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# VOILA! 2020

**Proceedings of the 5th International Workshop on  
Visualization and Interaction for Ontologies  
and Linked Data**

**Co-located with ISWC 2020, Virtual (originally planned in Athens,  
Greece), November 2, 2020**

Title: Visualization and Interaction for Ontologies and Linked Data (VOILA! 2020)

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ISSN: 1613-0073

CEUR Workshop Proceedings  
(CEUR-WS.org)

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## Preface

The Semantic Web enables intelligent agents to create knowledge by interpreting, integrating and drawing inferences from the abundance of data at their disposal. It encompasses approaches and techniques for expressing and processing data in machine-readable formats. All these tasks demand a human-in-the-loop; without them, the great vision of the Semantic Web would hardly be achieved. Meanwhile, visual interfaces for modeling, editing, exploring, integrating, etc., of semantic content have not received much attention yet.

The size and complexity of ontologies and Linked Data in the Semantic Web constantly grows and the diverse backgrounds of the users and application areas multiply at the same time. Providing users with visual representations and intuitive interaction techniques can significantly aid the exploration and understanding of the domains and knowledge represented by ontologies and Linked Data.

Ontology visualization is not a new topic and a number of approaches have become available in recent years, with some being already well-established, particularly in the field of ontology modeling. In other areas of ontology engineering, such as ontology alignment and debugging, although several tools have recently been developed, few provide a graphical user interface, not to mention navigational aids or comprehensive visualization and interaction techniques.

In the presence of a huge network of interconnected resources, one of the challenges faced by the Linked Data community is the visualization of multidimensional datasets to provide for efficient overview, exploration and querying tasks, to mention just a few. With the focus shifting from a Web of Documents to a Web of Data, changes in the interaction paradigms are in demand as well. Novel approaches also need to take into consideration the technological challenges and opportunities given by new interaction contexts, ranging from mobile, touch, and gesture interaction to visualizations on large displays, and encompassing highly responsive web applications.

There is no one-size-fits-all solution but different use cases demand different visualization and interaction techniques. The evaluation of such interfaces and techniques poses another relevant concern given the specific challenges of visualizing data imbued with semantic complexity. Ultimately, providing better user interfaces, visual representations and interaction techniques will foster user engagement and likely lead to higher quality results in different applications employing ontologies and proliferate the consumption of Linked Data.

These and related issues are addressed by the VOILA! workshop series concerned with *Visualization and Interaction for Ontologies and Linked Data*. The fifth edition of VOILA! is co-located with the 19th International Semantic Web Conference (ISWC 2020) and took place as a half-day virtual event on November 2, 2020. It was organized around scientific paper presentations and discussions.

The call for papers for VOILA! 2020 attracted 9 submissions in different paper categories. At least three reviewers were assigned to each submission. Based on the reviews, we selected 7 contributions for presentation at the workshop.

We thank all authors for their submissions and all members of the VOILA! program committee for their useful reviews and comments. We are also grateful to Sabrina Kirrane and Satya S. Sahoo, the workshop chairs of ISWC 2020, for their continuous support during the workshop organization.

November 2020

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VOILA! 2020  
<http://voila2020.visualdataweb.org>

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