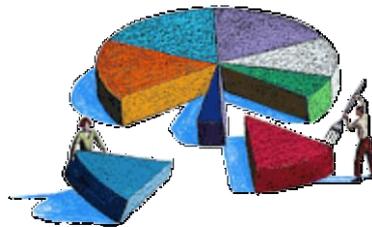# KEG Informatics

Data Extraction, Manipulation, Analysis, Display and Export

Product Overview

Pre-Release

Diaxon Ltd.
DEVX Application Suite

October 2009

Diaxon KEG Informatics – Product Overview

KEG is a new easy-to-use product that enables you to extract, manipulate, analyse, display and export your data held in databases, spreadsheets and other common data sources.

If you want to get data from a database (e.g. MS Access or SQL Server), you don't need to know anything about SQL (the most common database querying language) and if you want to use it with spreadsheets you don't need to know anything about macros, complicated cell formulae and other more expert areas of spreadsheet manipulation. KEG is an end-user application that requires very little mastering and has a logical and easy to use command language structure that enables you to extract, manipulate and display your data in series of simple steps. It can be used for a simple 'look', 'graph' and 'print' exercise through to conventionally tough data manipulations.

Keg allows you to:

- Access all or part of dataset from a range of sources and common formats
- Clean it (e.g. remove duplicates, strip out the bits you don't want to use)
- Manipulate it – e.g. roll it up (group) by category – e.g. total sales by date, product, region etc.
- Display it – a graph e.g. pie chart, histogram.
- Drill-down – e.g. select a particular component – area, date, product etc.
- Export it – e.g. write the refined output to a new spreadsheet

Your scripts can be saved and run as often as you like (e.g. a daily sales report). Unlike spreadsheets, there is no need to create multiple versions or cross-link sources. Keg script files are easy to maintain and distribute.

You can 'compile' your scripts and distribute very compact KEG rtx file 'executable' for others to use (e.g. in an email) – a bit like a pdf file.

Quite simply KEG gives anyone who needs to process and present structured information a very powerful tool to deliver results for very little investment in time and learning. It fills the gap between data explorers, data mining tools and data manipulation techniques (SQL, spreadsheets). It's inexpensive and is installed on your PC in seconds.

The KEG 'script developer' panel is used much like a calculator with simple buttons to fetch, save and manipulate data (e.g. create new and delete old columns)

For more experienced users with more demanding analytical requirements KEG can be used to perform complex functions in a very structured and transparent way. It has a number of built in examples and templates ready to be adapted for users' specific needs.

For advanced corporate needs Diaxon can provide training and other services – including provision of bespoke functions in a timely and cost effective manner.

Key Functions

- Read all / part of data source into the KEG worksheet (comprising rows and columns)
- Filter on components wanted
- Manipulate (see commands)
- Move / save working sets between the 'worksheet' and 'stored sheet'
- Dialogue – allow users to input choose query values
- Present results (graphs, charts)
- Export finalised data

## KEG Main Command Set – some examples

By combining these powerful commands into a script, you can quickly create whole applications in just minutes – You will completely avoid the mental gymnastics needed for conventional database querying and setting complex spreadsheet formulae.

| Command	Description
ADD	Add columns or rows to the worksheet
ALTER	Alter columns (position, name, content)
AREA	Specify source data area in a db (table) or Spreadsheet (Worksheet)
CHOICE (or CH)	Choose all or specified columns to use from a source
COL	Column command – contains multiple options e.g. COL 5 Volume = COL 1 * COL 2 * COL 3
DEDUP	Quickly identify & remove duplicates e.g. customer tables
DEFINE	Define the characteristics of a new column (text, numeric, date)
DELETE	Delete all or marked / specified rows or columns
DISPLAY	Display the current contents of the working sheet or stored sheet
EXPORT	Save your data in any format – leverage your favourite tools
FILTER	Filter input data by column criteria (e.g. Date of birth < 31/12/1959)
FREQUENCY	Create frequency distribution chart from data (e.g. ages distribution)
GRAPH	Display your data graphically with one simple command
GROUP	Roll-up and transform your data the way you want it and produce counts, totals and averages.
IF	Execute script lines & phrases conditionally (on values, input parameters)
IMPORT	Import data into KEG (e.g. a csv file or 'flat' file)
KEEP	Keep rows with your criteria selected with MARK and remove all other rows (also see REMOVE)
LOAD	Loads data from a predetermined source (e.g. where source needs to be hidden)
MAP	Fetches and creates the worksheet from a data source
MARK	'Marks' data rows that match your criteria E.g. MARK COL 6 postcode = LEFT SN5 (marks all rows where the postcode starts SN5). Follow it with the KEEP or REMOVE command
MERGE	Merges data in the worksheet dataset with the stored sheet data
REMOVE	Remove all rows not marked with the MARK command – leaving just those with the marked criteria.
RESTORE	Moves the stored worksheet into the worksheet
SCATTER	Produce a scatter plot of data in one column against another (X Y plot)
SCREEN	Read and display messages and input data on the screen / keyboard
SET	Sets a constant value in a column
SORT	Sort data in the way you want: ascending or descending order.
STATS	Create quick stats summary of your data
STORE	Stores contents of the worksheet in the Stored sheet (see also RESTORE)
SYSTEM	Pause, restart, display data values, the dataset during a script run
TRANSPOSE	Convert chosen row values into columns (like pivot tables)

Real-life Example

This following sequence demonstrates a script that reads data from a typical remote (web-based) contacts database. Some of the contacts have been given a profile – i.e. have had non-standard attributes added. Here we want to look at a particular account, see what characteristics have been added, choose just one and plot a graph of the results:

1) The KEG developer panel showing some of the script
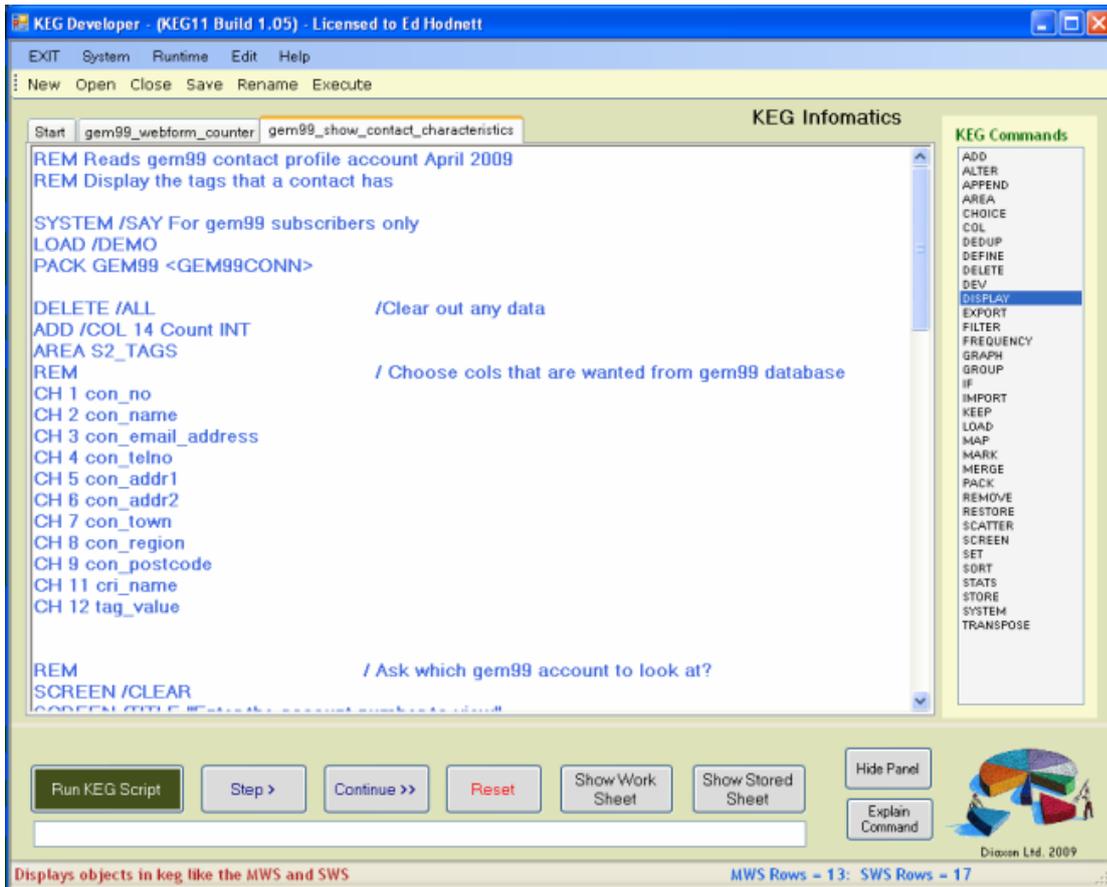
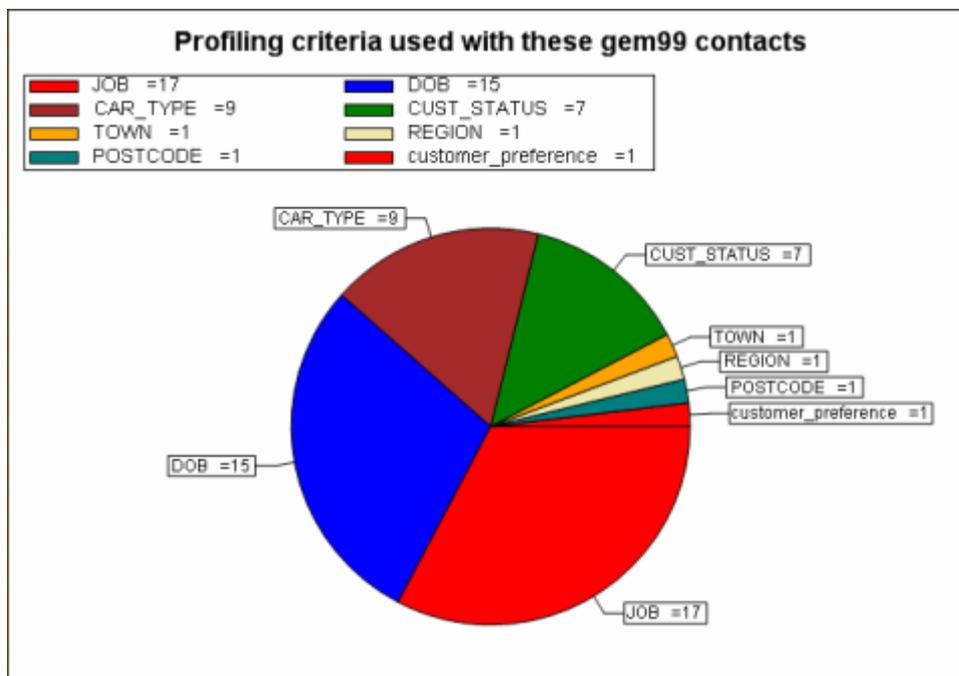2) When we click [Run KEG Script] it asks for the account to look at
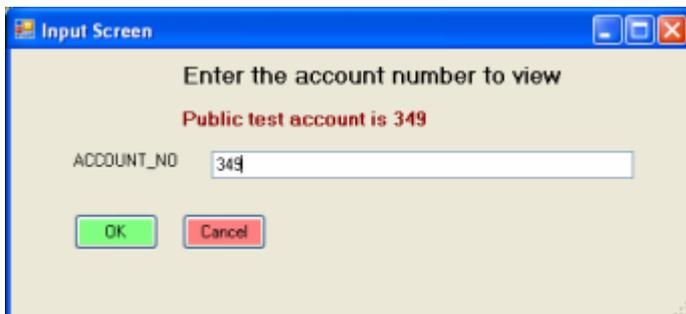
3) The data shown in the worksheet (NB. can be copied & pasted into a conventional spreadsheet)
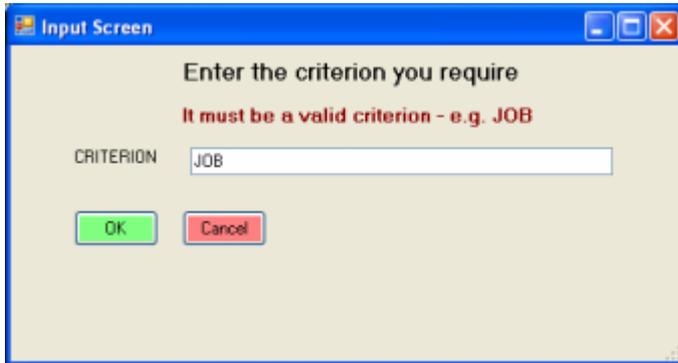
	CON_NO	CON_NAME	CON_EMAIL_ADD	CON_TELNO	CON_ADDR1	CON_ADDR2	CON_TOWN	CO
▶	559	John Anders	john@agent9.com				Leominster	He
	561	Harold Atkins	HA22@aol.com	01234 456023	3 The Mall		Ludlow	Sh
	574	Nancy Barton	NB@lovelost.co.uk	0456213091	Grassley Farm	Longings Lane	Bromyard	He
	575	Brian Canning	BC33@hotmail.c...		22 Finches Drive	Bodenham	Wrexham	
	579	Fred James	fred@ff.com	09845709387	4 The Meadway	Bullingham	Hereford	La
	562	Mike Rodgers	MikeR@sld.co.uk	0988776576	33 James View	Kettleworth	Stafford	Sta
	563	Peter Marley	pete@marley24.c...	08776537686	Larkrise	The Lane	Candleford	Wi
	564	Mary Shelley	MS@monsters.net	0976764377	14 Castle View	Frankelworth	Perth	Pe
	565	Sara Gibbs	sara123@gmail.c...	01237657645	Flat 21a	The Boulevard	St Austell	Co
	566	Michael Rice	mr@mr.com	0134578632	22 The Larches	Fetcham	Leatherhead	Su
	567	Amanda Lewis	amanda@woolw...	0123567231	23 Marches Ave...	Little Frampton	Framlingham	We
	568	Paul R Smith	PRSmith@nestle...		4 The Meadows	Lea Avenue	Seaford	Lin
	569	Jack Janison	Jack234@gmail...	07751987345	The Nest	Thornbury Street	Worthing	We
	570	Linda Martin	LindaM9@hotmai...	052642744654	34 The Crescent	Royal Mile	Edinburgh	Ed
	571	Roger McFee	Rmcfee@soton.a...		22 Roundhouse ...	Little Wendings	Southampton	Ha
	572	Janice Fisher	JanFisher@pemb...		41a Pontoon Street	St Clements	Oxford	Ox
	573	Steven Crawford	Scraford@saltarn...	01256347941	The Maltings	Saltash Way	Warwick	W

REFINED DATA — EXIT SYSTEM

Messages appear here!

4) KEG groups on the stored criteria to produce counts and then creates a pie chart

Profiling criteria used with these gem99 contacts

JOB =17
CAR_TYPE =9
TOWN =1
POSTCODE =1
DOB =15
CUST_STATUS =7
REGION =1
customer_preference =1

5) KEG now asks which criteria we want to look at

6) ….and produces another pie chart this time showing the numbers of each kind of job registered for the account chosen.
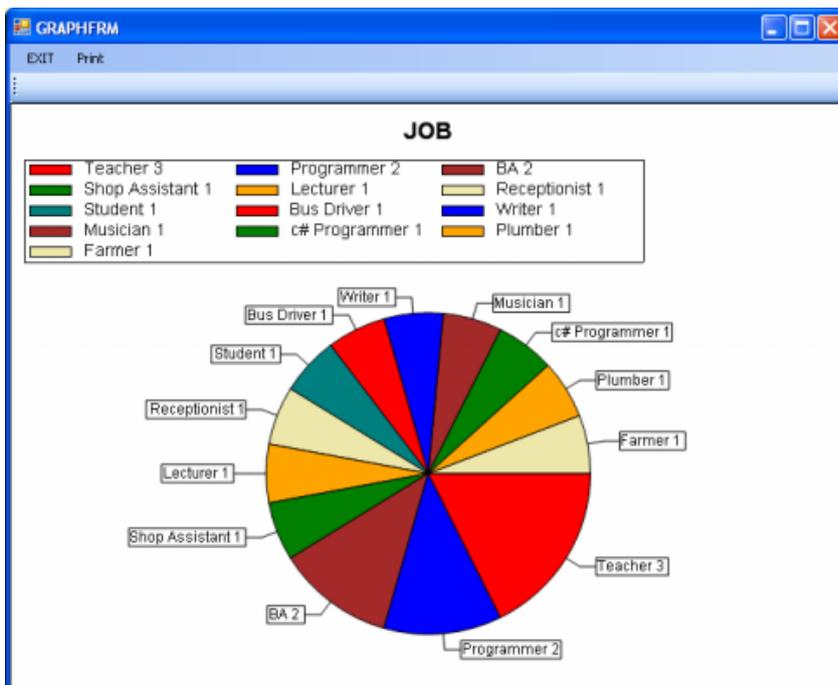
This simple sequence demonstrates some of the potential of KEG

- Fetch data from a web-based database (SQL server in this case)
- Filtering on a particular attribute (an account number)
- Roll-up the data to show counts of criteria stored on the db
- Display in graphical form
- Dialogue with the user – what data do you want to look at?
- Plot the 'drill-down' results.

The script could be extended indefinitely – e.g. to return to step 5). It could be used to further manipulate the data to produce an export contact list (e.g. for a particular job type) and then exported to a spreadsheet. In all the script took only 20mins to create.

Finally, the script was 'compiled' and turned into a small (<2kb) executable file that can be emailed to a third party, who if had agreed access rights, could run the script and see the same results – without entering the full KEG developer application.

Uses of KEG

If you are an individual or organisation who regularly uses spreadsheets and databases and need to manipulate and present data we think you could greatly benefit from KEG, its key advantages include:

- Simple to use and quick to learn
- Save yourself TIME and bother getting the data the way you want it
- Build more and more powerful KEG scripts as your KEG skills grow
- Simple high level commands performs everyday but tough data manipulation problems with ease
- No resorting to complex 'programming' in spreadsheets or databases
- Simple desktop installation
- Super efficient, small footprint
- Accesses many kinds of data sources
- End users can develop their own solutions without reference to IT experts
- Distribute compact 'executable' reusable reports / extracts / data manipulations through pdf-like executable files.
- Inexpensive option for some data-mining and reporting products
- Diaxon can extend command set as you require

For more information on KEG please contact us via our website www.diaxon.com

End of Document

© Diaxon (UK) Ltd 2009