

Geographic Referencing



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Lokasi → Dimana alamat Fakultas Geografi UGM?

**Jl. Kaliurang, Sekip Utara, Bulaksumur,
Sinduadi, Kabupaten Sleman, Daerah Istimewa
Yogyakarta 55281**

7°45'59.21"S 110°22'38.09"E



What is Geographic Referencing?

All geographic data, by definition, has some sort of geographic referencing to help **identify its location in the world.**

There are many possible means of describing your location. Some of these include georeferenced coordinates (such as latitude/longitude), coordinates whose relationship to the earth is not known (such as some survey data), linear referencing (such as street addresses and mile markers), more general land referencing (such as tier/range/section in the Public Land Survey System) and indirect positional references (such as distance and direction descriptions from known markers in the field - [30' west of the "old oak tree"])).

Geographic referencing standards help define common ways to collect and reference data. This in turn provides a more effective way to share information collected by different agencies. The standards in this section are current referencing standards in use by the state.

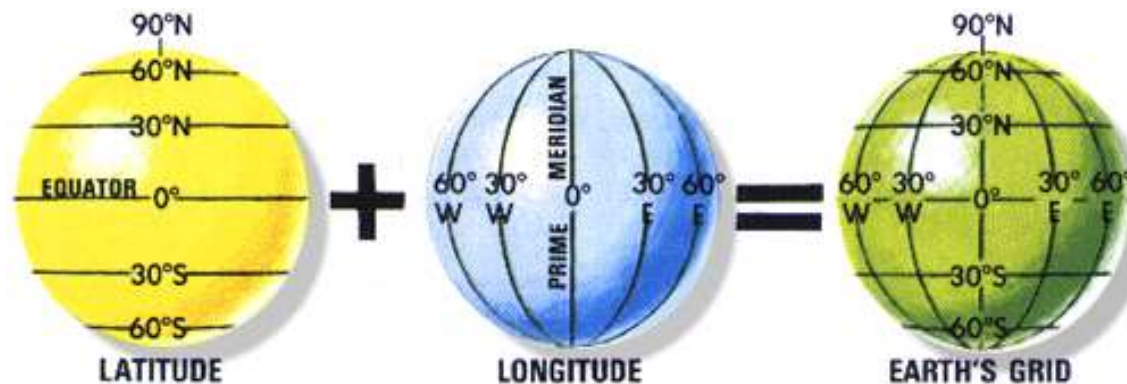
Commonly used systems of georeferencing

System	Domain of uniqueness	Metric / Non-metric	Example	Spatial resolution
Place name	Varies	Non metric	Hyderabad – India or Pakistan?	Varies
Postal address	Country	Non metric	11, Rose Apartments, Marris Road, Aligarh	Size of one mailbox
Postal code	Country	Non metric	202002(Aligarh, India) or WC1H OPF (London, U.K.)	Area occupied by a defined number of mailbox
Telephone code	Country	Non metric	011 (New Delhi, India)	Varies
Latitude/Longitude	Global	Metric	27°53' North Latitude and 78°35' East Longitude.	Infinitely fine
UTM	Zones of six degrees of longitude wide	Metric	1393267 & 3117373	Infinitely fine
State plane coordinates	USA only	Metric	55046.37 E & 75246.64 N	Infinitely fine

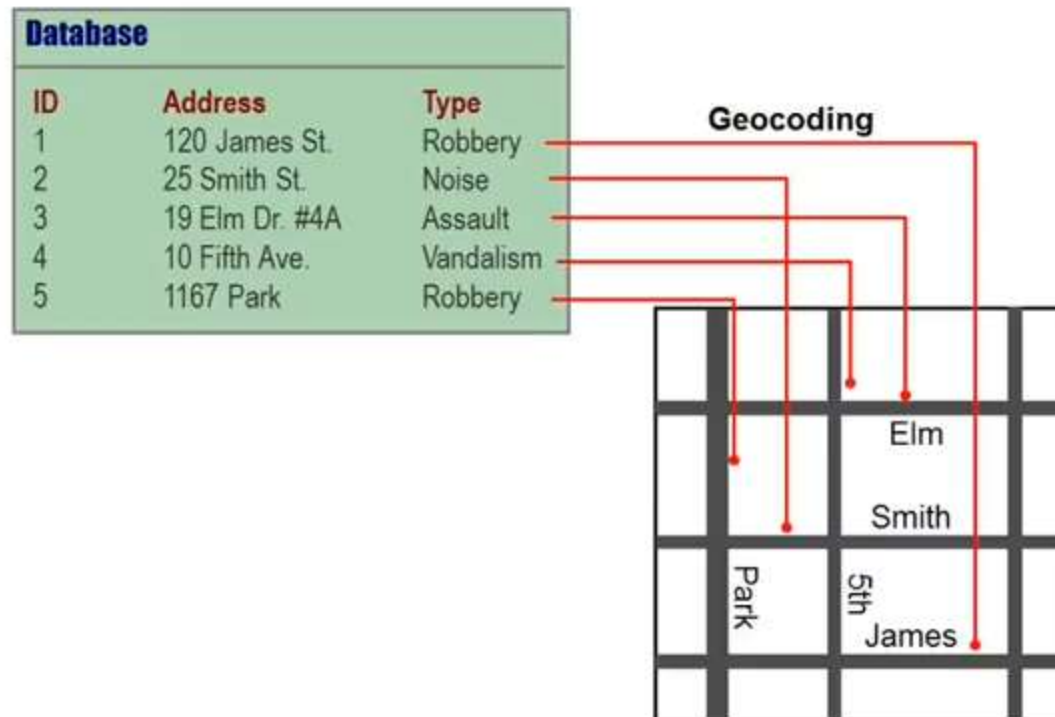
Basic elements of spatial data

Geographic referencing

- **explicit geographic reference**, is absolutely tied to the earth such as a latitude and longitude or national grid coordinate. Data from GPS units.
- **implicit geographic reference** such as an address, postal code, census tract name, forest stand identifier, road name or county, can be included by **joining tables** or using an automated process called "**geocoding.**"

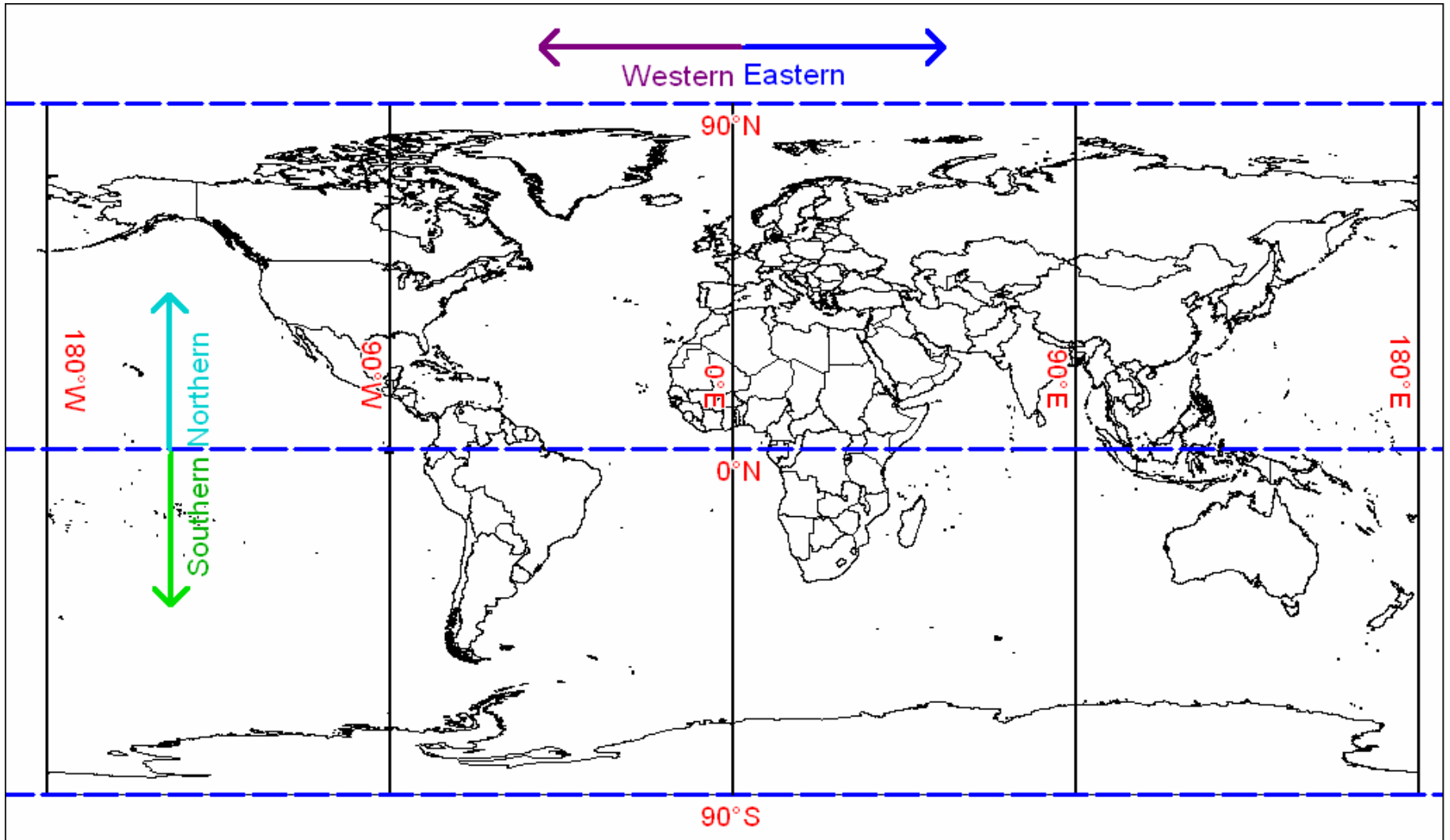


- Geocoding is the process of assigning a point location within a coordinate system.
- Indirect and discrete uses street addresses, CT, ZIP codes, accuracy depend on geocoding system, difficult to locate on digital maps

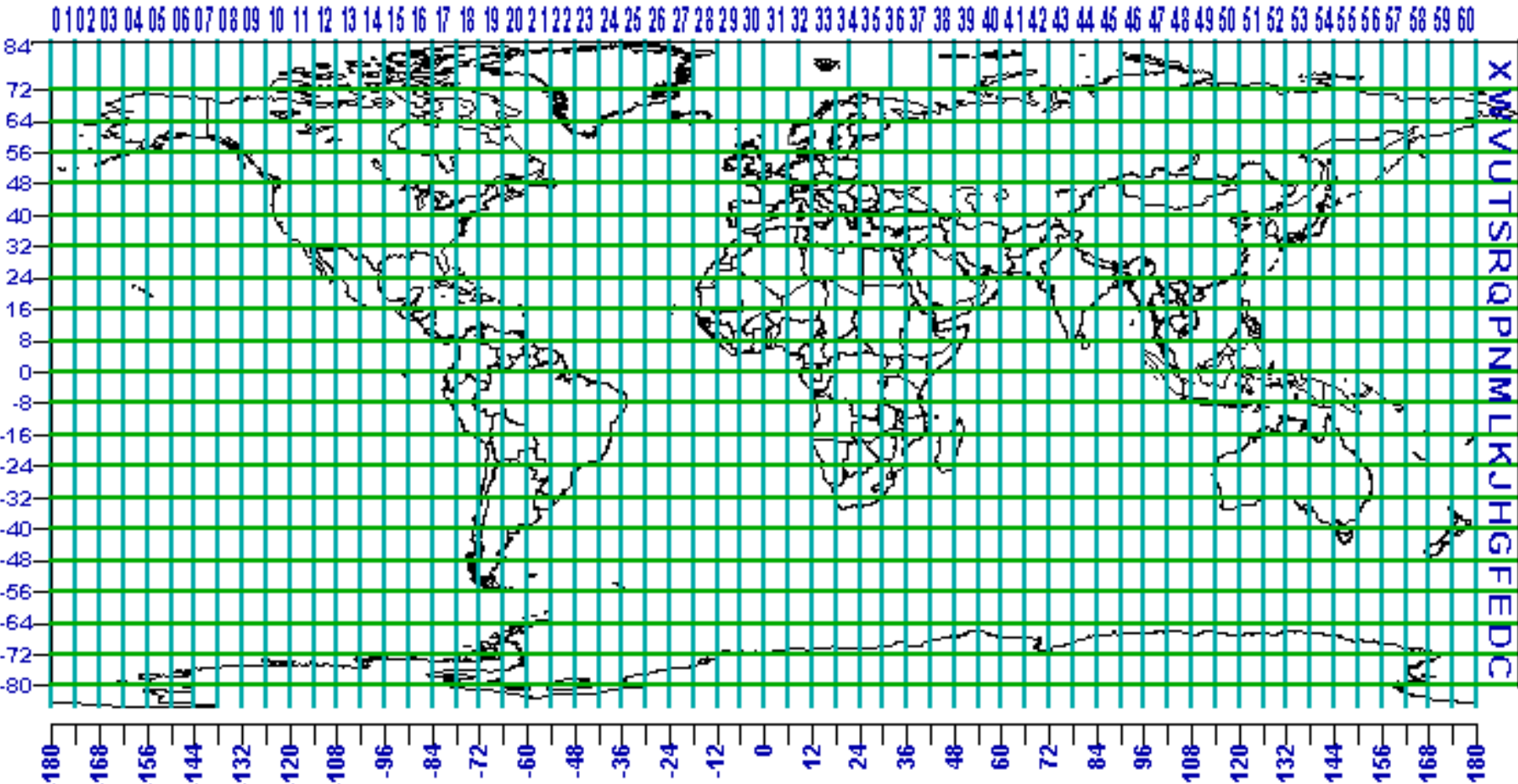




Latitude / Longitude

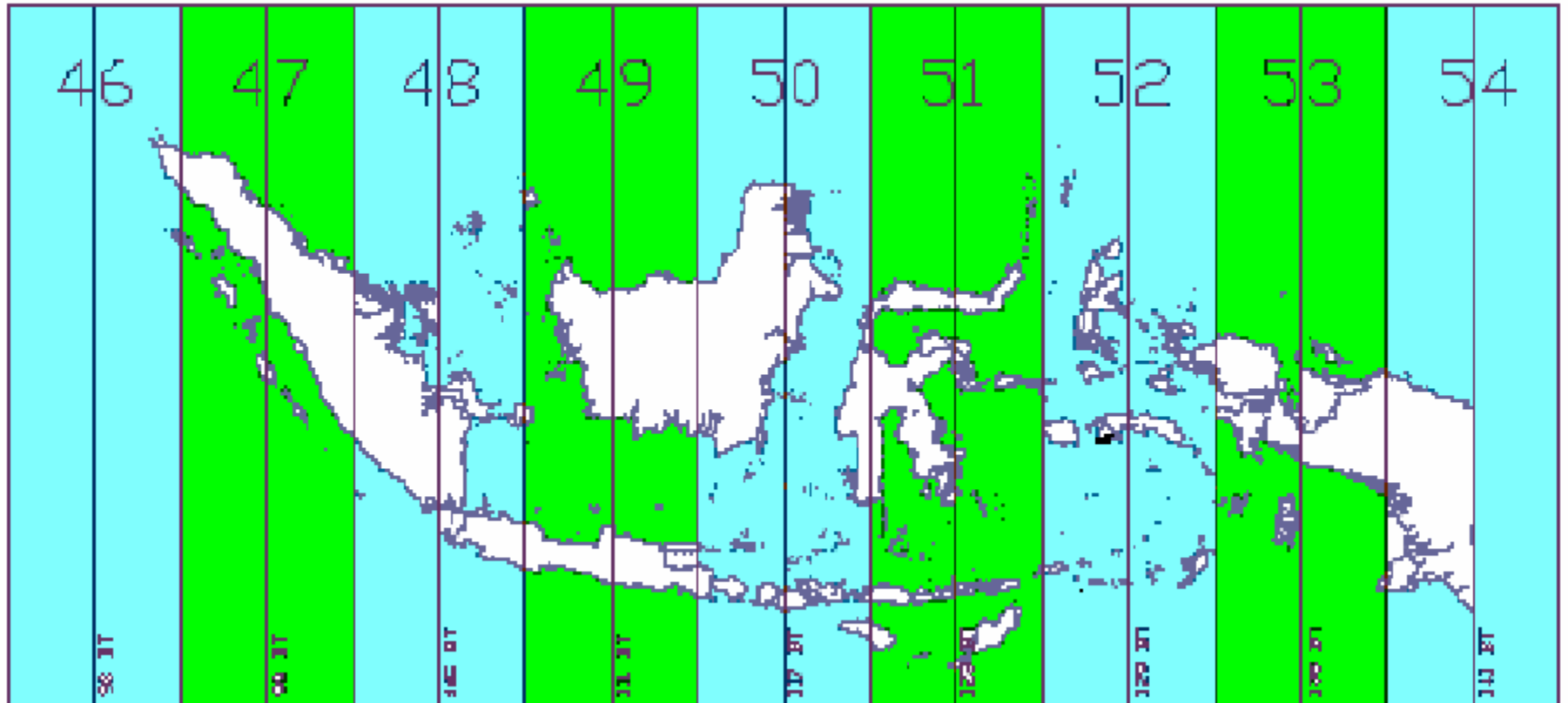



UTM Zone Numbers



Universal Transverse Mercator (UTM) System

ZONA UTM DI INDONESIA



An aerial photograph of a densely packed residential neighborhood. The houses are mostly two-story structures with various roof colors, including red, brown, and grey. There are many trees and green spaces interspersed among the buildings. A yellow callout box with a pointer is centered in the image, containing the text '434,590, 9,139,783'. The pointer indicates a specific house in the middle of the neighborhood. At the bottom of the image, a multi-lane road with traffic lights is visible.

434,590, 9,139,783

Dean Waldo

View of the Outer Banks of North Carolina
from Apollo 9

This photograph was taken on March 12, 1969 at 4
10:00 a.m. EST, from an altitude of about 120 miles.

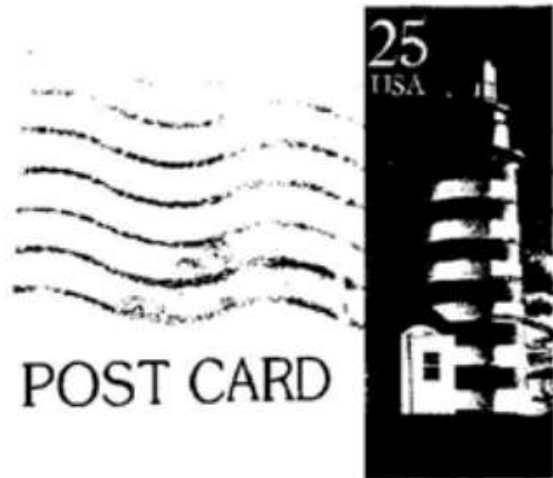
Posted at the old seafaring
village of Hatteras, I know
this card, with its complete
and accurate address will
get to you.

A pinhole shows you
where we are—

Yours Geographically

Dean

Elizabeth City News Co. Elizabeth City, North Carolina



POST CARD

Professor Waldo Tobler
34° 26' 41" N
119° 48' 26" W

Plastichrome®

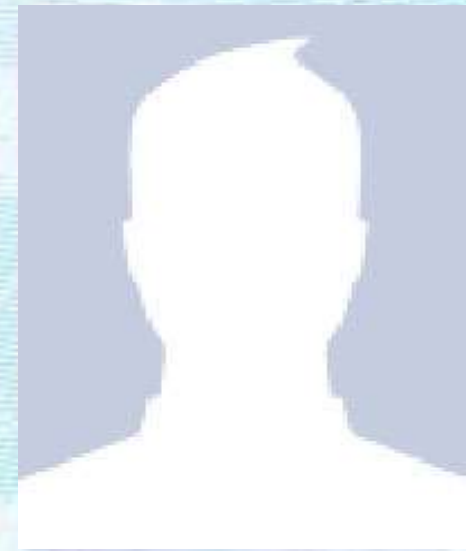
PRINTED
IN IRELAND

34°26'41.00"N
119°48'26"W

PROVINSI DKI JAKARTA
JAKARTA SELATAN

NIK : [REDACTED]

Nama : AMTINA FATHUL LATIFAH
Tempat/Tgl Lahir : [REDACTED]
Jenis Kelamin : PEREMPUAN Gol. Darah : O
Alamat **Koordinat** : **7°45'59.21"S 110°22'38.09"E**
RT/RW : 007 / 008
Kel/Desa : [REDACTED]
Kecamatan : KEBAYORAN LAMA
Agama : ISLAM
Status Perkawinan : BELUM KAWIN
Pekerjaan : PELAJAR/MAHASISWA
Kewarganegaraan : WNI
Berlaku Hingga : 24-12-2017



JAKARTA SELATAN
05-02-2012

A handwritten signature in black ink, appearing to be a stylized name, located below the official stamp.



Beijing - Informasi mengenai lokasi keberadaan pesawat Malaysia Airlines (MAS) MH370 muncul lagi mesti belum tentu benar validitasnya. Satelit canggih milik China menangkap tiga buah benda berukuran besar mengambang di tengah laut.

Dilansir *AFP*, Kamis (13/3/2014), satelit China mendeteksi tiga benda besar mengambang di perairan laut. Lokasinya memang masih masuk dalam wilayah pencarian pesawat yang membawa 227 penumpang dan 12 awak tersebut.

Satelit China itu menangkap gambar tersebut pada 9 Maret lalu. Hingga saat ini masih dianalisa untuk memastikan benar tidaknya benda tersebut merupakan bagian dari pesawat Malaysia Airlines.

Tiga benda itu tersebar dalam radius 20 km **di 105,63 derajat Bujur Timur** dan **6,7 derajat lintang utara**. Ukuran yang tampak adalah 13 x 18 meter, 14 x 19 meter dan 24 x 22 meter.

Google latitude

Friends History Apps

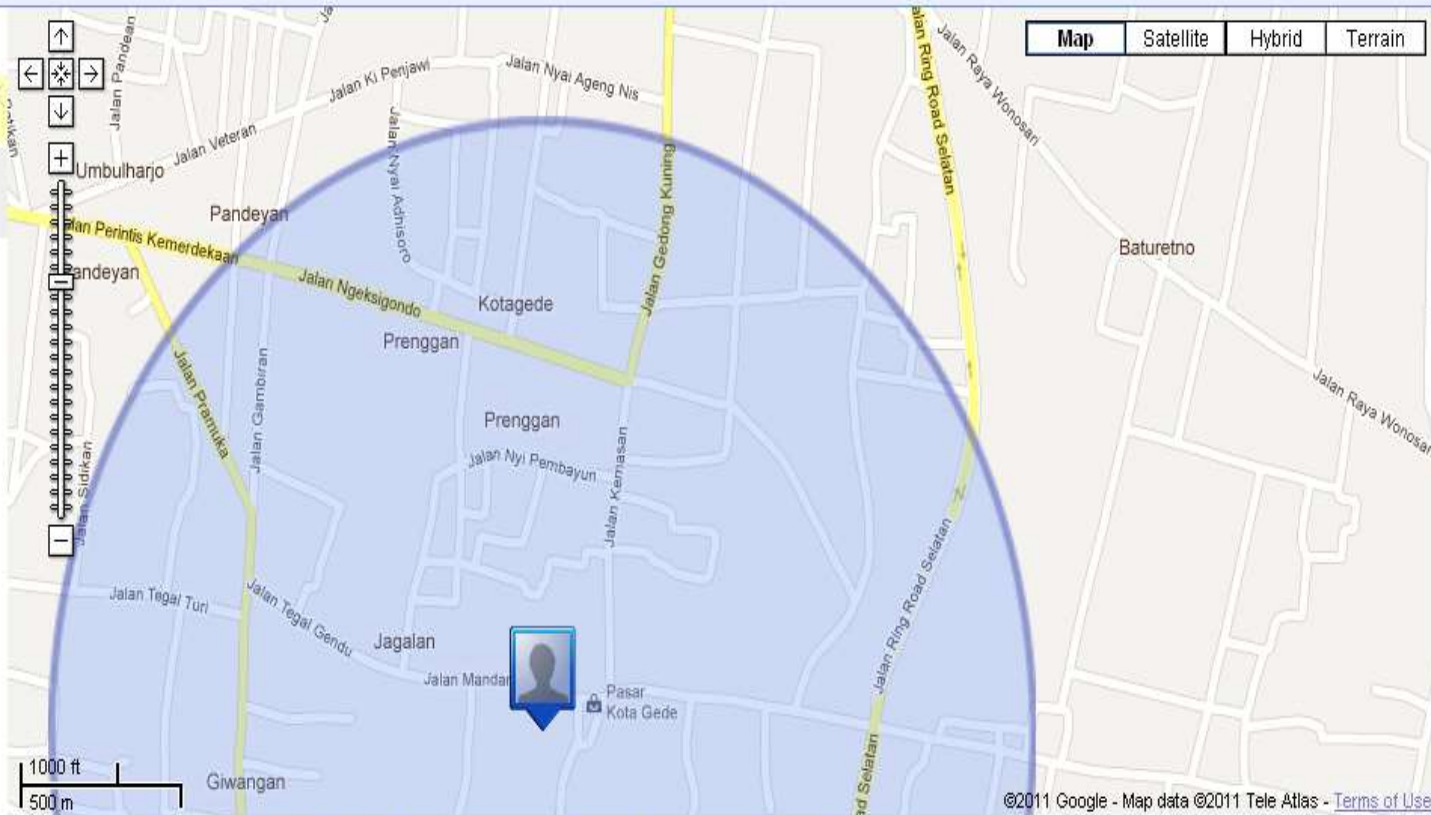
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Map Satellite Hybrid Terrain

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 **Taufik Hery** - [view profile](#)
Banguntapan 1 day ago



A systematic search across 1-kilometer grids within Parachinar identified three buildings :

N 33.901944° E 70.093746° = 33°54'6.9984" N 70°5'37.4856" E

N 33.911694° E 70.0959° = 33°54'42.0984" N 70°5'45.24" E

N 33.888207° E 70.113308° = 33°53'17.5452"N 70°6'47.9088" E

Structure A



N 33.901944° E 70.093746°

Structure B



N 33.911694° E 70.0959°

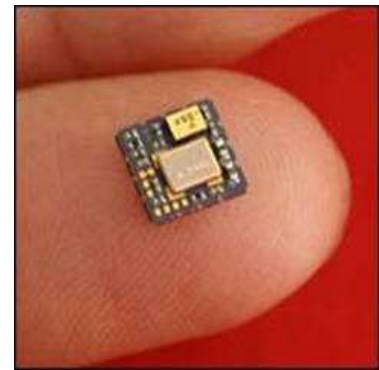
Structure C



N 33.888207° E 70.113308°

According to Canalys there were approximately 41 million [GPS](#) units sold in 2008, and in 2009 the number of GPS enabled cell phones in use had exceeded 27 million.

Points of interest, addresses (lines or points), and aerial or road data is all stored in a database that is accessed by your device.



Centimeters for Everyone



Trimble Catalyst features a small antenna and application software running on Android smartphones or tablets. The Catalyst subscription enables users to choose among a range of accuracy levels.

Image courtesy of Augview.

Trimble Catalyst GNSS receiver is Flexible, Simple and Affordable

[Trimble Geospatial](#) [Trimble Inc.](#)



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