Introduction
Over the last two decades, archives, libraries, and publishing houses all over the world have spent major efforts to digitize and disclose historical shipping data and other data from the Age of Sail. However, interacting with such datasets from a space-time perspective is challenging. Owing to the heterogeneity of data (e.g., large number of variables, incompleteness), cartographers struggle to provide users with visual representations that allow fast and appropriate access to maritime heritage data on a single screen. In particular with larger datasets, visual clutter in 2D visualizations obstructs the identification and analysis of spatio-temporal patterns. In this poster we propose a WebVR solution to overcome these problems.

Conclusion
The suggested adaptable virtual reality (VR) environment has several advantages compared to single screen dashboard representations. There is 'space' to create linked views all around users. It enables the creation of visually networked 'eventscapes'. The effect of the immersive three-dimensional environment allows the use of alternative graphic representations with the potential to unclutter the shipping data, providing opportunities to contextualize, confirm or reject hypotheses. The WebVR solution creates access for all browser-enabled devices. However, specific usability experiments have to be carried out to empirically evaluate whether the advantages mentioned here work.

Prize Paper archive
Our use case forms part of the digitized Prize Paper archive, a vast and valuable collection of judicial documents, private and official letters, shipping lists, and ledgers covering the period of 1652-1815. The 'interrogations' provide valuable insights in the global movement of humans and cargo and the maritime labor market in the early modern world. Up to now, few attempts have been made to explore the richness of this enormous dataset by means of spatio-temporal visualization in a VR environment.

Visualizations
Our 2D prototype shows a flow map for the spatial component of the movements. A timeline illustrates the temporal distribution of involved movements, while bars display the frequency of movements. In addition to graphical representations, filters and highlighters will be implemented in the VR environment interface.

Event scape
Our VR environment allows users to detect and contextualize spatio-temporal patterns in digitized maritime heritage data in the form of digital maps and linked timelines (= an eventscape).

The Virtual Reality working environment
WebVR is a web specification that enables Virtual Reality in a browser. WebVR is not commonly used in the geo-domain because the common frameworks for creating WebVR environments, like A-frame, lack the ability to display maps and geodata with web technology. In order to bring this capability to WebVR we created an A-Frame component for OpenLayers which makes it possible to import any OpenLayers map.