

**GDPC: THE GENOMIC DIVERSITY AND PHENOTYPE CONNECTION:
MIDDLEWARE FOR GENOMIC DIVERSITY AND PHENOTYPIC DATA**

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Databases and software tools that integrate information on genomic diversity with phenotypic data provide an opportunity to help bridge genomics and plant breeding. GDPC provides a middleware interface that gives access to data on genomic diversity (SNPs, RFLP, AFLP, etc.) and phenotypic data that may be collected in field, genetic, or physiological experiments.

The goal of this project is to simplify access to our data (i.e. loci, taxi, experiments, phenotypes, etc.) by creating a middle layer between the software tools and the data itself. This middleware separates the tools from the data format, allowing developers to concentrate on the tools purpose. Software tools request data from the GDPC interface in a standardized format. Since the middleware manages the interface between the tools and the data format, the tools, once designed, are able to work with any number of databases. GDPC also provides a way for the database developers to write connections for their database, allowing any given database to work automatically with software tools supporting the GDPC interface. This would allow tools to take advantage of new databases (with supporting connections) without additional software development. Finally, interactions with the databases would be separated from the analysis and presentation, while allowing software tools to work with larger sets of genomic and phenotypic data.

The early release version of GDPC is available at <http://www.maizegenetics.net>.