ArtVis - Gaining New Insights from Digital Artwork Collections

The ArtVis project uses advanced visualisation techniques in combination with a tangible user interface to explore a large digital artwork collection (Web Gallery of Art), containing pieces from European painters and sculptors from the beginning of the 11th to the mid-19th century. Users might gain new insights by *exploring*, *analysing* and *browsing* the artworks based on three complementary but coupled visualisation components. Special tangible controls further allow the user to explore the large collection of digital artworks based on different dimensions such as the name of the painter, the museum where an artwork is located, the type of art or a specific period of time (*faceted browsing*). The name ArtVis reflects the fact that we bring together *artworks* and the field of *Information Visualisation* in order to achieve a playful and highly explorative user experience.

An important aspect of the presented advanced visualisation technique and tangible user interface is the fact that input from the explore, analyse and browse components can be combined in order to formulate more *complex queries* to answer questions such as:

• ”When was the Flemish school at its peak?”

• ”Which was the most active Italian city during the Renaissance?”

• ”Illumination is the art of decorating books. What can we say about its evolution over time?”

The tangible ArtVis user interface aims to improve the *usability* by cleary defining the operations offered by the physical painter's palette as well as by attaching specific meaning or queries to tangible objects.

In the near future, we plan to collaborate with museums in order to make the ArtVis application accessible to a wider audience. Of course, the presented visualisation techniques and tangible interaction can not only be used for artworks and we plan to build similar *natural user interfaces* for enhanced data exploration in other domains.

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