Specification and background details for the interpretative output 1

Background

Since the restoration of HMS Victory began in May 2022, archaeologists have taken in excess of 3,000 images in addition to the high-resolution images taken to produce multiple 3D digital models of the ship. These additional images had to be stored and analysed manually, but with the aid of AI engines this process is now automated, increasing the quality and resolution of the recording of the works. We would like to share some of the 3D models with the public, enabling them to explore the conservation process whilst in the background we have the live project accessible via the gallery windows, essentially offer a live and virtual comparison opportunity.

Technology specification

- Model/display output must be appropriate for external use ie water resistant as the Victory Live experience is only sheltered with a tent.
- Model is Rhino 3D files *.3dm. For the surveys and photogrammetry, we use *.obj and *.glb files. The last two are industry standard formats. Rhino needs to be converted to whatever the visualiser takes.
- Utilised in a bay which 2.5 x 2.5 m
- The bay is located on the top floor of the Victory Live: scaffolding platform and looks out currently onto HMS *Victory's* starboard side with exposed framing system on view
- Timers would need to be required, set to opening hours.
- Updates to the system must be feasible for NMRN staff, training provided as part of the handover process and availability post installation for follow up.
- Technology should be suitable for usage over a period of five years. Technical support should be available over and above manufacturers guarantee period. Ie we should be able to make contact with someone to resolve issues, if we are unable to resolve in-house.
- This project will continue to evolve in terms of the models and photogrammetry; therefore, we may need the functionality to add a new section to the interpretative output.
- All materials will need to be fire retardant and wherever possible materials should minimise the fire loading risk. Ie avoiding wood in as many ways as achievable within the designated budget

Possible ideas or outputs:

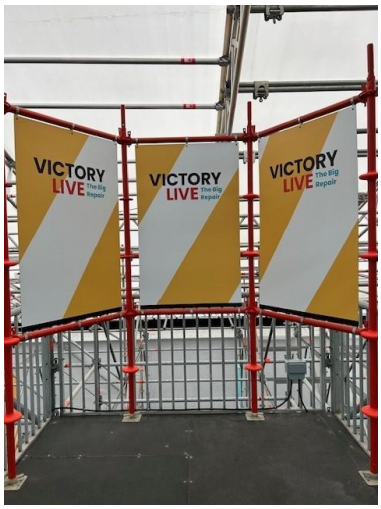
- Contextualise the scale of work being undertaken as part of Victory Live: The Big Repair project.
- Explain the different teams involved in the repair and their contributions.
- Ensure the public understand the scanning offers us a digital database and historical record of the ship which has never been undertaken before.
- Use 3D models and layer up the development over time on a screen using the raw footage.
- This includes 3D overlays of the ship at different stages throughout her life:

- When she was launched in 1765
- How she looked like before setting sail to Trafalgar
- How she looked like fully rigged (with sails and running rigging)
- How will she look after the great repair.

- Have selectable models which people can turn/explore with narrative soundbites available by specific sections:
  - Some models can be use to explore dimensions of the ship
  - Other models can be used to understand lived spaces and cargo areas
  - Other can point out areas of historic significance on board (i.e. Horatio Nelson's place of death, etc...

- Have a moveable flatscreen which could work as interface (and therefore to display the different 3D layers) between the visitors and the ship in the background using augmented and virtual reality.
- Project the model in a cinematic space, with a specific filmed loop to contextualise action and life on board.

Photos



2.5 x 2.5 m 1

Additional resources to support developments:

https://www.youtube.com/watch?v=wgHV7w9o2VM

https://www.youtube.com/watch?v=QPWqYOhv3z4