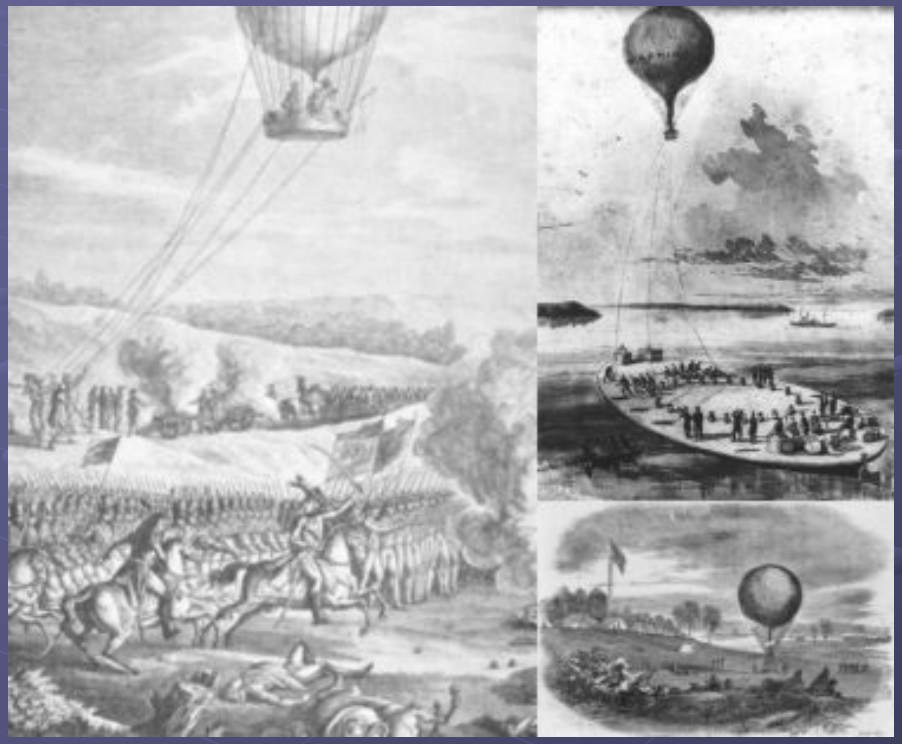
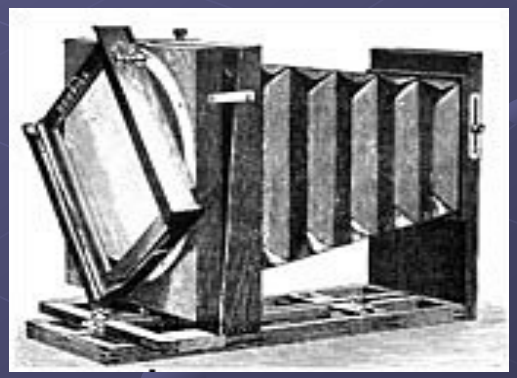
History of Remote Sensing



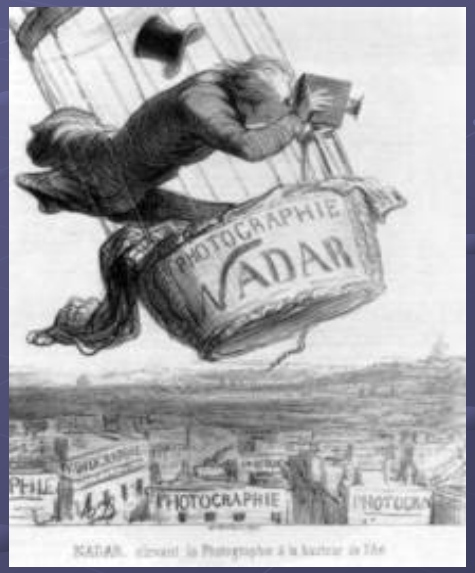
Some Important Dates in the Chronological History of Remote Sensing

The history of remote sensing began with the invention of photography. The term "photography" is derived from two Greek words meaning "light" (phos) and "writing" (graphien)

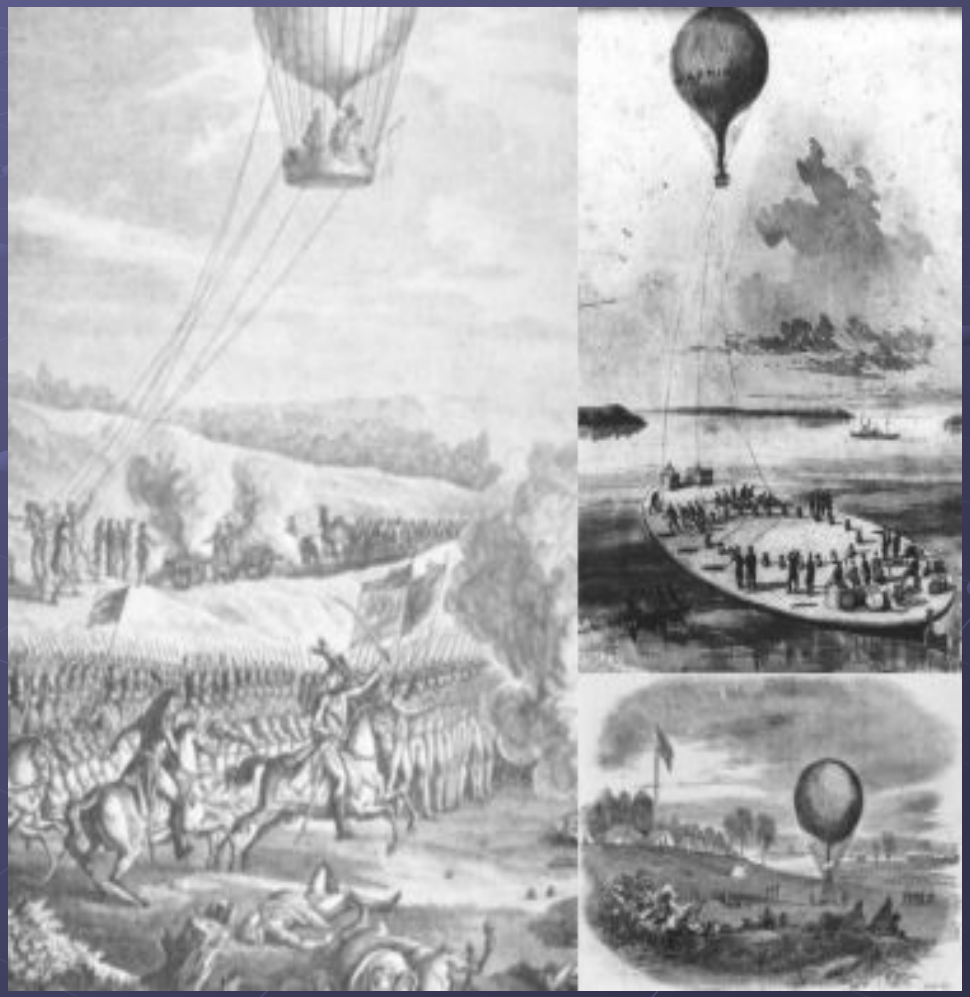


First photograph in the world by Niepce

- 1858 - Gasper Felix Tournachon “Nadar" takes the first aerial photograph from a balloon at an altitude of 1,200 feet over Paris.



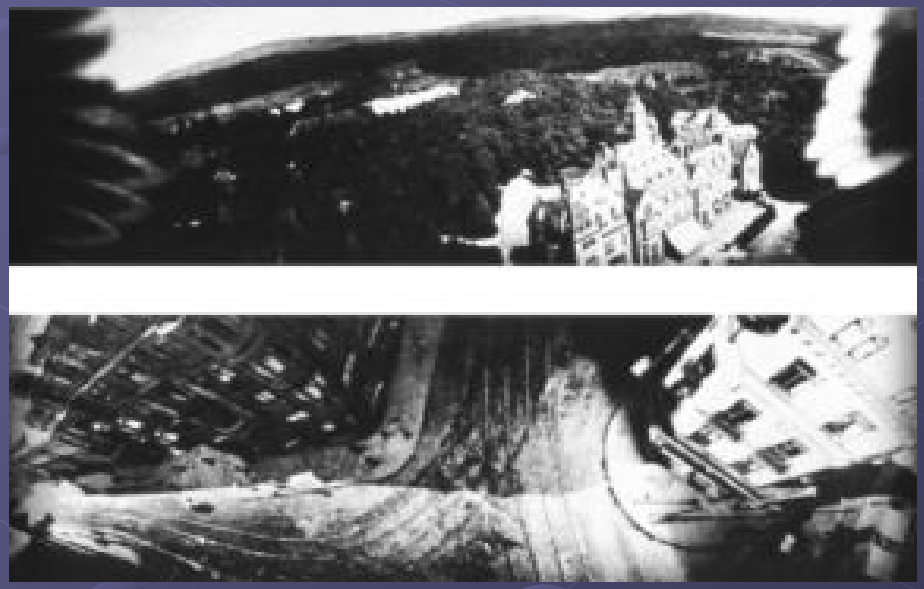
- 1860's - Aerial observations, and possible photography, for military purposes were acquired from balloons in the Civil War.



- 1887 - Germans began experiments with aerial photographs and photogrammetric techniques for measuring features and areas in forests.

- 1889 - Arthur Batut take the first aerial photograph using a kite of Labruguiere France.

- 1903 – Use of pigeons to take aerial photos.



1914 – WWI (World War I) provided a boost in the use of aerial photography, but after the war, enthusiasm waned

- 1940 - World War II brought about more sophisticated techniques in air photo interpretation.
- 1960 - TIROS-1 (Television IR Observation Satellite, USA) launched as first meteorological satellite.
- 1964- Nimbus Weather Satellite Program begins with the Launch of Nimbus1.

- 1972 - Launch of ERTS-1 (the first Earth Resources Technology Satellite ,later renamed Landsat 1).
- 1972 - Photography from Skylab, America's first space station, was used to produce land use maps.
- 1975 - Landsat 2
- 1978 - Landsat 3
- 1978 - Seasat, the first civil Synthetic Aperture Radar (SAR) satellite.

- 1981 - Space-Shuttle Imaging Radar (SIR-A)
- 1982 - Landsat-4
- 1984 - SIR-B
- 1984 - Landsat-5
- 1986 - SPOT-1
- 1988 - IRS-1A
- 1990 - SPOT-2
- 1993 - SPOT-3

- 1996 - Launch of IRS-P3
- 1998 - Launch of SPOT-4
- 1999 - Launch of Landsat 7,IKONOS ,IRS-P4, Terra
- 2001- Quickbird
- 2002 - Aqua, SPOT-5

Milestones in the history of Remote Sensing

1839: Beginning of practice of photography

1850-1860: Photography from balloons

1873: Theory of electromagnetic energy developed by James Clerk Maxwell

1909: Photography from airplanes

1914-1918: World War 1: aerial reconnaissance

1920-1930: Development & initial application of aerial photography & photogrammetry

Milestones in the history of Remote Sensing

1839-1945: World War II: application of nonvisible portions of electromagnetic spectrum, training of persons in acquisition and interpretation of airphotos.

1960-1970: First use of term “remote sensing”, start TIROS weather satellite, Skylab

1972: Launch of Landsat 1

1970-1980: Rapid advances in digital image processing

1980-1990: Landsat 4: new generation of Landsat sensors

1986: SPOT French Earth Observation satellite

1980: Development of hyperspectral sensor

Milestones in the history of Remote Sensing (Indian Context)

1969: Indian Space Research Organisation (ISRO) formed

1972-76: ISRO conducts air-borne remote sensing experiments

1975: Aryabhatta- the first Indian communication satellite launched

1979 – launch of Bhaskara 1

1981 – launch of Bhaskara 2

1982 – INSAT 1A (INSAT series from 1982 to 2003)

1988 – IRS series (IRS 1A)

2003 – Oceansat 2

2012 – RISAT 1

Thank You