The Internet and BdREN in Bangladesh
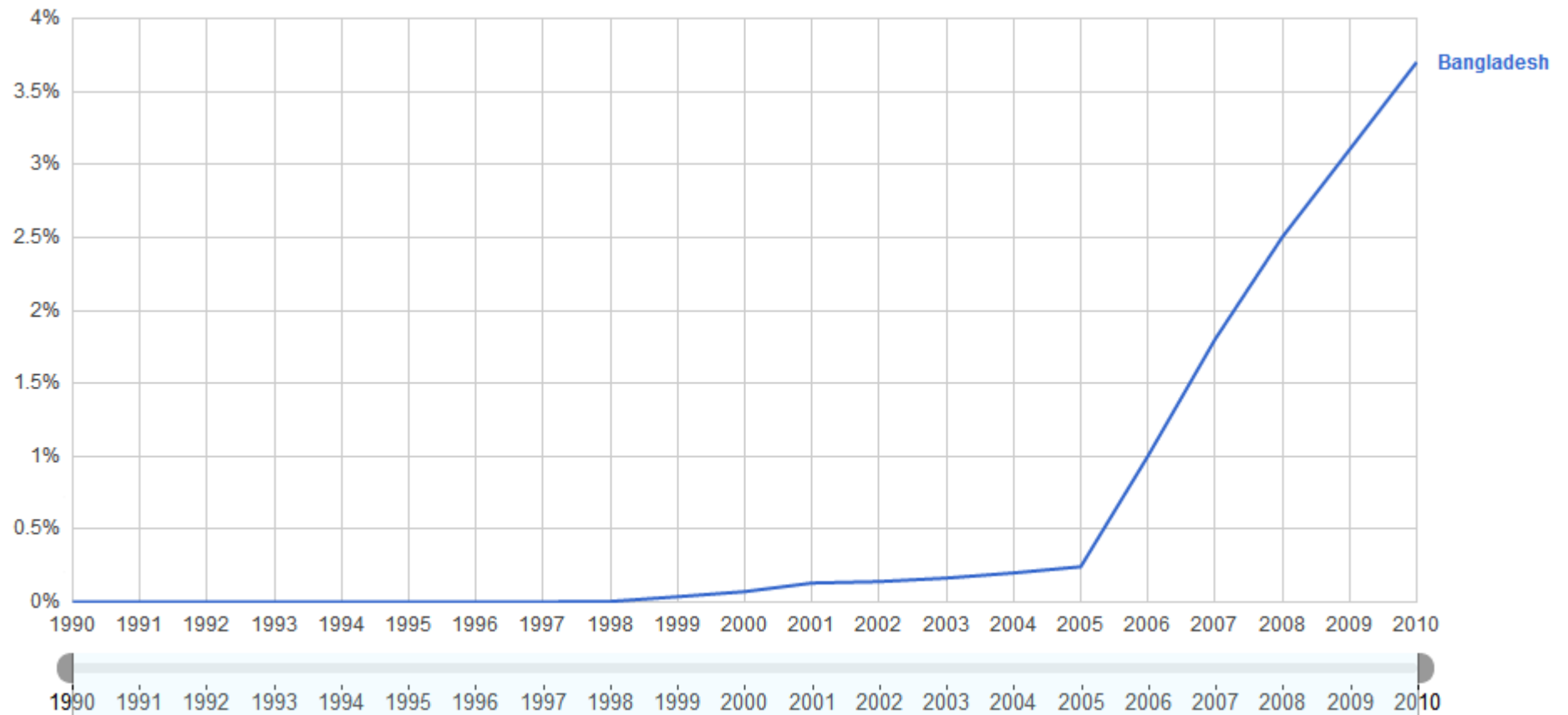
Syed Faisal Hasan, PhD
Associate Professor
CSE, University of Dhaka
Bangladesh
hasansf@gmail.com

Technology in Paradise (TIP 2013)
University of Hawaii
15 January 2013

Introduction

- Bangladesh is a country with 144000 square km and roughly 150 Million people.

- Connected to the Internet through SEA-ME-4 since 2006

- During the last two years Internet penetration increased 8 times.

- Internet penetration was 3.5% in 2011 according to ITU report. In 2010 Internet Penetration was only 0.4%. This is mostly because of the availability of WiMax and Mobile Internet.

- Around 5.5 Million users use the Internet according to ITU report.

Growth of Internet Users

Data from World Bank   Last updated: Jun 5, 2012

Internet Service Providers (ISP)

- International Long Distance Cable Operator: **01**

- International Internet Gateway (IIG) operators **36**

- International Gateway (IGW) operators: **29**

- Interconnection Exchange (ICX) operators: **26**

- International Terrestrial Cable Operator (ITC): **06**

- National Telecommunication Transmission Network (NTTN): **02**

- Internet Service Providers:

    - Nationwide: **108**

    - Cetral & Zonal: **134**

    - WiMax Operators: **02**

Telephone Service Providers

- Mobile phone operators: **06**
  - 85.455 million active subscribers in Dec 2011
  - Only one operator recently launched 3G, the rest have EDGE and EVDO.
- PSTN : **09**
  - State owned BTCL is the major one
  - IP Telephony Service Provider (IPTSP): **40**
    - They provide VoIP

Bangladesh Research and Education Network: BdREN

- BdREN is being implemented by the UGC as a World Bank funded Project since 2010

- The primary goal of BdREN are

  - to provide high performance network connectivity among the universities in Bangladesh
  - to provide research and education network connectivity with the rest of the world.

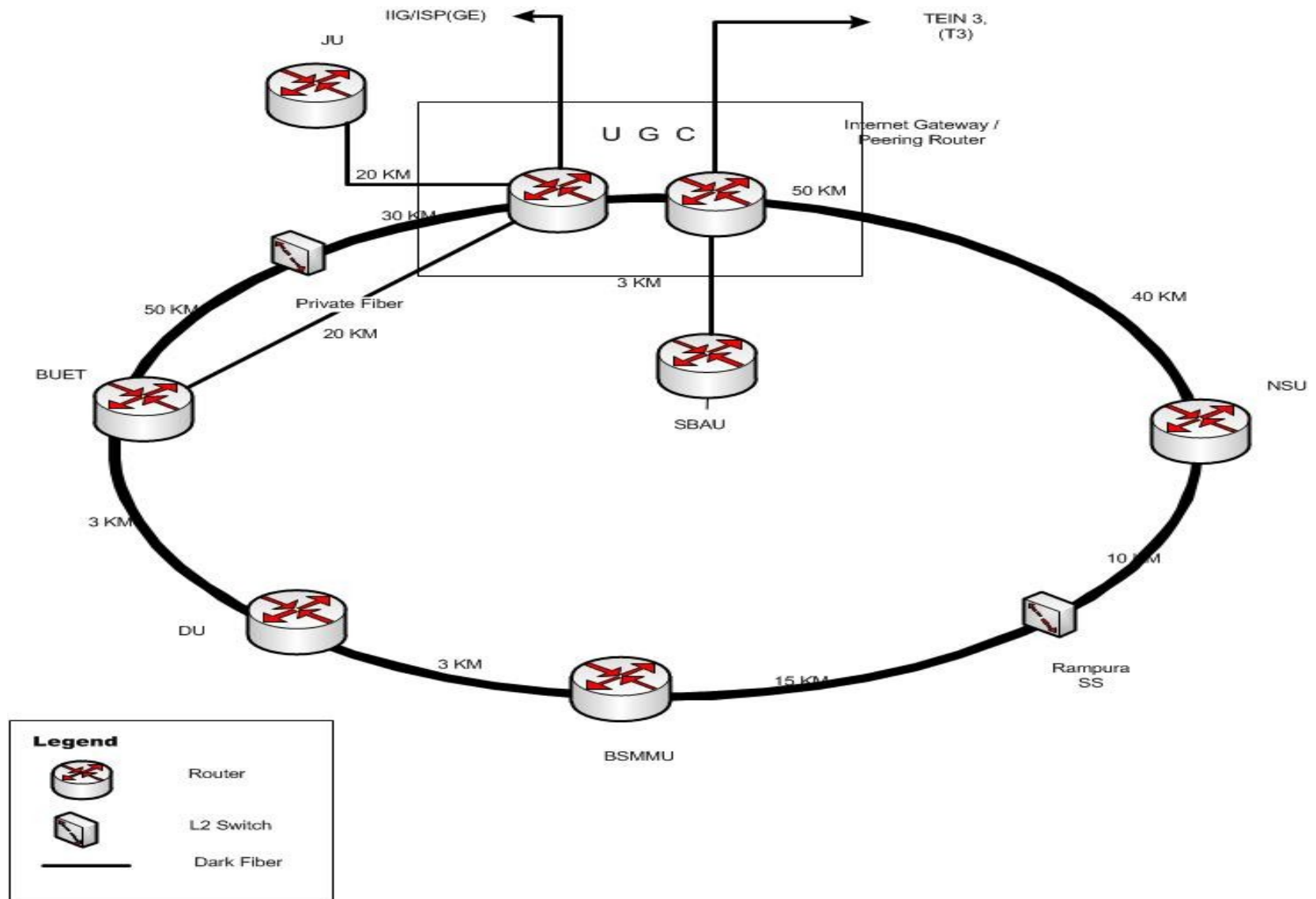# BdREN Implementation Status

- Phase 1: **Completed**

    - Acquisition of long distance fiber

    - Connecting 6 universities in Dhaka

    - 45 Mbps TIEN 3 connectivity since 2012

    - Commodity Internet of 60 Mbps

    - Virtual Class room in two universities

    - Virtual meeting room at UGC

    - Establishment of BCN in 11 universities

    - International scientific eJournals and ebooks are accesible from BdREN

BdREN's fiber network

- Acquisition of one pair of dark fiber from the nation wide over 3000 km fiber network of Power Grid Company of Bangladesh for 20 years.

BdREN's first phase network

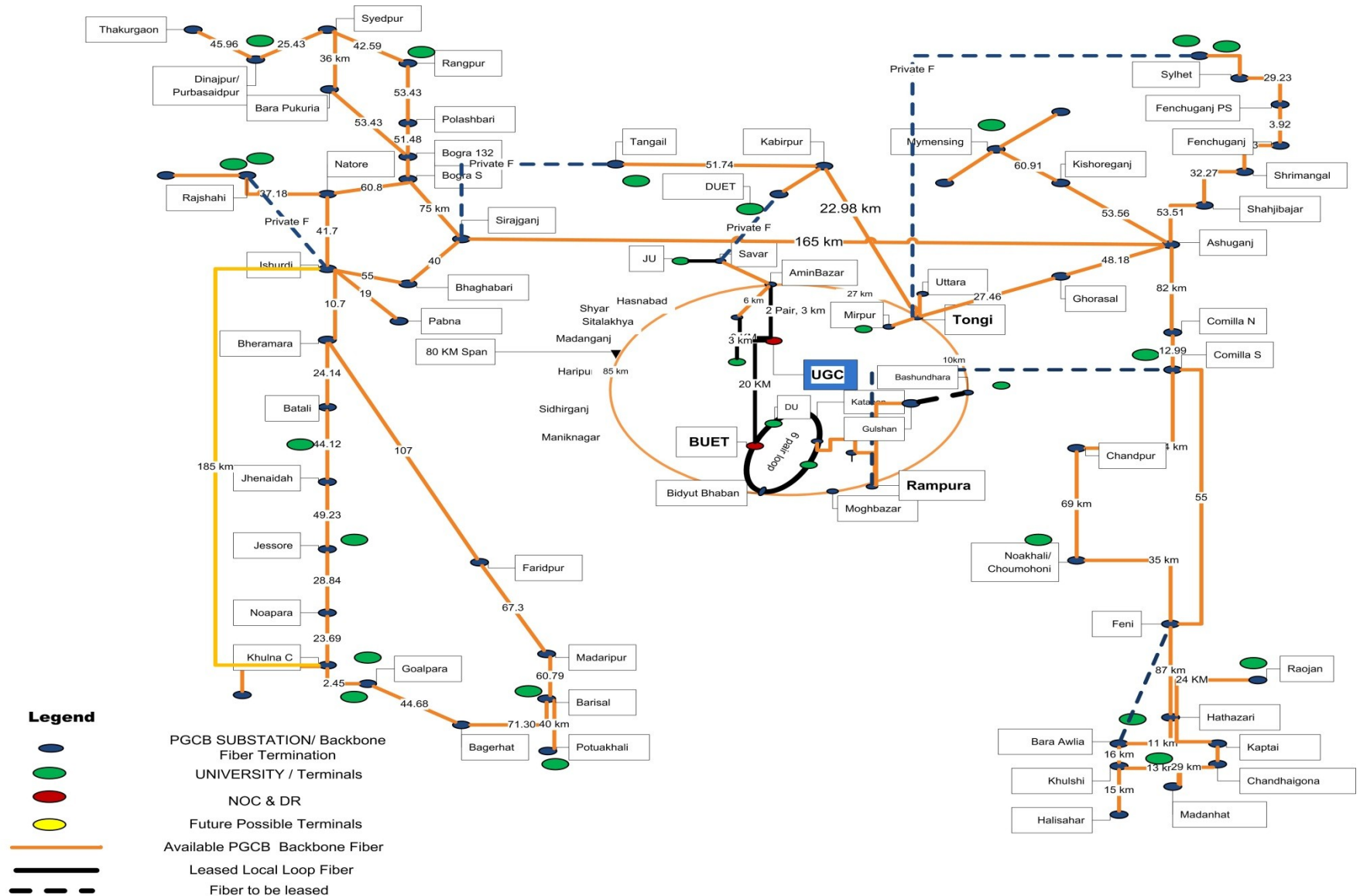# Virtual class room at Sher-e-Bangla Agricultural University

Virtual meeting room at UGC

BdREN Implementation stages

- Phase 2: On going

  - Establishment of local loop in 34 Universities
  - Establishment of BCN in 4 major universities
  - Establishment of BdREN trust

- Phase 3: in Future

  - BdREN Data center and DRS establishment
  - Virtual Class room in more universities
  - Establishment of BCN in all Universities

BdREN Planned Network

Planned BdREN services

- Web hosting for all universities

- Network Security and Management Services for all universities

- Storage facilities for archiving lecturer

- Digital Library Facilities

What does BdREN want now?

- Research collaboration in

  - Disaster warning and climate change

  - Advanced networking

  - Agro-research
  -
- Telemedicine
-
- E-Learning / Distance Learning

Challenges ahead

- Much of the future of BdREN depends on the capability of the BdREN Trust

- The pricing of bandwidth is still too much in compare to commodity Internet

- Poor campus Networks in most of the universities

- Management Overhead.

Thanks

- I am thankful to APAN and NSRC for providing me the fellowship and travel grant respectively.

- I am also grateful to Internet2 for giving me the opportunity to participate at TIP2013.

- Thanks to Professor Hashem of BdREN for providing me the latest updates.