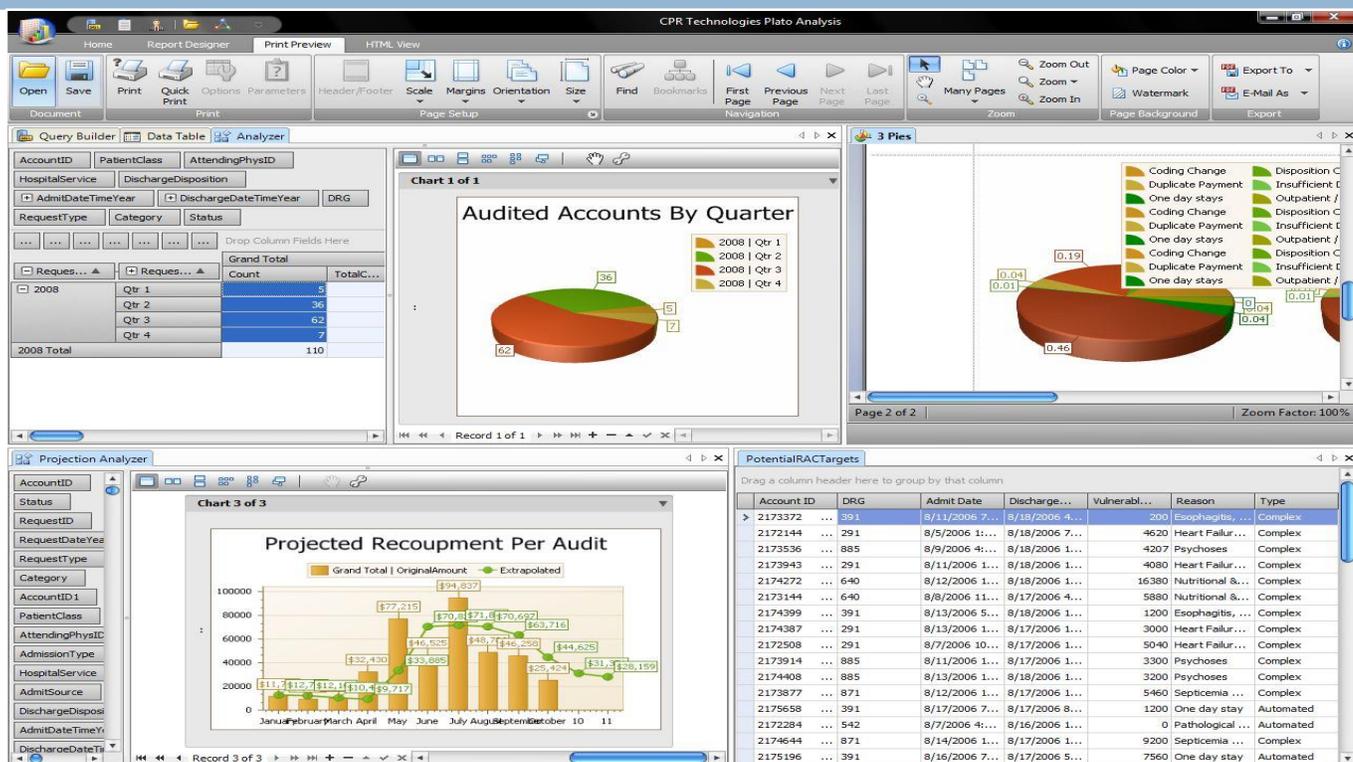




2015

Plato Analysis



Plato Analysis presents to the user a comprehensive solution and consolidation of tools that are used in doing data mining and analysis. Embedded within are advanced Query Builders able to aggregate data that spans Multiple Database targets, sophisticated data tables, analyzers and graphs, and a Report Writer rivaling capabilities of the higher end report writers. Artificial Intelligence tools empower the user to view data in a heretofore unprecedented way. Couple these with dynamic charts and gauges for the desktop and you most certainly have all you need to get started in analyzing your data right away.

If you require additional help or expertise, you may choose to call one of our contracted consultants who are fully trained and capable with this remarkable tool.

For further information on how to obtain Plato Analysis, please visit our web site at www.cpr-tech.com or contact sales at the telephone number below or email sales@cpr-tech.com.

CPR Technologies

Plato Analysis 2015

DATA IN - INSIGHT OUT

A comprehensive visual tool for the aggregation and analysis of healthcare data

Purpose and benefits

In this world of audits and surveys by anyone and everyone, the healthcare industry is left with few tools to collect the pertinent data needed to address the audit or survey. Most facilities struggle with lengthy and costly system integrations to get at their data, or simply try to get by with creating something to work the data themselves. Usually, this involves the facility's Information Systems' time and expense as well as the time and expense associated with the vendor whose software hosts the desired data. Commonly used tools such as Microsoft's Excel or Access have functional limits and rarely do the job to the full extent of what is needed.

After listening to frustrated customers tell us of the limitations they have with current tools, CPR Technologies presents "Plato Analysis", a unique aggregation and analytical tool for the analysis of healthcare data. The Healthcare Industry has always had the need to bring together data from multiple systems to address challenges in making informed decisions. Plato Analysis provides a powerful solution to enable users to meet those challenges. Plato Analysis is designed such that it provides a simplistic interface for the average user in that they can mine databases often with little or no technical assistance. Make no mistake, however. Plato Analysis is able to meet the rigors of the sophisticated decision support person as well.

Time after time we hear pundits telling us to data mine, data mine, data mine. Whether the data is hosted by high end SQL Database Management Systems, e.g. Microsoft SQL Server, Oracle, IBM DB2, MySQL, etc. or by file based databases such as Microsoft Access, Excel or Text files, Plato Analysis has you covered. Using an intuitive user interface, users can visually define the relationships between the databases and with a single mouse click, proceed to analyze it. Simply drawing a line between the databases' equivalent fields is enough for Plato Analysis to integrate the results into a single useable database for data mining.

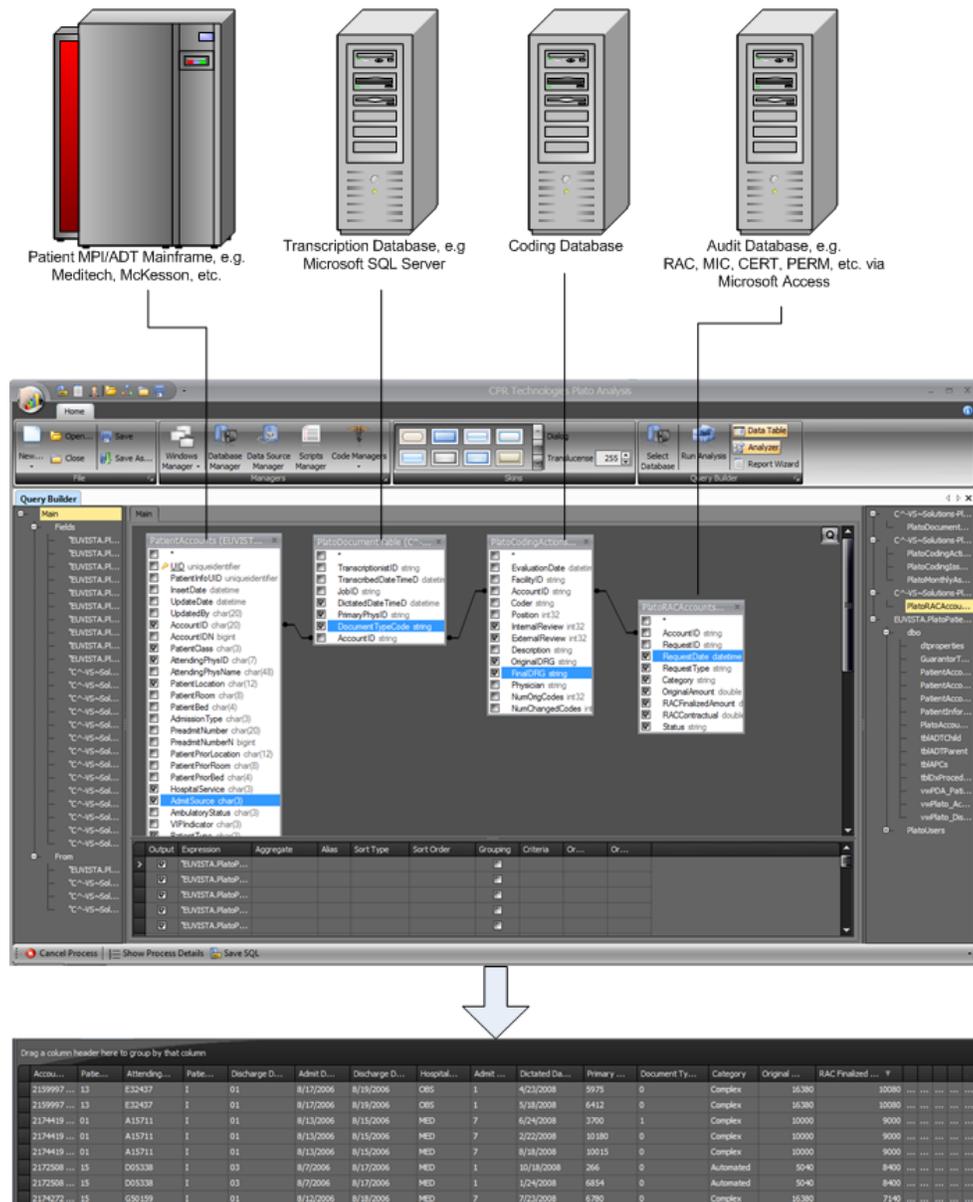
With features that include a powerful suite of analyzers (dynamic views of data), graphs, reporting tools, and more, Plato Analysis provides for all the results and views you could ask for. Additionally, Desktop Charts and Gauges that interoperate with real time data, changing dynamically, are easily designed and built.

How does it work?

Boasting a proprietary and extensible Relational SQL Engine developed and fine tuned over the course of 10+ years, Plato Analysis brings this technology to bear on the main problem facing Healthcare today that is, getting at the collective value present in data residing in different computer systems. The time has now arrived when the user can retrieve this data and derive valuable insight analyzing a single view of complex data, where, in essence, the whole is greater than the sum of its parts.

Imagine the following scenario. Your department needs to analyze the recoupment paid out to Medicare for a given physician. The nature of this type of analysis would include reviewing data found in the MPI system (for Patient Account Information), a Transcription Database (where the substantiating documentation resides), a Coding Database (where the final billing codes reside) and finally an Audit Results database (where the claims data resides).

Plato Analysis solves this problem by assembling the various database tables found in all the desired systems and presenting them as if they are all part of one database. The user can then visually link the tables together by simply dragging the mouse from a field in one table to a field in another table to define the relationship, as in the figure below.



Looking at the previous diagram, it becomes clear that working with multiple databases is significantly simplified by the Plato Analysis Query Builder. Simply select the databases you want to work with, link your tables, select the fields to retrieve, and then click 'Run Analysis'. All data will be retrieved, aggregated and loaded into sophisticated analyzers and data tables for your subsequent analysis.



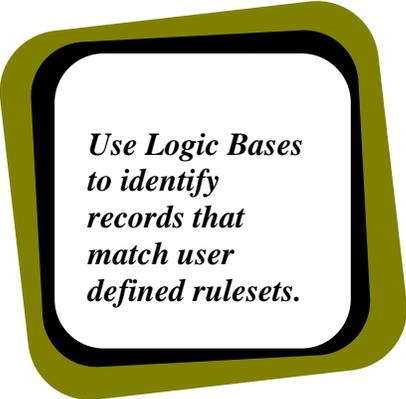
Select databases and fields, link tables, then click 'Run Analysis'. Insight out.

Data Tables and Logic Bases

A Data Table simply holds the results of your query. The data in a Data Table may then be used in a variety of ways, including exporting the data, sending the data to the Plato Analysis Report Writer to create a presentation ready report, or

applying what is known as a Logic Base against the data.

Plato Analysis supports the concept of hot swappable Logic Bases. A Logic Base represents a series of rules that retrieved data is subjected to in order to identify records matching said rules. Logic Bases can be created to meet the requirements of any retroactive and proactive queried data. Examples of Logic Bases distributed with Plato Analysis include, but are not limited to, RAC and MIC Target Logic Bases. Other uses of Logic Bases may be to define what might be overpayments based on Charge Data and Length of Stays, or to determine what records meet the criteria for focus reviews, e.g. Account records for a given Physician for a given DRG where Medical Necessity was not met. Logic Bases are open ended and can contain any rules that may be applied to any data.



Use Logic Bases to identify records that match user defined rulesets.

Analyzers and Graphs

Analyzers and Graphs are what give Plato Analysis its distinctive ease of use without sacrificing functionality and sophisticated analysis. You may use an analyzer to slice and dice data in a way that is just not possible with traditional pivot tables. With the tight integration of the Plato Analysis charting components, creating stunning presentation ready charts is as simple as highlighting the desired data; Plato Analysis does the rest.

The following figures demonstrate the tight integration between Analyzers and Charts.

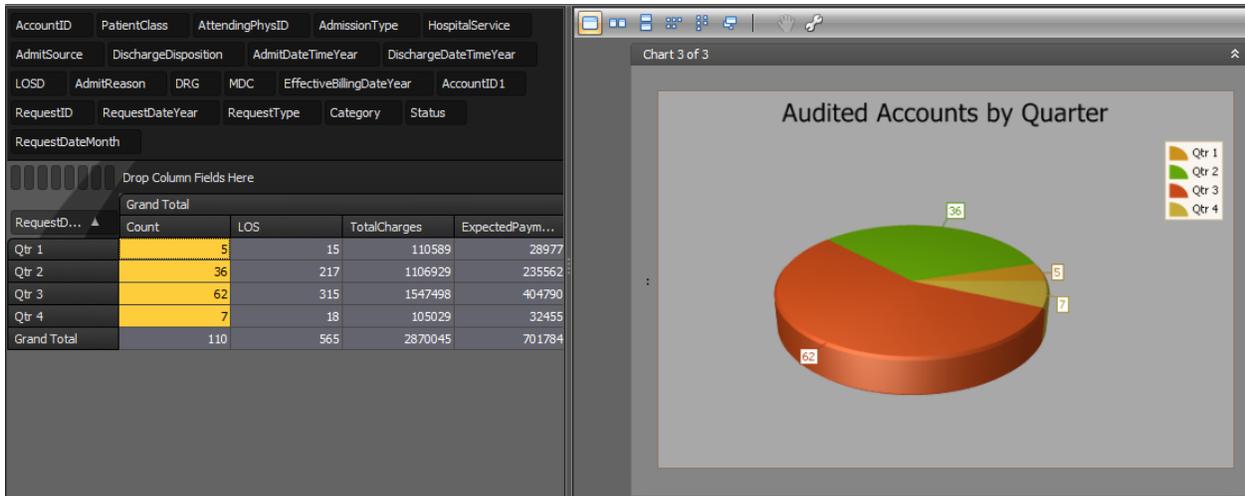


Figure: Pie Chart showing the count per quarter of accounts reviewed. Simply dragging the mouse over the desired data automatically generates the graph.

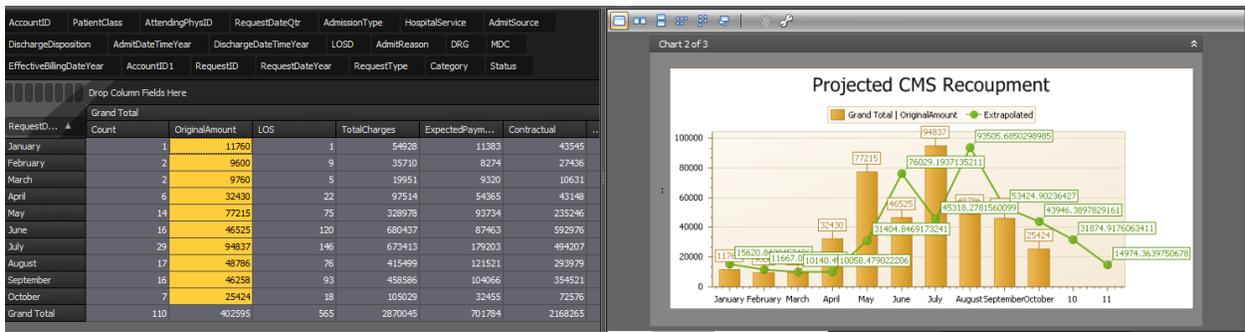


Figure: Bar and Line Chart showing the historical data for Original Charges, with a Projection for 2 months following the historical data. The Bars were generated automatically via the highlighted data; the projection line is generated via the Projection Button (not seen) on the main toolbar.

Report Writing

In addition to the data tables, analyzers, and charts, Plato Analysis boasts a very powerful but easy to use Report Writer. The Report Writer is very tightly integrated with the other components of Plato Analysis and provides a canvas under which the user can take the results of a query and create presentation ready reports for distribution. The Report Writer also can operate in 'standalone mode', which is a way of using the Report Writer with data not generated by a Plato Analysis query. For example, if you want to generate a report based on a data source provided to you, you may simply link to that data source directly from the Report

Customize your report and Print Preview your report until you get it just right.

Writer. Once the data has been linked, you may perform any report functions as if the data came directly from a Plato Analysis query. Additionally, many other visual components, e.g. Lines, Labels, Shapes, Tables, Pivot Grids, Sub Reports, and more, are available to the user to further customize the report. Choose Print Preview and you have automatic feedback on what the report will look like. To illustrate the point, refer to the figures below.

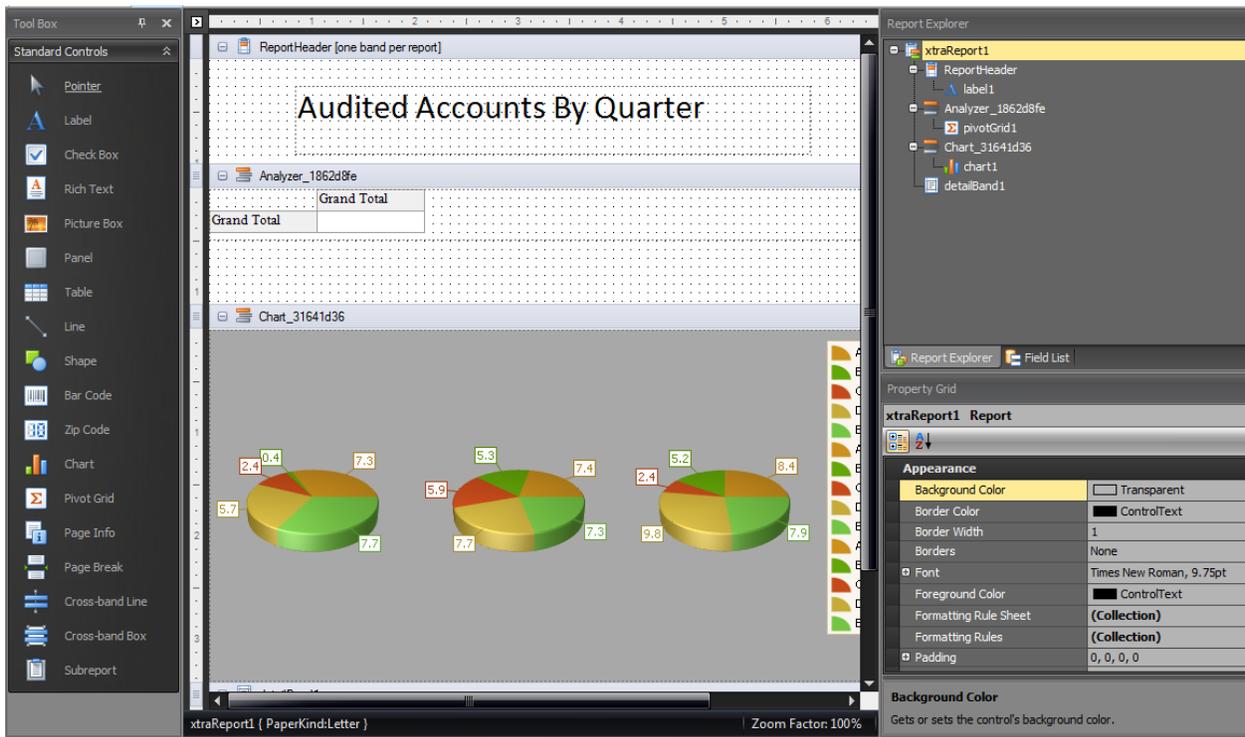


Figure: Report Designer displaying data received from a Plato Analysis analyzer and pie chart. Note on the left the various user interface elements that may be used to customize the report.

Simply adjust the report objects, hit Print Preview, and get automatic feedback on the report design. To adjust the report to the desired look, simply click the Report Designer tab to be placed back into the Report Designer; click Print Preview to review the new changes, and so on.

Audited Accounts By Quarter

RequestDateQtr	Grand Total	
	Count	TotalCharges
1	5	110589
2	36	1106929
3	62	1547498
4	7	105029
Grand Total	110	2870045

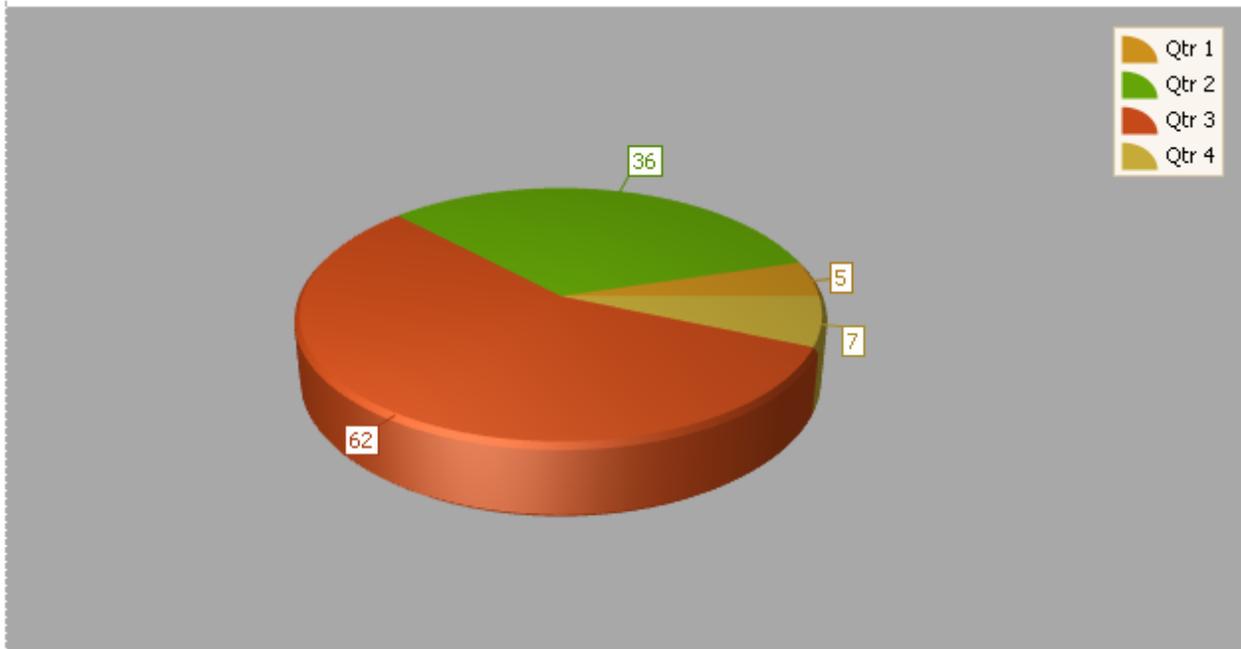


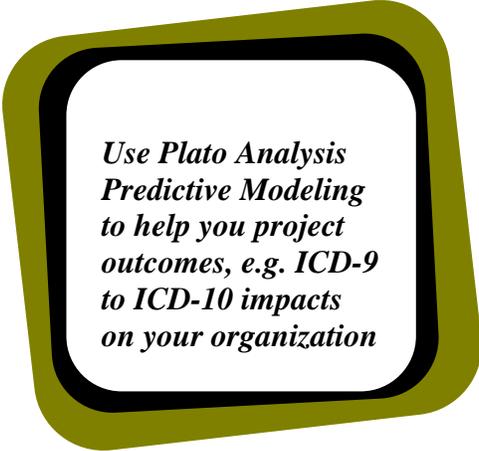
Figure: The immediate feedback provided by the Report Writer. Displayed is a simple Pivot Grid and Pie Chart displaying the audit counts for each Quarter. To further customize the report; simply click the Report Designer tab to make your modifications.

The Plato Analysis Report Writer rivals well known report writers in their capability but exceeds them in its simplicity of use.

Projections and playing What If...

Embedded within Plato Analysis are Artificial Intelligence (AI) Tools to aid in projections based on historical data. Three categories of Artificial Intelligence are employed; Neural Networks, Genetic Algorithms, and Fuzzy Logic. Do not be concerned about the fancy names; each tool serves a purpose and Plato Analysis presents the tools in a unique fashion allowing the user to employ them in real world applications.

Neural Networks are practically used, among other things, in learning from historical data and projecting metrics past the timeline of the trend. For example, a user may have 24 months of historical recoupment data including up to the present time; the user can then project possible recoupment in the future. Genetic Algorithms are used to tune the neuralnetwork for sophisticated problems that traditionally evade standard algorithms. Example uses of Genetic Algorithm tuned neural networks include a projection of future case mix based on present day data. The user may want to project this case mix by taking into account current case mix, DRG volumes, and historical admissions. In this instance, the user can ask the system how many DRG Codes of a specific type would be needed to yield a case mix number; this could then be used to project staffing requirements.



*Use Plato Analysis
Predictive Modeling
to help you project
outcomes, e.g. ICD-9
to ICD-10 impacts
on your organization*

Summary

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