The Experience of Regional Interconnection Projects from China

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1. Introduction of GMS Information Superhighway

2. Experience from the Success of GMS IS Project

3. Suggestion for the success of APIS
Origins of Greater Mekong Subregional Information Superhighway (GMS IS)

BACKGROUND

• Proposed by Ministry of Industry and Information Technology of China on 2004, aiming at promote communication and collaboration among countries in the sub region.

DEFINITION

• Commercial broadband platform, that could provide basic voice, data and internet access to facilitate applications such as distance education, telemedicine, e-government and e-commerce.

ATTITUDES

• Well received among governments, signed the MoU of the Information superhighway of the Greater Mekong Sub region on 2004.
• Participated operating enterprises signed the MoU of the network planning and construction of Information superhighway of the Greater Mekong Sub region on July, 2005.
GOAL

• Fiber-based backbone transmission network, with large capacity and high reliability within three to five years

• High-speed Internet platform, to provide government, businesses and individuals with a variety of high-quality telecommunication services such as voice, data and Internet.

• Promote economic, trade, cultural and information exchanges within the region, drive growth of other industries and narrow the digital divide between GMS and developed countries in the field of telecommunication.
PHASES

• **Phase One:** Building a backbone transmission network and a high-speed Internet.
  ✓ Building a backbone transmission network dominated by **point-to-point architecture** covering six countries.
  ✓ Building a **high-speed Internet** connecting important nodes of the six countries and rolling out subregional Internet services.

• **Phase Two:** Improving the backbone transmission network and the high-speed Internet to implement the GMS information superhighway.
  ✓ Improving the backbone transmission network by building a new layer with **three SDH rings** and by adding some SDH transmission systems into the original point-to-point structure.
  ✓ Improving the Internet by **expanding port capacities** according to service demands, and gradually rolling out various telecommunication services.
Principles of GMS IS

- The network shall be effectively interconnected with domestic networks of each country so that the GMS backbone network can fully play its linking role.
- The GMS backbone network shall be able to meet the growing demands by guaranteeing a future-proof size and scalability.
- Measures shall be taken to guarantee survivability and reliability of the GMS backbone network.
- The existing network resources shall be used as much as possible in building the GMS backbone network in order to reduce construction cost.
- The network shall be built in phases and steps.
Architectures of GMS IS

(1) E1 Circuit
- CAT-MPT  Completed
- CAT-TC  Completed
- ETL-CT  Completed
- ETL-VNPT  Completed
- ETL-TC  Completed
- TC-VNPT  Completed
- MPT-CT  Completed
- MPT-VNPT  Completed

(2) STM-1 Circuit
- CAT-ETL  Completed
- CT-VNPT  Completed
- ETL-CT  Completed
- ETL-VNPT  Completed
- TC-VNPT  Completed

point-to-point architecture
Achievements of GMS IS

**Strengthened the Physical Connection and Promoted the Economic and Trade Development of GMS countries**

- Double physical routes enhanced the connectivity of communications networks among six countries and improved the cross-border communications conditions among countries in the GMS significantly.
- Met the demand for communications, helped the development of economic trade among countries through the application of various trade informatization means on the GMS IS.

**Increased Benefits of Enterprises and Facilitated Relevant Cooperation**

- Great response in the world and real benefits for operators participating in the project from these countries.
- Reduced the cross-border connection fees to a large extent.
- Human resource training, rural communications demonstration projects, some later-added cross-border connection programs and some cross-border business has been enhanced.

**Overcame the bottleneck of the development and laid foundations for the development**

- Facilitated the construction of domestic backbone networks of these countries.
- Improved the network structure of domestic communications backbone networks of some countries.
- Enhanced capabilities of communications infrastructures of countries further and laid foundations for further development of communications/ICT industry of each country and the entire sub-region and bridging the digital divide.

**Established the Communication Mechanism and Strengthened Mutual Trust**

- Effective communication mechanism has been set up between communications authorities of countries in the GMS and enterprises participating in the project.
- Fruitful exchanges on the development, policies and business activities of telecommunications/ICT industry of these countries, strengthened mutual understanding and enhanced mutual trust and friendship.
- Laid good foundations for further cooperation on telecommunications/ICT sector of these countries.
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Another Two International Interconnection Projects initiated by China

China-ASEAN Information Superhighway (China-ASEAN IS)

• According to the definition of traditional Information Superhighway and experiences drawn from GMS IS, China-ASEAN Information Superhighway shall be a complete high-speed computers interconnection system that involves communications network, computer, database and terminal, and can provide users with a great deal of information at any time.

The Shanghai Cooperation Organization Information Superhighway

• Build a backbone transmission network with large capacity and high reliability within 3 or 5 years that would cover the whole area, using mainly optical fiber communication technology. Based on the transmission network, establish a high speed Internet network platform to provide all kind of telecom service for governments, enterprises and private persons in the area.
Summary of the Success of GMS IS

All the governments involved have the real need to join the project

- This is the most important factor for the success of GMS IS.
- The signing of MOU

A proper principle for the implementation of GMS IS

- Governments Drive, Enterprises Operate, Mutual Support and Developing Together
- The government of each country involved designated one dominant operator to take charge of the construction of GMS IS.

An effective cooperation mechanism for the construction of GMS IS

- set up a “Steering Group for the GMS IS”
- set up a “Implementation Group for the GMS IS”
Challenges of the Implementation of the Other Two Projects

Some countries do not have the real need to join the project

- They already have very perfect domestic and cross border network.
- They priority projects which come from areas other than ICT.

Some countries have a much opened telecommunications market

- The operators care more about the profit and investment recovery of the project.
- The government can not designated one dominant operator to take charge of the construction of projects.

Other factor for the failure of the other two project.

- Some countries worried about harming the interests of their own.
- The bilateral traffic do not worth to set up direct connection.
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Suggestion for the success of APIS

Make a close study of the real need of each country from the project

• This is the most important factor for the success of APIS.
• They won’t sign the MOU if they do not have real need from the project

Implement the project step by step and conduct a network planning

• Divide the whole project into several small projects/sub-projects according to different region and make progress from each of the small projects/sub-projects to get close to the final objective.
• Need a study of the new model for the investment, construction, operation of the network and financial settlement of using the network

Set up an effective cooperation mechanism for the APIS

• An effective cooperation mechanism will facilitate the implementation of APIS
China attaches great importance to the seamless connectivity for sustainable development in Asia and the Pacific, and is willing to share experiences on enhancing international communication capacity among countries, improving the flow of information to promote better and faster social and economic development.

Thanks