



**ASIA AIR SURVEY CO.,LTD.**

CORPORATE PROFILE



PIONEERING  
THE  
FUTURE



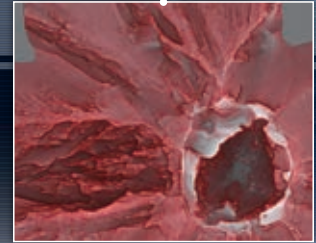
1954, First airplane was introduced (DeHavilland Beaver)

1984, Developed Utility Data Management System (UDAMS)



1995, The Great Hanshin Earthquake: an emergency aerial photography program

2002, "Red Relief Image Map" was invented



# Pioneering the Future Specializing in Aerial Surveying and Geospatial Information Technology.

## Taking on the challenge of a new business model in the geospatial information field

Based on camera-equipped aircrafts, we offer our customers a fully integrated service, from the acquisition of spatial information to applications. We are experts in surveying and map-making, we are also proficient in the fields of disaster prevention planning, the environment and the conservation of infrastructure.

AAS was established in 1954 as the first fully equipped private aerial survey company in Japan. AAS contributed to the re-construction of Japan using maps and survey data based on aerial photogrammetry.

Our mission is to provide technologies and know-how for acquiring, analyzing, and managing a wide range of geospatial data in order to support the natural and social environment.



Kiichiro Ogawa, President and CEO

## Basic Policy

AAS Group will contribute to prosperous living for people around the world and ensure safety and security through ceaseless technical innovation.

We will do the environmental conservation work from a global perspective as a corporation supported by all its employees, who possess high ethical values and a strong sense of responsibility.

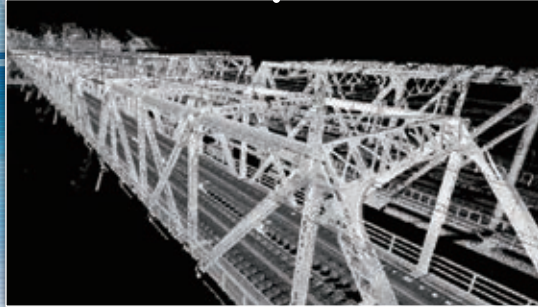
We will establish a "Japan-brand" in geospatial information consultancy.





2012, 3D Modeling Services was launched

2015, Mobile Mapping System on Railway (Point Cloud)



## Asia Air Survey's Business

Present

### Challenge

Pioneering new business model with cutting-edge surveying geospatial information technology, and consulting services

### Globalization

A world-class Japan-brand corporation providing high quality service based on experience and knowledge

### Value

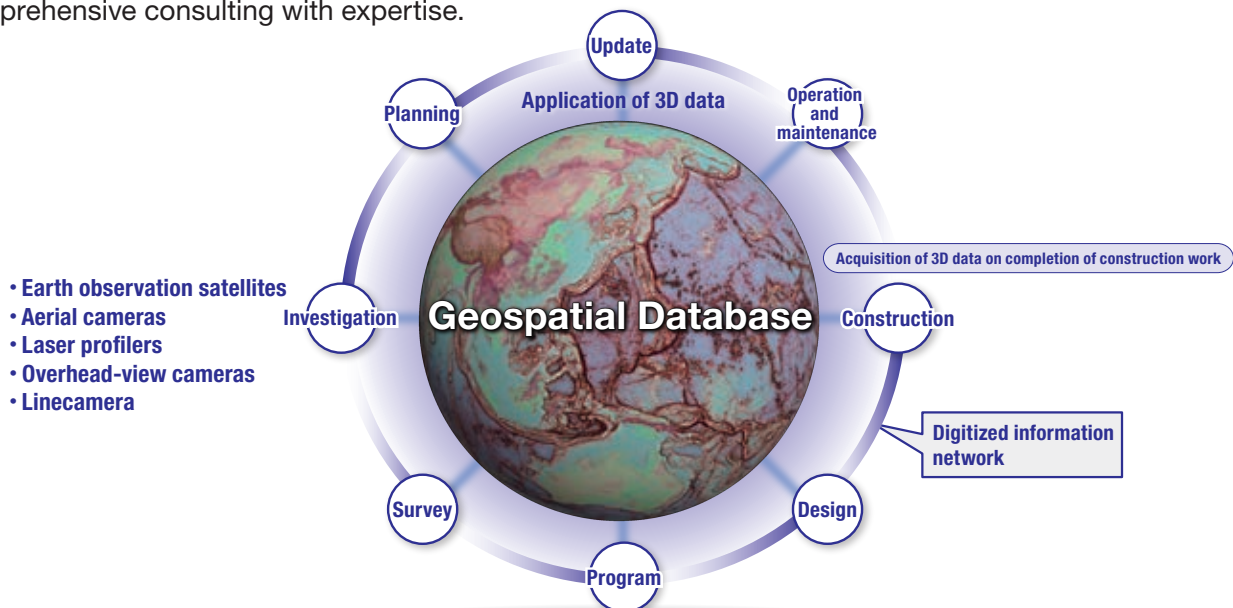
We appreciate and rely on our valuable stakeholders, clients, the community, and employees

### Long-term vision

**AAS continues growth, taking on the challenge of a new business in the geospatial information field**

## Geospatial Information that Supports Social Infrastructure

Making use of a geospatial information database and network, we handle all aspects of construction production systems, through surveying, planning, design, and maintenance management. We provide comprehensive consulting with expertise.



We undertake expertise-intensive all-round consulting, making full use of our digitized spatial information network and handling all aspects of the construction production system, including survey, planning, investigation, design and operation & maintenance

## High-level consultancy with cutting-edge sensing technology

Providing integrated consulting services from the collection and analysis of geospatial information to the formulation of business plans, using the latest equipment and ICT, in addition to our expertise.



### Cutting-edge technology

We offer accurate and fast surveying with the latest equipment and our special technical capabilities. As professionals in geospatial information, we provide the most suitable services for our customers.

### Comprehensive service

We develop business in diverse fields such as consultancy on disaster prevention, environmental management, and social infrastructure based on geographic information analysis. We make use of our comprehensive capabilities in various fields related to geographic information to support our customers' tasks.

### Market needs

We continue research and development to provide suitable service for the current market needs. We develop cutting-edge surveying, analysis, visualization, and information-sharing technologies.

## CSR / Corporate Social Responsibility

In the event of a large-scale disaster, we consider an accurate grasp of the situation to be important for preventative and emergency measures. We therefore carry out photographing independently and make the information available.



Mt. Aso eruption  
(taken at 2:08 pm on October 8, 2016 from northwest of Mt. Nakadake Crater)



Emergency photography of Great East Japan Earthquake  
(taken at 1:48 pm on March 13, 2011 Port of Sendai)

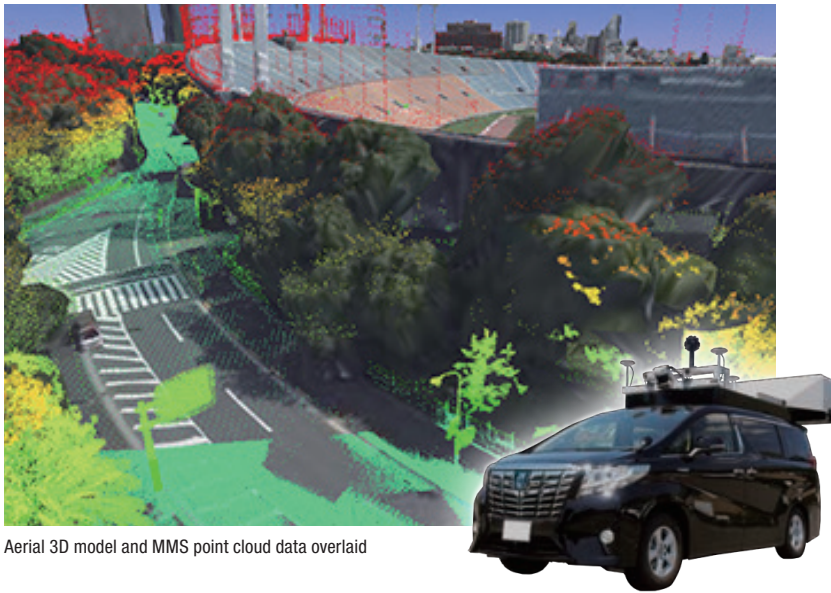




Red Relief Image Map by digital aerial photography and Airborne LiDAR Surveying data



Airborne LiDAR Bathymetry (ALB) allowing water depth of rivers and the ocean to be measured from the air



Aerial 3D model and MMS point cloud data overlaid

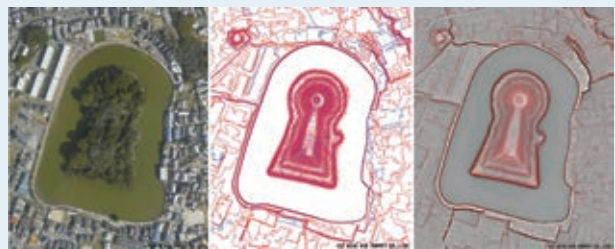


3D survey by UAV (point cloud data)

## Case Studies

### Helicopter-based LiDAR Survey

AAS in collaboration with the Archaeological Institute of Kashihara (Nara prefecture) surveyed tumulus features. A helicopter-based LiDAR system was used to acquire 3D point cloud data that was used to create a digital surface model (DSM) for the tumulus feature.



### Development of Forest monitoring using satellite remote sensing and UAV

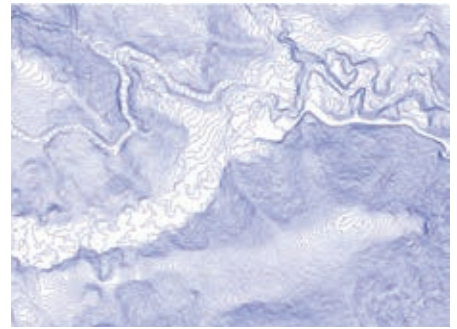
The Forestry Agency was supported by AAS to improve REDD+ technology in southeastern asia. REDD+ is the strategy for reducing deforestation and forest degradation. Since 2014, AAS has developed forest monitoring technology based on satellite remote sensing and UAV in Myanmar.







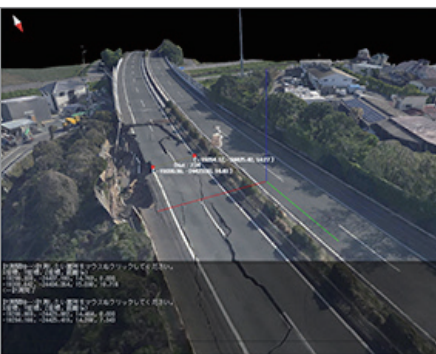
3D Model from Oblique Camera Images



1 m contour map



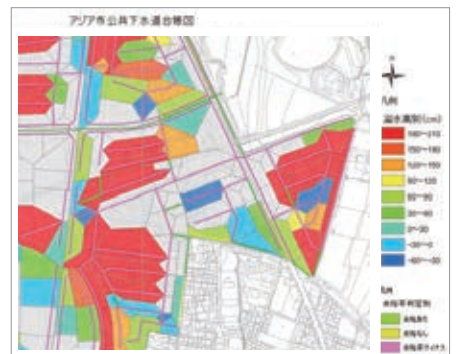
Digital Mapping Project: Cote d'Ivoire (JICA)



3D Cloud Viewer "LaVBrowser"

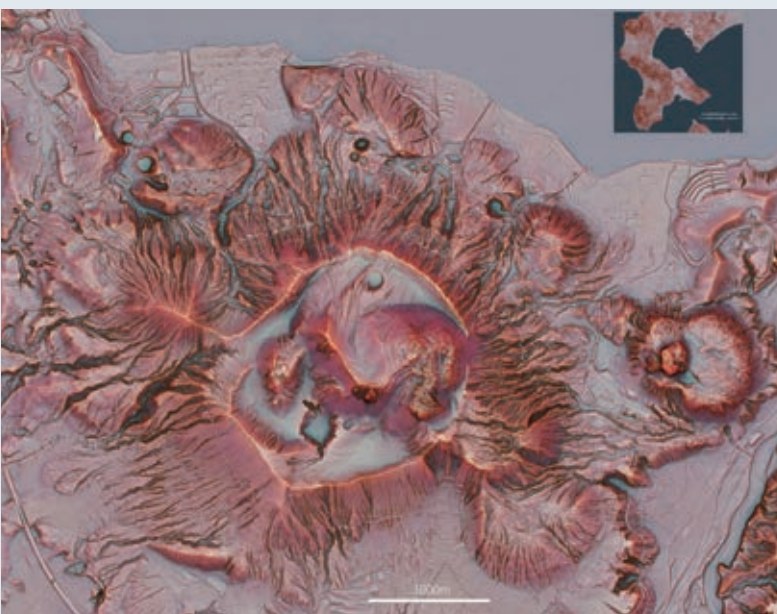


GIS for disaster prevention



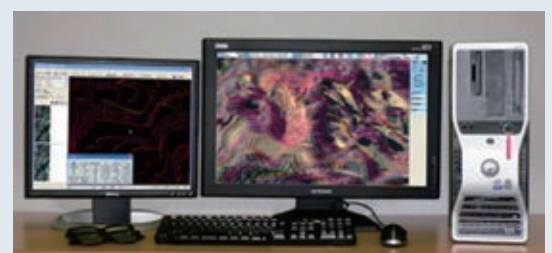
Combined Sewer Overflow Simulation

## Red Relief Image Map



The Red Relief Image Map (RRIM) is a novel 3D visualization technique developed by AAS to represent features on the land surfaces, sea floor as well as other celestial bodies. RRIM is developed from different topographic elements, which can be computed from LiDAR, ASTER GDEM, GTOPO30 and ETOPO2.

## Zukameijin Azuka



micro-topography.

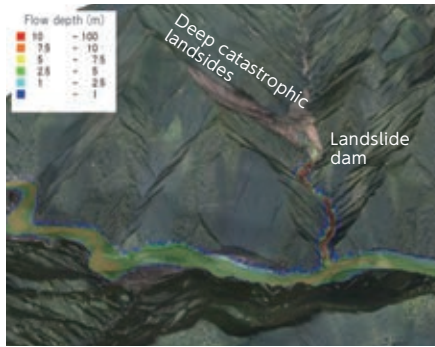
Patent

Three-dimensional image forming device and three-dimensional image-creation program (Patent No.4272146) etc.

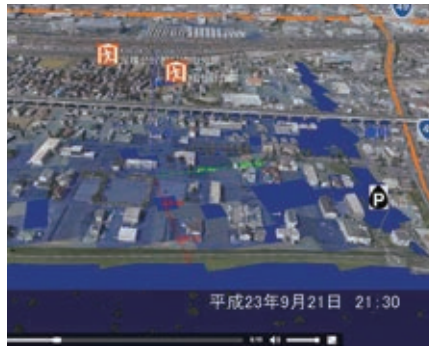
Red relief image map of Mt. Usu, measured on May 5th, 2005



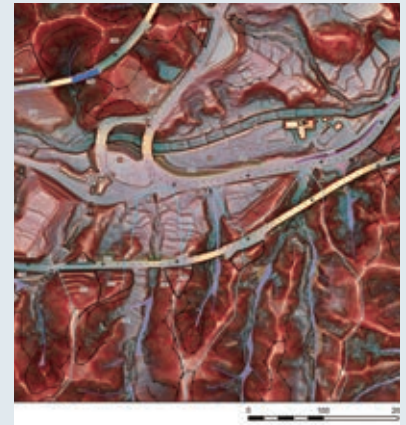
**[Disaster Management] Sabo, volcanic disaster prevention, slope disaster prevention, river disaster prevention, urban disaster prevention**



landslide dam outburst floods Simulation

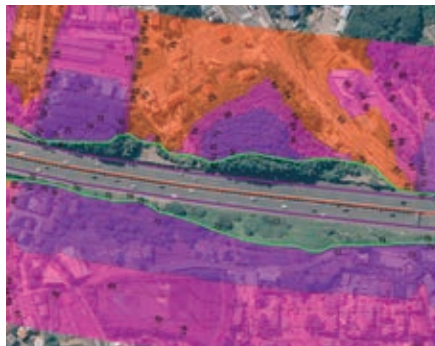


3D Flood Hazard Map (Koriyama City)



Basic Data for Road Facility Comprehensive Inspection

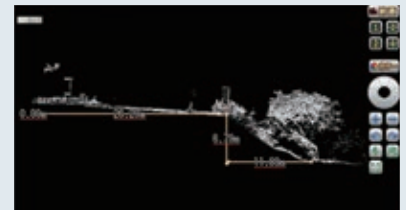
**[Environmental Management] Conservation of biodiversity, environmental assessment, forest resources management, soil contamination survey**



Road noise analysis



Mobile Field Survey System for Forest Management



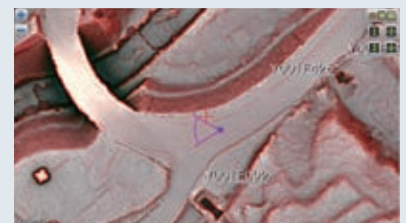
**[Infrastructure Asset Management] Planning, design, and conservation of renewable energy resources and infrastructure**



Small Hydroelectric Power Generation  
(Magoishi hydroelectric power plant /Aqua Power Tohoku Co.,Ltd)



Bridge Deflection Measurement System



Methods effective for viewing different kinds of information

Utilization of Geospatial Data on Road Management  
(Mie Office of River and National Highway,  
Chubu Regional Development Bureau, MLIT)

## Overseas Projects

We have put much effort into the maintenance of geospatial information such as topographic maps that are indispensable to the building of social infrastructure mostly in developing countries. In recent years, we have proactively been putting effort into consulting with forestry conservation planning, REDD+, and other areas involving the environment and disaster prevention. We provide solutions to issues such as global warming and biodiversity.



Training in the use of a transit compass for forest survey



Checking a topographic map

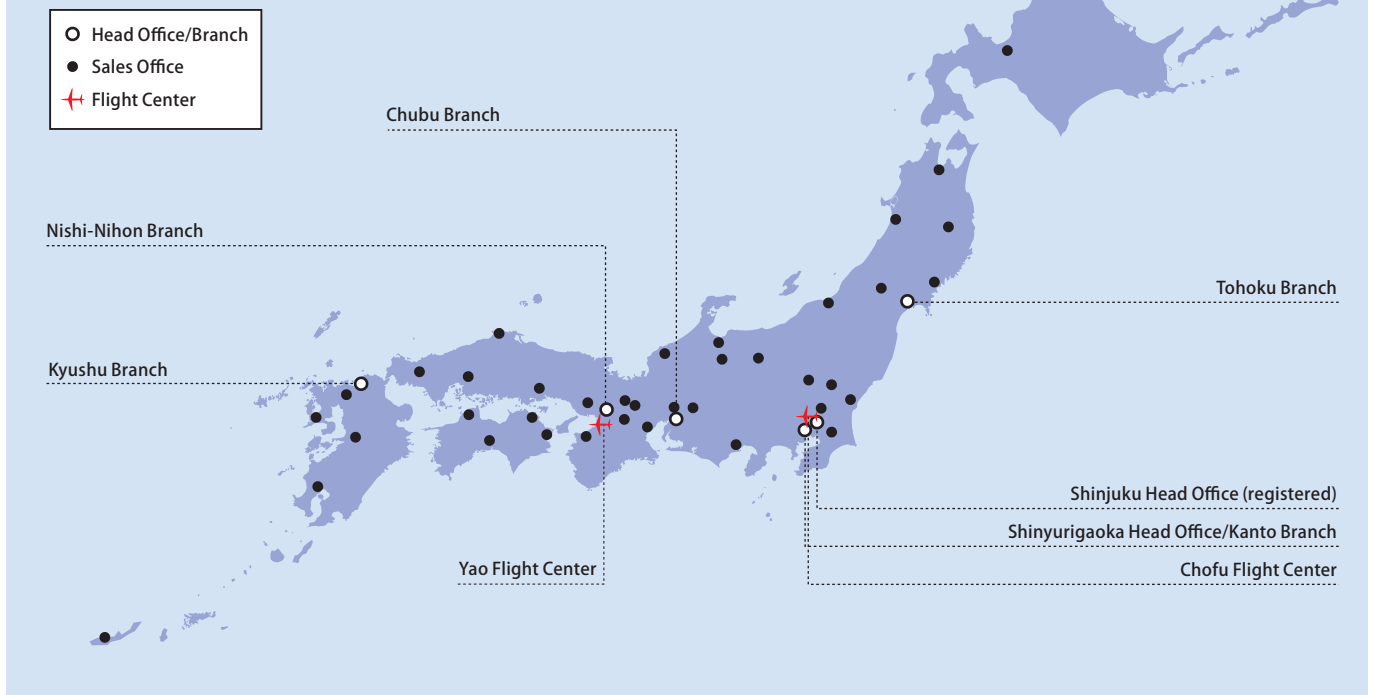


GIS Technology transfer



Forest survey

## Out nationwide network serves our clients



### History

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1954 Establishment (Inauguration) of Asia Aerial Survey Company</li> <li>1956 Licensed for Aerial Work Services by the Ministry of Transport</li> <li>1960 Development of the analytical aerial triangulation system, the world's first practical application</li> <li>1963 Change of company name to Asia Air Survey Co., Ltd. (Capital raised to 100,500,000 yen)</li> <li>1964 Listing on the Tokyo Stock Exchange, Second Section. Transfer of head office to Tsurumaki, Setagaya-ku, Tokyo.</li> <li>1965 Establishment of Kansai Branch<br/>First overseas project: ground control point survey in Ghana</li> <li>1981 Establishment of Technology Center in Atsugi City,</li> <li>1982 Completion of new head office building in Tsurumaki</li> <li>1989 Transfer of head office to Shinjuku-ku, Tokyo</li> </ul> | <ul style="list-style-type: none"> <li>1998 Acquisition of ISO9001 certification</li> <li>2003 Transfer of Technology Center from Atsugi City, Kanagawa Prefecture to Asao-ku, Kawasaki City (Shinyuri Technology Center)</li> <li>2004 Acquisition of ISO14001 certification</li> <li>2005 Acquisition of ISO/IEC27001 certification</li> <li>2008 Transfer of head office functions from Shinjuku-ku, Tokyo to Asao-ku, Kawasaki City (Shinyurigaoka Head Office)</li> <li>2009 Acquisition of Privacy Mark</li> <li>2012 Acquisition of Eco-First certification</li> <li>2014 Acquisition of ISO/IEC20000-1 certification</li> </ul> |
|---|---|



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