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To: Communications and Technology Branch
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Government of the Hong Kong SAR
2/F Murray Building, Central, Hong Kong

From: Business Software Alliance, Hong Kong

Re: Comments on Draft Digital 21 Strategy Document for 2004

Date: 10 December 2003

The Business Software Alliance (BSA) appreciates this chance to provide our views on the Hong Kong Government's (the "Government") draft Digital 21 Strategy document for 2004.

The BSA (www.bsa.org) is the foremost organization dedicated to promoting a safe and legal digital world. Its members include Adobe, Apple, Autodesk, Avid, Bentley Systems, Borland, Cisco Systems, CNC Software/Mastercam, EDS PLM Solutions, Entrust, HP, IBM, Intel, Internet Security Systems, Intuit, Macromedia, Microsoft, Network Associates, Novell, PeopleSoft, Robert McNeel & Associates, RSA Security, SolidWorks, Sybase and Symantec. BSA is the voice of the world's commercial software industry and its hardware partners before governments and in the international marketplace. Its members represent the fastest growing industry in the world. BSA programs foster technology innovation through education and policy initiatives that promote copyright protection, cyber security, trade and e-commerce. Many of these issues are addressed in the draft Digital 21 strategy document and, given the need for public/private collaboration in furthering

effective IT development, we are pleased to participate in this consultation process.

Introduction

We wish to congratulate the Government on efforts made since the initial Digital 21 strategy was released in 1998 to facilitate growth and opportunity within the IT sector in Hong Kong. Hong Kong has the potential to become an IT hub for the region and, while this will require ongoing work in a number of areas, the Government clearly remains committed to achieving this goal.

1. Government Leadership

The draft paper highlights the important role of the Government – as a major user of and investor in technology products and services – in facilitating the development of Hong Kong’s IT infrastructure and industry. The Government can also help to spark IT growth through policies that will generate investment in information technology. It is important to emphasize, however, that IT leaders generally agree that while governments can be effective facilitators of IT growth, they should maintain a laissez-faire approach to regulating the Internet and technology development. This includes ensuring respect for neutrality in IT decision-making and investment.

2. Sustainable E-Government Program

The Government has made progress on e-government implementation over the last four years. Additional efforts should be made by the Government to exploit information technology in its internal business and delivery of public services. In order to achieve this, it will be critical for the Government to ensure that it promotes and deploys software solutions based upon open standards that will facilitate interoperability. This issue is discussed in more detail at Point 5, below.

3. Infrastructure and Business Environment

The Government rightly notes that the importance of a world class infrastructure and business friendly environment cannot be overemphasized, identifying a number of critical success factors in building and sustaining a favorable business climate in Hong Kong. We discuss these in turn.

The Importance of Intellectual Property Rights Protection

Hong Kong has in the past shown leadership in the region in the protection of intellectual property rights, including through education campaigns, legislation, and law enforcement action against infringers. At the same time, however, software piracy – and in particular the illegal use of software in businesses – remains a significant concern. In 2002, the software piracy rate in Hong Kong was estimated by International Planning and Research Association to be 56%, resulting in losses to the industry of over US\$80 million in Hong Kong alone (most of which losses are attributable to organization end user software piracy). A 56% software piracy rate is very high for an advanced, knowledge-based economy such as Hong Kong, which aspires to and can become an IT hub. Moreover, the 2002 figure represents a three-point *increase* in the rate of software piracy over the prior year. Notably, during the same time period other markets in the region managed to reduce their software piracy rates, putting Hong Kong well behind other advanced economies in Asia including Singapore and Taiwan.

High levels of piracy cause considerable damage to Hong Kong's competitiveness and reputation as an international city and a commercial hub, and undermine the government's efforts to drive further innovation and creativity in the IT sector. Indeed, an economic impact study released in April by the international research group IDC confirms that reducing the piracy rate can have a significant positive impact on local economic development and growth of the IT industry as a whole; this study is discussed further at Point 6 below.

Despite the ongoing piracy problem, the Administration has introduced legislation currently pending before the Legislative Council – Copyright (Amendment) Bill 2003 – which would narrow the scope of the copyright law and reduce protection for right holders. If passed, this legislation would move Hong Kong in the wrong direction. We urge the Administration to refine the draft legislation in a manner that would strengthen, rather than weaken, the protection of intellectual property rights.

Promoting the Adoption of E-Business

In order to drive e-business and information technology adoption by business sectors, it is vital that governments around the world take adequate steps to protect the digital environment. The Hong Kong Government has enacted legislation aimed at curbing the growing problem of computer-related crime

and generally meets, and in some respects exceeds, the baseline standard established by the Council of Europe CyberCrime Convention for criminal legislation in this area.

However, we believe the Government has thus far been overly cautious in reacting to the enormous problem of spam. The torrent of unwanted, unsolicited, often offensive and sometimes fraudulent e-mail is eroding trust in technology and e-commerce, costing businesses billions of U.S. dollars annually, and posing a serious threat to the viability of Internet e-mail and a danger to e-commerce. Apart from draining productivity and wasting valuable time and resources, spam is increasingly used as a vehicle for the delivery of malicious computer viruses and worms that can cripple networks and impede effective communication across the Internet. Information indicates that spam already accounts for over half of all e-mail traffic in Hong Kong, and consumers in the entire Asia Pacific region are seeing increasing amounts of spam in Asian languages, including Chinese, that is targeted at local computer users.

BSA supports the enactment of effective anti-spam legislation which, while not a silver bullet, is an important component of an effective and comprehensive solution to the overall problem of unsolicited e-mail. Hong Kong should take steps to regulate the burgeoning spam problem, and we urge the Government to accelerate work in this area, including by immediately initiating a consultation process on the need for legislation. Indeed, we note that with diverse initiatives many countries around the world have already decided to legislate to specifically address spam and its negative impact on the effectiveness of electronic communications. Notably, most countries with developed information economies have already either enacted or are in the process of developing anti-spam legislation – this includes Korea, Taiwan, Japan, Australia, the United States, and the fifteen Member States of the European Union.

Maintaining High Standards of Security and Data Protection

The Government appropriately highlights global concerns over information security and the need to develop a solid information security framework. The draft Digital 21 paper touches upon this critical issue only briefly, however, and does not include detail on what specific steps the Government has taken or intends to take going forward to achieve its objectives and to address increasingly complex security-related challenges. BSA would welcome hearing more about the Government's strategic vision and action plan in this

area – including the role envisaged for the private sector – and recommends that this information be included in the final version of the paper.

For example, we believe the Government can play a key role in efforts to secure consumers' software and data, in close partnership with the private sector. The following are some of the specific areas where government initiatives can be particularly helpful in promoting cyber-security:

- Supporting research and development in security-related technologies.
- Adopting best practices within the government for procuring and deploying software designed to maximize security. As builders of the products that power and protect the world's information networks, BSA members are dedicated to developing a safe and legal online world with new technologies and industry-developed standards to combat the ongoing and rapidly evolving information security challenges.
- Providing even more training for government systems administrators.
- Establishing a structured mechanism for private/public sector interface on security-related issues.
- Dedicating adequate resources toward the investigation and prosecution of cyber-criminals.
- Supporting greater cross-jurisdictional cooperation. APEC has relatively recently begun to devote more attention on these issues. This is a positive development and one that Hong Kong should support as a leader among APEC economies.

4. Institutional Review

With respect to institutional review, the Government has identified a number of potentially helpful programs aimed at realizing the potential of information technology. One promising concept is establishing a more integrated structure that would include a Chief Information Officer at the center of government. As noted, this model has been adopted by a number of leading e-government countries including the U.S., the U.K. and Canada. A CIO might enable the Government to better manage information for the benefit of the community and to facilitate more efficient cross-agency leadership and coordination on e-government and broader security-related matters.

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5. Technological Development

The Government notes that technology manifests itself as infrastructure, processes, goods and services and that the opportunities afforded by technology are enormous. As outlined below, we agree on the need to strengthen Hong Kong's ability to adopt and apply information technology and create a capability for the development of innovative applications and services, and we offer a number of suggestions on how this might be achieved:

General:

As discussed more fully at Point 3, above, we note that strong IPR protection is essential to the health and growth of the IT industry. Without such protections, investors will not invest and industry will not be able to create cutting edge products needed to fuel economic productivity.

It is also important for the Government to embrace and support promising new technologies, and we encourage the Government to provide more detail on its plans in this area. Some new technologies, such as Wi-Fi, are discussed in the draft Digital 21 paper. Others include web services. Web services provide a standard way for software applications to work together over the Internet, and integrating far-flung business applications can spark a new wave of technology-led productivity growth. Another example is extensible markup language (or "XML") and extended enterprise applications which connect intelligent systems within and between businesses, computers and devices; cross company boundaries; and close the gap between one application and the next.

R&D Support

We applaud the Government's commitment to continue investment in research and development. As noted in the draft Digital 21 paper, it is important to have effective commercialization arrangements for technologies developed with government funds. This will help to support a dynamic commercial IT industry that will drive economic growth in Hong Kong, creating jobs and enabling the next wave of innovation.

Wireless Technologies and Services and New Developments

The Government correctly identifies potential opportunities through the exponential growth of wireless technology. Emerging wireless innovations

show possibilities, but Wi-Fi is only a small precursor of the promise that still lies ahead. New technologies such as Wi-Max, mesh networking, and technologies that facilitate computer and communications convergence show real promise and should also be the focus of future support and development.

These new technologies not only offer an additional means of delivering packets at high speed, they also allow the emergence of new business models for delivering broadband connectivity. The Government should foster policies that make more spectrum available for wireless devices and, simultaneously, adopt spectrum rules or “etiquettes” that limit the devices’ ability to engage in mutually destructive behavior (i.e., by interfering with each other); this will result in more choice for consumers and stimulated innovation in broadband services overall.

Digital Entertainment

With regard to digital entertainment, in order to effectively harness the opportunities afforded by digital and multimedia technologies, the Government should take further steps to protect technological measures to prevent unauthorized access to or use of copyrighted material in digital form, or the illicit dissemination of protected works. Such measures are fundamental to the global electronic marketplace and can take many forms. It is important that the integrity of these technical protection measures be protected by prohibiting the manufacture, trade in or use of devices or software that are primarily designed to circumvent them. The WIPO Copyright Treaty includes a requirement to “provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures” that copyright owners use to “restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.”

Existing Hong Kong law provides certain protections against circumvention of copy protection employed in computer programs and other works, and this is important to the protection of digital works, including digital entertainment works. However, the law contains a number of areas of potential ambiguity. We urge the Government to commit to clarifying relevant provisions of both the civil *and* criminal law to confirm coverage of (1) access control technologies; (2) acts of circumvention; and (3) circumventing components (such as a “cracking” computer program that is shipped with a computer).

Openness in Technological and Standards Adoption

BSA shares the Government's desire to see a dynamic IT industry and the development of new technologies. The Government should foster an environment in which the use and adoption of technology solutions is driven by market forces and principles of neutrality, consistent with Hong Kong's long history as one of the freest and most open markets in the world. More specifically, governments and other users of technology should be free to use the software and other technologies that best meet their needs, whether produced locally or abroad and whether developed on a commercial or an open source model. At the same time, governments should allow market forces to prevail in the development and adoption of these technologies, and should not give preferential treatment to one software development model over another.

Notably, the Government has emphasized in prior Digital 21 strategy papers the importance of free market principles. See Digital 21 Information Technology Strategy November 1998, at Section 1.3.3 (lauding the region's "free and market-based economy"); and Digital 21 Strategy May 2001, at p. 25 (emphasizing that the "2001 Strategy is essentially non-interventionist, following our free enterprise philosophy which guided us to our success in the past"). The Hong Kong Government should reaffirm in its final Digital 21 strategy paper for 2004 that it will continue to foster principles of neutrality and market-based decisions with respect to information technology.

BSA supports the Government's interest in carefully reviewing its procurement of information technology products and services, with a view toward ensuring that the Government gets value for its investment and that its overall IT policy is consistent with effective implementation of e-government programs and the broader goal of driving sustained economic growth within the information technology industry.

As a wholly separate matter, we note that it is important to support technologies based upon "open standards" that will foster interoperability in a marketplace of competing implementations, while ensuring that certain minimum requirements are met. In this submission, the term "open standards," is used to refer to a technical specification that is intended for widespread industry adoption and which has the ability to facilitate interoperability among different products or services. An "open standard" is unrelated to the development model used for the implementation of that standard, and the phrase "open source" should not be confused with "open

standards” as they are entirely unrelated concepts. Because standards facilitate the interoperability among technologies manufactured by different vendors in the world of computers and electronics, they are widely perceived as an effective and efficient means of promoting commerce and innovation. In the draft Digital 21 paper for 2004, the Government should outline what has been done and what is planned for the future to promote technology solutions that are based upon open standards and will facilitate interoperability.

Grid Computing

As noted in the draft paper, grid computing is another area that deserves attention. Grid and distributed computing have the potential to transform computing into a utility – allowing companies on-demand access to networked super computing power on a global scale. The Government provides only limited information on the topic. It would be helpful if the paper included details on specific plans or projects in the grid computing area.

6. Vibrant IT Industry

We agree with the Government’s observation that the information technology industry is a proven engine for economic growth and prosperity. In a recent study (available at www.bsa.org/idcstudy) the research firm IDC determined that Hong Kong’s IT sector, driven by a commercial software industry that has grown about 11 percent a year, has clearly helped to fuel the overall economy. Sales of domestic software and IT services have averaged 6.7 percent growth per year, adding US\$920 million to the local economy and creating 4,800 new IT jobs between 1995 and 2001.

The IDC study also demonstrated, as discussed more fully at Point 3, that the effective protection of intellectual property rights is an essential ingredient in the continued development of a vibrant IT industry. Indeed, IDC concluded that reducing the software piracy rate in Hong Kong by 10 points could add another US\$630 million to the Hong Kong economy and increase local industry revenues by more than half a billion U.S. dollars by 2006. The study also concluded this would generate an additional US\$40 million in tax revenues for Hong Kong’s government and create nearly 1,500 new high-wage, high tech jobs.

It would be helpful for the Government to explain more clearly in its 2004 Digital 21 strategy how it intends to help harness the potential for further

growth within the IT sector that will create new jobs and business opportunities that generate spending and new tax revenues.

Another way in which the Government can enable the development of innovative technology applications is by opening up intellectual property rights ownership by the Government for wider application by the information technology sector. Increasing access to IP has the potential to expand existing innovation in a way that will deliver new products and solutions to consumers and businesses, and lead to the creation of new jobs and economic growth.

7. Human Resources in a Knowledge Economy

We agree that, in order to maintain its competitiveness, Hong Kong must have adequate and quality human resources in information technology to meet the demands of a knowledge-based economy and specifically that of commerce and industry. This requires an educational system that teaches students how to think and can produce world class innovators.

8. Bridging the Digital Divide

The Government should continue working to introduce measures and programs that will ensure that the entire community will benefit from IT development. The specific initiatives identified in the draft Digital 21 paper are largely government driven. It is important, however, for the government to work in partnership with industry in achieving its goals in this area, and this point should be emphasized in the paper.

Conclusion

Once again, BSA thanks the Government for the opportunity to provide input and to participate in further developing a comprehensive strategy for achieving even greater success in the development of a knowledge-based economy and a healthy IT infrastructure and industry in Hong Kong. We look forward to continuing to participate in the consultation process and to hearing your response to our comments and the questions we have highlighted above.

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