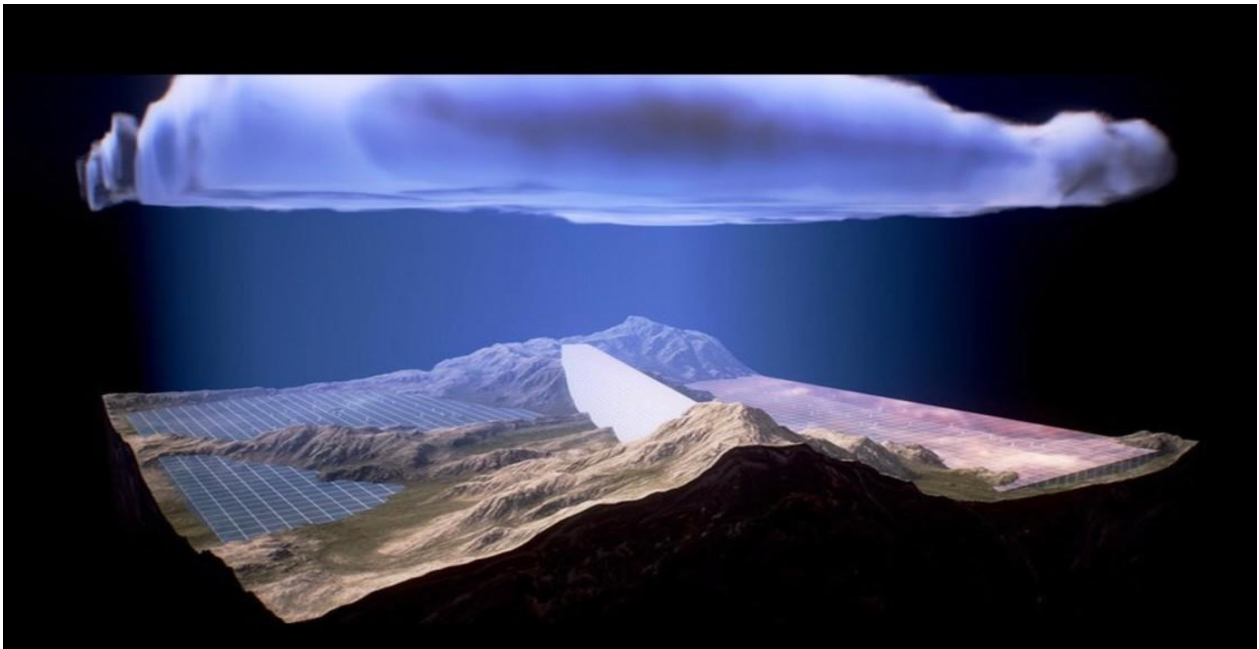


Capability Report: Drone Technology in Water Management and Dam Safety

Introduction

Moongate Technologies leverages advanced drone technology to enhance water management and ensure dam safety. Our services include bathymetric surveys, water level measurements, and comprehensive dam inspections.

Services Overview



Moongate Technologies applies a rather unconventional approach to dam inspections. Using unmanned aerial vehicles, hundreds of images are captured and compiled into a 3D model.

Bathymetric Surveys and Water Level Measurements

- **Technology Used:**
 - Drones equipped with LiDAR and sonar sensors.
 - Integration with satellite data for enhanced accuracy.

- **Capabilities:**
 - **Detailed Mapping:** Generate high-resolution maps of underwater terrain.
 - **Water Level Monitoring:** Measure and track water levels in real-time.
 - **Data Integration:** Combine drone and satellite data for comprehensive analysis.
- **Benefits:**
 - **Precision:** Accurate measurements aid in efficient water resource management.
 - **Cost-Effectiveness:** Reduces the need for manual surveys and large equipment.
 - **Safety:** Minimizes human exposure to hazardous environments.

Dam Inspections

- **Inspection Types:**
 - **Annual Inspections:** Regular checks to ensure structural integrity.
 - **Emergency Inspections:** Rapid response assessments following unusual events.
 - **Five-Year Inspections:** In-depth evaluations as part of long-term maintenance.
- **Technology Used:**
 - Drones equipped with high-resolution cameras and thermal imaging.
 - AI-powered image analysis for identifying potential issues.
- **Capabilities:**
 - **Visual and Thermal Imaging:** Detect surface damages and thermal anomalies.
 - **Remote Access:** Inspect hard-to-reach areas without scaffolding.
 - **Data Archiving:** Maintain historical data for trend analysis and planning.
- **Benefits:**
 - **Efficiency:** Faster inspections compared to traditional methods.
 - **Comprehensive Coverage:** Ability to inspect large and complex structures thoroughly.
 - **Proactive Maintenance:** Early detection of potential issues to prevent failures.



Clicking on an area of interest on the 3D model will direct the user to a high-resolution image from which measurements on cracks can be made with millimeter accuracy.

Conclusion

Moongate Technologies utilizes cutting-edge drone technology to provide efficient, accurate, and safe solutions for water management and dam safety. Our services ensure the sustainability and safety of vital water resources and infrastructure. By integrating drones with advanced sensors and AI, we offer unparalleled insights and operational efficiency to our clients.