

Cartography and Art
Zagreb, 15th April 2013

Compass roses on the old maps



Josip Faričić
Department of Geography
University of Zadar
e-mail: jfaricic@unizd.hr

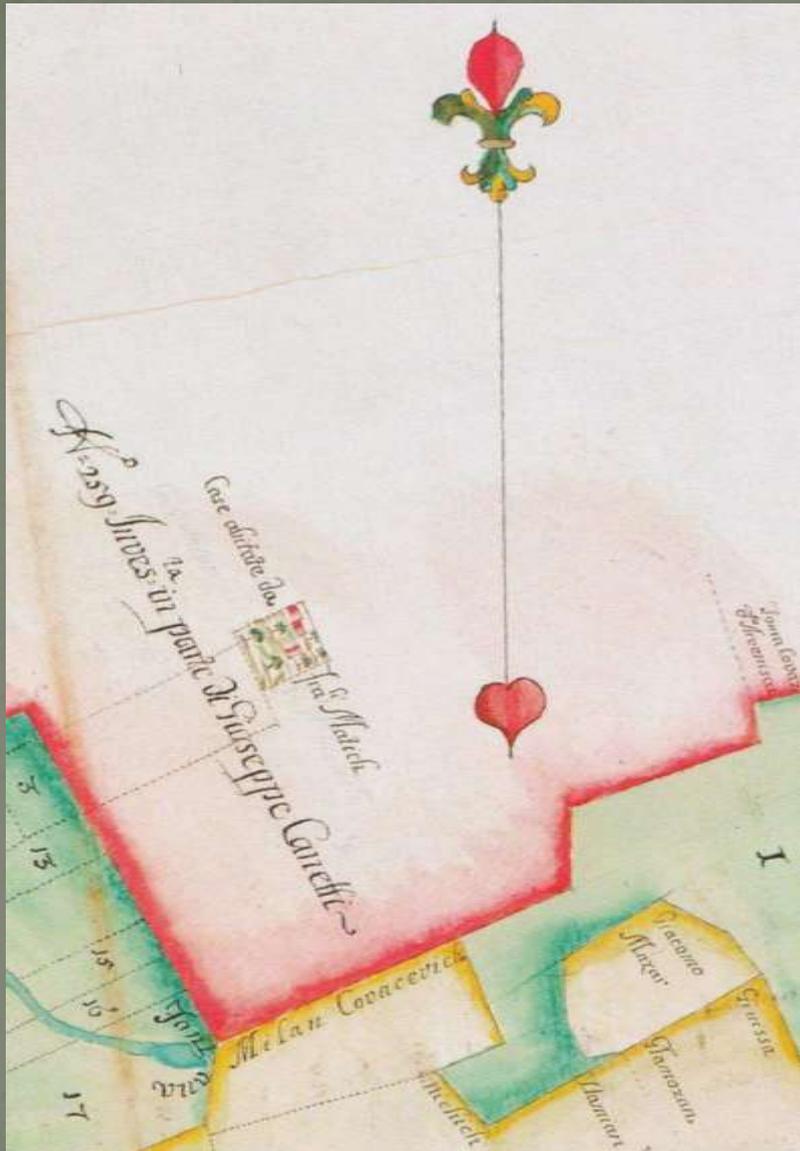
Introduction

- Compass rose is a very important figure that enables orientation of geographical objects on the map in relation to cardinal and intermediate directions.
- Since Renaissance their function has gradually been replaced by geographical latitude and longitude printed within the frame of the map and grid of latitude and longitude lines printed over the map field.

Wind rose – compass rose

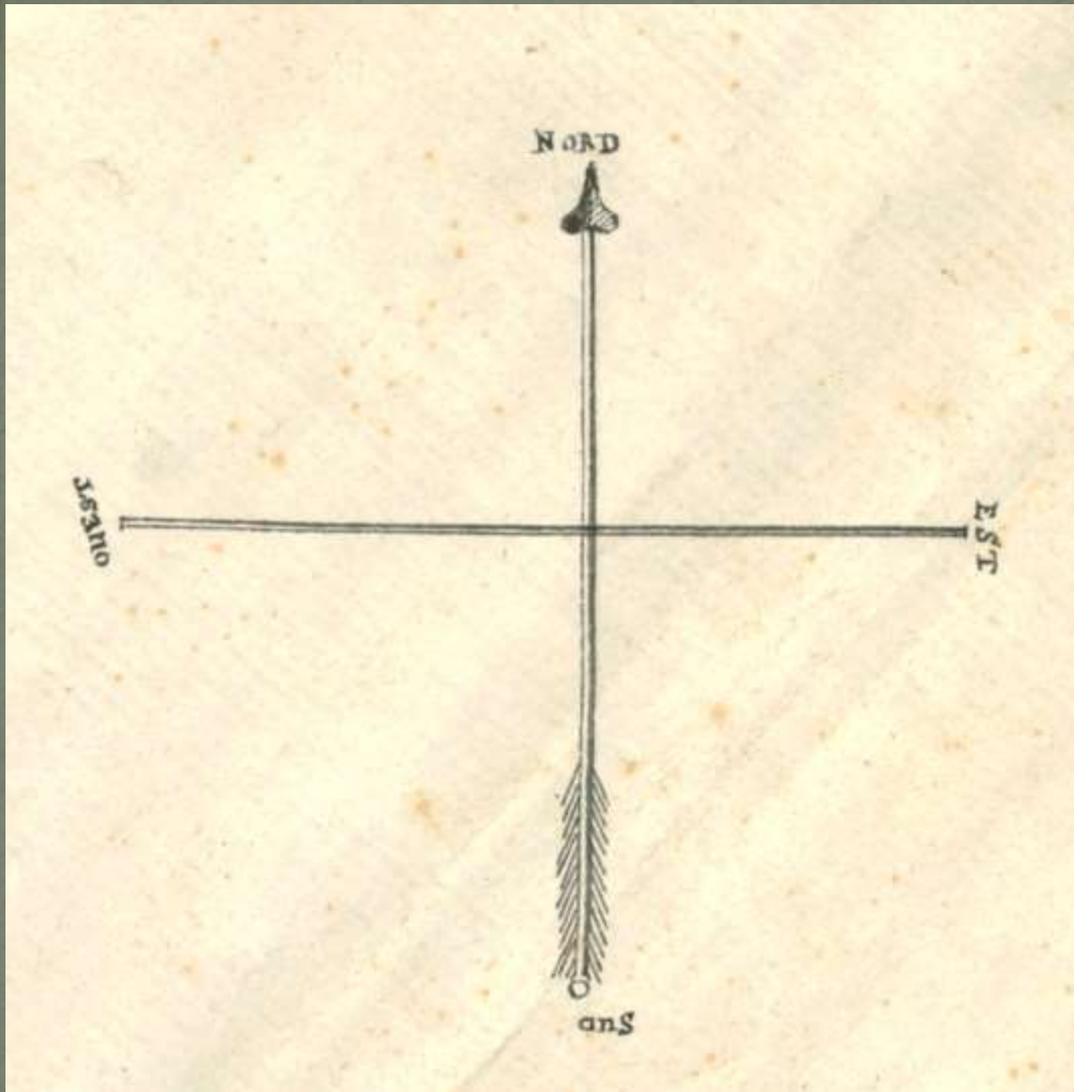
- Wind rose – graphical presentation of wind directions (directions from which winds blow)
- Wind rose were used as a element of compass from the end of 14th c.
- Compass roses – wind roses which were printed on geographical maps and charts (from those on which only cardinal directions were shown up to very complex wind roses with 32 and more directions).
- The increase in numbers of directions enabled more precise orientation, and also more accurate solutions for different navigational and similar activities.
- Purpose of compass rose – when a map is used in conjunction with a compass it was possible to determine the position and direction of movement in relation to cardinal and intermediate directions and geographical objects on map and in reality recognized or known space.
- Compass roses on charts were usually on the intersection of rhumb lines

From decorated compass
needle...



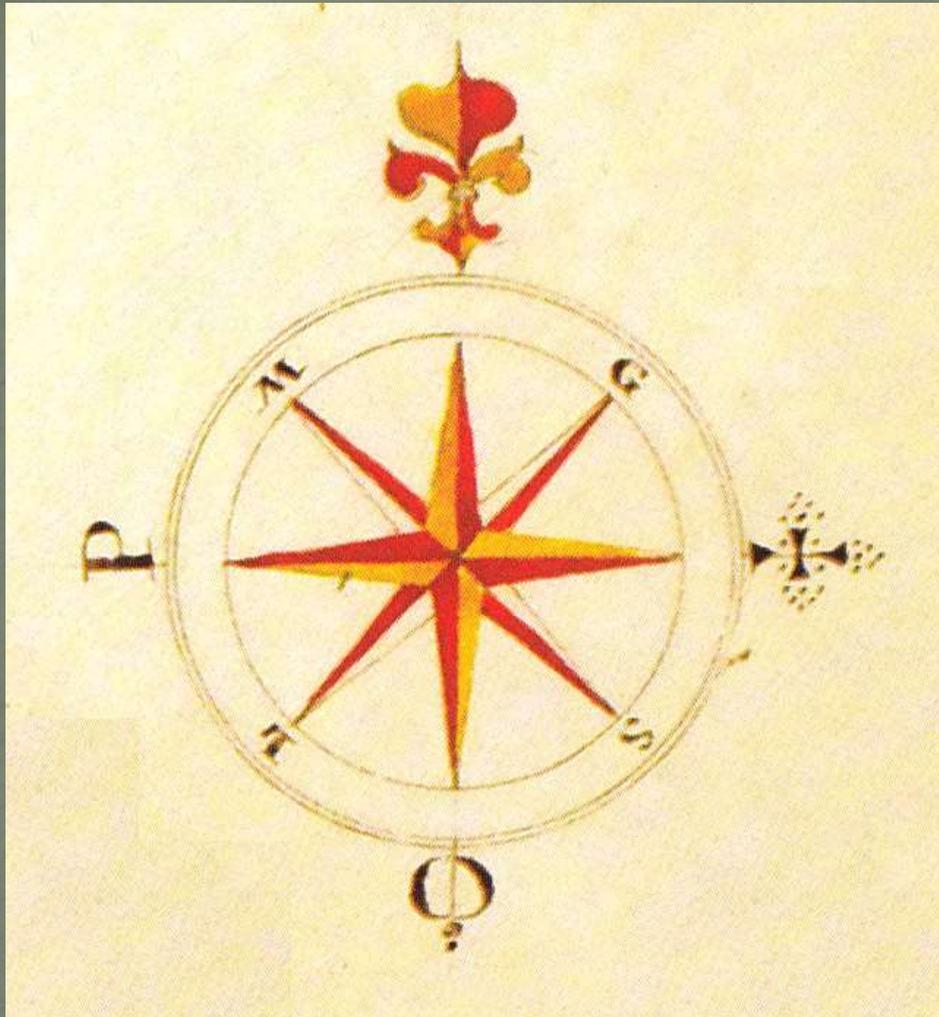
Pietro Signoretti, Cadastral map of Islam Grčki, 1709.

...to compass rose
with 4 directions...



Unknown author, Map of Dalmatia, 1730

...8 directions,



Giuseppe Antonio Grandis, Cadastral map of Benkovac, 1776.



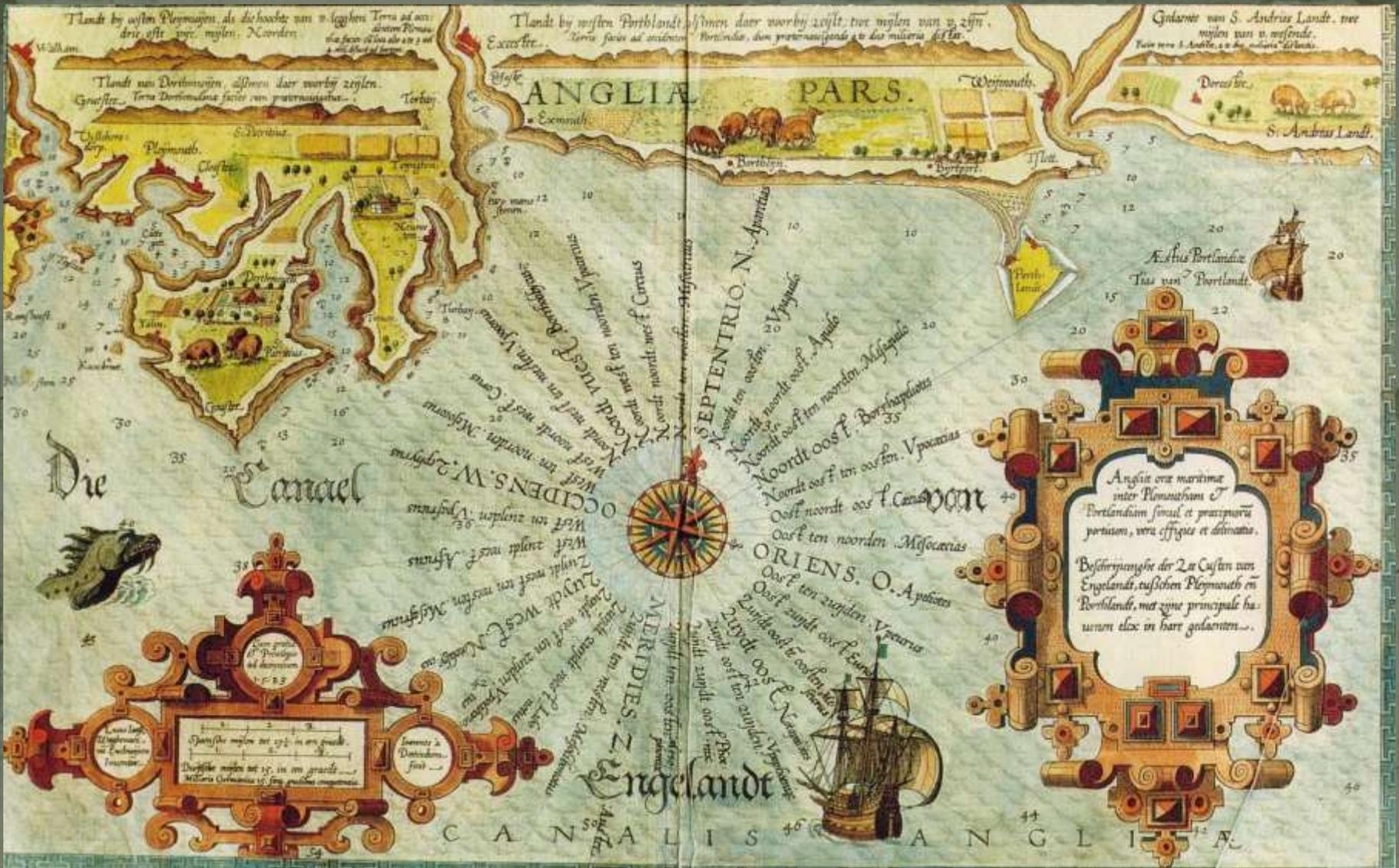
...16 directions and...

Jean François Roussin, Chart of Adriatic sea, 1661.

...32 direction



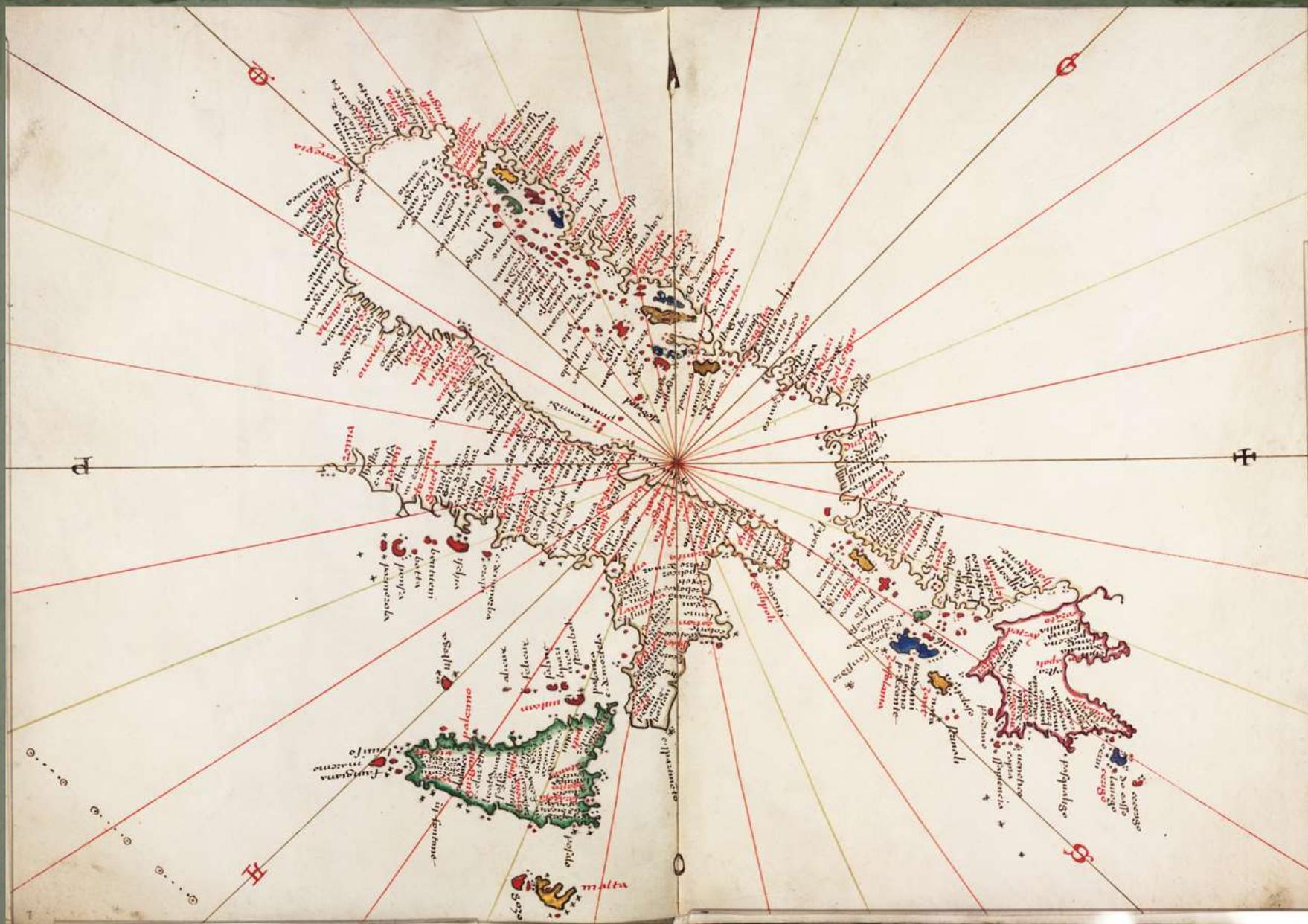
Unknown author, Portolan chart of Mediterranean Sea, 16th c.



Compass rose on the Waghenaer's chart of English Channel, *Spiegel der Zeevaerdet*, 1585.

Compass roses – part of geographical content and decoration of map

- Compass roses as a part of geographical content of the map were the feature which could have been lavishly formed without losing their basic purpose.
- Therefore there was no danger of subordinating functionality to aesthetics even during baroque which was marked by the luxury of artistic expression.
- Together with cartouches, compass roses were the content which was used for map decoration and so they became nicely designed geographical, geodetical and artistic achievements with multilayer semantic.
- That contributed to map attractiveness and popularity since at the same time they were the works of art, reflections of scientific notions, and a declaration of ideas formed in the triplet of a given space, time and culture.
- There is probably a significant number of those who became interested in cartography and geography after having been attracted by maps' aesthetics!



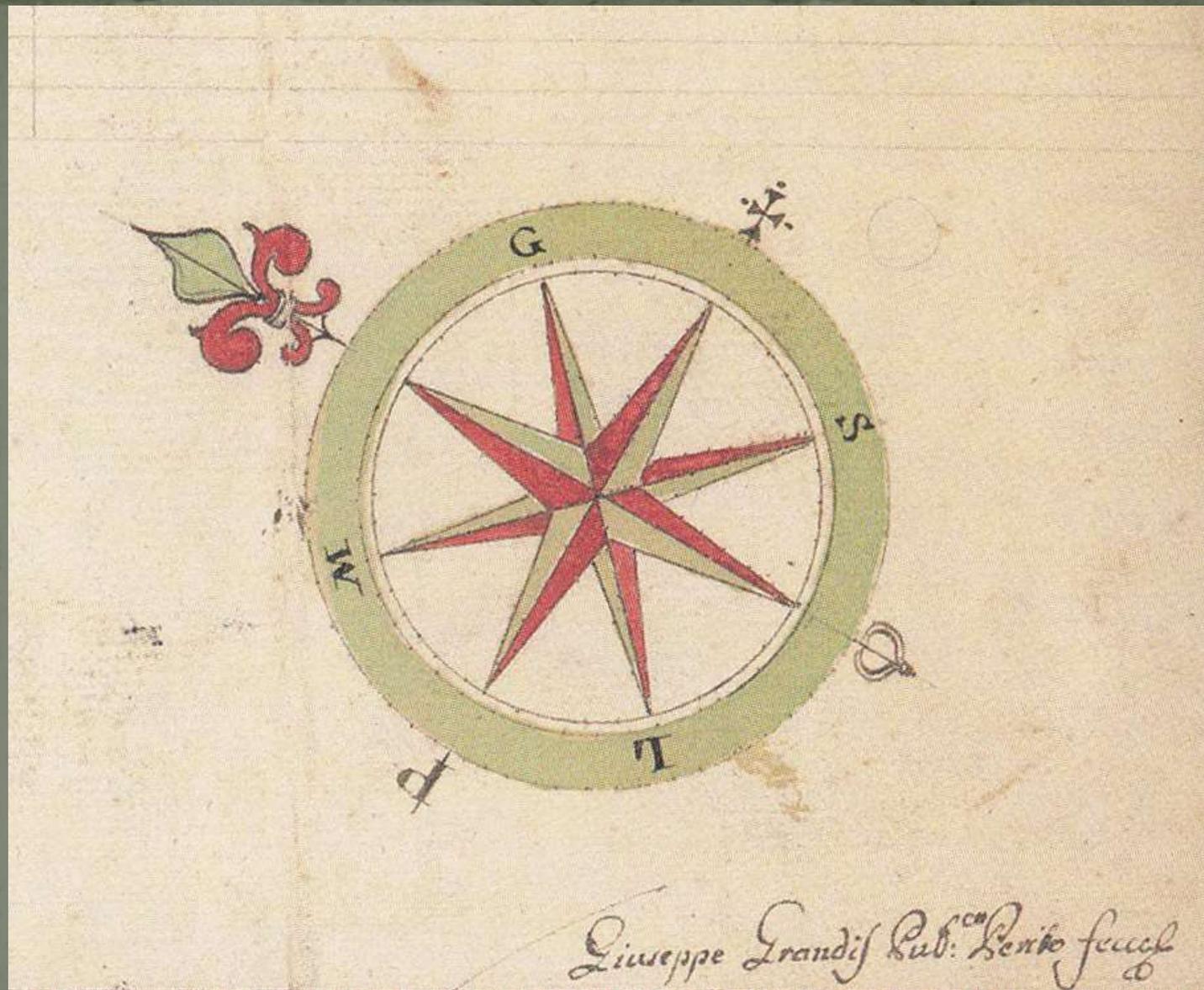
Bartolomeo dalli Soneti, Chart of Adriatic Sea, 1485



Giacomo Gastaldi, Map of Croatia and neighboring countries, 1546

Marking of cardinal directions

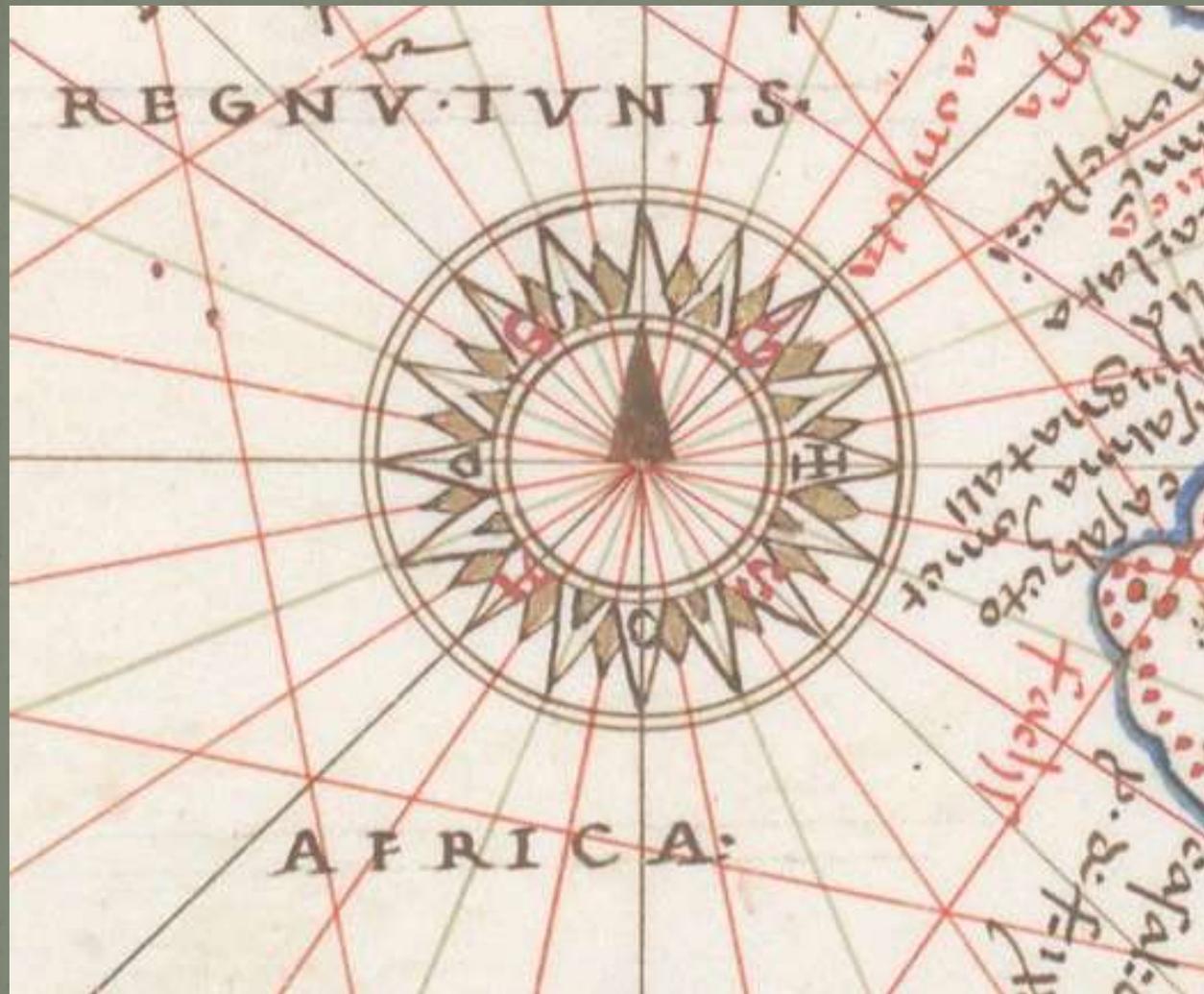
- On compass roses cardinal directions were marked with first letters that at the same time marked the direction of wind and cardinal directions
 - **T** – *tramontana* (north),
 - **L** – *levante* (east),
 - **O** – *ostro* (south),
 - **M** – *maestro* (northwest), etc.
- On some compass roses cardinal directions were marked with first letters of Latin names which were used for cardinal directions
 - **S** – *septentrio* (north),
 - **O** – *oriens* (east),
 - **M** – *meridies* (south),
 - **Oc** – *occidens* (west)
- Since North was the cardinal direction in relation to which azimuth that is course is calculated, it was necessary to mark it specially among all other cardinal and intermediate directions.



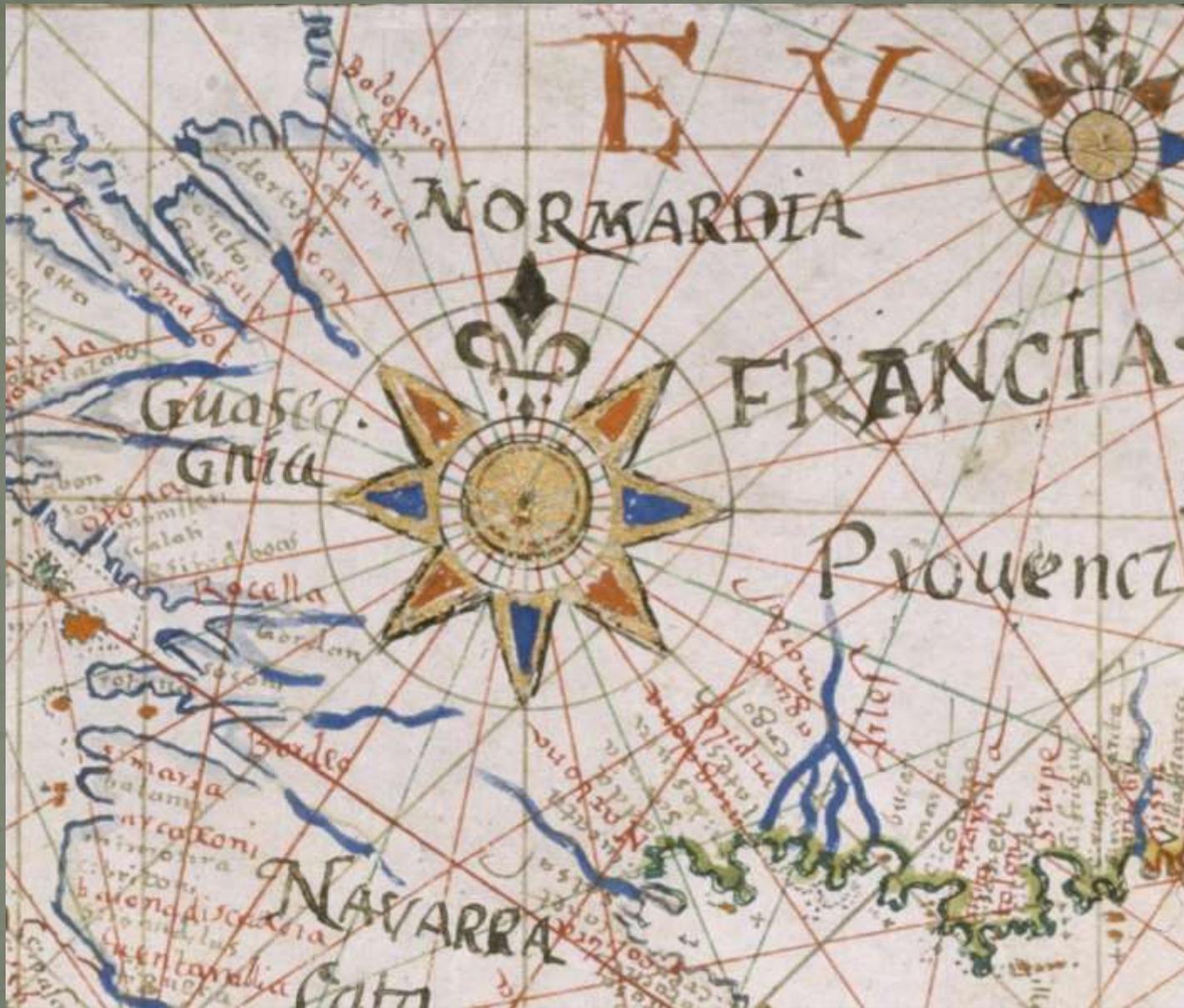
Giuseppe Antonio Grandis, *Cadastral Map of Diklo, 1775*
(map should be rotated by about 45 degrees in a clockwise direction)

North

- North was marked with a simplified or designed arrow head which has been the symbol for the head of magnetic needle in the compass.
- Since Renaissance instead of ordinary arrow or the head of the spear *fleur de lys* – lily's flower was used.
- The symbol *fleur de lys* had multiple religious meanings (as a symbol of Jesus Christ and his Mother Mary) and in politics (as a heraldic sign of nobility and royalty, especially for France dynasties Valois and Bourbon and with them related dynasty Anjou and English dynasties).
- Very likely, lily's flower was transferred from the mentioned sources to the cartography.
- It also needs to be pointed out that the Pole Star, which enabled orientation during clear nights, was also named Stella Maris. The same honorary title was associated with the Virgin Mary.
- By using the sign of lily's flower spiritual and geographical symbolism were unified.



Battista Agnese, Chart of Mediterranean Sea, 1544



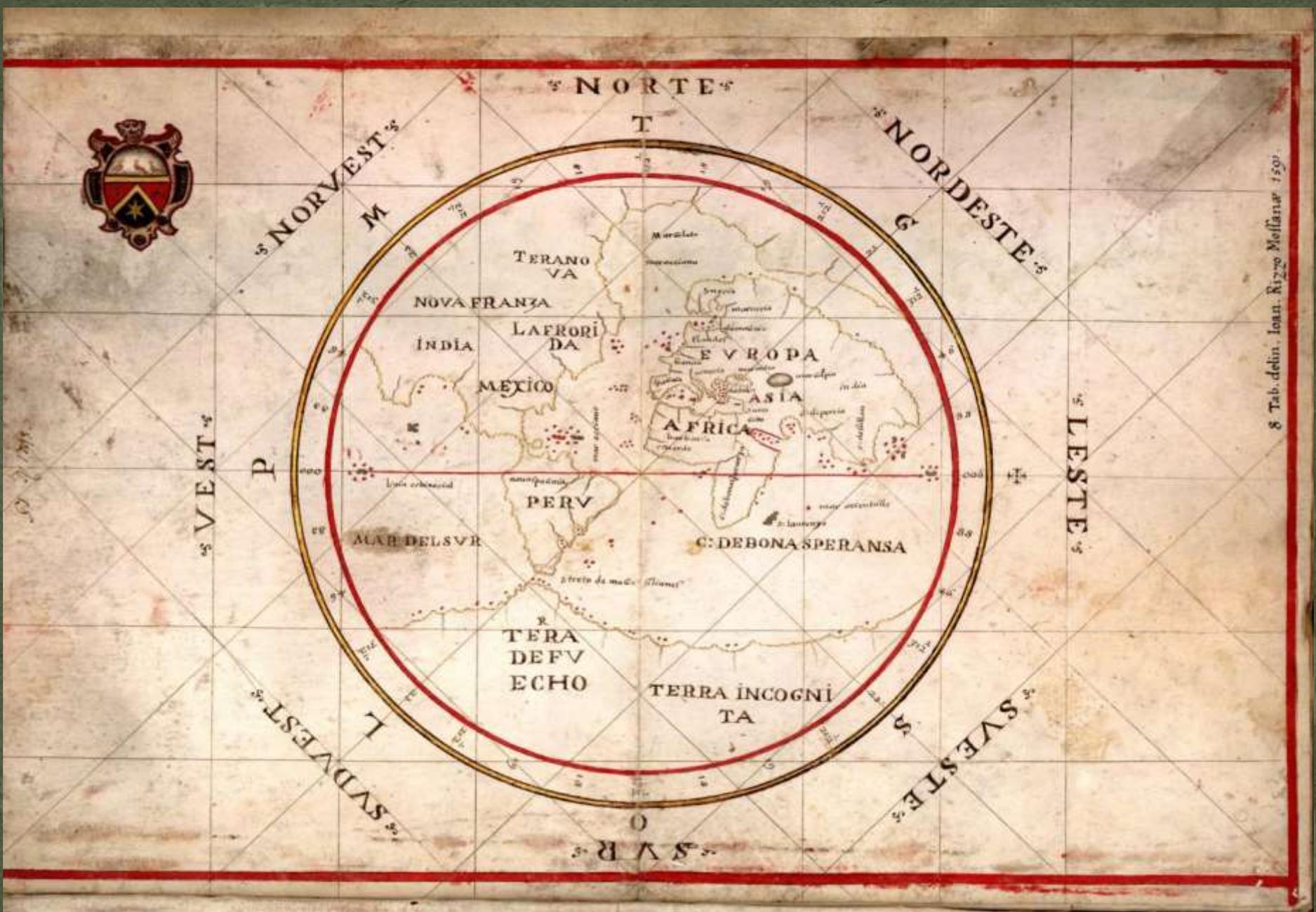
Placido Valoiro y Oliva, Map of Europe, 1626

East

- East was marked by the sign of cross.
- It symbolically represented the direction towards Jerusalem, the place where Jesus was crucified and buried.
- In relation to Italy and other Western Mediterranean countries, the region where first medieval charts and the most of geographical maps of the known world were made, Jerusalem is placed easterly.
- It is interesting that the cross was used for direction of East even on compass roses which were positioned easterly from Jerusalem.

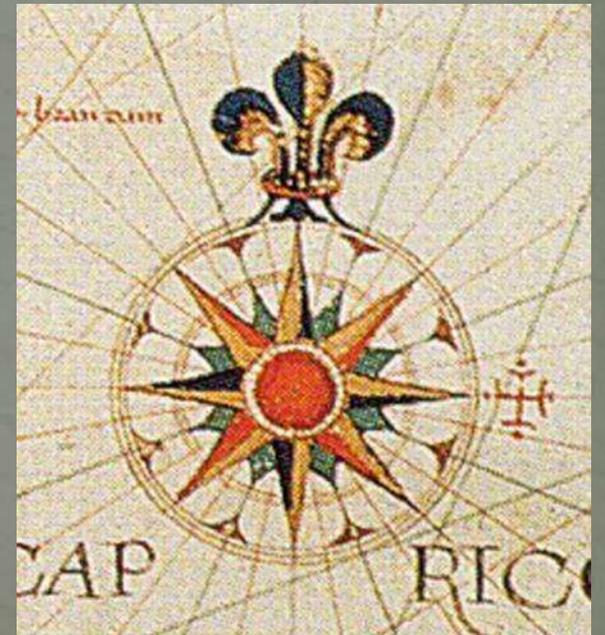


Francesco Camocio, Map of Europe, 1568



Lucas Janszoon Waghenar, Map of the World, 1591.

Diogo Homem, Map of Western Part of Indian Ocean, 1570



Modern use of compass roses



- Compass roses disappeared from topographical maps during the 19th century but they are still used as a simple orientation element on maps in situations when it is not necessary to determine geographical latitude and longitude but the user only needs to orientate towards cardinal directions.
- For that purpose a compass rose with four cardinal directions is used, such as the one used as NATO's symbol.
- Even today compass roses are frequently used on charts bearing in mind that they show values of magnetic declination (variation) whereas basic orientation on those maps is based on latitude and longitude grid.



RECONNOISSANCE HYDROGRAPHIQUE

DU

DETROIT DE PASMAN

FAITE

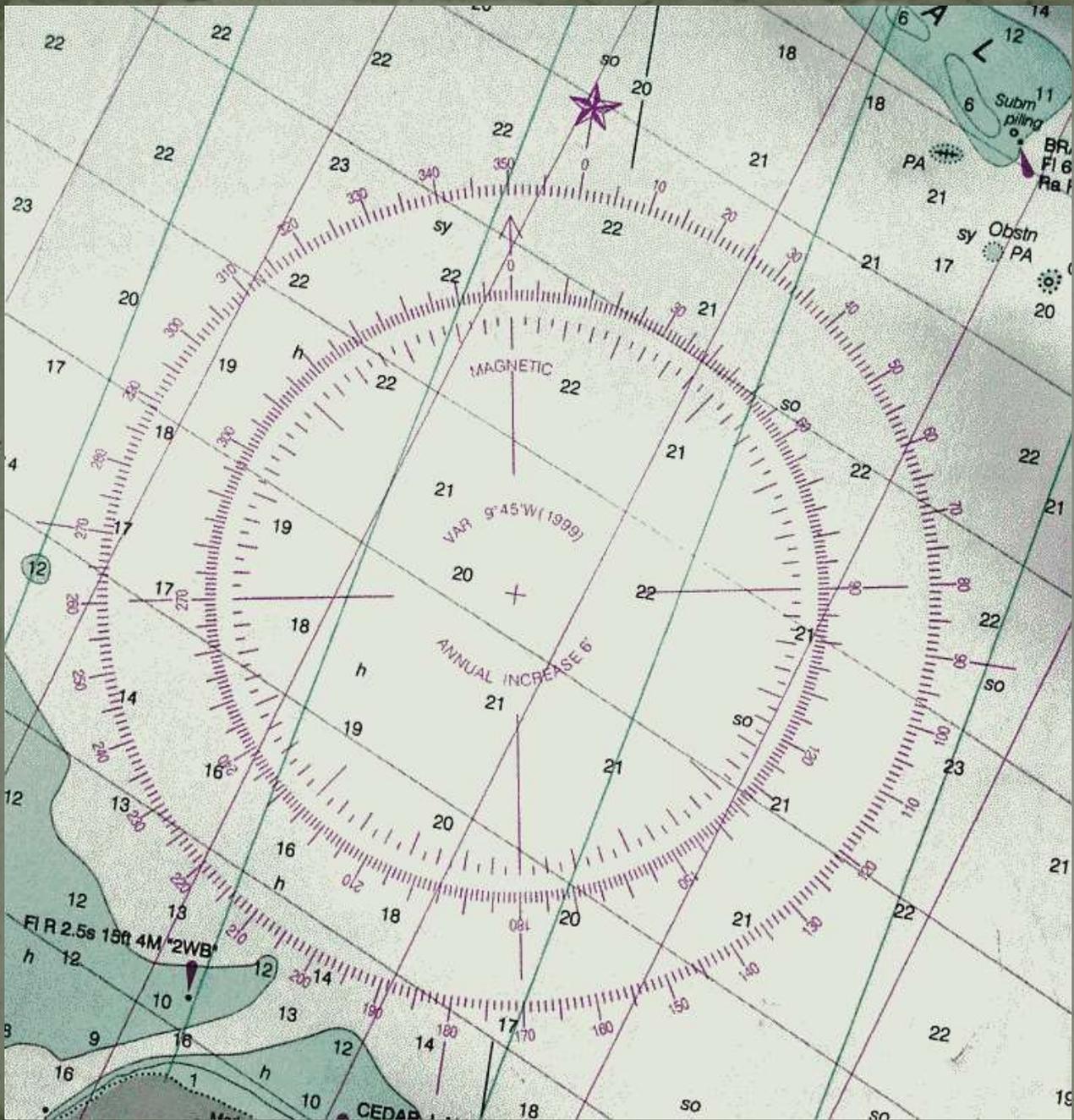
par l'ordre de sa Majesté

L'EMPEREUR ET ROI

en l'Année 1806



Charles François
Beautemps Beupre,
Map of Pašman Strait,
1806



Compass rose with representation of magnetic variation on modern chart



Thank you for
your attention!