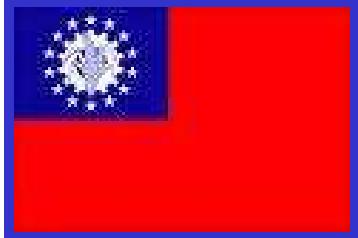
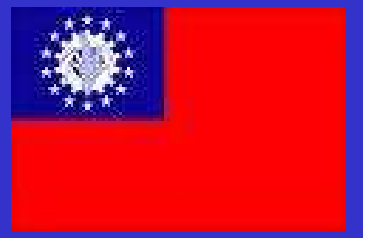


ICT Development in Myanmar



by

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M 1

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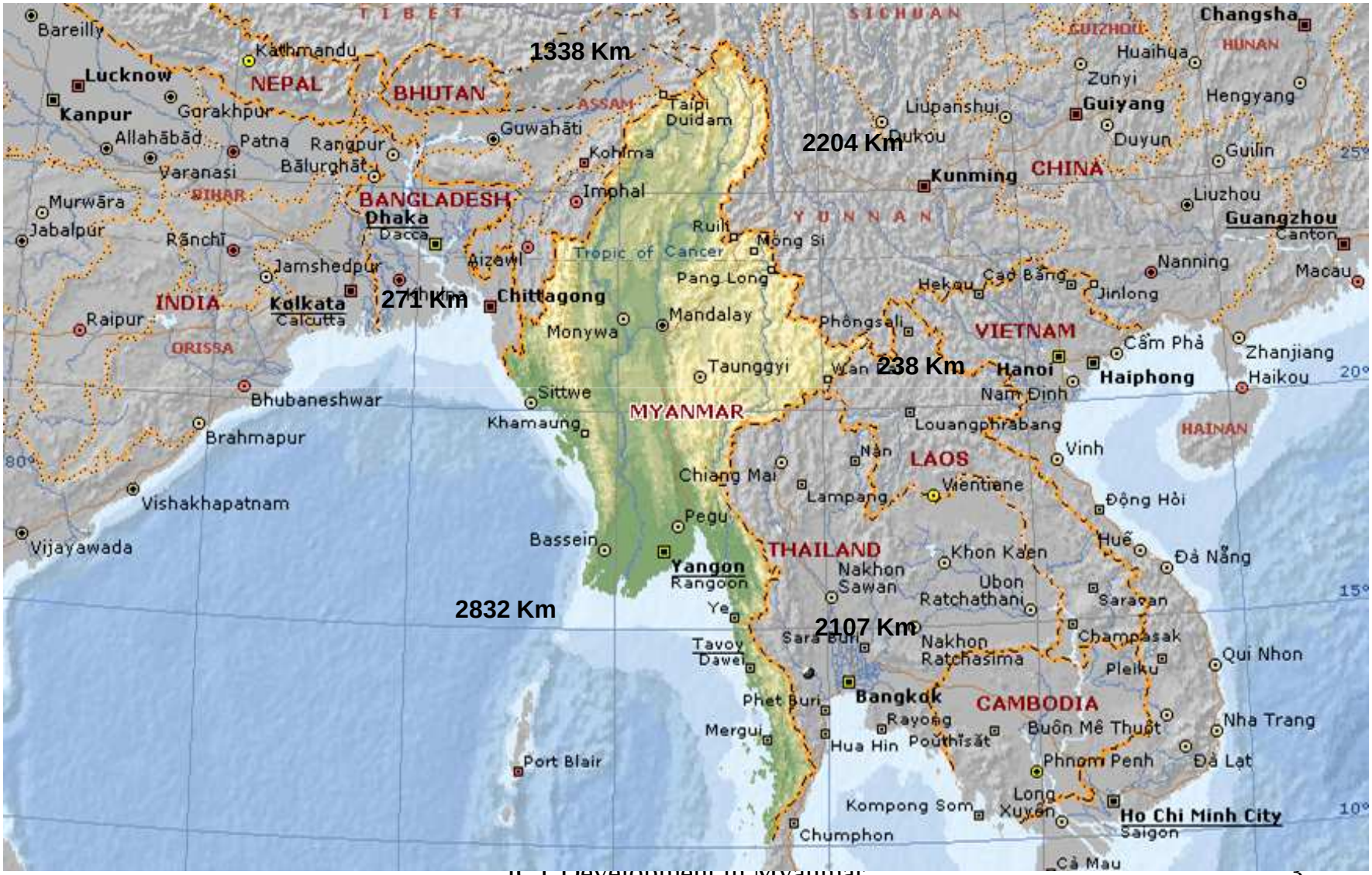
Contents

Myanmar and Neighboring Countries



Brief About Myanmar

• Area	677,000 Square km (50% of area is covered with forest)
•Borders	China, Thailand & Lao PDR in the east Bangladesh and India in the west
•Capital	Nay Pyi Daw (formerly Yangon)
•Population	54 million -With Urban –Rural ratio of 20:80
• Pop Growth Rate	1.84%
• Pop living in rural area	80%
• National Races	135

ICT Infrastructure

National backbone	: Fiber link between major cities
Cross border Fiber Link	: India-Myanmar
	China-Myanmar
	Thai-Myanmar
International Link	: Sea-Me-We(3) Cable
	: Satellite
Last Mile Link	: Dedicated Link
	: ADSL/Wireless Broad Band Access
	: MPT Satellite Terminal
Special networks	: Ministry of Science and Technology Network
	: Educational Intranet
	: Medical education network
	: Industrial Network

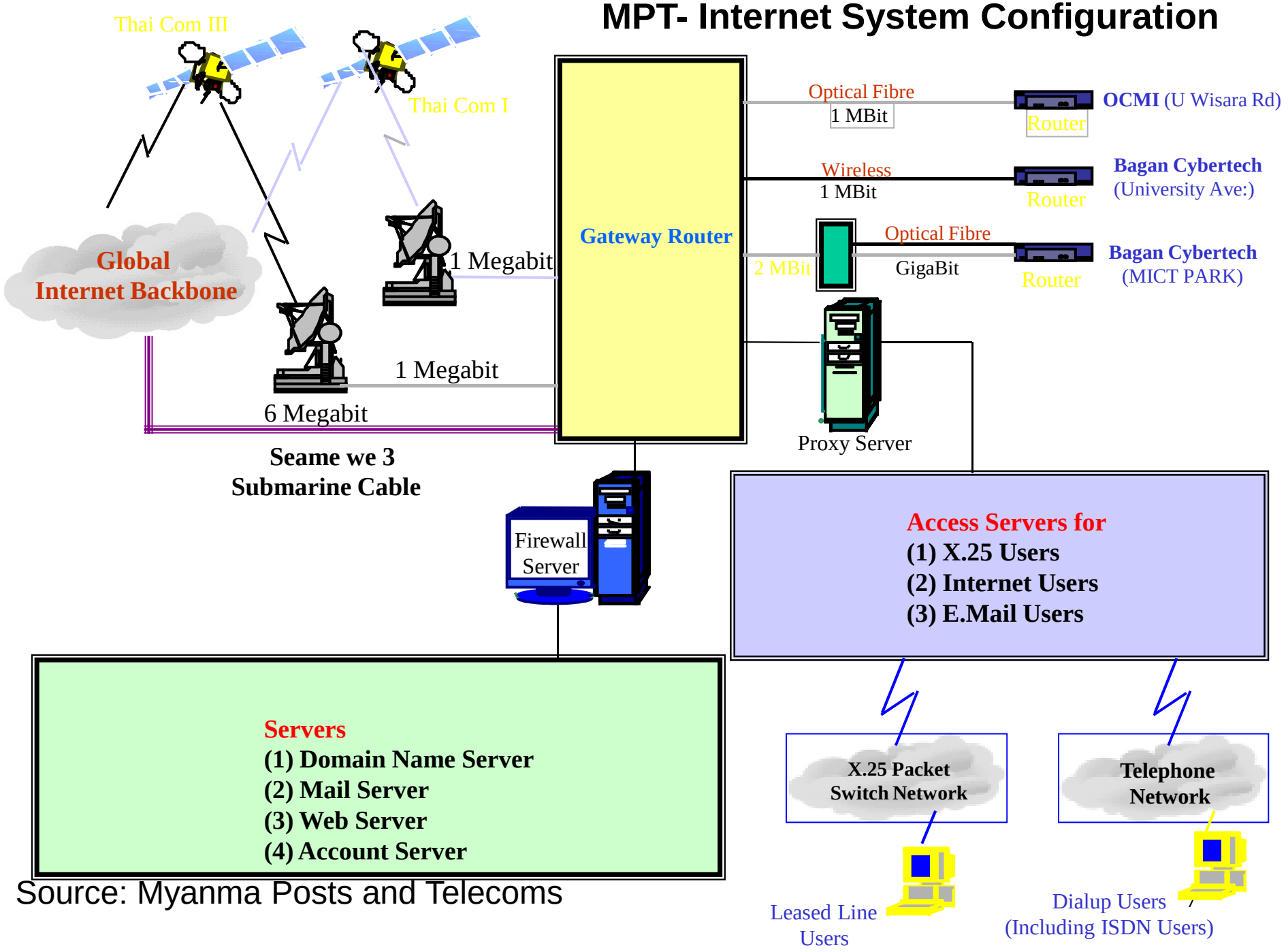
Internet Infrastructure

•Internet Service Provider
-Myanma Posts and Telecoms (MPT)
-Myanmar Teleport (formely Bagan Cyebertech)
-Red-link

•Internet Subscriber : 10,000
-User connectivity: Dial-up, ADSL, W-Max, WLL
-Mostly subscribed by govt. and Military officials in previous
-Now widely used by citizen

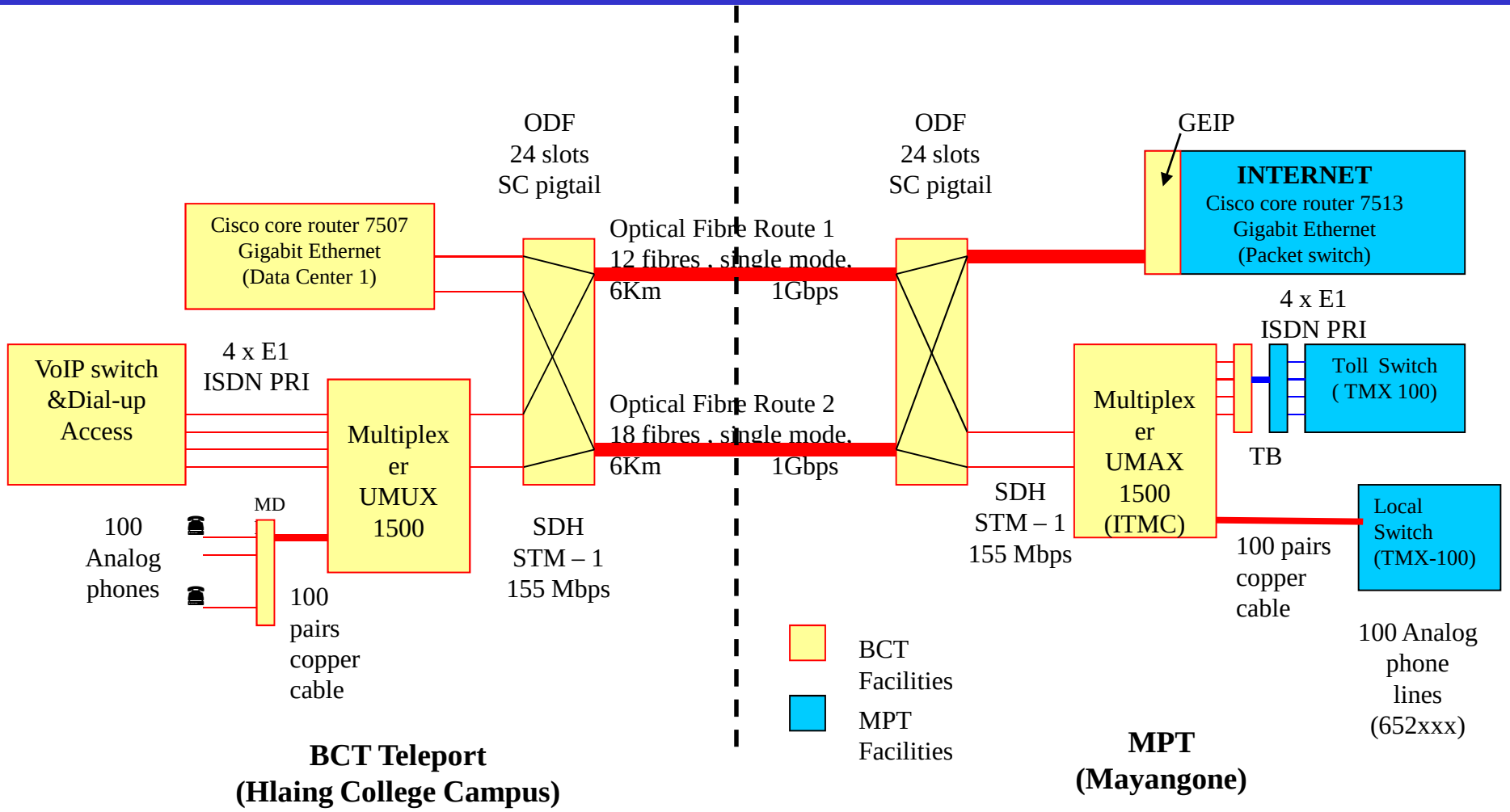
•Cyber café : around 350
•Internet User : 100,000
•Satellite is main international connectivity
•Country domain name : .mm

MPT- Internet System Configuration



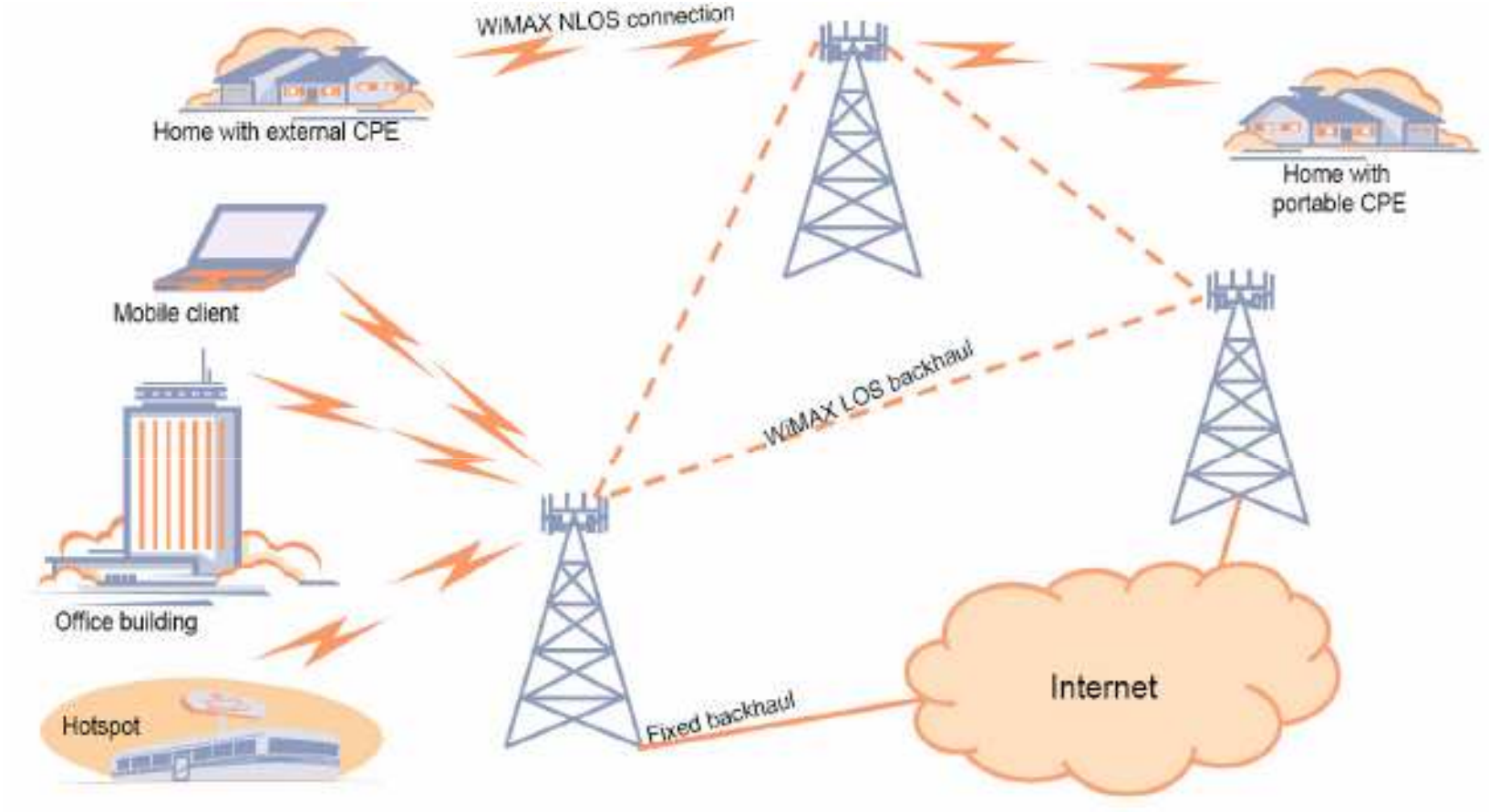
Source: Myanma Posts and Telecoms

Connectivity from BCT Teleport to MPT



Source: Myanma Posts and Telecoms

Wi-Max Development



Source: Myanma Posts and Telecoms

Internet Development (1 of 2)

➢ ***The first Official E-mail Service***

-Launched in November 1997 by MPT named as

user@mtpt400.stems.com

-Not an internet email using SMTP but uses X.400 protocol

-Winner Computer System → cheaper email services

-The first public WWW access -launched in 1998 by Business Online (www.bol.com.mm)

➢ ***Myanmar Post and Telecoms (MPT)(2000)***

-The first providing email, web-hosting, web-browsing, server co-location, FTP, intranet services etc.

Internet Development (2 of 2)

➢*Bagan Cybertech (The Biggest ISP In Myanmar)(2000)*

-Virtual private network services

-a VoIP gateway etc.

-Internet services to the general public via dial-up access

-Services to SMEs via Broadband VSAT/ IP star → 4 Mbps (expandable to 45 Mbps).

–Broadband wireless local loop (WLL) services launched in April 2002.

➢*Red-link (The first private company) (2008)*

-introduced Wi-max in Yangon

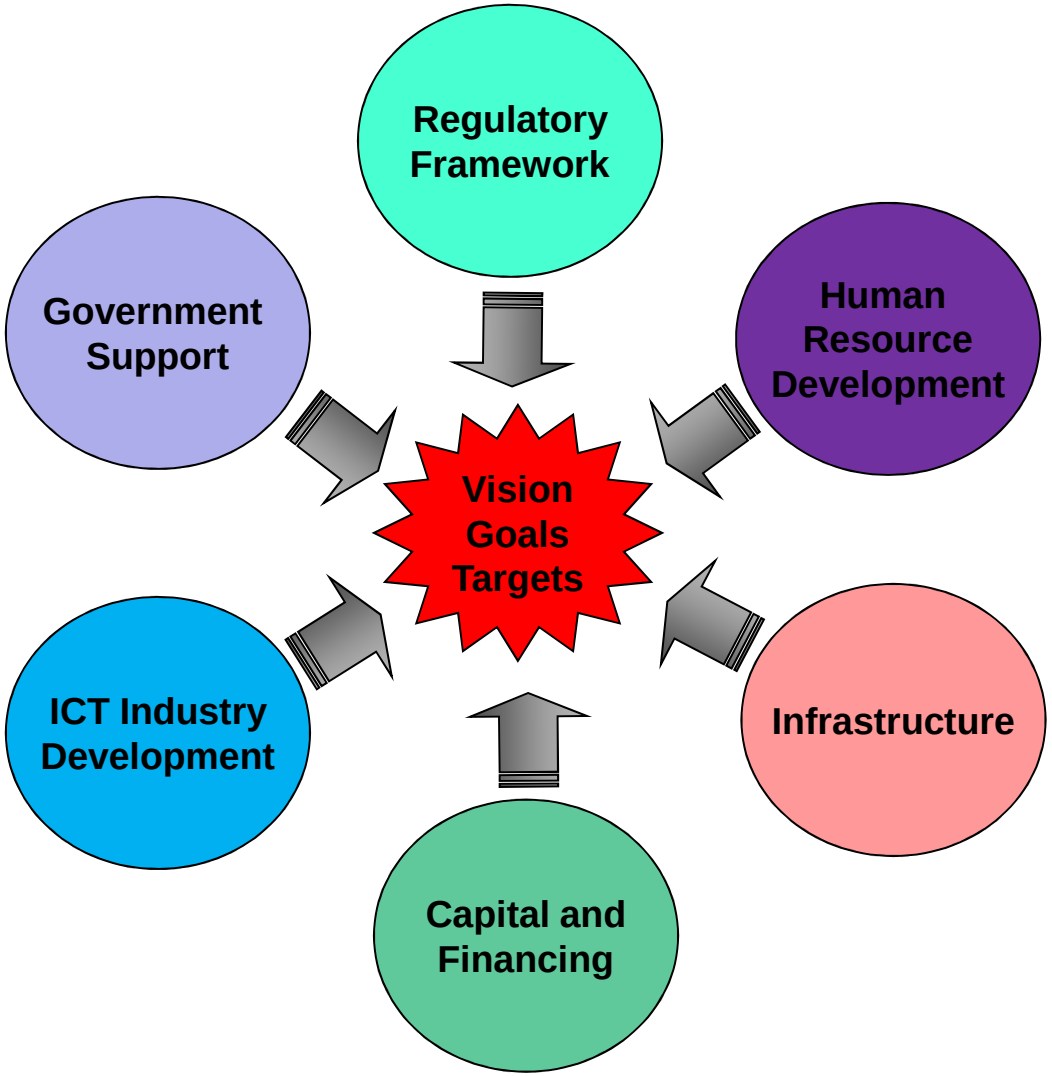
-launched portal site named as www.enjoy.net.mm

Internet Access in Myanmar

	Activation Cost ($)	Annual Cost ($)	Internet Speed			
			Consumer	Enterprise	Corporate	VPN
Dial-up	50	30	128kb/s	-	-	-
VSAT	2000	30~135	128kb/s	256kb/s	512kb/s	1Mb/s
iPSTAR	5000	40~280	128kb/s	256kb/s	512kb/s	1Mb/s
BWLL	2000	30~135	128kb/s	256kb/s	512kb/s	1Mb/s
Fiber Access	2500	500	-	-	-	1Mb/s
ADSL	2000	30~135	128kb/s	256kb/s	512kb/s	1Mb/s
Wi-Max	1800	30~135	128kb/s	256kb/s	512kb/s	1Mb/s

The speed of the Internet connection for the whole of Burma is 7.8 Gps and 25 percent of users are domestic.

Software and IT Services Development Strategy



Myanmar ICT Industry

Human Resource Development

➢ ***Working with institutions to focus on critical skills***

- 2 Unis & 24 Government Computer Colleges → Diploma to Doctoral
- Private ICT Training Schools →Diploma & Bachelor courses

➢ ***Collaborate with Overseas organizations***

- CICC Onsite Training Courses
- Joint ICT Training Programs (conducted by S'pore, Japan & India)
- Japan Myanmar e-Learning Center (MICT Park)
- MCSA/JTEC Certificate Program (Japan)
- Scholarship programs

➢ ***Implement e-Learning Initiative***

Opening 455 e-learning centers & over 900 Multimedia class rooms and computer labs

➢ ***Develop ICT Skills in the Public Sector***

e-Government Management Training Program to build internal capacity for coordinating and managing e-Government projects.

Infrastructure Development (1 of 5)

Action 1: Increase Internet and PC Penetration Rates

Objectives: To raise the Internet and PC penetration rates lack of public awareness and high cost of hardware and software are the primary reasons.

Status:

- Conduct a national campaign to heighten awareness of the Internet and its benefits.
  - IT Caravan programs
    (at least one trip for each year)

- To meet the demand of private citizens for low-cost computer
  - Budget PC Project
  - Launch at Jan 2004
  - Sell under 250$ PC bundle with software

Infrastructure Development (2 of 5)

Action 2: Building Infrastructure for e-Government Initiative

Objectives: To build infrastructure which is needed to implement the national e-Government initiative.

Status:

- Building a secure Government Network (On going)
- To build high-speed Fiber Optics network between Ministries and Departments.
- Setting up basic e-Government System
  - Document exchange
  - Electronic approval
  - Document Distribution and store

Infrastructure Development (3 of 5)

Action 3: Initiative Private Sector-Led ICT Park

Myanmar ICT Park was established in January 2002 (Yangon).

Concept	Government lead-Private Sector Driven
Location	Hlaing Campus
Size	30 Acres (accommodated 70 Software Company)
Ownership	Private
Function	Promoter and regulator Facilitator/Catalyst Incubating Center Provider of Infrastructure Interface with industry and government International gateway

Second ICT Park was established in August 2003 at Mandalay.

Infrastructure Development (4 of 5)

Action 4: Strengthen the connectivity Development

Objectives: To provide adequate infrastructure for connectivity (Broadband)

Status:

- Establishing V-SAT satellite networks for the whole country.
- Connection with SEA-ME-WE 3 submarine cable for international gateway.
- Connecting fiber line between two major cities: Yangon and Mandalay.
- Establishing broadband wireless networks in Yangon & Mandalay.
- Establishing iPstar broadband satellite communication systems for the whole Myanmar.
- Planning to provide ADSL Service in Yangon within a few months.

Infrastructure Development (5 of 5)

Action 5 : Establishing the public Internet Access Center

Objectives : To increase public access to internet

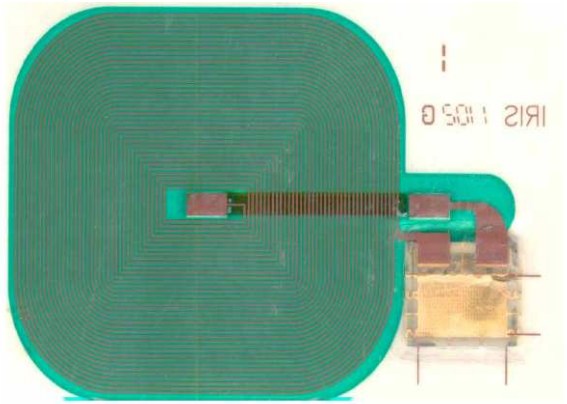
Status:

- There are 350 Cyber café in Yangon and Mandalay.
- Plan to open, nationwide within a year.
- It will include walk in internet access and IT support services.
- Community Access Center
  - Planning to establish Community Cyber Center in every town & city.
  - Government and Private Sector can than use satellite-based internet & phone even in rural area.
  - Going step by step from divisional & state cities to district & township within a year.

Government Support (1 of 2)

- Smart cards are rolled out in June 2002.

➢2000 smart cards has been issued to officials of Ministry of Defense containing personal, health and biometric information.



- Types of Cards :

➢Contact & Contactless

- Types of Integrated Circuits (ICs)

➢ Memory Card
  - 32 bit - 1KB
  - Electrically Erasable Programmable ROM (EEPROM)
  - Single Application use

➢ Processor Card
  - 2KB - 16KB
  - COS, EEPROM, RAM
  - Multiple Application use such as National Registration Card, Car License, Bank Card

Government Support (2 of 2)

e-Passport

Established 18-10-2002

e-Passport issued 5267

Key Steps

- Chip Embedded at Passport
- Key Generation
- Initialization
- Data, Photo, Finger Prints
- Personalization
- Sticker
- OCR and magnetic stripe Test
- QA Test

e-Visa

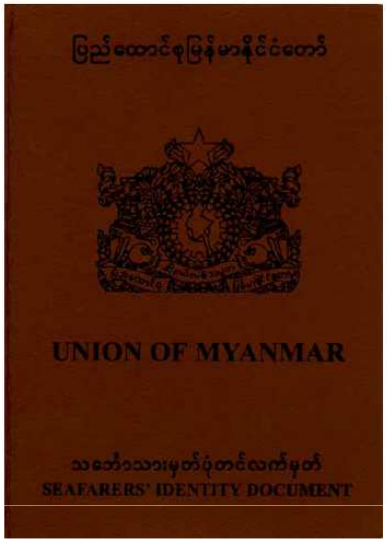
❖Launched in January 2004.

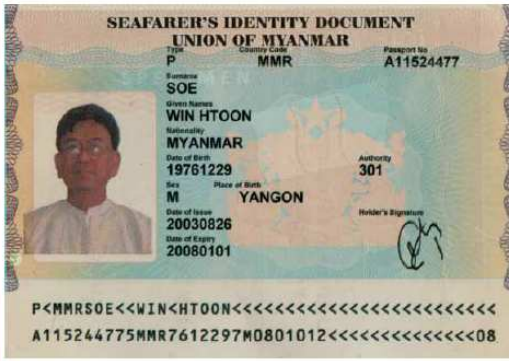
❖People who planning to visit to Myanmar can get visa information at on- line.

❖Can submit the visa application at on-line.

❖Can do the payment from on-line.

Immigration at Airport





ICT to Rural Area

- Initiated by PTD. (Telecom Authority, under MPT)
- Setting up multipurpose Community Tele Center at Phaunggyi village. (76.8 km away from Capital City)
- Assists by Telecommunication Development Bureau. (ITU)
- Purpose is to develop the living standard of people in rural area.
- Planning to install about 6000 small satellite terminals at remote areas within three years.

Issues and Obstacles

- ***Unstable Situations***

  This has slowed down the progress of our national ICT development projects a lot preventing the potential foreign investments and slowed down international co-operations and support.

- ***General economy declining***
- ***The lack of skilled personnel***

  Even though we have 2 universities and 14 colleges of Computer Studies, private training sectors and scholarship programs, we still need qualified ICT personnel. There is a severe mismatch between demand and supply of ICT workers.

- ***Brain-drain effects***

  Migration of talented ICT workers to other countries (such as Singapore)

- ***Poor communications infrastructure and Insufficient budget***
- ***Electricity problems***

References

- "Country Report on Wireless Broadband Development"; Information and Telecommunication Department, Ministry of Myanma Posts and Telecoms

- “Report on Management Statistical Development and Information Technology for National Statistical Offices"; Ministry of Myanmar Central Statistical Organization

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THANK YOU!