

GISci Glossary

ASCII	American Standard Code for Information Interchange	Standard for displaying character based data on a computer
ASTER	Advanced Spaceborne Thermal Emission and Reflection Radiometer	Japanese / American multispectral sensor (launched 2000 similar to Landsat ETM+)
CAD	Computer Aided Design	Popular method for scale drawings in a computer similar to GIS but without the necessity for spatial referencing
CEP	Circular Error Probability	A circle containing a location and 50% of the data from a device. Sometimes used to assess GPS accuracy (see Chapter 6)
CHEST		UK Agreement between education establishments and companies to supply students with low cost access to expensive commercial products (does not apply to all software see Chapter 14)
DEM	Digital Elevation Model	Three dimensional representation of the Earth
DGPS	Differential GPS	High accuracy GPS capable of accuracies from 1 to 5 m
ETM	Enhanced Thematic Mapper	A sensor aboard the Landsat 7 satellite, launched in 1999 (see Chapter 5).
FC	False Colour	Type of image from a multispectral sensor where bands have been combined to create an image that does not correspond to the visible spectrum (see Chapter 5)
FTP	File Transfer Protocol	Method for moving data on the Internet
GCP	Ground Control Point	A grid reference from the field referenced to a point on a map or image (commonly used in rectification) (see Chapter 9)
GIS	Geographical Information System	Software for storing, integrating, manipulating and analysing data that has a spatial reference (see Chapter 3)
GISci	Geographical Information Sciences	A term for the combined use of GIS, GPS and Remote Sensing
GIT	Geographical Information Technologies or Techniques	A term used interchangeably with GISci
GLONASS	Global Orbiting Navigational Satellite System	Russian equivalent to US GPS (rarely used in modern GISci)
GNS	Global Navigation System	Navigation system that operates worldwide (such as a GPS)
GPS	Global Positioning System	A system using satellites and small (usually low cost) handheld receivers to determine position to within about 10 m (see Chapter 6)
IR	Infra Red	The part of the electromagnetic spectrum with wavelengths longer than visible light (approx. 1 to 10 micrometres)
Landsat		American earth observation multispectral sensor (three varieties in increasing resolution MSS, TM, ETM+)
Multispectral		Sensor capable of splitting radiation into discrete bands allowing objects to be viewed at different spectral frequencies
MSS	Multi Spectral Scanner	A sensor aboard numbers 1 to 4 of the Landsat satellite series (see Chapter 5).
NDVI or VI	Normalised Difference Vegetation Index	Image processing technique for removing superfluous information from a scene to only leave highlighted vegetation
Panchromatic		Sensor where all radiation is focused into one detector creating a grey-scale image but usually of very high spatial resolution
PDA	Personal Desktop	Handheld computer with capabilities similar to a normal PC but

	Assistant or Personal Digital Assistant	usually with reduced power and functionality
RDBMS or DBMS	Relational Database Management System	Popular method for storing data, where the data has relationships and dependencies to other data in the system (see Chapter 4)
RGB	Red Green Blue	A popular method for creating colour images by defining the amount red, green and blue present. Commonly used in image processing to determine the order of the bands in a false colour image (e.g. 531 RGB) (see Chapter 5 and 8)
RS 232		Common adaptor on rear of older computers and on most GPS units (also called serial adaptor)
SQL	Structured Query Language	The accepted method for querying information in a database
TC	True Colour	Type of image from a multispectral sensor where bands have been combined to create an image that corresponds to the visible spectrum (see Chapter 5)
TIN	Triangular Irregular Network	Three dimensional skeleton used to join points in 3D space to act as the support for a DEM
TIR	Thermal Infra Red	A subset of the infra red portion of the spectrum furthest from visible light (approx. 7-10 micrometres)
TM	Thematic Mapper	A sensor aboard numbers 4 and 5 of the Landsat satellite series (see Chapter 5).
UTM	Universal Transverse Mercator	A set of map projections and co-ordinate systems designed for large scale mapping (see Chapter 2)
VNIR or NIR	Very Near Infra Red	A subset of the infra red portion of the spectrum nearest visible light (approx. 1-2 micrometres)
WAAS	Wide Area Augmentation Service	Methods for improving GPS accuracy (not as accurate as DGPS and requires a modern receiver)
WGS84	World Geodetic Survey 1984	Standard model of the earth used frequently in GISci and the model on which most GPS operate (see Chapter 2)

Field survey work techniques did not change greatly until the 1980s, but with the progressive advances in computer-based technologies there have been tremendous advances over the past 25 years. This advert for a field survey manual produced in the 1940s gives a taste of how much things have changed since then.

July-Sept. 1946

Page vii

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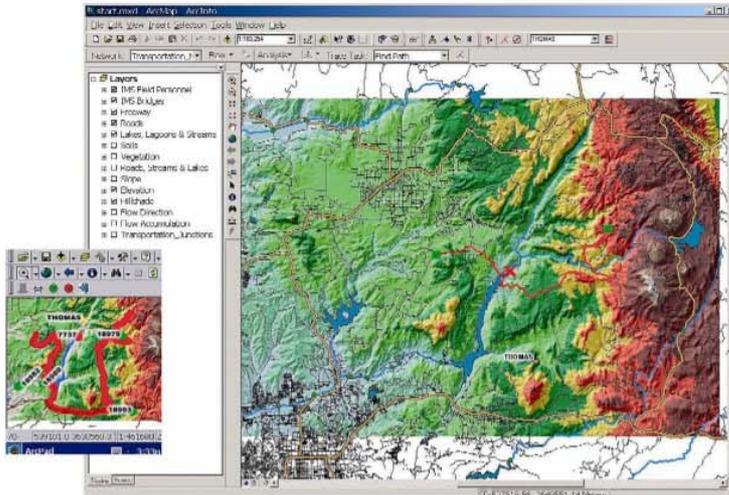
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Geography is increasingly being seen as the framework within which we can understand patterns, relationships and processes.

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ESRI (UK) is pleased to be able to continue our support to the RGS – IBG Expedition Advisory Centre through sponsorship of this important field manual.

Please do not hesitate to contact ESRI (UK) or relevant international distributor if you would like more information about ESRI GIS products and solutions, training or data services.

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