



Cross Border ICT Cooperation Among SASEC Countries

Randeep Sudan
Delhi, 15th March 2004

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Directors or the governments they represent. ADB makes no representation concerning and does not guarantee the source, originality, accuracy, completeness or reliability of any statement, information, data, finding, interpretation, advice, opinion, or view presented.

Outline of Presentation

- Status of ICT in the SASEC countries
- ICT applications
 - e-Government
 - e-Trade
 - e-Education
 - e-Health
- ICT infrastructure
 - Connectivity
 - Remote Sensing
 - Low cost PCs



Status of ICT in the SASEC Countries

	Bangladesh	Bhutan	India	Nepal
Population (in millions) (2002)	135.7	0.85	1048.3	24.1
Per capita income Atlas(\$) (2002)	360	590	480	230
Per capita income PPP (\$) (2002)	1720	...	2570	1350
Telephone main lines per 1000 people (2001)	4	25	38	13
Personal computers per 1000 people (2001)	1.9	5.8	5.8	3.5
Internet users (thousands) (2001)	250	3	7000	60

Source: World Bank (<http://www.worldbank.org/data/countrydata/countrydata.html>)



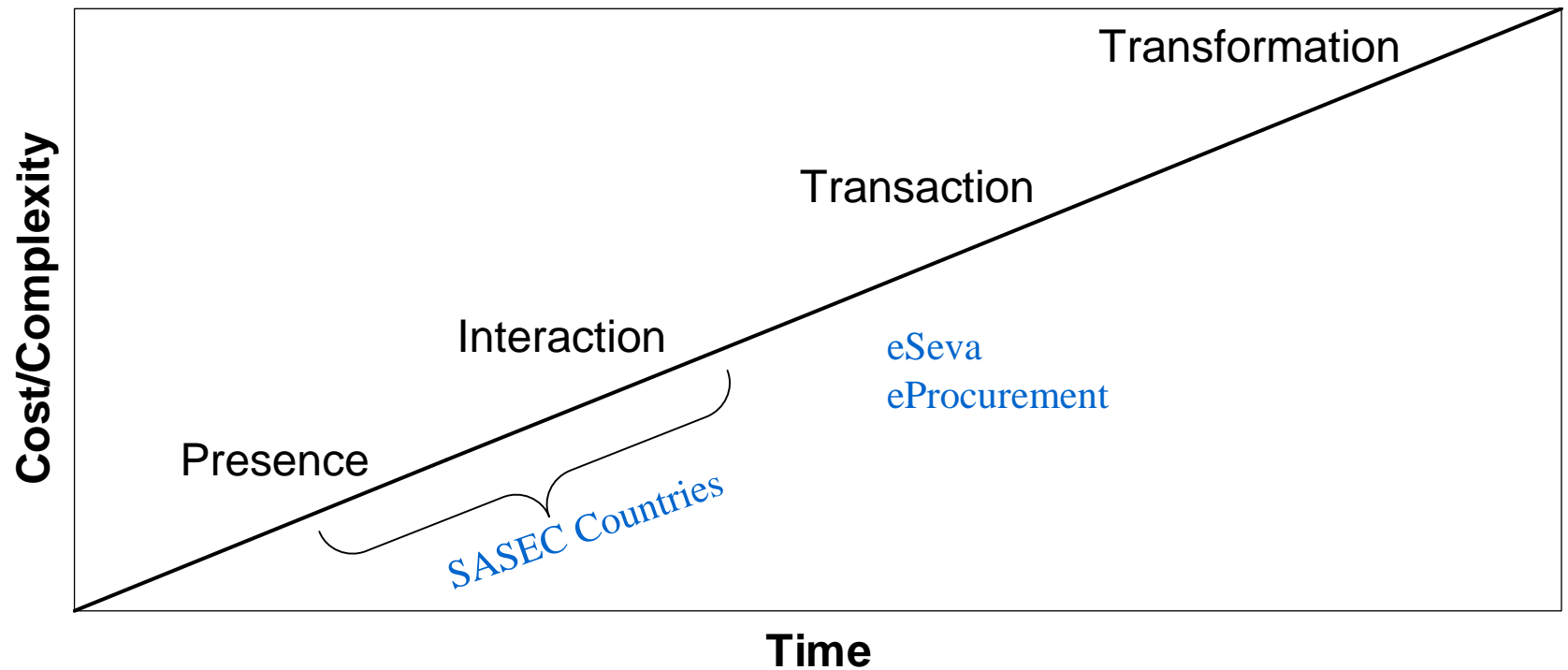
e-Government

- Governments will be a major vertical market for IT spending
- Gartner projections
 - Total IT spending \$2.4 trillion in 2007
 - Government spending \$320.7 billion
- India plans to spend Rs.120 billion (\$2.5 billion) in the next 4 years on e-Governance/e-learning



e-Government: Status in SASEC subregion

Phases of e-Government



e-Government



Common Interoperability Framework

- Cross border collaboration on e-Gov easier
- Portable and replicable e-Gov applications
- International frameworks
 - US Federal Enterprise Architecture
 - UK Government Interoperability Framework
 - e-Europe and e-ASEAN



e-Government Observatory

- Information exchange on e-Gov applications
- Showcase best practices
- Inventory of capabilities in the sub-region
- Development Gateway of the World Bank



Training of Civil Servants

- Awareness about e-Government
- Training areas
 - Public Private Partnerships, funding models, legal frameworks, architecture and security issues
- Leading institutions
 - John F Kennedy School of Government
 - Civil Services Training College Singapore
 - IBM Institute for e-Government

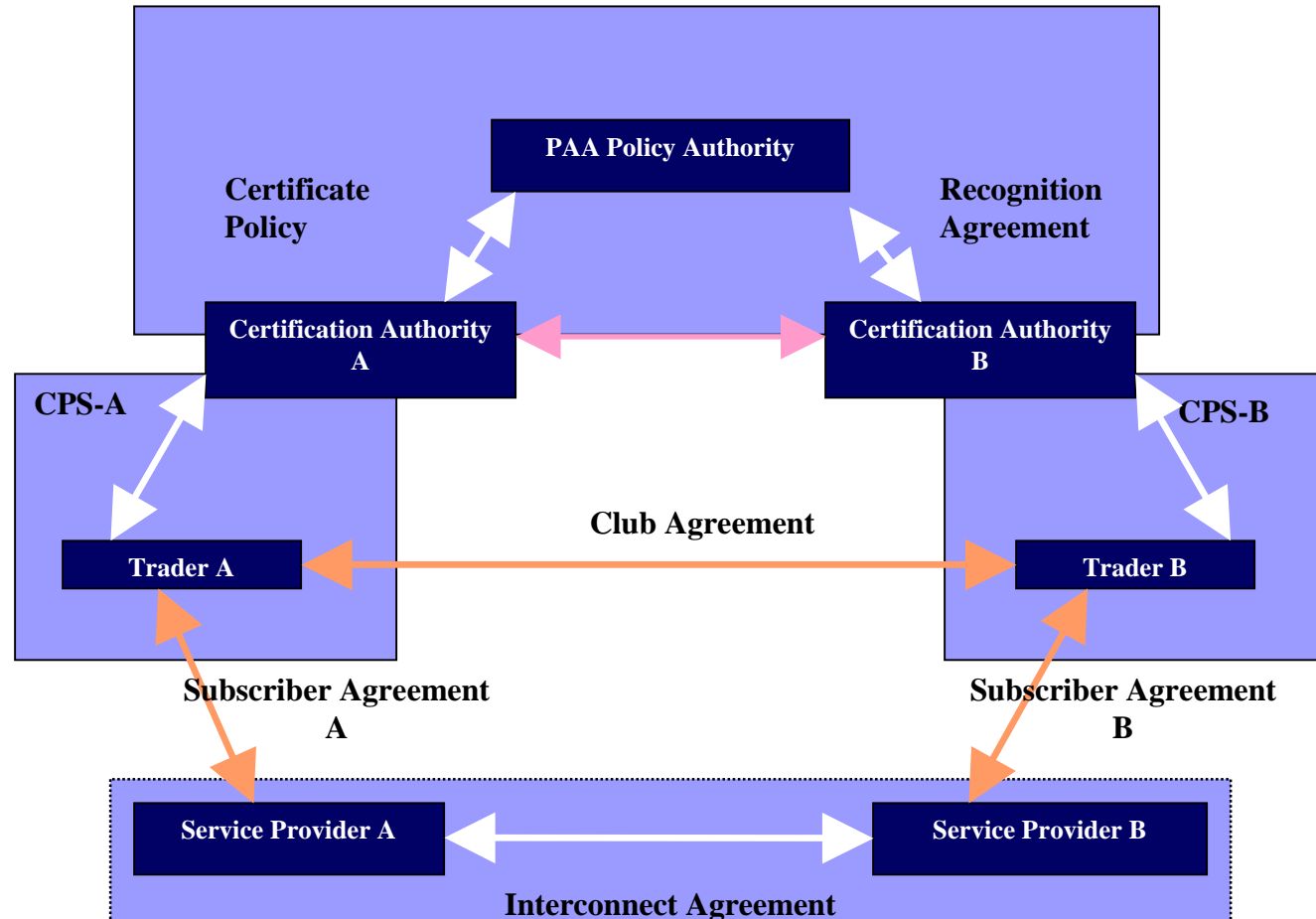


e-Trade: Status in SASEC subregion

- Bangladesh and Nepal participating in the ASYCUDA (Automatic System for Customs Data) programme of UNCTAD
- India has set up an EC/EDI Council
- In the case of Bhutan, e-Trade does not figure in the "Vision, Mission, Objectives and Strategies" of the Department of Trade



Paperless Trading



Source: Report on Legal Issues in Cross-Border e-Commerce Transactions, Asia PKI Forum, 302

e-Trade



Legal Infrastructure

- Mutual recognition of digital certificates
- Secure electronic transactions, payments and settlements
- Data protection and privacy
- Harmonising of laws important



e-Education: Status in SASEC subregion

- Data on computing graduates as % of total graduates not available for SASEC countries (UNESCO report to WSIS)
- Poor quality a common theme
- Bangladesh
 - Low penetration in schools
- Bhutan
 - Most IT training institutes run by private sector
- India
 - Large number of students (1 million IT graduates by 2008)
- Nepal
 - Infrastructure, teachers and content a constraint



e-Education for ICT Professionals

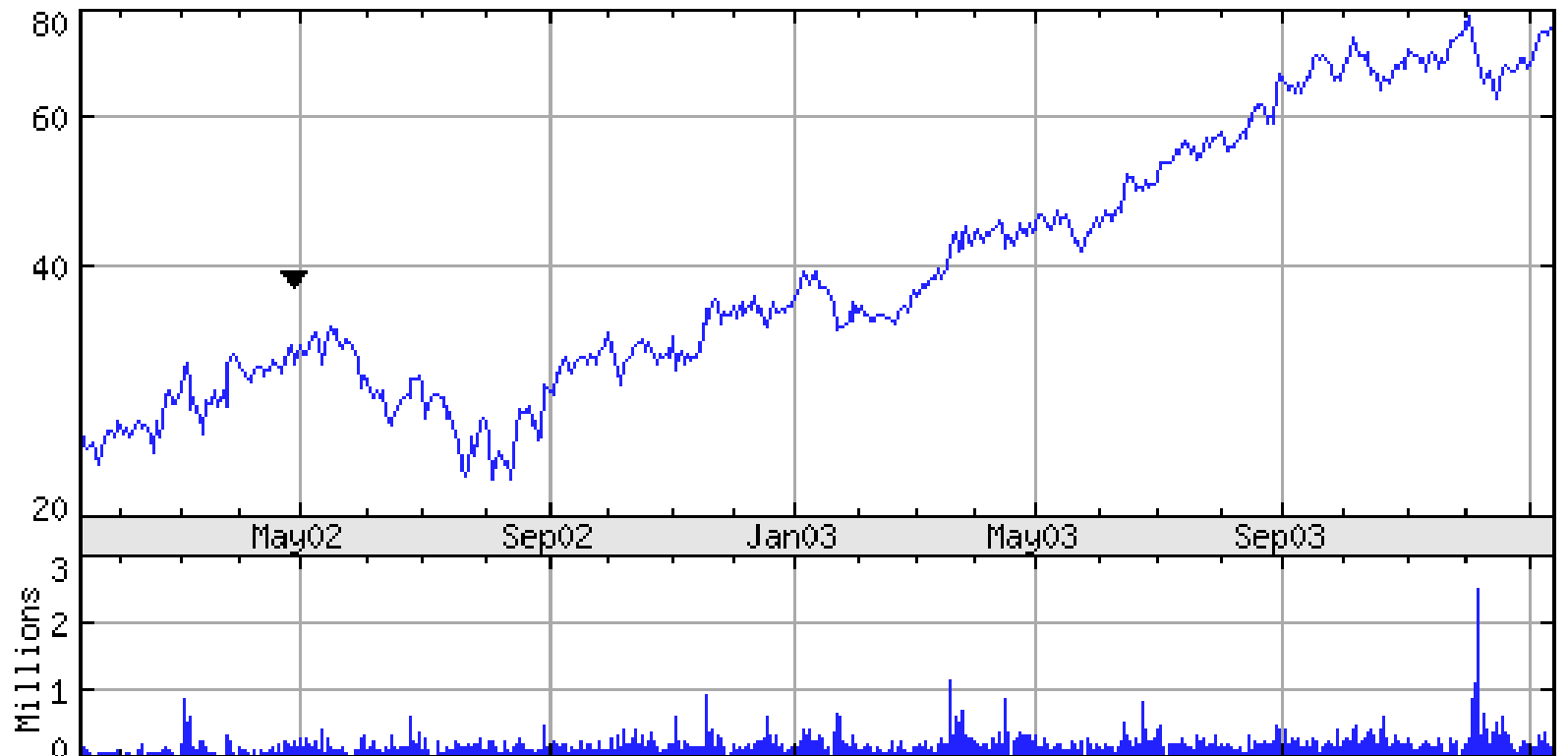
- Example: MSIT programme with CMU
- Linkages with international universities
- Linkages with corporates
 - Cisco Networking Academies, Microsoft, Sun-Java Competency Centres
- Virtual Tech University



University of Phoenix Online

APOLLO GRP-UNIV PHOENIX ONLINE
as of 12-Jan-2004

Splits: ▼



Copyright 2003 Yahoo! Inc.

<http://finance.yahoo.com/>



e-Education

Training for Emerging Opportunities

- Availability of trained manpower key to attracting investments
- Training needs
 - Accent neutralisation for call centres
 - Specialised courses in HR, finance, insurance, health services etc.
 - Middle management courses for BPO



e-Education for All!

- Digital libraries
- Sharing of content
- Satellite capabilities
- World Links



e-Health: Status in SASEC subregion

- Telemedicine yet to become mainstream
- Bangladesh
 - Bangladesh Telemedicine Services
- Bhutan
 - Telelink between Mongar Regional Referral Hospital and Jigme Dorji Wangchuck National Hospital set up
- India
 - Private sector groups like Apollo, CARE, Narayana Hrudayalaya have begun using telemedicine
- Nepal
 - Telemedicine still in its infancy



Telemedicine

- Large number of patients in the sub-region come to India for treatment
- Harmonising laws and health information standards
 - Telemedicine Act



International Connectivity: Status in SASEC subregion

- Bangladesh
 - Currently using satellite
 - SEA-ME-WE 4 (2005)
- Bhutan
 - Existing connectivity microwave and satellite
 - Optical ground wire Thimphu to Phuentsholing and Chumdo to Paro
- India
 - FLAG, SEA-ME-WE 3, SAFE, i2i and satellite
- Nepal
 - Existing connectivity microwave and satellite
 - East West Highway Optical Fibre Project



Connectivity

- Private sector Indian telecom players now control i2i (Bharti) and FLAG (Reliance)
- Big Broadband
 - 1 to 10 Gbps for enterprises
 - 10 to 100 Mbps to the home
- \$1 per person of capital investment could result in free Internet
- Wi-Max



Remote Sensing: Status in SASEC subregion

- India having remote sensing capability
- IRS Satellites
 - IRS 1A, 1B, 1C, 1D (September 1997), IRS P4 (Ocean), Resourcesat-1
- Applications
 - Agriculture and Soils
 - Forestry & Ecosystem
 - Integrated Surveys
 - Land Management
 - Geosciences
 - Oceans and Coasts
 - Water Resources



Remote Sensing

- Sharing of data for disaster management
- Tackling of environmental issues
- Watershed development



Low cost PCs: Status in SASEC subregion

- No large scale initiative in any of the SASEC countries for providing low cost PCs
- India
 - Simputer



Infrastructure: Low Cost PCs



Low cost PCs

- Thailand
 - One million low cost PCs programme
 - Microsoft offering packaged software at \$40, much below market price
- Trigem Computer Inc. of Korea and CMU working on a multifunction information appliance
 - PC, TV, digital VCR, Videophone and an IP Phone
 - Present cost about \$400 to reduce to \$250 in 2007



In Conclusion

"Opportunities are everywhere. This digital divide is not about the lack of opportunity; it is about the lack of imagination."

C.K.Prahalad

Creating Digital Dividends Conference, October 2000, Seattle.





Thank You