

LexBIG

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NCI EVS is the lead adopter site for the open source public domain terminology server LexBIG, developed by the Mayo Clinic as part of the caBIG® program. Effective with the release of EVS/caCORE 4.0, LexBIG has provided the base terminology server infrastructure for EVS.

LexBIG is based on the [LexGrid Data Model](#), Mayo's standard data model for storage of controlled vocabularies and ontologies. The LexGrid Model defines how vocabularies should be formatted and represented programmatically, and is intended to be flexible enough to accurately represent a wide variety of vocabularies and other lexically-based resources. The model also defines several different server storage mechanism (for example, relational database, LDAP) and an XML format. This model provides the core representation for all data managed and retrieved through the LexBIG system, and is rich enough to represent vocabularies provided in numerous source formats including:

- [Open Biomedical Ontologies](#) (OBO)
- [Web Ontology Language](#) (OWL)
- Unified Medical Language System (UMLS)
- [Rich Release Format](#) (RRF)

This common model is a critical component of LexBIG. Once disparate vocabulary information can be represented in a standardized model, it becomes possible to build common repositories to store vocabulary content and to build common programming interfaces and tools to access and manipulate that content.

LexBIG has three major components:

- Service Management tools to load, index, and manage vocabulary content for the vocabulary server
- An API providing Java interfaces to various functions including lexical queries, graph representation and traversal, and NCI change event history
- A Graphical User Interface providing access to service management and restricted API functions

The LexBIG API enables querying information stored in the LexGrid model. NCI and caBIG® are not alone in adopting [LexGrid](#). An essentially identical API called LexBio has been developed for the [National Center for Biomedical Ontologies](#) (NCBO). NCI EVS adopted a variant of NCBO's [BioPortal](#) as the terminology browser for EVS/caCORE 4.x. This variant was the NCI BioPortal and has been replaced by the [NCI Term Browser](#).