Model Ships, Free Software and Nothing but a Browser:

3D-Visualisations of Maritime Heritage for a Post-App World

3D-digitisation is a hot topic in digital heritage education und conservation. The German museum community is currently just getting started on cultivating the relevant expertise. All too often in their digitisation efforts, museums must rely on commercial partners whose central interest is not in providing sustainable standards and self-sufficiency to cultural institutions, but rather to ensure their long-term dependancy upon proprietary support for hard- and software.

Between March and December of 2017, the German Maritime Museum in Bremerhaven was capable of exploring the possibilities and applications of digitising and visualising its 3.000 piece collection of model ships in 3D. This project, titled „Model Ships as Knowledge Repositories for the study of maritime heritage", was funded by the Federal Ministry for Education and Research and supported by students from the department of computer science at Bremerhaven University of Applied Sciences. Together, we tackled the question of which conditions have to be met for the digital implementation and presentation of 3D data – and how to set cultural institutions up for maintaining their own online platforms at low cost.

The result of our cooperation is a fully open-source software infrastructure based on the WebGL API and the Three.js library, which allows for platform-independent, browser-based visualisation of 3D models. Within one unified framework, such data can be fed into various diverse channels of museum communication, from websites to media terminals within the physical exhibition or even AR and VR applications.

Our talk aims to be an introduction to the functionalities of the system as well as ist advantages over proprietary, app-based solutions. We also seek to give an overview of the actual content and didactic framing of our current digitisation efforts.