

**For information on
14 May 2012**

**Legislative Council Panel
on Information Technology and Broadcasting**

Progress Report on Digital Inclusion

Purpose

This paper updates Members on progress of Government's digital inclusion initiatives.

Background

2. Hong Kong is a mature digital economy. With broadband take-up rate of over 85%, use of the Internet for information and online services has become a daily routine for most people. Persons who are not digitally connected could be excluded from the mainstream community. Advancement in information and communications technology (ICT) has opened up opportunities to assist the elderly and persons with disabilities, etc. to improve their quality of life. One of the five key action areas of Government's Digital 21 Strategy is to build an inclusive, knowledge-based society. In consultation with the Task Force on Digital Inclusion, which is set up under the Digital 21 Strategy Advisory Committee to advise the Government on the strategies and priorities of measures to achieve this objective, our digital inclusion initiatives in 2011-12 focused on three priority groups, namely, students from low-income families, persons with disabilities and the elderly. Progress of the programmes for these groups is set out in the following paragraphs.

Internet Learning Support Programme

3. In the 2010-11 Budget, the Financial Secretary announced a two-pronged strategy to assist students from low-income families to undertake web-based learning at home, which comprises —

- (a) a non-accountable annual cash Internet Access Subsidy disbursed to eligible families from 2010/11 school year onwards together with the Comprehensive Social Security Assistance or the School Textbook Assistance as the case may be; and
- (b) a five-year Internet Learning Support Programme (Programme) to help eligible families procure affordable computers and Internet access service, and to provide training, and user and social support to them. At its meeting on 28 May 2010, the Legislative Council Finance Committee approved a funding commitment of \$220 million for the implementation of this Programme.

Progress of Implementation

4. The Government commissioned eInclusion Foundation Limited (eInclusion), formed by the Boys' & Girls' Clubs Association of Hong Kong and the Internet Professional Association, and WebOrganic, formed by the Hong Kong Council of Social Service, as Implementers in the eastern and western parts of Hong Kong respectively. The Programme was launched under the brand name "i Learn at home" (「一家一網 e 學習」) on 14 July 2011. Leveraging on their networks, the two Implementers have sourced discounted product offers for target beneficiaries with flexible payment options, and set up 22 service centres across the territory to provide comprehensive support to eligible families and students. Through bulk purchase and with the Implementers undertaking vendors' marketing and user support functions, the Programme has driven down the cost of computers and Internet access, and reduced the price disparity in different locations.

5. As at 31 March 2012, 43 378 of the 245 000 eligible families in the current (2011/12) school year have enrolled in the Programme and 10 395 of them have received services from the Implementers. To raise awareness of the Programme, the Office of the Chief Government Information Officer (OGCIO), together with the Implementers, have embarked on a series of promotion activities, including school talks; briefings for principals, parent-teacher associations; direct mail of Programme leaflets and enrolment forms through the Student Financial Assistance Agency; distribution of Programme information by Social Welfare Department; and general publicity such as Announcements in the Public Interest, RoadShow on buses, etc. These efforts notwithstanding, take-up of the Programme is slower than originally envisaged. To drive participation, we have since January 2012 streamlined the enrolment procedures. The Implementers will also roll out more attractive offers and value-added services, set up additional service centres, and mobilise volunteers to provide direct support to Programme

participants. We expect service take-up would improve with the increasing adoption of e-Learning and e-Textbook among schools and gradual expiry of pre-Programme Internet service contracts between eligible families and their service providers. A summary of Programme performance in figures and promotion activities is set out at [Annex A](#).

Programme Monitoring

6. OGCIO has entered into Funding and Operation Agreement with the two Implementers, setting out their performance targets, obligations, and governance and accounting requirements, etc. A Programme Steering Committee led by the Government Chief Information Officer and comprising representatives from the Education Bureau and the Social Welfare Department has been set up to monitor Programme delivery and resolve matters of common concern. In addition, OGCIO also monitors the Programme through regular working level meetings with the Implementers, Implementers' regular performance reports with supporting data and statistics, their annual business plan and audited accounts, and site visits. OGCIO will conduct a review of the implementation arrangements in mid- 2013.

Proposal to Disburse the Internet Access Subsidy through a Voucher System

7. There is a suggestion that the Internet Access Subsidy mentioned in paragraph 3(a) above should be disbursed to eligible families in the form of voucher to be redeemed for acquiring Internet services and computers through the Programme, thus ensuring proper use of the subsidy and encouraging participation in the Programme. This arrangement would **not** be consistent with the funding package which the Government proposed and the Finance Committee approved in May 2010 as set out in paragraph 3 above. The annual cash subsidy which forms the first limb of the approved package is designed to be a non-accountable cash subsidy. This arrangement is direct. It allows parents freedom to choose from the many computer/Internet service options that already exist in the market whilst minimising stigmatisation effect. It is consistent with the cash disbursement mode for other forms of student financial assistance, such as the School Textbook Assistance and Student Travel Subsidy. We have reason to believe that many of the eligible families have already procured some form of computer / Internet service before the school year 2011/2012 and that the direct cash subsidy must have reduced their financial burden in this respect. The second limb of the funding package relates to the additional services being or to be offered by the Programme, which is designed as a supplement to the annual cash subsidy, to help eligible families acquire more economical computer / Internet service packages and offer counselling and supporting services to them.

Whilst the take up rate for the initial year was lower than expected, we would work closely with the Implementers to try to catch up on performance for the remaining term of the Programme.

8. If a voucher system were to be introduced, the Government would need to cease the payment of the direct non-accountable cash subsidies, devise a voucher scheme to give all eligible families a range of choices no less restrictive than what they currently enjoy, and would need to revisit the status of the Implementers like whether they should be given the exclusive right to accept the vouchers, and if not, why would the Government still subscribe to their service. If the beneficiaries are allowed to select their own service providers and use the voucher for redemption, then the system for accrediting retail outlets and verifying the proper use of the vouchers for over 200 000 beneficiaries would be very costly and complicated. In the end, the additional administrative cost to be borne by service providers under a voucher scheme may be reflected in the Internet service charges. Considering that disbursement of the subsidy as a non-accountable cash allowance would afford more flexibility for the recipients and is administratively more manageable, the Administration does not see justification to link up the two limbs of the funding package.

Web Accessibility Campaign

9. To facilitate access to online information and services for all segments of the community including persons with disabilities, the Government launched a Web Accessibility Campaign (Campaign) in October 2011 to promote the adoption of web accessibility design in the public and private sectors. Government websites are required to conform to Level AA of the latest version (Version 2.0) of the Web Content Accessibility Guidelines promulgated by the World Wide Web Consortium (W3C) by early 2013 within all practicable means. This requirement makes the HKSAR Government one of the earliest to implement this latest standard for government websites.

10. For the non-government sector, our objectives are to raise awareness and encourage private sector organisations, public bodies and social service organisations whose online information and services are frequently used by persons with disabilities to adopt accessibility designs in their websites. To achieve these, we have compiled a management handbook on key web accessibility principles and practices for corporate executives and managers, developed a portal (www.webforall.gov.hk) to share know-how and best practices, and organised a series of seminars and workshops for some 150 organisations. Responses are encouraging, with over 5 600 downloads of the management handbook, some 140 000 page views of the portal since October 2011 and over 300 participants attending the seminars and workshops. A follow-up survey on

participants of the seminars and workshops indicated that 42 organisations have undertaken to improve web accessibility in their corporate websites, with 10 of them planning to complete the improvement within 2012.

11. Nonetheless, there is still much room for encouraging wider buy-in among organisations in the non-government sector. We will continue to promote web accessibility in 2012-13 through the following measures —

- (a) inviting tertiary education institutions to incorporate web accessibility in their ICT curriculum to inculcate professional ethics and foster awareness;
- (b) organising seminars and experience sharing workshops for corporate ICT personnel, website designers and social service organisations on web accessibility best practices; and
- (c) co-organising with the Equal Opportunities Commission a recognition scheme to show appreciation for organisations adopting web accessibility designs and to provide advisory support to them.

OGCIO has set aside \$2 million to champion and implement these initiatives. A summary of the initiatives under the Web Accessibility Campaign in 2011-12 and 2012-13 is set out at **Annex B**.

Development of Assistive Technology for Persons with Disabilities

12. In 2010-11, OGCIO set aside \$3.6 million to support the development of ICT-based assistive tools and applications for persons with disabilities. Of the 39 project proposals received, OGCIO had selected nine for funding support. The selected projects, ranging from software development and upgrade, input and control assistance device, web-based service to rehabilitation tools, cater for persons with different kinds of disabilities including visual impairment and difficulties in body movement.

13. All the nine projects have been completed. The products are available for free download, distribution to needy groups or further development with a proven concept, as the case may be. An exhibition of the completed products will be held in the Central Library on 11-14 May 2012 and then in the Central Government Offices to enhance awareness of ICT-based assistive technology and encourage adoption. It is noteworthy that one of the products won a silver award at the Hong Kong ICT Awards 2012. Details of the nine funded projects are set out at **Annex C**.

Encouraging ICT Adoption among the Elderly

Elderly Portal

14. The elderly is another priority group targeted for digital inclusion initiatives. In 2009-10, we commissioned the Hong Kong Society for the Aged (SAGE) to develop, manage and operate a thematic portal carrying information that caters for the needs and interests of the elderly. The portal, called “eElderly” (www.e123.hk), is designed to enable easy use and navigation by the elderly so as to encourage them to acquire Internet skills to engage with information, expand their social horizon and integrate with the younger generation.

15. SAGE has partnered with over 170 non-government organisations (NGOs) to provide computer training and support to elderly users. The portal attracts an average of around 270 000 page views per month. At present, some 25 000 elderly users have registered as members, who can then enjoy privileges like discounts on merchandise under the portal bonus scheme. In 2011-12, with additional funding of \$2.95 million from OGCIO, SAGE enhanced the content of the portal by incorporating bilingual information for carers as well as silver-hair market offerings. SAGE will continue to maintain and operate the portal at its own cost, leveraging it to encourage the elderly to learn to use the Internet and benefit from such use.

New Projects to Encourage Wider ICT Adoption Among the Elderly

16. In July 2011, OGCIO openly invited non-profit organisations to submit proposals for programmes to encourage wider ICT adoption among the elderly. A total of 13 qualified proposals were received. After evaluation, three projects were selected for funding support totalling \$840,000. These projects feature a combination of activities to build up elderly participants’ awareness and knowledge of ICT, foster inter-generational communication through ICT activities and train up silver surfers to advocate ICT adoption among their peers. Details of these three sponsored projects, which have commenced in January 2012 and will be completed by August 2012, are set out at **Annex D**.

District Cyber Centre Pilot Scheme

17. To empower community centres operated by social service organisations to support ICT use among needy groups in different districts across the territory, OGCIO engaged the Hong Kong Cyberport Management Company Limited, the Hong Kong Council of Social Service and the Internet Professional

Association to form an alliance to implement the District Cyber Centre Pilot Scheme in February 2009. At present, there are 57 centres under the Scheme providing computer equipment and Internet access, as well as user support and training, to various needy groups. In the past three years, OGCIO had injected \$25 million into the Scheme. The Scheme has also raised more than \$28 million of in-kind sponsorship such as software licences, broadband connections and professional services from the private sector. Since launch of the Scheme in February 2009, over 250 000 participants with around 600 000 man-hours were recorded in using the computer facilities and attending training courses and ICT activities of the district cyber centres.

18. The pilot scheme has successfully accomplished its mission of empowering these cyber centres, establishing a co-ordination network among them, and setting an effective platform for securing community donations and sponsorship as well as industry support. The centres will continue their on-going operations with their own resources and under their own management. The Hong Kong Council of Social Service (HKCSS), with its mission to provide support to social service organisations and its established network with these organisations, will continue to operate the network of cyber centres, co-ordinate industry sponsorship and provide technical support to the centres.

Survey on ICT Adoption of Under-privileged Groups

19. To gauge the adoption of ICT among under-privileged groups, OGCIO commissioned a research institute¹ to conduct a survey in 2011 on the usage, knowledge and access to ICT among seven under-privileged groups (namely, the elderly, persons with disabilities, students in low-income families, homemakers, single parents, new arrivals and ethnic minorities) vis-à-vis the mainstream community. Similar surveys were conducted in 2005 and 2008 using the same methodology by the same research institute. Through random sampling, a total of 4 500 households were scanned. 1 670 individuals responded to the survey, including 1 344 who belonged to the seven under-privileged groups and 326 from normal households.

20. Generally speaking, in comparison with the findings of the 2008 survey, all the under-privileged groups showed marked improvements in ICT adoption, in tandem with the increasing ICT use in the mainstream community. More specifically —

¹ The research institute selected for this survey is Policy 21 Limited. The same team of researchers, who then operated under the University of Hong Kong, undertook the same survey in 2005 and 2008.

- (a) For school-aged children in low-income families, about 97% of them have computers connected to the Internet in 2011, compared with 92.8% in 2008. This take-up rate is slightly below the 100% coverage for mainstream families with school-aged children. The digital divide for this group of under-privileged families has narrowed;
- (b) For the elderly group, the percentage having knowledge in using the computer has increased more than three-fold from 5.8% in 2008 to 19.8% in 2011. But compared with the corresponding figure for non-underprivileged households at 89.6%, a rather obvious digital divide remains; and
- (c) For persons with disabilities, computer usage has increased from 16.4% in 2008 to 24.8% in 2011. Compared with the corresponding figures for non-underprivileged households at 90.8%, however, a clear digital divide remains.

A summary of the findings of the 2011 survey in respect of these three groups is at **Annex E**.

Performance Targets

21. At the Panel meeting on 14 March 2011, Members asked us to consider setting a benchmark and target timeframe against which the progress and effectiveness of the digital inclusion initiatives could be measured. We have therefore taken the opportunity of the survey and asked the consultant to identify performance indicators and targets on e-competence of the elderly and persons with disabilities adopted in comparable economies for benchmarking purpose. However, such information is not available.

22. For students, ICT is part of the mandatory curriculum for primary and secondary schools to foster e-competence among students. Knowledge in and usage of ICT among them should not be an issue. To ensure that no student is deprived of access to web-based learning at home due to lack of means, the Government has introduced the Internet Access Subsidy for low-income families and implemented the Internet Learning Support Programme, as detailed in paragraphs 3-7. Through the Subsidy and the Programme, our target is to ensure that access to Internet-connected computers of students from low-income families should be on a par with their counterparts in the mainstream community.

23. For the elderly, we have embarked on a series of digital inclusion initiatives to equip them with know-how and encourage wider ICT adoption, such as provision of training and ICT-related activities, providing web contents that cater for their interests and needs, recognition schemes, etc. We envisage that with these efforts, and given the pervasiveness of ICT in daily lives, the e-competence of the elderly will continue to rise. We aim to increase computer and Internet usage rates of the elderly from currently 20% and 18.4% to 25% and 23% respectively by 2014.

24. For persons with disabilities, given their varying physical abilities, it is not realistic to set broad usage targets. Rather, for those who are e-competent, our aim should be to ensure that they can benefit from ICT. To this end, we have launched a Web Accessibility Campaign and have set performance targets for different initiatives under the Campaign. These performance targets are set out at **Annex F**.

Way Forward

25. In the year ahead, we will continue to take forward the Internet Learning Support Programme and the Web Accessibility Campaign. We will also launch a new initiative in the latter half of 2012 to support the development of mobile applications with contents or services that cater for their needs and encourage their social participation, leveraging on the user-friendly features and increasing popularity of mobile devices. To encourage wider adoption of ICT among the elderly, we will also organise a territory-wide recognition scheme around the end of the year to incentivise ICT usage among the elderly.

Advice Sought

26. Members are invited to note the above progress update on the digital inclusion initiatives.

**Office of the Government Chief Information Officer
Commerce and Economic Development Bureau
May 2012**

Internet Learning Support Programme

Progress and Performance

1. Performance Figures

Service Areas	Progress as at 31 March 2012		
	eInclusion	WebOrganic	Total
1. Number of target beneficiaries reached	19 449 families	23 929 families	43 378 families
2. Number of target beneficiaries served	3 117 families	7 278 families	10 395 families
3. Number of students trained	1 158	2 294	3 452
4. Number of parents trained	2 860	2 131	4 991
5. Number of Internet packages sold	396	1 503	1 899
6. Number of computers sold	2 498	2 289	4 787
7. User support requests handled	16 896	10 066	26 962
8. Counselling services rendered	6 cases	5 cases	11 cases
9. Conversion of non-user to user of Internet access at home	776	1 048	1 824

2. Promotion Activities

Office of the Government Chief Information Officer

Timeframe	Promotion Activities
June 2011	<ul style="list-style-type: none"> • Thematic programme portal to disseminate programme information • Briefings to schools and the Federation of Parent-Teacher Associations
July 2011	<ul style="list-style-type: none"> • Displaying programme posters in public housing estates, libraries, government premises and public locations such as bus stops and footbridges
August 2011	<ul style="list-style-type: none"> • Distributing programme posters and leaflets to all primary and secondary schools • Direct mail of programme leaflets and enrolment forms to all the 180 000 eligible families (75% of total) through the Student Financial Assistance Agency • Distribution of programme information to the remaining (around 70 000) eligible families through the District Social Security Centres of the Social Welfare Department
September 2011	<ul style="list-style-type: none"> • Broadcasting of Announcements in the Public Interest (API) on television and radio
October 2011	<ul style="list-style-type: none"> • Distributing posters and leaflets to all Mutual Aid Committees, Area Committees and District Cyber Centres • Broadcasting of API at community facilities
March 2012	<ul style="list-style-type: none"> • Broadcasting of promotional video at 3 200 buses and housing estates • Briefing to District Councils

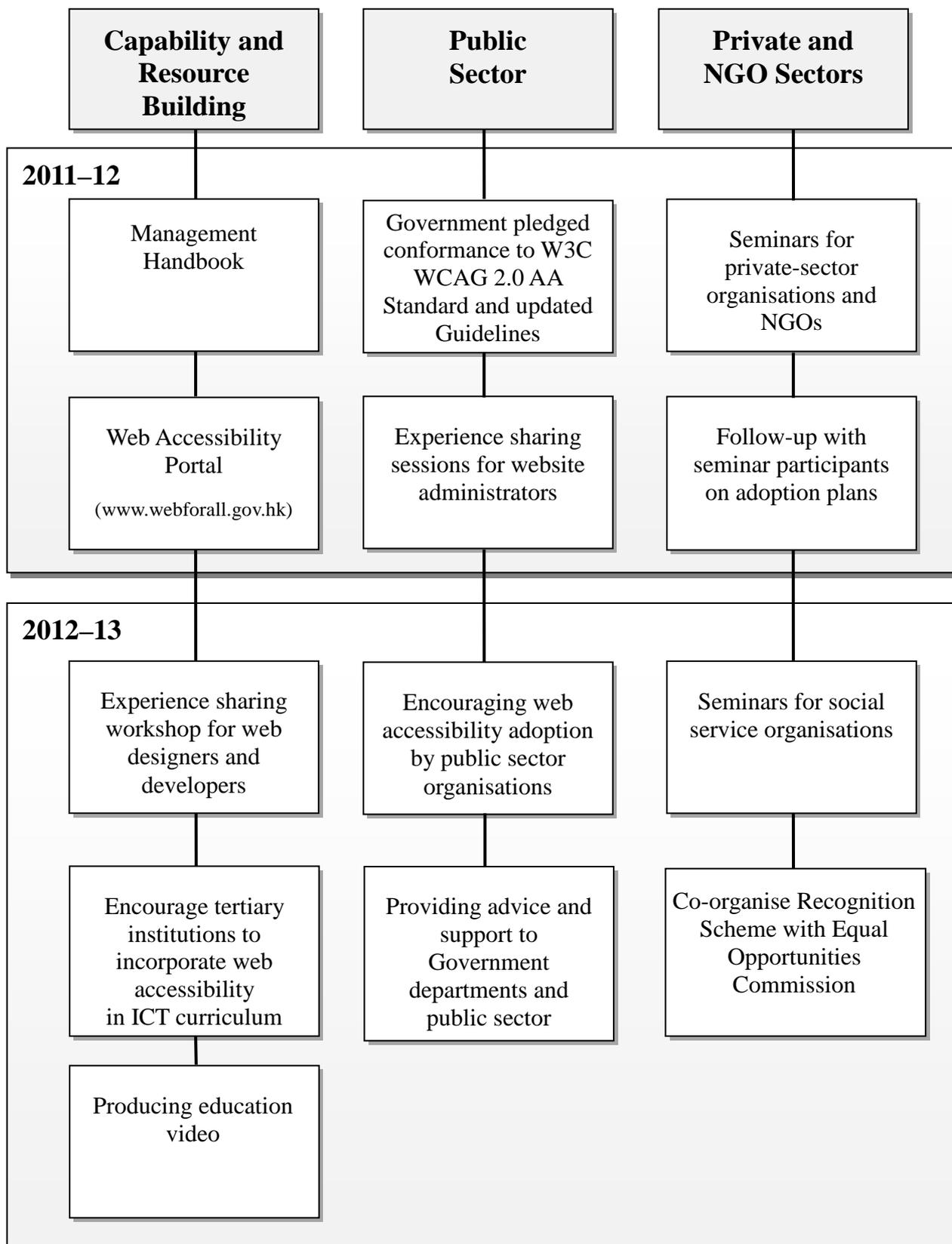
eInclusion

Timeframe	Promotion Activities
August 2011 to March 2012	<ul style="list-style-type: none">• 103 talks and visits to schools• 8 meetings with principals, Federation of Parent-Teacher Associations, Parent Associations, etc.
December 2011	<ul style="list-style-type: none">• Christmas sales promotion
March 2012	<ul style="list-style-type: none">• Launching of IT Buddies Program to provide one-on-one user support by tertiary student volunteers

WebOrganic

Timeframe	Promotion Activities
August 2011 to March 2012	<ul style="list-style-type: none">• 335 talks and visits to schools• 17 meetings with principals, Federation of Parent-Teacher Associations, Parent Associations, etc.
September 2011	<ul style="list-style-type: none">• Launch Seed School and Seed Ambassadors Programs to leverage schools to promote the Programme
December 2011	<ul style="list-style-type: none">• Christmas sales promotion
February 2012	<ul style="list-style-type: none">• Chinese New Year sales promotion

Web Accessibility Campaign 2011-12 and 2012-13



**Projects for the Development of Assistive Technology
for Persons with Disabilities**

1. **A Novel Chinese Text Input Brain–Computer Interface for Persons with Neuromuscular Disability** by The Chinese University of Hong Kong

This project develops a Chinese text input system that uses a brain-computer interface to facilitate persons with neuromuscular disability to input Chinese text into computer. The target users are persons with neuromuscular disabilities (e.g. motor neuron disease, multiple sclerosis and cerebral palsy).

2. **A Mobile, Multi-Modal Human Interface Device for People with Disabilities and Its Application on Home Automation System** by PHAB with The University of Hong Kong

This project uses eye-ball and face orientation input technology to assist physically disabled persons to control home appliances.

3. **Easy-Dots 2.0** by Hong Kong Blind Union

Easy-Dots is a Cantonese Braille input method developed by the Hong Kong Blind Union in 2003 for Windows XP. This project upgrades the software for Windows 7. The target users are visually impaired and dyslexic persons.

4. **Kinelabs for Elderly and Stroke Rehabilitation** by Polytechnic University

This project uses Kinect to provide therapeutic training at low cost for persons beset with stroke or brain injury. This project won a silver ICT Award in 2012.

5. **QuicKey “Barrier-free input device”** by Keysquare Communication Ltd

This input device uses simplified buttons to facilitate persons with physical disabilities in using the computer.

6. **Transense - Text4U** by The Hong Kong Society for the Blind

This is an iPhone application using the phone camera to scan and convert text (English, Simplified Chinese or Traditional Chinese) into speech. The application allows visually impaired persons to use their mobile phone to read text on printed matters such as name card, leaflets, signage, etc. that they come across in daily life.

7. **Touchscreen Text Input Application for Visually Impaired** by Freedom Communications with Hong Kong Blind Union

This project adapts the Easy-Dots input method for use with iPhone, which has built-in accessibility features for visually impaired persons. It enables English or Chinese input with touch and sound feedback.

8. **Intelligent Home for People with Physical Disabilities** by Vocational Training Council with Shine Skills Centres

This is a console system to assist physically disabled persons to control home appliances such as TV and lighting through mobile phones.

9. **Online Navigation System for the Disabled on Web-based and Smartphone Platforms (ONS4D)** by Vocational Training Council

This project aims at developing a web application with accessibility information. Users can upload the information on web-based and smart phone platforms. The target users are persons with physical disability and visual impairment.

Projects to Encourage Wider ICT Adoption among the Elderly

Sponsored Organisation	Project	Major Activities	Number of Elderly Participants
1. Po Leung Kuk (保良局)	「耆」樂數碼大本營—長者數碼學習計劃	<ul style="list-style-type: none"> • Computer training for elderly • Computer on loan service within centres • Appreciation scheme to encourage ICT usage by the elderly • Setting up a Facebook page for elderly users to connect among themselves • Competition on development of mobile elderly-centric applications 	20 000
2. Evangelical Lutheran Church Social Service – Hong Kong (基督教香港信義會社會服務部)	數碼耆義部落	<ul style="list-style-type: none"> • Computer training for elderly • Inter-generation ICT activities, e.g. visits by youth volunteers to elderly homes/centres • ICT competitions for elderly • Setting up a website for the elderly • Computer on loan service within the centre 	1 520
3. CPMS Social Center for the Elderly of Grace (中華便以利會恩慈長者活動中心)	數碼耆英無障礙	<ul style="list-style-type: none"> • Training courses on computer and mobile phone usage for elderly • Developing a mobile application for the elderly • Study on “How computers affect the daily life of elderly” • Organising open day, roving shows, closing ceremony cum carnival • Computer on loan service within the centre 	4 240

**Key Findings of the Survey on ICT Adoption Among
Students in Low Income Families, Persons with Disabilities and the Elderly**

	Students In Low Income Families #			Persons with Disabilities @			Elderly			The Mainstream Community		
	2005	2008	2011	2005	2008	2011	2005	2008	2011	2005	2008	2011
Usage												
• % having used a computer	84.8	96.7	87.2	16.4	16.4	24.8	6.7	7.8	20.0	78.6	78.6	90.8
• % having used the Internet	81.9	94.6	85.5	14.8	15.1	20.9	5.7	6.7	18.4	77.8	78.0	90.2
Access												
• % having a computer at home	70.4	93.9	97.5	50.6	50.0	57.8	46.4	46.8	49.9	91.1	93.3	92.9
• % having a computer connected to the Internet	66.8	92.8	96.8	46.8	46.7	56.6	43.1	43.2	48.1	89.2	92.5	91.7
Knowledge												
• % having knowledge in using the computer	78.7	89.0	83.7	14.6	12.4	21.3	6.1	5.8	19.8	75.9	74.1	89.6
• % having knowledge in using the Internet	78.7	86.9	84.0	13.6	12.5	17.4	5.4	5.7	17.4	75.8	74.0	89.0

“Students” include students receiving full time primary and secondary education in the 2011 survey but the 2005 and 2008 surveys only covered children aged 10-17.

@ “Persons with Disabilities” no longer include those with chronic illness, who were included in the 2005 and 2008 surveys.

**Targets for Students from Low-income Families, the Elderly and
the Web Accessibility Campaign**

<u>Targets</u>	<u>Timeframe</u>
<p>Students from Low-income Families</p> <p>Facilitating Internet Learning</p> <ul style="list-style-type: none"> • Access to Internet at home among students from low-income families is on par with students in the mainstream community 	2014
<p>Elderly</p> <p>Encouraging adoption</p> <ul style="list-style-type: none"> • 25% of the elderly have used a computer • 23% of the elderly have used the Internet 	2014 2014
<p>Web Accessibility Campaign</p> <ul style="list-style-type: none"> • All tertiary institutions have incorporated web accessibility in their ICT curriculum • 80% of government websites have validated to W3C WCAG 2.0 AA standard • Top 50 non-government websites frequently visited by persons with disabilities incorporating key web accessibility features increase from currently 25% to 50% 	2013/14 2013 2014