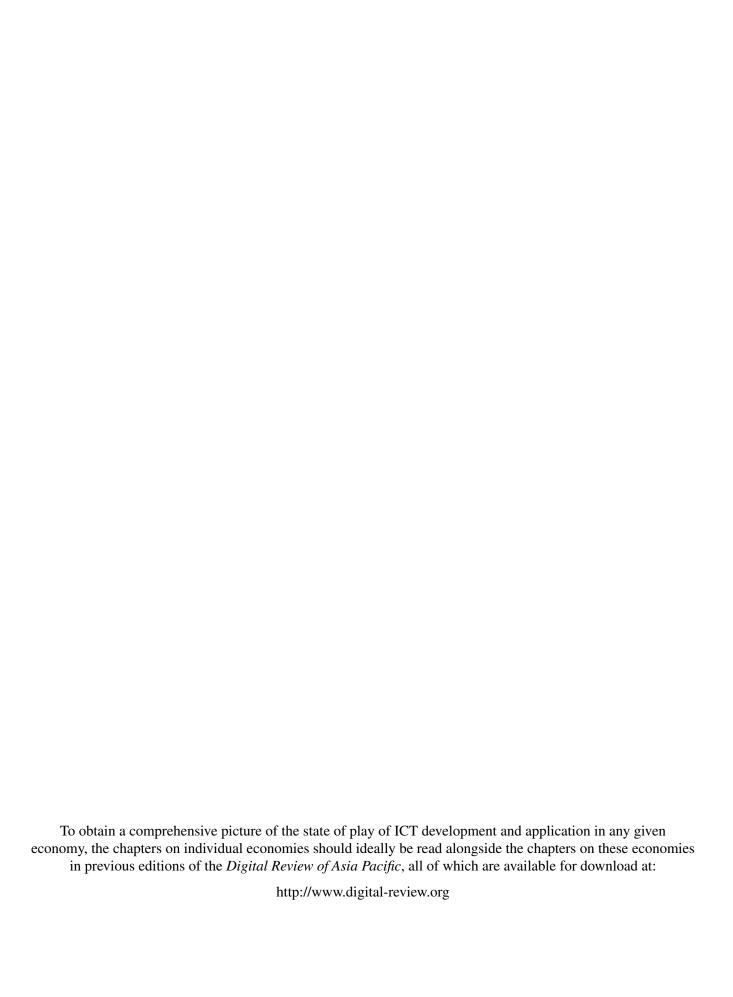
DIGITAL REVIEW of AsiaPacific 2009-2010



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Foreword

 Γ he current edition of the *Digital Review of Asia Pacific* vividly paints the picture of a major dimension of change in the Asia Pacific region, and indeed in the world. Asia Pacific is my main concern at the Economic and Social Commission for Asia and the Pacific (ESCAP), but changes here and globally are quite similar. Communication and networking enabled by information and communication technologies (ICTs) are proving to be economically, socially, and politically transformative over time. For example, in both poor and wealthy countries, mobile phone use has been skyrocketing and facilitating the expansion of markets, social business, and public services. In fact, an entire range of economic services, enabled by mobile phones, has begun to emerge: micro finance and insurance, marketing and distribution (for example, farmers and fishermen connecting with markets, reduced distribution margins, and buyer control), employment services (for example, drivers and casual workers), personal services, and public services (such as telehealth and distance education). And beyond the economic impacts, improvements are being made in other freedoms or dimensions of well-being — personal security, political participation and accountability, social peace, dignity, and opportunity.

These developments are important, where they are thriving. But we should not forget the negative aspects and possibilities of communications-based transformation, such as mobile phones being used to fan violence, cybercrime and terrorism, and our vulnerability to disruption of communication. Nationally and internationally, control of communications is contended, and openness generally considered best. Internationally, the spread and appropriation of ICTs is a key globalization driver and knowledge carrier. In these circumstances, societies need to build communications systems and manage them well, develop infrastructure and the capacity to use it, and implement good policy and regulation. In the right environments, both business and non-profit enterprise are effective in rapidly expanding

connectivity, using low-margin, high-volume business models. Affordable mobile Internet — smart phones and data services — exists today in wealthier societies and could be near universal in the next generation. These are stories that the *Digital Review of Asia Pacific 2009–2010* tells, in vivid and thoroughly researched detail, in snapshots as well as dynamic pictures of the development and use of digital storage, processing, and communications systems in 30 economies, with sub-regional and regional overviews.

Browse and be drawn into these pictures and narratives. Read previous editions of the Digital Review of Asia Pacific online to highlight changes and trends. In 2009 and 2010, partners of ESCAP, the International Development Research Centre (IDRC), and many other organizations will be monitoring the impacts of the global financial and economic crisis on economies, businesses and employment, public services and households, and identifying and carrying out key mitigation measures. Negative impacts spread through international 'transactions', falls in exports, remittances, foreign direct and portfolio investment, possibly official development assistance and, increasingly, transactions in knowledge. Impacts on digital systems and their users in particular could be substantially negative, arresting progress in economic and other spheres, with particular impact on the poorest. At stake in all sectors are advances in incomes, jobs, work, education, health, security, equity, and social functionality. Good management and responses, reported in the current and future editions of the Digital Review of Asia Pacific, will be central to reducing negative impacts. So enjoy, respond to, and do not miss the next editions of the Digital Review of Asia Pacific.

Noeleen Heyzer

Under-Secretary-General of the United Nations and Executive Secretary, ESCAP

Preface

ICT FOR DEVELOPMENT IN THE ASIA PACIFIC REGION: RIDING THE WAVES OF CHANGE IN A 'FLAT WORLD'

The Grameen Bank in Bangladesh, one of the poorest countries of the world, long ago made the choice to invest the present and the future of the poor in ICT.

ICT is a new opportunity for grassroots innovation.

I saw an opportunity for the poor people to change their lives but only if this technology could be brought to them to meet their needs.

(Muhammad Yunus 2007)

The sudden onslaught of the current economic turmoil comes just when this edition of the *Digital Review of Asia Pacific* (DirAP) went to press and long after the authors had submitted their manuscripts. But the publishers, editors, and authors of DirAP will be closely monitoring the impact of this turbulence on the appropriation of information and communication technology (ICT) in the region throughout 2009 and 2010. Dr Yunus has showed the way to all who are working toward empowering poor communities, to address their development challenges through effective access to ICTs. At the same time, we are learning that even as communities adopt and use ICTs, it is imperative to track and understand the positive and negative effects of ICTs on specific communities. Each wave of global change impacts not only the international and regional levels, but also, more and more, poor rural households.

In the maiden 2003-2004 edition, we referred to DirAP as an analysis of 'a new type of public sphere [that is] more participatory and intentional'. That statement was made at a time when we had yet to see the real power of ICT. Since then, we have seen ICTs completely transform our lives, including the way politics and governance are played out. This started in Asia with the now famous 'coup de text' in the Philippines, followed by similar innovations in China, Korea, Malaysia, and Pakistan. More recently, in the United States (US), the Obama campaign demonstrated the importance of ICTs in creating awareness and motivating action. The 2005-2006 edition of DirAP sought to prepare the DirAP audience for this kind of phenomena. The edition included reference to disruptive ICTs, with a close-up examination of the social, political, and cultural aspects of e-governance and the need to develop appropriate ICTs using Open Source programs and local language tools. In the 2007–2008 edition, we featured developments in mobile

and wireless technologies, as the remarkable growth of cellphone technology and Web 2.0 tools are impacting on public socialization and conscientization. This prognostic element is central to our motivation in producing DirAP as a regular Asiawatch serial.

In addition to tracking the way ICTs are used for political change in Asia, DirAP keeps a close eye on the impact of ICTs on the education, health, and livelihood of communities in the region. For the 2009–2010 edition, we have selected education as a principal theme. We are focusing on the state of ICT deployment and innovation in basic education, non-formal education, distance education, capacity-building for education policymakers and practitioners, and public-private partnerships in ICT for education.

DirAP has evolved since its inception in small and big ways. It has increased in volume, with a growing network of writers from the Asia Pacific region. It has adopted a co-authoring style to reflect multiple voices — a methodological posture that has been constant since the creation of DirAP and that can be summarized as follows:

The voices of DirAP are independent and if they are ideological at all, they are the voices of these writers who are the key movers and shakers in the ICT for development arena in the region. We believe that this multiplicity of voices, which includes those of policymakers, professionals from the private sector and senior scholars, offers a unique opportunity to access the richness and the complexity of the debates, of the choices being made and to be made, and of the major issues in the interface between communication and development. And we strongly believe in the importance of this complementarity and diversity

of voices, ensuring that, as in Kurozawa's Rashomon, the perspectives of the different actors are represented but also debated through research and statistical evidence. (Ng and Charron 2007)

The last three editions of DirAP were launched at the United Nations World Summit on the Information Society in Geneva (2003) and Tunis (2005), and at the Global Knowledge Partnership GKIII Conference in Kuala Lumpur (2007). They reached both Asia Pacific and international stakeholders in ICT for development (ICTD). Chin Saik Yoon and Felix Librero expertly served as chief editors of these previous editions. This year, we are most grateful to Shahid Akhtar and Patricia Arinto for convening this diversity of voices. We thank DirAP's editors and the editorial board for helping to transform the ferment in the field into a rather unique series of studies over time.

DirAP has ventured outside the ICT arena to bring in other disciplines to explain the effects of ICT in their fields. DirAP will continue to evolve, perhaps toward more interactive, participatory electronic formats. Whatever changes we make for the future editions of DirAP, we hope that the publication remains a useful source of research in ICTD that allows for an unfolding view and narrative. We hope too that ICTD stakeholders in Asia Pacific see DirAP as an opportunity to publish about ICTD efforts in the region and to reflect on platforms that they consider important for influencing change. And we hope that other ICTD stakeholders around the world will learn from these testimonies and experiences of ICTD in Asia Pacific unfiltered by what Edward Said (1978) referred to as an Orientalist bias.

Kenichi Ohmae's (1990) metaphor of a 'Borderless World' and Thomas Friedman's (2005) concept of a 'Flat World' might sound a bit stale to some. But in the current global crisis, one could argue to the contrary — that they are absolutely right. Moreover, Servaes's (2000) view that strengthening the

educational sector through the use of technology is a necessary precondition to meeting the challenges of a global world seems to ring more true today than it did at the beginning of the millennium. As publishers, we are proud to share with readers these narratives from different voices in the field, each of them attempting from their own perspective to respond to the current and future imperatives of ICTD in a networked society that seems to have shifted to a new age from that foretold by Castells (1996).

Claude-Yves Charron and Alain Modoux Orbicom, Network of UNESCO Chairs in Communication

Laurent Elder and Maria Ng Lee Hoon International Development Research Centre

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Introduction

The information age has been driven and dominated by technopreneurs — a small army of 'geeks' who have reshaped our world faster than any political leader has ever done.... We now have to apply these technologies for saving lives, improving livelihoods and lifting millions of people out of squalor, misery and suffering. In short, the time has come to move our focus from the geeks to the meek.

(Sir Arthur C. Clarke)

When Marshall McLuhan coined the term 'global village' in 1962, he was referring to the removal of space and time barriers in human communication as a result of the communication revolution taking place at the time. Today, we are living in a global village in every sense of the term. This has never been more evident than in the financial and economic crisis gripping the world today.

Banks are failing and stock markets are tumbling. The automotive, construction, insurance, manufacturing, tourism, and other industries are suffering their greatest losses in years. The prices of commodities like oil, copper, lead, nickel, platinum, and wheat have fallen 65–88 percent from their peaks. Households have lost billions in real estate and pension fund reserves are dwindling. Countless small and medium-sized companies are going bankrupt and millions of jobs are being lost. The Asian Development Bank estimates that more than USD 50 trillion in invested wealth vanished into thin air in 2008. The world is in a deflationary spiral.

Much of the crisis concerns the United States (US) and countries in the European Community. But given the interconnectedness of the world's financial and economic systems, economies around the world are experiencing a downturn. Even the biggest economies, like China, are hurting. Li Yizhong, head of China's Ministry of Information and Technology, has noted that 'the international financial crisis is having a severe domestic impact' and 'just about every industry has overcapacity'. Zhang Ping, head of China's planning body, predicts that '[e]xcessive bankruptcies and production cuts will bring massive unemployment, stirring social unrest. Owing to dramatic changes in the international economic and financial environment, the Chinese economy faces growing downside pressure'. And the head of the Australian central bank, Glenn Stevens, whose country is one of the key suppliers of natural resources to China, has said that '[t]he most striking real economic fact of the past several months is not continued U.S. economic weakness, but that China's economy has slowed much more quickly than anyone had forecast' (Sagami 2008).

It will take several years, maybe even a decade, before the recession (some call it 'depression') that the world is facing today can be fully turned around and all the losses made up. The next several years are not going to be easy for most developing countries and many that were already struggling to meet the Millennium Development Goals (MDGs) goals and targets are going to be facing even greater difficulties in realizing these goals. The new information and communication technologies (ICTs) have been a driving force of the globalized world in which we find ourselves today. Do ICTs have a role in helping to turn the global situation around?

Now more than ever, countries need more efficient, accountable and transparent government. And it is a well documented fact that use of ICTs assists in sharing information more effectively and delivering better services to the public. 'ICTs, wisely deployed, can potentially impact almost every sector, making development budgets, private sector investments and commitments from development partners go that much further in terms of cost effectiveness, impact and reach' (UNDP 2005, p. 1). ICTs help to increase transparency and accountability and decrease corruption. They promote economic growth by improving the interface with business and empowering citizens to participate in advancing good governance. ICTs also help to accelerate the pace of sustainable human development and to '... increase the effectiveness of new and more responsive solutions in the fields of health, education and related MDG focus areas' (UNDP 2005, p. 1).

The *Digital Review of Asia Pacific* (DirAP) aims to serve as a guide for ICT-related policy development, planning, research, and project implementation in the region. Like the previous editions, the 2009–2010 edition of DirAP reports on key ICT for development (ICTD) initiatives across the Asia Pacific region. The present edition of DirAP consists of four parts:

- Part A includes regional overviews on ICTD, regulatory approaches to ICT, and managing innovation.
- Part B, consisting of five chapters, focuses on various aspects of ICT in education.

- Part C assesses the ICT initiatives of four sub-regional groupings.
- Part D reviews the digital status of 30 economies.

The chapters in Part D report on the status of the technology infrastructure, ICT industries, digital content, online services, key ICT initiatives, enabling policies, regulatory environment, education and capacity-building programs, open source initiatives, ICT-related research and development, and ICTD trends and challenges up to mid-2008¹ in each of the 30 economies covered. The common framework that underpins these reports allows readers to undertake a comparative analysis and assess progress across the region.

The chapters in Parts A and C provide two types of comparative analyses of the ICT initiatives presented. In Part C, the comparative perspective is sub-regional, with four chapters reviewing the ICT initiatives of four political and economic groups. Budden, Jorari, and Taufao describe the digital status of the Pacific Island Countries. Garcia and Lallana provide an overview of the ICT initiatives of the Asia-Pacific Economic Cooperation (APEC). Lim outlines ICT-related aspects of the work of the Association of Southeast Asian Nations (ASEAN) toward building the ASEAN Community. Pradhan and Liyanage review recent initiatives by the South Asian Association for Regional Cooperation (SAARC) to foster regional collaboration in ICTD.

Part A provides regional perspectives. In 'ICT for development in Asia Pacific: Emerging themes in a diverse region', Butt and Sarker outline some key concepts that are useful for analyzing and evaluating ICTD initiatives in the region. In 'An overview of regulatory approaches to ICTs in Asia and thoughts on best practices for the future', Sreenivasan and Singh compare regulatory approaches in Asian jurisdictions, and describe what they consider to be the four pillars of ICT policy, namely, citizen-focused e-government services, improving access to education, open source software development, and localized and indigenous digital content development and regulation. In 'Managing innovation in the network economy: Lessons for countries in the Asia Pacific region', Nair and Shariffadeen consider the role of national innovation ecosystems in enhancing the innovative capacity and competitiveness of nations in the network economy. They propose a quantitative method of assessing national innovation capacity and outline strategies to close the digital and innovation divides between countries in Asia Pacific and other regions.

The chapters in Part B of this edition of DirAP revolve around the theme of ICTs and education. Strengthening the innovative capacity of countries and ensuring broad-based and equitable development require, among others, giving priority to education for all citizens. Indeed, the second MDG is the achievement of universal primary education. Education is a basic human right, and it is a precondition of economic and social development. ICTs are increasingly recognized as an important means of providing education for all and building the capacity of individuals and communities to survive and thrive in the knowledge-based economy. The 2005 UNDP Regional Human Development Report notes that 'ICTs are already creating new possibilities for "reaching the unreached" and also for making lifelong education feasible for all' and that 'these trends would only gather momentum and could imply a revolution, provided determined efforts are made to promote appropriate use of ICTs as innovative new delivery mechanisms for system-wide provision of education' (UNDP 2005, p. 12).

In the chapter titled 'Education for all in the digital age', Dhanarajan describes the important role that the new digital technologies can play in the global movement toward Education for All (EFA) that was launched in 1990 at Jomtien, Thailand, and affirmed in 2000 through the Dakar Framework for Action. The chapter also outlines factors that policymakers must consider in harnessing ICTs to provide education for all. These include the need for policy recognizing different modes of education, including open and distance learning, and alternative learning.

Baggaley, Belawati, and Malik, in their chapter titled 'Distance education in Asia Pacific', provide an overview of trends in distance education in the region, including the use of mobile phones in learning. The chapter discusses issues affecting Asian distance education institutions, such as lack of access to e-learning technologies, and the need to develop a distinctively Asian approach to distance education.

ICT use in non-formal education programs for out-of-school youth and adults is the focus of 'ICTs in non-formal education in Asia Pacific' by Dighe, Hakeem, and Shaeffer. Arguing that non-formal education has an important role to play in achieving quality education for all sectors of society, especially marginalized groups that comprise a significant percentage of the population in developing countries, the chapter critically examines the progress made and the lessons learned in the use of ICTs in non-formal education in the Asia Pacific region.

In 'Capacity-building for ICT integration in education', Ng, Miao, and Lee focus on building the capacity of policymakers and educators in Asia Pacific countries to integrate ICT in education. The basic elements of a holistic ICT in education policy and an ICT in education toolkit for policymakers and planners are detailed, as well as the dimensions of integrated teacher professional development that would enable teachers to use ICT effectively and appropriately to support national education goals. A case is made for moving away from technocentric planning and implementation approaches to ICT integration, to models

that focus on establishing sound policy and support strategies leading to capacity development and empowerment.

The final chapter in the thematic section on ICT and education is on 'Public-private partnerships in ICT for education' by Pillay and Hearn. ICT-supported education requires large investments not only in equipment and infrastructure but also in human resource development. Public-private partnerships are described as a means for governments to meet increasing demands for ICT-supported education reform and expansion.

In describing and analyzing trends and issues in the use of ICT in key areas such as education and governance in the Asia Pacific region, this edition of DirAP hopes to give its readers greater insight into the application of ICTs for sustainable human development. ICTs have been instrumental in the realization of a globalized world. Globalization has brought greater interdependence, with both positive and negative effects on economies and societies. When used wisely, ICTs can help mitigate some of the negative impacts and maximize the positive outcomes of interdependence, through better coordination and monitoring of development efforts, building partnerships between the public and private sectors and between governments and citizens, and fostering the innovative capacity and entrepreneurial spirit of individuals and communities.

Shahid Akhtar and **Patricia Arinto** Editors, *Digital Review of Asia Pacific 2009–2010*

NOTE

As is normally the case with analytical reviews, there is a
time lag between when such reviews are actually written
and their formal publication. The chapters on the individual
economies reflect conditions at the time of writing, which
was essentially around early to mid-2008, prior to the global
economic and financial crisis beginning in late 2008.

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Acronyms

2G	second generation mobile phone standards	ALU	Alcatel-Lucent
	and technology	ALS	Alternative Learning System
3G	third generation mobile phone standards and	AMCAM	American Cambodian Business Council
	technology	AMN	Afghan Media International
A&E	Accreditation and Equivalency	ANDC	Afghanistan National Data Centre
AAOU	Asian Association of Open Universities	ANDS	Afghanistan National Development
ABAC	APEC Business Advisory Council		Strategy
ABS	Australian Bureau of Statistics	ANZ	Australia New Zealand Bank
ABS-CBN	Alto Broadcasting System-Chronicle	AOTS	Association for Overseas Technical
	Broadcasting Network		Scholarships
ACBT	Australian College of Business and	APEC	Asia-Pacific Economic Cooperation
	Technology	APEC TEL	Asia-Pacific Economic Cooperation
ACC	ASEAN Coordinating Council		Telecommunications and Information
ACEN	APEC Cyber Education Network		Working Group
ACMA	Australian Communications and Media	APIAN	APEC International Assessment Network
	Authority	APIIT	Asia Pacific Institute for Information
ACS	Australian Computer Society		Technology
ACSA	Afghan Computer Science Association	APJII	Asosiasi Penyelenggara Jasa Internet
ACTOS	Association of Computer Training		Indonesia (Indonesian Internet Service
	Organizations		Providers Association)
ADB	Asian Development Bank	APKOMINDO	Asosiasi Perusahaan Komputer Indonesia
ADSL	Asymmetric Digital Subscriber Line		(Indonesian Computer Business
AEC	ASEAN Economic Community		Association)
AEEMA	Australian Electrical and Electronic	APNIC	Asia-Pacific Network Information Centre
	Manufacturers' Association	APPEAL	Asia Pacific Programme of Education
AGC	Attorney-General's Chambers		for All
AGIMO	Australian Government Information	APT	Asia Pacific Telecommunity
	Management Office	ARC	Administrative Reforms Committee
AHAN	Aik Hunar Aik Nagar (One Village One	ARCOM	Autoridade Reguladora das Communicações
	Product)		or Communications Regulatory Authority
AIATSIS	Australian Institute of Aboriginal and Torres	ARPU	Average revenue per user
	Strait Islander Studies	ARTC	APPEAL Resource and Training
AIG	Australian Industry Group		Consortium
AIIA	Australian Information Industry Association	ASC	ASEAN Security Community
AIL	Afghan Institute of Learning	ASCC	ASEAN Socio-Cultural Community
AIMS	Afghanistan Information Management	ASEAN	Association of Southeast Asian Nations
1111110	Services	ASEC	ASEAN Secretariat
AIOU	Allama Iqbal Open University	ASED	ASEAN Education Ministers Meeting
AiTi	Authority for Info-communications	ASFI	Advanced Software Foundation Inc
	Technology Industry	ASP	Application Service Provider
AKAKOM	Akademi Komputer or East Timor Computer	ASSI	Asosiasi Satelit Indonesia (Indonesian
AKAKOW	Academy Computer of East Timor Computer	11001	Satellite Association)
ALP	Australian Labor Party	AST	ASEAN Science and Technology
ALF	Australian Laudi Farty	ASI	ASEAN SCIENCE and Technology

ASTI	Advanced Science and Technology	BTCL	Bangladesh Telecommunications Company
	Institute		Limited
ATM	Automatic teller machine	BTN	Bhutanese ngultrum (currency)
ATRA	Afghanistan Telecom Regulatory Authority	BTRC	Bangladesh Telecommunications Regulatory
ATRC	ASEAN Telecommunications Regulators		Commission
	Council	BTS	Base Transceiver Station
AUAF	American University of Afghanistan	BTTB	Bangladesh Telegraph and Telephone Board
AWARI	Asosiasi Warnet Indonesia (Indonesian	CA	Certification Authority
	Internet Kiosk Association)	CAGR	Compound Annual Growth Rate
AWCC	Afghan Wireless Communication	CAL	Computer-aided Learning
	Company	CAN	Computer Association of Nepal
BA	Bachelor of Arts	CASIA	Chinese Academy of Sciences, Institute of
BASIS	Bangladesh Association of Software and		Automation
	Information Services	CAT	Communications Authority of Thailand
BayanDSL	BayanTel Digital Subscribe Line	CATV	Community Antenna Televsion, now known
BayanTel	Bayan Telecommunication		as Cable Television
BBS	Bangladesh Bureau of Statistics	CBN	Capacity Building Network
BCCP	Bangladesh Centre for Communication	CBO	Community-based organization
	Programs	CC	Creative Commons
BcN	Broadband Convergence Network	CCC	Ceylon Chamber of Commerce
BdOSN	Bangladesh Open Source Network	CCRTVU	China Central Radio and TV University
BDT	Bangladeshi taka (currency)	CCT	Science and Technology Committee
BEDB	Brunei Economic Development Board	CD	Compact disc
BFAD	Bureau of Food and Drugs	CDAC	Centre for Development of Advanced
BHMPS	Bhutan HRD Master Plan and Strategies		Computing
BHUs	Basic health units	CDMA	Code Division Multiple Access
BICMA	Bhutan InfoComm and Media Authority	CD-ROM	Compact Disc-Read Only Memory
BIPS	Bhutan ICT Policy and Strategy	CeC	Community e-Centre
BIR	Bureau of Internal Revenue	CEDFIT	Cebu Educational Foundation for
BIT	Bachelor of Information Technology		Information Technology
BMC	Budget and Management Committee	CEO	Chief Executive Officer
BND	Brunei dollar	CEPAS	Specification for Contactless e-Purse
BNU	Banco Nacional Ultramarino		Application
BoC	Bureau of Customs	CERTs	Computer Emergency Response Teams
BOI	Board of Investment	CET	Connect East Timor
BOT	Bank of Thailand	CETC	SPC Community Education Training Centre,
BPAP	Business Processing Association of the		Fiji
	Philippines	CGIAR	Consulative Group on International
BPO	Business Process Outsourcing		Agricultural Research
BPPT	Badan Pengkajian dan Penerapan Teknologi	CHA	Consortium of Humanitarian Agencies
	(Agency for the Assessment and Application	CHED	Commission on Higher Education
	of Technology)	CIA	Central Intelligence Agency (US)
BRAC	Bangladesh Rural Advancement Committee	CIC	Community Information Centre
BRTI	Badan Regulasi Telekomunikasi Indonesia	CICC	Center of the International Cooperation on
	(Indonesia Telecommunication Regulatory		Computerization
	Body)	CICT	Commission on Information and
BSA	Business Software Alliance		Communications Technology
BSNL	Bharat Sanchar Nigam Ltd	CID	Harvard Centre for International
BT	Bhutan Telecom Ltd		Development Model

CIDA	Canadian International Development	DCITA	Department of Communication, Information
	Agency		Technology and the Arts
CII	Confederation of Indian Industry	DCSF	Diliman Computer Science Foundation
CIMA	Chartered Institute of Management	DDC	Dzongkha Development Commission
	Accountants	DDD	Digital Divide Data
CIO	Chief Information Officer	DE	Distance education
CIT	Communications and Information	DEEWR	Department for Education, Employment and
	Technology		Workplace Relations
CITREP	Critical Infocomm Technology Resource	DEF	Digital Empowerment Foundation
	Programme	DEMP	Distance Education Modernization Project
CLC	Community Learning Centre	Depbudpar	Departemen Kebudayaan dan Pariwisata
CMA	Computer Misuse Act		(Department of Culture and Tourism)
CMC	Community Multimedia Centres	Depdiknas	Departemen Pendidikan Nasional (National
CMMI	Capability Maturity Model Integration		Education Department)
CMOS	Complementary Metal Oxide Semiconductor	DepEd	Department of Education
CMS	Clinic Management System	DEST	Department for Education, Science and
CMTS	Cellular Mobile Telephone Service		Training
CNMI	Commonwealth of the Northern Marianas	DETIKNAS	Dewan TIK Nasional (National ICT
CNNIC	China Internet Network Information Center		Council)
COO	Chief Operating Officer	DFAT	Department of Foreign Affairs and Trade
CoP	Communities of Practice	DICT	Department of Information and
CP	Certificate Policy		Communication Technology
CPE	Customer Premises Equipment	Digitel	Digital Telecommunications Phils. Inc.
CPP	Calling Party Pays	DIMS	Diploma in Information Management System
CPS	Certificate Practice Statement	Dirjen Postel	Direktorat Jenderal Pos dan Telekomunikasi
CPTTM	Macau Productivity and Technology		(Directorate General of Post and
	Transfer Center		Telecommunication)
CRAT	Cyber Regulatory Appellate Tribunal	DIT	Department of Information Technology
CRC	Communications Regulatory Commission	DLTV	Distance Learning Television
CRO	Communications Regulatory Organization	DMB	Digital Multimedia Broadcasting
CROP	Council of Regional Organizations of the	DNA	Deoxyribonucleic acid
	Pacific	DNOP	Data Network Operators Pakistan
CRULP	Centre for Research in Urdu Language	DOEACC	Department of Electronics and Accreditation
	Processing		of Computer Courses
CSAT	College Scholastic Ability Test	DOI	Digital Opportunities Initiative
CSL	Computer Services Ltd, Samoa	DOH	Department of Health
CSMS	Computer Science and Management School	DoS	Denial-of-Service
CSSL	Computer Society of Sri Lanka	DOST	Department of Science and Technology
CTI	Committee on Trade and Investment	DOTC	Department of Transportation and
CTM	Companhia de Telecomunicações de Macau		Communications
	(Macau Telecommunications Company)	DPI	Data Processing Iran Company (ex-IBM
CTT	Direcção dos Serviços de Correios,		branch in Iran)
	Telefonicos e Tegraphicos de Macau	DPR	Dewan Perwakilan Rakyat (House of
	(Telephony and Telegraphy Bureau)		Representatives)
DAISY	Digital Accessible Information System	DRM	Digital Rights Management
DANIDA	Danish International Development Agency	DRMASS	Digital Multiple Access Subscriber System
DBCDE	Department of Broadband, Communications	DSEJ	Direcção dos Serviços de Educação e
	and the Digital Economy		Juventude (Education and Youth Affairs
DCI	Data Communications Company		Bureau)

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DSGs	Deputy Secretary-Generals	ETPI	Eastern Telecommunications Philippines Inc.
DSL	Digital Subscriber Line	EU	European Union
DSRT	Direcção dos Serviços de Regulação	EUP	Eco-Design of Energy-using Products
Dorei	de Telecomunicações (Bureau of	EVN	Electricity of Vietnam
	Telecommunications Regulation)	FDCT	Science and Technology Development
DSWD	Department of Social Welfare and	IDCI	Fund
DOWD	Development	FDI	Foreign Direct Investment
DTAS	Diagnostics Tutorial Assessment System	FE	Fundamentals of IT Engineer
DTI	Department of Trade and Industry	FECS	Fundamentals of IT Engineer Certification
DTIS	Diagnostic Trade Integration Studies	TLES	Standards
DTT	Digital Terrestrial Television	FedGIS	Federated Geospatial Information System
DTV	Digital television	FERI	Foundation of Education Research and
DVB	Digital Video Broadcast	1210	Education
DVD	Digital versatile disc	FFA	Pacific Islands Forum Fisheries Agency
DWDM	Dense Wavelength Division Multiplexing	F-FDTL	Falintil-Forcas Defesa de Timor-Leste or
E3	Philippines' Electronic Governance for	1 1212	Timor-Leste Defense Force
	Efficiency and Effectiveness	FITIS	Federation of IT Industry in Sri Lanka
EBS	Educational Broadcasting System	FLEMMS	Functional Literacy, Education, and Mass
EC	Economic Committee		Media Survey
ECA	Electronic Commerce Act	FLOSSWorld	Free/Libre/Open Sources Software (FLOSS)
ECER	East Coast Economic Region	12000	World
ECSG	Electronic Commerce Steering Group	FMAC	Macau Foundation
ECTI	Electronic Computer Telecommunication	FMC	Fixed Mobile Convergence
2011	and Information	FMIC	French Medical Institute for Children
ECVN	e-Commerce Vietnam	FNRI	Food and Nutrition Research Institute
EDB	Economic Development Board	FOSS	Free and Open Source Software
EDGE	Enhanced Data Rate for GSM Evolution	FPCCI	Federation of Pakistan Chambers of
eDLTV	eLearning Based on Distance Learning		Commerce and Industry
	Television	FRST	Foundation for Research, Science, and
EDMS	Electronic Document Management		Technology
	System	FSM	Federated States of Micronesia
EDNET	APEC Education Network	FTA	Free-to-Air
EDS	Electronic Documents and Signatures	FTI	Fast Track Initiative
EDXL	Emergency Data Exchange Language	FTII	Federasi Teknologi Informasi Indonesia
EECV	Emergency and Education Vehicle		(Indonesia Information Technology
EFA	Education for All		Federation)
EFT	Electronic Funds Transfer	FTTH	Fibre-to-the-Home
EGD	e-Government Directorate	FTTN	Fibre-to-the-Node
EGTAB	e-Government Technical Advisory Body	FUP	Fundação das Universidades Portuguesas
EGTL	e-Government Leadership Forum	FWA	Fixed Wireless Access
EHR	Electronic Health Records	G2B	Government-to-Business
ELK	Enabling Language Kit	G2C	Government-to-Citizen
EMIS	Education Management Information	G2G	Government-to-Government
	Systems	G4C	Government-for-Citizens
e-NTF	e-National Task Force	GATS	General Agreement on Trade in Services
ESCAP	Economic and Social Commission for Asia	Gb	Gigabyte
	and the Pacific	Gbps	Gigabits per second
ESFRD	Electronics Support Fund for Research and	GCA	Government Certification Authority
	Development	GCC	Government Computer College
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GCIO	Government Chief Information Officer	HEIs	Higher Education Institutions
GCS	Global Care Solutions Company Limited	HFC	Hybrid Fibre-Coaxial
GDDS	General Data Dissemination System	HIES	Household Income and Expenditure
GDLN	World Bank's Global Distance Learning		Survey
	Network	HIV	Human Immunodeficiency Virus, the cause
GDOI	Global Digital Opportunity Initiative		of AIDS (Acquired Immunodeficiency
GDP	Gross Domestic Product		Syndrome)
GDTTI	Gabinete para o Desenvolvimento das	HLCIT	High Level Commission on IT
	Telecomunicações e Tecnologias da	HRD	Human Resource Development
	Informação (Office for the Development	HRDWG	Human Resource Development Working
	of Telecommunications and Information		Group
	Technology)	HRM	Human Resource Management
GeSCI	Global e-Schools and Communities	HSBC	Hong Kong and Shanghai Banking
	Initiatives		Corporation
GIC	Government Information Centre	HSDPA	High Speed Downlink Packet Access
GILAS	Gearing Up Internet Literacy and Access for	HSPA	High Speed Packet Access
	Students	IA	Infocomm Accessibility
GIS	Geographical Information System	IAC-ICTS	Interagency Committee on Information and
GLOCOM	Japan's Center for Global Communications		Communication Technology Statistics
GNH	Gross National Happiness	IAEA	International Atomic Energy Agency
GNP	Gross National Product	IAMAI	Internet and Mobile Association of India
GNU Linux	GNU's Not Unix Linux	IAS	International Accounting Standards
GoM	Government of Mongolia	IC	Integrated Circuits
GoP	Government of Pakistan	ICAM	Intelligent Content Assessment Marking
GOSL	Government of Sri Lanka	ICANN	Internet Corporation for Assigned Names
GPDP	Office for Personal Data Protection		and Numbers
GPMS	Government Personnel Management System	ICDL	International Computer Driving Licence
GPRS	General Packet Radio Service	ICI	Interconnection Institute
GPS	Global Positioning Systems	ICIMOD	Nepal's International Centre for Integrated
GRP	Government of the Republic of the		Mountain Development
	Philippines	ICM	Information, Communication, and Media
GS	Grama Sevaka (village headman)	ICMA	Information, Communication, and
GSIS	Government Service Insurance System		Media Act
GSM	Global System for Mobile Communication	ICP	Internet Connection Provider
GTZ	Deutche Gesellschaft fur Technische	ICT	Information and Communication
	Zussammenardeit — German Technical		Technology
	Cooperation	ICTA	Information and Communication
GXA	Games Exchange Alliance		Technology Authority
HCA	Ho Chi Minh City Computer Association	ICT4D/ICTD	Information and Communication
HCCR	High Council of Cultural Revolution		Technology for Development
HCDG	Human Capital Development Group	ICT-TL	Timor-Leste ICT Association
HCI	High Council of Informatics	ICTWG	ICT Working Group
HCID	High Council of Information Dissemination	ICX	Interconnection Exchange
HDD	Hard Disc Drive	ID	Identity/Identification
HDDI	Hard Disc Drive Institution	IDA	Info-Communications Development
HDIA	Human Impact Development Assessment		Authority of Singapore
	of Trade	IDC	International Data Corporation
HDSL	High bit-rate Digital Subscriber Line	ID-INC	Indonesia-Network Information
HDTV	High Definition Television	IDM	Interactive Digital Media

IDN International Domain Name ISDN Integrated Service Data Network IDR Iskandar Development Region iSLRCs i-Schools Learning Resource Centers IDRC International Development Research Centre ISOC Internet Society IDRCC International Development Research Centre of Canada ISPAK Internet Service Providers of Pakistan ID-SIRTII Indonesia Security Incident Response Team on Internet Infrastructure Nepal IDTUG Indonesia Telecommunication Users ISPANZ Internet Service Providers Association of Nepal Internet Service Providers Association Internet Service Providers Association Internet Service Providers Association Internet Service Providers Association Inte	
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Group New Zealand	
IEAA Interactive Entertainment Association of IT Information Technology	
Australia ITC Information Technology Company	
IFRS International Financial Reporting Standard ITEC Indian Technical and Economic	
IG International Gateway Co-operation	
IGNOU Indira Gandhi National Open University ITES IT enabled Services	
IGOS Indonesia Goes Open Source ITFP Information Technology Foundation of	the
IIREM Innovating ICT for Rural Education of Philippines	
Mongolia ITH Income Tax Holidays	
IIT Informatics Institute of Technology ITMX Interbank Transaction Management and	l
IITA Institute for Information Technology Exchange	
Advancement ITRC Iran Telecommunications Research Cer	iter
IITC International IT Conference ITS Intelligent Transport System	
IIUM Macau Inter-University Institute ITU International Telecommunication Union	1
IKC IlmuKomputer.com IX Internet Exchanges	
ILDTSP International Long Distance J2ME Java 2 Micro Edition	
Telecommunication Services Policy JARDIKNAS Jaringan Pendidikan Nasional (National	l
ILO International Labour Organisation Education Network)	
IMF International Monetary Fund JEDI Java Education and Development Initia	tive
IMS Interactive Multimedia Subsystem JETRO Japan External Trade Organization	
INESC Institute of Engineering Systems and JETS Japanese-European Technology Studies	i
Computers Institute	
Info Timor Info Exchange East Timor JICA Japan International Cooperation Agency	y
iNSPIRE iNfocomm Spark an Inspiring and JITEC Japan Information Technology Enginee	rs
Rewarding Experience Examination Center	
IOB East Timor Institute of Business KADO Korea Agency for Digital Opportunity a	ınd
IP Internet Protocol Promotion	
IPA Ingrated Programme of Action Kbps Kilobits per second	
IPC Informatization Promotion Committee KC Knowledge Channel	
IPM Institute for Studies in Theoretical Physics KCC Korea Communications Commission	
and Mathematics KCF Knowledge Channel Foundation	
IPR Intellectual Property Rights KCS Korea Customs Service	
IPRA Intellectual Property Rights Act KEPCO Korea Electric Power Corporation	
IPTV Internet Protocol Television KIPA Korean International Promotion Agency	7
IPv4 Internet Protocol version 4 KISDI Korea Information Society Development	ıt
IPv6 Internet Protocol version 6 Institute	
IRCTC Indian Railway Catering and Tourism KMPCD Kathmandu Metropolitan Police Crime	
Corporation Limited Division	
IRQUE Improving the Relevance and Quality of KOICA Korea International Cooperation Agenc	y
Undergraduate Education KPO Knowledge Process Outsourcing	
IRTI Act Right to Information Act (India) KREN Korean Education Network	

KSFCKorea Software Financial CooperativeMDAMedia Development Authority of SingaporeKTKorea TelecomMDecMultimedia Development CorporationLAMP/WAMPLinux, Apache, Mysql, and Php/Link AccessMDGsMillennium Development GoalsProcedure for Modems/Windows, Apache, Mysql, and PhpMacau Document Information ResourceMysql, and PhpDatabaseLANICLao National Internet CommitteeMECSMinistry of Education, Culture and ScienceLCDLiquid Crystal DisplayMEDMinistry of Economic DevelopmentLDCsLeast Developed CountriesMETIMinistry of Economy, Trade and IndustryLDILong Distance and International ServicesMGPMacau Grand PrixLEARNLanka Education and Research NetworkMGTOMacau Government Tourist OfficeLEDLight Emitting Diode LampMIBMaldives Internet BankingLETASLocal Enterprise Technical AssistanceMICMinistry of Internal Affairs andSchemeCommunicationLGULocal government NetworkMICAMinistry of Information, CommunicationLGULocal government unitand the ArtsLIFELiteracy Initiative for EmpowermentMICTMinistry of Information and CommunicationLINXLondon Internet ExchangeTechnologyLIPLembaga Ilmu Pengetahuan IndonesiaMIMOSMalaysian Institute of MicroelectronicLIRLindonesian Institute of ScienceSystemsLKUGLanka Linux User GroupMISPAMongolian Internet	KRW	Korean won (currency)	MCTV	Macau Cable TV
KT Korea Telecom MDec Multimedia Development Corporation LAMP/WAMP Linux, Apache, Mysql, and Php/Link Access MDGs Millennium Development Goals Procedure for Modems/Windows, Apache, MDIRD Macau Document Information Resource Mysql, and Php Database LANIC Lao National Internet Committee MECS Ministry of Education, Culture and Science LCD Liquid Crystal Display MED Ministry of Economic Development LDCs Least Developed Countries METI Ministry of Economy, Trade and Industry LDI Long Distance and International Services MGP Macau Grand Prix LEARN Lanka Education and Research Network MGTO Macau Government Tourist Office LED Light Emitting Diode Lamp MIB Maldives Internet Banking LETAS Local Enterprise Technical Assistance MIC Ministry of Information, Communication Scheme Communication LGN Lanka Government Network MICA Ministry of Information, Communications and the Arts LIFE Literacy Initiative for Empowerment MICT Ministry of Information and Communication Technology LIPI Lembaga Ilmu Pengetahuan Indonesia (Indonesian Institute of Science) MISPA Mongolian Internet Service Providers LEU Local Loop MISPA Mongolian Internet Service Providers Association LRC Labour Recruitment Committee MIT Massachusetts Institute of Technology LRT Likelihood Ratio Test MKE Ministry of Knowledge Economy LSPN Labour and Social Protection Network MND Mable Number Portability				
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LSF Lanka Software Foundation LSPN Labour and Social Protection Network MMP Macau Memory Project MMS Multimedia Messaging System MNP Mobile Number Portability	LRC	Labour Recruitment Committee		
LSPN Labour and Social Protection Network MMS Multimedia Messaging System MNP Mobile Number Portability	LRT	Likelihood Ratio Test		
Labour and Social Protection Network MND Mobile Number Portobility	LSF	Lanka Software Foundation		• •
	LSPN	Labour and Social Protection Network		
LTO Land Transportation Office	LTO	Land Transportation Office		•
LUGS Linux User Group of Singapore MoC Ministry of Commerce MOCIE Ministry of Commerce, Industry, and	LUGS			•
M&As Mergers and Acquisitions	M&As	-	MOCIE	•
MA Master of Arts Energy	MA		M-E	
MAMPU Malaysian Administrative Modernization MoE Ministry of Education	MAMPU	•		
and Management Planning Unit MOECS Ministry of Education, Culture, and Science				
MAP Management Association of the Philippines MOET Ministry of Education and Training				-
MASTEL Masyarakat Telematika MoEYS Ministry of Education, Youth, and Sport				•
MB Megabit MoF Ministry of Finance		•		•
MBA Master of Business Administration MOGAHA Ministry of Government Administration and			MOGAHA	•
Mbps Megabits per second Home Affairs	_		MOH	
MCEA Myanmar Computer Enthusiasts Association MOH Ministry of Health				•
MCF Myanmar Computer Federation MoIC Ministry of Information and Communication		*		
MCH Ministry for Culture and Heritage MOIT Ministry of Industry and Trade		•		
MCHE Maldives College of Higher Education MoITT Ministry of IT and Telecommunications				•
MCIA Myanmar Computer Industry Association MOPAS Ministry of Public Administration and		· · · · · · · · · · · · · · · · · · ·	MOPAS	
MCIT Ministry of Communications and IT Security			3.500.	•
MCMC Malaysian Communications and Multimedia MOSA Mongolian Software Industry Association	MCMC			
Commission MOST Ministry of Science and Technology	MCDA			
MCPA Myanmar Computer Professionals MOU Memorandum of Understanding	MCPA			
Association MOWD Ministry of Women's Development	Moore			
MCSDC Myanmar Computer Science Development MPDF Mekong Private Sector Development	MCSDC		MPDF	
Council Facility		Council		Facility

MPEG	Moving Picture Expert Group	NECTEC	National Electronics and Computer
MPLS	Multi-Protocol Label Switching		Technology Center
MPO	Management and Budget Organization	NEDP	National Education Database Project
	(formerly PBO)	Nepse	Nepal Stock Exchange
MPT	Myanmar Posts and Telecommunications	NFE	Non-Formal Education
MPTC	Ministry of Posts Telegraph and	NGAs	National Government Agencies
	Communications	NGN	Next Generation Network
MPTT	Ministry of Post, Telegraph, and Telephone	NGNII	Next Generation National Information
MRA	Mutual Recognition Agreement		Infrastructure
	for Conformity Assessment of	NGO	Non-government organization
	Telecommunications Equipment	NGPP	National Grid Pilot Platform
MS	Microsoft	NHRD	New Century Human Resource
MSAR	Macau Special Administrative Region		Development
MSC	Multimedia Super Corridor	NIA	National Information Society Agency
MSN	Microsoft Network	NIBM	National Institute of Business Management
MSUE	Mongolian State University of Education	NICF	National Infocomm Competency
MTNL	Mahanagar Telephone Nigam Ltd		Framework
MTVS	Mobile Television Services	NICI	National Information and Communications
MUST	Mongolian University of Science and		Initiative Committee
	Technology	NICT	National Institute of Information and
MVNO	Mobile virtual network operator		Communications Technology
MyICMS 886	Malaysian Information, Communications	NICTAA	National ICT Alliance of Afghanistan
•	and Multimedia Services 886	NICTCA	National ICT Council of Afghanistan
NADRA	National Database and Registration	NiDA	National ITC Development Authority
	Authority	NIE	National innovation ecosystem
NARC	National Administrative Reforms Council	NII	National Information Infrastructure
NASSCOM	National Association of Software and	NIN	National Identity Number
	Services Companies	NIOS	National Institute of Open Schooling
NAST	National Authority for Science and	NIPO	National Intellectual Property Office
	Technology	NIR	Network Information Resources
NBIS	National Basic Information System	NIS	National Innovation Summit
NBN	National Broadband Network	NISC	National Information Security Center
NBTC	National Broadcasting and	NISER	National ICT Security and Emergency
	Telecommunications Commission		Response Centre
NCC	National Computer Center (Philippines)	NISPAA	National ISP Association of Afghanistan
NCER	Northern Corridor Economic Region	NITA	National Information Technology Agenda
NCIT	National Centre for Information	NITC	National Information Technology Council
	Technology	NITP	National Information Technology Park
NCLHCR	National Centre for Linguistic and Cultural	NISTPASS	National Institute for Science and
	Research		Technology Policy and Strategy Studies
NCSKSC	National Committee for the Standardization	NIXI	National Internet Exchange of India
	of Khmer Script in Computers	NLP	Natural Language Processing
NCSTP	National Council for Science and	NMRIA	National Mapping and Resource Information
	Technology Policy		Authority
NDA	Non-Disclosure Agreements	NPTA	National Post and Telecom Authority
NDAP	National Digital Archives Program	NPTEL	National Project on Technology Enhanced
NDCC	National Disaster Coordinating Council		Learning
NDP	National Development Plan	NREN	National Research and Education Network
NeGP	National e-Governance Plan	NSA	Non-State Actors

NCD	National Charlet at Donner	DACINET	Accord Taskers Conference and Accord
NSB NSCB	National Statistical Bureau	PACINET	Annual Technical Conference, and Annual
NSO NSO	National Statistical Coordination Board National Statistics Office	DNOC	General Meeting of PICISOC
NSTDA		PacNOG	Pacific Network Operators Group
NSIDA	National Science and Technology	PAGASA	Philippine Atmospheric, Geophysical, and
NSW	Development Agency National Single Window	DADA	Astronomical Services Administration
NT NT	Nepal Telecom	PAIM	Plan of Action on Information and Media
NTA	Nepal Telecom Nepal Telecom Authority	PAN	Pan Asia Networking
NTC	National Telecommunications Commission	PANDI	Pengelola Nama Domain Indonesia
NTT	Nippon Telegraph and Telephone		(Indonesia Domain Name Registry)
NTU	Nanyang Technological University	PANdora	PAN Asia Networking Distance and Open
NUM	National University of Mongolia		Resource Access
NUOL	National University of Laos	PANGTEL	Papua New Guinea Authority
NUS	· ·		Telecommunications
	National University of Singapore	PAP	Public Access Provider
NZD	New Zealand New Zealand dollar	PAQTVET II	Philippine-Australia Quality Technical
NZD			Vocational Education and Training Project
0&0	Outsourcing and Offshoring	PASHA	Pakistan All Software Houses Association
OAK	Open Access to Knowledge	PAT 2004	Plan of Action on Telecommunications 2004
OCEI	Open Content in Education Initiative	PBO	Plan and Budget Organization
OCR	Optical Character Recognition	PC	Personal computer
ODA	Official Development Assistance	PCASTRD	Philippine Council for Advanced Science
ODF	Open Document Format		and Technology R&D
ODL	Open and distance learning	PCC	Proteur-created content
ODLAA	Open and Distance Learning Association of	PCT	Portuguese/Chinese Bi-directional
OFGE	Australia		Translation System
OECD	Organisation for Economic Co-operation	PCCW	Pacific Century Cyber Works
	and Development	PDAs	Personal/Portable digital assistants
OFDMA	Orthogonal Frequency Division Multiplex	PDF	Portable Document Format
	Access	PDH	Plesiochronous Digital Hierarchy
OFLC	Office of Film and Literature Classification	PECC	Pacific Economic Cooperation Council
OIC	Organisation of the Islamic Conference	PEDC	Philippine Export Development Council
OLE-Nepal	Open Learning Exchange-Nepal	PEZA	Philippine Economic Zone Authority
OLPC	One Laptop per Child	PFIF	People Finder Interchange Format
OpenCARE	Open exchange for Collaborative Activities		
	in Response to Emergency	PhilNITS	Philippine National Information Technology
OPGW	Optical Power Ground Wire	DLID	Standards Divinging 1999
OS	Operating system	PHP	Philippine peso
OSCC	Open Source Competency Center	PHS	Personal Handy-phone System
OSS	Open Source Software	PIC	Pacific Island countries
OSSF	Open Source Software Foundry	PICISOC	Pacific Islands Chapter of the Internet
OTBIP	Open Technology Business Incubation		Society
	Program	PICWIN	PAGASA Interactive Climate and Weather
OUHK	Open University of Hong Kong		Information Network
P&G	Procter & Gamble	PIFS	Pacific Islands Forum Secretariat
PIII	Pentium 3	PiL	Partners-in-Learning Initiative
P2P	Peer-to-Peer	Piltel	Pilipino Telephone Corporation
PAC	Public Access Centre	PISA	Programme for International Student
PACCS	Pakistan Automated Commercial		Assessment
	Community System	PITA	Pacific Islands Telecommunication
PaCCS	Pakistan Customs Computerized System		Association

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PKI	Public key infrastructure	RSS	Really Simple Syndication
PLDT	Philippine Long Distance Telephone	RTCs	Rural Telecentres
1201	Company	RTGS	Real-time interbank gross settlement system
PLUG	Philippine Linux Users Group	RTI	Right to Information
PMIS	Personnel Management Information System	RTM	Department of Broadcasting (Malaysia)
PMO	Prime Minister's Office	RTOB	Real Time Online Branches
PMS	Presidential Management Staff	RTTC	Regional Teacher Training Centre
PMTDP	Philippine Medium-Term Development Plan	SAARC	South Asian Association for Regional
PNG	Papua New Guinea	Si ii ii c	Cooperation
POS	Point of sale	SaaS	Software as a Service
POSS	Philippine Open Source Summit	SAFMA	South Asia Free Media Association
POSX	Pampanga Open Source eXchange	SAFP	Direcção dos Serviços de Administração e
PPP	Public-private partnerships	57111	Função Pública (Public Administration and
PRs	Permanent Representatives		Civil Service Bureau)
PSA	Panos South Asia	SAIC	SAARC Agricultural Information Centre
PSEB	Pakistan Software Export Board	SAP	Satellite Service Provider (Satellite Access
PSTN	Public Switched Telephone Network	5711	Provider in Persian)
PTA	Pakistan Telecommunication Authority	SARS	Severe Acute Respiratory Syndrome
PTCL	Pakistan Telecommunications Company Ltd	SASEC	South Asian Subregional Economic
PTI	Portuguese Telecom International		Cooperation
PTTC	Provincial Teacher Training College	SAVE	SAARC Audio-Visual Exchange
PUST	Pyongyang University of Science and	SBS	Special Broadcasting Services
	Technology	SCA	Spam Control Act
QGIS	Quantum Geographic Information System	SCCP	Sub-Committee on Customs Procedures
QUEST	Quality Education and Skills Training	SCIT	Supreme Council of IT
	Alliance	SCORE	Sarawak Corridor of Renewable Energy
R&D	Research and development	SCORM	Shareable, Content Object Reference Model
RA	Registration Authority	SCPC	Single Channel Per Carrier
RAB	Rapid Action Battalion	SCZMC	SAARC Coastal Zone Management Centre
RAM	Random Access Memory	SDC	SAARC Documentation Centre
RDTL	República Democrâtica de Timor-Leste, the	SDH	Synchronous Data Hierarchy
	official name of Timor-Leste	SDMC	SAARC Disaster Management Centre
READ	Rural Education and Development	SDSL	Symmetric Digital Subscriber Line
RFID	Radio-frequency identification	SEA	Software Exporters Association
RFP	Request for Proposal	SEAMEO	Southeast Asian Ministers of Education
RGoB	Royal Government of Bhutan		Organization
RIC	Rural Internet Centre	SEA-ME-WE	South East Asia-Middle East-Western
RICE	Regional IT Centers of Excellence		Europe Cable System
RICS	Pacific Islands Rural Internet Connectivity	SEAMOLEC	Southeast Asian Ministers of Education
	System		Organization Regional Open Learning
RIS	Regional Innovation Systems		Centre
RISC	Reduced Instruction Set Computer	SEC	SAARC Energy Centre
Ristek	Riset dan Teknologi (Research and	SEI	Software Engineering Institute
	Technology)	SEMP	Secondary Education Modernization
RLIC	Regional Learning and Innovation Culture		Project
RMC	SPC Regional Media Centre, Fiji	SEWA	Self-employed Women's Association
RMI	Republic of the Marshall Islands	SG	Secretary-General
R-NGN	Rural NGN	SGD	Singapore dollar
ROI	Return on investment	SGI	Sentral Gerbang Internasional (International
RPC	Revised Penal Code		Central Gate)

SCNIC	Singapore Nativally Information Contra	5054	Singapore Oner Sayres Allianas
SGNIC	Singapore Network Information Centre Secretariat of HCI	SOSA	Singapore Open Source Alliance
SHCI		SOX	Sarbanes-Oxley
SHRDC	SAARC Human Resource Development	SPC	Secretariat of the Pacific Community
OI.C	Centre	SPIDER	Swedish Program for ICT in Developing
SIC	SAARC Information Centre	CDINI	Regions
SIDA	Swedish International Development	SPIN	South Pacific Islands Network
GIGG	Cooperation Agency	SPNL	Spice Nepal Private Limited
SIGS	Security in the Government Sector	SPREP	Secretariat of the Pacific Regional
SIJs	Silver Infocomm Junctions	GP.TT	Environment Programme
SIM	Subscriber Identity Module	SPT	Saigon Postel Telecommunication
SIN	Single Identity Number		Company, Vietnam
SINGAP-TL	Sistema Integrado para a Nova Gestão da	SQL	Structured Query Language
	Administração Pública de Timor-Leste or	SSME	Service Science, Management, and
	Integrated System for a New Management		Engineering
	of East Timor's Public Administration	SSO	Shared Services and Outsourcing
SingPass	Singapore Personal Access	STAG	Science and Technology Advisory Group
SingStat	Statistics Singapore	STC	SAARC Tuberculosis Centre
SingTel	Singapore Telecommunications Limited	STI	Skill, Technology and Innovation
SIPA	Software Industry Promotion Agency	STL	Suara Timor Lorosae or the Voice of
SIT	School of Information Technology		Timor-Leste
SiTF	Singapore Infocomm Technology Federation	STM	synchronous transport module
SIRC	SMIE Infocomm Resource Centre	S/W	Software
SJI	Silver Infocomm Junction	SWCS	Software Design and Development
SKS	Sustainable Knowledge Systems		Certification Standards
SLASI	Sri Lanka Association for the Software	TAE	Trans Asia Europe
	Industry	TAFE	Technical and Further Education
SLCERT	Sri Lanka Computer Emergency Response	TAKFA	Development of Information Technology
	Team		Applications
SLCVA	Sri Lanka Computer Vendors Association	TAM	Telecommunications Authority of Maldives
SLI	Sambungan Langsung Internasional	TASMA	Production and Management of Electronic
	(International Direct-Calls)		Content
SLICTA	Sri Lanka ICT Association	TAVANIR	Iran Power Generation, Transmission, and
SLT	Sri Lanka Telecom		Distribution Company
SMCS	School of Mathematics and Computer	TCF	Telecommunications Carriers' Forum
	Science	TCI	Telecommunications Company of Iran
SME	Small and medium/medium-sized	TCO	Total Cost of Ownership
	enterprises	TCPI	Telecommunications Consumer
SMEDA	Small and Medium Enterprise Development		Protection Institute
	Authority	TDCA	Telecom Development Company of
SMP	Significant Market Power		Afghanistan
SMRC	SAARC Meterological Research Centre	TDF	Telecom Development Fund
SMS	Short Message Service	TDM	Teledifusão de Macau S.A. (Macao TV
SNPL	Spice Nepal		Broadcasting Co.)
SNS	Social Networking Service	TDSCDMA	Time Division-synchronous Code Division
SoC	System on Chip		Multiple Access
SOE	Standard ICT Operating Environment	TELMIN	Telecommunications and IT Ministers Meeting
SOM	Senior Officials' Meeting	TELSOM	Telecommunications and IT Senior Officials
SONA	State of the Nation Address	•	Meeting
SOPAC	Secretariat of the Pacific Islands Applied	TESDA	Technical Education and Skills
	Geoscience Commission	120211	Development Authority
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TFMEC	Task Force on the Measurement of	UNCITRAL	United Nations Commission on International
	Electronic Commerce		Trade Law
ThaiCERT	Thai Computer Emergency Response Team	UNCTAD	United Nations Conference on Trade, and
THDL	Tibetan and Himalayan Digital Library		Development
TIAC	Technology and Industry Advisory	UNDP	United Nations Development Programme
	Council	UN ESCAP	United Nations Economic and Social
TIFA	Trade and Investment Framework		Commission for the Asia and the Pacific
	Agreement	UNESCO	United Nations Educational, Scientific and
TIG	Trade Information Gateway		Cultural Organization
TIGO	The Lao Millicom Company	UNFPA	United Nations Population Fund
TIP	Technology Innovation Programme	UNICEF	United Nations Children's Fund
TITS	Telecommunication and Information	UNIDO	United Nations Industrial Development
	Technology School		Organization
TOT	Telephone Organization of Thailand, now	UNMIT	United Nations Integrated Mission in Timor-
	incorporated as TOT Corporation Limited	01,1111	Leste
TPD	Teacher professional development	UnPLUG	University of the Philippines Linux Users'
TPK	Te Puni Kokiri (Ministry of Maori	CIII ECC	Group
	Development)	IINSW@ADFA	University of New South Wales Australian
Trade SWAp	Cambodia's Trade Sector Wide Approach	onsweribin	Defense Force Academy
	Policy	UNTAC	United Nations Transitional Authority in
TRC	Telecom Regulatory Commission	UNTAC	Cambodia
TRCL	Telemedicine Reference Centre Limited	LINITAET	
TRIDI	Telecommunications Research and	UNTAET	United Nations Transitional Administration
	Industrial Development Institute	UNU-IIST	United Nations University — International
TSTIP	Tehran Software and IT Park	11.34	Institute for Software Development
TTP	Technology Transfer Program	UoM	University of Moratuwa
TUANZ	Telecommunications Users Association of	UoP	University of Peradeniya
	New Zealand	UPITTC	University of the Philippines Information
TV	Television		Technology Training Center
TVRO	Television Receive Only	UPOU	University of the Philippines Open
TVTL	Televizaun de Timor-Leste or Television of		University
	Timor-Leste	URL	Uniform Resource Locator
TWB	Transactional Web Presence	US	United Sates
TWEA	Trading with the Enemy Act	USAID	United States Agency for International
TWWW	Te Waka Wahine Wa-Hangarau — Society		Development
	for Professional Maori Women in	USB	Universal Serial Bus
	Information Technology	USD	United States dollar
UBD	Universiti Brunei Darussalam	USF	Universal Service Fund Guarantee Ltd
UCC	User-created content	USN	Ubiquitous sensor network
UCSC	University of Colombo School of	USO	universal service obligation
	Computing	USOF	Universal Service Obligation Fund
UGC	University Grants Commission	USP	University of the South Pacific
UK	United Kingdom	USPNet	USP Wide Area Network
UMAC	University of Macau	UT	Universitas Terbuka (Indonesia Open
UN	United Nations		University)
UN-ASPA	United Nations-American Society for Public	UTL	United Telecom Limited
	Administration	VAIP	Vietnam Association of Information
UNATIL	Universidade Nacional de Timor-Leste or		Processing
	Timor-Leste National University	VAS	Value added services

VAT	Value added tax	WCPFC	Western and Central Pacific Fisheries
VCCI	Vietnam Chamber of Commerce and Industry		Commission
VCD	Video compact disc	WDM	Wave Division Multiplexing
VCN	Village Communication Network	WEF	World Economic Forum
VDC	Village Development Committee	WFB	World Fact Book (a CIA publication)
VECOM	Vietnam e-Commerce Association	WGIG	Working Group on Internet Governance
VHF	Very high frequency	WHO	World Health Organization
VHS	Video Home System	WiBro	Wireless Broadband
VINASA	Vietnam Software Association	WiFi	Wireless Fidelity
VNNIC	Vietnam Internet Network Information	WiMAX	Worldwide Interoperability for Microwave
	Center		Access
VNPT	Vietnam Post and Telematics	WIPO	World Intellectual Property Organization
VoIP	Voice over Internet Protocol	WISEPORT	Wireless-broadband-access for SEaPORT
VPN	Virtual Private Network	WITSA	World Information Technology and Services
VSAT	Very small aperture terminal		Alliance
VSNL	Varat Sanchar Nigam Limited	WLAN	Wireless Local Area Network
VU	Virtual University of Pakistan	WLL	Wireless Local Loop
W3C (W3)	World Wide Web Consortium	WMP	Workforce Mobilization Program
WA	Western Australia	WSIS	World Summit on the Information Society
WAB	Wireless Broadband Access	WTO	World Trade Organization
WAN	Wide Area Network	WWF	World Wildlife Fund
WAP	Wireless Application Protocol	XMG	eXtensible MetaGrammar
WAS	Web Archive Singapore	XML	Extensive Markup Language
WASN	Wireless ad hoc Sensor Network Lab	YD07	YouDecide2007.org
WB	World Bank	YUST	Yanbian University of Science and
W-CDMA	Wideband Code Division Multiple Access		Technology