CYIENT

SCALABLE MAPPING AND MODELLING SOLUTIONS FOR BETTER DECISION MAKING

Overview

As a leading provider of geospatial services, Cyient helps transform, manage and deliver geospatial data. We drive stakeholder satisfaction by combining leading GIS technology platforms and data services to improve the quality, analysis, and application of geospatial information.

Our core skills for over 25 years have revolved around our ability to transform raw geospatial data into detailed maps for our customers. Our scalable solutions combined with the experience we have gained over the years mean that we can not only deal with large sets of data but also manage the complexity that comes with disparate systems, data and technology.

With a global delivery model we work with our customers across the globe and understand the challenges they face within the regions they operate in.

Mapping

Cyient's mapping solutions surround three key areas:

Create/Update – We can update existing maps, no matter how detailed they are. Our strengths lie in using the best source for the requirement (such as aerial imagery or LiDAR) in order to pinpoint changes to or the accuracy of an asset. Using this information, our skilled engineers capture changes for every single feature be it a home, gas pipe, telecom hub or the position of a particular crop.

Manage – One of the major challenges our customers face is managing their data, from managing multiple stakeholders/users to the many levels of complexity and accuracy within the maps. Our scalable solutions can help manage this data, no matter how large or complex.

Maintain – Once we have updated the data we maintain its accuracy (and currency) by regularly monitoring for change. We deploy a combination of automated and manual approaches to achieve this. This ensures the data being used from these maps are never out of date or redundant.

CASE STUDIES: MAPPING

Helping the UK Government Meet European Agriculture Compliance with Accurate Map Data

The challenge: The customer, the leading farming payment agency in the UK, had a critical requirement to update and maintain the Rural Land Registry (RLR) and to reflect the most accurate boundaries of a farmer's holdings.

Cyient Solution: Cyient provided a fully skilled digitising team who initially updated and maintained the RLR using a variety of secondary data and media sources to digitise and update parcels. In subsequent years, the scope has been extended to cover multiple projects from Business Readiness Testing for new GIS software, implementing Proactive Land Change Detection (PLCD) and training the RPA staff on new technology or procedures.
More recently Cyient's smart Remote Sensing solution, using satellite imagery, has helped the customer with a crop classification layer that supports the verification of farmer declarations.

Data Capture & Maintenance for Britain's leading National Mapping Agency

The challenge: As the National Mapping Agency for Great Britain, our customer needed to:
• incorporate up to 10,000 changes per day to their Geospatial Database of 460 million features
• maintain and improve the currency and content of their product range
• respond to ever increasing demands from its customer base over pricing and licensing policies

Cyient Solution: Since 2011, Cyient has been providing our customer with updated mapping data to comply with their Geobase-04 data model. Through this arrangement Cyient provides identification and capture of "Real World Changes", data attribution and improvements both to Rural and Urban environments.
Using high resolution aerial imagery, our Hyderabad based offshore team of over 250 Photogrammetry experts use Stereo and Mono plotting technologies to update changes identified. These changes are verified and confirmed by an onshore team of Field Surveyors based across Great Britain.

CASE STUDIES: MODELLING

HAD Maps for Autonomous Vehicles

The challenge: To deal with market pressures and competition, our customer, a world leading navigation provider, had a critical requirement to link Highly Automated Device (HAD) maps with Autonomous vehicles. The challenge involved capturing highly detailed navigation maps which represented the complete picture of road elements, like guardrails, curbs, road borders and detailed lane representation.

Cyient Solution: We used our core navigation database processing skills to achieve the customer's goals, successfully delivering 3D maps with Net 2 Class 0 detail for the majority of North America and Europe.

Delivering High Quality 3D City Models for Law Enforcement for a city in the Middle East.

The challenge: As a part of their IT implementation strategy, the city's police department wanted to update their GIS base map using high-precision digital aerial images and technology. They also required a comprehensive 3D visualization solution, which included building height and floor information of all the buildings in the City. The long-term objective was to visualize the whole city on Google Earth for monitoring vehicular traffic and law enforcement planning.

Cyient Solution: Cyient delivered accurate 3D building models with detailed attribute information. Our team also delivered the digital colour orthorectified imagery (in 15 cm GSD GeoTIFF format), true ortho imagery, colour balanced and edge matched DLTM projection, 3D vector data with all the specified attributes in Shape format, and digital elevation model (DEM) in ASCII grid format. The data was delivered with horizontal accuracy of 15cm and vertical accuracy of 25cm, enabling a 3D view of the city.

Modelling

Cyient's modelling solutions are a natural progression from our data acquisition and mapping capabilities. While most map data is two dimensional, we can capture aerial/oblique imagery and create complex geospatial data that adds the third dimension; the Z-value. This added dimension helps create 3D models ranging from a single building all the way up to a city. Cyient can create and maintain 3D data through all Levels of Detail (LOD) depending on our customer's needs.

WHY CYIENT?

1. **Scalability** – With our 3000+ Geospatial engineers.

2. **Complexity** – 25 years of experience dealing with complex sets of data.

3. **End-to-End Solutions** – We provide a complete offering from raw data to a finished 3D model.

4. **Cross industry** – We work within a range of industries be it national mapping agencies, utilities, telecoms, navigation or transport.

5. **Trusted partner:** Our track record with long standing customers prove we are a trustworthy partner for our customer's data and financial interests.

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, networks, and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build, and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With more than 15,000 employees in 22 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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