------------------------|--|--------------------------------------|
| Antigua and Barbuda | Connectivity – Limited Cost – high | Poor | Does not exist | RNM/CARICOM Assistance |

³⁶ Caribbean Response to the ICT – OECS Telecommunications Reform Project, page 2.

³⁷ *Op cit*, page 2.

| Country | Infrastructure Framework (Connectivity and Cost) | Policy Framework ICT Policies | Legal Framework (Security and Privacy) | International and Regional Framework |
|--------------------------------|--|-------------------------------|--|--------------------------------------|
| Barbados | Connectivity – good Cost – high | Fair/Good | Good | “ |
| Belize | Connectivity – Limited Cost – high | Poor | Poor | “ |
| Dominica | Connectivity – adequate Cost - Fair | Poor | Poor | “ |
| Grenada | Connectivity – Limited Cost – high | Fair/Good | Poor | “ |
| Guyana | Connectivity – Extremely limited Cost – high | Very Poor | Very Poor | “ |
| Jamaica | Connectivity – good Cost – fair | Good | Fair/Good | “ |
| Montserrat | Connectivity – Fair Cost - high | Poor | Does not exist | Some issues channeled through Uk |
| St. Vincent and the Grenadines | Connectivity – good Costs – high | Poor | “ | RNM/CARICOM for assistance |
| St.Kitts and Nevis | Connectivity – good Costs – high | Poor | “ | “ |
| St. Lucia | Connectivity – Fair Costs – high | Poor | “ | “ |
| Suriname | Connectivity – Limited Costs – high | Poor | “ | “ |
| Trinidad & Tobago | Connectivity – adequate Costs – high | Very Good | Good | “ |

Haiti, Bahamas not included

6.1 Infrastructure Framework – (Connectivity and Cost)

Traditionally, the defining characteristic of telecommunications services in the region is that of monopoly provider status. Within the Eastern Caribbean, and including Barbados, Cable & Wireless is the dominant provider. In fact, at one time Cable & Wireless was the sole provider of telecommunications services throughout the English speaking Caribbean. In other territories the Government is now the monopoly provider (e.g. Antigua & Barbuda, Trinidad & Tobago – 51% government owned), or private monopolies exist, for example Belize. Suriname is the exception with a purported duopoly structure.

The majority of the CARICOM countries, perhaps with the exception of Haiti, have relatively developed telecommunications and ICT infrastructure in place. For example, telephone mainlines in yr. 2000 per capita ranged from 79 for Guyana to 569 for St. Kitts and Nevis with the majority of the countries being at 149 or above. Haiti is the exception with 9. With regards to computers the penetration (per capita) ranges from 25.6 for Guyana to 181.7 for St. Kitts and Nevis. No data for that period was available for Haiti and Suriname. There is obviously not a linear relationship between PC penetration and Internet penetration as Internet diffusion rates are significantly more than that of PCs. Internet penetration per 1000 persons ranged from 3.5 for St. Vincent & the Grenadines to 100 for Trinidad and Tobago followed by Jamaica with 80. These various tele-density indicators are bound to increase as various countries within the region take measures to liberalize their telecommunications sectors.

Member states have invested heavily in upgrading their telecommunications infrastructure and now “parts of it have ... infrastructures as advanced as any in the world.”³⁸ Connectivity then to the rest of the world is not a problem. For example, Trinidad & Tobago is linked to the US through AT&T over the Americas 1 Fiber Optic Cable System. The member states of the OECS are linked to the Caribbean via the Digital Eastern Caribbean Microwave System (DECMS) and backed by the Eastern Caribbean Fiber System (ECFS). C&W had air marked US\$15 million for increasing the capacity of the ECFS to 2.5Gbps. Cable & Wireless (C&W) a major operator in the region provides international telecommunications services sometimes working through domestic operators and subsidiaries. As the countries liberalized their telecommunications sectors and introduced competition their infrastructures have developed more.

The region is also inter-connected via satellite and submarine cable. The recent ARCOS³⁹ initiative has resulted in a geographically extensive broadband fiber optic cable network that includes the Bahamas, Bermuda, Turks & Caicos, Belize, and all of the other islands of the Caribbean. The ARCOS network will connect the US, Mexico, Central America, Latin America, and the Caribbean and will provide 15 Gbps of fully redundant broadband capacity.

Over the years the Caribbean as a region, working through the Caribbean Association of National Telecommunications Operators (CANTO), has moved to strengthen both its lobby and its negotiating position. A major achievement of CANTO was that it was able to secure discounts from purchases for telephone equipment once the region had reached a certain threshold of purchases within a given period of time. This is an important mechanism and CANTO can in the future play a pivotal role as a regional trade lobby.

Across the region the cost of services remain high, although with the onset of competition in Internet Service Provisioning in many member countries, Internet access costs are coming down.. The disparity in dollar value and payment plans makes a cost comparison difficult. However monthly charges for Internet for a 56K dialup range from EC \$5 (Dominica) to \$400 Belize dollars for 100 hours in Belize.

³⁸ Noguera, Felipe “Telecommunications in the Caribbean,” <http://www.vii.org/papers/cari/htm>, page 1.

³⁹ The ARCOS program is a high capacity undersea fibre network for the Caribbean spanning 8,000 Km and linking the US, Mexico, Belize, Central America, Colombia, Venezuela, Curacao, Puerto Rico, the Dominican republic, Turks & Caicos, and Bahamas with an initial cross sectional capacity of 15 Gbps upgradeable to 320 Gbps.

Directly influencing CARICOM member states infrastructure readiness for ICT sector engagement is the structure of their telecommunications industries. As alluded to earlier, many members are currently in the process of introducing significant reforms in their respective telecoms sectors. This however has to occur within a Jenga-ing process⁴⁰ where the regime governing trade and investment has shifted out of the ambit of the state and into the international arena, under the WTO/GATS. Member states obligations under this process and the ability to influence the ongoing international decision making process will significantly impact the extent and pace of their respective reform initiatives and ultimately the region's ability to compete successfully in the ICT services export market. The implications of telecoms reform within the multilateral framework is discussed at length below in section 8.0.

6.2 Policy Framework

“The CARICOM Secretariat is carrying out work at the regional level aimed at establishing an ICT strategy.”⁴¹

With a view to presenting a CARICOM ICT Strategy in 2003, policy recommendations for CARICOM have been adopted and strategic objectives have been established, including

- Promotion of e-enabled human capital, to enhance human capacity through online communities and on-line learning (*e-communities*);
- Creating an enabling e-business environment for the growth of on-line businesses (*e-business*) and creation of new business opportunities; and
- Efficient functioning of governmental machineries to build civil society and democratic government (*e-government*).⁴²

Work is also in process in various Caribbean territories where it has been widely recognized that the “...information industry offers significant export opportunities...”⁴³ although the policies vary widely and tend to reflect respective national objectives.

In the case of the OECS, (Antigua & Barbuda, St. Vincent and the Grenadines, Dominica, St. Lucia, and Grenada) a sub-regional approach has been adopted and a recent sub-regional study, the OECS Telecommunications Reform Project, was completed. Within that framework respective OECS countries have articulated their national strategies and policies. Grenada for example, is committed to placing “...ICT at the center of its social and economic development as a dynamic industry in itself, and in support of ... other sectors...”⁴⁴ St. Lucia envisions a new hybrid-economy of which ICT will be a core component. Dominica on the

⁴⁰ Jenga-ing process refers to the breaking down of the traditional regime governing international telecommunications services and the subsequent replacement with new structures under a multi-lateral framework, all without causing the collapse of the sector.

⁴¹ In January 2003 Edward Carrington the CARICOM Secretary General in a speech at a meeting of the Member states made mention of this.

⁴² Ibid. page 8.

⁴³ The Global Information Industry and the Eastern Caribbean, page 497.

⁴⁴ Information and Communications Technology: Towards a Strategy and Action Plan for Grenada, Office of Prime Minister, St. Georges, Grenada, August 04, 2001, page 6.

other hand while it "...has identified the IT sub-sector as an area to be pursued for economic diversification..." has yet to develop a policy.⁴⁵

Other CARICOM countries have either developed some form of policy and strategy or are currently considering doing so though not necessarily within the context of an adopted wider CARICOM ICT strategy and or program. Guyana for example has ushered in the concept of the importance of IT and "...has taken several steps towards creating a domestic environment that was favorable to the growth of the information services sector"⁴⁶ including an IDB funded US\$20 million ICT Project aimed at amongst other things improving the legal framework, increasing public sector use of ICT, and promoting ICT exports. "An additional US\$5 million was earmarked for ...education ..."⁴⁷

In Barbados, the objective seems to be, and their current approach reflects this inclination, development of an information services sector built on call centers, data processing, transcription services, credit verification and processing services, and e-business transactions. Software development and computer-aided design are also in the list of products and services provided by Barbados. In this sense Barbados may have already identified and is carving out the role it intends to play within CARICOM as it relates to the ICT industry.

Belize has yet to articulate either a clear policy or a strategy with regards to ICT. However, recent initiatives, under the framework of export processing zones development, have provided the type of "incubator environment" from which to develop and grow an ICT sector. In this regard, Belize has toyed with off-shore gaming and education services (e.g. offshore type Medical Universities) and has established an e-business park. Where elements of an ICT sector exist it is loosely structured, very informal, and concentrated in providing basic services such as sales and repairs of computers, basic networking, and desktop publishing services. Software development and call center type operations are virtually non-existent.

Jamaica's ICT policy is contained within its National Industrial Policy⁴⁸ and as such forms part and parcel of a wider national industrial development plan. "In 1999 the Government of Jamaica developed a strategy for the acceleration of the use of ICT in the public and private sectors,"⁴⁹ and has made the integration of information technology into its economy "...a high priority and strategic imperative."⁵⁰ The objectives of that strategy are broad based and include programs similar to those of Barbados for example, data entry and processing, tele-marketing, and consultancy services. Education and training of an ICT workforce is of highest priority.⁵¹ Indeed there is a strong recognition by the policy and decision makers in Jamaica for increasing educational capacity to meet the collateral demand resulting from any expansion and or development of an ICT sector. In this regard, a joint public-private information and technology project or INTEC, has set a goal of creating 40,000 jobs by this year.⁵² Responsibility for ICT related issues falls under the Central Information Technology Office (CITO) created in 1999

⁴⁵ Holmes, Henderson B., Report – Analysis of IT Sub-sector in Dominica, Executive Summary, page i.

⁴⁶ Caribbean Response to the ICT – OECS Telecommunications Reform Project, page 5.

⁴⁷ Ibid., page 7.

⁴⁸ Jamaica's Information Technology/ Informatics Sector, JAMPRO – Research and Development Department, page 3.

⁴⁹ Jamaica Information and Communications Technology Project (JA-0116), May 30, 2002, page 1.

⁵⁰ Hewitt, Errol "A National Strategy for the Establishment of the ICT in Developing Countries: The Jamaican Experience," Paper presented for UNCTAD, page 1.

⁵¹ Global Information Technology Report 2001-2002, page 230.

⁵² Ibid., page 230.

within the Ministry of Industry, Commerce and Technology (MICT). CITO's primary responsibility is strategic planning and its functions include "... coordinating ICT plans by the different ministries and developing partnerships to promote ICT."⁵³ Jamaica is also looking at attracting new and existing ICT related businesses by creating and developing physical infrastructure along with the attendant investment attraction schemes.

Trinidad and Tobago drafted policies for use of information technology since 1998 and subsequently established the National Information Systems Center (NISC) with responsibility for strategic planning and standards in the sector. The objectives tend toward "...building an export oriented software sector..."⁵⁴ and toward education services within the conceptual framework of developing a knowledge-based society and facilitating improved government efficiency and empowering communities. Trinidad & Tobago has created a Ministry of Communications and Information Technology and it is tasked with leading ICT related initiatives as well as for supporting efforts by other departments in the country.

Clearly the respective Caribbean countries are at different stages of policy development. Some have yet to established objectives (Belize), while others have policy drafts under consideration, and yet others have developed and adopted a national policy (Jamaica). This is important given the emerging broader trade policy frameworks such as the FTAA and the WTO. Refer to Annex V for policy initiatives at a glance.

6.3 Enterprise/Legal Framework

Competition Policy

Competition policy is necessary to promote the efficient allocation of resources so that consumers may have access to adequate supplies of quality commodities at the lowest possible prices. Competition policy in general addresses the behaviour of enterprises by prohibiting certain business practices. Such practices include restrictive horizontal price agreements (e.g. price fixing, bid rigging and market allocation), acquisitions, abuses of dominant position and restrictive vertical agreements e.g., (predatory pricing, discriminatory pricing). Effective competition policy also endeavors to control the effect of certain business practices on market structure. For example, mergers and acquisitions and joint ventures can limit competition by creating dominant firms, monopolies or oligopolies.

Given the region's ICT sector aspirations this is a critical policy area that has for the most part, been overlooked by the region's governments. CARICOM has moved to address competition issues to ensure the benefits expected to accrue under the CSME are not frustrated by anti-competitive practices. Protocol VIII amending the Treaty of Chaguaramas sets out CARICOM's framework for addressing competition issues and deals with Competition Policy, Consumer Protection, and Dumping and Subsidies issues. Currently, only Jamaica has established competition legislation, though Barbados and Trinidad & Tobago are pursuing the same.

⁵³ Jamaica Information and Communications Technology Project (JA-0116), May 30, 2002, page 2.

⁵⁴ Ibid., page 294.

Information and Security Policies

These comprise all the specific attendant policies necessary for the development of the ICT sector. The category includes but is not limited to; legal support for e-commerce transactions, legal protection for processing and storage of networked information, legal and regulatory framework to address and prosecute cyber crimes, authorize digital signatures and enable key public infrastructures, protection of intellectual property rights and measures of consumer protection and privacy protection. Falling within the ambit of E-commerce, these issues are discussed at length below in section 9.0. However, perhaps because an articulated e-commerce strategy is rare throughout the region⁵⁵ this is a critical policy area where member states are acutely lacking.

6.4 Human Capacity Framework

While the Caribbean holds a competitive advantage due to its relatively affordable labor costs (25%-40% cheaper than in the USA) the technical skills demanded by a well developed ICT sector are not yet present. Across the Caribbean efforts at developing an ICT sector has recognized this and national plans have included, as a key component, commitments to providing an enabling environment as well as programs for ICT related education services. In fact the majority of policy/strategy positions articulated by the respective Caribbean countries have established human resource development and training as one of the primary strategic objectives; so much so that in a couple of cases there was a disparate focus on ICT education.

In St. Lucia, for example, having recognized that one of its major constraints would be the available labor force, a two pronged approach was assumed. An Education Development Plan was prepared which focused on technical and vocational education and a Green Paper on Public Sector recommended "...integration and sharing of information among ministries and departments...".⁵⁶ Jamaica's National Industrial Policy Action Plan calls for six core areas one of which is Human Resources Development and Training and Jamaica has committed to the training of 40,000 persons in collaboration with relevant institutions, to increase its ICT capacity.

Barbados' EduTech 2000 Project is one of the more progressive in the region. It involves the full computerisation of school networks and increased IT instruction in schools and Community Colleges and calls for the establishment of the University College of Barbados, which "is expected to significantly impact the ICT stock."⁵⁷

Despite the considerable advancements made in the region, particularly in the telecommunications sector, the review of CARICOM member's readiness for ICT indicates that there are still formidable challenges remaining across the region. Weak regulatory capacities, inconsistent policy approaches, low levels of network penetration, monopoly operators; and high levels of politicization continue to be factors littering the CARICOM ICT landscape.

⁵⁵ Though a few countries are pursuing one., refer to Annex VI

⁵⁶ Caribbean Response to the ICT – OECS Telecommunications Reform Project, page 12.

⁵⁷ R. Folkes, email correspondence, Ministry of Economic Development Barbados

How these challenges and constraints are dealt with are contingent on what strategic approaches towards an ICT sector are developed, how well these are articulated and implemented within the multilateral frameworks that governs them and how well the strategy is implemented on the ground. It is the formidable challenges in the ICT international and multilateral regulatory arenas that engage this paper next.

7.0 ICT Trade and Investment Considerations

Any considerations for developing an ICT sector within the Caribbean demands an understanding of the GATS, its scope, structure, and functions. This is because the GATS norms and disciplines constitute the ‘floor’ or the minimum common denominator of other agreements in services. From this position, an understanding of services and services negotiations under the FTAA and within the CSME is facilitated.

7.1 GATS

The GATS “...establishes a multilateral framework of principles and rules for trade in services with a view to the expansion of such trade under conditions of transparency and progressive liberalization and as a means of promoting the economic growth of all trading partners and the development of developing countries.”⁵⁸ It is different from trade in goods in that, unlike goods, it focuses on services and service suppliers, and includes various modes of delivery namely: *cross border supply* (Mode 1); *consumption abroad* (Mode 2); *commercial presence* (Mode 3); and *movement of natural persons* (Mode 4).

The GATS covers all commercially traded services with the exception of those that are supplied by a government or a governmental authority. Services are grouped into twelve primary areas including Business; Communications; Construction and engineering; Distribution; Education; Environment; Finance; Health; Tourism and Travel; Recreation, Cultural and Sporting services; Transportation services; and Other services not included elsewhere. These twelve areas are further subdivided into 155 sub-sectors.

As regards service exports in information and communications technology the sectors that are of core importance are (i) Business Services (computer and related services sub-sector); (ii) Communications Services (telecommunications sub-sectors); and (iii) Financial Services (banking and other financial services). More specifically,

| | |
|---|-------------------|
| Computer and related | |
| a. Consultancy services related to the installation of hardware | 841 ⁵⁹ |
| b. Software implementation services | 842 |
| c. Data processing services | 843 |
| d. Database services | 844 |

⁵⁸ International Trade Centre, “Business Guide to the General Agreement in Trade in Services,” ITC and Commonwealth Secretariat (1999), pages 13-14.

⁵⁹ Note that the CPC classifications for these sub-sectors are those of the WTO and are different from the ones listed earlier in the paper for ICT sectors such as Manufacturing, Services – Goods related, and Services – intangibles.

| | |
|--|-------------|
| e. Other | 845 + 849 |
| Telecommunications services | |
| a. Voice telephone services | 7521 |
| b. Packet-switched data transmission services | 7523 |
| c. Circuit-switched data transmission services | 7523 |
| d. Telex services | 7523 |
| e. Telegraph services | 7522 |
| f. Facsimile services | 7521 + 7529 |
| g. Private leased circuit services | 7522 + 7523 |
| h. Electronic mail | 7523 |
| i. Voice Mail | 7523 |
| j. On-line information and database retrieval | 7523 |
| k. Electronic data interchange (EDI) | 7523 |
| l. Enhanced value added facsimile services | 7523 |
| m. Code and protocol conversion | |
| n. On-line information and/or data processing | 843 |
| o. Other | |
| And Banking and other financial services | |
| a) All payment and money transmission services | 81339 |
| b) Provision and transfer of financial information, and financial data processing and related software by providers of other financial services. | 8131 |

Other services sectors may also be of some relevance because of the nature of the relationship of those sectors and sub-sectors to both ICT and its delivery. For example, postal and courier services (because of the need to deliver documents in hard copy for data entry, transcription, etc.), educational services because of the (IT skills development needs); and banking and other financial services (because of the need for payment and money transmission services) are all services areas that will significantly impact the roll out of any ICT strategy.

CARICOM Services Commitments:

According to an earlier RNM/IDB paper on services trade developed to support the RNM in preparing for and undertaking negotiations the "... general pattern of specific commitments of CARICOM countries do not differ significantly,"⁶⁰ and "... rank rather low in terms of the number of sectors in which they have made commitments."⁶¹ For example, Trinidad and Tobago had one of the widest range of sectors scheduled (7) with Belize and Suriname on the low end with commitments in only one and two sectors respectively.⁶² In fact the Paper noted that "... Jamaica made commitments regarding 23 types of services..." on one hand, while Belize and Barbados only made commitments for 1 and 3 services respectively on the other hand, while "...

⁶⁰ Majluf, op cit, page 58.

⁶¹ Ibid., page 60.

⁶² Ibid., page 60.

Antigua and Barbuda made commitments for 12 services, Guyana commitments for 8 services, and Trinidad and Tobago commitments for 7 services...'⁶³

Table 4: CARICOM ICT Related GATS Commitments

| | Business | Communications | Total Sectors Scheduled |
|------------------------------|-----------------|-----------------------|--------------------------------|
| Antigua & Barbuda | 3 | | 5 |
| Barbados | 2 | 1 | 4 |
| Belize | 1 | | 1 |
| Dominica | | 1 | 4 |
| Grenada | | 1 | 4 |
| Guyana | 1 | 1 | 4 |
| Jamaica | 4 | | 7 |
| St. Kitts & Nevis | | 1 | 5 |
| St. Lucia | | | 4 |
| St. Vincent & the Grenadines | | 1 | 6 |
| Suriname | | | 3 |
| Trinidad & Tobago | 4 | 1 | 6 |

(Source: Majluf, 2001)

Of the services sectors under which CARICOM countries made commitments, only six of the fourteen CARICOM countries (Antigua & Barbuda, Barbados, Belize, Guyana, Jamaica, and Trinidad & Tobago) made commitments under the Business services sector for a total of 15 sub-sectors; and only seven of the fourteen (Barbados, Dominica, Grenada, Guyana, St. Kitts & Nevis, St. Vincent & the Grenadines, and Trinidad and Tobago) made commitments under the Communications services sector for a total of only eight (8) sub-sectors. Regarding Financial Services "...CARICOM countries have made very limited commitments ..." and where they did coverage tended to be limited to reinsurance.⁶⁴ *This means that approximately half of CARICOM countries have not scheduled any commitments under areas critical to ICT including the delivery of any such services.*

A review of the WTO Services Database provides a more detailed picture of what ICT relevant services sectors and sub-sectors CARICOM countries scheduled, and these warrant some discussion here. However, it is important to point out at this juncture what earlier attempts at studying CARICOM services commitments determined, i.e. there is limited available information on the restrictions in effect in CARICOM countries affecting trade in services.⁶⁵ Refer to the services breakdown above for explanation on the letter codes used below.

| <u>COUNTRY</u> | <u>SERVICES COMMITMENTS</u> |
|------------------------------|--|
| <u>Antigua & Barbuda</u> | Has scheduled limitations on market access for computer and related services and for telecommunications services but is more concentrated in the latter. For example, packet switched (b) & circuit switched (c) data transmission |

⁶³ Ibid., page 64.

⁶⁴ Majluf, *op cit*, pages 67-69.

⁶⁵ Majluf, *op cit*, page 72.

| | |
|-----------------|---|
| | <p>services and private leased circuits (g) for public use are reserved for exclusive operators until 2012 in the case of Mode 3 and Unbound except as indicated in the horizontal section for Mode 4. For the former a Business Act applies in the case of Mode 3 and Mode 4 is subject to limitations as indicated under horizontal commitments. For non-public use these same services are limited to provision only on the network facilities supplied by the exclusive operators and any bypass of these exclusive operators is not permitted. For on-line information and data base retrieval services (j), electronic data interchange (k), and on-line information and/or data processing (n) market access is limited to use of network facilities provided by the exclusive operators for Mode 3, and is unbound except as indicated in the horizontal section for Mode 4.</p> <p>In terms of limitations on national treatment for computer and related services there are no limitations for Mode 4 (None) and Mode 3 is limited as per the Business Act. Telecommunications services (b, c, d, e, and g) for public use are unbound except as indicated for horizontal section for Mode 4 and there are no limitations for Mode 3. For electronic mail, on-line information and data base retrieval, electronic data exchange, on-line information and/or data processing and internet access were also unbound except as indicated in horizontal section for Mode 4 under both Market Access and National Treatment, and for Mode 3 possible only on network facilities supplied by the exclusive operators</p> |
| <u>Barbados</u> | <p>Scheduled commitments for Computer and related services but only for (b) software implementation services where there are no limitations on either market access or national treatment for all four modes of supply. In the case of telecommunications services for Barbados however almost the entire sector is subject to limitations. Market access in (b), (c), (d), (e), and (g) is reserved to exclusive suppliers for Mode 3 and unbound except as indicated in the horizontal commitments for Mode 4. As regards National Treatment for these services there are no limitations for Mode 3 and Mode 4 is unbound.</p> <p>In the case of (b), (c) market access is only permitted over the networks of the exclusive suppliers for Modes 1 and 3 while Mode 4 is unbound except as indicated in horizontal commitments; while (h), (j), (k), (n) and internet and internet access services (Other) have no limitations for</p> |

| | |
|------------------|--|
| | Modes 1, 2, and 3 and are unbound for Mode 4. |
| <u>Dominica:</u> | Did not schedule any commitments for Computer and related services but has done so for most of the telecommunications services sector. For (b), (c), (g) for public and non-public use, market access is limited to use of the network exclusive operator for Modes 1 (by-pass not permitted) and 3, and for Mode 4 as indicated in horizontal commitments. For (h), (j), (k), (n) and internet and internet access services (except voice) market access is similarly limited to network facilities supplied by the exclusive operator for Mode 3 and to horizontal commitment for Mode 4. There are no limitations (None) to national treatment for any of the services |
| <u>Grenada:</u> | Market access for (b), (c), (d) and (g) for both public and non-public use, and (h), (i), (j), (k), (l), (m), (n), and internet and internet access services are limited to use of the exclusive public and network operator until 2006 and bypass of the network is not permitted for Modes 1 and 3, and subject only to horizontal commitments for Mode 4. There are no limitations on national treatment for any of these services. |
| <u>Haiti:</u> | Made commitments, amongst others, under Financial Services: (d) all payment and money transmission services but there are no limitations for either market access or national treatment. |
| <u>Jamaica:</u> | <p>Made commitments under Computer and related services (b), (c), and (d) where market access is subject to registration and licensing for Mode 3 and are unbound except for horizontal commitment for Mode 4. There are no national treatment limitations for these services for Modes 1,2, and 3 and Mode 4 is unbound except as indicated in horizontal commitments.</p> <p>Coverage under telecommunications services is broad and includes most of the sub-sectors. Market access for (a), (d), (e), (g) is limited to exclusive private operator until 2013 for Modes 1 and 3, and there are no limitations on foreign equity participation in the exclusive private operator (Mode 3). Mode 4 is unbound except as indicated in the horizontal commitments. For (b), (c), (h), (i), (j), (k), (n), and internet and internet access services there are no market access limitations for Modes 1, 2 and 3 and Mode 4 is unbound except as indicted in horizontal commitments. There are no national treatment limitations for these services for Modes 1, 2, and 3 and Mode 4 is unbound except as indicated in the horizontal</p> |

| | |
|------------------------------|--|
| | <p>commitments.</p> <p>The Government of Jamaica however has reviewed regulatory disciplines and has completed a new telecommunications bill that provides the legislative framework for the provision of telecommunications services that reflect the technological advances and pro-competitive practices in the sector.</p> |
| <u>St. Kitts & Nevis</u> | <p>St. Kitts and Nevis made commitments under telecommunications value added services, specifically (h) electronic mail, (i) voice mail, and (n) online information and data processing but excluding telefax. Both market access and national treatment had limitations</p> |
| <u>Trinidad & Tobago</u> | <p>Made commitments under software development but there were no limitations under market access or national treatment for this service. Under telecommunications services (a), (b), (c), (d), (e), (g), (j), (k), (l), (m), (n), (o) market access is limited to use of the network exclusive public operator for public use for Mode 1, and is reserved to exclusive supply until 2010 for Mode 3. There are no limitations for Mode 4. In the case of Internet and internet access services was unconfirmed but should have been negotiated with the exclusive provider. There are no limitations for national treatment for any of these services.</p> |

The low level of commitments and schedules in these sectors have several significant implications for the region's development and in particular the development of the ICT sector, principal among these are:

- *That it is an indication of a lack of national and regional commitment to the development of ICTs through increased levels of market access in ICT related services sectors, resulting in a failure to attract needed investment in network capacity and related services and impairing the region's ability to establish itself as a credible ICT services exporter.*
- *Failure to award priority to these areas within the national development agenda. Little or no attention and resources are awarded to development of the attendant policies, programs and infrastructures necessary to encourage national development and growth of ICT services sectors. Principal among these is a lack of attention to capacity building and human resource development.*
- *Inability to take full advantage of market access opportunities in key target markets, for example E-commerce opportunities in computer and related services and financial services.*

The GATS also contains Annexes that clarify how the Agreement applies. The Annexes that are of import to ICT include the Annex on Article II Exemptions; the Annex on the Movement of Natural Persons Supplying Services under the Agreement (to the availability of qualified human resources for ICT services in the region); the Annex on Telecommunications (for obvious reasons); and the Annex on Negotiations on Basic Telecommunications.

8.0 Telecommunications & ICT

The degree to which a country is prepared to participate in the Global Information Infrastructure (GII) is significantly influenced by its network readiness. Network readiness in turn is significantly dependent on telecommunications. With the convergence of telecommunications, broadcasting and computing, telecommunications have become the basic platform around which all other communications services revolve. As such ICT diffusion and the benefits associated with it, are significantly dependent on the size, scope and quality of the telecommunications network that underpin it. How each country chooses to plug into the GII and make the transition to an information society will depend on two factors: 1.capacity to supply low-cost and widely available telecommunications services; and 2. cost and accessibility of the computer infrastructure.⁶⁶ Thus how countries approach the Basic Telecommunications Agreement (Trade in Services) and the Information Technology Agreement (Trade in Goods) which encourage progressive levels of liberalisation of telecommunications and computer markets, significantly influences its ability to effectively engage ICTs.

8.1 Low cost and widely available telecommunications services

At the entry into force of the BTA on February 4th, 1998, 72 members,⁶⁷ whose markets accounted for more than 90% of global telecommunications revenue, had signed and agreed to discuss ever-increasing levels of market access to their telecommunication sectors. The reason: to encourage liberalised trade in basic telecommunication services and capitalize on advances in technology to develop the telecommunications infrastructure and capitalise on its dual role as a distinct sector of economic activity and as the underlying transport means for other economic activities.

The scope of the agreement included all manner of access to and use of the public telecommunications transport network and services, excluding cable or broadcast distribution of radio or television programming. For the purposes of the BTA, basic telecommunication services are defined as all telecommunications services both public and private, that involve end to end transmission of customer-supplied information (such as voice or data). As a result the agreement covers not only the cross-border supply of telecommunications, but also services provided through commercial presence. These include telephony, data transmission, telex, telegraph, facsimile, leased circuits, fixed and mobile satellite systems and services, cellular telephony, mobile data services, paging and personal communications systems. Value added

⁶⁶ Latin America and the Caribbean in the Transition to a Knowledge –Based Society: An agenda for public policy, CEPAL, ECLAC, June 2000, pg 17.

⁶⁷ Including Antigua and Barbuda, Belize, Dominica, Grenada, Jamaica and Trinidad and Tobago

services,⁶⁸ although not formally a part of the negotiations formed part of the commitments made by 50 governments under the GATS agreement and some participants to the BTA chose to include these in their offers. At the time of the negotiations the participants also negotiated a set of regulatory principles that were to guide the liberalisation process and guard against the abuse of market power by monopolies who dominated the telecoms landscape. Specifically, these principles addressed the issues of competition safeguards, interconnection guarantees, transparency in licensing, independence of regulators, competition neutral universal service mechanisms and fairness in allocating radio spectrum and rights of way. The participants were free to include the reference paper, in whole or in part, as legally binding, additional commitments to their schedules.

As part of the GATS, the BTA commitments are subject to the MFN and the market access principles applied under the GATS but members are also free to limit and specify the extent to which they will guarantee access to their markets. Thus in a number of schedules, Member's made no specific commitment on basic telecommunications services or if they did, the commitments were to be phased in. At the time of its entry into force in 1998, only a few governments agreed to introduce competition in basic telecoms, which was generally regarded as a natural monopoly, and in most of these cases at least some networks or market segments remained under monopoly. Table 5 provides a convenient reference of the forms of trade in telecommunications services, allowed under the BTA and to which members committed, subject of course to the caveats in their commitment schedules.

Table 5

Forms of Trade in Telecommunications Services

| Modes of Delivery | Example | Significance | Examples of existing trade barriers |
|-------------------------------------|---|---|---|
| Cross-border supply | International Telephone Calls | Produces the bulk of the revenue in the telecommunications services trade | Bilateral Settlement agreements |
| Commercial Presence | Foreign owned company offering telephone services | Offers scope for foreign investment | Foreign investment and license restrictions |
| Consumption Abroad | Mobile Roaming | Development of global mobile network with use of terrestrial and satellite based technology | Incompatible technical standards and lack of roaming agreements |
| Movement of Natural Persons (staff) | Consulting on telecommunications activities | Growing need for advice on policy reform and training | Work permit restrictions |

(Source: ITC, 1999)

⁶⁸ Defined as telecommunications for which suppliers "add value" to the customer's information by enhancing its form or content or by providing for its storage and retrieval. E.g. online data processing, online database storage and retrieval electronic data exchange, email, voicemail.

Telecommunications Trade in CARICOM

As discussed above, the offers made by the CARICOM countries at the time of the BTA negotiations reflect an extremely cautious approach to market access, with little or no immediate access to fixed telephone line markets. Some countries such as Belize St Kitts, St. Vincent and the Grenadines, and Guyana made no offers to allow competition in their voice markets, and of the remaining countries, the majority offered a phased in approach, extending to as far as 2013; Grenada being the exception at 2006. See above and Annex VI, for more specific information on country commitments.

Perhaps negotiations for the BTA came too soon on the heels of the rash of telecoms network privatizations which occurred throughout the 1980's and early 90's in the region. For the most part the process mainly exchanged the former state monopoly with a private one,⁶⁹ whose investment would have been severely threatened by a liberal approach to market access. Whatever the reason, the conservative approach to market access ensured that the region was securely etched on the periphery in trade in telecommunications and the penetration statistics for basic telecommunication and internet services eloquently make the point.

According to the ITU, in 2001 total global telecom market revenue was \$968 billion and \$264 billion for services and equipment respectively. There were 1.053 billion main telephone lines, 955 million mobile subscribers and 502 million internet subscribers. Among spending in ICT sectors, telecommunications remains the single largest technology sector, with North America i.e. (US, its territories and Canada), accounting for 28% of total telecoms spending.⁷⁰ Of total main telephone lines, CARICOM countries who reported⁷¹ account for much less than 1%. On average, tele-density rates averaged around 29% for CARICOM countries, compared to 66% in Canada and the United States. Internet penetration reflects the level of fixed line penetration. Skewed by Jamaica and Trinidad and Tobago who report more than 100,000 internet subscribers each, on average CARICOM countries maintain roughly 25,000 internet subscribers, although the figures vary from 2,100⁷² to over 120,000⁷³ and whereas there are approximately 2,014 internet users in Canada and 5,015 internet users in the United States for every 1,000 inhabitants, among CARICOM countries the average is roughly 507⁷⁴.

Telecommunications Reform in CARICOM

Though not without significant cost, many CARICOM countries, despite their earlier commitments have decided to liberalise their telecoms market on an autonomous basis. Barbados, Belize, Jamaica, the OECS and Trinidad and Tobago have either legislated market access reform or are preparing to, see Table 6 below.

Table 6 Telecoms Reform Initiatives - Selected Member States

| Country | Particulars | Over view of Key Features | Updates |
|---------|-------------|---------------------------|---------|
|---------|-------------|---------------------------|---------|

⁶⁹ Felipe Noguera, Telecommunications in the Caribbean, <http://www.vii.org/papers/cari.htm>.

⁷⁰ Digital Planet, 2002, pg. 13

⁷¹ St. Lucia and Montserrat did not report

⁷² St. Kitts and Nevis

⁷³ Trinidad and Tobago

⁷⁴ ITU Statistics, 2002

| | | | |
|----------------------------|---|---|--|
| Barbados | Telecommunications Act 2000 Approach Gradual Managed Transition | Full Liberalization by December 2002 Phase One (Dec 2000- March 2001) Allow competition in CPEs (single line, inside wiring and multi-line systems), Mobile, internet, domestic voice (value added) switched resale of minutes using incumbent's network, international leased circuit capacity resale Phase two (April 2001 – Dec 2001) Full competition in CPEs, domestic voice fixed wire line network competition Phase three (December 2002) Full competition domestic voice, full network based competition international voice, including V-sats. | March 4, 2002 Barbados is currently in phase 1 of the liberalisation process. The Government and C&W are expected to renegotiate the timing of the phases. Source: Robert Folker On behalf of Permanent Secretary Ministry of Economic Development |
| Belize | Telecommunications Act 2001 Approach Rapid Transition | Full liberalization by December 2002 Public Utilities Commission, issue licenses but only after public consultation. | Belize fully liberalized and in compliance with WTO reference paper. Source: Dean Molina Public Utilities Commission |
| Jamaica | Telecommunications Act 2000 Approach Gradual Managed Transition | Full competition in all telecoms sectors by March 2003 Phase One (March 2000 –Aug 2001) Allow Competition in Mobile services, internet and data excluding voice and using incumbent's network Paging, resale of incumbent's international voice minutes, CPE and within Free Trade Zones Phase Two (Sept 2001, Feb 2002) Allow competition in domestic voice services, internet services provided by television providers, resale of incumbent's domestic switched minutes Phase three (March 2003) Full competition | Jamaica fully liberalized and in compliance with WTO reference paper |
| Trinidad and Tobago | Telecommunications Act 2001 Approach Rapid Transition | The de-monopolisation of the telecommunications sector such that service providers other than TSTT may provide services to operate a public telecommunications network or provide a public telecommunications or broadcasting service. Equal treatment of all similarly situated operators and providers of services except where special treatment is necessary for introduction of competition. Additional | Bill passed June , 2001 Promulgated and proclaimed as of 2003 |

| | | | |
|-------------|---|--|--|
| | | obligations to be imposed on operators or providers whose dominance is established in a particular market in accordance with the criterion laid out in the bill. | |
| OECS | Approach Gradual Managed Transition | <p>Cable and Wireless signed an agreement with the OECS on 7th April 2001 C&W has agreed to a transition period of 12 – 18 months from April 1st as follows.</p> <p>Phase One</p> <p>Allow competition in domestic mobile/cellular infrastructure CPE, single and multiline Resale of international minutes carried through incumbent's network Vsat facilities to serve call centre/data entry businesses (no interconnect with PSTN) Internet but no voice and no bypass Call back licensing</p> <p>Phase two 12 – 18 months from beginning of phase one Total international plus domestic mobile cellular International facilities based competition voice and data, including internet, Domestic voice and data infrastructure competition Full internet</p> | |

However, the demands of global ICT trade, particularly if CARICOM wishes to exploit export opportunities in services in the high technology areas, are exacting. According to research conducted by UNCTAD on the global computer software industry, the nature and size of the information and communications technology infrastructure, specifically the telecoms network, directly impacts the growth and spread of the computer software and services industry. “The computer service industry has come to increasingly rely on high-speed telecommunication networks and the internet to transfer code, data, and information across borders. Indeed difficulties in both verbal and data communication were considered to be the most important disadvantage in a survey of global information technology sourcing.” Without access to fast (broadband/ISDN) and low cost ICT networks, the computer software and services industry is constrained.”⁷⁵

Unfortunately, despite reform initiatives the cost and quality of the telecoms network is still very much a factor for CARICOM. According to the recent assessment of the state of e-readiness in the CARICOM region, “in most of the ... area, high speed connections (256K and

⁷⁵ Changing Dynamics of Global Computer Software, And Services Industry: Implications for Developing Countries, Commission on Science and Technology for Development, UNCTAD, April 2001.

upwards) do not exist and where they do, they could cost over US \$15,000 per month as compared to the USA where homes in New York for example, have 10 megabit connections at only US \$30 a month.⁷⁶

8.2 IT Infrastructure: Cost & Accessibility

The Information Technology Agreement

In 1994, 95, the main exporters of IT products, specifically Canada, European Union, Japan and the United States, initiated several rounds of discussions on the key requirements for the establishment of an information society. A central requirement was considered to be *inter alia*, the elimination of tariffs on IT products within a specified time frame to ensure rapid and cost-effective diffusion of the physical infrastructure across continents. Following the discussions, a draft proposal was presented to the WTO Singapore Ministerial Conference in 1996, which adopted it as a Ministerial Declaration on Trade in Information Technology Products.

Also known as the Information Technology Agreement, (ITA) the declaration at the time provided for the elimination of customs duties and other charges⁷⁷ on a most favored nation basis, on IT products by January 1, 2000. Other duties and charges were to have been eliminated by July 1997 (except if otherwise specified under a member's schedule). Some countries such as Costa Rica, Malaysia and India were given flexibility in cutting their tariffs after the year 2000 but not beyond 2005.

The product coverage is spelled out in Appendix A and B of the declaration. Broadly, these products can be categorized as:

- Computers i.e. complete computer systems and laptops, and component parts e.g. CPUs, keyboards, printers, monitors, scanners, hard disk drives, power supplies.
- Telecommunications Equipment including telephone sets, videophones, fax machines, switching apparatus, modems and parts thereof, telephone handsets, answering machines, radio broadcasting and television transmission and reception apparatus and pagers
- Semiconductors including chips, wafers, of various sizes and capacities
- Semiconductor manufacturing equipment including a wide variety of equipment and testing apparatus used to produce semiconductors
- Software contained on diskettes, magnetic tapes, CD-ROMs

⁷⁶ Alwyn Didar Singh, A Rainbow Technology for a Rainbow People: E-Business Capacity Development for the Caricom, Commonwealth Fund for Technical Cooperation, June-August 2001, pg 52

⁷⁷ Within the meaning of Article II: 1(b) of the GATT, 1994

- Scientific instruments including measuring and checking devices, chromatographs, spectrometers, optical radiation devices etc.

Among other main products covered by the ITA are word processors, calculators, cash registers, ATM machines, optical fiber cables, computer network equipment, flat panel displays, plotters, and multimedia upgrade kits. Consumer electronic goods are not covered by the ITA.

As of January 2003, the ITA had 42 participants (covering 57 members and states or separate customs territories in the process of acceding to the WTO), representing approximately 93% of world trade in information technology products. See annex VII for country listing. Allowed the flexibility to declare and maintain other duties or charges by recording them in their schedule of concessions, signatories to the ITA are able to manage the impact on tariff reductions on their economies at a pace amenable to their development and commercial objectives. For example in the US, Canada and the EU relatively high tariffs remain. In the US and Canada these are concentrated in the telecommunications sector and in the EU on semiconductors.⁷⁸

Impact of ITA

According to the ITC report, cost reductions in equipment, if passed on to consumers, have considerable positive effects on a country's overall economic performance. "Lower hardware prices stimulate the extended diffusion of communications infrastructure and bring down the cost of services. Both these developments encourage the use of communications services and networks. A rapid expansion of communication leads to a similar increase in access to information, with positive effects for the economy as a whole. Business opportunities also increase because of the closer integration of local economic actors in national, regional and global centers and flows of trade and commerce."⁷⁹

ITA also broadens opportunities for new market entrants. Globally competitive IT product companies continue to establish production facilities in locations offering comparative advantages. FDI flows to countries with proximity to markets, where production costs are low and skilled human resources and enabling policy environments are available, increased significantly.

The importance of plugging into the GII notwithstanding, the ITA also inspires negative results. For example, increased levels of market access imply that small and medium size IT product enterprises may fall prey to the multinational technology monopolies. Experience has shown that some of them survive and expand their operations beyond the local markets but a considerable number are absorbed by multinationals or go out of business altogether.⁸⁰ At the macroeconomic level, responding to the demand for new hardware in the case of most developing countries implies increases in hardware imports, likely exacerbating the negative balance of trade and increasing the need for foreign exchange. As the ITC points out if this need arises at the same time of a reduction in foreign exchange earnings due to the collapse of the

⁷⁸ Trade in Information Technology Products and the WTO Agreements, Current Situation and views of exporters in developing countries, ITC, pg. 82, Geneva, 1999

⁷⁹ *ibid*, pg. 74

⁸⁰ ITC Report, pg 78

accounting rate system in the attendant telecommunications industry, network expansion could be compromised.⁸¹

Latest Developments in ITA

Besides the expansion of product coverage which continues to remain a priority on the agenda of the WTO committee charged with the expansion of trade in IT products, country submissions are being entertained on the effects of non-tariff measures on market access for IT products. Developed countries such as the United States and Canada continue to lobby for agreements on non-tariff measures such as conformity assessments, regulatory process and procedures, standards, rules of origin requirements and customs procedures, which they argue increases the costs for producers and exporters and contribute to trade distorting effects. Although as of January 2003 formal negotiations had not begun on this issue, it is certain to remain on the agenda and countries contemplating participation in the ITA will have to consider their negotiating positions on these issues.

ITA and CARICOM

As of January 2003, not a single CARICOM member country was a party to the ITA. Whether this is the result of a deliberate country strategy, an oversight or the failure to define a widely endorsed regional position could not be determined with any degree of certainty. However, some member states domestic policies suggests a reluctance to participate in the scope or levels of tariff reductions and market access encouraged by the ITA.

For example the low customs duties on computers and computer parts (between 0 and 5%) that exist throughout the region suggest regional sensitivity to the importance of widespread access to computer hardware. However, the internal taxes levied as either a consumption charge, sales tax, VAT or other import surcharges, (see Annex VIII) in some cases severely contradicts this assertion and suggests that the taxes on computers and computer products are a significant source of revenue for some CARICOM governments. The diffusion rate of PCs in the CARICOM states reflects the relatively high hardware costs. For example, according to ITU statistics, the average number of PCs per 100 inhabitants, among CARICOM countries who reported in 2001 was only 9, versus 40 and 62 in Canada and the United States respectively (see Annex X for breakdown). In the case of Guyana the figure was an alarming 2 per every 100 inhabitants. According to ECLAC, the price of equipment in relation to average income of the population throughout the region is the main contributing factor to the dismal PC diffusion rates.⁸²

The region's position on the ITA ignores the widely purported and intended symbiosis of ITA and BTA and the collective importance of the issues they represent to the widespread diffusion of a communications infrastructure.

However, the need for CARICOM involvement in the ITA depends significantly on the role defined for ICT in the region. For example, if CARICOM adopts a regional position to pursue a supply led approach underpinned by the export of ICT services, then narrow policies can be formulated to facilitate the infrastructure and capacity needed to support the development

⁸¹ *ibid*

⁸² *ibid*, pg. 17

of this productive sector, without consideration of the broad scope and market access issues associated with the ITA. In fact, the negotiation of a suspension of the CET for relevant products, as allowed under Article VII of Protocol IV of the CARICOM treaty would likely have the same effect in reducing the costs of hardware destined for this sector, although it would not address internal tariffs.

If the strategy is to exploit the managed direct and spill over effects of widespread ICT diffusion throughout the region, or to exploit a combination of production, and user oriented strategies by making sure the CARICOM countries are securely plugged into the GII, then participation in the ITA becomes more important.

The liberalisation of trade in equipment began earlier than that of services and consequently is significantly more advanced. In fact the removal of tariff barriers on IT products has resulted in the creation of a single global market for IT products. The pressure for improved efficiencies and the competitive forces in the global market promotes the proliferation of communications networks, as the costs of delivering these networks decline and the quality of the services improves. Latecomers to the process, such as the CARICOM states, have the opportunity to “leapfrog” the process by taking advantage of the knowledge that has already been accumulated. Thus if the rapid and widespread diffusion of an efficient communications network underpins the region’s ICT strategy then, active consumer participation in the global IT products market is critical.

And, there are spillover advantages to ITA participation. For example, given the expected increases in demand and affordable supply spawned by greater access, significant opportunities exist for local firms to position themselves to export value added services such as consultancy services related to systems integration, customization, installation, and after sales service.

However, the benefits of this will have to be weighed against the loss in tax revenue from the entire schedule of products covered by the ITA, some of which (such as calculators and cash registers) have little impact on IT diffusion. For example, CARICOM countries traditionally levy high taxes on telecommunication equipment, including end user equipment, which are squarely within the ambit of the ITA (see Annex VIII). Countries will need to determine the impact of immediate or gradual reduction of customs duties and other taxes on these products, on their tax regimes. Macroeconomic impact such as the effect on the balance of payments and foreign exchange earnings is also a consideration, as are the institutional, policy and regulatory adjustments, (particularly customs regulations and harmonisation activities) that are required. Additionally, CARICOM will have to determine its position on the issues still under consideration at the multilateral level, specifically the expansion of product coverage i.e. what is being discussed and how it will affect tax regimes and the cost of compliance with regulatory issues determined to be non-tariff barriers.

9.0 E-Commerce

The growth of the Internet has played a key role in the dissemination and convergence of ICTs and the ubiquitous nature and global scope of these technologies are changing the way in

which economic and industrial activity is organized. The internet and the proliferation of the GII, underpinned by ICT has in recent years opened up the possibilities of e-commerce.

E-commerce like the technological platform on which it sits is not easy to define. A narrow definition would describe it as conducting business online. A broader definition suggests that it encompasses any kind of commercial transactions that can be concluded over an electronic medium or network. Whichever definition is subscribed to, there can be no argument that electronic commerce is changing the way business is conducted and has in fact introduced a radical new approach to commerce.

E-commerce applications are diverse but essentially there are two main uses. The first is to reduce transaction costs by increasing efficiency in the use of time and procedures, the other is to use it as a Marketing tool to increase sales and create new business opportunities.⁸³ There are four types of trade flows in which e-commerce plays a significant role: (i) business to business (B2B), (ii) business to consumer (B2C), (iii) consumer to business (C2B), as when the consumer takes the initiative and buys an airline ticket online, and (iv) consumer to consumer (C2C) - those activities that take place on e-auction sites.⁸⁴ As pointed out by the ECLAC report, each of these is associated with a different market morphology, different economies of scale and scope, different types of externalities and incentives and differing degrees of connectivity and of internet access.⁸⁵

From a development perspective e-commerce offers unprecedented opportunities. For example according to the ITC about 80% of e-commerce growth will be in business to business trade. That implies that more companies will locate their services wherever they have access to competitive skills and developing countries may have a comparative advantage in providing back office operations (such as call centres and data processing) if their costs are lower.⁸⁶ But there are also unprecedented challenges. For example, the growth of e-commerce can signal the destruction of existing local supply chains and a dependence on multinational suppliers. Indeed, IT multinationals may be the sole beneficiaries of e-commerce if local industries are weak. Local producers may find that they are increasingly losing existing local customers and if e-commerce negotiations secure commitments on cross border supply and movement of natural persons, local service providers will find themselves just as severely compromised.

For CARICOM members, the growing use of the Internet for the supply of B2B transactions is especially important given its aspirations as a services supplier. Such a trend suggests that unless member countries can fully exploit the e-commerce supply facility and fast, they cannot even consider competing in this sector. Thus, the question for member states is not whether they can afford to plug into the GII the question is how quickly can they get up to speed.

Plugging in and using e-commerce as a supply means implies that a number of policy and technical issues must be dealt with at the national level. These issues are summarised and

⁸³ A.D. Singh, pg 8

⁸⁴ Latin America and the Caribbean in the Transition to a Knowledge Based Society, *ibid* pg. 11

⁸⁵ *Ibid*, pg. 11

⁸⁶ Secrets of Electronic Commerce: A Guide for Small and Medium Sized Exporters, ITC, 2000.

discussed in the table below. A few, such as access and improvements to the telecoms infrastructure and related international legal issues have been addressed above.

Table: 7 Key Policy and Technical issues for E-Commerce Strategy

| Policy Issues | Technical Issues |
|---|--------------------------|
| International Legal Issues | Encryption |
| Fraud Issues | Security of Payment |
| Consumer Protection | Certification of buyers |
| Intellectual Property Protection | Authentication of buyers |
| Access to telecoms infrastructure | Digital Signatures |
| Improvement of telecoms infrastructure | Data Protection |
| Development of national e-commerce strategies | Privacy protection |

None from among this list can be ignored or circumvented. Insufficient attention to any one of these can undermine the road to effective e-commerce participation.

9.1 CARICOM and E-commerce

The CARICOM Secretariat recently concluded e-readiness assessment exercise, is a critical step towards preparing the region for e-commerce and related issues. However the report's results were sobering. The following were the conclusions for the region⁸⁷:

- Despite moves in most member states toward opening up the sector, telecom continues to be a major issue and is seen as a constraint to the development of e-business
- In most states there is no clear policy or plan in the area of IT or e-commerce/e-business
- A legal framework “practically does not exist” Neither in law nor in services offering security of transactions on the net
- Across the region the number of IT professionals being produced is very small and therefore there is a shortage
- Email and websites are the main applications driving the internet in the region. There is a severe lack of e-business in the region
- Policy makers in member states are not even aware of the global issues of e-commerce or the implications of the on-going discussions at WTO and FTAA.

In early 2003, the conclusions are still applicable. Barbados drafted an Electronic Transaction Act in 2001, but the regulations for this act are still being worked on⁸⁸. Jamaica and Trinidad both have e-commerce policies, although Jamaica's is articulated as part of its wider industrial

⁸⁷ Singh, pg. 48

⁸⁸ Robert Folkes, Ministry of Economic Development, Upton, St. Michael, Barbados robertfolkes@barbados.gov.bb.

policy and does not adequately address all the attendant issues. Belize and Guyana still do not have an ICT policy much less an e-commerce policy and the OECS countries are in the process of preparing one. Already lagging behind, the complexities and rapid evolution of e-commerce and its attendant trade and investment issues present a great challenge for member states.

9.2 The Trade Environment of E-Commerce

E-commerce was first considered within the WTO as a market access issue. The growing importance of e-commerce on global trade led the members of the WTO to adopt a declaration on global e-commerce in early 1998, at their second Ministerial Conference in Switzerland. The declaration essentially directed the General Council of the WTO to establish a comprehensive work programme to examine all trade related issues arising from e-commerce and present a report at the third Ministerial Conference. The declaration also established that members were to continue their current practices of not imposing customs duties on e-commerce.

The work programme was adopted by the WTO General Council in September 1998. Under the work program, issues related to electronic commerce were examined by the Council for Trade in Services, the Council for Trade in Goods, the Council for TRIPS and the Committee on Trade and Development. The work program produced a flurry of reports as each of the committees introduced their findings and many member governments submitted documents outlining their own thoughts. The main issues inspiring debate were

- The question of a permanent position on not imposing customs duties
- The classification of e-commerce as either a good, service or separate category
- The protection of Intellectual Property Rights on the Internet

The main points emerging from the reports are as follows:

- As far as trade in services is concerned e-commerce involves three different kinds of transactions
 - transactions for a service which is completed entirely on the internet from selection to purchase and delivery
 - transactions involving “distribution services” in which a product, whether a good or a service, is selected and purchased on-line but delivered by conventional means
 - transactions involving the telecommunication transport system, including provision of Internet services
- On the question of the classification of e-commerce, the general view is that the vast majority of transactions on the internet are *services* which are covered by the GATS
- The GATS makes no distinction between the different technological means by which a service may be delivered, whether in person, by mail, by telephone or across the Internet. Thus, the supply of services through e-commerce is covered by the commitments in the same way as all other means of delivery.

These recommendations are likely to inspire passionate and polemic debates and have considerable market access implications, relating to e-commerce and related sectors. This is discussed more in section 10.0.

9.3 Enabling Environs and Policy Issues/ E-commerce

*“Although technology is the engine that drives the process, it is people’s decisions and attitudes that set its direction. In practical terms, policies must be designed, articulated in coherent e-strategies and implemented in partnership with all the relevant e-players.”*⁸⁹

Intellectual Property and E-Commerce

The issues associated with Intellectual Property and E-Commerce are well documented. There can be no doubt that a key enabling factor of e-commerce/e-business activity is the protection of intellectual property rights. This is especially so for the computer services and software industry where the issue is that many of the products and services they produce are costly and often times risky to develop but are also extremely easy to copy. Considering the development perspective however, muddies the waters.

A compelling argument can be made that a developing country’s subscription to the protection of IPRs only increases the disparity between the developed and developing countries because, using the software industry as an example, a very large proportion of users in developing nations are simply incapable of paying the market costs of proprietary software.⁹⁰ Thus many protagonists of “free” software argue that developing countries should ignore intellectual property rights on software and turn their attention to low intellectual property rights protection and enforcement.⁹¹ For the least developed countries that do not have the means to properly enforce IPRs, this may be the only strategy available to them. However, for the countries seeking to develop computer services and software as a strategic industry, *such a strategy is not an option*. IPR protection has to be in place to protect the proprietary software being developed by the domestic sector and by foreign multinationals that have been attracted into the country.

IPRs in CARICOM

According to the Singh study, the disparity among member states in the quality of IPR legislation is immense. Legislation quality ranges from those that are totally WIPO compatible, as in the case of Trinidad and Tobago, to those that have not addressed the issue since 1912, as in the case of Suriname. For the most part though awareness and legislation exists and members are expending efforts to make their legislation TRIPS compliant. Enforcement on the other hand is difficult to gauge and the constraints of time, forced priorities that did not permit a review of any significance.

⁸⁹ E-Commerce and Development Report, 2002, Internet Version prepared by UNCTAD Secretariat, United Nations, New York and Geneva, 2002

⁹⁰ Changing Dynamics of Global Computer Software and Services Industry: Implications For Developing Countries, UNCTAD Secretariat, April 2001, pg. 30

⁹¹ *ibid*

Nevertheless, for member countries, the message is clear. Participation in services exports, particularly high end software and services exports demands a well managed, TRIPS compatible IPR legislative and enforcement regime that includes recourse to the judiciary and an assurance of the application of the rule of law.

From a trade negotiations perspective electronic commerce remains a key consideration for the TRIPS council. In terms of the TRIPS agreement the main issue is not whether the TRIPS agreement applies to electronic commerce. To quote the American submission, e-commerce does not rescind the general principles and balance of interests under intellectual property law which were developed for common commercial use. What is valid off-line is valid on-line.⁹² In fact the issue is to what extent the Agreement guarantees equal treatment for Internet versus conventional trade activities and more, what is the minimum protection for intellectual property rights which member states are obligated to guarantee in the context of electronic commerce activities.⁹³ CARICOM positions should be central to this dialogue.

Domestic Regulations

According to Article VI of the GATS, in any sector where a WTO member country has undertaken specific marketing-opening commitments that country must ensure that all measures of general application affecting trade in services are administered in a reasonable, objective and impartial manner. To meet this standard, member nations must ensure prompt review of administrative decisions affecting trade in service and must ensure that any qualification requirements and procedures, technical standards and licensing requirements do not constitute unnecessary barriers to trade in services.⁹⁴

The domestic regulation principles of GATS are relevant to a number of e-commerce issues. Notably tax treatment of electronic transactions (discussed above), content considerations, data protection, telecommunications (discussed above) and ISP access rates, consumer protection, fraud prevention, data transmission standards, infrastructure financing and encryption are all issues for domestic regulation.⁹⁵ The significance here is that these are all issues that will have to be considered a priority within the context of e-commerce strategies and domestic e-commerce regulation, which to date has not been comprehensively addressed by CARICOM member states.

Standards

Inter-operability is an increasingly important consideration to the burgeoning GII. Without interoperability, the components within each network cannot communicate effectively with one another, nor can information move seamlessly from one network to another. "Further, both government and industry concur that interoperability can occur only where there are standards i.e. where the hardware and software that make up the information infrastructure all speak the same language."⁹⁶ To the extent that standards are not clearly defined, it behoves the policymakers with services aspirations to devise policy with a view to interoperability within an international, voluntary and consensus based environment for standard setting. Policy makers

⁹² Submission from the United States, WTO: July 1999, www.docsonline.wto.org/GEN_viewerwindow.asp?D/DDFDOC.

⁹³ WTO submissions from Switzerland, June 2001, www.docsonline.wto.org/GEN_viewerwindow.asp?D/DDFDOC.

⁹⁴ Guide to the Uruguay Round Agreements, World Trade Organization (Kluwer Law International: The Hague/London/Boston, 1999), page .

⁹⁵ Trade Related Aspects of E-Commerce, A Discussion Paper sponsored by the Alliance for Global Business, pg. 28

⁹⁶ Ibid

also need to ensure that standard regulations do not offend the MFN principle or market access commitments, by legislating standards which form a technical barrier to trade, through the imposition of higher testing and certification standards for imports, discriminatory product labelling rules and other obstacles.

Even though there is advocacy by telecoms associations in the region (CANTO), to harmonize telecoms standards across the region, to date there has not been a CARICOM supported collective approach to establishing harmonised technical standards or negotiating spectrum and orbital slot allocation with the ITU⁹⁷. The matter of course requires careful study and debate. However to avoid the unpalatable circumstance of having members compete on the basis of interoperability with the GII, (as opposed to network vigour and substance) and to improve the appeal of the region as a credible services supplier, CARICOM may want to append the issue of harmonising standards and related negotiating positions to their agenda. Certainly, standards will have to be a consideration for member countries as they design their e-commerce strategies and supporting legislation.

Consumer Protection, Protection of Privacy and Fraud Prevention

Issues for consideration in this area include the implementation of fair information practices and transparent guidelines regarding the protection and privacy of trans-border flows of personal data. This is an area that calls for high levels of collaboration between policymakers and commerce because governments may need to consider and accept self-regulatory solutions and technological innovations that empower the user. According to the Alliance for Global Business, approaches to the protection of personal information that do not prevent trans-border data flows and where non discriminatory treatment is provided, find favor with business.

Policy makers will also have to consider appropriate action to combat e-commerce fraud and to provide information on fraud and “fraudsters” to the business community,⁹⁸ while the judicial system will have to develop the capacity to deal with internet fraud and computer crime. The implementation and prolific use of authentication technologies and digital signatures are important artillery in the war against e-commerce fraud and are important for users to protect themselves against fraud.

10.0 Market Access

Trade in ICT services, like most other services, is generally limited by two broad market access restrictions, specifically: (i) the conditions in the domestic regulatory environment; and (ii) external trade policies. Falling within the ambit of these areas, are a number of areas acquiescent of market access restrictions including; structural barriers, non-tariff barriers, and horizontal commitments by countries.

Generally, market access in services is concerned more with a wide range of non-tariff barrier issues than with border measures, although border measures are of considerable import.

⁹⁷ Source: Roberto Young, Director of Telecoms, Office of Telecommunications, Belize

⁹⁸ *ibid*, pg 35

Under the GATS for example, MFN Treatment and National Treatment as well as a broad range of domestic regulations, policies and practices, have prescriptive restraining functions as it relates to market access. For example, MFN requirements usually yield to preferential regional arrangements that allow for more favorable treatment to some trading partners. However, MFN market access limitations are contingent on laws and regulations, policies and practices in force in the domestic and regional environment and it is important to recognize that scheduled limitations do not necessarily translate into restrictions on market access.

National Treatment also permits some limitations but “...any measures which affect conditions of competition to the detriment of foreign suppliers must be scheduled.”⁹⁹ These include limitations on:

- The number of service suppliers;
- Total value of service transactions;
- Total number of service operations or on the quantity of output;
- The total number of natural persons that may be employed;
- Measures which restrict or require specific types of legal or joint entities; and
- The percentage of foreign capital

NT limitations in members’ schedules relate specifically to: (1) nationality or residency requirements for executives and board members; (2) requirements to invest a certain amount of assets in local currency; (3) restrictions on the purchase of land by foreign service suppliers; (4) special subsidy or tax privileges granted to domestic suppliers; and (5) differential capital requirements and special operational limits applying to operations of foreign suppliers.¹⁰⁰

Other barriers to market access reside in the regulatory regimes for foreign investment [as it relates to commercial presence] and the temporary presence of natural persons, discussed below.

10.1 Commercial Presence (Mode 3)

“It would be beneficial for CARICOM Member states to maintain the possibility of setting conditions to market access regarding commercial presence in order to pursue developmental objectives such as transfer of technology and access to distribution networks...”¹⁰¹ in particular as it relates to ICT services exports. If CARICOM intends to pursue strategic alliances for the development of ICT services sector, and this is seen to be critical to establishing a successful ICT sector, then any impediments to commercial presence could prove a disincentive to potential investors.

In this regard, CARICOM’s Protocol II “...contains separate provisions regarding the right of establishment affecting all business activities in all sectors (Art. 35b), as well as provisions regarding specifically, commercial presence for services (Art. 36 and 36 a). In

⁹⁹ Page 102

¹⁰⁰ Page 103

¹⁰¹ Majluf, op cit, page 79.

CARICOM commercial presence as a related right of establishment has a dual treatment and therefore in order to avoid a situation where restrictions would apply only to CARICOM nationals, it would be in the interest of CARICOM states to introduce similar provisions in the FTAA.

Domestic regulations constitute a primary barrier to trade in services in the Caribbean. For example, businesses desirous of establishing locally in the majority of the Caribbean territories including the Antilles, Barbados, Belize, Dominica, Grenada, St. Lucia, St. Vincent, are often subjected to an economic needs test, licensing, certification and work permit requirements.¹⁰²

10.2 Movement of Persons (Mode 4)

The GATS Annex on Movement of Natural Persons Supplying Services under the Agreement however sets out terms for measures affecting such persons. Specifically it sets out that while the GATS

“... may not apply to measures affecting natural persons seeking access to the employment in the market of a Member ... nor to measures regarding citizenship, residence or employment on a permanent basis ... it shall not prevent a Member from applying measures to regulate the entry of natural persons into, or their temporary stay in its territory, including those measures necessary to protect the integrity of, and to ensure the orderly movement of natural persons across its borders, provided that such measures are not applied in such a manner as to nullify or impair the benefits accruing to any Member under the terms of a specific commitment.”

Mode 4 or the presence (movement) of natural persons would apply to, for example, allowing natural persons outside of CARICOM, whether employees of a foreign services supplier or independent individuals, into CARICOM for the purpose of providing ICT services. It would also apply to CARICOM ICT specialists moving outside of the region to provide services whether as part of a larger project or as stand alone services (i.e. consulting software implementation). Here CARICOM will have to guard against losing any newly developed talent and expertise (i.e. brain-drain) to importing countries. Hence, Mode 4 raises many attendant issues for CARICOM. Central among these are, labor migration, accreditation of qualifications, income taxation and social services. The free movement of natural persons is critical to the ability to grow ICT services especially given that “...very few members have made liberal commitments in this mode.”¹⁰³

The ICT sector demands the availability and ease of movement of skilled persons particularly, IT professionals and practitioners and CARICOM has a shortage of such persons within the region. Consequently, it will need to develop such capacity. This is possible either

¹⁰² Majluf also made this point and stated that while foreigners could invest in these sectors they “... could not provide the service, unless they received a work permit ...” and were often subject to “... licensing, registration and certification requirements.” Page 64.

¹⁰³ Market Access: Unfinished Business *Post Uruguay Round Inventory and Issues*, World Trade Organization 2001, page 112.

through formal education and training programs (medium to long term), but may also warrant attracting persons holding the requisite qualifications from elsewhere (short-term). In this regard CARICOM has to ensure that it establishes the appropriate regulatory, policy, and operational frameworks, in order to mitigate any “threats” whether real or perceived to the domestic job market and to ensure that there are opportunities for transfer of knowledge and expertise.

“Mode 4 [therefore] will be critical as firms seek to tap foreign markets to import much needed and sought after skills...”¹⁰⁴ and in this regard within CARICOM, “...work is in process on the removal of permit restriction, a regional accreditation process and the free movement of labor...”¹⁰⁵ but it is doubtful that any resulting movement of persons within the region would be sufficient to fulfill the human resource requirement needs that an expanded ICT services export industry would demand. In this regard CARICOM would, based on what ICT sectors and sub-sectors are identified for development, need to conduct a comprehensive assessment of the human resource capacity needs, match that against what is available, and then determine how it would source the difference (i.e. seek qualified individuals from outside the region (short term), or provide capacity development and training programs (medium to long term).

10.3 Members Commitments - ICT Related Services

According to the WTO, of some 60 sectors scheduled for Computer and Related Services,

“...52 committed on sub-sector (a) consultancy services related to the installation of hardware, 57 committed on (b) software implementation services, 55 committed on (c) data processing services, 49 committed on (d) data base services and 30 on (d) other computer services. Looking at the level of commitments for sub-services (a) to (d) as a whole ... the proportion of unrestricted, or full, market access commitments on cross border supply ranges between sub-sectors 60-63%, the proportion of full commitments on consumption abroad from 70-76% and the corresponding range for commercial presence is 68-77% (but which falls to 29-33% when horizontal limitations on Mode 3 are taken into account). The proportion of full commitments on market access for presence of natural persons is lowest at 4-7% (falling to 2% when horizontal limitations are factored in.)”

The USA and Canada are two of the key markets for exports from CARICOM and both have scheduled commitments under ICT related sectors and sub-sectors. The European Union comprising its fifteen member states also holds outsourcing potential but here there may be some language barrier obstacles to overcome.

The USA has scheduled commitments for ICT related services under Computer and Related Services and Telecommunications. All services sectors are unbound for both market access and national treatment as it relates to Mode 4 (temporary entry and stay of natural

¹⁰⁴ WTO Council for Trade in Services, “Computer and Related Services: background Note by the Secretariat,” S/C/N/45 14 July 1998, page 11.

¹⁰⁵ Page 161

persons).¹⁰⁶ This applies to all intra-corporate transferees including managers, executives, and specialists – defined as persons within an organization possessing knowledge or expertise relevant to the organization’s services, research equipment, techniques or management. “Entry for persons named in this section is limited to a three year period...” with possibility of extension for a further two years.¹⁰⁷

As regards Computer and Related Services, except airline computer reservation systems, no limitations (None) were scheduled for Modes 1, 2 and 3 under market access. Mode 4 was unbound except as listed in its horizontal commitments. Under National Treatment for the same services no limitations were scheduled across all four modes. As regards telecommunications services including email(*h*), voice mail(*i*), on-line information and data base retrieval(*j*), electronic data inter-change(*k*), enhanced value-added facsimile services(*l*), code and protocol conversion(*m*), on-line information and or data processing(*n*), other(*o*) offered over common carrier transmission facilities which employ computer processing applications Modes 1, 2, and 3 have no limitations (None) for market access, and Unbound except as indicated in the horizontal section for Mode 4. National treatment had no limitations for all four modes of supply.¹⁰⁸

In 1997 the US submitted a supplemental schedule for Telecommunications services covering voice services, packet-switched and circuit-switched data transmission services, telex services, telegraph services, facsimile services, private and leased circuit services, and other services (including Personal Communications Services and Mobile Data services). Modes 1 and 2 under market access had no limitations and Mode 4 is unbound except as indicated by horizontal commitments. Mode 3 there were no limitations but Comsat has exclusive rights to links with Intelsat and Inmarsat and are not allowed by foreign governments or representatives thereof or non-US citizens.¹⁰⁹

Canada on the other hand, schedule wider commitments for Computer and Related Services including Consultancy Services related to the installation of computer hardware(*a*), software implementation services(*b*), data processing services(*c*), data base services excluding those listed under Financial Services(*d*), maintenance and repair services of office machinery and equipment including computers (*e*) and (*o*) other computer services. For these services Modes 2 and 3 under both market access and national treatment had no limitations and Mode 4 was unbound except as indicated in the horizontal section.¹¹⁰ Canada has a limit of ten (10) entrants per project in the case of senior computer specialists holding M.A. degrees in computer science from Canadian accredited universities and with ten years experience.

Within telecommunications services, enhanced value added telecommunications services including (*h*), (*i*), (*j*), (*k*), (*l*), (*m*), (*n*), and (*o*), there were no limitations for Modes 1, 2, and 3 under Market Access with Mode 4 unbound. It was the same for National Treatment for these services.¹¹¹

¹⁰⁶ United States, WTO GATS Schedule GATS/SC/90, (WTO: 15 April, 1994), pages 1-3.

¹⁰⁷ Ibid, page 3.

¹⁰⁸ WTO Organization GATS/SC/90, page 34.

¹⁰⁹ US, WTO GATS/SC/90/Suppl.2, 11 April 1997.

¹¹⁰ GATS/SC/16, Canada, WTO: 15 April 1994, pages 24-25.

¹¹¹ Ibid., page 38.

Regarding Financial Services, the measures apply to all sectors and are undertaken in accordance with an Understanding in Financial Services including (d) all payment and money transmission services, and (e) guarantees and commitments. Mode 3, commercial presence is bound for both market access and national treatment.¹¹²

In the case of the European Union as regards computer and related services (a), (b), (c), (d), and (e) there are no limitations for Modes 1, 2, and 3 for both market access and national treatment and unbound for Mode 4 for both except as indicated in the horizontal section.¹¹³

It is evident from the above that in undertakings in the key export markets, exports in Modes 1 and 2 for both market access and national treatment tends to be more liberal than Mode 3 in most case and generally for Mode 4. For example, the USA, Canada, and the EU where they have scheduled commitments under Computer and related services have a higher share of no limitations (None) for Modes 1 and 2 than they do for Mode 4 for the same service sector or sub-sector as the case may be. This pattern holds throughout their schedule of commitments including for ICT related services and is consistent with the general approach by WTO Members to services trade.

CARICOM needs to take on board this reality as it will have implications for how ICT services are delivered to the key export markets. It also sets out at least some parameters of what the region's engagement in the trade and negotiation process needs to be cognizant of. Modes 3 and 4 demand closer scrutiny and assessment especially given the fact that Mode 3 and attracting foreign investment tend to go hand in hand, and that impediments to the temporary movement of persons (Mode 4) could prove an obstacle to growing and expanding ICT services in the short term or at least until the region is able to build the capacity that is required.

10.4 Implications of Wider Market Access in the Region

“The purpose of the successive rounds of negotiations on services trade mandated by Article XIX of the GATS is to achieve “a progressively higher level of liberalisation”, meaning the improvement of market access by extending sectoral coverage of schedules and reducing or eliminating the restrictive effects of scheduled measures.”¹¹⁴ Thus the success of the new round which started in January 2000 will depend significantly on any resulting expansion and improvements of commitments on specific services.

Telecommunications

In telecoms, particularly for the CARICOM countries, there is large scope for improvement. Members have so far made minimal commitments and despite autonomous efforts to liberalise, much remains to be done. For CARICOM, it is not a question of whether to

¹¹² GATS/SC/16, page 48 and 57.

¹¹³ GATS/SC/31, 15 April 1994, pages 26-27.

¹¹⁴ Market Access: Unfinished Business *Post Uruguay Round Inventory and Issues*, World Trade Organization 2001, page 114

liberalise but rather when and how to provide higher levels of market access, without compromising national and (collectively) regional development objectives. These questions become even more significant when juxtaposed against the current services round and the increasing pressure for higher levels of access. For example, the proposals from the United States on market access issues in telecoms make it clear that they intend to negotiate on a cluster of services issues related to telecoms and agitate for increased market access particularly in Modes 1 and 3 and in full basic and value added services sectors¹¹⁵.

As pointed out by the ITC, the implications of market access for developing countries vary significantly according to the status of their domestic telecommunications markets and their economic development prospects in the near future.¹¹⁶ Thus if an export led ICT strategy underpins the development prospects for the region, countries will have to undergo an assessment of their telecommunications infrastructure, determine the impact of autonomous liberalization, and assess this against the effects on the domestic environment.¹¹⁷

Given the focus on ICT and the inherent info-structural deficiencies within the region, the new round of GATS will present unprecedented opportunities and challenges for the CARICOM region. Members will have to grapple with increasing pressures for higher levels of market access in basic telecommunications and particularly within Modes 1 and 2, while dealing with telecoms sector reforms, commitments on implementation issues and the pressure to bridge the digital divide. Additionally e-commerce, its relationship to telecoms and its attendant issues and implications, discussed below, will also have to be a consideration. On the other hand, if the region's strategy is clear, and the enabling environment well defined and implemented, the GATS allows the flexibility to tailor concessions on market access to development objectives and allows countries a range of options. However, a lot depends on how the negotiations are approached, the region's strategy and individual country commitment to regional strategies and representation. If a regional position is to be articulated however, it is quite late to submit initial requests and offers for consideration in the new round of services negotiations, but CARICOM should seek to do so immediately.

E-Commerce

CARICOM members will need to be concerned with simultaneous negotiations in several different forums and with several emergent negotiation issues on this subject.

WTO

The question of not imposing customs duties and the debate on the classification of some service/products are still on the table. At the ill-fated Seattle ministerial the negotiations were deferred to the Doha round, where it was decided that the freeze on customs duties for e-commerce transactions was to be maintained until the Cancun round. The general council was also instructed to consider the most appropriate institutional arrangements for handling the work

¹¹⁵ World Trade Organization, Communication from the United States, Market Access in Telecommunications and Complementary Services: The WTO's role in accelerating the development of a Globally Networked Economy, December 2000, www.docsonline.wto.org/Gen_viewerwindow.asp?D:DDFDOC.

¹¹⁶ ITC, pg 62,63

¹¹⁷ For a possible framework for policy assessment see WTO Secretariat Paper, Assessment of Service Liberalisation: Potentially Relevant Considerations and Criteria, Nov. 2001.

programme, and to report on further progress at the fifth round scheduled for September 2003 in Mexico.

FTAA

The discussions on e-commerce continue in this forum, but formal negotiations still remain a long way off and depend significantly on the WTO negotiations. At the Quinto Ministerial governments decided to temporarily suspend the activities of the Joint Committee of Experts on Electronic Commerce and authorized the Trade Negotiating Committee (TNC) to reactivate it when and how the TNC deemed necessary. There are two more meetings of the Ministers responsible for Trade scheduled in the final period of discussions, i.e. one in the 4th quarter of 2003 in Miami and the other in 2004 in Brazil. CARICOM needs to actively engage in the Trade Negotiating machinery of the FTAA and use the experiences to build capacity for the development of its negotiating position both in the WTO and the FTAA forums. CARICOM success (or failures) in articulating its position in the WTO will significantly affect its performance in the FTAA negotiations

Implications of E-Commerce as a Supply Means

As the WTO points out "... the status of e-commerce under the GATS is a systemic issue of fundamental importance which will permeate the negotiations on market-access commitments in most sectors."¹¹⁸ E-commerce when considered as a means of service delivery implies that where national treatment and market access commitments (Modes 1, 3, and 4) exist on any service, any restrictions on electronic supply (e-commerce) would be subject to challenge as impairing the value of the commitment. Many familiar services e.g. legal services, architectural services, entertainment services, health services to name a few, can be delivered across borders electronically. To do so however, countries have to make mode 1 commitments for all these sectors. And though it is natural to think of electronic commerce primarily in terms of cross-border trade, it is important to bear in mind that commitments under modes 3 and 4 also cover the right to deliver the service electronically. Thus, a bank established under Mode 3 (commercial presence) or a consultant working abroad on the basis of a Mode 4 (movement of natural persons) commitment must be guaranteed the right to use computers to deliver their services.

It can be expected, that in upcoming negotiations on market access, the electronic supply facility will increase interest in securing commitments in many professional services, including Computer and Related Services. For developing countries, with ICT export services aspirations, this is an extremely critical development. Full liberalisation of Computer and Related Services will provide all countries with the opportunity to provide "back-office" services to business in other countries. For example assume a Jamaican information technology firm is processing banking records for a foreign bank, and the country in which the bank is located made Mode 1 commitments in Computer and Related Services. The records for the bank can be processed anywhere the Jamaican firm can do business and the ensuing data may be delivered to the bank electronically. This development will exponentially expand the scope of suppliers for ICT services and the reliance on efficient, high quality, high speed communications networks.

¹¹⁸ Market Access: Unfinished Business *Post Uruguay Round Inventory and Issues*, World Trade Organization 2001, page 125

The broader market access issues notwithstanding, within the negotiations on e-commerce, CARICOM members will have to determine a negotiating position on the issue of customs duties on products and services delivered electronically. For member countries, where financial and service transactions form between 50 – 80% of total trade in goods and services (see section 3.0), the question of whether or not to levy tariffs on e-supplied services needs to be carefully considered. The impact on tax revenues and evaluation of technologies that will make duty valuations possible and enforceable have to be carefully evaluated before any decision can be made either unilaterally or regionally on this issue. CARICOM also needs to make representation in the ongoing product/service e-commerce debate. The specific issues are whether some products even when delivered electronically should be classified as goods rather than services and subject to the rules of the GATT, instead of the GATS or to a *sui generis* regime. This matters because the issue is one of classification and is likely to impact tax and customs duty regimes. Goods more than services tend to be subject to tariffs but trade in services is usually limited by restrictions on national treatment or quantitative controls on access to foreign markets. Thus, the rules that will be devised for e-commerce can affect the choice between physical vs. digital methods of trade.¹¹⁹

If the increasing estrangement from the information society has not imbued CARICOM members with a sense of urgency to bridge the divide, the latest issues related to e-commerce should provide all the inspiration they need. The virtual roads and highways of the Internet are fast replacing their physical counterparts as the primary means of conducting international business. Being islands (for the most part), CARICOM countries should be able to relate to the sense of isolation that threatens when clear, unencumbered two-way material access (roads and bridges) are not an option. The new way of doing business is much more complex, with no clear roadmaps and substantially more players. If action to address the digital divide, and to get into the negotiations shaping its future are not awarded priority, both on a national and regional level, CARICOM members may be destined to the far reaches of the periphery in international commerce and industry, without any significant means of bridging the digital divide.

11.0 Trade Strategy Options

Although many CARICOM countries have yet to articulate a national IT strategy, there can be no doubt that they have decided to embrace a strategy of selective intervention to accelerate the pace of diffusion of ICTs in their respective countries. Indeed, within member states it is overwhelmingly apparent that the question is not whether government should get involved; but rather how and to what extent. In answering the latter questions, key considerations are . . .

- Should they target specific sectoral, industries or activity areas?
- What sorts of simultaneous socio-institutional reforms and complementary investments are needed?
- Should governments adopt a sequential approach?
- What is the appropriate timing for countries at different levels of development?¹²⁰

¹¹⁹ Singh, pg. 16

¹²⁰ Nagy H. and Dugonjic V., Why a National Strategy for Exploiting Information Technologies, ATAS, Issue 10, 1995.

How CARICOM members answer these questions nationally and regionally and how well they represent their positions internationally, will significantly impact the region's overall development.

A national IT strategy has to address the systemic constraints to the effective use and diffusion of IT. This involves organizational adjustments and coordinated actions at the enterprise, industry and national level with investments in management skills and restructuring.

“A long term perspective and a coherent framework are needed to identify economy-wide information and communication needs, to target large-scale application areas for strategic impact and demonstration effects, and to create the funding mechanisms, policy environment and common services necessary to support a combination of top-down/bottom up initiatives and pilot projects, accelerate learning and meet the needs of smaller organization.”¹²¹

Any strategy for trade in ICT needs to take into consideration, among other things, the multi-functionality of ICT (i.e. as a strategic industry itself; as a key generic technology spanning all industries and sectors; and as an essential infrastructure enabler). These give rise to a number of possible policy options which are briefly discussed below.¹²²

Supply led/Export Focus:

An export focus can stimulate economic growth, improve balance of payments and reduce dependence on traditional commodity exports. However since the focus is on the lucrative, already developed external markets, there is no immediate incentive to focus on the infrastructure needs of the domestic market, even though it may be limited by market failure or underdevelopment. Additionally an export focus demands that developing countries compete with each other for the same limited supply of capital. The pressure to compete for investments can negatively impact the public budget of smaller countries if it is not offset by rising growth and revenues. However, countries such as Costa Rica have pursued this strategy successfully. Having developed the right mix of skills, infrastructure and enterprise, Costa Rica has developed itself into a viable location for high tech industries and currently hosts companies such as Intel and Microsoft.

National Capacity/Import Protection Focus:

This approach is usually embraced by countries with a large skill base, extensive research and development capabilities and infrastructure networks and a large domestic market. The strategy is to encourage development of national fledging ICT industries by providing the enabling environments and protecting them until they are ready to compete internationally. Brazil employed this strategy successfully early in its development process. Such a strategy has the potential to create diversified producer capabilities and strengthen domestic economic linkages but because of the absence of competition initially, incentives for the adoption of cutting edge technology may be lost and with it competitive advantages in the global economy.

¹²¹ Ibid

¹²² The following discussion relies heavily on the report Creating a Development Dynamic, Final Report of the Digital Opportunity Initiative, UNDP, Markle Foundation and Accenture.

To the extent that the main focus is the development of the ICT sector as the end, rather than the means to an end, spill over effects may be limited and development goals addressed only indirectly or in the longer run.

A Global positioning focus:

As opposed to a national capacity focus, a concentration on the deployment of ICT to improve global positioning allows countries to use ICT to make the overall investment climate more attractive and to facilitate increased competitiveness in sectors and products in which the country has or may create, a competitive advantage. Key examples of this approach are Singapore and Malaysia. Malaysia's approach to ICT has been to create a high-tech environment and infrastructure that can attract national and international investors and create spill over effects in other major sectors of society such as education, healthcare and government. In its efforts to attract private investment, the Malaysian government invested US \$40 billion in a world class physical and information infrastructure, put strong emphasis on the expansion of the telecommunications network and other supporting networks i.e. energy, transportation and physical facilities, provided attractive tax incentives for world-class technology led companies and most importantly, it launched evolving strategies to provide a well educated work force with relevant skill levels ranging from technical to research. In addition the country offers unrestricted and user-friendly work permit policies for foreign knowledge workers, while taking sweeping effort to improve literacy and computer literacy.

However, since the focus is on realizing opportunities in the global economy, such a strategy may divert attention away from fostering local markets and businesses and may not necessarily translate into gains for the population, particularly the vulnerable and disadvantaged groups. For example there is increasing concern of an emerging gap between the information rich and those who do not have access to technology, because of the high cost of computer compared to average income.

For Economic and Social Development:

The focus here is to integrate ICT into broader development strategies, thereby gaining from the synergies between different elements of a holistic approach to development. Such an approach assumes of course, clearly identified and articulated long term development objectives for the country. In the longer term however it assures that the significant advantages of ICT can be exploited and realized across economic and social sectors.

There are several lessons that can be gleaned from developing country experiences with the strategies discussed above, which are worthy of mention here:

1. Not all countries can benefit from a focus on developing ICT as a sector. Countries that launched national policies to support ICT as a sector based their efforts on local comparative advantages that included relatively advanced technical and human capabilities, basic telecommunications infrastructure, and substantial R&D investment. Additionally they offered large incentives to private investors. In some cases such as India and Brazil, it took more than ten years to create an internationally competitive ICT sector and the impact on development objectives was not immediate or direct.

2. All countries can benefit from using ICT as an enabler of development. Incorporating ICT into existing development strategies and goals and if conditions are suitable, within the context of an enabler strategy, try to develop a competitive ICT sector¹²³.

11.1 Recommendations for an ICT Trade Strategy for CARICOM

Given the options, the development realities of CARICOM member states, and the valuable lessons available from earlier developing country experiences, *a user –oriented strategy* is highly recommended as a national and regional strategic approach to ICT throughout the region. Such an engagement strategy takes the national and regional development strategies as a starting point and makes IT products and services as accessible as possible to user industries and services, especially those critically dependent on IT for competitiveness and service performance¹²⁴. It does not imply however that the focus on users should subvert or ignore market forces and the opportunities from the development of ICT as a production section. Rather, it espouses that the distinction not be emphasized in government policy and blurred in implementation. In sum then CARICOM countries would ensure that ICT and its inherent advantages are not limited to ICT exports and the development of that productive sector but indeed to all user industries and services important to the country's broad development agenda.

Such a strategy would allow CARICOM as a region and at a country level to target specific sub-sectors, industries, or areas of activity for accelerated and focused development. It would take individual country development and ICT strategies as a starting point and fuse these into a CARICOM regional strategy that would be based on an objective assessment of the strengths within the region as it relates to ICT vis-à-vis the export market for identified sectors, industries, or activities. Such a strategy however, would also have to consider the considerable supply-related constraints of CARICOM members such as *inter alia* inadequate skilled personnel or inappropriate technological frameworks and would have to develop a systemic approach to managing the socio-economic disparity in the region. It would also have to consider indigenous entrepreneurial efforts in the sector and try to reconcile the activities and development of these within the region's export led/user oriented strategy.

National strategies will vary according to the IT supply and demand of an economy. Within CARICOM, national strategies for IT need to be timed and tailored to the level of technological capability, the size and structure of the domestic market for IT products and services, literacy rate, managerial competencies, telecommunications and other physical infrastructures (transportation, electricity), financial and technology support capabilities, the civil service and the relationship between government and business. Thus for CARICOM members with small size economies and relatively adequate to low technological capabilities, the IT strategy may focus on building out the national information infrastructure that would support the basic modernization of infrastructure and the export of services. It is important to keep in mind however, that even when using similar approaches, as is posited here, countries may pursue different instruments and coverage.

¹²³ Digital Opportunity Initiative, *ibid*

¹²⁴ Hanna, Dugonjic, *ibid*, pg. 37

However, the importance of a regional strategy and approach to ICT development cannot be overstated. This is driven by the realities in the global trade and investment environment. While members are engaged in building out their strategies and infrastructures, there are a number of issues and emergent trends in the international ICT environment (a number of them highlighted here) that will be simultaneously discussed and decided on in the relevant international forums. CARICOM members must pursue meaningful representation within these forums. The organizations are those such as the WTO, ITU, ICANN, World Bank Group, WIPO and UN agencies such as UNESCO; who decide on the following issues:

- Fundamental legal principles governing international ICT relations and related regulatory institutions, procedures and practices that have traditionally been made by representatives of nation-states and embodied in treaties e.g. WTO, WIPO.
- International ICT technical, operational and revenue sharing standards e.g. ITU
- ICT policy coordination e.g. WTO regulatory principles, ICANN
- Fund provisioning to developing countries e.g. World Bank Group

Meaningful representation will not occur unilaterally and most CARICOM members do not have the capacity to pursue simultaneous representation in these forums. A reliance on the expertise of the technical experts of the RNM and submission to its coordinating function by member states is critical to a successful regional ICT strategy.

Assuming that the proposed strategy is adopted, following are some action points that would be necessary if such a strategy is to succeed:

- Identify specific sub-sectors, industries, or areas of activity for accelerated development – i.e. software development, off-shore back-office services, data entry, telemedicine, environmental assessment and monitoring services, online management and consultancy, etc.;
- Develop an enabling and supporting environment by among other things simultaneously reforming the relevant institutions, and addressing systemic constraints to the effective and widespread diffusion of ICT;
- Identify and develop strategic commercial interests within the targeted specific sub-sectors, industries, and areas of activity, as well as within the broader ICT industry;
- Identify what complementary investments are necessary based on the specific sub-sectors, industries, or areas of activity identified as for accelerated and focused development and coordinate in order to capture any externalities;
- Design and implement a strategy that focuses on building competitive capability for ICT services exports across the region;

- Identify region wide ICT skills needs, based on in particular the targeted specific sub-sectors, industries, or areas of activity, and design and implement a strategy to develop technological skills and ICT-competency skills and attitudes required for addressing those skills needs;
- Focus on building competitive capabilities for services exports in general, in particular ICT services exports, across the region and at the national level;
- Adopt a sequential but flexible approach for bringing CARICOM countries on board the program based on the different levels of economic and industrial development and e-readiness;
- Develop a culture of security that fosters regional cooperation and coordination but with enforcement at the national level
- Develop and implement incentives for the promotion of ICT competency within the business community of the respective CARICOM countries

Specific activities may include:

National Agenda

- ✓ Commit to selective intervention to accelerate the pace of ICT diffusion at the national level by determining national development objectives and developing a related country ICT Strategy which is underpinned by a *user oriented strategy* that focuses on:
 - building out the national information infrastructure and making it as accessible as possible to user industries
 - Determine ICT sectors for export development. It is established that information processing services increase in value as skills and technology are added to labour. As such member states should focus on developing skills in the high end of ICT services continuum such as software development and design, online management and consultancy services in the long term but capitalize on the low to medium end in the shorter term
- ✓ Develop an e-commerce strategy, the overall goal of which is to create an Internet-based gateway to serve entrepreneurs as well as to educate on the importance of using e-commerce services; strategic components should therefore address the issues of networks, e-transactions, training, and wider access to information.
- ✓ Determine reforms and complementary investments necessary such as: Telecoms Reform, Competition Policies, Technical Standards, Customs Harmonization Issues, Human Capacity Development Issues, Security Legislation, Investment Incentives and tax treatment, Consumer Protection Legislation, Intellectual Property Rights, E-Commerce facilitation
- ✓ Ensure transparency and predictability

- ✓ Identify the attendant national trade agenda
 - Improve Market Access in Telecoms. Members should adopt a phased in approach to market access for telecoms services, but not beyond a two year period. Access in modes 1,2,3 and 4 need to be considered for basic telecoms, data transmission, leased circuits, fixed and mobile satellite systems and services, cellular telephony, mobile data services and internet service provisioning.
 - Accede to the ITA and submit a schedule of concessions that include those items necessary to build out the telecoms infrastructure, support exports and provide affordable end user equipment. These include telecommunications equipment, cabling, software, parts, computers, modems, printers, etc.
- ✓ Determine country approach to E-commerce negotiations
- ✓ Ensure representation in ICT related CARICOM programs and forums

Regional Agenda

CARICOM

Collect and analyze country ICT strategies and pursue regional approach to ICT. Ensure the regional agenda . . .

- anticipates a “reasonable” time frame for market access in key ICT areas in telecoms in member states,
- That there are appropriate ITA commitments and concessions,
- That there are E-commerce strategy and implementation plans
- Appropriate attendant policies particularly IPRs, and electronic transmission security issues and effective enforcement mechanisms
Harmonization of policies/laws where appropriate, e.g. technical standards, customs, consumer protection, human capacity, data protection and security issues
- Appropriate Mode 1-4 offers and the skillful use of MFN and national treatment restrictions, particularly as it pertains to e-commerce

Continue to encourage an ideology of integration

RNM

- Provide capacity support and consultation to national governments as they establish ICT related trade strategy positions. Ensure consideration and strategies that encourage the development of indigenous efforts.
- Monitor and update members on ICT related developments in the international trade arena
- Establish a project to study the implications of e-commerce issues on the table and provide recommendations for member positions, offers
- Ensure effective representation in all applicable international forums

12.0 Negotiating Options

12.1 Services Negotiating Forums:

As discussed above, there are at least three forums within which services are being negotiated that are of significance to CARICOM members; these are . . . (1) the WTO Doha Round (2) the FTAA (scheduled for 2005), and CARICOM's own (CSME) where a regional ICT strategy is scheduled to be presented at the 14th Inter-Sessional Meeting in early 2003. Outside of these there is the process leading up to the World Summit on Information Society (WSIS), and the UN Millennium Development Project.

The WTO

Within the WTO the GATS (Article XIX) commits Member governments to undertake negotiations on specific issues and to enter into successive rounds of negotiations to progressively liberalize trade in services. Accordingly, in early 2000 the services negotiations started officially under the Council for Trade in Services and in November 2001, the Doha Declaration (Par 15 – Services) endorsed the work already done in negotiations in services, reaffirmed the negotiating guidelines and procedures,¹²⁵ and established the deadline for the conclusion of the negotiations as part of a single undertaking (2004).¹²⁶ It also instructed the General Council to consider the most appropriate institutional arrangements for handling the work program, and to report on further progress to the Fifth Ministerial Conference (2003). WTO Members, CARICOM countries included, are currently tabling proposals regarding both the structure and the contents of the new negotiations.

CSME

Trade in CARICOM Services is provided for under Protocol II of the Agreement amending the Treaty of Chaguaramas and at the 23rd meeting of CARICOM Heads of Government in Georgetown, Guyana in 2002 the CARICOM Secretariat was mandated to present a CARICOM ICT Strategy to the next meeting in early 2003 for ratification. Clearly then CARICOM countries need to be cognizant of the negotiating timetables for the GATS, FTAA and CSME. While the objectives, procedures, and negotiating processes of these different forums may be similar and are inherently inter-related, they differ to the extent that the scope and depth of liberalization are intended for different audiences and therefore the commitments are bound to be different by country, by forum, and by service sector and sub-sector. This demands nuanced negotiating approaches to ensure that CARICOM's interests are reflected in the different forums.

12.2 Negotiating Strategies¹²⁷

¹²⁵ In March 2001, the Services Council fulfilled a key element in the negotiating mandate by establishing the negotiating guidelines and procedures.

¹²⁶ Key dates in the services negotiations include Initial offers of market access: by 31 March 2003; Stock taking: 5th Ministerial Conference, 2003 (in Mexico); and Deadline: by 1 January 2005, part of single undertaking. The dates for Negotiating guidelines and procedures has already past (March 2001), likewise for Requests for market access (30 June 2002).

¹²⁷ This section draws heavily on the study conducted by L.A. Majluf for the CRNM as part of an IDB funded technical cooperation project.

CARICOM's negotiating strategy as it relates to ICT will be fashioned by several factors including, among others (a) the broader development objectives at the country level; (b) national ICT objectives; (c) the ability to craft a regional strategy and position for ICT upon which the export of ICT services will be marketed; and (d) the scope, coverage, and level of development of ICT sectors and other service sectors within the respective economies (i.e. transportation, tourism, etc.). Hence, "...negotiating approaches will have to be evaluated on the basis of each country's objectives..." with regards to trade and investment in ICT services in and of itself, as well as within a broader CARICOM regional policy and strategy,"¹²⁸ especially considering that within the FTAA process the Latin American countries are likely to seek market entry for ICT services exports.

However, the fact that all services agreements have four major elements in common (i.e. scope and coverage; liberalizing principles; liberalization approach; and related disciplines)¹²⁹ allows, at least in principle, a structural framework for approaching negotiations and within which to articulate any nuances for the different forums. Given these realities, a '*bottom-up positive list*' liberalization approach¹³⁰ seems most favorable for the following reasons . . .

One, in a bottom up approach only MFN and transparency are general obligations. All other liberalizing principles that are of a specific nature, result from negotiations, and apply only to those sectors and modes of supply for which specific commitments have been scheduled. In other words, although a regional approach may be assumed for negotiating ICT services, only those services sectors and sub-sectors according to the different modes of delivery that are scheduled by the respective CARICOM countries would realize liberalization, although the level of liberalization would depend on any final agreement arrived at within the respective negotiating forum (i.e. FTAA, WTO). This directly complements the recommended *user oriented* ICT trade strategy as it allows for a number of possible approaches to gradual and progressive liberalization. Hence, CARICOM would be able to design different 'liberalization packages' for the different forums (FTAA and WTO) specific to the ICT and related services sectors identified for action.

Two, this approach offers an element of "...flexibility to introduce special and differential treatment to small economies..." and "...the type of flexibility granted developing countries in the GATS could be incorporated as provisions in favor of small economies."¹³¹ CARICOM has been negotiating for recognition of the uniqueness and needs of small developing countries and the special challenges that such economies are faced with in development and in integration into the international economy. In the FTAA process, section 1.7 under services sets out that "... for developing countries and particularly the smaller economies there shall be flexibility in meeting the commitments, and S&D shall be given to promote the balanced growth of the Parties [to the agreement] to facilitate their increasing participation in trade in services in the hemisphere."

¹²⁸ Majluf, *op cit*, page 82.

¹²⁹ Majluf, *op cit*, page 75.

¹³⁰ For a more detailed explanation of the various types of negotiating approaches including the pro's and con's of the same see Majluf, in "WTO and FTAA Services Trade Negotiations: Challenges for Developing Countries with Special Reference to CARICOM," study presented to the RNM as part of an IDB funded technical cooperation project.

¹³¹ Majluf, *op cit*, page 83.

Three, it would allow CARICOM countries to set or indicate conditions and limitations to market access and national treatment that are not part of its current regulatory regime. This is critical given the fact that regulatory capacity within the region is weak, ICT as a services sector is nascent, and support has to be established for the development of localized entrepreneurial efforts in the ICT sectors. Therefore, negotiating margins are essential to CARICOM's entry into the service sectors of export interest. As such, CARICOM countries would be able to set ceiling bindings of commitments in those specific sub-sectors, industries, or areas of activity identified for accelerated development – i.e. software development, off-shore back-office services, data entry, telemedicine, environmental assessment and monitoring services, online management and consultancy, etc.- and to nuance these within the FTAA and WTO.

Finally, this approach best serves the co-existence of sub-regional agreements in particular with the FTAA and allows countries to seek reciprocity of concessions in negotiations. This is critical given that CARICOM countries face a wide and complex agenda of negotiations, across a number of different forums and therefore requires more efficient bargaining particularly at the pluri-lateral level (FTAA) where it is likely to be more possible. This also takes on more significance considering that two of the key markets for services exports (USA and Canada) are within the FTAA geographic coverage and that the Latin American countries would likely similarly be seeking market entry for ICT services exports.

12.3 Negotiations Recommendations

1. Determine what CARICOM's interests in the WTO and FTAA services negotiations are, in particular as it relates to ICT services exports and conduct an analysis of these especially with regards to Article XIX (negotiating progressive liberalization of specific commitments);
2. Identify those ICT products and services that CARICOM has an interest in and believes it will produce more efficiently in the future and seek to open these markets both within the FTAA and the WTO;
3. Identify within the specific commitments of the key target markets for ICT services exports under the WTO what the obstacle are to such exports from CARICOM and seek to address those within the WTO and to influence their exclusion within the FTAA;
4. Assess the relevance of joining the ITA in light of the region's apparent interest in developing ICT services exports in particular as it relates to non-tariff measures such as conformity assessments, regulatory processes and procedures, standards, Rules of Origin requirements, and customs procedures;
5. Review and analyze the proposals within the current GATS negotiations of relevance to ICT services exports in particular as it relates to those WTO Members who have an export interest in such service sectors;

6. Review and analyze the submissions on horizontal commitments including Mode 4 (movement of natural persons) in light of the need to develop ICT related skills and competencies across and within the region;
7. Initiate a study to analyze the implications of e-commerce classification on the export of ICT service from CARICOM;
8. Seek credit within the WTO for any autonomous liberalization undertaken by CARICOM countries in particular as it relates to telecommunications services given this industry's strategic importance for ICT services exports;
9. Approach external services negotiations with a view to establishing cooperative efforts and strategic linkages and leverage more human and capital resources to become more engaged in, understand, and take advantage of the various negotiation processes;

Specific activities may include:

RNM

Use national ICT strategies as a starting point to balance the regional and national objectives and develop a forum specific negotiating strategy

- Use a 'bottom up positive list' approach to ensure negotiation results are consistent with national ICT strategies and liberalization schedules
- Exploit Special and Differential Treatment advantages where applicable and only where it does not compromise long term objectives
- Seek credit within the WTO for autonomous liberalization by members

13.0 Conclusion

At the end of the day, CARICOM has expressed a real interest in ICT, including services exports and in this regard need to know what the prospects for the sector are. It's a question that begs a complex response. Consider the facts:

1. CARICOM wishes to pursue ICT services export as a regional development policy
2. As a potential supplier it is significantly late in the game
3. However it does have significant comparative advantages that can be channeled to exploit the opportunities in ICT

But

4. The situation differs from country to country, and the region generally cannot be classified as e-ready. The number of domestic regulatory, infrastructural, capacity, and trade issues that have not been addressed, in some cases even put on the agenda, are significant. Additionally the issues here defy a band-aid approach.

5. Getting into the game, requires first learning how to play by the rules and then how to exploit the rules to CARICOM's advantage. Simultaneously substantial domestic and regional issues which continue to plague the region's development need to be addressed. Central among these is a reluctance to cede sovereignty in favor of a more harmonized approach to policy.
6. Unless this issue is centrally addressed, CARICOM members will make individual inroads in the ICT services sector but the region and particularly collective representation in international forums will be significantly compromised.

Success in pursuing an ICT sector will depend on (1) the recognition for a balanced approach to the issues as it will inevitably result in an economic paradigm shift with far reaching implications for many if not all of the CARICOM states; (2) the need to address the considerable supply side constraints which are critical to the ICT industry (for example skilled labor, free movement of persons, regulatory structures, etc.); (3) adopting the right strategic approach for facilitating public-private sector collaboration as it relates to ICT services, training and capacity development, and trade and negotiations; and (4) tailoring such approaches to the economic and development realities of the constituent countries of CARICOM.

Annex I – Terms of Reference

Consultant for the preparation of an issues paper on ‘Prospects for CARICOM Services Exports in Information and Communication Technology: Trade and Investment Issues TECHNICAL COOPERATION PROJECT ATN/SF –8016-RG

Objectives of the Consultancy

To prepare a 25-30 page paper which examines prospects for CARICOM services exports in Information and Communication Technology and related trade and investment issues.

The paper will

1. Present a succinct overview of the ICT industry in CARICOM at the country level.
2. Examine the challenges facing the industry, prospects for growth, key constraints and the policy measures needed to further develop this sector in CARICOM states in order to increase exports. (including the impact of the recent downturn in the global hi-tech sector)
3. Examine the service sectors under the GATS that relate to the ICT industry and discuss the implications of CARICOM services commitments in these areas for trade and investment.
4. Assess the implications of negotiations on market access in the telecommunications sector for the ICT industry in CARICOM.
5. Assess the relevance of the Information Technology Agreement (ITA) to the ICT sector and review the compatibility of domestic policies in CARICOM with the aims of the ITA.
6. Examine any market access barriers (regulatory, etc.) to the export of ICT services from CARICOM and to the import of such services in key overseas markets.
7. Assess the trade and investment needs of the ICT sector in CARICOM in terms of movement of persons (mode 4) and commercial presence.
8. Develop recommendations regarding a trade strategy for the sector.
9. Provide recommendations on how CARICOM as a region should approach services negotiations (bilateral, regional and multilateral) as they relate to the ICT sector.

Modalities

Two consultants will prepare the paper. Ms. Celene Cleland will serve as Lead consultant.

Skills/Qualifications of consultant

The consultant must possess an advanced degree in Economics, Business Management, International Trade/Relations, Law, or another related field of study. Caribbean experience is a desired competence.

Scope of work

To prepare a Paper with then objectives and content as outlined above.

Methodology

It is expected that research will be conducted involving primary and secondary sources. Interviews should be conducted with key private sector representatives and officials. The Lead Consultant is required to prepare a work plan and outline for the report based on these terms of reference to be approved by the Caribbean Regional Negotiating Machinery (CRNM). The Lead Consultant will also take responsibility for preparation and submission on the final draft and final report by the stipulated deadline.

Timelines

The work is expected to commence by January 10,2003. A final draft should be presented to the Project Manager by March 04,2003 and a final report submitted within two weeks of receipt of the RNM's comments on the final Draft.

Annex II – Largest ICT Industry TNCs

Ranked by foreign assets, 1999

| Corporation | Ranking | Country | Industry |
|--------------------------|----------------|----------------|--------------------------------|
| General Electric | 1 | United States | Electronics |
| IBM | 9 | United States | Computers |
| Siemens AG | 14 | Germany/EU | Electronics |
| Mannesmann AG | 18 | “ | Telecommunications/Engineering |
| Sony Corporation | 22 | Japan | Electronics |
| Telefonica S.A. | 30 | Spain | Telecommunications |
| Motorola Inc. | 32 | United States | Electronics |
| Phillips Electronics | 33 | Netherlands/EU | Electronics |
| Hewlett Packard | 39 | United States | Electronics/Computers |
| Alcatel | 43 | France/EU | Electronics |
| Fujitsu | 50 | Japan | Electronics |
| Hitachi | 55 | Japan | Electrical/Electronics |
| Matsushita Electronics | 56 | Japan | Electronics |
| Canon Electronics | 61 | Japan | Electronics/Office Equip |
| Ericsson LM | 69 | Sweden/EU | Electronics/Telecoms. |
| SBC Communications | 74 | United States | Telecoms |
| Electrolux AB | 80 | Sweden | Electrical/Electronics |
| Edison International | 83 | United States | Electronics |
| Lucent Technologies Inc. | 92 | United States | Electronics |
| Toshiba Corporation | 97 | Japan | Electronics |

Annex III – What are the Jobs?

The ICT services industry encompasses a number of jobs that range from a requirement for relatively low generalist skills to highly specialized programming skills. Some examples are:

- Key in data entry for magazine subscriptions, coupons and other simple tasks
- Manuscript conversion from paper or voice to electronic format
- Corrections and repair of “exceptions” in highly automated systems such as airline ticket revenue accounting
- Conversion of databases from old files formats to newer easier to use systems
- Voice oriented and computer supported call center operations for technical help desks or customer services
- Telemarketing, inbound and outbound
- Processing and analysis of Market Research data
- Computer Aided Design
- Geographic Information Services (GIS)
- Document Storage and Management
- Software program conversion for changes in large systems computer platforms
- Software development

Source Schwarc R. and Hume S., “Prospects for Information Service Exports from the English-Speaking Caribbean,” The World Bank, Latin America and Caribbean Region, Informatics and Telecommunications Industry and Energy Department, Finance and Private Sector Development, March 1996

Currently, Barbados and Jamaica advertise competencies in the following areas:

| Barbados | Jamaica |
|--|---|
| <ul style="list-style-type: none"> ▪ Software Development Coding, Abstraction, Etc. ▪ Medical Records Processing ▪ Direct Mail (Data entry and fulfillment) ▪ Health Insurance ▪ Legal Services ▪ Publishing ▪ Credit Card Centre Operations ▪ Telemarketing/Call Centres ▪ GIS/CAD <p>Source: Barbados Investment and Development Corporation, www.bidc.com/infotech.htm.</p> | <ul style="list-style-type: none"> ▪ Information Processing e.g. Medical Records, Payroll & Invest. Files ▪ Inbound/Outbound Telemarketing Credit Card centre operations ▪ Data Conversion and Imaging ▪ Multimedia/multilingual services ▪ GIS/CAD Digitizing ▪ Data Warehousing ▪ Software developments and products ▪ Customized software applications ▪ Website Management and Internet Development <p>Source: www.jamaicanetlink.com/business/opportunities/itservices.html.</p> |

Annex IV – Telecommunications Indicators for the Caribbean

| | Population Total (M) | GDP per capita (US\$) | <u>Main Telephone Lines</u> 1999 | | <u>Cellular mobile</u> subscribers | | <u>Internet</u> Users | |
|----------------------|-------------------------|-----------------------------|-------------------------------------|------------------------|---------------------------------------|------------------------|--------------------------|------|
| | 1999 | 1998 | Total (k) | per 100 inhabitants | (k) | per 100 inhabitants | (k) | %pop |
| Antigua & Barbuda | 0.07 | 8,266 | 34.0 | 46.80 | 1.5 | 2.06 | 4 | 5.5 |
| Bahamas | 0.30 | 11,001 | 111.2 | 36.90 | 15.9 | 5.28 | 12 | 4.1 |
| Barbados | 0.27 | 8,731 | 113.0 | 42.18 | 12.0 | 4.48 | 6 | 2.2 |
| Belize | 0.24 | 2,558 | 31.6 | 13.75 | 3.4 | 1.49 | 10 | 4.3 |
| Dominica | 0.08 | 3,236 | 18.7 | 25.23 | 0.7 | 0.86 | 2 | 2.6 |
| Grenada | 0.09 | 3,635 | 27.5 | 29.78 | 1.4 | 1.53 | 2 | 1.9 |
| Guyana | 0.86 | 881 | 64.0 | 7.49 | 1.5 | 0.17 | 3 | 0.4 |
| Haiti | 8.09 | 452 | 60.0 | 0.80 | - | - | 6 | 0.1 |
| Jamaica | 2.56 | 2,707 | 474.0 | 18.68 | 79.0 | 3.11 | 60 | 2.4 |
| St. Kitts & Nevis | 0.04 | 6,840 | 17.2 | 43.82 | 0.4 | 1.13 | 2 | 4.9 |
| St. Lucia | 0.15 | 3,815 | 40.4 | 26.57 | 1.9 | 1.25 | 5 | 3.4 |
| St. Vincent | 0.11 | 2,824 | 21.0 | 18.79 | 0.8 | 0.67 | 2 | 1.8 |
| Suriname | 0.42 | 1,976 | 70.8 | 17.05 | 17.5 | 4.21 | | 0.0 |
| Trinidad & Tobago | 1.29 | 4,726 | 264.1 | 20.58 | 26.3 | 2.05 | 25 | 1.9 |

Source: ITU (Americas Telecommunications Report 2000)

Annex V – Availability of National ICT Investment/IT Policy

| Country | Investment Incentive Programs specific to IT Sector | ICT Country Strategy | E-commerce strategy |
|--------------------------------|---|----------------------------------|--|
| Antigua and Barbuda | Generic Fiscal Incentive Acts | None | None |
| Bahamas | Generic Fiscal Incentive Acts | None | Draft e-commerce laws |
| Barbados | Yes Maximum Corporate tax rate of 2.5% on net profits for IBC Exemption from import duties on computers and other production related equipment Full and unrestricted repatriation of capital, profits and dividends Other incentives Office space Training assistance programs | Preparing to Draft ICT Strategy. | Electronic Transactions Act (in draft) Computer Misuse Act (in draft) Data Protection Act (in draft) |
| Belize | Generic Fiscal Incentive Act IBC Act Export Processing Zone Act Free Zone Act | None | None |
| Dominica | Generic Fiscal Incentives Act | None | None |
| Grenada | Yes Relief from CET and GCT on equipment Full ownership of business Free movement of capital and persons | None | None |
| Guyana | Generic fiscal incentive act | None | None |
| Jamaica | Yes Free Zone act 100% income and profit tax exemption, duty free import for capital and consumer goods, good for construction and alteration and repairs, repatriation of earnings and minimized customs procedures stand alone free zones Export Industry Encouragement Act, tax holiday on profits for 10 years | Extensive IT strategy and policy | Incorporated to some extent in IT strategy |
| Montserrat | Generic fiscal incentive act | None | None |
| St. Kitts/Nevis | Generic fiscal incentive act | None | None |
| St. Vincent and the Grenadines | Generic fiscal incentive act | None | None |
| St. Lucia | Generic fiscal incentive act | None | None |
| Suriname | Generic fiscal incentive act | None | None |
| Trinidad and Tobago | Fiscal Incentives Act Free Zone Act which includes Service Operations Exemption for customs duty on the importation of good to the zone Exemption from income tax Exemption from corporate tax | IT Policy | E-commerce policy Advisory Cmt. for E-commerce |

| | | | |
|--|---|--|--|
| | Exemption from business levy Exemption from withholding taxes on remittance of profits, dividends and other distributions Exemption from land and bulding taxes on land, buildings, improvements to buildings, plant and machinery in the free zone.. | | |
|--|---|--|--|

Annex VI - CARICOM Country Commitments - BTA:

| CARICOM Country Commitments - BTA | | | |
|-----------------------------------|---|---|--|
| Country | M/A Offers | M/A Commitments | Exemptions |
| Antigua and Barbuda | <p>International service – 2010</p> <p>Monopoly maintained on domestic voice service</p> <p>Data transmission and leased circuits – 2012</p> | <p>Data transmission over closed user groups, internet and internet access – No restrictions</p> <p>Terrestrial based mobile cellular service – open through commercial presence</p> <p>Cross border supply of satellite based mobile services and fixed satellite services</p> <p>Commits to reference paper</p> | MFN Exemption for Nationals of other Caribbean Countries |
| Barbados | <p>Voice telephony, data transmission and private leased circuit – 2012 (when monopoly license expires)</p> <p>For non public use the supply of voice telephony, data transmission and facsimile services are opened up for competition on the basis of facilities leased from the monopoly supplier up to 2012</p> | <p>Unrestricted supply of terrestrial and satellite based mobile services as of 1999</p> <p>Internet and internet access services and V-sat no restrictions</p> <p>Commits to the reference paper</p> | none |
| Belize | <p>No offers on public voice telephony, data transmissions and Internet</p> <p>Offers a phased in commitment to allow open competition in trunked radio service and teleconferencing by 2003</p> <p>Paging and other value added by</p> | Commits to reference paper | none |

| Country | M/A Offers | M/A Commitments | Exemptions |
|-----------------|--|---|------------|
| | 2008 | | |
| Dominica | No offers on public voice telephony | <p>Commits to no restrictions on data transmission over closed groups and several value added telecoms services, including Internet and internet access (excluding voice) and teleconferencing.</p> <p>No restriction on cross-border supply of satellite based mobile and fixed satellite services through commercial arrangements with the exclusive operator</p> <p>Commits to the Reference Paper</p> | None |
| Grenada | <p>Offers a phased-in liberalisation of most basic telecommunications services in all markets segments including voice telephony, data transmission, private leased circuits and terrestrial mobile services by 2006</p> <p>Allow the supply of satellite based mobile services and fixed satellite services through commercial arrangements with the exclusive operator, until 2006</p> | <p>No restrictions on value added telecom services, trunked radio systems and internet and internet access services (excluding voice)</p> <p>Commits to the Reference Paper</p> | |
| Guyana | No offers on basic telecommunication services, including internet and internet access | Online and information data base retrieval permitted however no commercial presence restricted by public telecoms transport network and services provided by a monopoly supplier operating under a 20 year license with an option to renew for the same period | None |

| Country | M/A Offers | M/A Commitments | Exemptions |
|---------------------------------------|---|--|------------|
| | No offers on reference paper | | |
| Jamaica | <p>Offers to phase in domestic facilities based and international voice telephony and other basic telecommunications services by 2013</p> <p>Undertakes additional commitment to submit an improved commitment on voice over closed user groups and voice over internet currently reserved to exclusive supply until 2013</p> <p>Terrestrial cellular mobile telephone and domestic satellite based mobile telephone services to be provided by an exclusive operator under a five to ten year exclusive license</p> <p>Offers international satellite based mobile telephone and fixed satellite services through commercial arrangements with the exclusive operator until 2013</p> | <p>Commits to no restrictions in data transmission, digital mobile data services, personal communication services, paging, teleconferencing, internet and internet access (excluding voice), trunked radio systems, video transport (excluding teleconferencing), as other value added services.</p> <p>Allow supply of international voice, data and video transmission services to firms involved in information processing located within free zones.</p> <p>Commits to the reference paper</p> | None |
| St Kitts and Nevis | <p>No offers on basic telecommunications services</p> <p>No offer on reference paper</p> | No restrictions on electronic mail, voice mail, online information and data processing, excluding telefax | none |
| St. Lucia | No commitments on Telecoms | | |
| St. Vincent and the Grenadines | No commitments on Telecoms | | |
| Suriname | Offers to review the circumstances for licensing additional operators of basic services by 2003 | Commits to duopoly provision of public voice telephone services, fixed network infrastructure and fixed satellite services and to maintaining existing licenses for mobile phones and PCS | none |

| Country | M/A Offers | M/A Commitments | Exemptions |
|------------------------------|--|--|------------|
| | | <p>No restrictions on non-public voice services and public and non-public data transmission, internet services (excluding voice) and teleconferencing subject to use of duopoly facilities.</p> <p>No restrictions on the provision of public mobile data, paging, and trunked radio systems</p> <p>Commits to reference paper</p> | |
| Trinidad & Tobago | <p>Offers competition in voice telephone, data transmission, telex, telegraph and private leased circuits for public use from 2010</p> <p>Offers to negotiate on other mobile services, internet and internet access and teleconferencing for private uses</p> | <p>No restrictions on mobile satellite based services for public use including mobile telephone services, mobile data, fixed satellite services and personal communication services as well as several value added services.</p> <p>Commits to the reference paper</p> | none |

(Courtesy of WTO website www.wto.org. Schedule excludes Bahamas, Montserrat and Haiti.)

Annex VII –Participants in the Information Technology Agreement (ITA)

January 2003

| | |
|---|-----------------|
| Albania | Costa Rica |
| Georgia | Indonesia |
| Lithuania | Moldova |
| Romania | Singapore |
| Australia | Croatia |
| Hong Kong, China | Israel |
| Macao, China | New Zealand |
| Bulgaria | Slovak Republic |
| Iceland | Cyprus |
| Malaysia | Japan |
| Separate Customs Territory of Taiwan, Penghu, Kinmen | Norway |
| Canada | Slovenia |
| India | Czech Republic |
| Mauritius and Matsu | Jordan |
| Thailand | Oman |
| Estonia | Switzerland |
| Kyrgyz Republic | El Salvador |
| Turkey | Korea |
| European Union | Panama |
| Latvia | Philippines |
| Poland | United States |

Annex VII - Duties and Charges on Selected ITA Regulated Equipment

| COUNTRY | PERSONAL COMPUTERS | | | | | |
|---------------------|--------------------|-----------------|---|-------------------|-----|---------------------------|
| | DUTY | CONSUMPTION TAX | COSTOMS/ IMPORT SURCHARGE | ENVIRONMENTAL TAX | VAT | SALES TAX |
| 8471.20 | | | | | | |
| ANTIGUA & BARBUDA | 5% | 30% | 5% of CIF value | | | |
| BARBADOS | FREE | | | 1% | 15% | |
| BELIZE | FREE | | | 1% of cif value | | 8% |
| DOMINICA | 5% | | 2% of CIF value | | | 5% |
| GRENADA | 5% | | 5% of CIF value | | | |
| GUYANA | 5% | | | | | |
| JAMAICA | FREE | | Customs User Fee ranging from JM\$600.00 – JM\$3,000.00 charged on all customs transactions | | | |
| MONTSERRAT | No data available | | 8% of CIF value | | | |
| ST KITTS | FREE | | 5% of CIF value | | | |
| ST LUCIA | FREE | | 4% of cif value | | | |
| ST VINCENT | FREE | | 4% of cif value | | | |
| SURINAME | 5% | | | | | 7% - called consumers tax |
| TRINIDAD AND TOBAGO | FREE | | Inspection fee of 0.5% of cif value plus VAT | | 15% | |

Foreign Exchange Transactions – Antigua and Barbuda, Montserrat, St Vincent – 1%, Belize 1.25%.
Suriname – statistics fee at 0.5% and consent fee at 1.5% on cif value of all imports

| COUNTRY | COMPUTER EQUIPMENT PARTS & SOFTWARE | | | | | |
|---------------------|-------------------------------------|-----------------|---|-------------------|-----|---------------------------|
| | DUTY | CONSUMPTION TAX | COSTOMS/ IMPORT SURCHARGE | ENVIRONMENTAL TAX | VAT | SALES TAX |
| 8473.30 | | | | | | |
| ANTIGUA & BARBUDA | 5% | 30% | 5% of CIF value | | | |
| BARBADOS | 5% | | | 1% of cif value | 15% | |
| BELIZE | FREE | | | 1% of cif value | | 8% |
| DOMINICA | 5% | | 2% of CIF value | | | 5% |
| GRENADA | 5% | | 5% of CIF value | | | |
| GUYANA | 5% | | | | | |
| JAMAICA | FREE | 15% | Customs User Fee ranging from JMS\$600.00 – JMS\$3,000.00 charged on all customs transactions | | | |
| MONTSERRAT | No data available | | 8% of CIF value | | | |
| ST KITTS | FREE | | 5% of CIF value | | | |
| ST LUCIA | FREE | | 4% of cif value | 1% of cif value | | |
| ST VINCENT | FREE | | 4% of cif value | | | |
| SURINAME | 5% | | | | | 7% - called consumers tax |
| TRINIDAD AND TOBAGO | FREE | | Inspection fee of 0.5% of cif value plus VAT | | 15% | |

Customs Duty is charged on non-CARICOM products

Foreign Exchange Transactions – Antigua and Barbuda, Montserrat, St Vincent – 1%, Belize 1.25%.

Suriname – statistics fee at 0.5% and consent fee at 1.5% on cif value of all imports

| COUNTRY | MOBILE PHONE | | | | | |
|---------------------|-------------------|-----------------|---|-------------------|-----|---------------------------|
| | DUTY | CONSUMPTION TAX | COSTOMS/ IMPORT SURCHARGE | ENVIRONMENTAL TAX | VAT | SALES TAX |
| 8517.50 | | | | | | |
| ANTIGUA & BARBUDA | 5% | 30% | 5% of CIF value | | | |
| BARBADOS | 5% | | | 1% ON CIF VALUE | 15% | |
| BELIZE | 5% | | | 1%of cif value | | 8% |
| DOMINICA | 5% | | 2% of CIF value | | | 5% |
| GRENADA | 5% | 25% | 5% of CIF value | | | |
| GUYANA | 5% | 10% | | | | |
| JAMAICA | FREE | 15% | Customs User Fee ranging from JM\$600.00 – JM\$3,000.00 charged on all customs transactions | | | |
| MONTSERRAT | No data available | | 8% of CIF value | | | |
| ST KITTS | 5% | 15% | 5% of CIF value | | | |
| ST LUCIA | FREE | | 4% of cif value | 1% of cif value | | |
| ST VINCENT | 5% | 30% | 4% of cif value | | | |
| SURINAME | 5% | | | | | 7% - called consumers tax |
| TRINIDAD AND TOBAGO | 2.5% | | Inspection fee of 0.5% of cif value plus VAT | | 15% | |

Customs Duty is charged on non-CARICOM products

Foreign Exchange Transactions – Antigua and Barbuda, Montserrat, St Vincent – 1%, Belize 1.25%.

Suriname – statistics fee at 0.5% and consent fee at 1.5% on cif value of all imports

| COUNTRY | TELECOMMUNICATIONS SWITCH EQUIPMENT | | | | | |
|---------------------|-------------------------------------|-----------------|---|-------------------|-----|---------------------------|
| | DUTY | CONSUMPTION TAX | COSTOMS/ IMPORT SURCHARGE | ENVIRONMENTAL TAX | VAT | SALES TAX |
| 8517.30 | | | | | | |
| ANTIGUA & BARBUDA | 5% | 30% | 5% of CIF value | | | |
| BARBADOS | 5% | | | 1% of cif value | 15% | |
| BELIZE | 5% | | | 1% of cif value | | 8% |
| DOMINICA | 5% | | 2% of CIF value | | | 5% |
| GRENADA | 5% | 25% | 5% of CIF value | | | |
| GUYANA | 5% | 10% | | | | |
| JAMAICA | FREE | 15% | Customs User Fee ranging from JM\$600.00 – JM\$3,000.00 charged on all customs transactions | | | |
| MONTserrat | No data available | | 8% of CIF value | | | |
| ST KITTS | 5% | 15% | 5% of CIF value | | | |
| ST LUCIA | FREE | | 4% of cif value | 1% of cif value | | |
| ST VINCENT | 5% | 30% | 4% of cif value | | | |
| SURINAME | 5% | | | | | 7% - called consumers tax |
| TRINIDAD AND TOBAGO | 2.5% | | Inspection fee of 0.5% of cif value plus VAT | | 15% | |

Customs Duty is charged on non-CARICOM products

Foreign Exchange Transactions – Antigua and Barbuda, Montserrat, St Vincent – 1%, Belize 1.25%.

Suriname – statistics fee at 0.5% and consent fee at 1.5% on cif value of all imports

| COUNTRY | OPTICAL FIBRE CABLES | | | | | |
|---------------------|----------------------|-----------------|---|-------------------|-----|---------------------------|
| | DUTY | CONSUMPTION TAX | COSTOMS/ IMPORT SURCHARGE | ENVIRONMENTAL TAX | VAT | SALES TAX |
| 8544.70 | | | | | | |
| ANTIGUA & BARBUDA | 5% | 20% | 5% of CIF value | | | |
| BARBADOS | 5% | | | 1% of cif value | 15% | |
| BELIZE | FREE | | | 1% of cif value | | 8% |
| DOMINICA | FREE | | 2% of CIF value | | | 5% |
| GRENADA | 5% | 25% | 5% of CIF value | | | |
| GUYANA | 5% | 10% | | | | |
| JAMAICA | FREE | 15% | Customs User Fee ranging from JM\$600.00 – JM\$3,000.00 charged on all customs transactions | | | |
| MONTSERRAT | No data available | | 8% of CIF value | | | |
| ST KITTS | 5% | 15% | 5% of CIF value | | | |
| ST LUCIA | FREE | 5% | 4% of cif value | 1% of cif value | | |
| ST VINCENT | 5% | 30% | 4% of cif value | | | |
| SURINAME | 5% | | | | | 7% - called consumers tax |
| TRINIDAD AND TOBAGO | 5% | | Inspection fee of 0.5% of cif value plus VAT | | 15% | |

Customs Duty is charged on non-CARICOM products

Foreign Exchange Transactions – Antigua and Barbuda, Montserrat, St Vincent – 1%, Belize 1.25%.

Suriname – statistics fee at 0.5% and consent fee at 1.5% on cif value of all imports

Source: Caribbean Export Database of Statistics – March 2003

Annex IX - Diffusion of Personal Computers in CARICOM States Year 2001

| Country | No. of PCs per 100 Inhabitants |
|--------------------------------|--------------------------------|
| Antigua and Barbuda | Not available |
| Bahamas | " |
| Barbados | 9.23 |
| Belize | 13.52 |
| Dominica | 7.50 |
| Grenada | 13.0 |
| Guyana | 2.64 |
| Haiti | Not available |
| Jamaica | 5.0 |
| Montserrat | Not available |
| St. Kitts/Nevis | 17.45 |
| St. Vincent and the Grenadines | 11.61 |
| St. Lucia | Not available |
| Suriname | 4.55 |
| Trinidad and Tobago | 6.92 |
| | Not available |
| Caribbean Average | 9.14 |
| Canada | 40.31 |
| USA | 62.50 |

(Source: ITU 2002)

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