ISWC 2018 RESOURCES TRACK: Instructions for Authors and Reviewers

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Slides based on Freddy Lecue and Valentina Tamma: "ISWC2017 Resources Track: Author and Reviewer Instructions". figshare. https://doi.org/10.6084/m9.figshare.4679152. March 2017.

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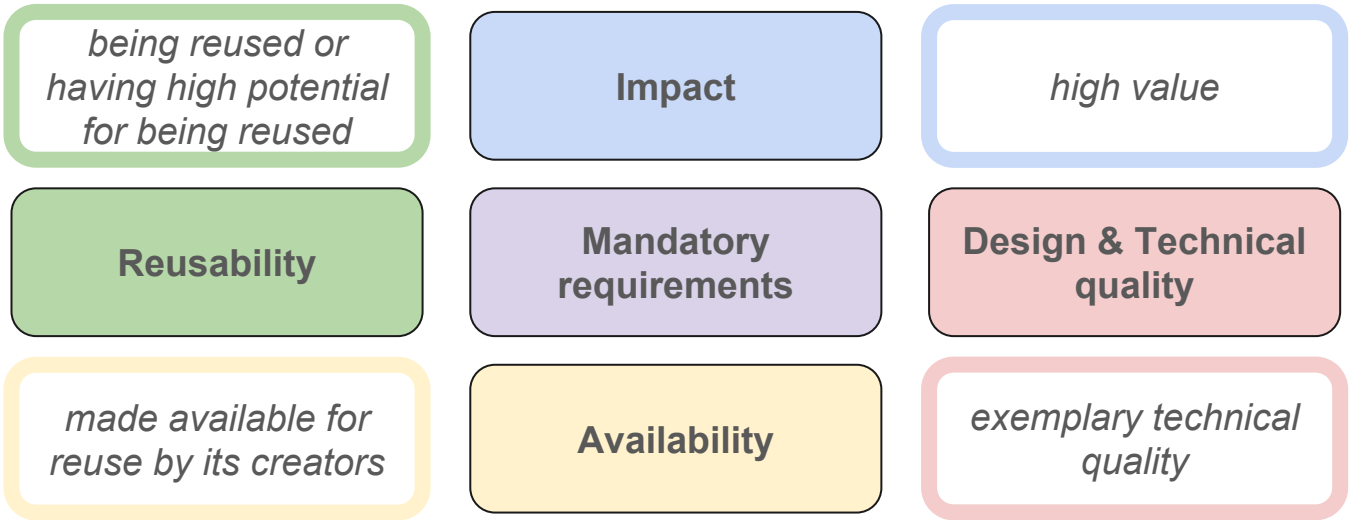
Focus of the Resources Track

Papers describing ***resources*****:** high quality information artifacts that are reusable in novel contexts. They include, but are not limited to:

- Datasets
- Ontologies and vocabularies
- Ontology design patterns
- Workflows
- Evaluation benchmarks or methods
- Services and APIs
- Software frameworks
- Crowdsourcing task designs
- Methodologies
- Protocols and metrics

General review criteria

Review criteria for all resources



Mandatory requirements

Mandatory requirements

- **Persistent URI**: The resource and its related results must be published at a persistent URI (PURL, DOI, w3id)
- **Canonical citation**: A canonical citation must be associated with the resource
- **Clear licence**: The resource must provide a licence specification (see creativecommons.org, opensource.org for more information)

Impact

- **Pioneering**: the resource breaks new ground
- **Addressing requirements**: the resource plugs an important gap
- **Advancing the state of the art**
- **Comparison** with other resources with similar scope

- **Relevance** to the Semantic Web community
- **Relevance** for society in general
- **Fostering adoption of Semantic Web technologies**: potential or evidence are provided

Reusability (established resources)

Reusability

- **Evidence of usage** by a wider community that the group of creators
- **Easiness to reuse** i.e. quality of documentation, availability of tutorials, etc.
- **Generality**: is the resource applicable to scenarios (or to data) other than the presented one?
- **Extensibility** to meet future requirements
- **A clear target of users** is identified
- **How others use data and software** is clearly explained
- **Strengths, weaknesses and limits** are clearly stated and motivated

Reusability (new resources)

Reusability

- **Potential of reuse** is supported by evidence of discussions in discussion fora, mailing lists, etc.
- **Easiness to reuse** i.e. quality of documentation, availability of tutorials, etc.
- **Generality**: is the resource applicable to scenarios (or to data) other than the presented one?
- **Extensibility** to meet future requirements
- **How others are expected to use data and software** is clearly explained
- **Strengths, weaknesses and limits** are clearly stated and motivated

Design & technical quality

Design & Technical quality

- **Design best practices** have been followed
- **Reuse best practices** have been followed
- **Suitability** of the resource for the proposed task is fairly claimed
- **Compliance to FAIR principles**: e.g. schema diagrams, description of datasets use VoID/DCAT

Availability

Availability

- **Public availability**: e.g. as API, Linked Open Data, Download, Open Code Repository
- **Public findability**: the resource is registered in (community) registries (e.g. Linked Open Vocabularies, BioPortal, DataHub) or in generic repositories (FigShare, Zenodo or GitHub)
- **Sustainability and maintainability** is supported by a clear and fair plan
- **Open standards** are adopted or the resource creators provide good reasons for not adopting any

Resource-specific Review criteria

The following criteria are to be considered **additional** to the general criteria

Slide based on http://ontologydesignpatterns.org/wiki/Odp:Exemplary_ontology

Ontologies and vocabularies

- Methodological soundness
- Clarity of the domain and requirements being addressed by the ontology or the vocabulary
- Clarity of modelling problems encountered
- Soundness of modelling choices and motivations including validation of SPARQL queries over possible evaluation scenarios
- High quality design: e.g. no hacks and workarounds, no redundancy
- Logical correctness: e.g. logical consistency, correct use of the modelling language primitives
- Meaningful and motivated reuse of other resources
- Reuse of ontology design patterns
- Validation in a real use case
- Quality of the resource documentation: rich annotations accompany and are included in the resource e.g. competency questions, rdfs:comment, reports, guidelines.

Slide based on http://ontologydesignpatterns.org/wiki/Odp:Exemplary_ontology

Ontology Design Patterns (ODP)

- Methodological soundness
- Clarity of the requirements being addressed by the ODP
- The ODP is sufficiently general to be interesting for reuse (better: there is evidence of reuse in a number of independent ontologies)
- Soundness of modelling choices and motivations, including: validation of SPARQL queries over possible evaluation scenarios and axioms for supporting interoperability
- Limits and advantages of the ODP are clearly explained
- High quality design: e.g. no hacks and workarounds, no redundancy
- Logical correctness: e.g. logical consistency, correct use of the modelling language primitives
- Reuse of other ontology design patterns, if applicable (e.g. specialisation)
- Alignment to existing, relevantly related and widely used ontologies, if applicable. Or sound and convincing comparison with them
- Quality of the ODP documentation: rich annotations accompany and are included in the ODP e.g. specific ODP annotations, examples of reuse, competency questions.

Synthetic Datasets

- The dataset is easy to access and query
- The model used to represent the data is clear
- The methodology to produce the data is sound
- The data generator is scalable
- The data capture important characteristics of the equivalent real-world data

Annotated Datasets

- The dataset is easy to access and query
- The model used to represent the data is clear
- The assumptions behind the annotations are sufficiently described
- The methodology used for producing the annotations is sound

Other Datasets

- The dataset is easy to access and query
- The ontology/vocabulary used to represent the data is clear
- The dataset provide a significant coverage of the domain it targets and it can be meaningfully used for real world applications and/or for supporting scientific experiments
- The methodology to produce the data is sound

Software Frameworks

- Complexity of the implemented functionalities: the framework allows others to save significant coding effort
- The chosen abstractions are useful and likely to generalize to other problems
- The framework differs from existing ones that cover similar requirements and the difference addresses relevant requirements
- Quality and performance of the tool/system. Papers should include a clear evaluation of the performance of the tool/system according to relevant measures such as speed, usability, efficiency, etc.
- Community: e.g. active mailing list, issue trackers, can be (or better is being) used by others

Services and APIs

- The functionality of the service is clear and important features of the service are published
- The service/API differs from existing ones that cover similar requirements and the difference addresses relevant requirements
- Relevant metrics about the service are provided, e.g. uptime of the service, service levels
- The service is well documented to enable use, e.g. availability of tutorials, code snippets.
- The API is documented in a machine processable way

Benchmarks

- The benchmark measures something significant, it is it relevant and sufficiently general
- The proposed performance metrics are sufficiently broad and relevant
- The tasks are well motivated in terms of testing the system or mimicking real-world scenarios
- The scale of the dataset is appropriate and it be scaled on appropriate metrics
- It differs significantly from existing benchmarks developed for similar purposes and the difference addresses a relevant shortcoming
- Others can use the data and software of the benchmark
- The benchmark has been run on at least three different systems (not variants of the same system)
- The coverage of systems is reasonable and a suitable baseline has been provided
- Sufficient experimental details are provided to enable interpretation of the results and replication of the experiments (e.g. software version numbers, hardware details)
- Good experimental protocols have been followed (e.g. warm-up periods, multiple runs, standard errors reported)
- The results are discussed and explained sufficiently

Crowdsourced tasks and designs

- The crowdsourced task is clearly described and sound
- If the task is composed of more than one task, the workflow (sequence of tasks involved) is described and related designs and code are provided
- The task(s) template(s) design is clearly explained and the code available for reuse
- The setting for the crowdsource platform is provided: number of workers, restrictions, etc.
- Generality of the template to be applied to different data
- The template is easy to adapt to other platforms or data formats
- Sample of input data and result data is provided or alternatively, if data are not shareable, comprehensive examples and explanations
- Limits or potential weak points are pointed out

Length of the paper

Is this the right track for my paper?

YES: if your paper describes a resource, its design, the methodology used for creating it, its validation, its documentation and its focus is on sustainability and community adoption of the resource.

NO: if your paper describes HOW a resource was used for supporting a specific novel application that targets relevant domain and type of users -> this would be a good fit to the In-Use Track

NO: if your paper describes a novel method to create or extend a resource and its evaluation -> this would be a good fit to the Research Track

Is my paper the right length?

You have a minimum of 8 and a maximum of 16 pages. We expect that papers describing benchmarks may require more space than the others, hence if your paper is comprehensive enough in less than 16 pages, it is fine.

- Be sure to include all mandatory information and links to additional documentation, repositories, data,

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