

Modeling CIViC Interpretations Using SEPIO

CIViC Curation Jamboree and
Hackathon Pitch

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The Scientific Evidence and Provenance Information Ontology

- SEPIO is a domain-agnostic ontology and data modeling framework
- Developed to provide rich, computable representations of scientific assertions and the **evidence** and **provenance** supporting them
- The core ontology defines a **generic and flexible model** that can be applied in any domain and **extended with domain-specific** features.
- This model is the foundation of the **larger framework** that supports the creation of **custom ontology-based schema** for specific applications called **SEPIO 'Profiles'**

CIViC-SEPIO Alignment: Why Now?

- SEPIO standard for evidence modeling is gaining adoption across basic, translational, and clinical efforts
 - Monarch Initiative (G2P associations)
 - ClinGen (Variant and Gene Curation)
 - NCATS Biomedical Data Translator (Gene, Disease, Drugs, . . .)
- Being used in data models being developed by the GA4GH to support exchange of variant annotations
 - Covers all somatic interpretation types captured in CIViC
 - Includes VICC/CIViC as a key Driver Projects and pilot adopters (Malachi, Alex, Arpad, others)
- Focus of ITCR grant to be submitted in November
 - Subha Madhavan (Georgetown), Obi/Malachi (CIViC), Larry Babb (ClinGen), (Matthew Brush (OHSU, SEPIO)

Hacking Goals

- Understand the SEPIO model and framework
- Understand CIViC curation workflow, data, and tools
- Identify specific use cases and benefits for SEPIO adoption in CIViC
- Plan path to adoption (modeling requirements, architecture modifications, curation tools, etc.)
- Explore potential for deeper curation of structured evidence using a SEPIO-CIViC data model

Specific Tasks and Deliverables

- Reciprocal tutorials about SEPIO Framework and CIViC models, tools, and workflows
- Evaluation of prepared examples of SEPIO-based CIViC data (complete/refine examples)
- Brainstorm/prioritize use cases and value propositions for SEPIO adoption
- Draft outline of SEPIO Profile(s) to support existing CIViC data and extended curation/use cases