

GPS

GLOBAL POSITIONING SYSTEM



WHAT ARE GPS FOR?

- GPS STANDS **FOR GLOBAL POSITIONING SYSTEM**, SO IT IS A GLOBAL POSITIONING SYSTEM.
- THANKS TO GPS IT IS POSSIBLE TO LOCATE THE LONGITUDE AND LATITUDE OF OBJECTS AND PEOPLE.
- ALL THIS HAPPENS THANKS TO THE SATELLITES THAT ARE STATIONED IN THE EARTH'S ORBIT AND ALLOW US TO KNOW AT ANY MOMENT THE EXACT LOCATION OF A PLACE.
- THE SATELLITES CONTAIN AN ATOMIC CLOCK THAT CALCULATES THE TIME PASSING FROM THE REQUEST MADE BY THE GPS RECEIVER TO THE ANSWERS OBTAINED FROM THE SATELLITES IN THOUSANDTH OF A SECOND.

WHEN AND WHERE DID GPS START?

- THE GPS PROJECT WAS DEVELOPED IN 1973 TO OVERCOME THE LIMITATIONS OF PREVIOUS NAVIGATION SYSTEMS.
- THEY WERE CREATED AND BUILT BY THE US DEPARTMENT OF DEFENSE (USDOD) AND ORIGINALLY HAD 24 SATELLITES.
- IN 1991 THE USA OPENED THE WORLD FOR CIVILIAN SERVICE UNDER THE NAME SPS (STANDARD POSITIONING SYSTEM)
- THE SYSTEM BECAME FULLY OPERATIONAL IN 1994

THE ELEMENTS OF THE GPS

TO ENSURE THE PERFECT FUNCTIONING OF THE GPS IT IS NECESSARY THAT THREE DIFFERENT INSTRUMENTS WORK IN PERFECT AGREEMENT:.

THE SPACE SEGMENT

IS COMPOSED OF SATELLITES STATIONED AROUND THE EARTH'S ORBIT INCLINED BY 55 DEGREES TO THE EQUATOR.

EACH SATELLITE GOES OVER THE SAME POINT EVERY 24 HOURS.

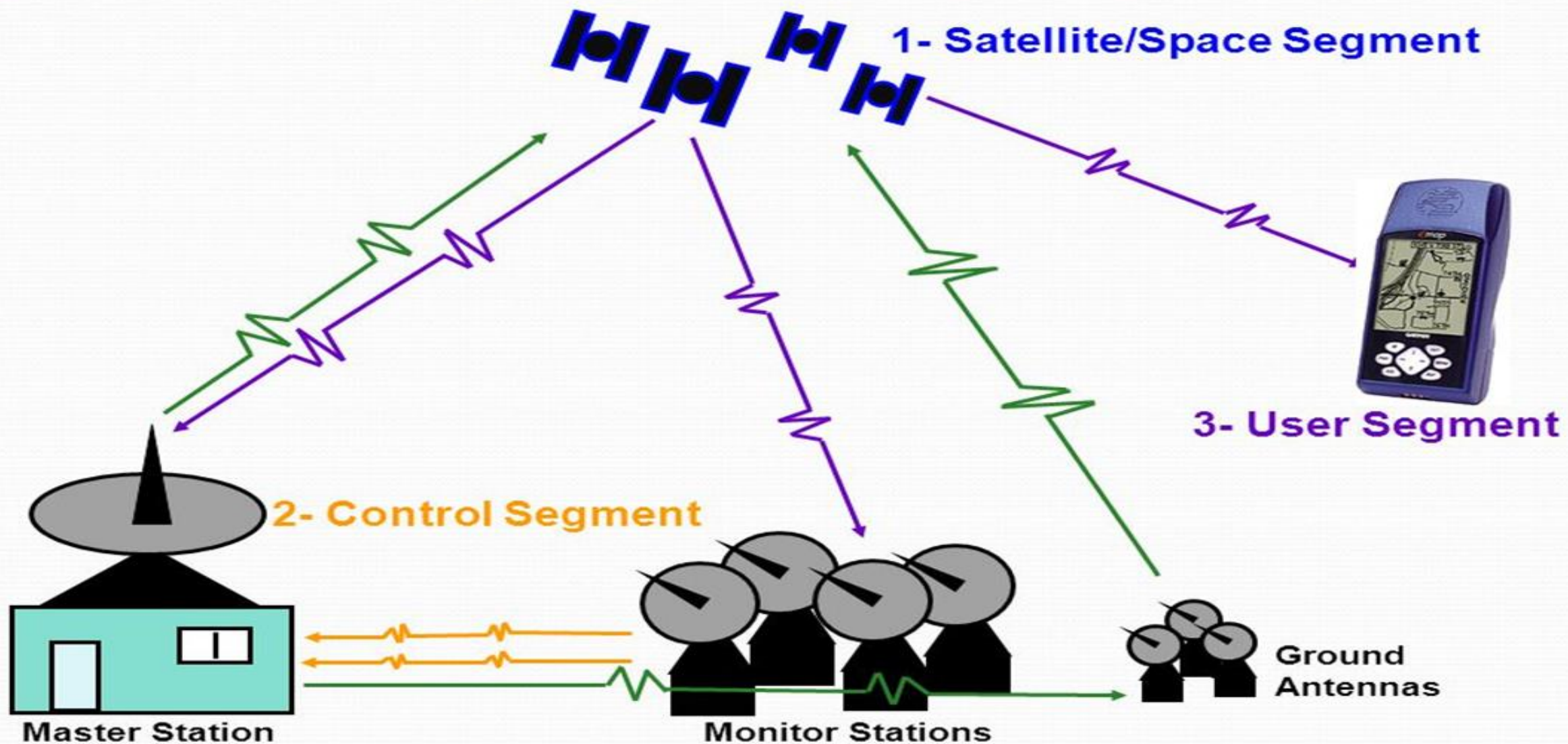
THE CONTROL SEGMENT

THE CONTROL SEGMENT STATIONS ARE ALL LOCATED NEAR THE EQUATOR: COLORADO SPRINGS IN THE USA, HAWAII, ASCENSION ISLAND, DIEGO GARCIA AND KWAJALEIN. THEY HANDLE ALL THE INFORMATION SENT BY THE SATELLITES. THE MOST IMPORTANT CONTROL CENTER IS COLORADO SPRINGS WHICH CORRECTS ALL THE WRONG INFORMATION SENT BY THE SATELLITES.

THE SEGMENT OF USE

THE SEGMENT OF USE IS THE GPS RECEIVERS ON EARTH. FOR EXAMPLE SMARTPHONES, AND OTHER DEVICES .

3 Main Segments to any GNSS



NAVIGATORS,
SMARTPHONES,
TABLETS,
SMARTWATCHES AND
WATCHES,
ARE SOME AMONG MANY OTHER DEVICES WITH A GPS RECEIVER INSIDE

DEVICES



INREACH MINI

- SENDS AND RECEIVES MESSAGES
- IT IS WEARABLE
- IT'S FOR BASIC NAVIGATION: THERE'S A COMPASS THAT SHOWS DISTANCE ALONG A ROUTE OR TO A WAYPOINT
- YOU CAN ALSO POST YOUR ADVENTURES ON SOCIAL MEDIA.



A STICK



- SEND OR RECEIVE A TEXT MESSAGE FROM ANYWHERE IN THE WORLD
- WHEN THINGS DON'T GO AS PLANNED THIS STICK WILL GET YOU IN CONTACT WITH LOCAL EMERGENCY SERVICE DIRECTLY, TO ENSURE A FAST AND EFFICIENT RESCUE.

ADVANTAGES

GPS HELP US TO:

- MAP FORESTS,
- HELP FARMERS HARVEST THEIR FIELDS,
- NAVIGATE AIRPLANES ON THE GROUND OR IN THE AIR.
- LOCATE PEOPLE IN NEED OF ASSISTANCE.

GPS SYSTEMS ARE USED IN MILITARY APPLICATIONS AND BY EMERGENCY CREWS

THEY PROVIDE WEATHER AND TRAFFIC ALERTS : FOR EXAMPLE, YOUR GPS MAY NOTIFY YOU OF ROAD DELAYS OR CLOSURES DUE TO CONSTRUCTION OR TRAFFIC ACCIDENTS.

DRAWBACKS

- UNFORTUNATELY, YOU MAY NOT RECEIVE THE ALERT IN TIME TO CHANGE YOUR ROUTE, OR THE ALTERNATE ROUTE MAY BE CONSIDERABLY LONGER THAN THE ORIGINAL.
- OVER TIME, STREET NAMES CHANGE AND NEW ROADS APPEAR. FOR THIS REASON, YOUR GPS MAY PROVIDE INCORRECT INFORMATION. FOR EXAMPLE, THE SYSTEM MIGHT TELL YOU TO TURN LEFT WHEN YOU SHOULD TURN RIGHT.
- THIS INACCURACY IS CERTAINLY A DRAWBACK.

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