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Conference Abstract

Collaborative Authoring, Peer Review and Publication of Data-rich Documents with the new ARPHA Writing Tool 2.0

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Abstract

ARPHA Writing Tool (AWT) is an XML-first authoring tool that allows researchers to collaborate with co-authors, editors, reviewers, proofreaders, and others to prepare a ready-to-submit manuscript in a shared online environment before publishing it in any scientific journal or platform.

Being the very first authoring tool to provide ontology-linked and domain-specific semantic tagging, AWT 2.0 also supports import of structured data from external resources (e.g., Darwin Core data from GBIF, iDigBio, BOLD) and semantic enhancements made during the writing process (e.g., citation intent based on the Citation Typing Ontology (CiTO) or automated links for taxon names to trusted online resources) (Agosti et al. 2024, Benichou et al. 2023, Shotton 2010).

Amongst the most notable benefits designed for the domain of biodiversity science are various biodiversity-specific data import and export features and bi-directional links with leading biodiversity data aggregators (e.g., GBIF, BOLD, Catalogue of Life, Checklist Bank, TreatmentBank, Biodiversity Literature Repository at Zenodo, European Nucleotide Archive (ENA), OpenBiodiv) (Page 2023).

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Originally designed for the Biodiversity Data Journal and later integrated into other journals published on the ARPHA platform, the 2.0 version of the authoring environment is now also available as a fully collaborative editing tool. As such, it allows users to export manuscripts in either PDF or JATS-XML format, before submitting them to any scientific journal or platform. Thus, the AWT 2.0 prompts wider use of XML-born and FAIR scientific publications.

AWT 2.0 can also be used for collaborative authoring, community review, editing and publication of documents for institutions or international organisations. The publications are automatically available in semantically enriched HTML, well-designed PDFs and machine-readable JATS-XML. This is how, for example, the collaborative SOLO platform allows the Soils for Europe project stakeholders to contribute to the development of strategic documents—called roadmaps—in a shared environment. There, the documents are subject to at least two rounds of transparent and open community peer review before they are published on the platform (Fig. 1). External reviewers can also leave comments as long as they are logged in with their Open Researcher and Contributor ID (ORCID) Those publications serve to address knowledge gaps relevant to the EU Soil Mission and guide funding priorities (CORDIS 2025).

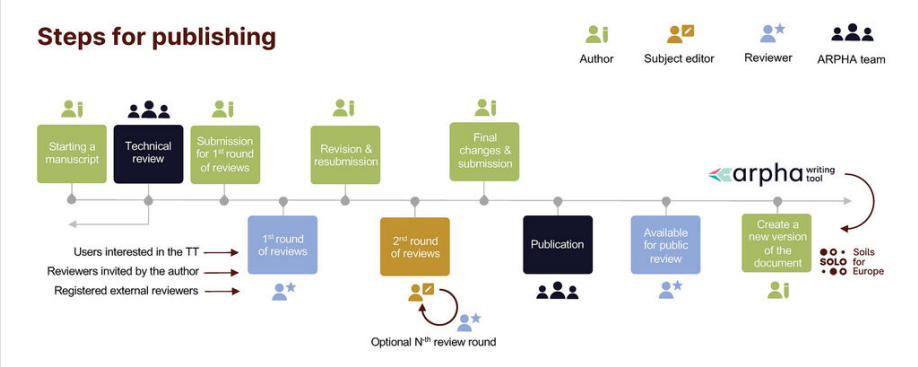

Figure 1.

SOLO platform publishing workflow. Original work by S. Peneva, CC BY-4.0.

A key feature of publishing with SOLO is the annual roadmaps update, which ensures they remain current and in tune with the latest research and emerging trends. Once their authors update them, documents retain links to their earlier versions, so that their 'evolution' can be easily tracked. This iterative process ensures that the platform remains a 'living' resource for stakeholders, providing up-to-date guidance on soil health priorities and challenges.

Keywords

document editing platform, semantic tagging, XML, ontology

Presenting author

Teodor Georgiev

Conflicts of interest

The authors have declared that no competing interests exist.

References

- Agosti D, Bénichou L, Casino A, Nielsen L, Ruch P, Kishor P, Penev L, Mergen P, Arvanitidis C (2024) Liberate the power of biodiversity literature as FAIR digital objects. Research Ideas and Outcomes 10: e126586. https://doi.org/10.3897/rio.10.e126586
- Benichou L, Salaün M, Boyadzhieva I, Demirov S, Georgiev T, Penev L (2023) Pre-Publication Data Linking in Taxonomy and Biodiversity: The ARPHA and Metotaxa-Metostem Publishing Systems. Biodiversity Information Science and Standards 7: e110919. https://doi.org/10.3897/biss.7.110919
- CORDIS (2025) SOLO's preliminary assessments on the knowledge gaps of Soil Mission objectives are now publicly available. https://mission-soil-platform.ec.europa.eu/news-events/latest-news/solos-preliminary-assessments-knowledge-gaps-soil-mission-objectives-are?utm_source=chatgpt.com. Accessed on: 2025-8-21.
- Page R (2023) Ten years and a million links: building a global taxonomic library connecting persistent identifiers for names, publications and people. Biodiversity Data Journal 11: e107914. https://doi.org/10.3897/BDJ.11.e107914
- Shotton D (2010) CiTO, the Citation Typing Ontology. J Biomed Semant 1 (Suppl 1): s6. https://doi.org/10.1186/2041-1480-1-S1-S6