ABOUT TIRAIN

Shaanxi Tirain Science & Technology Company Limited, founded in 1999, is committed to aerophotogrammetry, remote sensing, engineering survey, cadastral survey, GIS development, Web Mapping, and GIS based Decision support System. And Tirain provides a variety of services to the urban planning, land management, traffic, logistics and public safety and so on. Moreover, Tirain passed the *ISO9001-2000*, got *National High-Tech Enterprise Certificate* by Chinese Government, and has been awarded as the *Contract Abiding & Trustworthy Enterprise* by Xi'an Municipal Government for several times. Thanks to its standardized company management, high-quality market resources, innovative technologies, technical personnel and excellent management team, Tirain now is the only private enterprise in northwestern China possessing the A-grade license in Surveying, Mapping and Geoinformation, which is the highest grade awarded by Chinese Central Government. Therefore, as one of the first-class geographical enterprises in China, Tirain will do its best to meet the new challenges of geographic information industry and offer the high-quality services to our honorable customers. The primary business area of Tirain involves,

1) **Tirain Information Photogrammetry System (TR-IPS)**

Using MicroStation V8 as the data management platform, TR-IPS designs a united enterprise management environment to conduct the project and quality management. Besides, a series of operation modules for acquiring, editing, publishing, storing and internet based management, enhance the entire system the superior integrated operation capability and promote it to higher level. The primary modules involve:

- Three-line array digital camera ADS40/08 Module

- Low-altitude UAV Module

- Conventional cameras (DMC, UCX, RC30, etc.) and mapping for remote sensing images module.

- Importing and process module for aerial photographic project.

- Data Acquisition and editing module

- Map exporting and data storing module

2) GeoCloud (Tirain Internet Mapping Engine)

GeoCloud is an advanced internet mapping engine independently developed by Tirain. Abide by OGC standards and OGC specifications; GeoCloud standardizes the process of making internet maps. Besides, it provides a series of map icons and style sheets to help the map makers to design stylish internet maps. Furthermore, the published map can be cut into tiles and deployed in an optimized cloud environment.

3) Urban Road Network Management Information System

This system is devoted to better management of urban road network. The road network, the subsidiary road facilities, the house numbers and other related data are stored in database, managed by GIS platform and generated in different formats. What's more, the data, especially the spatial data, is encrypted by a high-level-security spatial database. In this way, the spatial data and the copyrights are protected confidentially in the process of distribution and immigration.

4) Tirain UAV Photogrammetry

Integrated with unmanned aircraft vehicle, the photogrammetry system adopts measurable digital camera to make various scales of topographic maps, DEM, DOM, etc.

5) NaviLite (Tirain Spatial Database)

NaviLite, independently developed by Tirain, is a multi-platform spatial file database solution which is designed for spatial mobile applications. As a database, NaviLite shows high performance in spatial analysis even to the extent that only a small amount of memory is consumed. More importantly, the encryption method used by NaviLite will keep the spatial data in safety and not be illegally used in any mobile clients, such as cellphones, navigators or tablets. Besides, APIs in C/C++/Java are provided for further programming; therefore the developers can easily embed NaviLite in their programs.

6) 3D Geographic Information Applications

Based on DOM, DEM and other related spatial data, our R&D team will build an optimized 3D scene in large scale, which comes with a customized professional 3D-GIS platform with specific functions such as geo-search, spatial analysis and so on.