SERVICE SHEET

GIS

GEOGRAPHICAL INFORMATION SYSTEMS

A large Fyfe team of geospatial information specialists works on geographical information system (GIS) mapping and spatial data management projects. More than 15 CAD/GIS specialists and technical assistants develop processes and tools to ensure fast, accurate and data capture of the highest quality, maintain data and research for ongoing data updating.

FYFE

ENVIRONMENT | DEVELOPMENT | RESOURCES

GIS

PROCESS MODELLING

Develop tools to automate GIS processes for converting and delivering data to automated alignment sheet CAD process, reducing the time required for GIS works by 90%.

GIS DATA MANAGEMENT

Implement client specific data models and data standardisation; migrate new or existing data into client developed data models set to a data standard; and tailor freshly captured or existing data into new data models and standards to client requirements.

GIS MAPPING

Tailor mapping services to client needs for conveying clear and easy to understand information.

SPATIAL ANALYSIS

Use techniques and tools to analyse entities using their topological, geometric or geographic properties (e.g. conditional, density, distance, generalisation, interpolation, neighbourhood, raster conversion and creation, reclassification and surface).

Create, modify and analyse TIN, raster, and terrain surfaces; extract, interpolate and derive information and features for all entity types.

Construct triangulated networks to derive height values for the evaluation of pipeline network placement.

CONSTRAINTS MODELLING

Create overlays of surface or 3D models of various geographic and operational constraints, such as distance from various features, no go areas, rights of way and data quality assurance; derive constraint values from geometry or attribute information and present in table, raster and vector form.

CHANGE DETECTION

Analyse remotely sensed imagery to discriminate areas of change between multi-temporal data sets to evaluate seasonal or anthropocentric variation in environmental condition over time.

IMAGE CLASSIFICATION

Use classification techniques, including knowledge and object based classification, to delineate varying land use and land cover, and deliver comprehensive mapping in hard copy and soft copy formats.

IMAGE ANALYSIS

Develop analytical processes to extract useful data from RADAR and hyperspectral imagery for desktop studies such as land suitability mapping.

PIPELINE ROUTE SELECTION

Produce initial pipeline route selection using a combination of aerial imagery and available GIS datasets including land system, drainage systems, flood data, infrastructure, civil infrastructure, topography, vegetation, environmentally sensitive areas, culturally sensitive areas, existing pipeline and pipeline furniture; produce quick, accurate and efficient planning of pipeline line of sight.

INDUSTRY STANDARD AND 'STATE OF THE ART' SOFTWARE

Use, proficiently and effectively, all leading GIS and raster image analysis software packages; customise applications to client project specifications to achieve required outcomes; provide high-end products in all leading GIS formats according to a native GIS environment.

GIS software packages

ESRI Arc GIS and extensions for designing and managing solutions through the application of geographic knowledge; Pitney Bowes MapInfo Professional for mapping and geographic analysis application; AutoCAD Map 3D mapping software for model-based infrastructure planning and management.

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