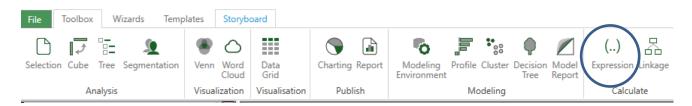
## dun & bradstreet

## Market Insight How to Use The GeoDist Expression (Single Site Radius Searches)

The GeoDist Expression can be used to do a radius search around ONE latitude/longitude point. You will need to have a selection already created in Market Insight with the Lat/Long you want to do the radius search around. The GeoDist Expression can be found in the Toolbox tab called "Expression".



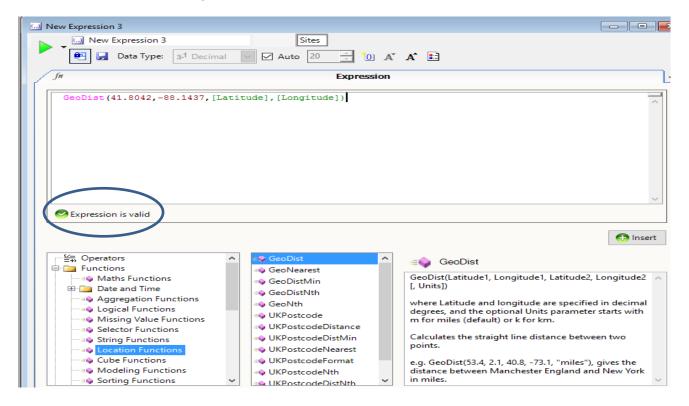
Open a new Expression window in your workspace. (either double-click on the Expression tool in your toolbox, or drag-and-drop the Expression tool into the workspace.) Next, note the types of expression categories in the lower-left corner of the window; choose the "Location Functions." You'll then see the "GeoDist" option appear in the lower-center box; the lower-right box contains the description of the function.

New Expression 3	
New Expression 3     Sites	
🔁 🛃 Data Type: 123 Integer 🔽 🗹 Auto 20 🛨 🔞 🗛	A 🗄
fn Expression	
Expression is not valid	€ Insert
<ul> <li>✓ GeoDist</li> <li>✓ GeoDist</li> <li>✓ GeoDist</li> <li>✓ GeoDist</li> <li>✓ GeoDist</li> <li>✓ GeoDistMin</li> <li>✓ GeoDistMin</li> <li>✓ GeoDistNth</li> <li>✓ GeoNth</li> <li>✓ GeoNth</li> <li>✓ GeoNth</li> <li>✓ UKPostcode</li> <li>✓ UKPostcodeNearest</li> <li>✓ UKPostcodeNearest</li> <li>✓ UKPostcodeFormat</li> </ul>	GeoDist GeoDist(Latitude1, Longitude1, Latitude2, Longitude2 [, Units]) where Latitude and longitude are specified in decimal degrees, and the optional Units parameter starts with m for miles (default) or k for km. Calculates the straight line distance between two points.

After you've highlighted the GeoDist function, click on the "Insert" button and it will appear in the expression window.

New Expression 3		
New Expression 3	Sites	
💽 🛃 Data Type: 3.1 Decimal	V Auto 20 🕂 🔞 🗛	A* 💼
fn	Expression	
GeoDist (	eld or numeric expression expected	
Operators     Functions     Functions     Date and Time     Aggregation Functions     Gelector Functions     Selector Functions     String Functions     Cube Functions     Gube Fu	GeoDist GeoNearest GeoDistMin GeoDistNth GeoNth UKPostcode UKPostcodeDistance UKPostcodeDistMin UKPostcodeDistMin UKPostcodeFormat UKPostcodePormat	GeoDist GeoDist(Latitude1, Longitude1, Latitude2, Longitude2 [ Units]) where Latitude and longitude are specified in decimal degrees, and the optional Units parameter starts with m for miles (default) or k for km. Calculates the straight line distance between two points. e.g. GeoDist(53.4, 2.1, 40.8, -73.1, "miles"), gives the distance between Manchester England and New York

Next, you need to setup the criteria. For this example, we will use the Latitude 41.8042 and the Longitude -88.1437. You will need to type in the lat/long into the expression window and follow the prompts in the lower left hand corner. Once they are entered you will need to go to your System Explorer tab on the left of your screen and find the Latitude and Longitude variables. Drag those into the expression window and separate with commas as shown below. When finished you should get "Expression is Valid" message.



This expression uses the first lat/long that you key in as the starting point, and then is comparing the lat/long on every DUNS number to that starting point to give a distance. The default is to show miles To make things easier to keep track of, rename your expression window for the variable.

Distance From Branch Location	- • ×
Distance From Branch Location Sites	
🖭 🚽 Data Type: 3-1 Decimal 🔽 🗹 Auto 20 🚊 🚺 🗚 🖍 🔛	
fn Expression	<b>•</b>
GeoDist(41.8042,-88.1437,[Latitude],[Longitude])	

Click the build/run button in the upper-left of the window. You can build the expression to see a preview of the calculation.

Distance From Branch Locat	ion	Sites				
🖭 🛃 Data Type: 3.1 Deci	mal 🗸 🗹 Auto	20 🚊 🚺 🗚	΄ 🗚 🔛			
fn Expre	ssion	79	1	Preview		
Distance From Branch Location 4	Latitude +¤	Longitude +				
768.4894	31.516969	-82.850718				
4222.1217	21.307200	-157.846500				
241.3594	42.892337	-83.651294				
569.0823	38.762975	-78.100139				
550.6209	34.506261	-84.063041				
4222.5811	21.539454	-158.043213				
878.5686	42.240565	-71.007410				
875.6834	42.324567	-71.056797				
874.0079	42.376042	-71.085656				
577.3886	35.974750	-95.849108				
866.6042	42.281788	-71.238309				
1111.554	26.562536	-81.871758				
689.7611	39.930524	-75.162731				
4220.8256	21.280735	-157.799868				
1712.4244	34.066624	-118.195865				
875.4383	42.365834	-71.058361				

This preview shows a random selection of DUNS numbers and their distance from my starting point Lat/Long in miles. Now, you can drag-and-drop this expression into a Selection window and use it as criteria for your query.

In this new selection, I am asking Market Insight to return only those records that are less than or equal to 20 miles from my starting lat/long of the branch location.

Rew Selection 4	
New Selection 4 Sites	
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Selection *	<u>ی</u> ک
New Selection 4	Distance From Branch Location
□··· New Selection 4 ····· Distance From Branch Location of <=20	Enter your numeric ranges in the space below.
	<=20
	v .
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	Include 🖂 😭 🚺 🛄
Cover Selection *	

You can also drop your expression into a data grid and it becomes a column, showing the results of the calculation when looking at the lat/long for each DUNS number site.

Data		Sites					
🌁 Exp ata Grid	ort As 🔻 🛑 Limits 👻 🏾 Aggrega	tion 🔻 🏭 Add User Coo	de 🔻 🎚 🛛 Add l	JRN Editor Column 👻	Rows To Browse	• • • • • • • •	
ata Grid		_					9
Drag a column	header here to group by that c	olumn.					
Duns Number	🗜 🛛 Business Name 🕂	US City +=	State +⊐	Latitude 🕂	Longitude 🕂	Distance From Branch Location 🗢	~ T
001019905	DSI Holdings Corporation	VILLA PARK	ILLINOIS	41.903844	-87.980287	10.87	Â
001023360	Tmf Polymer Solutions Inc.	PLANO	ILLINOIS	41.713768	-88.493490	19.08	Γ
001023782	Crystatech, Inc.	DES PLAINES	ILLINOIS	42.019102	-87.920924	18.75	
001039981	Lechler, Inc.	SAINT CHARLES	ILLINOIS	41.917949	-88.262609	9.96	
001049829	Herrera Trucking, Inc.	MAYWOOD	ILLINOIS	41.889684	-87.836802	16.86	
001058119	Loyola University Health Syst	MAYWOOD	ILLINOIS	41.857404	-87.833199	16.40	
001065353	John F Garrow	WHEATON	ILLINOIS	41.858846	-88.102320	4.34	
001066641	Lewis Brothers Bakeries Inc	MELROSE PARK	ILLINOIS	41.908060	-87.858430	16.34	
001067912	Cds Moving Equipment, Inc.	ARLINGTON HEIGHTS	ILLINOIS	42.037675	-87.973907	18.34	
001075774	The Cuyahoga Corp	WEST CHICAGO	ILLINOIS	41.918140	-88.197810	8.35	
001075832	Toth Enterprises Inc	WHEATON	ILLINOIS	41.849504	-88.124293	3.29	
001094358	Pulte Home Corporation	SCHAUMBURG	ILLINOIS	42.065172	-88.079315	18.33	
001094676	Lineweh Ltd	GLEN ELLYN	ILLINOIS	41.870372	-88.046674	6.77	
001094903	Excel Group Holdings, Inc.	ITASCA	ILLINOIS	41.979738	-88.037592	13.30	
001104736	McCain Foods Usa, Inc.	LISLE	ILLINOIS	41.809629	-88.098830	2.34	
	1000 1 1	00010101		14 0 0 0 7 7 7	07.0000	Browsing first 1,000	✓ Sites
Cover Selection	Deter Crist					c.onsing hist 1,000	