Legislative Council Panel on
Information Technology and Broadcasting

Digital Divide

Purpose

This paper briefs Members on Government's policies and measures to address issues relating to digital divide.

Background

Definition of Digital Divide

2. The Organisation for Economic Cooperation & Development defines "digital divide" as "the gap between individuals, households, businesses and geographic areas at different social-economic levels with regard both to their opportunities to access information and communication technologies (ICT) and to their use of the Internet for a wide variety of activities"[1]. With this broad definition, "digital divide" exists in every economy in some form or the other. The difference is therefore in the extent of the divide.

ICT Development in Hong Kong

3. Hong Kong is one of the most advanced economies in the Asia-Pacific Region. Our ICT development is at the forefront in the region. Hong Kong has excellent telecommunications infrastructure. Our personal computer (PC) and Internet penetration rates are comparable to advanced economies in the world, and our mobile phone penetration and smart card utilisation are also amongst the highest in the world. Generally speaking, a substantial proportion of our population already have the opportunities to access ICT and the use of the Internet. Digital divide is less a problem in Hong Kong

[1] Understanding the Digital Divide, OECD, 2001.

as compared with other places in the world. Our focus in addressing digital divide is therefore on how to avoid its emergence and to strengthen the community for exploitation of opportunities in the digital world. This is a key element of our Digital 21 IT Strategy.

Household Survey on the Use of ICT

4. According to the annual household survey conducted by the Census and Statistics Department in March 2000, we have a household PC penetrate rate of around 50% and an Internet penetration rate of 36%. The rates increase with the increase in household income as follows –

Monthly household income (HK$)	PC Penetration Rate (%)	Internet Penetration Rate (%)
< 10,000	15.3	7.7
10,000 – 19,999	45.9	29.5
20,000 – 29,999	62.8	46.7
30,000 – 39,999	70.7	55.9
40,000 – 49,999	74.2	60.2
> or = 50,000	82.8	71.5
Overall	**49.7**	**36.4**

5. There is no appreciable difference in the penetration rates in respect of households in public or private housing. The difference in usage of PC and the Internet between the two sexes is also insignificant -

Male		Female	
PC Usage Rate (%)	Internet Usage Rate (%)	PC Usage Rate (%)	Internet Usage Rate (%)
44.1	**32.0**	**42.0**	**28.5**

6. However, senior citizens have a lower PC and Internet usage rate than the younger ones as shown below -

Age Group	PC Usage Rate (%)	Internet Usage Rate (%)
10 – 14	72.8	43.1
15 – 24	78.9	64.5
25 – 34	65.0	48.1
35 – 44	44.5	28.3
45 – 54	20.2	11.5
55 – 64	6.6	3.2
> or = 65	0.6	0.2
Overall	**43.1**	**30.3**

7. We also understand that people with disabilities, housewives and the new arrivals may also have less opportunities to access ICT. In order to bridge the gap or avoid the emergence of potential gap between various sectors of the community, Government has developed policies and implemented measures to tackle the issue.

General Policies

8. Under the "Digital 21" Strategy, we aim to encourage and promote the wider use of ICT in the community. We have implemented various initiatives under the strategy, including enhancing the use of ICT in education, providing free computer facilities for public use, offering free ICT awareness courses and e-mail accounts, enhancing web accessibility, and making available telecommunications connections at affordable prices.

9. On the social welfare side, welfare service clients and the disadvantaged individuals are encouraged to use ICT by teaching them the skills and by making ICT readily accessible to them. In respect of people with disabilities, we recognise the potential of ICT in enhancing their employability and enriching their lives. We support the use of technology-assisted devices to increase accessibility and use of ICT by people with disabilities. For senior citizens, we encourage them to learn to use ICT so as to enrich their lives by exploring opportunities in the increasingly knowledge-based and technology-oriented society.

Education and Training Initiatives

ICT Training in Schools

10. In order to eliminate the potential risk of "digital divide" in the future generation, IT training in schools is crucial. We are actively pursuing the 5-year strategy (1998-99 to 2002-03) on "Information Technology for Learning in a New Era" launched in November 1998 to promote ICT education in schools. This involves capital spending of $3.2 billion and annual recurrent spending of over $550 million. Our objective is to enhance the effectiveness of teaching and learning by harnessing the power of IT.

11. One of the key components of the strategy is to provide training for all teachers. Our targets are that by the 2000-01 school year, all teachers will reach at least the "basic" level of ICT competency, all pre-service teachers will reach the "upper-intermediate" level; and by the 2002-03 school year, about 75%, 25% and 6% of teachers will reach at least the "intermediate", "upper-intermediate" and "advanced" levels respectively. To this end, about 85,000 training places have been or will be provided to serving teachers during the 1998-99 to 2002-03 school years. Up to March 2001, more than 38,000 teachers have completed the "basic" level training; 3,500 teachers the "intermediate" level training; 1,900 teachers the "upper-intermediate" level training; and 1,600 teachers the "advanced" level training.

12. We have targeted to deliver 25% of the school curriculum with the assistance of ICT by the 2002-03 school year. Our aim is to ensure that our future generation has the capabilities to process information effectively and efficiently, and develops the attitude and capability for independent life-long learning.

Increasing the Number of Internet Connections for Schools

13. To encourage students to use the Internet for self-learning, we have also provided recurrent grants to schools to connect to the Internet. All schools are now connected to the Internet and over 90% of them are connected by leased line or broadband.

Improving Computer Access for the Under-Privileged Group

14. To help students from less well-off families who cannot afford to buy computers for use at home, a sum of $200 million from the Quality Education Fund has been allocated to provide funds to secondary schools to buy notebook computers with free Internet access for loan to needy students. Moreover, in order to ensure that needy students will have free access to computers and Internet outside normal school hours, incentive grant has been provided to schools to encourage them to make available their computer rooms and ICT facilities (including those with Internet access) for use by students after school hours. In the 2000-01 school year, about 560 schools have applied for and received the incentive grant.

Professional ICT Training for Secondary Students

15. We will also collaborate with the ICT industry to provide professional IT training to students at secondary level so that students can gain early exposure to the use of ICT. These training programmes will lead to professional qualifications which are recognised internationally and will help the students acquire state-of-the-art ICT skills. This will give them a competitive edge in establishing a career in the ICT field or pursuing future study in ICT. We will also explore the provision of ICT training to those secondary school leavers who may wish to pursue an early career in the ICT field. The training will also equip them with qualification which can be accepted academically if they wish to pursue higher study at a later stage.

Vocational Training and Employees Retraining

16. In addition to training and education in schools, there is also a demand in the market for employees in various sectors to have basic ICT skills. This opens up job opportunities for the unemployed as well as the employed to be engaged in ICT related jobs. At the vocational level, the Hong Kong Institute of Vocational Education of the Vocational Training Council (VTC) has offered over 3,000 IT sub-degree training places in 2000-01. Each year, the Information Technology Training and Development Centre (ITTDC) of the VTC has also provided about 10,000 training places under its IT skills upgrading courses for in-service personnel and IT conversion courses for non-IT university graduates. In addition, the ITTDC has provided through the

Youth Pre-employment Training Programme about 1,000 training places for the IT modules in 2000-01.

17. Apart from the IT courses provided by the VTC, the Employees Retraining Board (ERB) is at present providing over 40,000 short term basic IT skills training places each year to help trainees sustain their employment in a knowledge-based society. We will explore with the ERB to organise more of these courses to meet the IT training needs of the workforce. Besides, the ERB has offered 200 training places under the IT Technical Assistants Programme in 2000-01 to help trainees to take up low-end IT jobs. The number of training places will increase to 300 in 2001-02. Also, the ERB is now jointly running an IT Assistant Training (ITAT) course with the VTC. This course targets at junior IT assistant level. It takes about 10 weeks to complete the course which covers areas like basic IT skills, web authoring, introduction to e-commerce, networking etc. The pilot course has received positive response from the market and achieved an encouraging placement rate for the trainees. 900 training places were provided in 2000-01. We will continue to provide another 1,400 training places in 2001-02 to increase the supply of trained IT manpower at the junior level. We will review the course in the light of market demand.

18. Separately, the VTC is implementing a $176 million three-year strategy to strengthen its IT infrastructure and services to enhance the quality of teaching and learning. The VTC will also enhance its IT-related services in a number of areas, including the development of an e-learning portal for delivering VTC courses on the Internet and setting up an IT Skills Assessment Centre to develop an effective skills assessment mechanism for IT users and practitioners.

Technology Diffusion in the Community

Affordability of Telecommunications Services

19. Our policy is to provide a favourable environment for ICT to diffuse in the community. We have adopted pro-competition and pro-consumer policies in the telecommunications sector. Market liberalisation and competition have driven the prices of telecommunications services down to a

competitive and affordable level.

20. In the mobile phone sector, the availability of six operators and eleven networks have enabled Hong Kong to become one of the economies with the highest penetration (78%) in the world. In the fixed line sector, Hong Kong has achieved universal coverage for fixed line telephone networks. The fully liberalised market and large number of Internet service providers (over 240) have resulted in 36.4% of households having Internet connection (as of March 2000), which is comparable to most of the developed economies.

21. The broadband networks cover all business premises and over 95% of households in Hong Kong. Further liberalisation measures are expected to enhance substantially the choice of broadband access to households and will keep the prices further down. To date we have a total of over 400,000 broadband Internet connections.

Free Access to ICT Facilities

22. Under the "Community Cyberpoint" project and through subvention to non-government organisations (NGOs), we at present provide more than 2,200 PCs with Internet connection for free use by the public at convenient locations around the territory, including community halls/centres, District Offices, public libraries, post offices, and Government-subvented organisations and voluntary agencies. A super cyber centre with 100 PCs to provide free ICT facilities, resource materials and ICT training to the community is also being set up at the former Canton Road Government Offices in Yaumatei. By end 2001, we will increase the number of public computers available to the community to about 3,200.

23. To enable the blind and the visually impaired to access computers and the Internet, computers with specially designed facilities were installed at eight NGO-run service units. These special facilities include screen enlarging software, voice synthesizer software, power braille and large-size flat LCD monitor. We will explore the further development of this project in the light of response and operational experience. Apart from that, 24 public libraries also provide PCs which have installed similar software for the blind and the visually impaired. In addition, special arrangements have been made in the design of the Community Cyberpoints to facilitate access by people who are physically

handicapped such as wheelchair users.

24. To further encourage the use of ICT, we have also launched the Universal Free E-mail Service in co-operation with the ICT industry and over 1.3 million free e-mail accounts have been distributed.

Funding for Personal Computers for People with Disabilities

25. A Central Fund for Personal Computers was set up in 1997 under the Director of Social Welfare Incorporated Account with an allocation of $1 million from the Special Coin Suspense Account. The purpose of the Central Fund is to assist people with disabilities to set up PC workstation at home so as to help them find and sustain an income-generating job. To date, 63 applicants have received support with a total expenditure of $979,000. A grant of $3 million from the Lotteries Fund has been injected in March 2001 into the Central Fund so that the scheme can be extended. We expect that about 200 more disabled persons will benefit.

Availability of Software Products for People with Disabilities

26. We have provided, through the Innovation and Technology Fund, funding to local institutions for the development of software products for the blind and visually impaired, e.g. the "Access with Speech and Braille" developed by the Hong Kong Polytechnic University on Chinese voice synthesizer software. We are also liaising with the Hong Kong Blind Union on how this area should further develop.

Knowledge and Awareness

27. We are aware that some sectors of the community may not have the opportunities to fully appreciate the benefits brought about by the development of ICT. To address this matter, we launched the "IT Hong Kong" campaign in September 2000 to promote the awareness of ICT in the community. The campaign comprises a series of ICT awareness programmes, the establishment of a dedicated website, the introduction of an ICT Pioneer scheme, the organising of district ICT activities, and broadcasting educational and promotional programmes about ICT on television.

28. The purpose of the district-based ICT awareness programme is to enable the public, especially those who have less opportunities to use ICT, such as senior citizens, housewives and new arrivals, etc. to learn basic ICT knowledge. In the past six months, we have provided free basic ICT introductory courses to around 9,000 participants.

29. In collaboration with the Social Welfare Department (SWD) and Hong Kong Council for Social Services, we have also provided in 2000-01 about 3,200 places of ICT awareness programme for different categories of people with disabilities such as the visually impaired, mentally handicapped, physically handicapped, etc. to acquaint them with basic computer operations and the use of adaptive devices. Courses are also provided to more than 100 "trainers" to help them acquire an understanding of the special needs of different disability groups and better skills in teaching people with disabilities. The “IT Hong Kong” campaign has also received the Outstanding Issues Awards from the View of People with Visual Impairment from the Hong Kong Blind Union. Through the SWD, we have also arranged in 2000-01 basic ICT awareness courses for 5,000 senior citizens to arouse their interest in the use of ICT to enrich their daily lives.

30. In the light of the positive response, we will continue to provide such ICT awareness course in 2001-02. In addition to the "IT Hong Kong" campaign, Government has organised, and co-organised with other NGOs, various activities to promote the awareness and use of ICT targeting at different sectors of the community. Some examples are -

- The Radio Television Hong Kong (RTHK), in collaboration with the Hong Kong Computer Society, produced a series of TV episodes entitled "IT Files" in 1999 to promote the use of ICT in our daily lives. In the light of the favourable public response to the first series, the RTHK produced the second series of "IT Files II" which featured ICT usage and development in Hong Kong as well as in other places. The "IT Files II" programme was broadcast earlier this year.

- Government partnered with the Pegasus Social Service Christian Organisation (Pegasus) and operated the "E-Community Ambassador" in 1999-2000. The project made use of a mobile facility to promote various Government ICT initiatives around Hong Kong at community level. The Quality Education Fund has also funded the Pegasus to operate the IT Training Centre, mobile IT Bus and e-Teaching Aids Centre which help train school teachers and students to use ICT for teaching and learning. In collaboration with the Home Affairs Department, Pegasus is now orgainising IT awareness courses and is planning other ICT promotional activities in some districts.

- To further encourage the use of ICT among women at grassroot level, a Central Co-ordinating Committee on the Promotion of IT Usage among Women chaired by the Director of Home Affairs has been set up to co-ordinate and encourage implementation of ICT training programmes and activities organised by Government, NGOs and private sector for women. Members of the Legislative Council, representatives from NGOs and relevant Government bureaux and departments serve on the Committee to promote the use of ICT among women.

- In 2000, under an "Opportunity for the Elderly Project", the SWD provided financial subsidy of $0.3M to welfare sector NGOs, etc. to launch 43 ICT related projects benefiting 13,600 senior citizens. The projects included basic training on the use of Octopus cards, automatic teller machines, basic web surfing, etc.

Access to Government Services

31. Government has been leading by example in the adoption of ICT to enhance the quality and efficiency of public service delivery. We have launched the "Electronic Service Delivery" (ESD) scheme to deliver online services to the community 24 hours a day and 7 days a week. Members of the public, including people with disabilities, can access these services through the Internet or public kiosks installed at convenient locations. One of the aims of the ESD

scheme is to familiarise the public with carrying out transactions through electronic means so as to enhance the ICT knowledge of the community.

32. To meet the needs of people with disabilities, the ESD website is designed in conformity with the internationally recognised "Web Content Accessibility Guidelines" developed by the World Wide Web Consortium. It also provides text only version for use by the blind and the visually impaired. The public kiosks are also equipped with touch pad for easy web page navigation and control by people with physical handicap such as wheelchair users. In the further implementation of the scheme in 2001-02, we will supervise the ESD operator to introduce improvement measures in respect of the design of the ESD web site and other ancillary facilities. We will also consult representative bodies of the blind and the visually impaired with a view to further improving the scheme and facilitating all members of the community to obtain ESD services.

33. To facilitate access by the blind and the visually impaired to Government services, we aim to enhance all Government websites by 2002 or earlier in accordance with our internal web accessibility guidelines, which are developed based on the "Web Content Accessibility Guidelines" and with input from the Hong Kong Blind Union. These Guidelines have also been issued to public bodies and Government subvented organisations for reference and adoption. Government also organised seminars for the ICT industry in order to enhance its awareness about web accessibility. Speakers of the seminars included representatives from the Hong Kong Blind Union, the Equal Opportunities Commission, the universities and Government. We will arrange similar seminars for the public bodies and Government subvented organisations.

34. We have included, in our "Digital 21" website (www.digital21.gov.hk) a section on the "Tips for improving accessibility of web pages" which places special emphasis on the needs of users who have impaired vision or hearing. We are also in close liaison with industry associations like the Webmasters (Hong Kong) Association to promote the adoption of web accessibility guidelines in the private sector.

Conclusion

35. The development of ICT should not benefit just certain groups of people. It should benefit the community as a whole. Government is committed to strengthening the capability of the community to explore the opportunities of the digital world. We are pursuing this through different means: education and training, facilitating technology diffusion, promotion of ICT awareness and knowledge, and enhancing accessibility. We will continue to strive and promote the wider use of ICT in all sectors of the community under our Digital 21 Strategy.

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