

ITA BI Roundtable

Incorporating Geospatial Data in your Analytics

17 August 2010

AN **ITA** ROUNDTABLE SERIES

Chaired by: [Tom Huguelet](#), [contextQ](#)



Illinois Technology
Association

About ITA



The **Illinois Technology Association (ITA)** is committed to developing an environment in which technology companies can flourish in an increasingly competitive marketplace. The ITA is a regional industry trade association headquartered in Chicago and serving all of Illinois. The ITA provides members with access to connections, information and promotional opportunities to improve business locally, regionally and nationally.

Already more than 550 members-strong, the ITA connects technology organizations that focus on travel, data management, telecommunications, navigation, sales enablement, and much more.

ITA Roundtable Program

The mission of the ITA Roundtable Series is to create small group collaboration opportunities for the Illinois technology community. Relevant topics that will accelerate the development of the regional technology industry through the creation, growth, and success of individual businesses are the focus of each program. ITA builds progressive collaboration through the involvement of individuals that have excelled as leaders in the tech community that want to give back to both emerging and established tech companies.

ITA Membership

We invite you to become a member and let the ITA help drive your business. Membership **entitles your entire company** to participate in ITA activities and events at discounted rates.

For further information, please contact:

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Tom Huguelet



- Consultant
- Trainer
- Mentor
- Primarily but not exclusively Microsoft
- 21 years consulting, 11 focused on BI
- MCSE, MCDBA, MCT, MCTS
- I love this stuff!

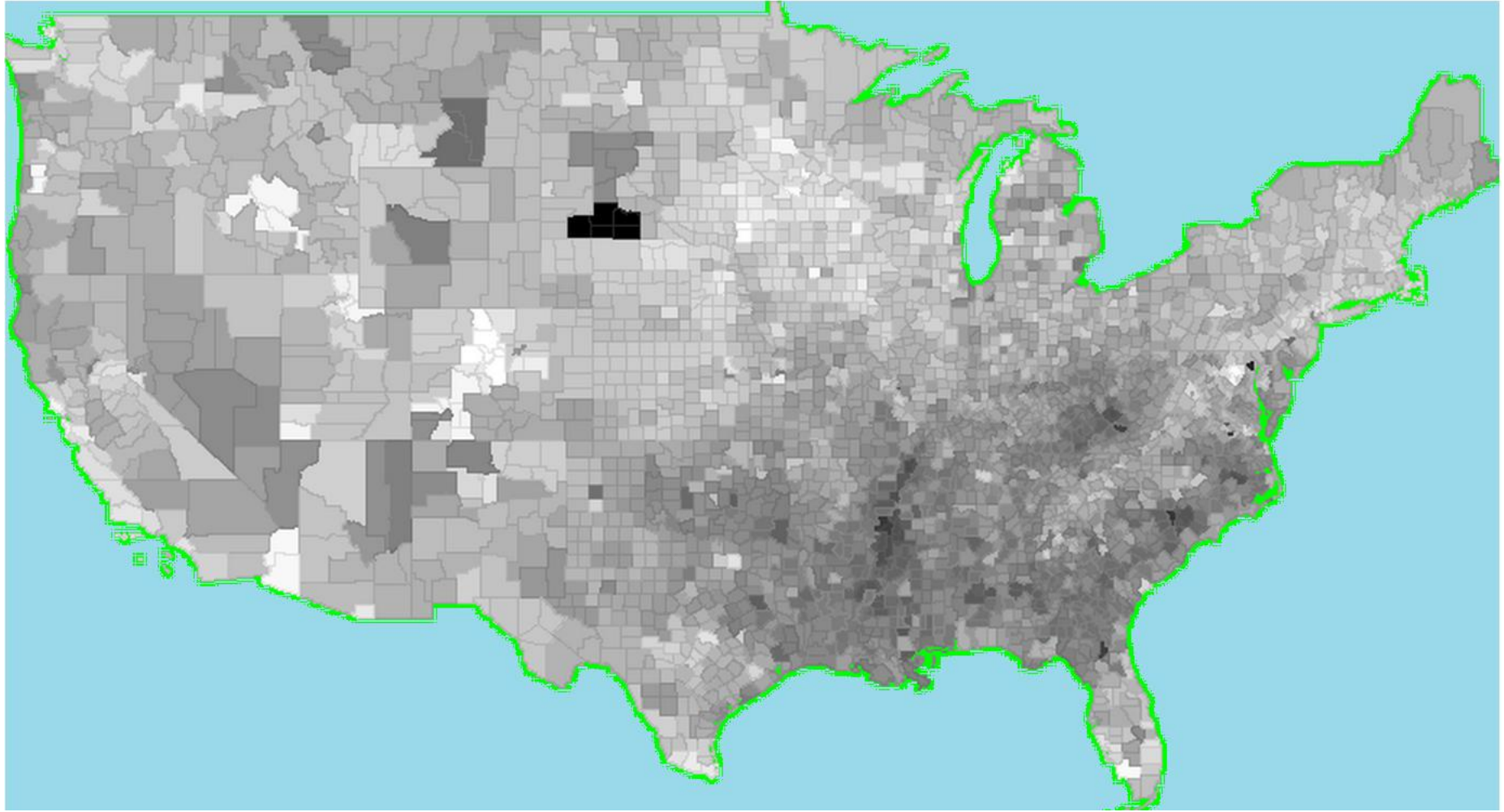
- <http://contextq.com/>
- <http://twitter.com/TomHug>
- tom@contextQ.com

Why GeoSpatial?



State_FIP	County_FICHSI	Couici	CHSI_Stat	CHSI_Stat	Strata_ID	ALE	Min_ALE	Max_ALE	US_ALE	All_Death	Min_All	Cl_Max_All	US_All	DeCl_Min	Ai_Cl_Max	A_Health_St	Min_Heal	Max_Heal	US_Health	Cl_Min	Hi_Cl_Max	H_Unhealthy	Min_Unhe	Max_Unhe	US_Unhe	Cl_Min	Ui_Cl_Max	Unhealthy_U
1	1	Autauga	Alabama	AL		29	74.9	74.5	78	76.5	1041.5	794.8	1008.8	898.6	993.1	1089.8	21.8	11.7	22.8	17.1	15.5	28.2	7.5	4	8.8	6	5.4	9.7
1	3	Baldwin	Alabama	AL		16	76.6	75.5	78.2	76.5	856.9	729.2	931.7	898.6	831.4	882.5	15.4	11.9	20.4	17.1	12.4	18.3	6.7	5.6	7.4	6	5.7	7.7
1	5	Barbour	Alabama	AL		51	74.5	72.3	77.3	76.5	1019.4	780.2	1108.1	898.6	968.4	1070.5	21.4	18.3	31.7	17.1	13.2	29.6	-1111.1	5.5	8	6	-1111.1	-1111.1
1	7	Bibb	Alabama	AL		42	73.2	73.3	77.8	76.5	1050.5	827.1	1110.4	898.6	1004.4	1096.5	19.4	13	29.3	17.1	10.1	28.7	-1111.1	4.7	8.2	6	-1111.1	-1111.1
1	9	Blount	Alabama	AL		28	76.1	74.9	79.4	76.5	954.2	722	1002.4	898.6	916.2	992.1	25.8	10.1	24.6	17.1	19.6	32.1	7.9	4.2	7.8	6	6	9.8
1	11	Bullock	Alabama	AL		75	71.9	72.1	76.4	76.5	1107.6	908.9	1153.6	898.6	1048.4	1166.7	-1111.1	18.5	33	17.1	-1111.1	-1111.1	-1111.1	4.2	9.4	6	-1111.1	-1111.1
1	13	Butler	Alabama	AL		76	73	72.2	75.5	76.5	1084.2	992.4	1133	898.6	1043.9	1124.6	21.6	17.4	31.8	17.1	13.8	29.5	6.9	5.3	8.8	6	4.5	9.3
1	15	Calhoun	Alabama	AL		6	73.1	73.5	77.3	76.5	1100.3	829.9	1032.7	898.6	1065.6	1135	26.7	12.7	21.7	17.1	22.6	30.8	8	5.2	7.6	6	6.8	9.2
1	17	Chambers	Alabama	AL		50	73.8	73.4	76.9	76.5	1075.6	879.5	1101.8	898.6	1032.4	1118.8	32.3	17.5	29.5	17.1	22.8	41.9	7.9	5.5	8.7	6	5.5	10.3
1	19	Cherokee	Alabama	AL		64	75.3	74	76.9	76.5	999.3	869	1083.5	898.6	960.5	1038.1	-1111.1	12.2	30.3	17.1	-1111.1	-1111.1	8.8	5.2	9.5	6	5.9	11.8
1	21	Chilton	Alabama	AL		32	74.1	73.4	77.9	76.5	1040.4	824	1076.8	898.6	995.4	1085.5	26	9.1	27.7	17.1	19.4	32.7	9.7	5.5	8.6	6	7.5	11.9
1	23	Choctaw	Alabama	AL		66	74.6	71.9	77	76.5	975.7	868.3	1244.2	898.6	929.6	1021.8	29.8	14	33.7	17.1	20	39.6	-1111.1	4	8.5	6	-1111.1	-1111.1
1	25	Clarke	Alabama	AL		51	74	72.3	77.3	76.5	982	780.2	1108.1	898.6	931.2	1032.8	-1111.1	18.3	31.7	17.1	-1111.1	-1111.1	5.8	5.5	8	6	3.6	8
1	27	Clay	Alabama	AL		63	74.9	74.5	77	76.5	950.3	872.1	1044.9	898.6	904.6	996	-1111.1	13	31.9	17.1	-1111.1	-1111.1	7.1	5	9.1	6	4.6	9.6
1	29	Cleburne	Alabama	AL		41	75.3	73.3	76.8	76.5	1072.8	909.2	1133.1	898.6	1018.9	1126.7	-1111.1	12.9	25.5	17.1	-1111.1	-1111.1	8	4.5	8.5	6	5.1	10.8
1	31	Coffee	Alabama	AL		32	75.9	73.4	77.9	76.5	923.6	824	1076.8	898.6	885	962.2	19.1	9.1	27.7	17.1	13.7	24.4	7.1	5.5	8.6	6	5.4	8.8
1	33	Coffee	Alabama	AL		21	75.3	75.3	78.9	76.5	964.4	755.9	958.4	898.6	930.2	998.6	20.3	13	23.4	17.1	14.6	26.1	5.6	5.3	7.4	6	4.1	7.1
1	35	Conecuh	Alabama	AL		75	73	72.1	76.4	76.5	1093.6	908.9	1153.6	898.6	1043.1	1144.1	19.1	18.5	33	17.1	9.3	28.9	7.4	4.2	9.4	6	4.6	10.1
1	37	Coosa	Alabama	AL		41	74.9	73.3	76.8	76.5	909.2	909.2	1133.1	898.6	856.9	961.5	18.3	12.9	25.5	17.1	8.9	27.7	4.9	4.5	8.5	6	2.2	7.5
1	39	Covington	Alabama	AL		35	74.7	73.5	75.7	76.5	999.7	930.6	1096.3	898.6	959.9	1039.5	22	20.5	30.1	17.1	15.4	28.6	5.2	5.2	8.7	6	3.6	6.8
1	41	Crenshaw	Alabama	AL		71	73.7	73.1	76.2	76.5	1058.7	937.7	1087.4	898.6	1009.4	1107.9	-1111.1	18.4	35.9	17.1	-1111.1	-1111.1	-1111.1	4.7	9	6	-1111.1	-1111.1
1	43	Cullman	Alabama	AL		21	75.3	75.3	78.9	76.5	1028.7	755.9	958.4	898.6	998.2	1059.2	23.8	13	23.4	17.1	18.7	28.9	8.2	5.3	7.4	6	6.6	9.8
1	45	Dale	Alabama	AL		33	75.5	74	77.3	76.5	987.4	836.7	1050.9	898.6	946.5	1028.4	23.9	13.4	24.7	17.1	17	30.8	5.8	5.2	7.3	6	4.2	7.4
1	47	Dallas	Alabama	AL		52	72.1	71.6	75.4	76.5	1136	950	1196	898.6	1093.4	1178.5	25.1	19.7	31.8	17.1	18.8	31.5	7	5.8	9.5	6	5.2	8.8
1	49	DeKalb	Alabama	AL		24	75.1	74.5	77.1	76.5	960.6	865.2	1013.5	898.6	927.8	993.3	22	14.7	24.5	17.1	17	27.1	7.2	5.7	8.2	6	5.8	8.7
1	51	Elmore	Alabama	AL		19	75.2	74.9	79.3	76.5	946.9	742.3	1003.6	898.6	911.8	982.1	15.1	9.6	24.2	17.1	10.9	19.3	5.8	4.9	7.5	6	4.5	7
1	53	Escambia	Alabama	AL		51	73.2	72.3	77.3	76.5	1042.6	780.2	1108.1	898.6	998.5	1086.8	31.2	18.3	31.7	17.1	23.7	38.8	7.5	5.5	8	6	5.3	9.7
1	55	Etowah	Alabama	AL		6	73.5	73.5	77.3	76.5	1091.5	829.9	1032.7	898.6	1057.5	1125.4	24.1	12.7	21.7	17.1	20.3	28	8	5.2	7.6	6	6.8	9.1
1	57	Fayette	Alabama	AL		63	73.9	74.5	77	76.5	979.6	872.1	1044.9	898.6	938.5	1020.7	32.7	13	31.9	17.1	23.4	42	10	5	9.1	6	7.2	12.8
1	59	Franklin	Alabama	AL		49	73.6	73.9	77.6	76.5	1091.7	802.3	1046.3	898.6	1042.5	1141	25	14.1	27.1	17.1	15.9	34.1	-1111.1	5.4	8.4	6	-1111.1	-1111.1
1	61	Geneva	Alabama	AL		64	74.7	74	76.9	76.5	984.9	869	1083.5	898.6	949.9	1020	25.6	12.2	30.3	17.1	17.2	34	6.3	5.2	9.5	6	4.1	8.5
1	63	Greene	Alabama	AL		75	72.7	72.1	76.4	76.5	1050.9	908.9	1153.6	898.6	990.3	1111.6	-1111.1	18.5	33	17.1	-1111.1	-1111.1	-1111.1	4.2	9.4	6	-1111.1	-1111.1
1	65	Hale	Alabama	AL		76	72.7	72.2	75.5	76.5	1073	992.4	1133	898.6	1025.2	1120.8	-1111.1	17.4	31.8	17.1	-1111.1	-1111.1	6.9	5.3	8.8	6	4.1	9.7
1	67	Henry	Alabama	AL		63	74.5	74.5	77	76.5	961.4	872.1	1044.9	898.6	917.7	1005	-1111.1	13	31.9	17.1	-1111.1	-1111.1	5.5	5	9.1	6	2.8	8.3
1	69	Houston	Alabama	AL		23	75.7	73.7	77.3	76.5	905	855.1	1103.9	898.6	878.1	932	21.9	13.7	24	17.1	17.3	26.5	6.9	4.8	7.7	6	5.6	8.2
1	71	Jackson	Alabama	AL		22	74.5	73.9	77.9	76.5	1027.6	854.3	1059.4	898.6	987.7	1065.5	22.6	9	22.6	17.1	16.9	28.3	7.4	5	8	6	5.5	9.3
1	73	Jefferson	Alabama	AL		3	73.6	73.6	78.2	76.5	1034.5	787.3	1024.9	898.6	1020.8	1048.2	17.7	11.7	19.5	17.1	16.2	19.3	6.3	5.2	6.6	6	5.8	6.8
1	75	Lamar	Alabama	AL		63	73.9	74.5	77	76.5	1044.9	872.1	1044.9	898.6	998.5	1091.3	-1111.1	13	31.9	17.1	-1111.1	-1111.1	-1111.1	5	9.1	6	-1111.1	-1111.1
1	77	Lauderdale	Alabama	AL		21	76.4	75.3	78.9	76.5	910.9	755.9	958.4	898.6	884.3	937.5	23.4	13	23.4	17.1	18.7	28.2	7.4	5.3	7.4	6	5.9	8.8
1	79	Lawrence	Alabama	AL		32	74.3	73.4	77.9	76.5	1054.1	824	1076.8	898.6	1004.2	1104	28.8	9.1	27.7	17.1	20.1	37.6	7.5	5.5	8.6	6	4.9	10.1

Why GeoSpatial?



<http://health.jameyer.com/health.py/blot>

connect | inform | promote | lead

Terminology & Concepts



- ESRI - Environmental Systems Research Institute
- Shape File
- Geometry
 - VS --
- Geography
- Spatial functions
- Point
- Line
- Polygon
- Shape
- Projection
- Tiles

Data Acquisition



- http://www.census.gov/geo/www/cob/bdy_files.html
- <http://www.diva-gis.org/gData>
- <http://www.data.gov/raw/2159>
- http://www.vdstech.com/map_data.htm

Data Preparation



- Geocoding
 - Google Maps
 - Bing Maps (AKA Virtual Earth)
 - Yahoo PlaceFinder (Yahoo Maps deprecated)

Data Presentation



- Smart tool
- or --
- Smart Data
- Coordination of Layers
- WMS Server

Resources



- <http://www.communityhealth.hhs.gov/homepage.aspx>
- <http://pietschsoft.com/post/2008/06/Plot-ZipCode-Boundaries-on-a-Map-Part1-Making-sense-of-US-Census-ZCTA-ARCINFO-Ungenerate-ASCII-files.aspx>
- <http://health.jameyer.com/health.py/home>
- <http://blogs.msdn.com/b/seanboon/>
- <http://blogs.msdn.com/b/edkatibah/>
- <http://blog.sqlauthority.com/2010/03/30/sql-server-world-shapefile-download-and-upload-to-database-spatial-database/>