Technology enhancement for smooth migration to NGN

GROUP-5 REPORT

Agenda

> Introduction

> Issues with IP Based Networks

> Precedence of difficulties

> Smooth realization of IP based network

> Way Ahead

Introduction

➤ **Group Subject**: **Problems and remedies for planning / deploying IP based network Infrastructure**

➤ **Group Members**
  ■ Bangladesh : Mr. Md. Golam Razzaque
  ■ India : Nishith Kumar Upadhyay (Presenter)
  ■ Myanmar : Myo Swe
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Issues with IP Based Networks

> Business/ Economic Issues

> Human Resource related issues

> Technical Issues

> Regulatory Issues

Business/ Economic Issues

- ➢ Issues related to migration

- ➢ Huge Investment requirement

- ➢ Sunk Cost of Legacy Network

- ➢ Monopoly issues by Incumbents

- ➢ Proven Business Model

  - ◼ Significance   5

  - ◼ Urgency   4

  - ◼ Cost to resolve problem   5

  - ◼ Degree of difficulty   2

Human Resource related issues

- ➢ Content and training environment

- ➢ Lack of sufficient expertise in Planning / Operation of NGN

- ➢ Awareness building and educating the end user
  - ■ Significance   2
  - ■ Urgency   2
  - ■ Cost to resolve problem   3
  - ■ Degree of difficulty   5

Technical Issues

➢ Interconnecting existing networks & IP based Networks

➢ Interoperability related issues

➢ Up gradation of existing Mobile, Fixed & IP Networks

➢ Technical Problems in migration

➢ Security in IP Networks

➢ Numbering

➢ Standardization

    ■ Significance   4

    ■ Urgency   5

    ■ Cost to resolve problem   4

    ■ Degree of difficulty   4

Regulatory Issues

➢ High Level of regulation

➢ Low penetration of Broadband & PC/End Devices

➢ Access to the Network by third party content application providers

➢ Low penetration of Telecom facilities in Rural Areas

➢ Infrastructure related issues. (Electricity etc.)

- Significance   3
- Urgency   3
- Cost to resolve problem   2
- Degree of difficulty   3

Precedence of Difficulties

➤ **The priority of the issues to be resolved:**

1. Technical issues

2. Business & Economic Issues

3. Human Resources Issues

4. Regulatory Issue

Smooth realization of IP based network

➢ Various measures related to assure end-to-end connectivity, QoS and Standardization for the new IP Networks:

- Proper planning

- Operational measures

- Standardization

- Pilot /Test Implementation

- Skill Development

Planning

➢ Adopt tested and successful technologies as per country's need

➢ Frame proper regulatory mechanism to address licensing, QoS & Interconnection related issues

➢ Identifying the various NGN Related Services and developing favorable environment for them.

Operation issues

- ➢ Addressing

  - ■ ENUM (Electronic NUMbering) by Internet Engineering Task Force (IETF)

  - ■ Mapping traditional telephone numbers with IP addresses

- ➢ Security:

  - ■ Network operators expect their infrastructure to be secure
  - ■ Control and management plane information in-band in a shared user plane

- ➢ End-to-End Quality of service (QoS)

  - ■ Guarantee of secure delivery of content during periods of congestion

Operation issues (contd.)

- ➢ Upgrade the Network at Core & Access areas.

- ➢ Operations, administration & maintenance (OAM)

- ➢ Network Management

  - ■ Automated management tools to address the complex network requirement

  - ■ Development of flexible service integration framework

Standardization

➢ Well defined country specific standards to ensure interoperability

➢ Setting up certifying Agencies like Conformity Assessment Bodies (CAB) to conform Interface compliance

➢ Setting up of test facilities and certification agencies

Pilot /Test Implementation

➢ Overall NGN implementation can be supported by a Pilot project with :

- ITU/ MIC Japan assistance

- Joint efforts by local Network operators

Skill Development

➢ Educating service providers

➢ Organizing more training courses

➢ Exchange of Information between various countries

➢ Requesting ITU/MIC Japan for development of training facilities.

Way Ahead

➢ Proper Regulatory framework for NGN Environment

➢ Implementation of the Pilot Project

➢ Customization of Standards for country need

➢ Roadmap for migration of NGN specific applications and contents

➢ Generating awareness

➢ Skill building

Thank You