**Integrated Bio Information Search (IBIS)**

Fast context based searching and filtering.

Integrated Search and Filter Service allows context based biological searches. Here IBIS, a new front end to the biological databases at NCBI, is shown searching across 4 different repositories: a Gene Database, MIMI for Interactions, Gene to Mesh mapping, and a Database of Gene Tagging of PubMed Abstracts. IBIS and the Integrated Search and Filter Service allow users to easily zero in on items of interest by applying filters to the current search context.

**Hive Integration (External Tool Services)**

Integration with other best of breed tools and services.

External Tool Services allows for integration of NCBI data and services with other organizations. Here integration with HIVE is shown. NCBI and I2B2 are working together to integrate the NCBI TagMapper service with HIVE generated ICD9 codes: the diagnostic category is mapped to a list of genes which can be saved (via the Application Data Sharing Service). Shown in the background, the save gene list can be used in other NCBI tools (shown here: a gene-list query to the MIMI Web).

**Application Data Sharing Service**

Easy data sharing across applications.

Application Data Sharing Service (described in the poster entitled “Cross Application Integration Through A Shared Database”) allows users to share data across multiple applications. A user can choose the best tool for their research and easily move data between tools. This eliminates cut and paste, and allows for saving of contextual results for further exploration. Shown here are the extensions to Gene2Mesh, and MimiWeb to interface with this service. PubOnto and PubAnatomy are two other tools (shown in the companion poster) that also use this service.

Data sets are archived, annotated, and versioned. Currently we are capturing and transporting datasets that consist of combinations of these data types: Gene, Publication, Rank-Ordering Index, Mesh Term, Fisher's Exact Test Value (used in ranking items with respect to a known ‘background’ set of data).

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