

Telecommunications Data

During 2004 the Telecommunications Research Project at the University of Hong Kong – <http://www.trp.hku.hk> – collected data relating to telecommunications in selected countries of the East Asia Pacific region, including the Pacific Islands, as part of a project for The World Bank. This data has been slightly updated and is presented here for scholars and researchers.

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TRP

January 2005.

At a Glance (2002)

Country	Population	GDP per capita	Public phones	Fixed mainlines		Cellular		INTERNET				Total Internet price	
	TOTAL (M) 2002	(per km2) US\$ 2002	per 1'000 pop 2001	TOTAL '000 2002	Per 100 inhabitant 2002	TOTAL 000's 2002	Subscribers per 100 inhabitants 2002	Hosts per 100 inhabitant 2002	SUBSCRIBERS ('000) 2002	USERS ('000s) 2002	Users per 100 inhabitant 2002	20 hours of use US\$ August 2003	As % of GNI per capita August 2003
Cambodia	13.79	254	0.3	35.4	3.01	380	2.76	0.01	6.7	30	0.22	57.36	245.8
China	1,284.53	963	2.64	214420	16.69	206620	16.09	0.01	49700	59100	4.6	10.14	13
Indonesia	212.11	860	1.83	7750	3.65	11700	5.52	0.03	600	8000	3.77	22.26	37.6
Laos PDR	5.53	328	0.06	61.9	1.12	55	1	0.01	2.6	15	0.27	31.87	123.4
Malaysia	24.53	3870	6.87	4669	19.04	9241	37.68	0.35	2633	7841	31.97	8.42	2.9
Mongolia	2.43	439	0.26	128	5.27	n/a	8.89	0.01	10.5	50	2.06	n/a	n/a
Myanmar	48.99	148	0.04	342.3	0.7	48	0.1	-	8.4	25	0.05	42.5	180.9
Philippines	79.48	969	0.19	3310.9	4.17	15201	19.13	0.05	800	3500	4.4	17.05	20.1
Timor Leste	.82	494	n/a	2 (2000)	.26 (2000)	12 (2000)	1.5 (2000)	n/a	n/a	.15 (2000)	n/a	n/a	n/a
Thailand	61.89	2044	3.39	6499.8	10.5	16117	26.04	0.16	1500	4800	7.76	6.98	4.2
Vietnam	81.25	429	0.08	3929.1	4.84	1902	2.34	-	350	1500	1.85	19.85	55.4
Pacific Islands													
Cook Island	0.18	4715	n/a	6.2 (2002)	25	1.5	9.5	n/a	n/a	n/a	n/a	na	na
Fiji	0.82	2068	1.83	102 (2003)	12.35 (2003)	109.9 (2003)	13.31 (2003)	-	7.6	55 (2003)	6.6 (2003)	31.74	17.6
Fed. States Micronesia	118 (July 2003 est.)	2,070 (2002 est.) - PPP	.63	11 (2001)	10	4 (2003)	3.4	n/a	1.8	6	4.4	n/a	n/a
Kiribati	.9	700	0.21	4.5	13.4 (2000)	.5	0.6	42	n/a	1.22 (2000)	n/a	n/a	n/a

Marshall Islands	0.06	1817	n/a	4.5 (2003)	8.27 (2003)	.6 (2003)	1.11 (2003)	0.01	0.7	1.4	2.6	20	10.2
Nauru	.115	3,900	n/a	1.9 (2001)	16.5	1.5 (2002)	13.04 (2002)	n/a	n/a	.3	2.4	n/a	n/a
New Caledonia	0.22	13940	4.56	52	23.21	80	35.71	2.64	15	60 (2003)	26.2 (2003)	80.34	6.4
Niue	.1	3,710	n/a	1.1 (2002)	61.1 (2004)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
PNG	5.46	777	0.16	62	1.13	15	0.27	0.01	27	75	1.37	20	45.3
French Polynesia	0.25	16613	3.61	52.5	21.87	90	37.49	1.49	11	35	14.2.6	69.29	4.8
Samoa	0.18	1428	0.86	11.8 (2003)	6.53 (2003)	2.7	1.5	3.16	1.3	4	2.22	42.97	36.3
Solomon Islands	0.44	611	0.6	6.6	1.49	1	0.22	0.11	1	2	0.5	91.15	191.9
Tonga	0.1	1322	0.56	11.2	11.29	3.4	3.38	19.64	1.9	3	2.92	45.45	38.7
Tuvalu	.9	1,160	n/a	.7 (2002)	8.6	n/a	n/a	.02 (2000)	n/a	n/a	n/a	n/a	n/a
Vanuatu	0.2	1113	0.73	6.5 (2003)	3.15 (2003)	7.8 (2003)	3.76 (2003)	0.27	1.5	7	3.46	46.7	51.9

Source: ITU, ADB, CIA Fact Book

Table 2

Country	Company	Foreign Investors (Financial & Strategic)
CAMBODIA		
	Camintel (Cambodia Indosat Telecommunication)	<i>Seeking to exit – PT Indosat (Indonesia) (49%) but plans to sell. The government of Cambodia has the remaining 51% stake.</i>
	CamShin (Cambodia Shinawatra) (GSM1800)	Shin Satellite (Sattel) (Thailand) (100%) 35-year build-operate-transfer wireless-telecoms licence
	Camtel (AMPS)	CP Group (Thailand) (70%)
	Casacom (GSM900)	Samart Corp (Thailand) (49%) Telekom Malaysia International (Malaysia) (51% for \$16 million)
	CamGSM (MobiTel) (GSM900)	Millicom (Sweden): with partner Royal Group (Cambodia) have 58.4% stake
	Tricelcam	<i>Exit – Technology Resources Industries Bhd (Malaysia) (1999 after having invested US\$10m, subscribers turned over to Casacom)</i>
	SLD Telecom recently won CDMA license	SLD is a consortium comprised of SK Telecom, LG Electronics, and DongAh (all South Korea)
	Big Pond (2 nd ISP)	<i>Exit – Telstra (Australia) US\$15-20m; In 2000, 10-year contract with the government ended, left after building Cambodia's first international gateway and running lucrative IDD monopoly</i>
	SingTel Cambodia (paging)	<i>Exit – Singtel (US\$1.4 million, 1998)</i>
	VoIP project	Modernform Enterprise Computing (Mfec) (Thailand) 45m baht (2003)
	Camnet (ISP)	International Development Research Centre (IDRC) (NGO, Canada), through its Pan Asia Networking (PAN) program funded Cambodia's 1 st ISP with US\$366,000 grant in 1997
	Community Information Centers (CIC)	Asia Foundation (NGO), to coincide with July 2003 national election
CHINA		
First-tier Operators		
	China Telecom	Dual listing on NY and HK stock exchanges in November of 2002. Forced to halve its listing after the initial offering failed to attract sufficient international response. In the end, managed to raise around US\$1.43bn.
	China Netcom (CNC Group)	Internet broadband JV with IDG Venture Capital (USA) (which holds less than 30%) November 2002: With Newbridge Capital and Softbank Asia Infrastructure Fund (SAIF) acquired most of assets of insolvent Asia Global Crossing, renamed Asia Netcom, for US\$89.9 million. Bought out its partners' 49% stake in early 2004. Prior to IPO, must deal with foreign investors – among them Goldman Sachs, NewsCorp, Michael Dell, Sun Hung Kai Group (Hong Kong) – who paid \$325 million for 12 percent stake (2001)
	China Mobile	1997 \$4bn IPO Vodafone (UK) (~3%)

China Unicom	<p>2004: Wireless data JV (\$6m) with SK Telecom (South Korea) (49%)</p> <p>With Zhongxing (ZTE), signed agreement with Romania's fixed-line phone operator POSTelecom whereby ZTE will provide soft switching, broadband data and wireless access products worth US\$94m and China Unicom will provide consulting services in network construction and operation. Romania Post, the biggest shareholder of POSTelecom with an 80% equity, will transfer 29% of the total stake to ZTE. (August 2003)</p> <p>Floated overseas in June 2000 and raised \$5.65bn</p> <p>Mass Exit China-China-Foreign (CCF) investment scheme: Between 1995-1998, 40 foreign firms, including France Telecom, Deutsche Telekom AG, SingTel, Sprint, Bell Canada, Korea Telecom, New World Development (HK), CCT Telecom Holdings (HK), First Pacific (HK), CNK Telecom (HK), Henderson Investment (HK), Cable and Wireless, and NTT, sunk \$1.4bn in Unicom. Many companies lose millions as MII declares CCF illegal.</p>
Second-tier Operators	
China Railcom	Network construction loans from World Bank and UBS AG
China Satcom	In talks with Nextel (USA) to set up JV (December 2003)
Strategic Investors	
Shanghai Symphony Telecom Co (UNISITI)	AT&T (USA) (25%, \$25m) in JV with Shanghai Telecom and Shanghai Information Investment
NTT China	NTT (Japan) Set up wholly-owned subsidiary in January 2004
4G research lab (Beijing)	NTT Docomo (Japan) (2003)
KDDI China	KDDI (Japan) Opened up Guangzhou affiliate in 2003, \$420,000
Shenzhen-Guangzhou MVNO	China Motion (Hong Kong) 7-year contract with China Mobile up for renewal
Wireless and (online) Value-Added-Services Providers (WASPs)	
Linktone	Shanghai SMS and mobile gaming provider; listed on Nasdaq in March 2004 and raised ~\$86m; spun off from Intrinsic China Technology and registered in Cayman Islands.
Tom Online	Internet spinoff of tycoon Li Ka-shing's media flagship TOM Group Ltd, headquartered in Beijing. Dual listing on Nasdaq and Hong Kong's Growth Enterprise Market (March 2004). Raised \$194m. Also registered in Cayman Islands.
Tencent Technology Ltd	Shenzhen instant messaging service provider; seeking May 2004 listing on Hong Kong's main board
21CN CyberNet Corp	CITIC Pacific (Hong Kong)
Shanda Networking Development Co	Online gaming company; listed on Nasdaq in May 2004 and raised ~\$165 million SAIF (US\$40m in 2003)
EfriendsNet	1 st social networking website in China. Received startup capital from, among others, Tim Draper, founder and managing director of Draper Fisher and Jurvetson, and Yasumitsu Shigeta, founder and chairman of Hikari Tsushin Inc (Japan) (September 2003)
China Network International (CNI)	Technical services provider and IDC; secured \$20m from UBS Capital, AIDEC (Asia Infrastructure Development Company), and TFG Venture Capital (June 2001)
Ningbo GWT Network Communications Co	Quadtel (Australia) (7.5%, May 2002)
Sina	Wireless and online value-added-services provider; listed on Nasdaq 2000 Pacific Century Cyberworks (PCCW) (Hong Kong) (\$5 million for a 1.4 per cent stake, 1999) Softbank (Japan) Walden Group Dell Computer Corp (USA) Creative Technology (Singapore) United Overseas Bank (UOB) (Singapore)

Sohu.com	China's first Internet portal; listed on Nasdaq (July 2000) <i>Exit – Intel Corp:</i> sold its 8.6% stake to Beijing-based software firm Beida Jade Bird Group (2001) Goldman Sachs Dow Jones IDG Hikari Tsushin (Japan) Morningside Ventures
Netease.com Inc	Listed on Nasdaq (June 2000), almost delisted in 2001 Baring Private Equity Partners Goldman Sachs Softbank China Venture Investments
AsialInfo	Listed on Nasdaq (March 2000) Warburg Pincus (US\$18m) Goldman Sachs Fidelity Capital Asia ChinaVest Morgan Stanley
Ctrip.com International Ltd	Online travel agent; listed on Nasdaq in December 2003 and raised US\$75.6 million
INDIA	
Mahanagar Telephone Nigam (MTNL) (Delhi and Mumbai)	Listed on New York Stock Exchange (NYSE) (2001) 11% of the company's equity capital, which had been in the form of global depository receipts (GDRs), was converted to American Depository Receipts (ADRs) for the New York listing
Videsh Sanchar Nigam Limited (VSNL)	Listed on local Indian exchanges and the New York Stock Exchange (NYSE) (2000) 57m ADRs representing about 30% of the company's total share capital
Bharti Tele-Ventures Ltd	Listed on Bombay and Delhi stock exchanges (2002) SingTel (first acquired stake through Pastel Ltd, 2000) (altogether ~28%) Warburg Pincus (1999 acquired stake through Brentwood Investment Holdings Ltd; by 2001 had committed US\$292m) (20%) AIF Funds Management Ltd. (US\$35m) IFC (US\$20m) New York Life Insurance Fund (NYLIF) (US\$5m, 2001)
Bharti Mobile Ltd (Karnataka)	<i>Exit – Overseas Telecom (Telia Overseas)</i> (sold 26% to Bharti TeleVentures) (2003)
Bharti Cellular	<i>Exit – BT (UK)</i> (sold 44% stake to Bharti Tele-Ventures, June 2001)
Bharti BT Internet	<i>Exit – BT</i> (sold 49% stake to the Bharti group, April 2001)
Bharti BT (Vsat)	<i>Exit – BT</i> (sold 49% stake to the Bharti group, April 2001)
Bharti Mobinet (Chennai)	<i>Exit – Millicom</i> (2001) <i>Exit – BellSouth International</i> (2001) Combined 49.5% stake picked up by Bharti Enterprises
Bharti Telenet	<i>Exit – Telecom Italia</i> (26%, 2000)
Hughes Tele.com	<i>Exit – Hughes Network Systems (US)</i> (sold stake to Tata Group)
Modi Telstra (Kolkata)	<i>Exit – Telstra</i> (sold 49% stake to Modi Group)
Idea Cellular	AIG (1.8%). STT (Singapore) and Telekom Malaysia are to buy AT&T's stake. <i>Exit – AT&T Wireless (USA)</i> (33%)
BPL Mobile (Mumbai)	BPL group (74%): ~40% of which is controlled by American Insurance Group (AIG) (USA), Actis (then known as CDC Capital Partners), TVG (Hong Kong), Asian Infrastructure Fund (AIF), and AIDEC Management Co (Singapore) FT/Orange (France) (26%)
BPL Cellular	<i>Exit – AT&T Wireless</i> (sold 49% stake to majority owner BPL Group, December 2003)
Escotel Mobile	<i>Exit – First Pacific (Hong Kong)</i> (49%) (January 2004 sold stake for US\$20m gain, acquired by Idea Cellular) (2002 IFC loan and equity commitment never taken up)
RPG Cellular (Chennai circle)	<i>Exit – Vodafone (UK)</i> (21% stake acquired by Sivasankaran's Sterling group June 2003)
Hexacom India Ltd (Rajasthan)	<i>Exit – Telesystem International Wireless TIW (Canada)</i> (27.5% stake sold for \$11.7m to Shyam, later acquired by Bharti, 2004)
Hutchison Essar Telecom Ltd (Delhi)	Hutchison Telecom (Hong Kong) (49%)

Hutchison Max Telecom Ltd (Mumbai)	Hutchison Telecom (Hong Kong): Hong Kong's Distacomm holds 15-20% of Hutchison's 49% stake in Hutchison Max Telecom
Hutchison Telecom East (Kolkata)	Hutchison Telecom (Hong Kong) (33%)
Fascel Ltd (Gujarat)	Hutchison Telecom (Hong Kong) (49%)
Hutchison-Essar South (Chennai, Karnataka, Andhra Pradesh and Tamil Nadu)	Hutchison Telecom (Hong Kong) (49%)
Data Access Ltd. (ISP Now India and international services operator)	<i>Planned Exit put on hold – Pacific Century CyberWorks PCCW</i> (Hong Kong): dilute its stake from 24% to 16% through new share flotation but put on hold by Securities and Exchange Board of India
Reliance Infocomm	<i>Exit – Verizon</i> (2003) Called off earlier plan to offload 4% equity to Qualcomm Inc for \$200 million. Now looking to sell off 15-20% stake to foreign private equity investors. (February 2004)
Satyam Infoway (Sify) (India's first Internet service provider)	Listed on Nasdaq June 2003, a group including Softbank Corp and Softbank Asia Infrastructure Fund (SAIF) cut its stake in Sify to 62.6% from 68.4%. Venturetech Solutions bought out one of Sify's strategic investors Sterling Commerce – (raising its stake to 13.2%)
Zip Telecom	<i>Exit – AIG India Sectoral Equity Trust</i> (sold 12% to Zip Global Networks Ltd, the Mauritius-based parent company of Zip Telecom, June 2002)
Zip Global	AIG Asian Opportunity Fund (US\$20m for 18% stake, May 2001)
TVCL (Vsat)	<i>Exit – Telstra</i> (20%) (August 2003)
Communication Ventures India Private Ltd	IFC (20%) (July 2000) Fusion Telecommunication International (USA) (2%)
Shyam Telecom	Mauritius-based India Communications Global Partners (10%) (May 2002)
Gateway Systems India (Pune) (wireless broadband access provider)	Sakon LLC (a subsidiary of Titan Corp) (US\$10.6m for 74% stake, August 2001)
ATS Services Private Ltd	Libra Advisors LLC (US) (24.5%) Tandon Capital Associates (US) (24.5%) July 2000
Spice Communication	Modi Wellvest controls 51 percent (in which Prudential Asian Fund, Hong Kong owns 15 percent) Seeking to exit – Distacom (HK) (49%)
INDONESIA	
PT Telkom	Listed on Jakarta, Surabaya, London and NYC stock exchanges in 1995. Forced by US SEC to re-audit 2002 results after inadequacies found.
Scheme kicked off in October 1995 in which foreign operators provided regional fixed-line services under a joint operating scheme with Telkom known as the Kerja Sama Operasi (KSO) agreement. Out of the 5 original KSOs, only one left.	
PT Bukaka Singtel International (BSI) East Indonesia (Region 7)	Singtel (40%)
PT Daya Mitra Telekomunikasi Mitratel, Kalimantan (Region 6)	<i>Exit – C&W</i> (25%) Resolved for US\$121.93m in March 2001
PT Pramindo Ikat Nusantara, Sumatra (Region 1)	<i>Exit – France Cables et Radio (France Telecom)</i> (35%) Resolved by Telkom in February 2002 for a reported US\$425m
PT AriaWest, West Java (Region 3)	Bought out by PT Telkom for US\$365.44m (August 2003) <i>Exit – AT&T</i> (35%) <i>Exit – Asian Infrastructure Fund</i> (12.5%)
PT Mitra Global Telekomunikasi (MGTI), Central Java and Yogyakarta (Region 4)	<i>Exit – Telstra</i> (sold its 20.4% to PT Alberta Telecommunications, a subsidiary of Saratoga Investama Sedaya) <i>Exit – NTT East (Japan)</i> (15.27%) <i>Exit – Itochu (Japan)</i> (1.25%) <i>Exit – Sumitomo (Japan)</i> (1.25%) All MGTI shareholders, including Indonesian Satellite Corp (IIT) (30%), agreed to accept PT Alberta's offer of US\$266m (September 2003)

PT Telkomsel (65% PT Telkom)	SingTel (35%) Exit – KPN (Netherlands) sold its 22.3% interest to Singtel for \$602 million
PT Indosat (owns PT Satelindo and IM3)	Listed on Jakarta, Surabaya and the New York Stock Exchange (1994) Singapore Technologies Telemedia (Temasek) (42%) Exit – Deutsche Telekom AG (Germany) Indosat bought its 25% stake in Satelindo in 2002 for \$325 million
PT Excelcomindo	Telekom Malaysia (27.3%) AIF (13%) Exit – Mitsui (Japan) sold 4% to TM; Verizon Communications (USA) [original investment made by Nynex] sold 23% to TM
PT CircleCom Nusantara Indonesia (CNI) (VOIP service provider)	CircleCom (Australia) (50%) May 2003
PT Citra Sari Makmur	Verizon (USA) (37%)
PT Cyber Access Communications	Charoen Pokphand (CP) Group (Thailand)
PT Asia Cellular Satellite (AceS)	Lockheed Martin (32.55%, \$162m, January 1999)
PT Bakrie Telecom	CMA Fund Management Ltd. (Singapore) (6%)
PT Mobil-8 Telecom (CDMA 1X)	Korea Telecom Freetel (KTF) and Qualcomm (together hold 15.6% stake) in JV with PT Bimantara Citra which owns 72% of the company and restructured it after buying out three AMPS operators: PT Komselindo, Metrocel and Telesera PT Dwimarga Dwiutama Asia Link BV (8.5%)
LAO PDR	
Lao Telecom (LTC)	Shin Satellite Plc (SATTEL) & Shinawatra International Plc (Thailand) (49%)
Tango (GSM)	Millicom (Sweden)
MALAYSIA	
Telekom Malaysia	Listed on KL stock exchange (KLSE) (1990); took over Celcom in a \$1.05 billion buyout in May 2003 Temasek Holdings (Singapore) (paid 1.6bn ringgit for 5% stake, March 2004) Aborted a proposed tie-up with NTT (Japan) in July 2000 with Telekom claiming that the Japanese company wanted more control than Telekom was willing to give
DiGi.com	Listed on KLSE (1997) Exit – Swisscom (1998), sold off 30% stake for 183 million francs Plan to sell to Softbank (Japan) 3% stake in March 2000 is aborted in Sept. 2000 Telenor (Norway) (currently 61%), entered the venture in January 2000
Maxis	Listed on KLSE (2002); bought Time's cellular arm, TimeCel, for 350 million cash (2003) Exit – BT (UK); AT&T (USA) Exit – MediaOne (US) Their combined 46% stake was bought out by Malaysian tycoon Ananda Krishnan pre-IPO for US\$678.9m in May 2001.
AtlasOne.net (wireless broadband service provider)	International Leasing and Investment Co (ILIC, 33% owned by Islamic Development Bank, Saudi Arabia) (US\$50m, August 2003)
Celcom	Merged with Telekom Malaysia and delisted Exit – Deutsche Telekom AG Pending arbitration over \$175 million claim. 2003 DT sold its six percent stake in Celcom to Telekom Malaysia for 435 million ringgit (\$114 million), or 2.75 ringgit per share. But says it is entitled to a buyout price of 1.1 billion ringgit, or 7.00 ringgit per share, under an agreement with Celcom's former management headed by Malay tycoon Tajudin Ramli.

Time dotCom	Listed on KLSE (2001) In May 2000, SingTel was prevented from acquiring a 20 percent stake in Time dotCom after Malaysia's political leaders vetoed the deal on security grounds.
Measat	Microsoft buys acquires 9% stake from Binariang Satellite Systems Sdn Bhd (BSS) in Malaysia's communication satellite
MONGOLIA	
Mongolian Telecommunications Co (MTC)	Korea Telecom (KT) (bought 40% stake in 1995 for \$4.5 million)
Mobicom (GSM)	KDDI (Japan) Sumitomo (Japan) The two Japanese companies each own 44.4%, and the remainder is owned by Newcom Co, a Mongolian communications consulting firm.
Skytel (AMPS and CDMA)	SK Telecom (South Korea) (1999, 25%) Taihan Electric Wire (South Korea) (35%)
Mongolian Railway Co	In fiber-optic project with China Unicom and Russian Railways Co (RZD) subsidiary TransTeleCom
MIDAS council	Joint program by the United Nations Development Program (UNDP) and the Soros Foundation (NGO) that gives small grants to IT-related development projects
MYANMAR	
Project to provide telephone service to villages in remote parts of the country	Shin Satellite (Thailand) (May, 2002) \$12m deal with Myanmar Posts & Telecom
GSM "build and transfer" project in Rangoon and Mandalay	Sky-Link Communications, a company incorporated in the British Virgin Islands with ties to the family of former dictator Ne Win (2002)
CDMA system in Rangoon	Ucom International Company (Singapore) (March 1998)
Loxley Myanmar Co	Loxley (Thailand) (51%, 1995): awarded a letter of credit from Myanmar Post & Telecom to provide cellular digital telephone sets and equipment
PACIFIC ISLANDS	
Cook Islands	Telecom Cook Islands Ltd (TCI) – Telecom New Zealand (60%)
Fiji	Fiji International Telecommunications Ltd (FINTEL) – Cable & Wireless (49%) Vodafone Fiji – Vodafone (49%)
Guam	The Government of Guam (GovGuam) intends to privatize Guam Telephone Authority (GTA). Privatization adviser is Patton Boggs LLP. [www.privatize.gtaguam.com]
Kiribati	Telecom Services Kiribati – Telstra (49%)
Northern Mariana Islands	Micronesian Telecommunications Corp (MTC) [Verizon Micronesia]Exit – Verizon (USA) Pacific Telecom (Philippines) paid US\$60m to buy MTC (May 2004)
Papua New Guinea	Telikom PNG Limited – Decision by National Executive Council and Independent Public Business Corporation (IPBC) to sell 51% stake to Korean strategic investor blocked (change of government, change of rules) Econet Wireless International (EWI, Zimbabwe) told a Zimbabwe newspaper that EWI won a \$US50 million contract to install a GSM mobile phone system in Papua New Guinea. PNG mobile phone retailer and regulator, Cellnet, has denied that claim. (March 2004)
Saipan	Verizon Pacifica Exit – Verizon (USA) Sold off to Tan Holdings-Citadel consortium (2002)
Samoa	Telecom Samoa Cellular – Telecom New Zealand (90%)
Solomon Islands	Solomon Islands Telecom (Solomon Telekom) – Cable & Wireless (41.9%)
Tonga	Exit – Cable & Wireless (2000) Tongan government received (\$5.29 million) loan from the Asian Development Bank for the purchasing of C&W assets in Tonga

Vanuatu	Telecom Vanuatu Ltd (TVL) – Cable & Wireless (33%), France Telecom (33%)
PHILIPPINES	
PLDT [Piltel]	Listed on Manila and New York (1994) stock exchanges First Pacific (Hong Kong) (24%) NTT (Japan) (15%)
Smart	NTT (Japan) previously held 37 percent of Smart before reorganisation under First Pacific's ownership (1999)
Globe Telecom [subsidiary Innove, previously known as Islacom]	Listed on Manila stock exchange SingTel (raised stake to 40% from 29.1% by buying part of Deutsche Telekom AG's stake in November 2003) DeTeAsia (subsidiary of Deutsche Telekom) still retains a minor stake <i>Exit – Deutsche Telekom (Germany) sold 60% of its DeTeAsia stake to SingTel as well as a stake to Ayala Corp</i>
Bayantel	<i>Seeking to exit – AIF (Asia Infrastructure Fund) (Hong Kong) claims the Lopez's Benpres Holdings owes it US\$45.4m for its stake</i> TVG (Hong Kong) <i>Exit – Verizon (USA) (19%) [through Nynex]</i> <i>Exit – Telstra (September 1994)</i>
Digitel	Telia (Sweden) (9.44%) Exited 40% stake in 1993-4 – Cable & Wireless (UK)
Eastern Telecommunications Philippines (ETPI)	<i>Exit – C&W (UK) sold its 40% stake for US\$20m in March 2001 to AGN Philippines (AGNP), a wholly-owned subsidiary of Australian Gigahertz Network International (AGNI, which is in turn owned by Union Capital, Australia)</i>
Capitol Wireless (Capwire) (operator of international gateway facility)	<i>Seeking to exit – Republic Telecommunications Holdings (Retelcom), a telecommunications company composed of Telectronics Systems Inc, A2 Telecommunications and Korea Telecom (70%)</i> Clemente Capital (15%) H&Q Asia Pacific (15%)
Express Telephone (Extelcom)	Country's smallest operator (AMPS), sister firm to BayanTel which owns 47% of Extelcom <i>Exit – Millicom (Sweden) (sold its 47.9 percent stake in 2002)</i>
Philcom	<i>Exit – Comsat (USA) (1997)</i>
Nextel Communications Philippines, trunk radio operator, relaunched as Next Mobile (2003)	Originally launched in 1996 after NII bought Hong Kong-based firm Top Mega, which held a 30-percent stake in local telecom firm Infocom Network Inc (ICNI) <i>Exit – Nextel International (renamed NII Holdings in which Nextel holds 45% and filed for Chapter 11 protection in 2002)</i>
TIMOR LESTE	
Timor Telecom	Portugal Telecom: signed 15-year contract in 2002 to invest \$29 million to rebuild and operate the phone system; Portugal Telecom-led consortium owns 50.1% Vodatel (Macau) (10.9%)
Connect East Timor	Australian NGO <i>Exit – Telstra (2002) Began rebuilding the telecom infrastructure in 1999 under a UN contract. Managed to resurrect fixed-line network and to create GSM mobile phone network.</i>
THAILAND	
TelecomAsia (True Corp)	Listed on the Stock Exchange of Thailand (SET) in December 1993 <i>Exit – Verizon (USA) Divested Nynex Network Systems's 18% stake in 2003</i>
TA Orange	<i>Exit – France Telecom/Orange (France) Sold off a 39% stake in the company in spring 2004, left with 10%</i>

True Internet Data Centre (True IDC)	DACOM and its subsidiary Korea Internet Data Centre (KIDC) (Korea, 30%)
AIS (Advanced Info Services)	Listed on SET SingTel (21.5%)
DTAC (Total Access Communications)	Listed on Stock Exchange of Singapore (1995) Telenor (Norway) (30% direct stake, also has an indirect stake in the company)
Hutchison CAT Wireless Multimedia	Hutchison (Hong Kong) (raised stake to 75% in April 2004, up from ~65%, through Imobile, a company owned by Hutchison)
Provincial fixed-line operator Thai Telephone & Telecommunication (TT&T)	NTT West (Japan) (11.5%)
Samart Group [Samart I-Mobile: multimedia content]	Telekom Malaysia International (20%)
Digital Phone Co (DPC), a GSM1800 MHz network operator	<i>Exit – Telekom Malaysia International</i> Sold off its 49.9 percent, valued at US\$245 million (Bt11.15 billion), to Shin Digital Co (2001)
CS Loxinfo (Thailand's largest ISP)	IPO in March of 2004 on SET SingTel (16.8%) CitiCapital, a unit of Citigroup
Internet Thailand (Inet)	Somers (UK) (17.35%)
Star	Pacific Internet (Singapore) (49%)
VIETNAM	
Business Cooperation Contracts (BCC) structure: foreign partner develops infrastructure and provides organizational assistance and advice, local partner provides services, the two sides share profits as agreed	
East Ho Chi Minh City (HCMC) BCC	France Telecom in 1997 entered into a \$467 million BCC with state-owned Vietnam Post and Telecommunications (VNPT) to install 540,000 fixed-telephone lines in over seven years
Mobiphone BCC	Comvik of Sweden (and Millicom) in US\$324 million BCC with Vietnam Mobile Service Company (VMS), an affiliate of VNPT
4 province BCC	Korea Telecom in 1996 with VNPT in \$40m BCC projects to install 150,000 lines in four provinces: Haiphong, Quang Ninh, Hai Duong, Hung Yen; also providing ADSL service on a trial basis
Hanoi BCC	NTT (Japan) in 1997 with VNPT BCC building local telephone network in Hanoi
Saigon Postel BCC	SK Telecom (Korea) led consortium with Saigon Post and Telecoms (Saigon Postel) in US\$230m CDMA BCC
Hanoi BCC	<i>Exit – Cable & Wireless:</i> 1999 withdrew from \$207 million BCC to install 250,000 phone lines in Hanoi entered into in 1998.
HCMC BCC	<i>Exit – Telstra:</i> 2003, contract with VPNT ended. From 1987 worked on satellite stations, the North-South fiber optic cable line, and submarine fiber optic cable lines for international connectivity. Had also earlier pulled out of a \$300 million deal to develop telecoms network in HCMC.
HCMC BCC	<i>Exit – SingTel (withdrew):</i> back in 1991 SingTel International (STI, a subsidiary of SingTel) invested ~\$10m with HCMC P&T in a mobile network which had 11,000 subscribers
Vietnam Electronic Navigation (VEN) Haiphong (VoIP provider)	Universal Telecom Services (US) (\$2.25 million, 2002)

Source: Company and press reports

Table 3 - Telecommunication Markets

CAMBODIA						
Teledensity						
<i>Fixed</i>						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	(0.024m)	(0.028m)	0.2 (0.030m)	0.25 (0.034m)	0.26 (0.035m)	0.7 (0.04m)
Mobile						
Year	1998	1999	2000	2001	2002	
Per 100 People	0.5 (0.04m)	0.7 (0.1m)	1.0 (0.2m)	1.7 (0.31m)	3.9 (0.5m)	
Given the lack of basic infrastructure, telecommunications are mainly conducted through mobile phones which account for 81% of total traffic (January 2003)						
Internet						
Year	1998	1999	2000	2001	2002	
	(0.002m)	(0.004m)	(0.006m)	(0.01m)	0.22 (0.03m)	
VoIP services are illegal in Cambodia, but are nonetheless readily available at roadside Internet kiosks and via prepaid cards.						
Key Players Fixed			Marketshare			
MPT telecoms company (Telecom Cambodia)			around 50%			
Camintel (Satellite + fixed – ex-UNTAC network)			countrywide			
Key Players Mobile			Marketshare (subscribers)			
Cambodia Smart Communication Co (Casacom)			110,000, up from 50,000 in 2001			
Cambodia Shinawatra (CamShin)			123,949 (by 1st quarter 2004)			
CamGSM (MobiTel), GSM-900, also operating fixed wireless service called Telesurf in the licensed 3.5 GHz frequency band			250,000, or ~70% marketshare, up from 55,000 subscribers in 2000			
Camtel			1,000			
Key Players Internet			Marketshare			
CamNet (1997)			n.a.			
Cogetel			n.a.			
Big Pond (Telstra)			n.a.			
Everyday			n.a.			
CHINA						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	7.0	8.7	11.4	14.1	16.7	19.7
By August 2002 there were 203.5m subscribers, and the penetration rate stood at 22.8% in urban areas. In view of the large investment projects undertaken by the main providers, the national penetration rate is forecast to reach 33.2% in 2007. Excluding fixed-line wholesale, the biggest share in China's total fixed-line market in revenue terms was taken by China Telecom, with a 60 percent share, followed by China Netcom's 34 percent and China Unicom's 4 percent.						
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	2.0	3.5	6.8	11.4	16.1	21.0
China has the largest market for mobile phone services in the world, with 269m subscribers.						
Internet						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.3 (4m)	0.7 (9m)	1.2 (15m)	2.6 (28-33m)	6.4 (68-83m)	9.8 (87-127m)
Bandwidth for Internet connections from China to the outside world rose 39.2% in the first six months of 2003 to 10,577 megabytes (MB). China Telecom remains the dominant basic Internet service provider (ISP) and reseller of capacity to other ISPs; it accounted for 6,452 MB, or 61% of the outgoing Internet links at end-June; China Netcom was second, with 2,870 MB, or 27%.						
Key Players Fixed and Mobile			Total marketshare (%)			
			2002		2003	
China Mobile			36.7%		37.0%	
China Telecom			33.1%		30.7%	
China Netcom			16.4%		16.2%	
China Unicom			12.4%		14.5%	
China Railcom, China Satcom and others			Combined 1.4%		Combined 1.6%	
Key Internet Players			Marketshare			

China Telecom						
China Netcom (China169)						
Great Wall Broadband Network Service (China's third-largest ISP)	Currently has four million subscribers, ~5% marketshare					
263.com						
China Unicom	Plans new national Internet cafe chain					
INDONESIA						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	2.7	2.9	3.2	3.4	3.7	4.0
220,000 wartel (telephone kiosks) cover the remotest areas.						
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.6	1.1	1.8	3.1	5.4	8.1
Internet						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.3 (0.5m)	0.5 (1.0m)	1.1 (2.4m)	2.0 (4.2m)	2.8 (6.0m)	3.4 (7.4m)
Around 65% of Indonesia's Internet users have a college/university level education and the remaining 35% have a high school education.						
Key Players Fixed						
PT Telkom (65% state-owned) – international, national long distance and fixed line local loop + CDMA WLL	Its decades-long monopoly over domestic fixed services ended in August 2003, when Indosat was allowed to enter. At the same time, Telkom was allowed to do international services. Has around 7.2-7.9m fixed telephone lines in service. Bought out 3 of the 5 KSOs, with PT Alberta buying out a 4th one.					
PT Indosat (16% state-owned) – international, national long distance + CDMA WLL in the local loop	Primary provider of international telecoms services with a marketshare of 86.5%. Bought out Satelindo in 2002.					
Key Players Mobile						
Marketshare (%)						
Telkomsel (GSM-900, CDMA)	52%					
Satelindo/IM3 (GSM-900) [Merged with PT Indosat]	27%					
Excelcomindo (GSM-900)	16%					
Mobile 8 (CDMA - merger of AMPS regional operators Komselindo, Prima Bhakti, Telesera and Mobisel)						
Natrindo (Lippo Group – 1800 GSM/PCS + WCDMA 3G approved)						
Metrocel (CDMA 450 nationwide)						
CAC (CP Group, Thailand – WCDMA 3G approved)						
Four other 1800 GSM/PCS licences have been issued. Telkom and Indosat/Satelindo have been awarded spectrum for 3G services. 40% of mobile users in the country are based in the Greater Jakarta area.						
Key Players Internet						
Marketshare						
Telkomnet (PT Telkom)	93 percent of Indonesia's Internet users use dial-up services. Of this number, 48 percent use TelkomNet Instan as their ISP provider.					
PT Cyberindo Aditama (CBN)	45 percent of dial-up users					
Centrin						
Radnet						
Indonet						
PT Supra Primatama Nusantara (Biznet)						
PT Circleonecom						
LAOS						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.6 (29,000)	0.7 (31,700)	0.8 (42,000)	1.0 (52,600)	1.1 (61,900)	
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.1 (6,250)	0.2 (9,000)	0.2 (13,850)	0.5 (32,000)	0.9 (51,300)	
Internet						
Year	1998	1999	2000	2001	2002	2003

Per 100 People	(500)	(2,000)	(6,000)	(10,000)	0.3 (15,000)	
Key Players Fixed	Marketshare (2002)					
Lao Telecom (LTC)	65%					
Enterprise Telecom du Laos (ETL, relaunched in August 2000)	35%					
Key Players Mobile	Marketshare (subscribers)					
Lao Telecom (LTC) (GSM 900/1800)						
Tango (GSM)	April 2003 launch; coverage in the capital Vientiane and main tourist area of Luang Prabang; targeting the under 30 age-group, which comprises 68% of the population of Laos					
ETL						
Lao Asia Telecom (LAT, owned by Lao army)						
Key Players Internet	Marketshare					
LaoNet (GlobeNet)						
Planet Online						
LaoTel Internet (LTC)	Dominant ISP					
MALAYSIA						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	20.0	19.8	20.1	19.6	19.0 (4.7m)	18.6
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	10.0	13.1	23.5	33.3	37.7 (9.3m)	42.0
Internet						
Year	1997	1998	2000	2001	2002	2003
Per 100 People	5	7	11	20	22 (5.3m)	30
Key Players Fixed	Marketshare (%)					
Telekom Malaysia	98%					
Time dotCom	1.6%					
Maxis	0.7%					
Digi.com	none					
Key Players Mobile	Marketshare (%)					
Telekom Malaysia-Celcom Merger	41%					
Maxis-TimeCel Merger	42%					
DiGi.com	17%					
Key Players Internet	Marketshare (subscribers)					
TM Net	1.9 million					
Jaring run by government agency Mimos						
Communication satellite						
Measat	Owned and operated by Binariang Satellite Systems Sdn Bhd (BSS), wholly-owned subsidiary of MEASAT Global Berhad. Carries Astro TV and Internet.					
MONGOLIA						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	4.5	4.4	5.6 (Budd e) OR 5.0 (World Bank)	5.2		
Mobile						
Year	1998	1999	2000	2001	2002	2003

Per 100 People	0.1 (0.0028m)	0.12 (0.003m) OR 1.5	1.9 (0.05m) OR 6.5 (World Bank)	8.5 (0.23m)	11.1 (0.298m)	(0.3m)
Internet	1998	1999	2000	2001	2002	2003
	(0.0036m)	(0.012m)	(0.03m)	1.7 (0.04m)		
Key Players Fixed	Marketshare (subscribers 2002)					
Mongolian Telecommunications Co (MTC)	132,000 subscribers; 32.7% market share (2003)					
Mongolian Railcom	10,000 subscribers; 2.5% market share (2003)					
Key Players Mobile	Marketshare (subscribers)					
Mobicom (GSM-900)	190,000 subscribers; 47.1% market share (2003)					
Skytel (AMPS, CDMA)	70,000 subscribers; 17.3% marketshare (2003)					
Key Players Internet	Marketshare					
Magicnet (spun off from Datacom in 2002)	~4,500 customers					
Railcom						
Micom						
Internet cafés seem to be dominant means of going online. To quote someone, "Today you cannot walk 200 metres without passing an Internet café [in Ulan Bator]."						
MYANMAR						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.5 (229,000)	0.6	0.6 (266,200)	0.6 (295,200)	0.7 (341,300)	(416,000)
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	(8,500)	(11,400)	(13,400)	(13,800)	0.06 (30,000)	(63,150)
Of the current mobile phone system, 8,500 are of cellular system, 2,700 of digital European cordless (DECT) system, 30,050 of CDMA system and 21,900 of GMS system. The cellular system was introduced in 1993, while the DECT and CDMA systems were launched in 1997 and the GSM system in 2002.						
Internet						
Year	1998	1999	2000	2001	2002	2003
		500	7,000	0.02 (10,000)	0.04 (15,340)	
Unauthorized ownership of a fax modem or setting up a computer network without the telecom ministry's approval risks seven to 15 years imprisonment and a fine, according to the 1996 Computer Science Development Law.						
Key Players Fixed	Marketshare					
Myanmar Posts & Telecommunications (MPT)	100%					
Key Players Mobile	Marketshare (subscribers)					
Sky-Link (GSM) (BOT, held up indefinitely in trial)						
MPT (GSM, CDMA)	2002: 300 subs (AMPS), 6,500 subs (CDMA-800), 8,540 subs (US TDMA-800)					
Loxley (Thailand) (DAMPS, 1996)						
Key Players Internet	Marketshare					
MPT						
Bagan Cybertech	Semi-government organization established in 2001 to be the ISP for a chain of Internet cafes. Also runs "Myanmar Intranet services" consisting of 6 websites under the category e-shopping, one under e-banking, four under e-reservation and one under e-media.					
PHILIPPINES						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	3.3	3.7	3.8	3.9	4.0	4.2

Metro Manila in 2001 accounted for 2.95m, or 42%, of the country's fixed lines. However, by the end of 2000, only 2.8 million of the total 6.8 million lines available in the country had been subscribed.						
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	2.2	3.6	7.9	13.4	18.4	24.6-30
The increase in the number of mobile phone subscribers reflects the affordability of the technology and its suitability in a country made up of more than 7,000 islands. World leader in SMS.						
Internet						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	1.6 (1.2m)	2.6 (2.0m)	3.8 (3.0m)	4.2 (3.4m)	4.9 (4.1m)	5.6 (4.8m)
One-third of Internet users accessed the Internet in cyber-cafes in early 2000. About one-fourth did so in schools and another one-fourth in the workplace.						
Key Players Fixed			Marketshare			
PLDT [which also owns Clark Telecom, Subic Telecom, Piltel, Maranaw and SmartTel]			2.1m fixed-line subscribers, representing a 68% marketshare			
Globe Telecom						
BayanTel (in receivership)						
Eastern Telecom (ETPI)						
Key Players Mobile			Marketshare (subscribers)			
PLDT [Smart, PilTel and Telesat]			14.4m (58%)			
Globe Telecom			9.1m (40%)			
Extelcom (Bayantel)						
Sun Cellular (DigiTel)						
Key Players Internet			Marketshare			
PLDT Infocom			Market leader			
Sky Internet BayanTel						
Pacific Internet						
PNG						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	1.3	1.3	1.3	1.2		
PNG currently has a teledensity of less than one in 50						
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.1	0.2	0.2	0.2	(AMP S, 4,840)	GSM network launched
Internet						
Year	1998	1999	2000	2001	2002	2003
Number of Internet users		2,000	45,000	50,000		
Key Players Fixed			Marketshare			
Telikom PNG			Monopoly			
Key Players Mobile			Marketshare			
Pacific Mobile Communications (PMC, a subsidiary of Telikom PNG)			25,000 GSM customers (end of 2003)			
Key Players Internet						
Tiare (Telikom PNG)						
TIMOR LESTE						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	(12,000)		(~2,000)			
Much of the telecommunications infrastructure was severely damaged in 1999. In 2002, Timor's 489 villages were phoneless and housed a combined population of 281,000. A 2002 study prepared for the transitional government showed there is a need for 12,147 lines, comprising 5767 fixed lines for Dili; 1935 fixed lines shared among the 12 district capitals; 2610 mobile lines; and 1835 lines for the nation's villages.						
Mobile						
Year	1998	1999	2000	2001	2002	2003

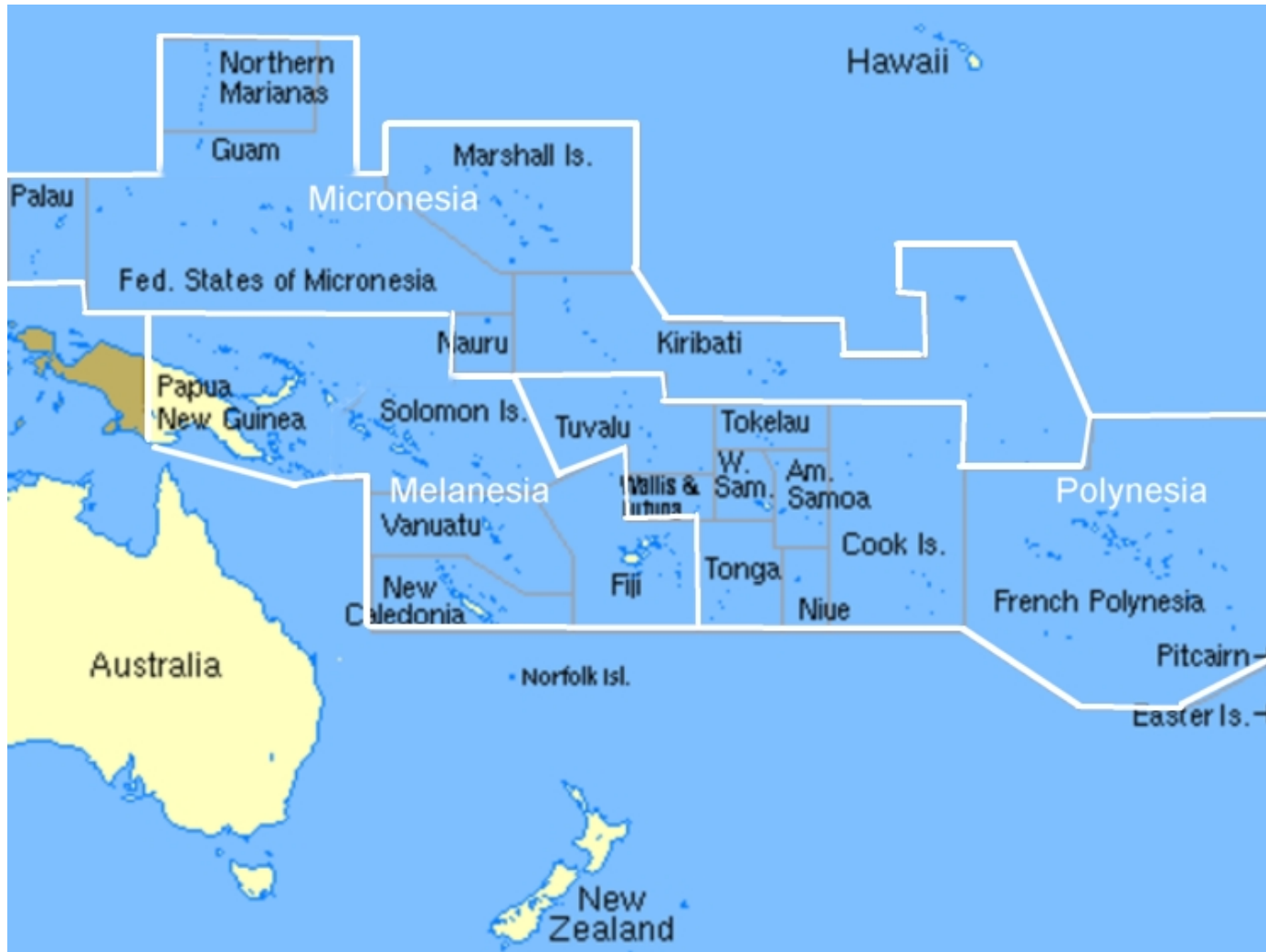
Per 100 People			(12,000, mostly UN personnel)			
Key Players Fixed, Mobile, and Internet	Marketshare					
Timor Telecom						
THAILAND						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	8.5	8.4	9.0	10.3	10.9	11
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	3.5	4.0	5.8	12.7	27.7	34.2
Over 70% of consumers use a prepaid scheme.						
Internet						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	1.0 (0.6m)	1.4 (0.9m)		3.5m		10 (6m)
Internet services began in 1995. CAT Telecom has established a Thailand Internet Exchange Service and there are 17 Internet service providers (ISPs), with the top five accounting for 77 percent of market revenue. Analysts forecast Internet users in Thailand to reach 16 million in 2008 due to strong domestic economic growth.						
Key Players Fixed	Marketshare					
TOT	3.6m lines					
CAT	Provides international services and regulates the Internet in Thailand					
TelecomAsia (True)	2.6m lines in Bangkok					
TT&T	1.5m telephone lines in Thailand's 75 provinces outside Bangkok					
Key Players Mobile	Marketshare (subscribers)					
AIS (GSM)	13.7m (or ~60% marketshare)					
TAC (GSM)	6.5m (29%)					
TA Orange (GSM)	1.8m					
Hutchison CAT (CDMA)	500,000					
Thai Mobile (1900MHz)	150,000					
Key Players Internet	Marketshare					
CS LoxInfo (October 2002 merger of two of the largest ISPs, LoxInfo and CS Internet)	Largest Thai ISP, half owned by Shin Sattelite, in terms of revenue, about 40% of total at Bt1.4bn (March 2004)					
Internet Thailand (INet)	20%					
KSC						
Asia Infonet						
Vietnam						
Government strategy on IT and telecom development calls for new enterprises to account for 25-30% of market share in basic telecom and Internet services by 2005.						
Teledensity						
Fixed						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	2.2	2.7	3.1 (2.5m)	3.8 (3.1m)	5.4 (4.3m)	5.9
Forecast to increase to 7.8 per 100 people in 2007						
Mobile						
Year	1998	1999	2000	2001	2002	2003
Per 100 People	0.3	0.4	1.0 (0.6m)	1.4 (1.2m)	2.34 (1.6m)	3.2
Forecast to increase to 7.4 per 100 people in 2007						
Internet						
Year	1998	1999	2000	2001	2002	2004
Total Number of Internet Users	(0.01 m)	(0.19 m)		(0.44 m)	(1.9m)	4.9 per 100 people (3.95 m)
Key Players Fixed	Marketshare					

State-owned operator Vietnam Post and Telecommunications (VNPT)	4.7m fixed line subscribers. Its competitors have ~5% of the market.
Army-owned communications company Viettel (2000)	By the end of 2003 had planned to install about 3,000 telephones in Hanoi and Ho Chi Minh City. Like other new entrants, benefiting from regulatory ruling that operators with marketshare of less than 30% will be able to set their own prices (December 2003). Has snapped up a 60% marketshare in domestic and overseas VOIP (2002).
Saigon Postel (1995)	14,000 telephone subscribers
Hanoi Telecom	
Vietnam Maritime Information and Electronic Company (Vishipel)	VoIP project with a six-year license
Electricity Telecom Company (ETC)	Not yet begun operation
Key Players Mobile	Marketshare (%)
Vinaphone, subsidiary of VNPT (GSM)	Vinaphone (62% marketshare or 1.7m subscribers), VMS-Mobiphone, and City Phone, all VNPT brands, hold close to a combined 80-90% marketshare, or ~2.6m subscribers
VMS-Mobiphone, operated by Vietnam Mobile Service (VMS), also a subsidiary of VNPT, in a BCC with Comvik, a Swedish company (GSM)	
City Phone, low-cost mobile phone service launched by VNPT in late 2002. Deploys UT Starcom PHS technology.	
Saigon Post and Telecommunications (Saigon Postel, or SPT), in BCC with SK Telecom (Korea) called S-Fone (CDMA) 2001	
Vietel (GSM)	40,000 subscribers
Key Players Internet	Marketshare (%) (as of April 2004)
State-owned Vietnam Datacommunications Company (VDC)	59.67%
Corporation for Financing and Promoting Technology (FPT)	25.28%
Netnam	6.42%
Saigon Postel	4.88%
Vietel	1.85%
One Connection Inc, first ISP run by a private-sector company in Vietnam. Launched its service in early 2003, becoming the sixth ISP in the country	1.77%
Hanoi Telecom	0.14%

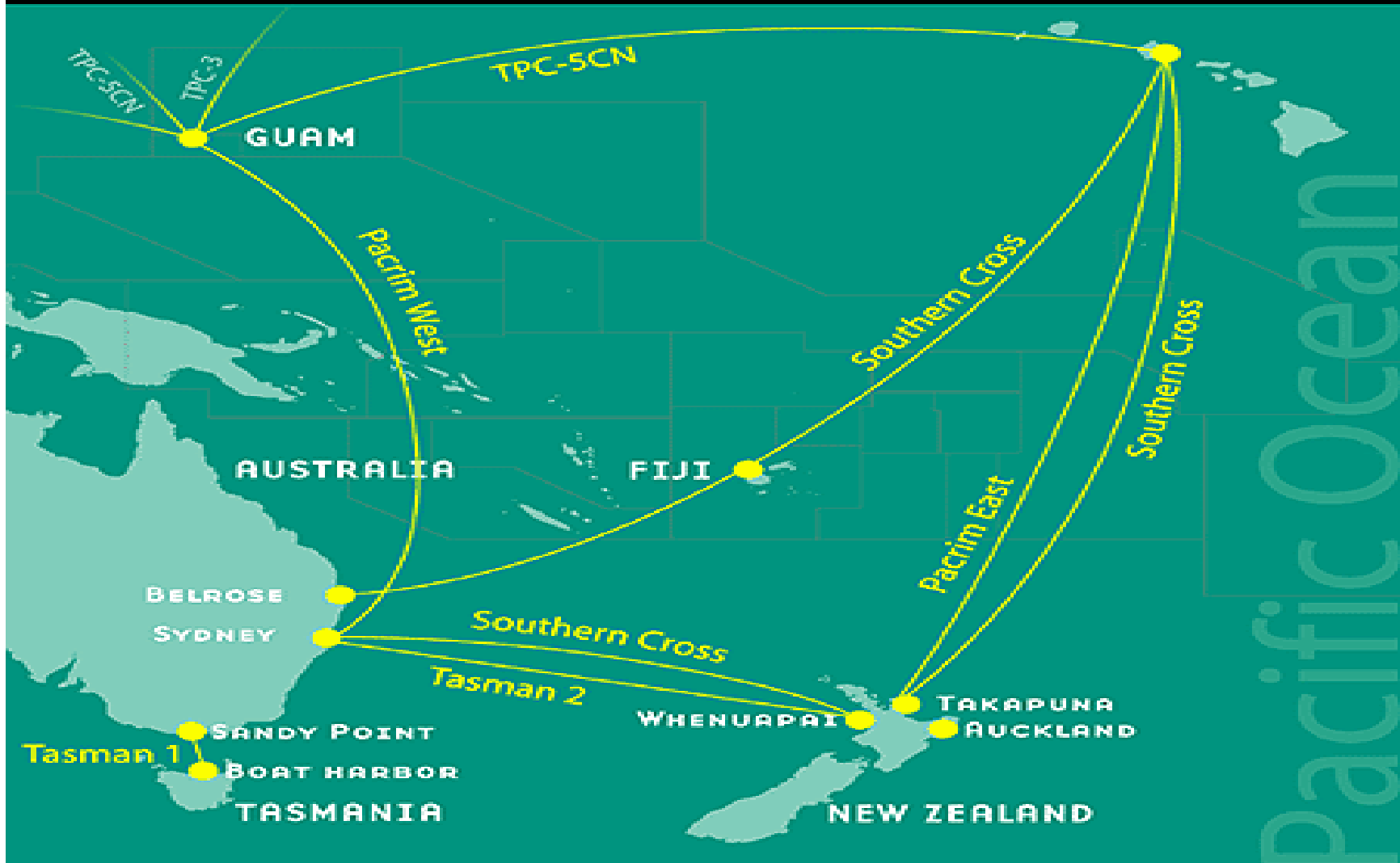
Source: EIU, Pyramid (2003, 2004), IDC, China's MII, TIF Briefing Paper, various newspaper articles. Source: EIU, Pyramid (2003, 2004), TIF Briefing Paper, various regulatory agencies and newspaper articles, Paul Budde (2003), World Bank, ITU

Table 5 – Pacific Islands Chart

Pacific Islands



Submarine Fiber Optic Cables



Country	Population ('000) 2002	GDP Per Capita US\$ 2002	Law Policy Maker and Regulator	Major Telecom Provider	Carrier Ownership	Market Status
PACIFIC ISLANDS						
Melanesia						
Fiji (Independent Republic from UK since 1970)	824	2,068	Post and Telecommunications Decree 1989 (Abolishes government's exclusive privilege to establish, maintain and operate telecommunications in Fiji. Draft Telecommunication Act 2003 Department of Posts & Telecommunications	Telecom Fiji (privatized in 1998) Fintel (privatized in 1976, exclusive rights) Vodafone Fiji Ltd. (privatized in 1994)	Amalgamated Telecom Holdings Limited (ATH) – 49% Fiji National Provident Fund 51% Government joint venture Govt 51 % C&W 49 % Telecom Fiji Vodafone – joint venture	Fixed line monopoly International monopoly Mobile monopoly
New Caledonia (French overseas Territory)	210.8	13,940	OPT	Office des Postes et Télécommunications France Cable & Radio	State-owned Subsidiary of France Telecom	Domestic monopoly International Monopoly
Papua New Guinea (constitutional monarchy with parliamentary democracy, independence 16 September 1975 from the Australian-administered UN trusteeship)	5,460	777	Telecommunications Act 1996 (Established the PANGTEL as the independent regulatory body) Radio Spectrum Act 1996	Telikom PNG (exclusive rights up to 2001) Pacific Mobile Communications	Government Corporation; statutorized in 1996 (Wholly owned subsidiary of Telikom PNG)	To be privatized

			<p>Telecommunications Bill 2002</p> <p>Independent Consumer and Competition Commission Bill 2002</p> <p>Postal and Telecommunications Services Licence (6 April 2000)</p> <p>PANGTEL</p>			
<p>Solomon Islands (Independence from UK 7 July 1978, former known as British Solomon Island)</p>	447.9	396	<p>Telecommunications Act 1972</p> <p>Comptroller of Posts and Telecommunications the telecoms to be the licensing authority. Gives Government the exclusive right of establishing, maintaining and working in the Solomon Islands.</p> <p>Min of Posts & Communications</p>	<p>Solomon Telekom Company (exclusive license up to 2003, privatized in 1989)</p>	<p>Solomon Island National Provident Fund 51 %, C&W 41.9%, Investment Corporation of Solomon Islands 7.1%</p>	Monopoly
<p>Vanuatu (Parliamentary republic, independence 30 July 1980 from France and UK)</p>	199.8	1,230	<p>Telecommunications Act 1989</p> <p>Established the Telecommunications Authority</p> <p>Ministry of Telecom Posts & Tourism</p>	<p>Telecom Vanuatu Ltd (Exclusive agreement until 2012; privatized in 1989)</p> <p>C&W</p> <p>France Cable & Radio</p>	<p>Joint venture of Government, C&W and FCR holding equal shares (33%)</p>	Monopoly
Micronesia						
<p>Guam (US Territory)</p>	159.5	21,000 (2000 est.) - PPP	GTA	Guamtel		To be privatized
Kiribati			Telecommunications Act			

<p>(Independence 12 July 1979 from UK)</p>	<p>90</p>	<p>700</p>	<p>1983 (amended in 1996) Permanent Secretary of the Sector Ministry is the designated Telecommunications Authority. Operations of telecoms is undertaken by Kiribati Telecommunications Services Ltd, which sometimes performs the duties of the regulator.</p> <p>Draft Telecommunications Act 2001</p> <p>Ministry of IndoCommunications & Transport</p>	<p>Telecom Services Kiribati Ltd. privatized in 1990 (exclusivity of service until 2005)</p> <p>Telecom Kiribati Ltd. (Corporatised in 1983)</p>	<p>State-owned (JV between Govt and Telstra terminated in May 2001)</p> <p>Government owned; asset holding company which collects lease fees from the operator for the use of Government aid funded facilities and also advise Government on matters of regulation</p>	<p>Monopoly</p>
<p>Marshall Islands, Republic of the (Constitutional government in free association with the US; the Compact of Free Association entered into force 21 October 1986)</p>	<p>51.8</p>	<p>2,210</p>	<p>Communications Act 1987 and Public Law 1990-105 Established National Telecom Authority as a statutory corporation. It also gives the corporation wide powers to enable it to carry out its function as the provider of telecommunications.</p> <p>Marshall Island National Telecommunications Authority Act 1990</p> <p>Draft Telecommunications Act</p>	<p>Marshall Islands National Telecom Authority (MINTA, Privatized in 1991)</p>	<p>Government owns 25% of MINTA. Only citizens can hold the remaining share</p>	<p>Monopoly</p>

			2003			
			Min. of Transport & Communications			
<p>Micronesia, Federated States</p> <ol style="list-style-type: none"> 1. Chuuk State 2. Korsae State 3. Pohnpei 4. Yap <p>(Constitutional government in free association with the US; the Compact of Free Association entered into force 3 November 1986; economic provisions of the Compact are being renegotiated)</p>	118 (July 2003 est.)	2,157	<p>FSM Telecommunications Corporation Act of 1981</p> <p>FSM Radio Communication Act of 1991</p> <p>Dept. of Transport & Communications (Regulation of telecommunications is the responsibility of the Ministry)</p>	FSM Telecom Corporation (1987 statutorized)	State-owned	Monopoly
<p>Nauru, Republic of (Independence 31 January 1968 from the Australia-, NZ-, and UK-administered UN trusteeship)</p>	11.5	3,900	<p>Wireless Telegraphy Act 1974</p> <p>Telecommunication Act 2002 (establishment of RONTEL Corporation)</p> <p>Ministry of Island Development (The government is the regulator and the provider of all telecommunications services)</p>	<p>Nauru Telecommunications Department</p> <p>Rontel Corporation</p>	Government Department	Monopoly
<p>Northern Mariana Islands (US Commonwealth)</p>	80 (July 2003 est.)	12,500 (2000 est.) - PPP	<p>Federal Telecommunication Act 1996</p> <p>Commonwealth Telecommunication Act</p>	<p>Micronesian Telecommunications Corporation</p> <p>Verizon Pacifica</p>	<p>Privately owned by Verizon</p> <p>Currently under negotiation for</p>	Monopoly

			Commonwealth Telecommunication Commission		sale to Pacific Telecom Inc. (Delgado family of the Philippines)	
Palau, Republic (Also Belau formerly, Trust territory of the Pacific Islands. Independence 1 October 1994 from the US- administered UN Trusteeship)	19.1	8,030	An Act in 1982 of the Palauan Congress established the Palau National Corporation. The body is a public corporation that is wholly owned by the Palauan national government which has some regulatory oversight of the industry Draft Radio Regulation 2003 Ministry of Commerce & Trade	Palau National Communication Corporation (Statutorized in 1982) Palau National Cellular, Inc.	quasi-government corporation PNCC (originally with the Family Telephone Company , Japan)	Monopoly
Timor Leste	1,019 (July 2004 est.)	494	Autoridade Reguladora das Comunicacoes (ARCOM) Regulatory body under the authority of MTCOP (Ministry of Transport, Communications and Public Works), which is responsible for all telecom activities, such as frequencies management, tariff control, telecom policy, licensing, quality of service, etc.	Timor Telecom (New telecom operator in July 2002 created by Portugal Telecom; 15 year concession with the MTCOP, in 2017 telecom network will be transferred to the government) Telstra	Portugal Telecom (PT- led consortium agreed to provide all 13 East Timorese districts with telecoms services at the lowest possible tariffs.)	Has an exclusive operation of mobile, fixed, data, leased circuits, transport
Polynesia						
Cook Islands (self-governing in free association with New Zealand; Cook Islands is	14.3	4,950	Telecommunications Act 1989 (amended by the Telecommunications Act	Telecom Cooks Is. Ltd. (privatized in 1989)	Joint venture Government 40%, Telecom NZ 60%	Monopoly

fully responsible for internal affairs; New Zealand retains responsibility for external affairs and defense, in consultation with the Cook Islands)			1992) Telecom Cook Is. Ltd. as the sole provider of telecom services. Ministry of Posts and Telecom			
French Polynesia (TAHITI) (French Overseas Territory)	265.1	16,613		Office Post & Telecom (Domestic, Mobile) Tahiti Nui Telecommunications (International) Tikiphone (Mobile)	State-owned 34% France Telecom	monopoly
Hawaii (US Territory)	1,244	Gross State Product (2000): \$ 39.1 billion		Hawaiian Telecom (formerly known as Verizon Hawaii)	Carlyle Group of Washington D.C	
Niue (self-governing parliamentary democracy since 19 October 1974 from NZ)	1.9	3,710	Communication Act 1989 Gives Cabinet power to issue public communications service licenses. Communications Amendment 2000 Min. of Posts & Telecom	Niue P&T (was also given control & management of the frequency spectrum) statutorized in 1982	Government corporation	Monopoly
Pitcairn (Dependent Territory, UK)	.047 (July 2003 est.)			(International: radiotelephone)		na
Samoa, American (US Territory)	70.2 (July 2003 est.)	8,000 (2000 est.) - PPP		American Samoa Telecommunications Authority Blue Sky Communications	State-owned	Monopoly
Samoa (Formerly Western Samoa, independence 1 January 1962 from New Zealand-administered UN	169.2	1,060	Post Office Act 1972 Post and Telecommunications (Internet) Act 1997	SamoaTel (corporatised in 1999 and holds a 10-year exclusive	State-owned	Monopoly

trusteeship)			<p>Postal and Telecom Services Act 1999</p> <p>Posts & Telecom Department</p> <p>Ministry of Post & Telecoms (MPT)</p> <p>Telephone charges prescribed by the Head of State on the advice of Cabinet.</p> <p>Ministry of Posts and Telecommunications</p>	<p>licence to provide the main postal and telecom services in Samoa.)</p> <p>Telecom Samoa Cellular</p>	<p>Joint venture, Govt 10% and Telecom New Zealand 90%</p>	
Tokelau (Dependent Territory, NZ)	1.4 (July 2003 est.)	1,000 (1993 est.) - PPP		Telecommunications Tokelau Corporation	Community-owned corporation	Monopoly
Tonga, Kingdom of (Independence 4 June 1970 from UK protectorate)	100.2	1,870	<p>Tonga Telecommunications Commission Act 1984</p> <p>Radio Communication Act 1930</p> <p>Companies Act 1995</p> <p>Communication Act 1999</p> <p>Communication Act 2000 (primary act) Established the Department of Communication as the regulatory body in all ICT activities</p>	<p>Tonga Communication Corporation (Established in February 2001 as public enterprise)</p> <p>(C&W, Privatised in 1978; franchise agreement until July 2000)</p> <p>U-Call Mobile (Prepaid GSM)</p> <p>Shoreline Communications (Tonfon)</p>	Government as sole shareholder	<p>Fixed Competition</p> <p>Mobile competition</p>
Tuvalu (Constitutional monarchy with a parliamentary	9.9	1,160	Telecommunications Ordinance 1979 (established the	Tuvalu Telecom Corporation	Government corporation	Monopoly

democracy; began debating republic status in 1992, began independence from UK in 1978)			<p>telecommunications authority, appointed by the Ministry. The ordinance is silent on the provision of telecommunications but the authority has been authorized to establish telecommunications lines and posts on any property and do all such things necessary for the proper operation of a telecommunications system established by the Government.</p> <p>Telecommunications Corporation Act 1993 Min. of Works, Communications & Energy</p>			
Wallis & Futuna (French Overseas Territory)	15.5 (July 2003 est.)	3.700 (2001 est.) - PPP		Service Des Postes et Telecommunications (SPT) FCR Wallis et Futuna	France Telecom	Monopoly

Country	Fixed lines per 100 inhabitants 2002	Fixed lines in use '000	Cellular Subs per 100 Inhabitants 2002	Mobile Cellular Subs. '000	Total Telecom Staff '000 2002	Subscriber per Employee 2002	Internet		Total Internet price US\$	
							Subs ('000) 2002	Users ('000) 2002	20 Hrs use August 2003	GNI p/cap August 2003
PACIFIC ISLANDS										
Melanesia										
Fiji	12.35 (2003)	102 (2003)	13.31 (2003)	109.9 (2003)	1.2	139	7.6	55	31.74	17.6
New Caledonia	23.21	52 (2002)	35.71	80 (2002)	.3	367	15	60 (2003)	80.34	6.4
Papua New Guinea	1.13 (2002)	62 (2002)	.27	15 (2002)	1.8	41	27	75	20	45.3
Solomon Islands	1.49	6.6 (2002)	.22	1.0 (2002)	.2	55	1	2.2	91.15	191.9
Vanuatu	3.15 (2003)	6.5 (2003)	3.76 (2003)	7.8 (2003)	.2	40	1.5	7.5 (2003)	46.7	51.9
Average	8.2		9.9							
Micronesia										
Guam	47.9	84.1 (2003)	34.4 (1998)	55 (1998)	na	na	na	5 (2000)	na	na
Kiribati	13.4 (2000)	4.5 (2002)	0.6	.5 (2002)	na	na	.51	3 (1999)	na	na
Marshall Islands, Republic of the	8.27 (2003)	4.5 (2003)	1.11 (2002)	.6 (2003)	.1	45	.7	1.4	na	na
Micronesia, Federated States	10	10.1 (2001)	3.4	4 (2003)	na	na	1.8	6 (2002)	na	na
Nauru, Republic of	16.5	1.9 (2002)	13.04	1.5 (2002)	na	na	na	na	20	10.2
Northern Mariana Islands, Commonwealth	29.2 (2000)	21 (2000)	na	3 (2000)	na	na	na	na	na	na
Timor Leste	.26	2 (2000)	1.5	12 (2000)	na	na	na	.15 (2000)	na	na
Palau	35.1	6.7 (2002)	10	1 (2002)	na	na	1.7	na	na	na
Average	21.9		12.4							
Polynesia										

Cook Islands	45	6.2 (2002)	9.5	1.5 (2002)	na	na	1.1	na	na	na
French Polynesia	21.87	52.5 (2002)	37.49	90	.9	129	11	35	69.29	4.8
Hawaii	na	na	na	na	na	na	na	na	na	na
Niue	61.1 (2004)	1.1 (2002)	5.6 (2004)	0.1		na	.2	na	na	na
Pitcairn	na	.001 (there are 17 telephones on one party line) (1997)	na	na	na	na	na	na	na	na
Samoa, American	21.83	15 (2002)	na	2.3 (1999)	na	na	na	na	na	na
Samoa (Formerly Western Samoa)	6.53 (2003)	11.8 (2003)	1.5	2.7 (2002)	.2	66	1.3	4	42.97	36.3
Tokelau	20.96	.3 (2002)	0	na	na	na	Na	na	na	na
Tonga, Kingdom of	11.29	11.2 (2002)	3.38	3.4 (2002)	.3	50	1.9	2.9	45.45	38.7
Tuvalu	8.6	.7 (2002)	0	na	na	na	.25	na	na	na
Wallis & Futuna	12.96	1.9 (2002)	0	na	na	na	Na	.9 (2002)	na	na
Average	23.9		7.2							
Average for Pacific Islands	18.9 Range: 1.1- 61.1		9.4 Range: 0-37.5							
Average for EAP countries	6.6		11.96							

Source: ITU, CIA The World Fact Book, The Pacific Telecommunications Association (PITA, 1998); SOPAC (2000) South Pacific Applied Geoscience Commission, World Bank (2002), CTO, Forum Secretariat

Pacific Domestic Communications Services								
	Telex	HF/VHF	Paging	Cellular	Microwave	Local TV	Local Radio	Internet ⁴¹
Cook	•	•	•	•	•	•	•	•
Fiji	•	•	•	•	•	•	•	•
FSM	•	•				•	•	•
Kiribati	•	•			•	•	•	
Marshall	•	•		•		•	•	•
Nauru	•	•		•	•	•	•	•
Niue	•	•		•	•	•	•	•
Palau		•	•	•	•	•	•	•
Samoa	•	•	•	•	•	•	•	•
Solomon	•	•	•	•	•		•	•
Tokelau		•						•
Tonga		•	•	•	•	•	•	•
Tuvalu		•					•	
Vanuatu	•	•	•	•	•	•	•	•
PNG	•	•	•	•	•	•	•	•

Source: Forum Secretariat

Pacific Regional Satellite and Cable Coverage

	PeaceSat	InmarSat	Iridium	IntelSat 174	IntelSat 177	IntelSat 180	USPnet	Submarine cable
Cook	•		•	•		•	•	
Fiji	•		•	•	•	•	•	•
FSM	•		•	•		•		
Kiribati	•		•	•		•		
Marshall	•		•	•		•		
Nauru	•		•	•		•		
Niue	•		•	•		•		
Pitcairn		•						
Palau	•		•	•		•		
Samoa	•		•	•		•		
Solomon	•		•	•		•	•	
Tokelau	•		•	•		•		
Tonga	•		•	•		•	•	
Tuvalu	•		•	•	•	•		
Vanuatu	•		•	•		•	•	
PNG	•		•	•	•	•		•

Source: Forum Secretariat