**BRUNEI DARUSSALAM WRITTEN REPORT FOR APEC TELECENTER TRAINING CAMP,
TAIPEI, TAIWAN 24-29 JANUARY 2005**

1. Brunei Darussalam in General

Brunei Darussalam has a total population of 348 800[1] with a total land area of 5765 sq km. The Ministry of Communications together with The Authority for Info-communications Technology Industry of Brunei Darussalam (AiTi) has been active in attending various international meetings such as APEC Tel and ASEAN to discuss matters such as the digital divide. Since a Brunei Darussalam also has rural areas, a certain degree of digital gap exists. The issue in this matter is to address Universal Service and Universal Access.

The ICT industry players in Brunei Darussalam are as follows:-

- Ministry of Communications - Policy maker;
- Authority for Info-communications Technology Industry of Brunei Darussalam (AiTi) – Regulator;
- Brunei Darussalam National IT Council (BIT Council) – provides the supporting role in the implementation of e-Government, e-Business and e-Brunei Darussalam; and
- Telecoms Department and DST Communications – Operators and service providers.

2. The Authority for Info-communications Technology Industry of Brunei Darussalam (AiTi)

The Authority for Info-communications Technology Industry of Brunei Darussalam (AiTi) was established by the Authority for Info-communications Technology Industry of Brunei Darussalam Order, 2001 ("AiTi Order"), as an independent statutory body responsible for regulating and developing Brunei's ICT industry. AiTi commenced operations on 1st January 2003, replacing the Telecommunications Department as the Authority which regulates and develops the local ICT industry. One of the primary objectives of AiTi is to contribute towards the diversification and development of the economy through the development and growth of the local ICT industry.

AiTi has set up the Industry Development and Human Capacity Building Group to address the issue of Digital Divide. Digital Divide and Universal Access is one of AiTi's six Key Thrust Areas.

AiTi has 6 key Thrust Areas;

1. Licensing Regime & Regulatory Framework
2. Promoting ICT development
3. Human Capacity Building for ICT
4. Advisory Role on ICT
5. Digital Divide & Universal Access
6. Representation at International Fora

a) Digital Divide & Universal Access

Under this key thrust area, a regulatory framework will be drawn up designating Service Providers to provide Universal Service (such as voice & internet access). Another plan is to increase PC penetration ratio through ownership of budget PCs for low income earners via special projects. Another planned initiative is to jointly develop ICT based curriculums with relevant institutions to stimulate the use of PCs for course study.

3. Universal Service Obligation

The Telecommunications Department has undergone a nationwide rural communication project to address the Universal Service Obligation. The affected areas are Temburong, Tutong and Belait districts. This involves providing fixed lines to the areas. The project completed in 2002 and the outcome of the project is that the rural community in all the three districts are connected with the rest of the country. The aim of providing the basic communication services to the public is achieved. By 2004 there are 83320 fixed line subscribers.[2]

4. Digital Divide in Brunei Darussalam

To bridge digital divide in Brunei Darussalam, Internet usage is encouraged among the society. Education plays an important role in reducing the gap, particularly in maximizing the use and benefits of the Internet. The Government has been actively promoting and implementing initiatives to bridge the gap.

5. Internet in Rural Areas

Apart from providing basic telephony, the rural areas area also provided with the internet access through the dial-up at speed of up to 56kbps. The percentage of the population owning a PC is as follows:

PC Ownership (per private household) [3]

6. Belait district is 47.5 percent
7. Tutong district is 38.4 percent
8. Brunei Muara district 50.8 percent
9. Temburong district is 25.5 percent

This is complimented by the growth of cybercafes in Brunei Darussalam. To date there are 76 registered cybercafes in Brunei Darussalam, which are mostly concentrated in Brunei Muara District. A few cybercafes are located at the other districts.

10. Mukim.Net[4]

Mukim.Net is a project which has been initiated by the Ministry of Home Affairs. The project is done is by setting up located centres at each mukim. The project is currently still undergoing further research and possibilities and is to be implemented in the near future. This is also one of E-Brunei Strategic Initiatives.

What Mukim.Net provides <u>advice to potential business community</u> on the effective use of technology. This include on-line business, consultancy & IT services, training courses, forums & workshops, promotion & marketing of Mukim/ Kampong products. At the same time it also provides <u>general community services</u> for example, e-voting of Penghulu

and Ketua Kampong, linkages to other sites, access to equipment and office facilities such as photocopying, scanning and printing.

The targeted customers or users includes parents, students, housewives, retierees, unemployed, self employed, small business people as well as Penghulus and Ketua Kampongs. With Mukim.Net, it is hoped that the objectives of the project is met. These objectives are;

   i.) To create a knowledge based and information rich country
   ii.) To improve the standard of living especially in rural areas
   iii.) To enable public access at anytime, anywhere, anyhow
   iv.) To enable communications and interactions through electronic and multimedia channels

6. Internet for Schools[5]

The Ministry of Education also has played a part in helping bridging the digital divide in Brunei Darussalam. The first BBC computers donated to secondary schools were done by Brunei Shell in 1984. This was used in computer appreciation clubs. It was only in 1986 that the Awang Semaun Secondary School became the first secondary school to introduce computer studies as an optional subject at the upper secondary level. In 1991 computer studies have been introduced as an optional subject to lower and upper government secondary schools. IBM-compatible computers or PCs were widely purchased and used in these schools.In 2002 the Department of Economic Planning and Development, the Prime Minster's Office's Short Term Economic Recovery Project", Project " Internet for Schools" was conceptualized and implemented by the Department of ICT. There are five (5) sub-projects involved in the project;

   i.) Internet Connectivity & Accessibility For Secondary and Primary Schools and Ministry of Education – all government primary and secondary schools Ministry of Education and its various departments have internet connectivity and accessibility.
   ii.) Computer Hardware and Software For Secondary and Primary Schools where computers are provided for Net access at the administration room and library of each school.

iii.) Computer Hardware and Software for ICT Services and Resource Center in Ministry of Education.

iv.) Network Infrastructure for Resource Center in Ministry of Education

v.) Site Preparation for Resource Center in Ministry of Education

By end of 2002 a joint initiative project between Ministry of Education and BAE Systems (UK) was implemented in four primary and secondary schools in Brunei Darussalam. A total of 80 teachers and officers from the Department of Schools, Department of ICT and Department of Curriculum Development attended a five day ICT and Design and Training Course from the 23rd to the 29th October 2002. This course was organised by BAE Systems (UK) and conducted by experts from the United Kingdom. Courses covered during the training were the Design and Technology for Primary and Secondary, CAS/CAM & Interactive Whiteboard Applications.

According to the ICT Department in the Ministry of Education, to date almost all the students have access to computers and the internet in their schools.

With the above explanation on the various initiatives, it shows that the government of Brunei Darussalam has taken the necessary steps and will be implementing more in the future to ensuring that the public has the opportunity to access and use the services. In terms of establishing a telecenter in Brunei, this is still to be realized. More research on the various factors involved in establishing one needs to be considered especially if it helps to reduce the digital gap.

7. Business and Entrepreneurs Development Centre

The Business and entrepreneur Development Centre is an agency under the Ministry of Industry and Primary Resources which conducts ICT courses to support the development of Small and Medium enterprises (SMEs). These courses have been launched since 1999. The targeted participants are SMEs, retirees, unemployed graduates and those intending to set up their own business. The courses offered ranges from basic Microsoft courses to web designs and programming as well as courses on e-commerce and marketing.

8. Summary

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Although, there is no 'telecenters' in Brunei Darussalam yet, but initiatives to bridge digital divide have been actively pursued by various agencies. Such initiative can further be enhanced by exploring possibilities of engaging collaborative work to reduce the digital gap, particularly in the rural areas. Telecenters can be considered as one of the methods to reduce digital gaps in the rural areas.

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[1] Brunei Darussalam statistical Yearbook 2003
[2] Telecommunications Department, JTB 2004
[3] Brunei Economic Bulletin, Vol 1. Issue 5 , January 2003
[4] Ministry of Home Affairs, Brunei Darussalam, January 2005
[5] Ministry of Education, IT Department, January 2005