



GenePilot™: The Next Step in MicroArray Analysis

White Paper

GenePilot™ is the new tool in the field of MicroArray Analysis, offering an integrated and sophisticated analysis suite which is more intuitive to use, uses less memory, runs on more different platforms and costs far less than any other competing product in the market today.

Why Choose GenePilot?

*Cost-effective solution
to your specific needs!*

GenePilot™ provides a cost-effective and specific solution to the needs of many companies working with MicroArrays. It has been carefully evolved to provide the most widely used and useful features that can best help a Biologist do their work. It will require far less memory than other products of this type and offers some very exciting features which are not found anywhere else!

Addressing Your Specific Needs!

*Your specific needs
can be addressed with
cost-effective
customizations of
GenePilot™*

We recognize the fact that almost every lab working with MicroArray technology have their own specific needs in the form of:

- ◆ Different types of data
- ◆ Different methods of storing their data.
- ◆ Different criteria for processing their data.
- ◆ Different needs in the analysis that they wish to execute on their data.
- ◆ Different needs in data visualization.

GenePilot™ is designed from the ground up to be easily adapted to the specific needs of each client. Combining this flexible architecture and a small company environment, GenePilot can be tailored to each company's specific needs at a cost far below that of any competing product. This can be for data importation, data preprocessing, data filtering, a new analysis program or specific display and result export needs. These solutions can be expedited and evolved to fit each client's needs.

Tools that you can use.

Class color-coded data columns provide an effortless means for seeing class distribution

Very sophisticated Gene Ontology display simplifies process of determining Gene Ontologies of similar rows.

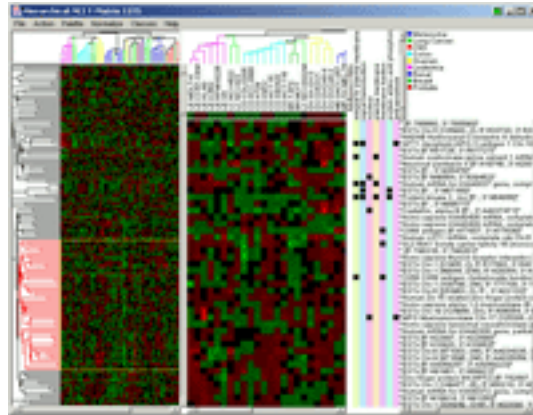
Automatic resizing of components allow adaptation to larger or double monitors.

Analytic-specific ordering of display rows allow for the most useful display of result information.

The heatmap colors can be changed and the rows can be normalized (Color-coding for each row determined by Min & Max for each row)..

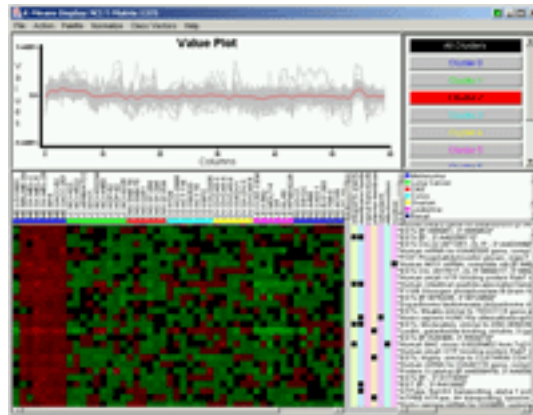
GenePilot™ provides a powerful set of tools which can be combined to do comprehensive analysis on MicroArrays with very advanced result displays:

Hierarchical Clustering



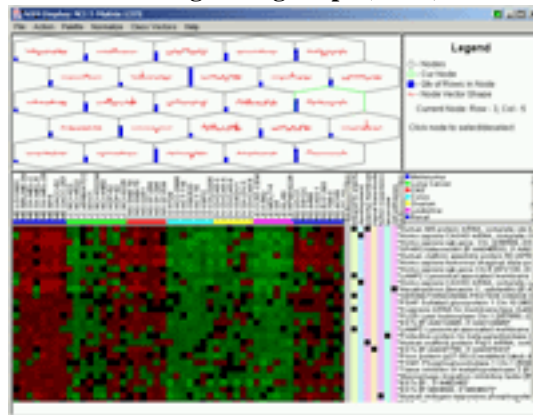
Hierarchical Clustering is a two-way (independent) bottom-up clustering method which provides a very good first-look at the data.

K-Means clustering



K-Means clustering is a top-down clustering method which separates all rows into a predetermined number of clusters.

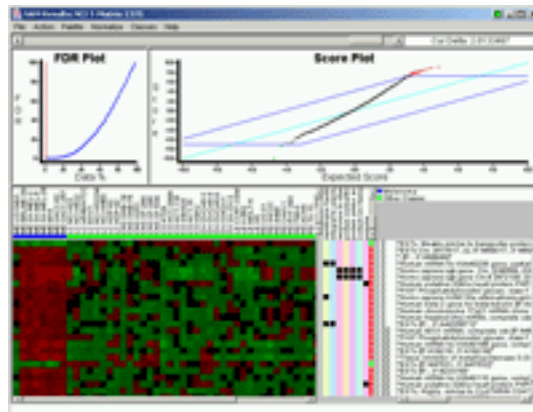
Self-Organizing Maps (SOM)



SOM is a top-down clustering method that utilizes the concept of neighborhoods, with similar vector shapes congregating in 'neighborhood' regions. It is more complex than K-Means but offers more powerful results once learned

Columns are ordered by classification when available..

Significant Analysis of Microarrays (Stanford)



SAM is a Supervised analysis tool and the most advanced tool in GenePilot. It will find the most significant rows according to the selected vector.

Features You Want!

The features for GenePilot were carefully selected to maximize it's usefulness without making it too complex for the common user.

Easily export your data into a spreadsheet for closer view or manipulation!

Copy to Clipboard (or File)

GenePilot™ provides a sophisticated Copy interface which is unique in it's function within each Analytic Result. With multiple types of row data that can be stored, the user is given an interface to tailor what gets copied to the Clipboard (or File) to their needs.

Generate compelling presentations!

Save to Bitmap

GenePilot™ provides a flexible means to save information in the Analytic Results to Bitmaps so that they can be used for publishing or presentations.

Dataset creation from Analytic results offers a quick and simple way to narrow down your Dataset rows!

New Dataset Creation from Analytic Results

This feature is currently unique to GenePilot™ and allows for the effortless creation of new Datasets by utilizing the results from an Analytic. As an example, the row from a group of nodes in SOM can be used to define the rows which will make up a new Dataset. Or, in a more powerful example, an maximum FDR can be used to determine the Significant rows to select from the results in SAM across all classes or a combination of several classes (i.e. create a dataset with the significant Genes with an FDR less than 5 for the Cancer classes of Breast Cancer and Melanoma).

Import Gene Ontology information quickly and efficiently!

A typical new user can feel comfortable in just a few minutes and be doing useful work in less than an hour.

The main tutorial can be completed in about 2 hours and will bring most users up to full speed!

Selection and ordering of Row Information

With over 13 types of row information fields to choose from, the information displayed next to each Heatmap row can be tailored to each users needs. The field and the position of each field can be specified.

Easy importation of additional Gene Information

GenePilot™ offers a quick and easy method to import data from Stanford Source if the original data contained a column of data that can be used to query the Stanford Source Database. If available, as many as 12 columns of information can be imported including Gene Ontology information.

Gene Information Page with Gene Ontology Matrix

Topped by a Gene Ontology Matrix, the Gene Information Page displays all loaded information about each Gene with customizable hot-links to additional sources of information.

Very Intuitive And Easy To Learn

GenePilot™ was designed by a seasoned profession with years of multi-media experience. This experience is reflected in an intuitive interface that is both easy to learn yet powerful in features.

Individual Result Windows

GenePilot™ utilizes individual windows for each Analytic Result, providing an interface for easy side-by-side comparison of results.

Comprehensive Tutorials

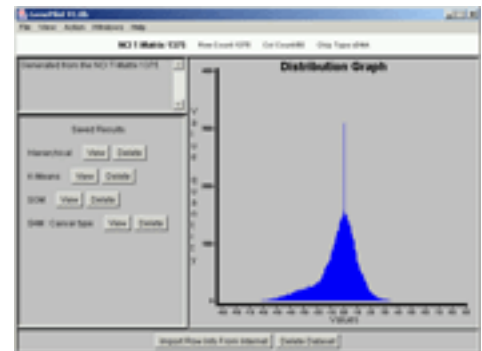
Comprehensive tutorials utilizing very interesting (NCI T-Matrix) sample data provide a quick means to learn and understand the many features and capabilities of GenePilot™.

Consistent Look and Feel

Each result window has a consistent look and feel while adding the specific features to each to enhance the power of each individual tool.

Very Comprehensive User Manual

A very comprehensive user manual has been developed to help users get the most out of GenePilot™.



Comprehensive Help Pages

Help is available at the click of a button or selection of a menu item for all of GenePilot™ interfaces.

Available Services

GenePilot™ is available in a variety of contracts and can aid your company's goals in a variety of ways.

Analysis tool

GenePilot™ is available for free to Academics and at a very reasonable price for Companies.

Bundling Option

GenePilot™ is designed with potential bundling options in mind. For companies which manufacture MicroArray Chips, GenePilot™ offers a perfect bundling solution for your clients with reasonable rates to add customization for automatic recognition of your company chips and importation of prepared row information. This would provide significant utility to the use of your chips!

Import customizations

GenePilot™ can be customized at a very reasonable rate to automatically recognize your company's specific data formats to simplify the process of data importation into GenePilot™.

Custom Analytics

In most cases a new analysis program which meets your specific needs can be added into GenePilot™ in less than a week and at a price far below the costs of doing the work in-house. These new programs can have all of the same features (i.e. save to bitmap, create sub-Dataset, copy-to-clip/file, etc.) as the rest of the Analytic Results.

About TG Services, Inc.

TG Services, Inc. has been providing cutting-edge software solutions for over 5 years. Founded by an award-winning Multimedia veteran with 12 years of development experience and over 10 commercial products, TG Services, Inc. delivers expertise across multiple platforms and many programming languages. With many satisfied clients including IBM, Sega, McGraw-Hill and many more, TG Services has established itself as a proven solution provider for a wide variety of software. TG Services, Inc. is a privately held Company.