Collaborative tools development status

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2024: developments

The ePIC collaboration established the requirements for collaborative tools in late 2023, and work began in early 2024.

1. **Development of a Digital Directory**: The ePIC collaboration identified a high-priority need for developing a digital directory accessible through federated identity mechanisms for global collaborators. This directory has been successfully delivered and incorporates essential features for disambiguation, such as identifying institutes through their ROR identity and individuals through their ORCID identifier. https://phonebook.sdcc.bnl.gov/ePIC

2. **Implementation of Role-Based access and roles within the experiment**: Critical roles assumed by individuals within the collaboration (such as author, collaborator, council member, etc.) have been implemented, along with a history of roles and affiliations.

3. **Authorization Using CoManage Software**: Authorization for accessing related web services has been implemented using the CoManage software centralized tool, which is synchronized with the digital directory.

4. **Development of a Digital Repository**: A digital repository based on the InvenioRDM platform has been developed. This prototype repository allows for the storage and tracking of internal and public documents and supports important features like versioning and comments for draft versions. It is connected to the digital directory through the CoManage authorization software.

5. **Investigation of Glance**: The team explored using Glance, a CERN-developed information management tool. However, due to its deep integration with CERN's infrastructure and some very experiment-specific modules, it was deemed unsuitable for direct implementation at BNL. Despite this, the insights gained from the Glance team were valuable and will guide the development of more adaptable tools.

Anticipated work for 2025

1. **Integration of Tools**: The primary goal for 2025 is to integrate the tools currently in development to provide a seamless user experience. This includes providing the necessary administrative features required by a complex international collaboration like ePIC. The roles and groups within the ePIC experiment will be implemented according to the ePIC organization, ensuring that the system accurately reflects the collaboration's structure and needs.

2. **Development of a Generic Workflow Engine**: A significant focus will be on developing a generic workflow engine (a la Glance) for handling both internal and public documents related to the experiment. This engine will manage the process of document release, from the draft level to final approval, including the review process (editorial boards, public meetings, etc…). The workflows will vary depending on the type of document, and the engine will be configurable to accommodate the ePIC experiment's structure and other organizational processes. The Workflow Engine will maintain references to external repository (Indico, events)

3. **Connection to Modern Communication Tools**: The workflow engine will also connect to modern tools like Discourse, an open-source discussion platform designed to facilitate online conversations in a structured, user-friendly way (the e-group feature of Glance). This integration can further enhance the collaborative capabilities of the EIC community.

4. **Use of LLM for Advanced Search**: We plan to integrate large language models (LLM) for advanced search capabilities on document content. This will significantly enhance users' ability to find relevant information quickly and accurately.

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