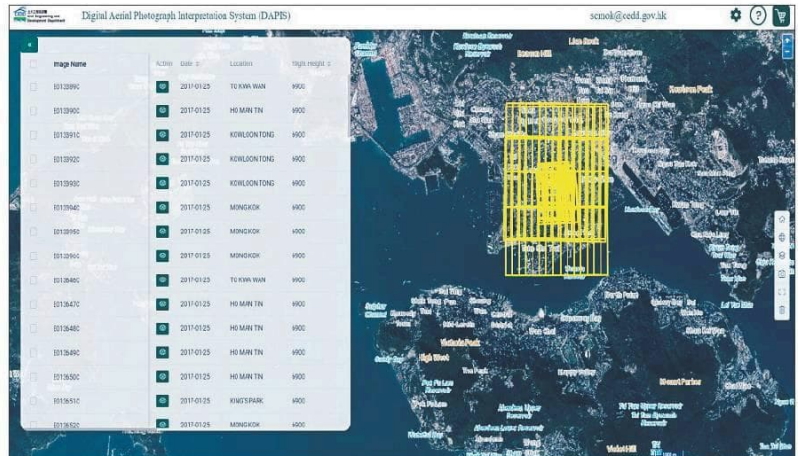


City Talk



The DAPIS system, with its widespread coverage of Hong Kong, gives officials a bird's-eye view of slopes that comes with aerial photographs and topography based on stereoscopic models. Left: a DAPIS three-dimensional monitor.



Nuts and bolts
Edmund Leung

Big picture on slope safety clearer with aerial photography

Many of us are aware of the detailed cataloguing of all man-made slopes in Hong Kong, following landslide disasters in 1972 and 1976, and this has helped to significantly reduce the risks of major landslides.

However, the Geotechnical Engineering Office of the Civil Engineering and Development Department hasn't stopped there.

It continues to enhance the recording system for Hong Kong's topography to provide useful details to enable engineers to monitor slopes and plan for future development without increasing risks.

Recently, as part of the initiative to make Hong Kong a smart city, the CEDD has rolled out the digital aerial photograph interpretation system.

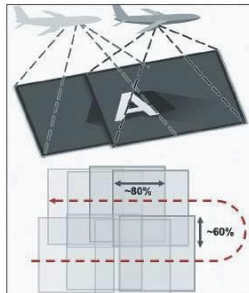
DAPIS makes its photographs of most parts of Hong Kong available to government departments and personnel participating in government works projects.

Aerial photographs of Hong Kong are not new.

As early as 1924, the British Royal Navy used an aircraft operating from a seaplane carrier to take aerial photographs.

Aerial photograph interpretation is a crucial part of geotechnical studies.

Its applications include:

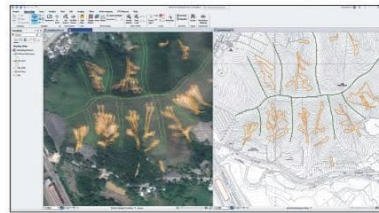


- Mapping of geology and geomorphology for rock types, geological structural patterns, superficial deposits, boulders, drainage lines, seepages and catchments;

- Cataloguing of manmade slopes for evaluation and management of slope safety;
- Compilation of the enhanced natural terrain landslide inventory for hazard assessments and debris flow landslide studies;
- Determination of site development histories, land-use and construction techniques, and terrain evaluations to map slope gradients, land protection measures, man-made slopes' formation, etc; and
- Land use planning and management.

With the passage of time, the resolution of photographs, coverage and general details were found to be not good enough for modern engineering applications.

For example, establishment of stereoscopic model and photogrammetric analysis using digital aerial photographs and photogrammetric parameters would be required and an updated digital system has been long overdue.



minimizing the need for physical visits.

In addition, it enables multiple users to view the same set of photographs simultaneously, unlike traditional paper-based aerial photographs.

This new system enhances the efficiency of aerial photograph interpretation as

Funded by the Innovation and Technology Fund, HK\$6.5 million has been provided to help develop DAPIS.

Over just two years, DAPIS' data server and internet platform have already been able to make digital aerial photographs and photogrammetric parameters available to government departments, especially the GEO, to conduct geotechnical studies to mitigate the risks of landslide hazards.

This scheme will help the GEO to establish a centralized management system to enhance the management of digital aerial photographs with less manpower required.

It also provides a convenient set of data, with a one-stop 3-D imagery hub storing aerial photographs through the internet platform.

The system enables users from government departments and the engineering sector to view, search and download digital aerial photographs in their office at any time,

measurements and sketches of observations can be digitized on georeferenced image models to allow volumetric calculation in landslides studies and filling/excavation assessments.

The reduced use of paper-based photographs also enables a sustainable and environmentally friendly solution.

As we can see, a relatively small budget of a few million dollars has resulted in a significant upgrade of our terrain records and will in the long term provide huge savings in manpower and time for continuous monitoring of slopes and useful data for future land planning.

It is another example of how technology can help to provide better living and enhanced safety for all.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye over features of modern life

Kwade makes solo HK debut in her own unique style



Alicja Kwade's *Pretopia* opened at Tai Kwun last week, captivating local and international visitors. It runs until April 6.

This landmark exhibition marks the artist's first solo presentation in Hong Kong. It showcases a thoughtfully curated selection of nine works from different phases of her career alongside newly commissioned pieces tailored for the F hall.

The exhibition's design fosters a sculptural environment in which each artwork interacts harmoniously with the others.

Kwade's unique approach transforms the space into a dynamic exploration of interconnected ideas, creating a multiverse that invites viewers to reconsider their perceptions of time and reality.

Kwade is a globally recognized artist



CULTURAL EXCHANGE
BERNARD CHARNWUT CHAN

celebrated for her innovative sculptures, expansive public installations and works in film, photography, and paper.

Her art challenges conventional scientific and philosophical ideas by blurring the lines of perception.

Through her unique approach, Kwade employs reflection and repetition, deconstructing and reconstructing everyday items and natural materials to delve into the nature of reality and scrutinize social structures.

Her work often intersects the absurd and the profound, transforming widely accepted beliefs into thought-provoking inquiries.

This poetic exploration disrupts established systems, seeking new ways to understand our world. Her artistic practice invites viewers to reconsider their perceptions and engage with the complexities of existence.

Her installations often use everyday objects, such as clocks, mirrors, gates and bricks. This diverse array of components invites contemplation on how we interpret social structures and the nature of reality.

Her creations have been included in prestigious public collections, such as the Centre Pompidou in Paris, Hirshhorn Museum in Washington, Los Angeles County Museum of Art, Louisiana Museum of Modern Art, Mudam Museum of Modern Art in Luxembourg and Museum Modemer Kunst Stiftung Ludwig in Vienna.

Tai Kwun Contemporary's Breakthrough series highlights new artistic talents through fresh presentations and commissions.

Pretopia will be featured alongside a solo exhibition by Hu Xiaoyuan: *Veering* from January 24 to April 13 and Maeve Brennan: *Records* from March 20 to June 8.

Veering explores the intricate interplay between human fate and the forces of nature, tackling profound inquiries about personal existence and the essence of life itself. "Records" explores the social, political and historical resonance of objects and places through the lens of the Dublin-born, London-based artist and filmmaker.

Bernard Charnwut Chan is chairman of Tai Kwun Culture & Arts Co Ltd