

AI-BASED GENERATION OF A MULTI-MODAL PANORAMA FOR THE BAYEUX TAPESTRY

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The Bayeux Tapestry is an exceptional Middle Age embroidery, of 70m long and 50cm high. Throughout 55 scenes, it tells the epic of William, Duke of Normandy, who left Normandy with his armada in 1066 to conquer the kingdom of England. However, researchers and scientists interested in the study of this unique artifact are confronted with problems related to temporal or geographical constraints i.e., to accessibility: the number of visitors, the exceptional size of the document, the protective glass, etc. In order to solve these accessibility issues and thus facilitate access to the Tapestry to scientists and the general public, we proposed to create a digital multimodal (daylight, multi-spectral and fine-scale geometry) panorama, which can be explored online in a web interface. This talk will present the mathematical and AI tools which were developed for generating this multimodal panorama, from the spatial and spectral registration to the deep learning-based fine-scale 3D-reconstruction.