



The Caribbean Telecom Equipment Market: Another Look at Markets and Market Access

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BARBADOS

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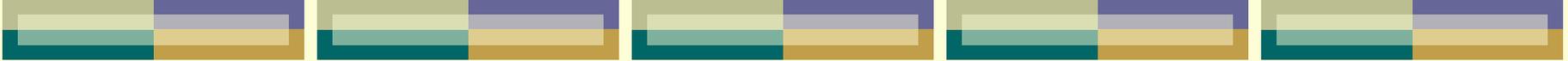
October 3-7, 2005





Caribbean Telecoms Equipment Market Trends

- Structure of the Telecom Market
 - Dynamics of Trade Experiences
 - Technology and Procedures Systems
 - Technical Barriers to Trade
 - Choices for Enhancing the Telecom Market via Market Access Instruments
- 



Caribbean Telecoms Equipment Market Trends

SELECTED ISSUES

- TRADE
- TECHNOLOGY
- CONFORMITY ASSESSMENT
- SAFEGUARDS
- TRADE BARRIERS

Special Treatment

Technical Assistance



Map of the Caribbean



LIBERALISATION – REGULATIONS & MARKETS

Country	Telecom Act	Other Instruments	New Licences	ICT Policy
Antigua & Barbuda	Old	APUA (Authority)	*	
Barbados	New Policy	FTC	*	*
Belize	New	PUC	*	
Dominica*	New	ECTEL	*	*
Grenada*	New	ECTEL	*	*
Guyana	New	PUC	*	
Jamaica	Old	OUR	*	*
Montserrat	Old		*	*
St Kitts/Nevis*	New	ECTEL	*	*
Saint Lucia*	New	PUC/ ECTEL	*	*
St. Vincent and the Grenadines	New	ECTEL		
Suriname*	New Policy	TAS		*
The Bahamas	New	New PUC	*	*
Trinidad and Tobago	New Policy	TATT and RIC	*	
British Virgin Islands	New	-	-	
Cayman Islands	ICT Act	Independent Regulator		*
Turks and Caicos Islands	Old	-		*
Anguilla	New	PUC		*
Haiti	Old	CONATEL	*	
Dominican Republic	New	INDOTEL	*	*

* ECTEL members – Eastern Caribbean Telecommunications Authority

CELLULAR MARKET TRENDS

Human Development Report 2005

Technology: diffusion and creation

To Acquire Knowledge

	Telephone mainlines (per 1,000 people)	Cellular subscribers (per 1,000 people)	Internet (per 1,000 people)	Patents granted to residents (per million people)	Receipts of royalties and licence fees (US\$ per person)	Research & development (R&D) expenditures (as % of GDP)	Researchers in R&D (per million people)
HDI Rank	2003	2003	2003	2003	2003	1997-2002	1990-2003
High Human Development							
Barbados	497	519	371	0	3.2	...	...
Saint Kitts and Nevis	...	...	...	...	0.0 ^c	...	...
Costa Rica	278	181	288	0	0.1	0.4	533
Bahamas	415	367	265	...	0	...	...
Cuba	64	3	9	0	...	0.5	538
Trinidad & Tobago	...	399	...	0	...	0.1	347
Antigua & Barbuda	...	...	...	0	0.0 ^c	...	...
Medium Human Development							
Suriname	152	320	44	...	...	...	...
Saint Lucia	...	...	...	0	...	...	...
Jamaica	...	680	...	1	4.6	...	...
St. Vincent & the Grenadines	273	529	...	0	0.0 ^c	0.2	179
Grenada	290	376	169	0	0.0 ^c	...	...
Dominica	...	...	...	0	0.0 ^c	...	...
Dominican Republic	115	272	102	...	0.0 ^c	...	...
Belize	113	205	...	0	0.0 ^c	...	...
Guyana	...	...	...	...	41.9	...	...
Honduras	49	55	40	1	0.0 ^c	0.1	74
Guatemala	77	165	...	...	0.0 ^c	...	...
Low human development							
Haiti	17	38	18	...	0.0 ^c	...	...

LICENCES & INSTRUMENTS

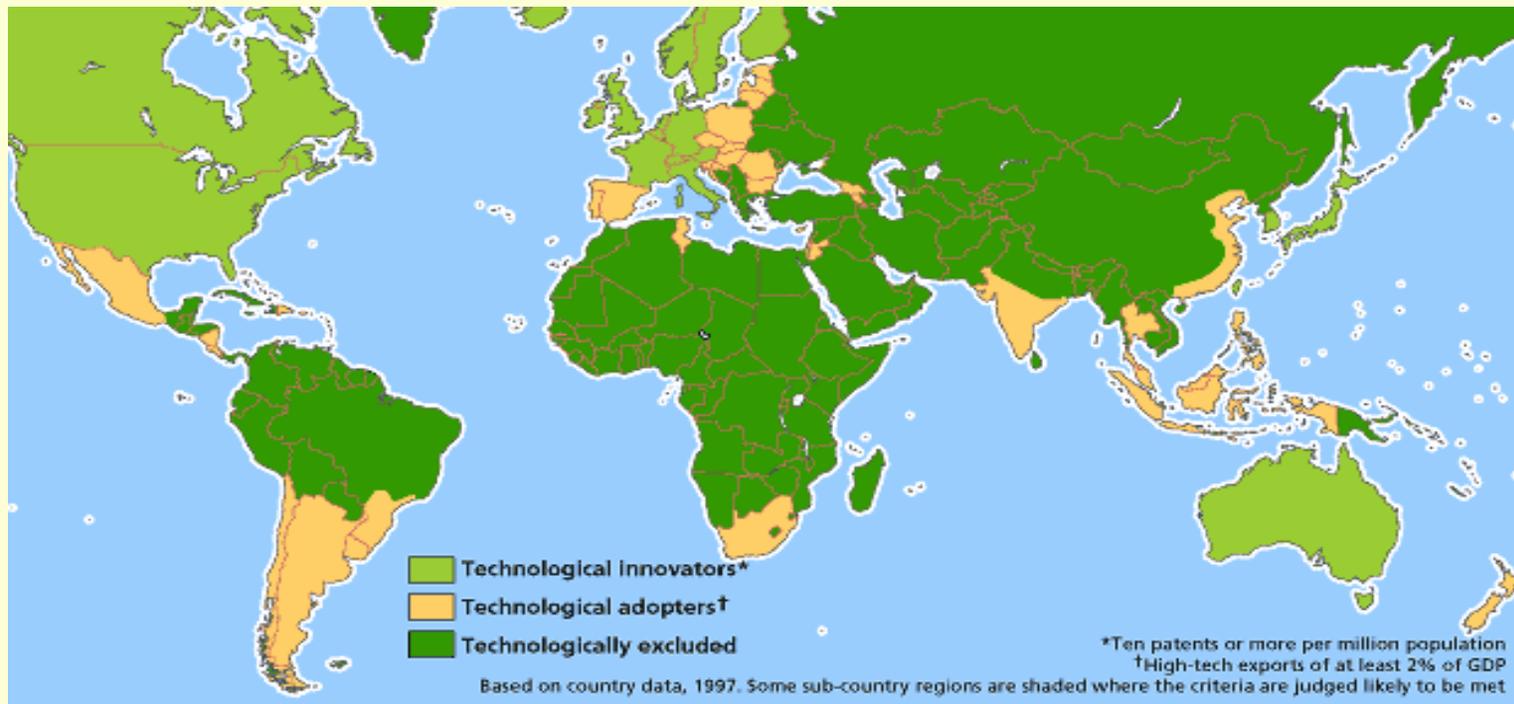
COUNTRIES	SPECTRUM USE	E-COMMERCE	TELECOM/ INET USAGE	INT'L COOP.	SECURITY/ STANDARDS
Guyana	National Frequency Mgt Unit – Lic. Granted	Draft Law Weak System	High Mobile Med. Infrastructure	Technical – ITU Finan. – IDB	-
Haiti	Licences Granted	-	Weak Infrastructure	UNDP	-
Trinidad and Tobago	Gov't Technical Agency	Laws on E-Transactions SME Portal, Central Bank Clearing System	High Mobile	Technical – ITU Financing – IDB	Draft Legal Arrangements for data Protection
Cayman Islands	-	Advanced E-Commerce Laws and Regulations	High Infrastructure	Investors	Securep'ments s and Signatures
Barbados	Licences Granted	E-Commerce Laws	High Infrastructure	-	-
Antigua/Barbuda	Licences Granted	Economic Processing Zone	High	Investors	-
Belize	Licences Granted	Economic Processing Zone	High	Plan Puebla and Panama Initiatives – Backbone Infrastructure	-
St Kitts/Nevis	Licences Granted	-	-	-	-
Dominican Republic	Licences Granted	Economic Processing Zone E-Commerce Laws	Med. Infrs. High Mobile	ITLA: Microsoft Investors	Secure Signatures
Suriname	-	-	Med. Infrastructure	Investors	-
Jamaica	Licences Granted	Economic Processing Zone – Call Centres E-Commerce Laws	Medium Infrastructure High Mobile	E-Learning, ITU Training, Infrs - CIT/CISCO	Draft Cyber crime Law, Draft New Standards Law
The Bahamas	Licences Granted	Advanced E-Commerce Laws and Regulations	High Infrastructure	Investors	Secure Signatures
Bermuda	Licences Granted	Advanced E-Commerce Laws and Regulations	High Infrastructure	Investors	Data Protection Legislation
Anguilla	Licences Granted	Advanced E-Commerce Laws and Regulations	High Infrastructure	Investors	Secure Data Infra. (ACORN)

Equipment Trade

	<u>Telecom Equipment</u> Exports (M US\$) 2002	<u>Telecom Equipment</u> Imports (M US\$) 2002	<u>Trade Balance</u> (M US\$) 2002
Argentina	38	606	-569
Barbados	-	27	-27
Belize	...	6	...
Bolivia	8	54	-46
Brazil	1'258	518	-636
Canada	3'685	3'606	78
Chile	8	469	-493
Colombia	5	504	-498
Costa Rica	20	100	-80
Dominica	...	4	...
Ecuador	1	181	-180
El Salvador	3	59	-56
Grenada	-	6	-4
Guadeloupe*	...	...	...
Guatemala	2	202	-200
Honduras	1	32	-31
Jamaica	...	64	...
Mexico	6'902	2'632	4'270
Nicaragua	1	39	-38
Panama	...	100	...
Paraguay	-	33	-42
Peru	3	191	-188
Puerto Rico*	...	...	...
St. Kitts/Nevis	...	2	...
St. Vincent	...	5	...
Suriname	...	11	...
Trinidad & Tobago	10	67	-57
United States	10611	29'292	18'681
Uruguay	-	19	-19
Venezuela	3	483	-480

* - As at year 2000

MAPPING TECHNOLOGY INNOVATION





Eastern Caribbean Emergent Broadband Internet Services

NETWORKS

Cellular

PSTN

Cable TV

GSM

TECHNOLOGY

ADSL

DOCSIS

HSPDA

DVB-RCS/DVB-S

WIMAX



TYPE APPROVAL FORM



Telecommunications Authority of Trinidad and Tobago

Suites 3-5, BEN Court, 76 Boundary Road, San Juan, Republic of Trinidad & Tobago

Telephone: (868) 675 – TATT (8288)

Fax: (868) 674 - 1055

APPLICATION FOR TYPE APPROVAL FOR RADIO COMMUNICATION EQUIPMENT

GUIDELINES AND INSTRUCTIONS

1. Two (2) copies of this application must be completed and submitted to the Telecommunications Authority of Trinidad and Tobago.
2. The content of this application is subject to change by the Telecommunications Authority of Trinidad and Tobago.
3. Section B shall be completed for each radio communication device, for which type approval is requested (duplication of Section B is allowed for multiple devices for type approval)

SECTION A

GENERAL

1. Name of Applicant _____

2. Address _____

3. Telephone No. _____ FAX. _____

5. E-Mail address _____

6. Details of Applicant:

Individual

Company

Company Registration Number _____

Company Registration Date _____

(Attach a copy of the Company's Registration Certificate)

TYPE APPROVAL FORM (2)

SECTION B

TYPE APPROVAL INFORMATION

The Telecommunications Authority of Trinidad and Tobago requires the following information for all radio communication equipment for which type approval is being sort.

Information for the following should include:

1. Nature of Business:
 - Radio communication (wireless) reseller
 - Agent/Supplier/Manufacturer
 - Principal User
 - Other:
2. The make, model and brief description of the radio communication equipment.

Make	Model	Description

3. Verification of International Standardization certification for the said equipment (e.g. FCC or CE test reports).
4. Copies of the manufacturer's technical specifications for all radio communication equipment for which type approval is requested.

SPECTRUM LICENCE FORM

File No.:



Telecommunications Authority of
Trinidad and Tobago
BEN Court
76 Boundary Road,
San Juan

Tel: (868) 675-8288
Fax: (868) 674- 1055
Email: info@tatt.org.tt
Website: www.tatt.org.tt

SPECTRUM LICENCE TECHNICAL SPECIFICATIONS (Attachment to Form L1)

Form TS-SP

Instructions:

1. Two (2) printed copies of this form must be completed and submitted.
2. Please write in **BLOCK CAPITAL** letters with the use of a pen.
3. Please refer to the Instructions sheet to help you complete this application.

PART 1 GENERAL INFORMATION		
Applicant:		
Contact Information		
Name of Individual and Position:		
Mailing Address:		
Telephone:	Fax:	Email:

PART 2 Spectrum Details	
Total Bandwidth (MHz)	
Frequency Range (MHz)	
Class of Emission	
Operation Type (Continuous / Intermittent)	
Hours of Operation	

PART 3 Station/ Antenna Details*	
Geographical Location of Station(s) (degrees, minutes, seconds)	
Height above ground (m)	
Elevation above sea level (m)	
Effective Radiated Power (ERP) / W	

SPECTRUM LICENCE FORM (2)

Antenna Details	Type of Antenna
	Make and Model
	Gain (dB)
	Beamwidth (degrees)
	Polarization

Remarks:

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Systems Operated – Please check all that apply

- Public Mobile Radio Systems
- Private
- Trunked Mobile
- Fixed Wireless Access Systems

Certification Process



Telecommunications Authority of Trinidad and Tobago

BEN Court, 76 Boundary Road, San Juan, Republic of Trinidad & Tobago

Telephone: (868) 675-8288; Website: www.tatt.org.tt
Fax: (868) 674-1055; E-mail: info@tatt.org.tt

Date: 20th July, 2005.

Name and Address of Applicant

Type Approval for Low Power Radio Communication Device:

Dear Madam,

Centron & Sentinel

In response to your application No: Form AL-TA-01 submitted on 5th Jul 2005.

Received on: 5th July 2005.

Our file No.

The Telecommunications Authority of Trinidad and Tobago is pleased to grant Type Approval for the device to the named GRANTEE:

Name of Grantee

Equipment Description: Itron meters with AMR endpoints

Model Number: Centron & Sentinel

Center Frequency:

The Centron (SK9C1A-2 and SK9C1A-3) and the Sentinel (SK9R300S-1) meters are frequency hopping transmitters. The Sentinel (SK9SMFMM-1) is a direct sequence transmitter. All meters operate in the 902-928MHz range

Bandwidth:

Centron – 200kHz
Sentinel (SMFMM-1) – 1MHz (DTS system)
Sentinel (R300S-1) – 200kHz

Band occupied:

ISM 902-928 MHz

Manufacturer:

ITRON Inc.

Acknowledged Type Approval:

Centron (8dBm) – SK9C1A-2 (FCC), 864G-C1A2 (Government Ministry)
Centron (20dBm) - SK9C1A-3 (FCC), 864G-C1A3 (Government Ministry)
Sentinel – SK9SMFMM-1 (FCC), 864G-SMFMM1 (Government Ministry)
Sentinel - SK9R300S-1 (FCC), 1316D-R300S 3 9 (Government Ministry)

This Type Approval is granted under the following conditions:

1. The equipment is operated under the technical parameters specified.
2. No radio frequency interference is generated from said device to higher powered devices.
3. Protection from radio frequency interference is not guaranteed.

Yours truly,

.....
/s/ Executive Director

*Board of Directors: Mr. Khalid Hassanali (Chairman); Mr. Cagney Casimire (Deputy Chairman); Ms. Beverly Beckles; Ms. Gillian Bishop; Mrs. Carol Clark; Dr. Ronald Ramkissoon; Mr. Learie Alleyne-Forte; Mr. Samuel Henry; Prof. St. Clair King; Mr. Wayne Nakhid; Dr. Shahid Hussain.
Dr. John Prince (Executive Director)*



WTO/GATS Basic Telecoms Agreement

Reference Paper of Regulatory Principles

- 1.2.a Available Technical Information
 - 2.2.a Interconnection
 - 5 Independent Regulators
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WTO – Agreement on Technical Barriers to Trade

TECHNICAL BARRIERS

Article 6 – Trade Facilitation

Article 12 Special Treatment

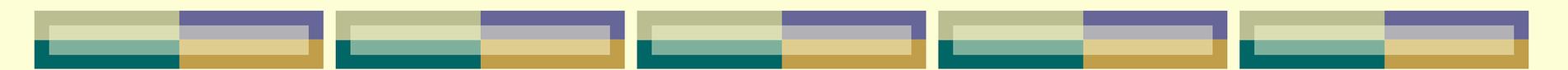
Article 11 Technical Assistance





WTO: Enhancing the Telecom Market

- Trade Dimensions - Broadcasting Equipment Market
 - Safeguards - Importing Countries and Production Location
 - Special Treatment
 - Surveillance Stage of Technological Development
 - Mode 4 - Movement of Technical Experts - ISO/IEC-17011
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CONCLUSIONS

- Trade Facilitation and Market Access are Key
 - Shift in Product Type – Broadcasting Market and Cellular Environment
 - “Tweaking” the Trade Rules
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