

# **HISTORY OF CARTOGRAPHY**

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**The history of Cartography directly linked with the knowledge about the earth surface mapping during pre historic times**

**Man was rather forced to develop a variety of techniques and means to keep the records of his experiences for prosperity.**

**Cartography has changed through time so also have its functions. In the past it was more concerned with the measurement and the representation and size and other broad details of the earth's surface. Today these broad details are well known to us. Like modern Science and technology, modern Cartography appears to be easily of western origin.**

**The development of Cartography stems from ancient Greek times.**

**On the basis of cartography existing knowledge about the historical development of cartography four distinctive stages may roughly marked out.**

**These are**

- 1. Ancient period (up to 400 A.D)**
- 2. Medieval period (400 to 1500 AD)**
- 3. Early Modern Period (1500 to 1900 AD)**
- 4. Recent period (1900 to date)**

## **THE ANCIENT PERIOD**

**This period may be studied under the following heads**

- 1. Primitive cartography**
- 2. Greek cartography**
- 3. Roman Cartography**
- 4. Asian Cartography**

## **Primitive Period**

**Primitive period people expressed their ideas and experiences graphically Eskimos of Arctic, Bedouins of Arabian desert, Polynesians of Pacific Islands and the Banjaras of India have remarkable ability to draw sketches of the areas which they are familiar on a piece of skin, wood, bone or terracotta.**

**Egyptians used geometrical method for Land measurements and for establishing land owner ship lines each flood in the Nile also by Chinese and Babylonians. Babylonians gave some shape and size to earth and they believed that earth to be flat and circular surrounded by sea and heavens.**

## **Greek Period**

**Ionians were the first Hellenic people to take interest in the development of scientific thought. They prepared itinerary maps showing the stages along route leading to trading areas and centres as the coasts of Mediterranean and Susa the capital of Persia. Anaximander who prepared the first map of the world and Hecataeus who wrote the first book of Geography also. Hecataeus believed to earth as circular plane, surrounded by continuous belt of ocean with Greece in the centre after that Eratosthenes outlined the world map representing the spherical on a plane surface by extending two parallels one passing through Gibraltar and the Caspian Sea and other through Egypt and south India. Later Ptolemy out lined the world map and miscalculated the circumference of the earth to the extent to 1 degree of Latitude equaling to 90.4 kms. When converting distance to degrees he got greatly exaggerated values.**

## **Roman Cartography**

**For a long time they were concerned with empire expansion and consolidation of their empire. Thus the map for them was a practical tool to be used in travel of the officials and campaigns of their armed forces.**

- **The roads are shown in straight lines**
- **Distance between two stages are marked**
- **True directions are neglected**
- **Shape and relative positions are distorted**
- **The map includes Europe, Africa and Asia, the probable shape of the map was round.**

## **South East Asian Cartography**

**The maps of one sort or the other prevalent in China, India, Japan and Korea. Every possibility that intervening seas and oceans were also well charted by the Chinese and Indians.**

## **Medieval Period Maps**

**During the Medieval period, European maps were dominated by religious views. The T-O map was common. In this map format, Jerusalem was depicted at the center and east was oriented toward the map top. Viking explorations in the North Atlantic gradually were incorporated into the world view beginning in the 12th century. Meanwhile, cartography developed along more practical and realistic lines in Arabic lands, including the Mediterranean region. All maps were, of course, drawn and illuminated by hand, which made the distribution of maps extremely limited**

**Examples:**



Hereford Mappa Mundi, about 1300, Hereford Cathedral, England. A classic "T-O" map with Jerusalem at center and east toward the top. Taken from Whitfield (1994, p. 21)..



Al-Idrisi's map of the world, 1456. [Al-Idrisi](#) was a muslim scholar in the court of King Roger II of Sicily. He completed a map of the known world in the 12th century. Drawn with south at the top, this later example has been inverted for easier viewing. Taken from Whitfield (1994, p. 29).



Northern regions map from S. Munster's *Cosmographia* (1588). North Atlantic region is essentially a [Viking view](#) dating from the 12-14th centuries. One of the last wood-engraved maps, done in the style of copper-plate engraving. Published posthumously by H. Petri (son in law) in Basle, Switzerland. Original map in the collection of the author.



Genoese nautical chart of the world, 1457. Taken from Whitfield (1994, p. 40-41).



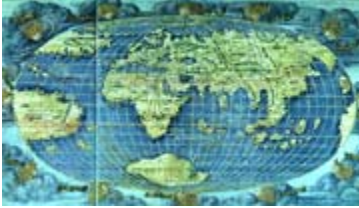
Waldseemüller's world map, 1507, the first map to incorporate New World discoveries. This map is based on the Ptolemaic projection, but does not show the entire globe. Taken from Whitfield (1994, p. 48-49). Click on small image to see full-sized (148 kb) version.



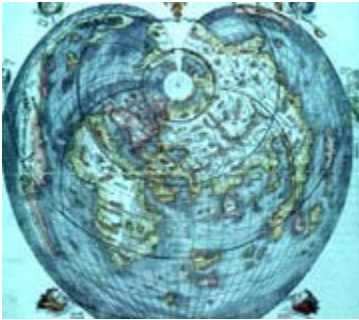
Detail of Ptolemy and "old world" from Waldseemüller's world map, 1507. This detail depicts the Old World in the Ptolemaic projection. Taken from Whitfield (1994, p. 11).



Detail of Amerigo Vespucci and "new world" from Waldseemüller's world map, 1507. This detail depicts the New World in the Ptolemaic projection. Taken from Whitfield (1994, p. 37).



World map of Rosselli, 1508, the first map to show the entire globe. A mythical southern continent is shown, and ocean areas are much too small. Nonetheless, it is a true world map. Taken from Whitfield (1994, p. 50-51).



Heart-shaped world map of Apian, 1530. A fully expanded Ptolemaic projection of the world results in this heart-shaped map. Popular during the Renaissance, this kind of map is a novelty today. Taken from Whitfield (1994, p. 57)



World map in Mercator projection by van Keulen, about 1720. The ultimate map for navigation of the world, as first devised by [Mercator \(1569\)](#). On this projection, all straight lines are true bearings. This results in great size distortion toward the poles, which cannot be shown. Taken from Whitfield (1994, p. 108-109).

## Early modern Maps

Maps became increasingly accurate and factual during the 17th, 18th and 19th centuries with the application of scientific methods. Many countries undertook national mapping programs. Nonetheless, much of the world was poorly known until the widespread use of aerial photography following World War II. Modern cartography is based on a combination of ground observations and remote sensing.



Map of the Danish Kingdom, 1629, by Janssonius. A high level of geographic accuracy is demonstrated along with marginal illustrations that enhance the map. Reproduction of original map from the Geodetical Institute of Denmark.



**Hondius' world map in two hemispheres, 1630, the quintessential Renaissance map. Taken from Whitfield (1994, p. 75).**



**The fool's cap world map, about 1590. Ptolemaic projection on the face of a clown. Maker, date and place of publication are unknown. Maps are human representations of the world, as seen through the eyes of a fool in this example. Taken from Whitfield (1994, p. 78-79).**

### **Recent Digital Cartography Maps**

**Geographic information systems (GIS) emerged in the 1970-80s period. GIS represents a major shift in the cartography paradigm. In traditional (paper) cartography, the map was both the database and the display of geographic information. For GIS, the database, analysis, and display are physically and conceptually separate aspects of handling geographic data. Geographic information systems comprise computer hardware, software, digital data, people, organizations, and institutions for collecting, storing, analyzing, and displaying georeferenced information about the Earth (Nyerges 1993).**