

TASK FORCE ON ECONOMIC CHALLENGES

Advanced Digital Multimedia Infrastructure for Hi-Tech Community Centres in Hong Kong

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Summary of Proposal

A Government-led initiative to develop an advanced networked media infrastructure in Hong Kong equipped with the latest supercomputing and multimedia technologies to:

- Accelerate the growth of Hong Kong based industries in animation, electronic cartoon, interactive games and other digital media and visual arts targeting the vast market of China and the rest of the world;
- Convert unoccupied or underutilised government-owned premises into safe, comfortable high-tech community centres targeting unemployed young people and offering them an opportunity to explore, learn and experiment with state-of-the-art interactive media technologies;
- Initial project planning and development to be led by The Hong Kong Applied Science and Technology Research Institute (ASTRI) and the Innovation and Technology Commission (ITC) – and to involve close cooperation with universities and other organisations that provide multi-media training such as the Vocational Training Council, CityU, PolyU, and Hong Kong Cyberport.

Supplementary Commentary

The Hong Kong Applied Science and Technology Research Institute (ASTRI) proposes to work with the Government and other local organisations to develop an advanced networked media infrastructure equipped with the latest supercomputing and multimedia technologies.

The infrastructure will be housed in a number of currently unoccupied or underutilised premises owned by the Government. These facilities can be converted into safe, comfortable community

centres open to all Hong Kong citizens, particularly the younger generations, to explore, learn, and experiment with state-of-the art interactive media technologies.

By offering Hong Kong's young people – many of whom are struggling to find employment in the current environment – the latest computing and multimedia tools, these community centres are expected to help foster their creativity in different areas of media design. Such designs include animation and cartoon characters, digital film, digital audio and video production.

For example, some of the users could work on the graphic rendering of massive volumes of Chinese history and literature, Hong Kong-produced movies and comics, and other folk art genres. The centres could also provide counseling to youngsters in intellectual property creation and protection, financing, marketing, and other business start-up skills.

A key economic goal of the project is therefore to accelerate the growth of vibrant Hong Kong-based industries in electronic cartoon, animation, interactive games, and other digital media and visual arts targeting the vast market of China and the rest of the world.

Leading-edge supercomputing and multimedia technologies continue to progress at an astounding rate and the cost of acquiring such technology has declined dramatically. It is now possible to acquire a compact supercomputer with tens of Teraflops of computing power (1 Teraflop = 1000 billion computations per second) at a cost of just a few high-end workstations. Some of these supercomputers employ “green” technology that consumes only 20% of the power required by earlier machines. The new computing engine is augmented by advances in other media technologies such as 120 Hz 3D-monitors that offer crystal-clear, flicker-free images for 3D gaming and graphical applications.

These and other new technologies, sometimes referred to as “Cloud Computing”, have the potential to enable the creation of inexpensive media centres that can support hundreds to thousands of users simultaneously (see Exhibit 1).

The new technology will also provide improved computer security and minimize the spread of computer viruses through extensive use of central storage or USB flash devices. The “Cloud Computing” architecture also reduces the cost normally associated with maintaining and servicing a large number of PCs for individual users.

The architecture can be further expanded to include the latest broadband wireless technologies and handsets, enabling the porting of media applications to hand-held devices for mobile users.

ASTRI proposes to work with the Innovation and Technology Commission (ITC) to develop a practical, cost-effective plan to turn this concept into reality. In cooperation with universities and other organisations that provide multi-media training such as the Vocational Training Council, CityU, PolyU, and Hong Kong Cyberport, ASTRI proposes to develop the underlying computing infrastructure to implement a “proof-of-concept” Hi-Tech Community Centre and use this as a reference model for other interested parties.

The next step for this group of organisations would be to expand the infrastructure further with affordable rental or usage charges to attract a critical mass of talents and start-ups, which in the long run will have the potential to develop sustainable, vibrant business activities, provide attractive employment opportunities, and revitalize under-utilized industrial areas of Hong Kong.

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Exhibit 1.

