



شركة دايركشن للأنظمة المتكاملة المحدودة

DIRECTION INTEGRATED SYSTEMS CO. LTD

Tel: (249) 154882010 Fax: (249) 154882040

ت: ٠١٥٤٨٨٢٠١٠ فاكس: ٠١٥٤٨٨٢٠٤٠

Street No. 29Khartoum El amarat

www.direction-sd.com

الخرطوم العمارات شارع 29

Direction Geographic Information Systems

## **Direction Integrated Systems Company**

Is a private joint stock company established on 15<sup>th</sup>,Feb.2010 under the law of companies of the Republic of Sudan 1925 and is listed under the law of companies registration with General Commercial registrar under the number (36284).

### **Company Address:**

Republic of Sudan - Khartoum Al Marat - the intersection of 29<sup>th</sup> Street with Mohammed Najib Street.

**Tel :** 249-154882010

**Fax:** 249-154882040

**Website:** [www.direction-sd.com](http://www.direction-sd.com)

**E-mail :** [info@direction-sd.com](mailto:info@direction-sd.com)



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## The Company's goals:

The country has seen a renaissance of development in various technical fields. And to meet these new advancements and future challenges, an expansion in use of the latest technologies that save time and effort becomes very crucial. So came the idea of creating a specialized company with clear strategic objectives to provide technical support to keep pace with technological developments in Sudan , not to overlook the technical implementation of key activities and associated activities of the company.

## Company's activities:

1. Working in the field of engineering consultancy.
2. Work in the field of electrical and civil engineering.
3. Working in the field of surveying and maps. (Where the company officially qualified by the Ordnance Survey).
4. Security and safety systems and information security.
5. The company works in the computer fields (maintenance, programming, networks).
6. Designing specialized programs for companies and institutions, security programs in particular.
7. Working in the field of mineral exploration (mechanical, Geophysical).
8. Working in the field of seismic survey.
9. Working in the field of mining (where the company owns the name Direction for mining, Al Fares mining)
10. Working in the field Removal rocky obstacles with regard to the work of water and oil.



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11. The company holds internal and external courses for geographic information systems, Computer and Information security and confidentiality systems.
12. GIS consulting and Designing Services: consulting services to help design spatial database, applications and systems to meet customer needs in geographic information systems.
13. GIS data conversion and Automation.
14. Spatial analysis: (Spatial Analysis) our team is able to assist in the spatial analysis process that helps in the decision-making process.
15. Tracking (Tracking): Direction Integrated Systems provides integrated tracking and tracing of vehicles and personnel services or assets.
16. Navigation Services (Navigation Services) to access and navigate effectively from one point to another, thanks to the visual guidance or voice, as the system will reset the roads depending on the applications of Geolocation GPS for joint According geographical maps, which include side streets and major in the provinces, as well as the main places "points of Interest" in the state of Khartoum.
17. Remote Sensing applications: Digital image processing (Digital Image Processing): Modeling, Enhancement, analysis of variance (Contrast), Mosaicking.
18. Safety and Security: The Company markets alarming and fire extinguishing systems, manual or automated.



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### Bodies that deals with the company:

1. **Armed Forces** (Communication and Information Commission, the Military Survey Department, etc.).
2. **Ministry of the Interior** (central reserves, Civil Registry Authority, Authority police supply).
3. Governmental institutions.
4. **Sudanese Electricity Distribution Company** (where the company officially qualified by the Sudanese company for the distribution of electricity).
5. **Sudanese Electricity Transmission Company.**
6. **Red Sea State.**
7. **EIGADARIF State.**
8. **Ministry of Electricity and Dams Implementation Unit.**
9. **The Ministry of Communications** (National Information Center).
10. **Ordnance Survey** of Khartoum state (where the company officially qualified by the body).
11. **Ministry of Infrastructure and Urban Development.**
12. **General Authority of Civil Aviation.**
13. **Central Bureau of Statistics.**
14. **Commission to encourage investment.**
15. **National Water Corporation.**
16. Companies that work in the **Implementation of roads and bridges**
17. Working in the field of **transportation** and **relocation** companies.
18. **Petro Lowell Petroleum Services.**
19. **Integrated Chemicals and development Co.Ltd.**
20. **Security guards** companies.
21. **Car rental** companies.
22. **KM Technology Corporation**



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23. **White Nile Sugar** factory.
24. **Zain Co. For Telecommunications.**
25. **SUDANI Company.**

#### Related foreign companies:

1. **ESRI** North East Africa (**ESRI-NEA**).
2. **SANFUL**, Chinese company.
3. **GPT**, German company.
4. **Quality Stander Information Technology**, Egypt.
5. **Amal International Center** - Arab Republic of Egypt.
6. **Al Qarar Foundation Security Services** - Saudi Arabia.
7. **Senen General Trading Company**, United Arab Emirates.
8. **IGN FI**, French company.
9. **PETRA DIGITAL SOLUTIONS**, Republic of Egypt.
10. **Ahmed Salah al-Din Abd –almofh's Group of Companies**, Saudi Arabia.
11. **Geo Systems** (Company specialized in geographical information systems Software) - Taiwan's.
12. **MapOne** company, Republic of Egypt.
13. **Alkan Group**, Republic of Egypt.
14. **Khatib & Alami Engineering Company.**

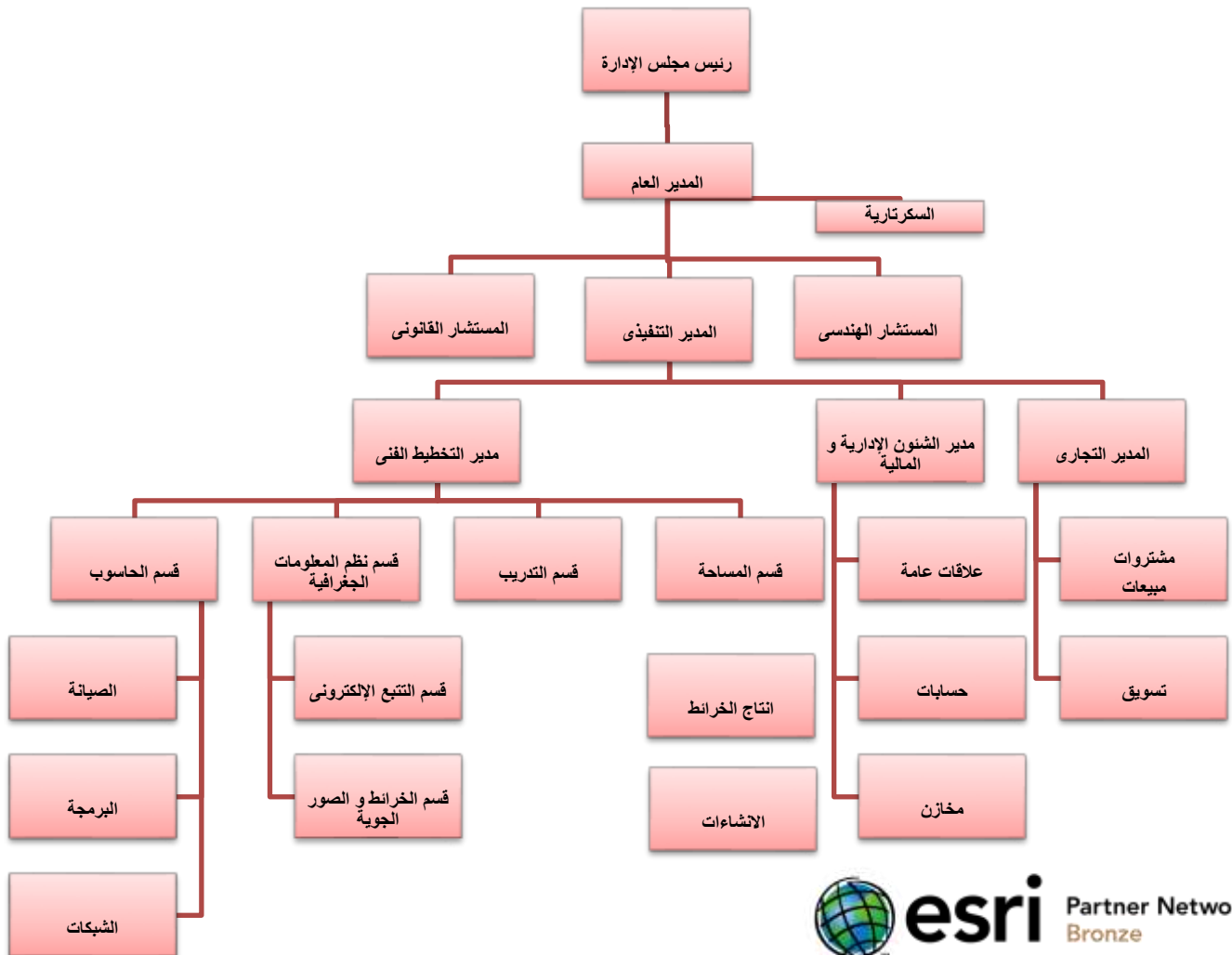


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### The administrative structure of the company:



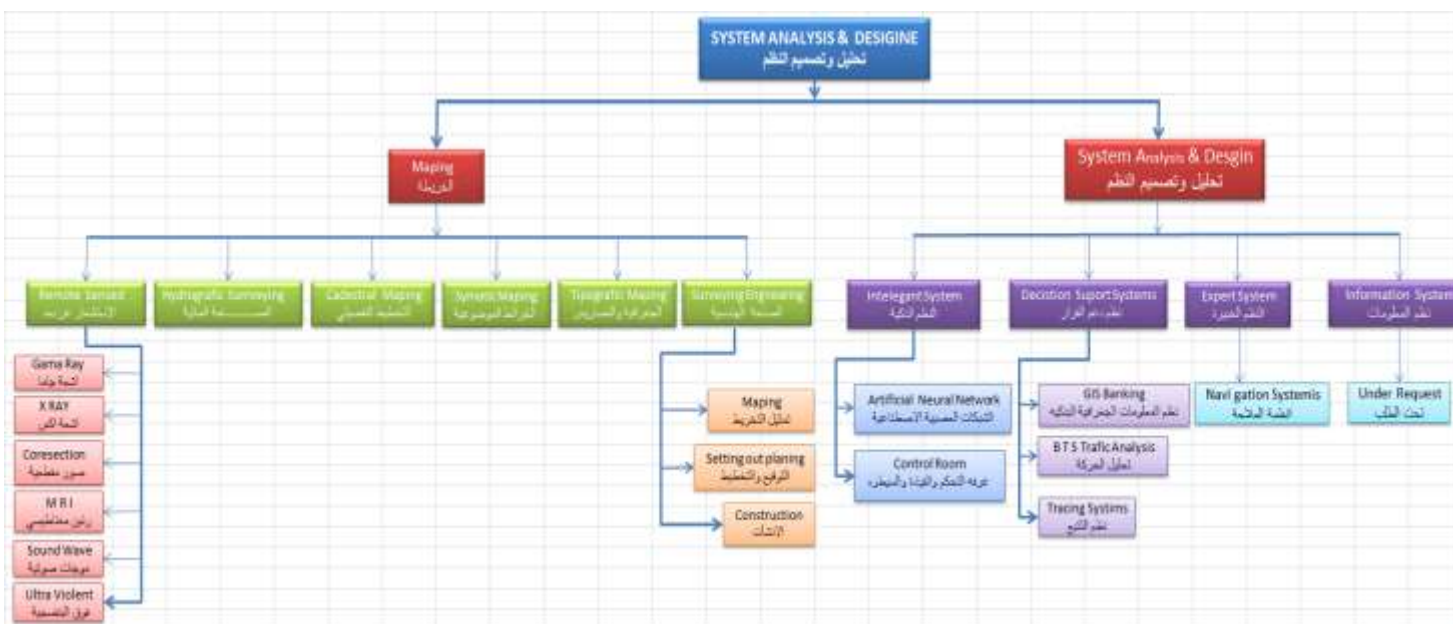
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## Geographic Information Systems(GIS)

A geographic information system (GIS) lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends.

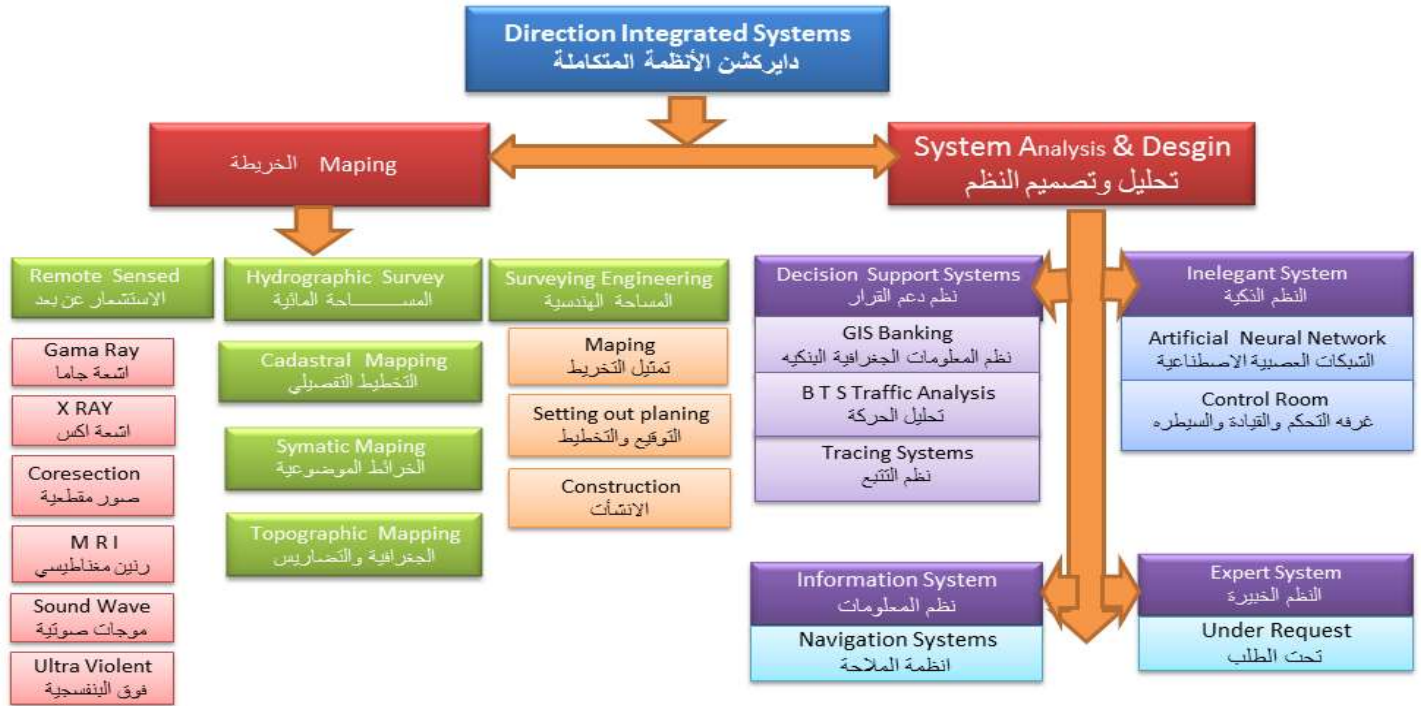
GIS benefits organizations of all sizes and in almost every industry. There is a growing interest in and awareness of the economic and strategic value of GIS.



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## GIS at Direction Integrated Systems



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## Real World Representation

### PLACE Representation

Methods for specifying locations on the Earth's surface are essential to the creation of useful geographic information

Places (Locations) is the basis for many of the benefits of RW Modeling

### Geo-Reference

### Geo-Locate



The process of allocating a location based on assigned value.



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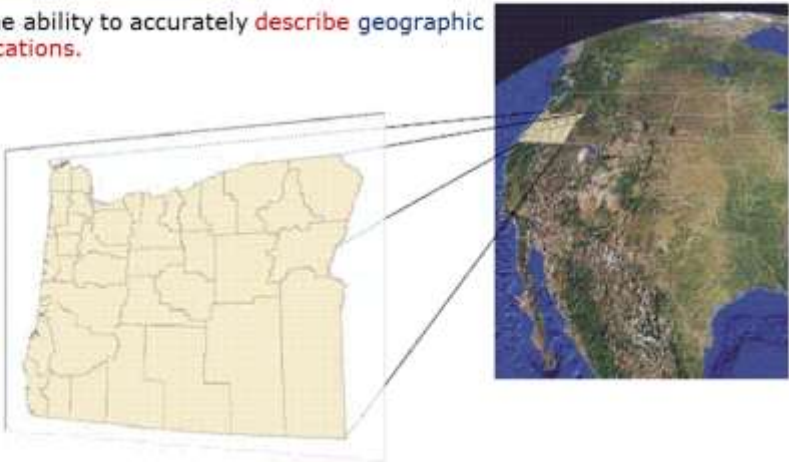
## Real World Representation

PLACE Representation	Places (Locations) is the basis for many of the benefits of RW Modeling		
<p><u>Postal Codes</u></p> <p>The basic Georeference types are:</p>	Geo-Reference	Geo-Locate	Geo-Code
	<ul style="list-style-type: none"> <li><u>Postal Codes</u> were introduced in many countries (not all) in the late 20th century in order to simplify the <u>sorting</u> of mail.</li> <li>They have <u>proven</u> very <u>useful</u> for many <u>purposes</u> besides the sorting and delivering of mail.</li> <li>Although <u>ZIP code</u> varies and can be <u>changed</u> whenever the postal country authorities want, it is <u>sufficiently</u> constant to be used for <u>mapping</u> purposes.</li> </ul>		



## Real World Representation

<b>PLACE Representation</b>	Places (Locations) is the basis for many of the benefits of RW Modeling
Methods for specifying locations on the Earth' surface are essential to the creation of useful geographic information	<b>Geo-Reference</b>
	The ability to accurately <b>describe</b> geographic <b>locations</b> .



### Why GIS?

- GIS is widely used to optimize maintenance schedules and daily fleet movements. Typical implementations can result in a savings of 10 to 30 percent in operational expenses through reduction in fuel use and staff time, improved customer service, and more efficient scheduling. GIS helped the City of Woodland refine its fleet scheduling, saving fuel and labor
- Better Decision Making: GIS is the go-to technology for making better decisions about location. Common examples include real estate site selection, route/corridor selection, evacuation planning, conservation, natural resource extraction, etc. Making correct decisions about location is critical to the success of an organization. This GIS-based



disaster decision support system helps Taiwan plan for and respond to typhoons

- **Cost Savings from Greater Efficiency :**GIS-based maps and visualizations greatly assist in understanding situations and in storytelling. They are a type of language that improves communication between different teams, departments, disciplines, professional fields, organizations, and the public.
- **Better Record Keeping :**Many organizations have a primary responsibility of maintaining authoritative records about the status and change of geography. GIS provides a strong framework for managing these types of records with full transaction support and reporting tools. ROI on Montana's GIS-based statewide cadastral system is more than \$9 million annually.

## COMPONENTS OF A GIS:

An operational GIS also has a series of components that combine to make the system work. These components are critical to a successful GIS.

### Hardware

Hardware is the computer system on which a GIS operates. Today, GIS software runs on a wide range of hardware types, from centralized computer servers to desktop computers used in stand-alone or networked configurations.

## Software

GIS software provides the functions and tools needed to store, analyze, and display geographic information. A review of the key GIS software subsystems is provided above.

## Data

Perhaps the most important component of a GIS is the data. Geographic data and related tabular data can be collected in-house, compiled to custom specifications and requirements, or occasionally purchased from a commercial data provider. A GIS can integrate spatial data with other existing data resources, often stored in a corporate DBMS. The integration of spatial data (often proprietary to the GIS software), and tabular data stored in a DBMS is a key functionality afforded by GIS.

## People

GIS technology is of limited value without the people who manage the system and develop plans for applying it to real world problems. GIS users range from technical specialists who design and maintain the system to those who use it to help them perform their everyday work. The identification of *GIS specialists* versus *end users* is often critical to the proper implementation of GIS technology.

## Methods

A successful GIS operates according to a well-designed implementation plan and business rules, which are the models and operating practices unique to each organization.

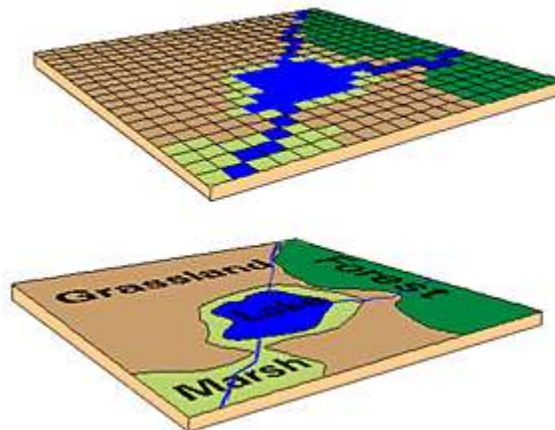
As in all organizations dealing with sophisticated technology, new tools can only be used effectively if they are properly integrated into the entire business strategy and operation. To do this properly requires not only the necessary investments in hardware and software, but also in the retraining and/or hiring



of personnel to utilize the new technology in the proper organizational context. Failure to implement your GIS without regard for a proper organizational commitment will result in an unsuccessful system, Many of the issues concerned with organizational commitment are described in **Implementation Issues and Strategies**.

### HOW A GIS WORKS

A GIS stores information about the world as a collection of thematic layers that can be linked together by geography. This simple but extremely powerful and versatile concept has proven invaluable for solving many real-world problems from modeling global atmospheric circulation, to predicting rural land use, and monitoring changes in rainforest ecosystems.



Geographic information contains either an explicit geographic reference such as latitude and longitude or national grid coordinate, or an implicit reference such as an address, postal code, census tract name, forest stand



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identifier, or road name. An automated process called geocoding is used to create explicit geographic references (Multiple locations) from implicit references (descriptions such as addresses). These geographic references can then be used to locate features, such as a business or forest, and events, such as an earthquake, on the Earth's surface for analysis.



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### Data Available to Direction Integrated Systems:

LAND USE												
NO	CODE		TOWN	CODE	VECTOR DATA			RASTER DAT				
					BLOCK	PLOT	ROAD	TYPE	SENSOR	FORMAT	SPATIAL RESOLUTION	ACQUISITION DATE
1	DIS-01	Khartoum	KHARTOUM	1	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
2			KHARTOUM NORTH	2	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
3			UM DURUMAN	3	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
4			Jebel Awliya	4	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
5	DIS-02	RED SEA	PORTSUDAN	5	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
6			SUAKIN	6	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
7			HIA	7	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
8			HLAIB	8	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
9			SNKAT	9	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
10			GBIT	10	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
11			Toker	11	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
12			Arkawit	12	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
13			MHAMED GOOL	13	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
14			DONGOLA	14	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
15	DIS-03	NORTHERN	WADI HALFA	15	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
16			KREMA	16	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
17			MARAWI	17	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
18			DIGO	18	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
19			Elmahas	19	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
20			Kajbar	20	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
21			Korti	21	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
22			El Birawia (Royal City)	22	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
23			El Multaga (Merawi D)	23	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
24			Elgoth	24	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
25	DIS-04	NILE	ALDBA	25	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
26			ALTDAMON	26	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
27			ATBRA	27	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
28			AL DAMR	28	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
29			ABO HAMED	29	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
30			BRBR	30	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
31			ALIBIDIA	31	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
32			ALBAOGA	32	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
33			ALMTMA	33	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
34			KASSLA	34	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
35	DIS-05	KASSALA	Arowma	35	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
36			NEW HALFA	36	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
37			Khshim Elgerba	37	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
38	DIS-06	GEDAREF	ALGADARIF	38	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
39			El Fao	39	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
40			El Haouata	40	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
41			El Fashaga	41	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
42			El Shouak	42	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
43			El Galabat	43	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
44	DIS-07	ALJAZIRA	WADMADANI	44	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
45			ALKAMLEN	45	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
46			ALHILAJIA	46	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
47			Elhesehissa	47	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
48			Rufaa	48	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
49			Tabat	49	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
50			El Mihyriba	50	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
51			ALMSED	51	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
52	DIS-08	WHITE NILE	WD ALNOMAN	52	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
53			KOSTI	53	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
54			Eldwaim	54	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
55			Elgetinah	55	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
56			RABAK	56	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
57			Elkowah	57	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
58			El Jezeira Aba	58	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
59			Tendalti	59	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
60			El Jableen	60	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
61			ABO HGAR	61	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
62	DIS-09	SINNAR	Sinnar	62	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
63			SINJAH	63	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
64			Kenana	64	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
65			unknown	65	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)
66			El Souki	66	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	YEAR (2014)





87	BLUE NILE	DIS-10	ALDMAZEN	87	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
88			ALXRMK	88	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
89			WD ABOK	89	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
90			Eldindir	90	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
91			Gissan	91	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
92	NORTHERN KORDOFAN	DIS-11	Roseires	92	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
93			BADOS	93	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
94			ALOBIED	94	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
95			ALRAHAD	95	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
96			UM RWABA	96	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
97			ABO HRAZ	97	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
98			Bara	98	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
99			Babanousa	99	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
100			Lagawa	100	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
101			Sodari	101	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
102	SOUTHERN KORDOFAN	DIS-12	Abu Jebelhi	102	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
103			Ali	103	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
104			El Simeih	104	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
105			ALNHOOD	105	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
106			KADOGU	106	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
107			ABYI	107	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
108			Rashad	108	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
109			ALMGLAD	109	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
110			ABO KRSHOLA	110	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
111			Abu Zabd	111	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
112	NORTHERN DARFUR	DIS-13	Elfula	112	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
113			El Mazroub	113	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
114			Talodi	114	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
115			ALABASIA	115	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
116			DILLING	116	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
117			ALFASHIR	117	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
118			Muhajriya	118	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
119			DAR ALSLAM	119	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
120			Kutum	120	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
121			Muleit	121	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
122	SOUTHERN DARFUR	DIS-14	Kepkabyah	122	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
123			Taweelah	123	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
124			Umm Kedada	124	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
125			Shengli Tobai	125	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
126			Wadaa	126	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
127			Umm Badir	127	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
128			NYALA	128	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
129			ALMLAM	129	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
130			RHID ALBARDI	130	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
131			MERSHANG	131	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
132	WESTERN DARFUR	DIS-15	Kass	132	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
133			ABO AGOR	133	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
134			Abu Gebra	134	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
135			OM DAFQ	135	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
136			AL JUNAYNAH	136	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
137			ZALINGEI	137	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
138			ISH BARA	138	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
139			Mestrieri	139	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
140			Guldo	140	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
141			Foroburunga	141	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
142			Buram	142	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
143			Habyta	143	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
144			Bardiah	144	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)
145			MAKGAR	145	ok	ok	ok	satellite	QUICKBIRD	IMG	0.56 M	3-BANDS	YEAR (2014)



DIRECTION INTEGRATED  
SYSTEMS CO. LTD

# شركة دايركشن للأنظمة المتكاملة المحدودة

## DIRECTION INTEGRATED SYSTEMS CO. LTD

Tel: (249) 154882010 Fax: (249) 154882040

ت: ٠١٥٤٨٨٢٠١٠ فاكس: ٠١٥٤٨٨٢٠٤٠

Street No. 29Khartoum El amarat

www.direction-sd.com

الخرطوم العمارات شارع 29

Direction Geographic Information Systems

LAND COVER	
NO	Feature
1	Geographic_Zones
2	Grid_2Deg
3	Grid_5Deg
5	International_Boundary
6	Localities
7	National_Boundary
8	Polytical_Boundary_Line
9	Polytical_Boundary_Poly
10	States_Line
11	States_Poly
12	Tribes
13	Precipitation
14	RainFall
15	Sea_Currents
16	Temperature
17	Contour_10m
18	Drainage
19	Hills
20	Spot_Heights
21	Mines
22	Oil_ConcessionBlocks
23	Oil_Fields
24	Pipe_Line
25	Refiner
26	Earthquakes
27	Geological_Eon
28	Geological_Era
29	Geological_Structure
30	Volcanic
31	Agricultural_Land
32	Agricultural_Projects
33	Cultivated_Areas
34	Forests
35	Gezera_Projec
36	Gezera_Project_Canalization
37	Goaz_Areas
38	Islands
39	Soil
40	Vegetation
41	Woody_Land
42	Rural_Areas
43	Service_Activities
44	Settlements
45	Urban_Areas
46	Airports
47	Airways
48	Highways
49	National_Roads
50	Railways
60	Town_Roads
61	Tracks
62	Electricity_Net
63	Sewerage
64	Water_Net (PipesNet-Valves, Wells , Pump Stations)
65	Ground_Water
66	GroundWater_Acquifer
67	GroundWater_Basin
68	Hydrosphere
69	Lakes
70	Rivers
71	Swamps
72	Water_Resources
73	Water_Stations
74	Wells
75	Tourist_Archeological_Sites

rk



## Navigation

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

**Navigation system provides you with following information when you drive your car :**

- Smarter destination search: search for the location you want to visit.
- Time remaining to reach your destination.
- Quick and intelligent routing and rerouting.
- Integration with contacts (and possibly social networks).
- Excellent spoken voice features.
- A voice command system that works and works well.
- A connection to the Web/cloud.
- A cohesive interface that's not distracting to the driver.



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2Direction Navigation System - figure 1



Direction Navigation System 2



## Vehicles tracking system

With Full pride Direction Integrated Systems Co. Ltd. developed its automatic tracking system for vehicles.

### Introduction:

Many companies have a huge departments require them to provide a means for workers to transport goods, such as sales departments and other technical departments responsible for customer service, these departments have great share in maximizing the company's profits and play an important role in customer satisfaction.

Despite this fact, senior management understands the importance of maintaining the productivity rates of these departments, they sometimes ignore the importance of the transport fleet management serve these departments in order to achieve higher productivity rates at the lowest possible cost.

The companies that rely on fleets of transport as one of the main instruments governing the conduct of the work depends upon such distribution companies are supposed to have sufficient expertise to manage its own fleet of transport by employees where bother appointing of them experience in the organization of work and the fleet.

However, this does not apply to most of the companies that deal in selling a commodity, market, or maintenance depending on the means of transport owned, as here, the company is required to offer this service to



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work on own and operate vehicles to help those who work in the implementation of their duties and here consists fleet management problem transport in non-specialized companies with access to higher productivity management concerned at the lowest cost transfer is not easy and helping the difficulty of this matter is that the nature of the transportation costs in itself it cost does not centralized and diverse in the sense that the cost is repeated often and in amounts small in a variety of geographic areas, which incalculable traditional methods.

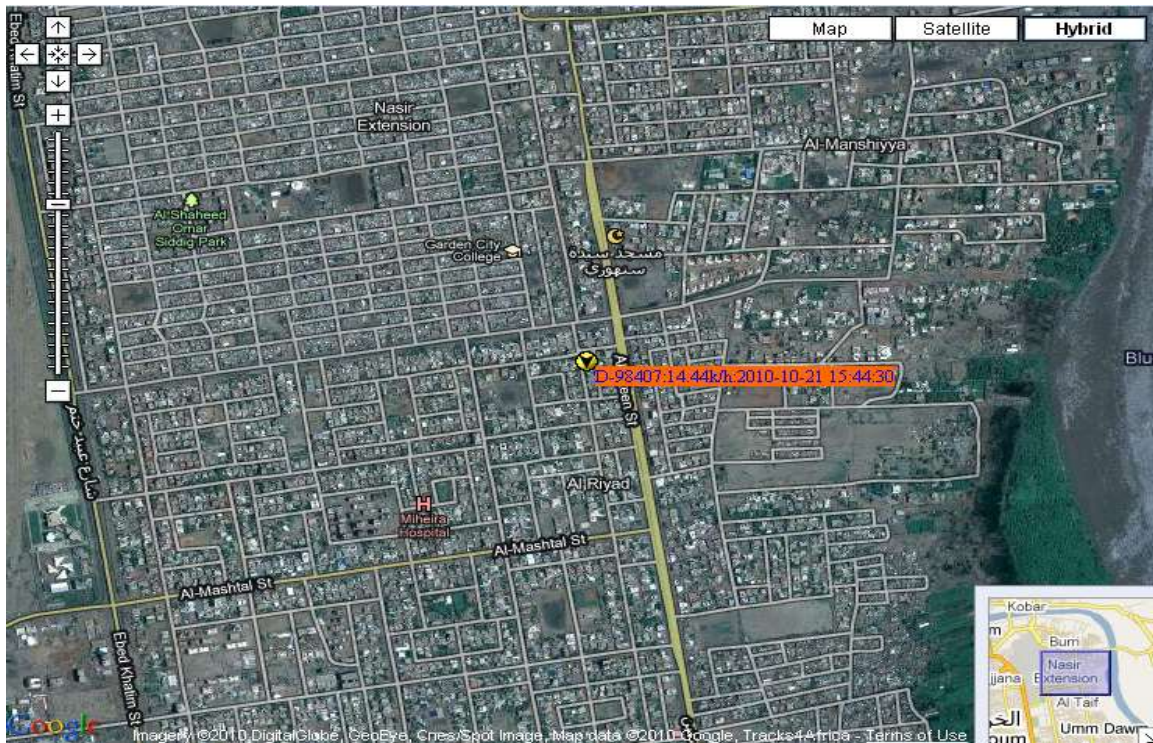
Hence it is clear that the transport fleet is a work tools such as production or computer to machines administration and the process of binding policies put each company's departments will ensure monitoring and control the actions of employees to manage this fleet and staff by established policies allowing access to the operating efficiency of the transport fleet and provide cost desired helping both those who work for senior management in achieving their goals....



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Hence pioneered automated vehicle tracking system, which helps the organization to transport fleet management and follow-up by satellite (GPS). Direction Company is one of the first promoter companies to program of automatic tracking of vehicles in Sudan.




**Features of Direction tracking system:**





1. The Possibility of using local maps, without the need for the Internet.
2. The system ensures maximum protection for data that is exchanged between the car and the system to prevent spying.
3. Securing system database, And only allow access to it by the system administrator.
4. There is a specific level of authorization for each user of the system.

**Add to the above there are several types of devices:**

<p><b>Wireless GPS tracker</b></p> <p><b>With one key call!</b></p> <p><b>New</b></p> 	<ol style="list-style-type: none"> <li>1. GPS/GSM/GPRS real time positioning function/2. Remotely arm/disarm function.</li> <li>3. Remotely stop car (Cut off power or fuel supply)/4. Wireless Stealth Lock vehicle feature./5. Main power cut off alert /6. Low power alert</li> <li>7. Displaying location on your cell phone</li> <li>8. Speeding alert/ 9. Parking alert</li> <li>10. Monitoring function</li> <li>11. SOS alarm and One key call</li> <li>12. Movement alert and Geo-fencing alarm</li> <li>13. Work compatible with the existing simple alarm system , upgrade to GPS</li> </ol>
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### Wireless GPS Tracker

**With Alarm and  
Engine CUT OFF  
Automatically!!**



1. GPS/GSM/GPRS real time positioning function/2. Arm/disarm through original remote controller/3. Engine CUT OFF in automatically/4. Main power cut off alert/5. Low power alert/6. Displaying location on your cell phone/7. Speeding alert/8. Parking alert/9. Monitoring function/10. Center speaker to driver
11. Movement alert and Geo-fencing alarm
12. SOS alarm and one key call
13. Work compatible with existing remote controller/14. Vibration alarm
15. Engine ignition alarm function
16. Illegal door open alarm
17. Support GPS central monitoring software and web tracking

### Fird Equipment (Motorcycle) Tracker



**Support 3.7V Low**

1. Real-time GPS/SMS/GPRS Positioning;
2. Remote Arm/ Disarm
3. Vibration Alarm;
4. Engine ignition alarm function
5. Main power cut off alert
6. Geo-fencing alarm
7. Online checking
8. Small size, hidden, and easy to install;
9. SOS Alarm;(optional)
10. Remote Monitoring(optional);
11. Remotely to cut off power and gas supply(optional).
12. Waterproof case(optional).
13. Support GPS monitoring software and web tracking



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### Camera/GPS Tracker



- 1.Real time positioning save 500 trace points when GPRS can't work/2.Robbery alarming, failure to seek help
- 3.Speed alarm,geo-fence alarm,SoS alarm.
- 4.Remote cut off power in safe status.
- 5.Geo-fence,area/6.Connect network camera
- 7.Monitor and One key call (optional) another usd18.00/pcs
- 8.Temperature sensor function (optional) another usd35.00/pcs/9.Connect with LED

### Personal GPS Tracker



- 1.GSM /SMS communication or GPRS TCP/UDP connection
- 2.High sensitivity, new technology and latest GPS SiRF-Star III chipset
- 3.SOS button send out exact location for immediate rescue/action
- 4.Support quick dialing buttons for 3 preset phone numbers
- 5.Support check location by SMS and GPRS
- 6.Monitors can track the person without interfering the subject, LIVE! Real-Time tracking



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## الأعمال الهندسية المساحية Survey Works

### Survey Works

### الأعمال الهندسية المساحية. Survey Works

- Geodetic Survey. دراسات وتصاميم الطرق.
- Cadastral Survey. الخرائط الكتورية.
- Contour Maps. اعمال الميزانيات الشبكية.
- Control Survey. أعمال الرفع المساحي للأراضي (المعالم).
- Route Survey. أعمال التوقيع المساحي (المعالم).
- Topographic Survey. حساب المساحات ورسم اللوحات والكروكيات.
- Subdivision Survey. رسم البروفيل حساب كميات الحفر والردم.
- Site Plan Survey. تقسيم الأراضي وأعمال الميزانيات.
- GPS Real Time (RTK). أعمال الـ GPS Real Time .
- GIS تأسيس النقاط المرجعية عالية الدقة.
- GIS and LIS Surveying and Mapping . انشاء نقاط التحكم الارضي.
- Digital Image Processing خرائط المشاريع الهندسية والتخطيطية.
- Satellites imageries تحديد مواقع ابار البترول بعد تسليم الاحداثيات.
- Applications:- تخطيط ودراسة وعمل كنتور المشاريع الزراعية.
- GPS Tracking Systems. تخطيط الاراضي السكنية.
- Vehicle Tracking Systems. شق القنوات والري.
- Applications Tracking Systems





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الخرطوم العمارات شارع 29

Direction Geographic Information Systems



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### (Rent & Sales)

- *Plotter.*
- *GPS Real Time.*
- *Total Station.*
- *Level's.*
- *Scanner A0& A3*



### (Equipments)

- **GPS Trimble RTK**  
BASE & ROVER R8 GNSS (2 SET)
- **GPS Trimble RTK**  
BASE & ROVER 5800 (1 SET)
- **Total Station Leica**  
(3 SET) TC 407, TS02, 1203
- **Digital Level Leica**  
(one set)
- **Auto Level's**  
(7 SET) LEICA NA2
- **Plotter 5500ps.**



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<u><b>Geodetic Survey</b></u>
A Land Survey which is affected by and takes into account the curvature of the earth and astronomic observations.
<u><b>Control Survey</b></u>
A Land Survey providing precise locations of horizontal and vertical positions of points for use in boundary determination, mapping for aerial photographs, construction staking, or other needs.
<u><b>Route Survey</b></u>
Reconnaissance, preliminary survey and location survey for an alignment or linear type feature such as a road, railroad, canal, pipeline or utility line.
<u><b>Topographic Survey</b></u>
A Land Survey locating natural and man made features such as buildings, improvements, fences, elevations, land contours, trees, streams, etc. This type of survey may be required by a government agency, or may be used by Engineers and/or Architects for the design of improvements or developments on a site.
<u><b>GIS and LIS Surveying and Mapping</b></u>
Geographic Information Systems and Land Information Systems.
<u><b>Satellites imageries</b></u>
All type of satellites images in the most recent resolutions.

برامج تصميم الطرق

LANDDESK TOP 2004-2009

برامج حساب الكميات

LANDDESKTOP&EARTH WORK

برامج نظم المعلومات الجغرافية

ArcGIS 9.3, ERDAS 9.2, ENVI & IDRISI

الموهلات البشرية

لدينا مهندسين ذوي خبرات طويلة وكفاءة عالية.