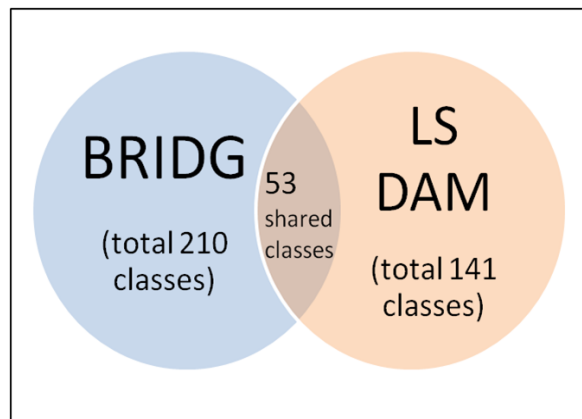# BRIDG Modeling

BRIDG LS DAM Integration Activities in 2013

The scope of the BRIDG model has now changed to encompass the larger translational research domain. It is no longer limited to just represent the clinical research domain. To support this larger scope of BRIDG, NCI recommended integrating the Life Sciences domain Analysis Model (LS DAM) with BRIDG. From a scientific perspective, unifying the models will more readily support use cases spanning the clinical and life sciences domains. Use cases spanning these domains are rapidly increasing, due to the tremendous advances being made in our ability to elucidate the genetic basis of disease. The goals of precision medicine require linking clinical and molecular semantics. The BRIDG Semantic Coordination Committee (SCC), the modeling team of BRIDG, is working closely with the LS DAM analyst and two of the ten subject matter experts of LS DAM from July - September, 2013 to perform the semantic integration of the two models (BRIDG and LS DAM).

This upcoming release will be the first version of BRIDG in support of the larger translational research scope of BRIDG. Building a translational model has been challenging as we try to align the semantics of the regulated domain of clinical research (original BRIDG scope) with the hypothesis-driven arena of life sciences. This hypotheses-driven arena for LS DAM had a broad scope and it covered many different areas of life sciences such as, Molecular Biology, Tissue biobanking, some aspects of Imaging and Nano technology and Lab information systems. BRIDG LS DAM Integration Proposal The NCI leadership tasked the BRIDG and LS DAM analysts to develop a white paper on how the BRIDG and LS DAM models could get integrated. The paper was reviewed and commented on by NCI and the BRIDG governance board and the task to integrate the two models was approved. The BRIDG LS DAM Integration Proposal documents the details of the rationale for the integration, approach to integration and known semantic differences between the two domains that need to be aligned in the new translational BRIDG model. The LS DAM model was built as a BRIDG-aware model in the life sciences domain. It leveraged and re-used the BRIDG classes as needed and used some of the same principles and guidelines of the BRIDG model. As a result, there were many common classes shared between the two models.

The figure below depicts the overlap of classes/semantics between BRIDG 3.0.2 and LS DAM 2.2.3.

Integration Status (as of March 27, 2015)

The LS DAM 2.2.3 Plus model semantics have been integrated with the BRIDG model and published as part of BRIDG release 4.0.