


Enrich Your Dashboard and Reports with Geospatial and Mapping Capabilities

Rick Blackwell

IBM Analytics University 2017

Brought to you by *LearnQuest*



Please Note

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion.

Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision.

The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract.

The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.

Notices and disclaimers

Copyright © 2017 by International Business Machines Corporation (IBM). No part of this document may be reproduced or transmitted in any form without written permission from IBM.

U.S. Government Users Restricted Rights — use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM.

Information in these presentations (including information relating to products that have not yet been announced by IBM) has been reviewed for accuracy as of the date of initial publication and could include unintentional technical or typographical errors. IBM shall have no responsibility to update this information. **This document is distributed “as is” without any warranty, either express or implied. In no event shall IBM be liable for any damage arising from the use of this information, including but not limited to, loss of data, business interruption, loss of profit or loss of opportunity.** IBM products and services are warranted according to the terms and conditions of the agreements under which they are provided.

IBM products are manufactured from new parts or new and used parts. In some cases, a product may not be new and may have been previously installed. Regardless, our warranty terms apply.”

Any statements regarding IBM's future direction, intent or product plans are subject to change or withdrawal without notice.

Performance data contained herein was generally obtained in a controlled, isolated environments. Customer examples are presented

as illustrations of how those customers have used IBM products and the results they may have achieved. Actual performance, cost, savings or other results in other operating environments may vary.

References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business.

Workshops, sessions and associated materials may have been prepared by independent session speakers, and do not necessarily reflect the views of IBM. All materials and discussions are provided for informational purposes only, and are neither intended to, nor shall constitute legal or other guidance or advice to any individual participant or their specific situation.

It is the customer's responsibility to insure its own compliance with legal requirements and to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the customer may need to take to comply with such laws. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the customer is in compliance with any law.

Notices and disclaimers continued

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products. IBM does not warrant the quality of any third-party products, or the ability of any such third-party products to interoperate with IBM's products. **IBM expressly disclaims all warranties, expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular, purpose.**

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents, copyrights, trademarks or other intellectual property right.

IBM, the IBM logo, ibm.com, Aspera®, Bluemix, Blueworks Live, CICS, Clearcase, Cognos®, DOORS®, Emptoris®, Enterprise Document Management System™, FASP®, FileNet®, Global Business Services®, Global Technology Services®, IBM ExperienceOne™, IBM SmartCloud®, IBM Social Business®, Information on Demand, ILOG, Maximo®, MQIntegrator®, MQSeries®, Netcool®, OMEGAMON, OpenPower, PureAnalytics™, PureApplication®, pureCluster™, PureCoverage®, PureData®, PureExperience®, PureFlex®, pureQuery®, pureScale®, PureSystems®, QRadar®, Rational®, Rhapsody®, Smarter Commerce®, SoDA, SPSS, Sterling Commerce®, StoredIQ, Tealeaf®, Tivoli® Trusteer®, Unica®, urban{code}®, Watson, WebSphere®, Worklight®, X-Force® and System z® Z/OS, are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at: www.ibm.com/legal/copytrade.shtml.

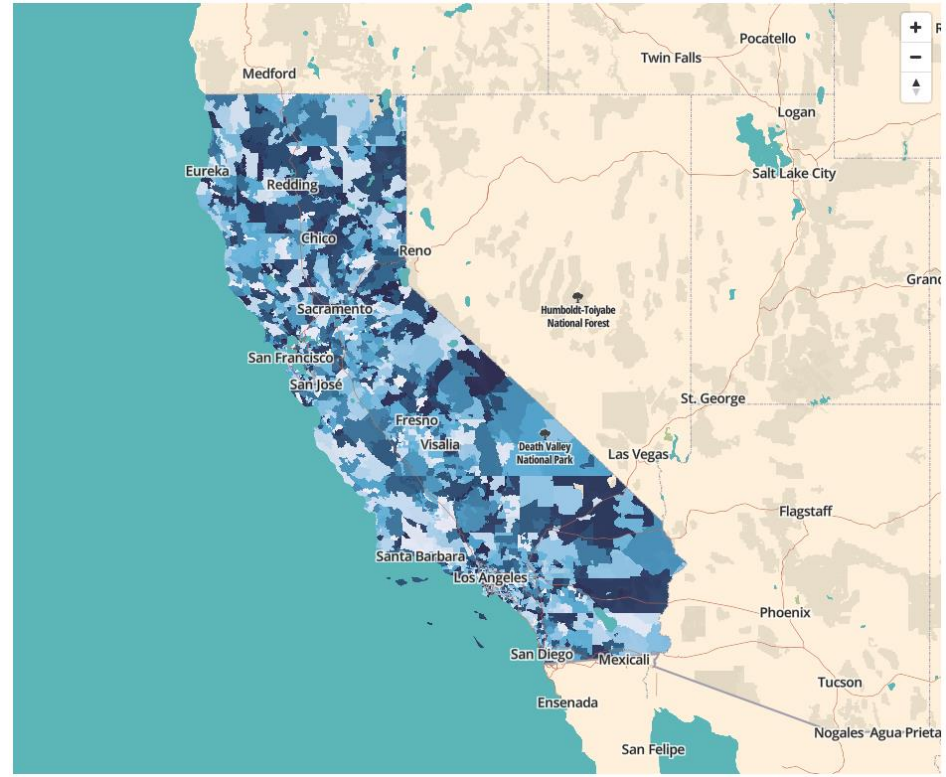
Agenda

- Maps in dashboards
- Maps in Reports
- Mapping Tips and Tricks
- Esri integration
- Looking forward

Demonstration: Mapping in Dashboards

- Cognos Analytics 11 Release 6
- One location
 - Fill, point or both

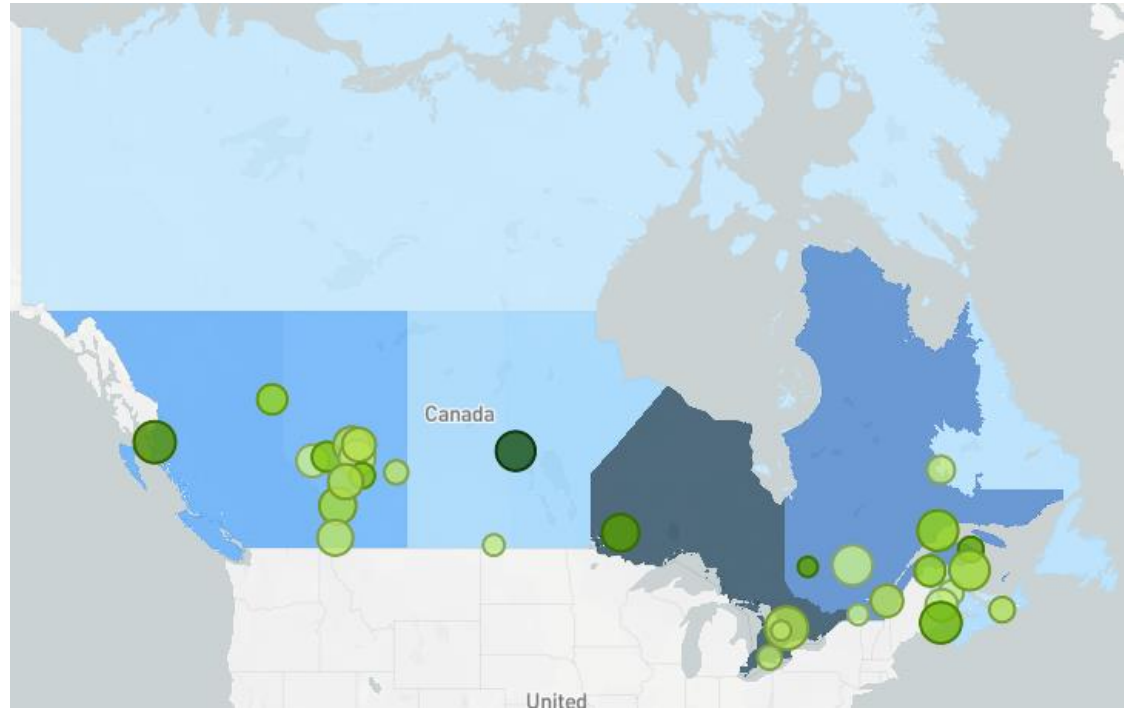
Dashboard Maps in R7 Demo.doc



Demonstration: Mapping in Reports

- Cognos Analytics 11 Release 7
- Two locations
 - One fill such as state
 - One point such as city

Reports - Mapping US Zip Codes.docx

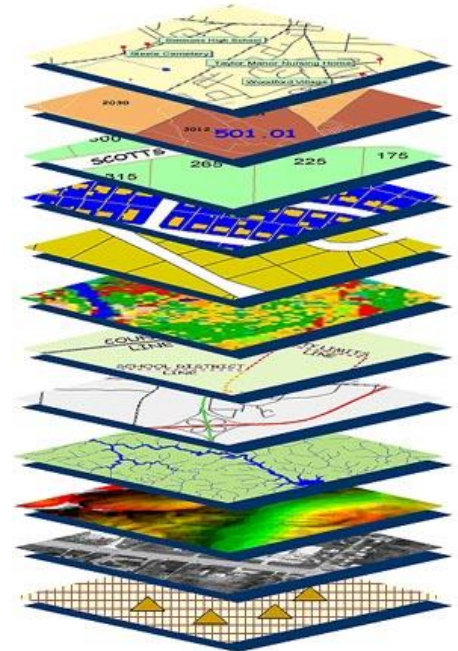


Mapping Tips and Tricks

- OOTB Polygons

What is a Map?

- Base map layers for basic visual elements
 - “Pretty pictures”
 - Roads, buildings, water, labels
 - Referred to as “Style” in Cognos Analytics
- Layers for analyzing data
 - Named features
 - Polygons such as countries, regions, post codes
 - Points such as telephone poles or cell phone towers
 - Lines such as traffic routes
 - Points identified by latitude/longitude



Cognos Analytics OOTB Polygons

- Global mapping solution
- Integration of 556,000+ Pitney Bowes Polygons
- 236,000+ administrative boundary polygons
 - Countries, states, regions, districts, cities, etc.
 - Up to 5 levels
- 320,000+ Postal/Zip Codes
 - Maintain postal hierarchies
 - Ex. US Major Geographic Area -> Sectional Center facility -> 5 Digit Zip

OOTB Polygons

- Info found in BOX
 - <https://ibm.box.com/s/rvqticfej2fadqybittgg484hbfe81q4>
 - */Mapping/IBM Cognos Analytics Mapping.zip*
- IBM CA 11 R6 Admin Boundary Types and Post Regions.xlsx
 - What kinds of admin boundaries polygons are available (region, kommune, Bundeslaender, etc)
 - What post code polygons are available?
- IBM CA 11 R6 Named Administrative Boundaries.xlsx
 - Which named polygons exist
 - Useful when your map cannot find a given location
 - Alias names

Mapping Admin Boundary Polygons

- Each polygon has a name
 - Frankfurt, USA, España
- Data item value names must match polygon name
 - USA = USA
 - Spain ≠ España

Alias Names

- Aliases allow for two or more names for the same polygon
 - España: Spain, ES, ESP, etc.
 - USA: United States, United States of America, US, US of A, U.S., U.S.A., etc.
- No (dis-)advantage to using name or alias.
- Aliases can be added by IBM development only
- Create a Request For Enhancement (RFE) to requests aliases

Dealing with Ambiguous Place Names

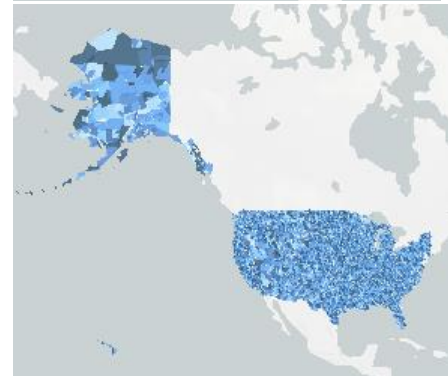
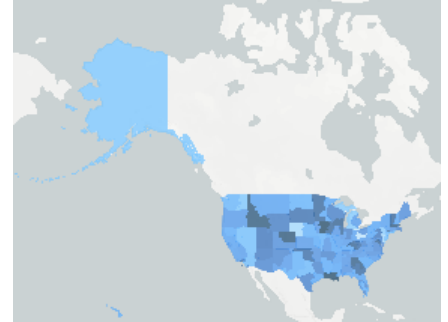
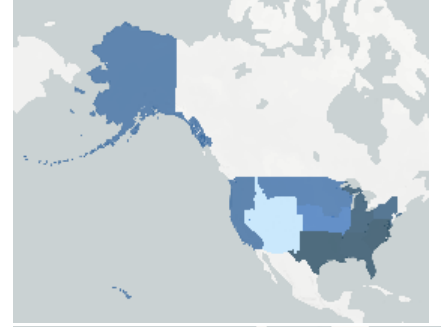
- Which Paris do you mean?
 - France
 - Canada: Ontario, Yukon,
 - US: Arkansas, Idaho, Illinois, Indiana, Iowa, Kentucky, Maine, Michigan, Mississippi, Missouri, New Hampshire, New York, Portage County, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Virginia, Wisconsin
 - Denmark
- Use refining data item to provide more context
 - Country
 - Country, Province/State

Mapping Post Codes

- Post code systems differ widely by country
- You must understand the code system your country uses and how those polygons are typically used in business analysis.
- You must understand which polygons IBM provides
- Post code polygons identified by complete or partial post code
- Post codes are ambiguous!
 - 30+ countries use 5 digit numeric post codes
 - ALWAYS refine by country
 - Country = USA
 - A single data items with USA in every row works

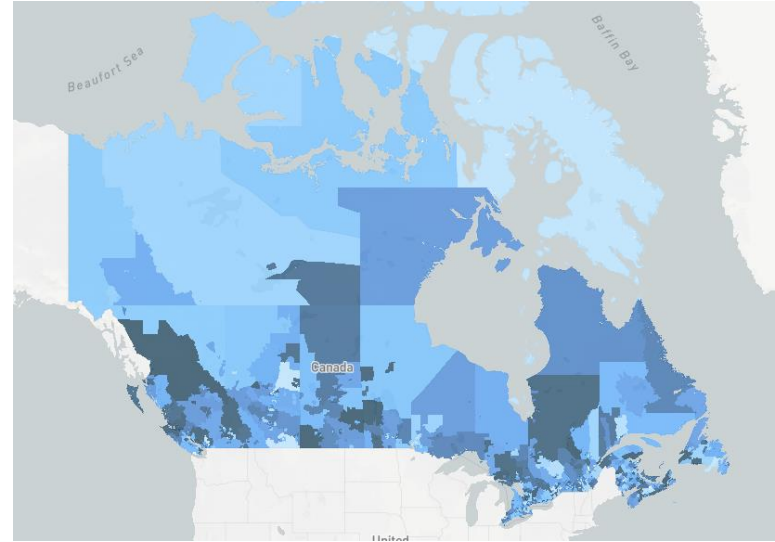
US Zip Codes

- Hierarchy is built into zip code system
- 1 Digit Major Geographic Area
 - 2 Digit Sectional Center Facility
 - 5 Digit Zip
 - ~~Zip+4 delivery routes, post boxes, etc~~
- Substring(ZipCode, 1, 1/2/5)
- Refine by County USA
- Zip codes can start with Zero
 - Excel format column as text



Canadian Postal Codes

- Hierarchy built into system
 - 1 Digit ~ province
 - 2 Digits – smaller division
 - 3 digits = FSA
 - Forward Sortation Area
 - ~~6 Digits = delivery route, post box, etc~~
- Substring(PostalCode, 1, 3)
- Refine by Country “Canada”



Other Post Code Systems

- IBM CA 11 R6 Admin Boundary Types and Post Regions.xlsx
 - UK: 1, 2 and 3/4/5 digits
 - Australia: 1, 2, 4 digits
 - Germany: 1, 2, 5 digits
 - 248 countries
- Get to know your post code system
 - Wikipedia
- Use substring() to isolate specific digits
- Refine by country – ALWAYS!!!!!!

Demonstration

- US Zip Codes in Reports

Esri Integration

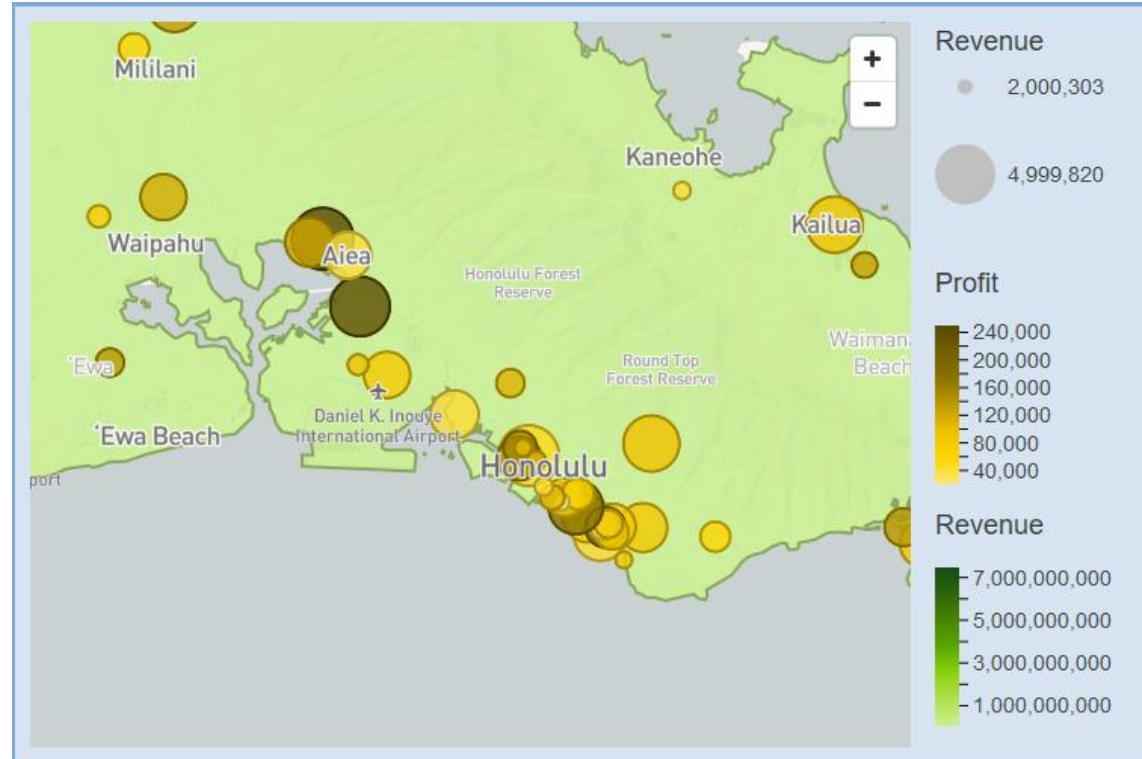
- EM4C provides Esri integration in Cognos 10.x reports
- EM4C does not support Cognos Analytics
- Esri customers need an alternate solution
- Integeio integrates Esri assets into Cognos Analytics reports
- Contact Integeio for more information
 - America's - Paul Hulford - paul.hulford@integeo.ca
 - Europe - David Thomas - davidt@integeo.com
 - AsiaPac - Roderick Ross - rodr@integeo.com

Looking Forward

- Equal functionality in Dashboards
 - Add support for multiple queries per widget
 - Each map layer generally requires a separate query
 - Country, sum(revenue)
 - State, average(profit)

Latitude/longitude support in report

- Business in Hawaii



Thank You



