



From Query/400 to Dashboards with DB2 Web Query

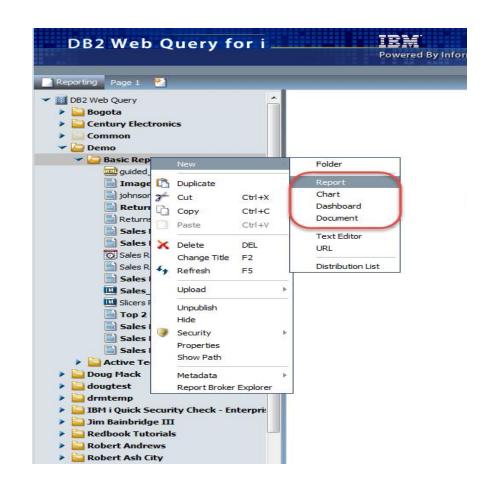
Doug Mack mackd@us.ibm.com





IBM DB2 Web Query for i User Interface

- The jumping off point for working with DB2 Web Query
 - BI Portal the End User Standard Interface
 - Run Reports
 - Edit Reports
 - Schedule Report
 - Work with folders
 - Work with Change Management
 - Sync reports via Mobile Favorites Folder
 - Set up Security
 - Build a personal Dashboard
 - InfoAssist Report Authoring Tool invoked with right-click and NEW at the folder level or with rightclick EDIT at report level

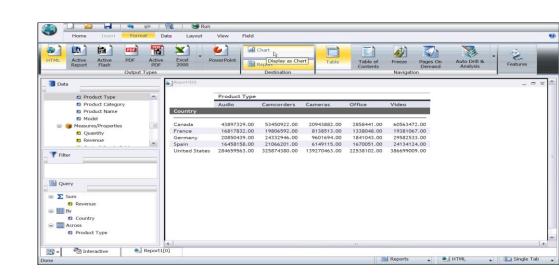






Build/Edit Reports and Dashboards with InfoAssist

- Web based Report Authoring component (built into Express or Standard)
- Invoked from BI Portal (web) or Developer Workbench (Windows)
- Intuitive office-like interface
 - Tool bars (Ribbon) change based on selected tab
- WYSIWYG layout area
- Build reports, charts, graphs, maps, dashboards
- Output types
 - Excel including pivot tables
 - "Active" technologies (good for mobile devices)
 - PDF, File, Print, Database
 - Auto drill down (OLAP) report
 - HTML, HTML5, Flash
 - Powerpoint

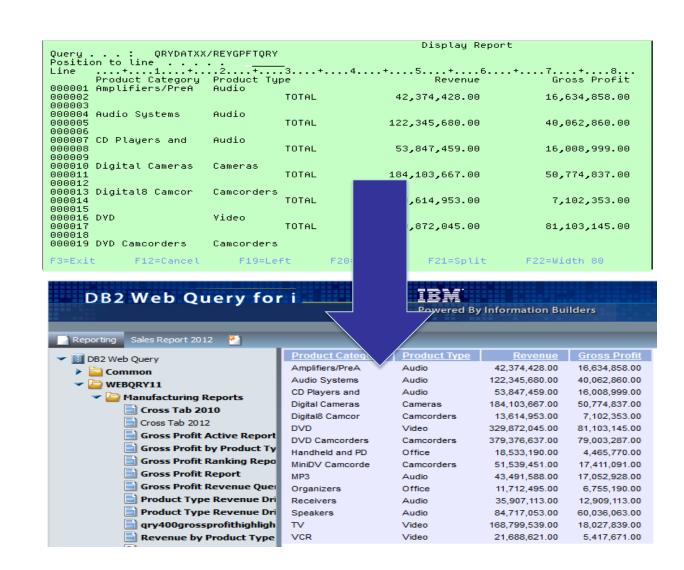






Query/400 to DB2 Web Query

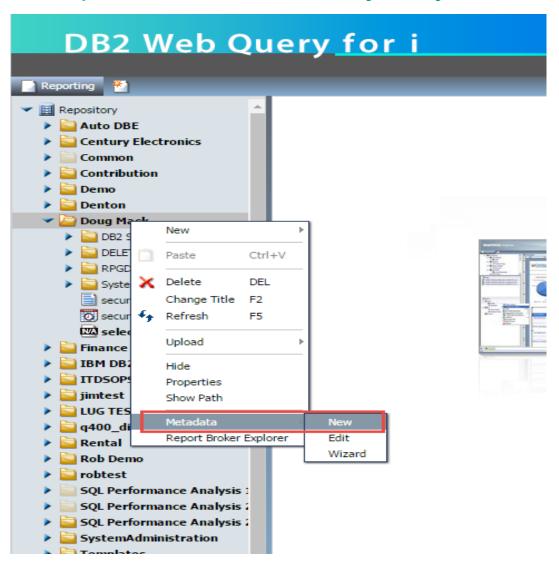
- Imports your existing QRYDFN to DB2 Web Query browser reports
- Can import "all" per Library
- Can still run the green screen version (but why would you?)
- If the green screen version changes, you'd need to re-import
- There ARE some limitations
 - We'll get to those later







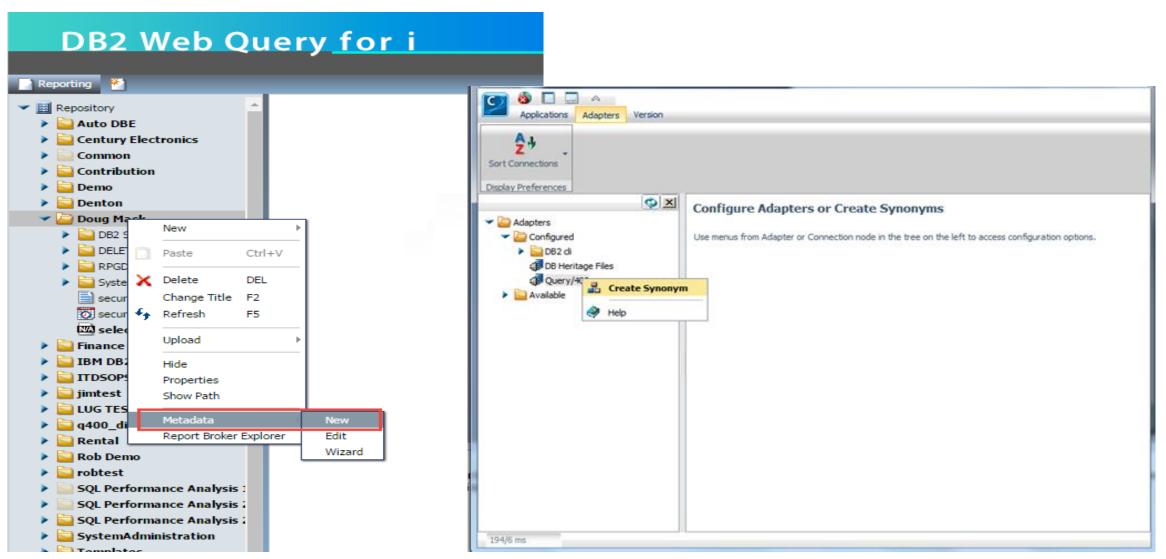
Step 1 is to Create a "Synonym" over the Query/400 definition(s) query







Step 1 is to Create a "Synonym" over the Query/400 definition(s) query



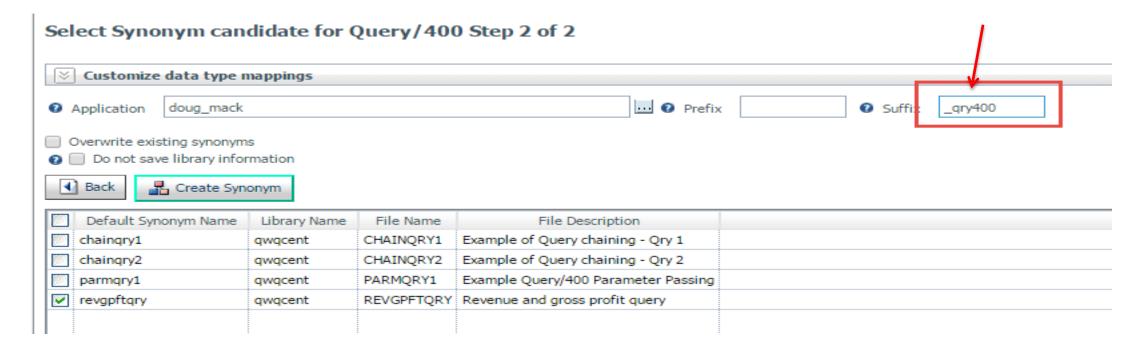




Choose which queries to import

A report is automatically built

Hint: Give the synonym a prefix or suffix so you can later recognize it as a query/400 definition



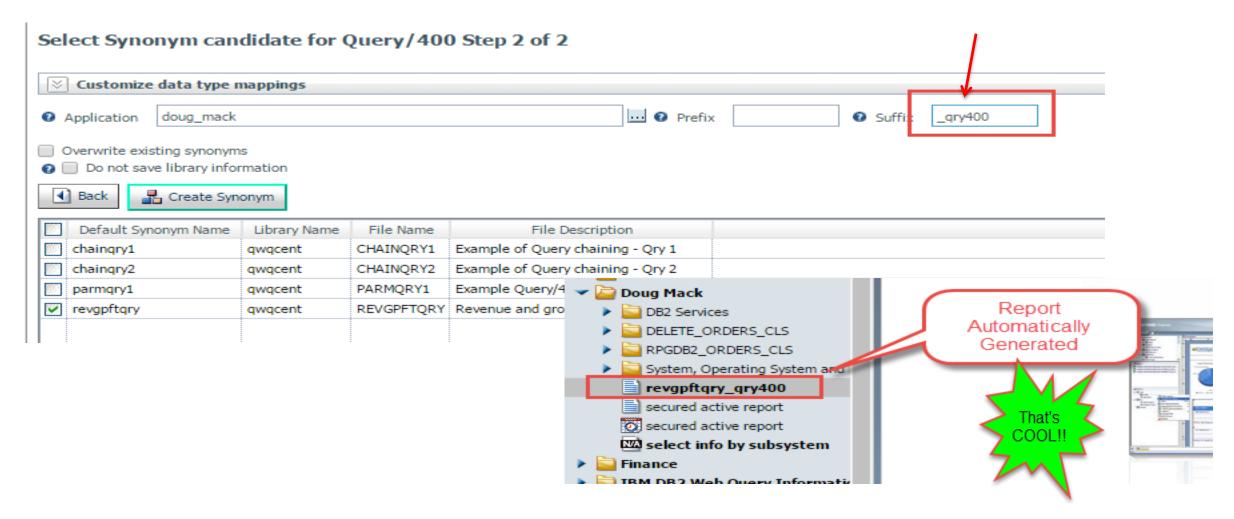




Choose which queries to import

A report is automatically built

Hint: Give the synonym a prefix or suffix so you can later recognize it as a query/400 definition







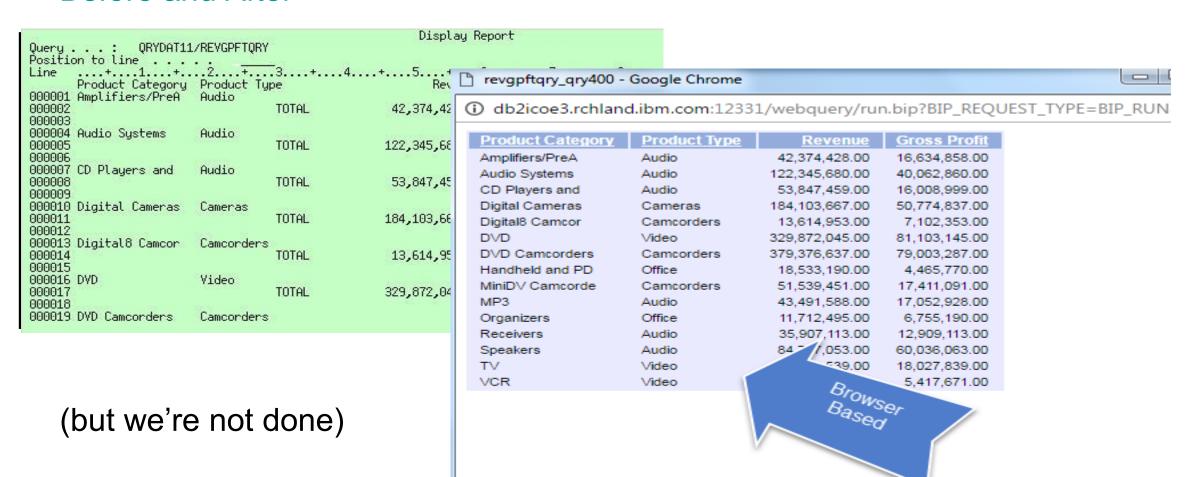
Before and After

Query : QRYDAT11 Position to line	./REVGPFTQRY	Display Report			
Line+1+ Product Category 000001 Amplifiers/PreA	Product Ty	+ pe	4+5+6+ Revenue	7+8 Gross Profit	
000001 Amptiller S77 eA 000002 000003	nadio	TOTAL	42,374,428.00	16,634,858.00	
000004 Audio Systems 000005 000006	Audio	TOTAL	122,345,680.00	40,062,860.00	
000007 CD Players and 000008 000009	Audio	TOTAL	53,847,459.00	16,008,999.00	
000010 Digital Cameras 000011 000012	Cameras	TOTAL	184,103,667.00	50,774,837.00	
000013 Digital8 Camcor 000014 000015	Camcorders	TOTAL	13,614,953.00	7,102,353.00	
000016 DVD 000017 000018	Video	TOTAL	329,872,045.00	81,103,145.00	
000019 DVD Camcorders	Camcorders				





Before and After



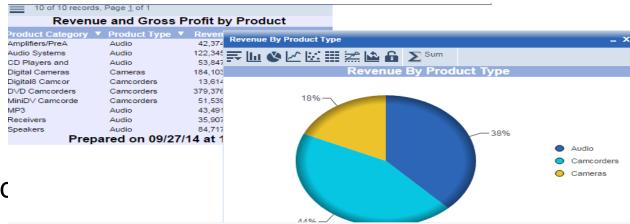




Enhance the Query/400 Definition

- Format the report
 - Add a header, footer, stylesheet, traffic light
- Change the output
 - Push the result set into a spreadsheet or build an "active" report
- Add a prompt for user controlled record selection
- Add the report to a dashboard
- Schedule the report to run automatically and send it out in an email



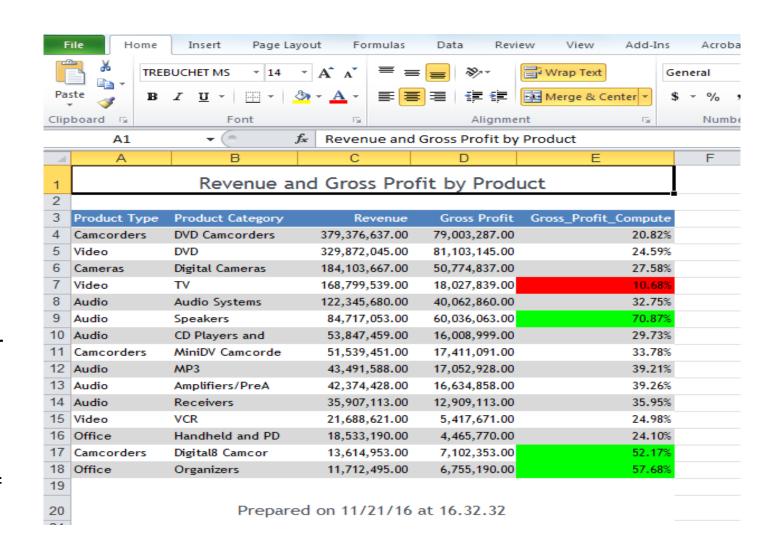






No More Green Screen

- Changed the look of the report
- Added Report Header and Footer
- Sorted by Revenue
- Created new calculated field for %Gross Profit
- Added traffic lighting to that new field
 - Can easily spot that bottom two products are high margin but low revenue – why aren't we selling more?
- Changed the output to allow the end user to run this query on their own and put the results in a spreadsheet
- Made Product Type a parameter
- Moved Product Type column to the left of Product Category

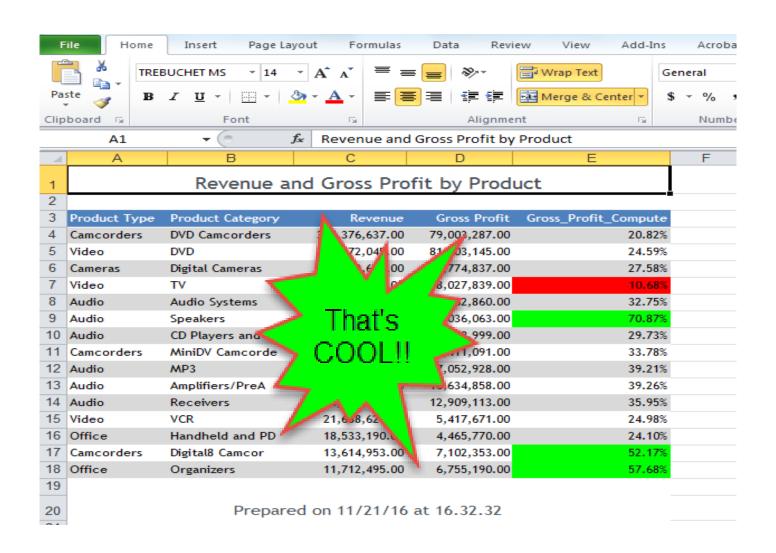






No More Green Screen

- Changed the look of the report
- Added Report Header and Footer
- Sorted by Revenue
- Created new calculated field for %Gross Profit
- Added traffic lighting to that new field
 - Can easily spot that bottom two products are high margin but low revenue – why aren't we selling more?
- Changed the output to allow the end user to run this query on their own and put the results in a spreadsheet
- Made Product Type a parameter
- Moved Product Type column to the left of Product Category







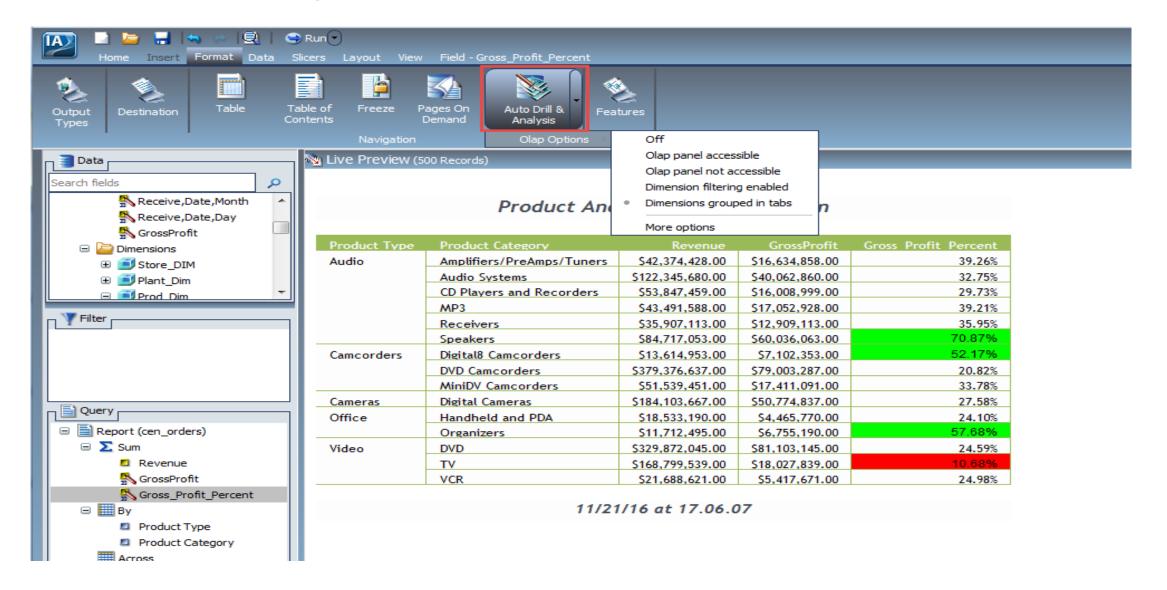
Now Let's Talk about those Limitations

- Chained Queries probably require some analysis and re-write because either you don't NEED to chain the queries because of more powerful function in DB2 Web Query or there is a better way
- Pre 7.2 it uses the older DB2 query engine, and likely even at 7.2 or 7.3
 - Poorer performance than a native SQL Query that DB2 Web Query generates
- Fields available to you to add to the report are limited to the original fields defined in the Query/400 definition
- And think about this if you have 1000 Query/400 definitions where there is a lot of redundancy or even ones that are obsolete this is your chance to clean this up and consolidate
- IBM has some tools to you help you too
- But here's an example:





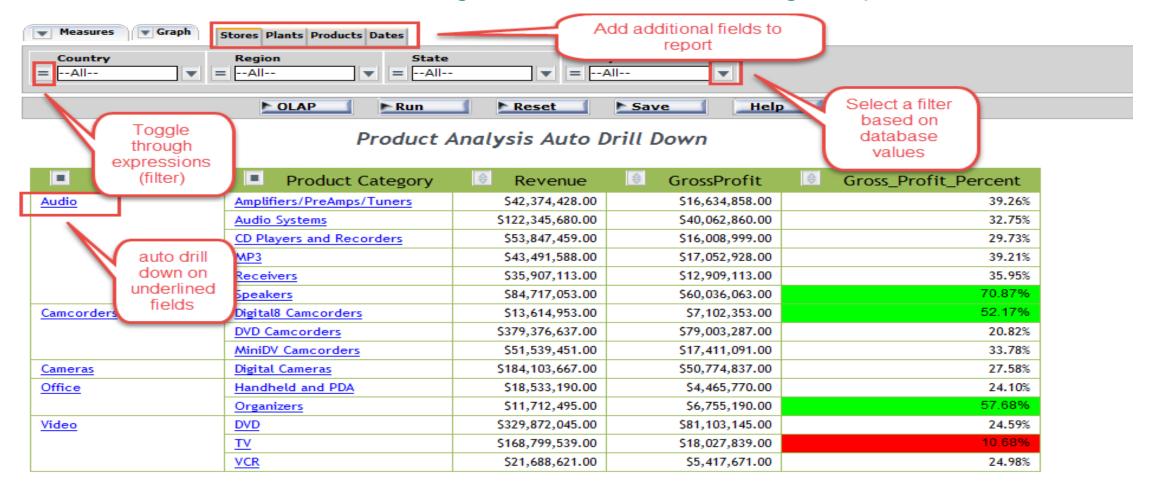
Build That Same Report from Scratch and make it "Auto Drill"







Now the end user can iterate through the data – with a single report



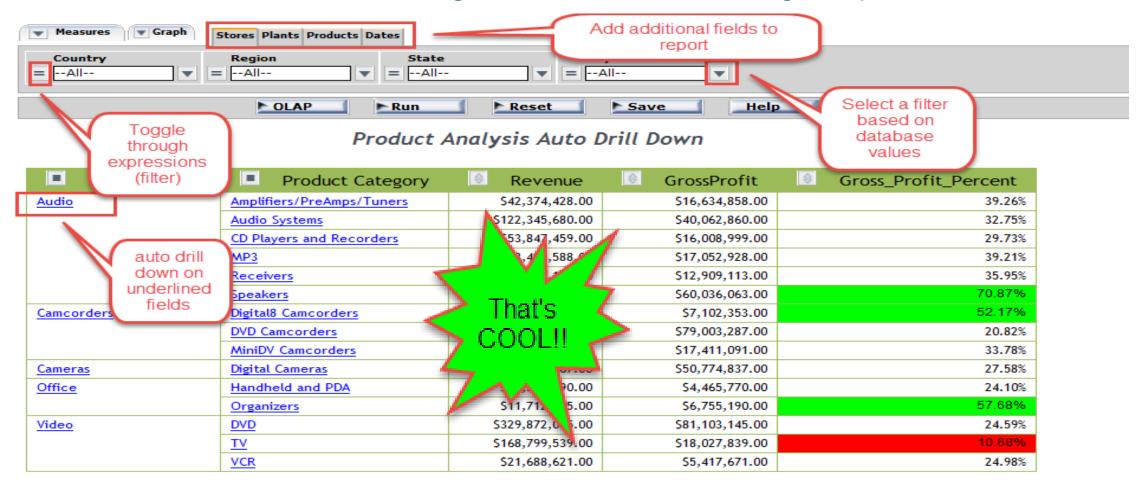
11/21/16 at 17.07.50

(





Now the end user can iterate through the data – with a single report



11/21/16 at 17.07.50

-





Drill down on just Audio products

Product Analysis Auto Drill Down

Product Category	Revenue	⊕ GrossProfit	⊕ Gross_Profit_Percent
Amplifiers/PreAmps/Tuners	\$42,374,428.00	\$16,634,858.00	39.26%
Audio Systems	\$122,345,680.00	\$40,062,860.00	32.75%
CD Players and Recorders	\$53,847,459.00	\$16,008,999.00	29.73%
MP3	\$43,491,588.00	\$17,052,928.00	39.21%
Receivers	\$35,907,113.00	\$12,909,113.00	35.95%
Speakers	\$84,717,053.00	\$60,036,063.00	70.87%

11/21/16 at 17.07.50





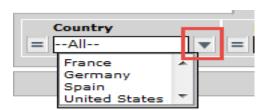
• Drill down on just Audio products

Product Analysis Auto Drill Down

Product Category	Revenue	⊕ GrossProfit	⊕ Gross_Profit_Percent
Amplifiers/PreAmps/Tuners	\$42,374,428.00	\$16,634,858.00	39.26%
Audio Systems	\$122,345,680.00	\$40,062,860.00	32.75%
CD Players and Recorders	\$53,847,459.00	\$16,008,999.00	29.73%
MP3	\$43,491,588.00	\$17,052,928.00	39.21%
Receivers	\$35,907,113.00	\$12,909,113.00	35.95%
<u>Speakers</u>	\$84,717,053.00	\$60,036,063.00	70.87%

11/21/16 at 17.07.50

Filter on United States and add REGION column to report



Product Analysis Auto Drill Down







 Look for Trends by adding YEARS across the top (and clean up the report by removing a couple of columns):





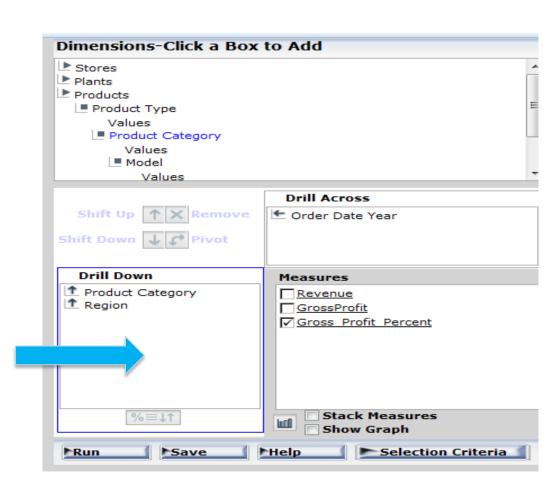


 Look for Trends by adding YEARS across the top (and clean up the report by removing a couple of columns):

Product Analysis Auto Drill Down					
		Order 2015	Date Year 2016		
Product Category	Region				
Amplifiers/PreAmps/Tuners	East North Central	41.09%	36.13%		
	East South Central	38.09%	42.14%		
	Middle Atlantic	34.87%	38.85%		
	Mountain	43.50%	49.60%		
	New England	42.12%	35.44%		
	North	37.44%	39.41%		
	<u>Pacific</u>	36.03%	39.23%		
	South Atlantic	41.86%	40.01%		
	Web(R)	39.88%	37.15%		
	West North Central	49.87%	17.29%		
	West South Central	41.12%	42.16%		

Product Analysis Auto Drill Down

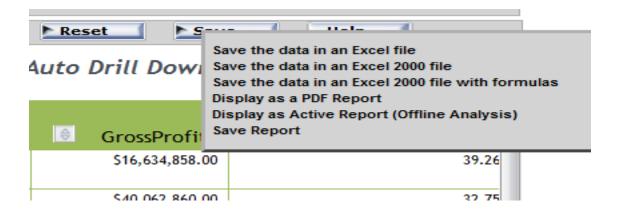
Use Pivot tool to make multiple changes at once:







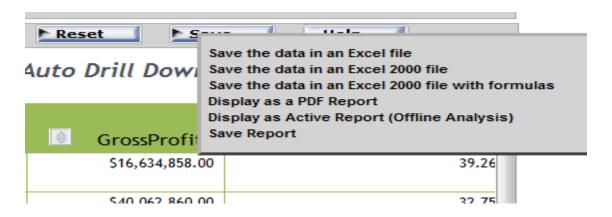
- Slice and Dice through the data
- Save to Excel, or "Active" report
- Save as another report on the BI Portal Tree







- Slice and Dice through the data
- Save to Excel, or "Active" report
- Save as another report on the BI Portal Tree



 With this ONE "auto drill" report, you just eliminated at least 20 Query/400 reports (probably more)







Learning How to Build Reports with InfoAssist

- 1. Get the EZ-Install Package Includes everything you need to get started with InfoAssist Tutorials Send email to QU2@us.ibm.com and request it (include s/n)
- 2. Work through the EZ-Install "next steps" at ibm.biz/db2wqezinstall Guides you through what is included and how to use various deliverables in EZ-Install
- 3. Build your first report using above website documents, then pursue the 14 chapters of self-guided Tutorials (link to that same website)
- 4. There are advanced report authoring concepts and tips and techniques not covered in the Tutorials
 - * Get Assistance
 - * Leverage the online Forum and additional documentation





Building Dashboards

- There are actually multiple ways on build and deploy dashboards, but all have common methodology
 - Build reports first and separately, then place onto dashboard using one of the different layout tools based on requirements
 - Personal Dashboard? Use BI Portal 'Page'
 - Simple Active Dashboard enabled for Mobile? InfoAssist "create new dashboard"
 - Complex HTML Dashboard? Use Developer Workbench HTML Composer
- Due to time constraints, let's look at an InfoAssist built "Active" Dashboard

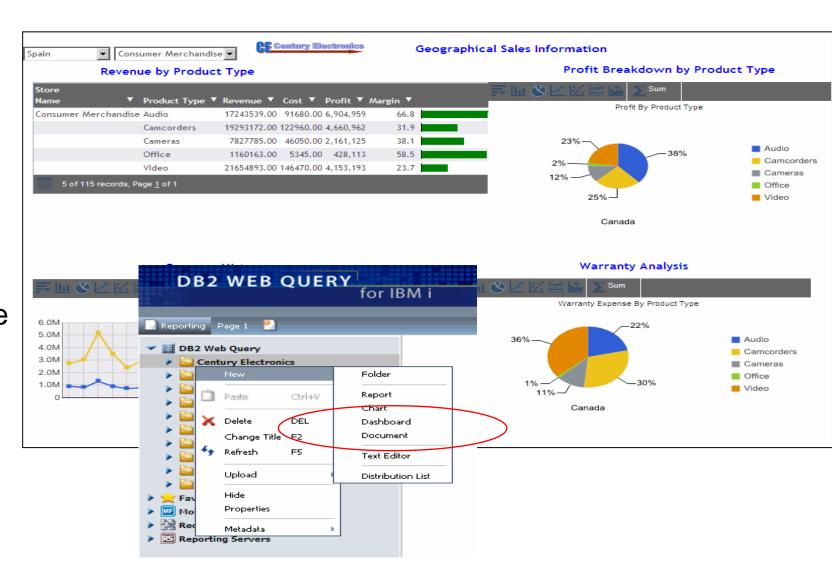




Mobile Dashboards with "Active Technology" Dashboards

- •There may be times where you want multiple controls or do not want EVERY report on the dashboard to be coordinated
- •With this technology, the dashboard is in STATIC data format, but you can work with the data in any dashboard

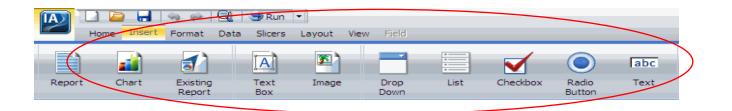
 Open up a new DASHBOARD in InfoAssist

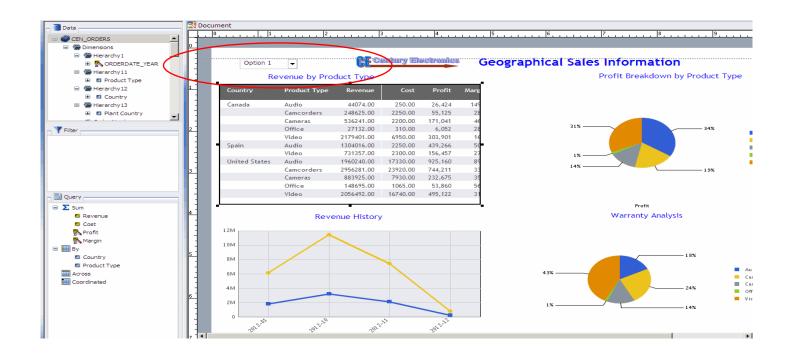






- Make sure you select one of the "Active" technologies
 - Remove coordinated fields if in place
- •Select INSERT and note the control options you can add. Select DROP DOWN to add a drop down box and position outside of existing report areas

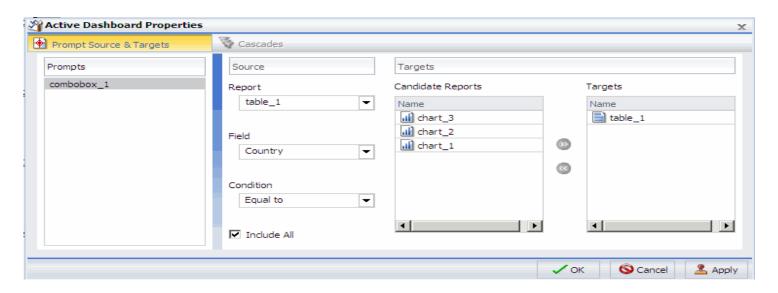


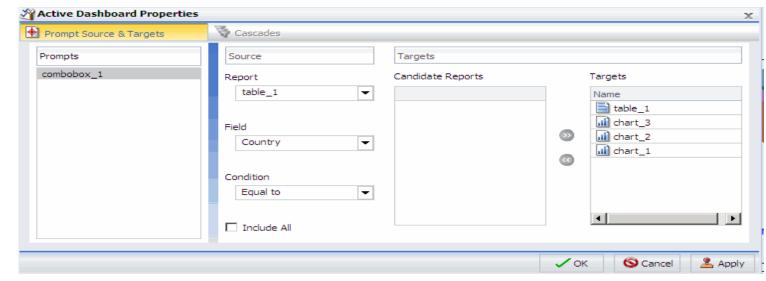






- •Right click on the drop down box and select properties
- •Select the name combobox_1 on the left under Prompts, select table_1 under Reports, and select Country under Fields
- •Hold shift and click each of the names of reports/charts you want to link together under the Candidates column.
- When you have selected them all, use the movement arrow icon to move your reports and charts from left to right

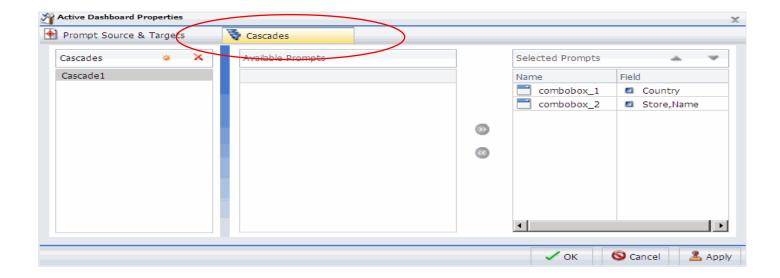








- •Add the 2nd control for another prompt (e.g., Stores) as before
- •Now when you right click, you can select the CASCADES tab to set the order of selectivity for the 2 control boxes
- •Please note that Drop Downs, Lists, Radio button groups, and Check box groups all work similarly and require the same configuration to link them to charts or reports.









•Finished Product!





To Learn More

- DB2 Web Query for i Website
 - Ibm.biz/db2webqueryi
- DB2 Web Query for i Wiki
 - Ibm.co/db2wqwiki
- DB2 Web Query Getting Started Enablement:
 - https://ibm.biz/db2wqconsulting
- Demonstrations:
 - Wizard Analytics: https://ibm.biz/DB2WQWizards
 - End User Demos: https://ibm.biz/db2wqreportingdemos
 - Getting Started Videos:
 https://ibm.biz/db2wqgettingstarteddemos
- Follow DB2 Web Query guy Doug Mack on twitter at @mckdrmoly or check out his blog at http://db2webqueryi.blogspot.com/ for all the latest



© 2017 IBM Corporation





Thank You