A Linked Open Data Infrastructure for Studying Historical Activities of International Organizations: First Results on the League of Nations (1920–1946)

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The notion of democracy and the functions of the state of the law in modern liberal countries are based on legislation and agreements that are discussed and decided in democratically elected national parliaments. In the same way, international organizations discuss and agree upon international matters, such as state of the law principles, war and peace, climate change, and global health. Examples include Parliament of EU, the United Nations (UN), and Inter-Parliamentary Union (IPU) to name a few.

To make decision making transparent, minutes of discussions among the decision makers are documented and made open to the public and researchers. Even if the documents are openly available to read they are seldom published according to the FAIR principles that would facilitate development of easy to use intelligent applications for public engagement and scholarly Digital Humanities (DH) research [8, 4].

We present the vision and first results of the "Minutes of Multilateralism" initiative[5] to turn assembly minutes materials of international organizations into a sustainable infrastructure and LOD ecosystem [1, 2] that allows users to trace who spoke, on what issues, in which capacities, and how agendas evolved over time, while remaining explicit about uncertainties, biases, and curatorial choices. The ultimate goal is to create and align with each other minutes data from several related international organizations, with a focus on Geneva-based ones.

In national parliaments, the minutes typically record the speeches of parliamentarians word by word [4] while international assembly minutes focus more on documenting the decisions. However, the minutes are essentially texts making references to topical matters, people, organizations, and places in time. Our research hypotheses therefore is that a similar kind of technical solution can be applied to different kind of minutes cases. To test and demonstrate this, the notion of the "Sampo framework" [3] was employed by taking an existing Sampo,

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[5] Project homepage: `https://seco.cs.aalto.fi/projects/minutes/`

in our case ParliamentSampo [4] of Parliament of Finland, with its ready to use user interface (UI) model and knowledge graph as a starting point and modify it declaratively. This approach allows for extremely rapid software development [6]. As a proof of concept, we present the case of the ca. 27 000 assembly minutes and 3300 related diplomats of the League of Nations (LoN) (1920–1946) based on data from the LONTAD project, [7, 9]. The LOD service and portal LEAGUE OF NATIONS SAMPO available on the Web [5] are presented and demonstrated with lessons learned discussed.

Bibliography

[1] Cafiero, F.: Datafying diplomacy: How to enable the computational analysis and support of international negotiations. Journal of Computational Science **71**, 102056 (2023). `https://doi.org/10.1016/j.jocs.2023.102056`

[2] Cafiero, F., Cointet, J.P., Mallard, G.: Digital accountability can re-legitimate multilateralism (2025), working paper

[3] Hyvönen, E., Leskinen, P., Tuominen, J.: Lettersampo – historical letters on the semantic web: A framework and its application to publishing and using epistolary data of the republic of letters. Journal on Computing and Cultural Heritage **16**(1) (2023). `https://doi.org/10.1145/3569372`

[4] Hyvönen, E., Sinikallio, L., Leskinen, P., Drobac, S., Leal, R., La Mela, M., Tuominen, J., Poikkimäki, H., Rantala, H.: Publishing and using parliamentary linked data on the semantic web: Parliamentsampo system for parliament of finland. Semantic Web **16**(1) (2025), dOI: 10.3233/SW-243683

[5] Leskinen, P., Hyvönen, E., Cafiero, F., Lionnet, A., Blukacz-Louisfert, B., Bourneuf, P.E., Rodogno1, D., Mallard, G.: A linked open data service and semantic portal to study the assembly minutes and prosopography of the League of Nations (1920–1946 (December 2025), `https://seco.cs.aalto.fi/publications/2026/leskinen-et-al-lon-2026.pdf`, submitted for peer review

[6] Rantala, H., Ahola, A., Ikkala, E., Hyvönen, E.: How to create easily a data analytic semantic portal on top of a SPARQL endpoint: introducing the configurable Sampo-UI framework. In: VOILA! 2023 Visualization and Interaction for Ontologies, Linked Data and Knowledge Graphs 2023. vol. 3508. CEUR Workshop Proceedinbgs (2023), `https://ceur-ws.org/Vol-3508/paper3.pdf`

[7] UN Library & Archives Geneva: LONTAD: Total digital access to the league of nations archives. `https://libraryresources.unog.ch/lontad` (2022), digitization project (2017–2022) providing comprehensive online access to the League of Nations archives

[8] Van Aggelen, A., Hollink, L., Kemman, M., Kleppe, M., Beunders, H.: The debates of the European Parliament as Linked Open Data. Semantic Web **8**(2), 271–281 (2017). `https://doi.org/10.1007/s42001-019-00060-w`

[9] Wells, C.M.: Total digital access to the league of nations archives: Digitization, digitalization, and analog concerns. In: Archiving Conference. vol. 16, pp. 12–16. Society for Imaging Science and Technology (2019)