



Global Sea Routes

A Historical Geodatabase of European Global Navigation (1500-1900)



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Ship name	Start Date	Arrival Date	Itinerary	Captain	Nationality	Fleet	Voyage Typ.
Ariel	29-05-1866	06-09-1866	Fuzhou to Gr...	Keay, John	Great Britain	Shaw, Lowth...	Commercial
Cadogan	10-02-1724	16-02-1727	The Downs...	Hill, John, Pri...	Great Britain	East India C...	Commercial
Caracciolo	30-11-1881	09-09-1884	Pozzuoli-Ma...	De Amezaga...	Italy	Regia Marin...	Circumnavig
Carolina	26-10-1682	11-06-1683	Downs to Ba...	Harding, John	Great Britain	East India C...	Commercial
Centurion	11-08-1740	15-06-1744	Portsmouth r...	Anson, George	Great Britain	Royal navy	Circumnavig
City of Adelaide	26-12-1866	10-04-1867	Adelaide to L...	Bruce, David	Great Britain	Harrold Bros...	Commercial
City of Adelaide	30-05-1874	24-08-1874	London to Ad...	Bruce, David	Great Britain	Harrold Bros...	Commercial
Concord	25-02-1660	24-07-1660	Gravesend t...	Kilvert, Roger	Great Britain	East India C...	Commercial
Cutty Sark	15-02-1870	13-10-1870	London-Sha...	Moodie, Geo...	Great Britain	John "Jock" ...	Commercial
Dartmouth	31-12-1710	17-08-1713	Downs-Cape...	Beckford, Th...	Great Britain	East India C...	Commercial
Devonshire	28-04-1809	08-07-1810	Portsmouth t...	Murray, James	Great Britain	East India C...	Commercial
Discovery	01-08-1776	03-12-1779	Portsmouth...	Clerke, Charles	Great Britain	Royal navy	Exploration
Dolphin	21-06-1764	09-05-1766	The Downs...	Byron, John	Great Britain	Royal navy	Circumnavig
Dolphin	22-08-1766	20-05-1768	Plymouth-Str...	Wallis, Samuel	Great Britain	Royal navy	Circumnavig
Eagle	27-03-1624	07-04-1626	Downs-Cape...	Johnson, John	Great Britain	East India C...	Commercial
Earl of Balcar...	25-04-1830	06-05-1831	Blackwall Do...	Broughton, B...	Great Britain	East India C...	Commercial
Earl of Balcar...	27-02-1828	17-06-1829	Portsmouth...	Broughton, B...	Great Britain	East India C...	Commercial
Empress of C...	22-02-1784	11-05-1785	New York-Ca...	Green, John	United State...	John Peck	Commercial
Endeavour	26-08-1768	13-07-1771	Plymouth rou...	Cook, James	Great Britain	Royal navy	Circumnavig
Flying fish	01-11-1852	01-02-1853	New York to ...	Nickels, Edw...	United State...	Glidden & Wi...	Commercial
Hallowe'en	19-11-1873	17-02-1874	Shanghai to ...	Watt, James	Great Britain	John "Jock" ...	Commercial
Harrington	07-10-1741	29-08-1744	Blackwall-In...	Jenkins, Rob...	Great Britain	East India C...	Commercial

“The temporal dimension of world connectedness, or: how long did it take to travel by sea to several overseas destinations and how did that change over the four centuries of the modern era?”

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GSR - Global Sea Routes is a relational geospatial database aimed at the study of European navigation on a global scale in the modern and contemporary ages, in order to understand how the degree of world interconnectedness from the standpoint of maritime journey times evolved over four centuries (1500-1900).

GSR objectives: computing plotting narrating

- analysing quantitatively and plotting on georeferenced digital maps maritime connections fostered by European navigation
- making use of printed sea voyage accounts and manuscripts ship logbooks to construct digital cartographies and produce narratives from non-narrative data
- understanding globalisation as a function of European overseas expansion and the connected voyages, explorations and transportations in order to visually represent global Europeaness from the late-15th century to the beginning of the 20th century
- building relational online geodatabase to be accessed on the Web

Project launch: January 2019

Prototype development and fine-tuning: late 2020-1st trimester 2021

Web interface implementation: from second trimester 2021

Software used for the prototype database: PostgreSQL, PgAdmin, PostGIS, QGIS

Online database and data visualization: Nodegoat

GSR is

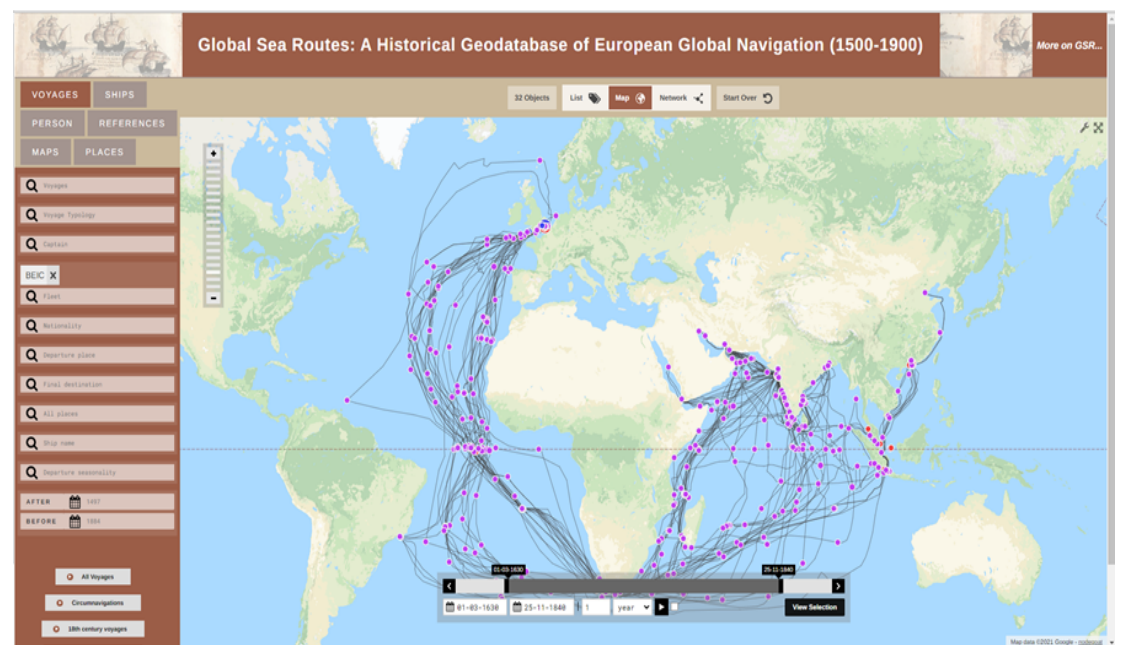
- a relational database with a spatial component (Geodatabase)
- a scientific cooperation between the University of Trieste and the Italian Navy Hydrographic Institute

Ongoing developments

- debug of the database structure
- data entry
- web application

Web application

- enables final users to obtain comparative synoptic visualisations, e.g. dynamic maps and comparative quantitative tabulations, designing routes according to specific research interests and needs
- search options based on series of variables, such as:
 - time periods
 - geographical areas and relations
 - vessels nationality and purpose of the voyages
 - technical characteristics of vessels and propulsion systems
 - navigation techniques, relating to nautical, astronomical and cartographical knowledge and skills



Screenshot of synoptic geo-referenced visualization in GSR web interface

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