

Retiring Discoverer

How We Found There is NO Silver Bullet



Oracle Analytics, BI and Big Data
Special Interest Group

September 11, 2018

Details About Today's Webinar

- Submit your questions in the Questions box on the bottom right of your screen
- Your name and questions will not be accessible to other webinar participants
- A copy and recording of the presentation will be available after the webinar to attendees
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Agenda

- Analytics, BI and Big Data SIG and Presenter Introductions
- Xilinx Case Study
- Questions

Analytics, BI and Big Data SIG Focus

- The Analytics, BI and Big Data SIG's mission is to provide education and networking opportunities for over 2,000 SIG members in 60 different countries interested in Oracle Analytics, BI and Big Data subject matter, including on-premises and cloud solutions.
- Why should you [join](#) OAUG and participate in the Analytics, BI and Big Data SIG? Benefits include:
 - **Education and Training.** Access regularly-scheduled webinars from Oracle's product teams and Analytics, BI and Big Data customers and partners.
 - **Networking.** Connect with your peers and other leaders in the Analytics, BI and Big Data customer and partner community both through the SIG's social media channels as well as through attending events such as the Analytics, BI and Big Data SIG group meetings at OAUG Collaborate and Oracle OpenWorld.
 - **Professional Development.** Apply for a volunteer role and take advantage of the opportunity to participate in areas such as communications, recruiting or facilitating a domain area that you might not get to work on in your "day job!".
 - **Our Team Does Great Work!** Our predecessor SIGs (BI-Big Data and Endeca) are proud to have earned several "GEO/SIG Certificates of Distinction" from OAUG over the years and we earned the award again in 2018!



Your SIG Leadership

Role	Person(s)
Co-Chair	<ul style="list-style-type: none">• Kirby Lunger, Partner, Performance Architects• Jay Canupp, Practice Director, Enterprise Information Management, Axia Consulting
Secretary	<ul style="list-style-type: none">• Dianne DeNezza, Director of FIS Business Solutions, University of Pittsburgh
Education Coordinator	<ul style="list-style-type: none">• Ramesh Kumar, Managing Partner, eAlliance Corporation
GEO/SIG Liaison	<ul style="list-style-type: none">• Ryan Legge, EVP, NuWave Solutions
Communications Coordinator	<ul style="list-style-type: none">• Morgayne Keyser, Business Analyst and Test Lead, NuWave Solutions
Member-at-Large	<ul style="list-style-type: none">• Raghav Venkat, BI Architect, City of Las Vegas• Jennifer Fairchild, BI Analyst, Sales IT Team, Boar's Head• Craig Madore, Product Manager, Enterprise Student Systems, Harvard University
Oracle Liaison	<ul style="list-style-type: none">• Emily Cikovsky, Principal Product Manager, Analytics, Oracle Corporation

Speaker Biography



Chao-Yee Watson

- Over 20 years managing business process and system change in High Technology
- Extensive experience driving international change management and enterprise-wide roll-outs with a focus on process design, key performance metrics design and resource optimization
- Thought leader in design and re-engineering of processes in the areas of business intelligence, program management, data governance, customer service, supply chain management, demand management, product lifecycle management
- Featured speaker and panelist at multiple OAUG COLLABORATE conferences, OAUG NorCal ConnectionPoint and PMI Silicon Valley Symposium
 - PMP® certified
 - MBA from Santa Clara University
 - BS in Mechanical Engineering from UC Berkeley

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Xilinx Case Study Agenda

- Introduction
- State of Reporting at Xilinx
- Approach to Determining Requirements
- Evaluation of Replacements
- Plans to Replace
- Current Status of the Replacement Projects
- Key Learnings

Introduction

As Xilinx, a semiconductor company, looked to replace Discoverer, it found that depending on business function that there was no single tool or application which could successfully satisfy Discoverer users.

This case study discusses how one department, Customer Operations, successfully replaced Discoverer through a combination of OBIEE, BIP and APEX tools.

Objective 1: Discuss Xilinx's roadmap for Discoverer retirement and the roadblocks which continue to delay replacement

Objective 2: Talk about the specific Customer Operations business case and how this department utilized Discoverer

Objective 3: Share the solutions to meeting business needs via OBIEE, BI Publisher and custom APEX tools

State of Reporting Tools

- Discoverer remains one of the legacy reporting platforms in use
- Other custom tools have been created using PL/SQL, APEX, PHP
- Original plan was to retire Discoverer in Nov 2016 and replace with BI Publisher 11g
- This plan was delayed based on user requirements
- The plan was to roll out both BIP reports as well as OBIEE analysis and a yet to be defined analysis tool to fulfill all use cases
- The plan has now changed to include OBIEE, BIP and APEX
- Potentially other new ideas not considered back in 2016 are now on the table

Discoverer – the “Swiss Army Knife”

- Original intent when Discoverer was implemented over a decade ago was to replace Oracle Reports and other flat file reports
- The management model for Discoverer was loose
- IT created the folders in Business Areas
- The users became rather creative in how they utilized Discoverer

How Discoverer was Used

- Static Reports
- Shared Customized Reports
- Volume Data Extracts
- Ad hoc Data Extracts

Options for Discoverer Replacement in 2016

- BI Publisher
- OBIEE Answers
- BICs
- APEX Applications
- Tableau
- TOAD
- Other legacy systems
- Don't replace Discoverer
- Other options not yet evaluated

Customer Operations Use Cases

- Xilinx Customer Master Team

- Team utilizes static reports in their daily tasks maintaining customer master data

Total Reports	Reports Confirmed Not in Use	Reports Pending Response	Reports Owners No Longer With Xilinx	Reports Confirmed in Use
38	0	0	0	38

- Xilinx Customer Operations Account Managers

- Team created many customized reports from folders with no guidance or restrictions from IT
- Reports ranged from static reports to shared reports to one-time data extracts
- Many of these reports are redundant

Total Reports	Reports Confirmed Not in Use	Reports Pending Response	Reports Owners No Longer With Xilinx	Reports Confirmed in Use	Total Tables	Tables Confirmed Using
5279	1250	1444	2111	474	176	45

Reporting Tools Considerations

BI Publisher	OBIEE Answers
Highly formatted or specific layout reports	Ad-hoc analysis
Operational or transactional data reporting. Any aggregations or pivots must be done by end-user	Analytical reporting. Aggregations, pivots, and drills defined in RPD. Drag and drop for end-user
Power users or Business Analysts (technical users) reporting on non-hierarchical data. Data for the report is directly retrieved via SQL.	Known data elements to answer the question (e.g.: <i>Opportunity</i>) Dimensions and Facts are pre-built
Requires SQL expertise for creating Data Models. Can be a risk when used by novices	End-user reporting. No SQL expertise required
Multiple data sources including OBIEE Subject Areas	Row-level security (Must use Answers)
Quickly and easily develop or change reports (source data)	Requires a longer development cycle to incorporate all required data elements into the RPD
Easily create multiple report layouts from a single data model	Reporting only predefined subject areas
Ad-hoc reporting	Hierarchical data (Must use Answers)
Summary: BI Publisher is primarily meant as a tool for creating highly formatted, published reports (Invoices, Quotes, etc) by technical users. It is NOT suited for analytical reporting OR for hierarchical data OR where row-level security is required.	Summary: OBIEE Answers is the primary, best of class, analytical reporting tool. Best used for reporting of structured and pre-summarized data.

Two Use Cases – Two Tool Solutions

- Xilinx Customer Master Team
 - Chose to use BI Publisher to replace static reports
 - Small group of homogeneous users
 - Users only needed formatted reports for daily use
 - Team needed push reports that could be scheduled
- Customer Operations Account Management
 - Chose to use OBIEE Answers to replace Discoverer
 - Large group of disparate users
 - Report format less important as most extracted data from Discoverer to slice and dice in Excel
 - Needed ad-hoc reports with differing parameters

Results from Xilinx Customer Master Reports Conversion

- Conversion started June 2016

Status <i>(as of February 2018)</i>	#	%
Reports in PROD	32	71.1%
Reports – Tested & Pending IT <ul style="list-style-type: none">• Unable to extract huge report• Unable to extract 3 months data• Issues on parameters & data extracted	4	13.2%
Reports - Not Ready in UAT <ul style="list-style-type: none">• Pending Finance/GD - GD BI project is currently on hold	2	13.2%
Total reports to migrate	38	100.0%

- Reports not converted are still on hold because Finance Department has not found a suitable replacement solution for their business requirements

Plan to Replace Remaining Xilinx Customer Master Reports

- For reports where a large volume of data is required to be extracted, we are still evaluating potential options
- The Finance Department is in process of running several proof of concepts of reporting and analytics platforms
- There has not been a single solution so far that can replace Discoverer for their use

Evaluating Discoverer vs. BIP vs. OBIEE vs. APEX

Task / Requirements	Discoverer	BIP	OBIEE	APEX
User creates ad-hoc report	Yes	No	Limited	Limited
Data Model needs to be defined prior to report creation	No	Yes	Yes	Yes
Create / modify report parameters at runtime	Yes	No	Yes	Yes
Multiple levels of conditions at report level	Yes	No	Yes	Yes
Defining calculation functions at report runtime	Yes	No	Yes	No
End user creation of data model	N/A	No	No	N/A
Group by function	Yes	Yes	Yes	Yes
Multiple column selection at runtime	Yes	No	Yes	Yes
Drill down reports	Yes	Yes	Yes	Yes
Unrestricted Excel export	Yes	No	No	Yes

Replacing Customer Operations Account Manager Reports

- Plan to build a reporting schema in an Oracle database
- Tables will be created that will include all the data specified in the user requirements
- The schema will be made visible in the existing Customer Operations Subject Area in OBIEE
- Super users will build the reports
- Account Managers will be testing these reports as they are developed

How the Plan Went...

- Existing Oracle Database was utilized to aggregate data to stage for ETL's into OBIEE instance
- Out of the 45 views which were utilized in Discoverer, only 10 could be pulled into OBIEE
 - Lack of IT personnel with experience in setting up ETL's
 - Business scope limited by phasing of the project
 - Only 4 reports were created
- The four reports which were created received a good reception from the business
 - The reports were finished in October 2017
 - Bugs with the data delayed training and rollout until January 2018
 - Reports finally in use in production in February 2018
- Remaining Discoverer views will not be replaced with OBIEE

The Four Reports

ORACLE Business Intelligence

Customer Operations Reporting

Open Order Report | Closed Order Report | Open Expedites | Closed Expedites | Data Dictionary

COAM --Select Value-- Ship To Customer Account --Select Value-- Warehouse --Select Value-- Part Number --Select Value-- Order Type --Select Value--
 XU NAME --Select Value-- Bill To Customer Account --Select Value-- CFD Fiscal Quarter --Select Value-- Product Family --Select Value-- SO Number contains any
 Customer --Select Value-- Channel --Select Value-- CSD Fiscal Quarter --Select Value-- Line Status --Select Value--

Apply Reset

12K <u>Not Meeting CSD</u> Orders Lines Not Meeting CSD	3K <u>CFD Outside Qtr</u> Order Lines Delinquent to Quarter	94 <u>Escalated Expe...</u> Escalated Expedites Edit - Export	15K <u>Orders With Hol...</u> Orders With Holds	3 <u>No CFD</u> Unscheduled >=2 days	37.6M <u>All Backlog (Qty)</u> Contains DevSys Orders
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XU Name	Ship To Customer Account	Ship To Customer Name	Ship To Customer Location Type	Bill To Customer Account	Bill To Customer Name	Marketing Part Number	Customer Part Number	Ordered Quantity	Unit Selling Price	SO Number	PO Number	CSD	CFD	Line Status	COAM	Customer Doc Date	Order Line Dollar Total
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These four tabs replaced a total of 200+ user reports and 10 views in Discoverer

New Plan for Discoverer Replacement

- Move forward with development of custom web applications in APEX
 - No dependence on IT for ETL development
 - All applications on Oracle database owned and maintained by the business
 - Functionality fits all business requirements for ease of use plus custom display of data
- Once remainder of Discoverer Reports are replaced by APEX applications, then Customer Operations will retire all 45 views in Discoverer
- Other departments refuse to retire Discoverer
 - For those reports, Customer Operations will continue to use Discoverer
- There is currently no target date or timeline for the final retirement of Discoverer

Customer Operations - Capabilities

2016	2017	2018
Discoverer Reports	Creation of OBIEE Dashboards and Reports	Creation and Enhancement of APEX and OBIEE Tools to Streamline Processes
Pre-Built Reports Applications and Dashboards	Creation of APEX Applications	Automation of Spreadsheet based business processes
	Creation of ad hoc SQL Queries	Organizing and utilizing Knowledge Bases

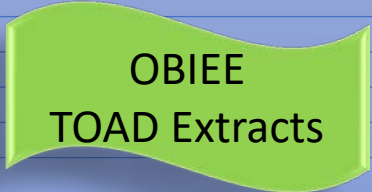
***Increasing Customer Operations Capabilities
Agile Response to Business Changes***

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Customer Operations Business Process Technologies

	Applications / Tools	Reports	Dashboards / Cockpits / Gauges
Attributes:	Interactive Screens for Data Creation and Maintenance	Detail Data	High Level Indicators Tracking to Overall Target Ranges
	Backend of Application Stores Created Data	Transactional Data	Aggregation and Summary of Detailed Data
	May or may not connect to other Enterprise systems	Line Level Data	Includes Data Available from Other Departments
	Entirely Customizable	Flat File	Potential for Predictive Insights
	May also include Reports / Dashboards	Filterable and Sortable	May include drilldowns into Detailed Data from Summary levels
Usage:	For managing info not available in any other Enterprise system	Details used to trigger other transactional activities	Ensure processes are on track
	Reduce the risk of losing information currently stored in spreadsheets and/or SharePoint	Research into Details of Exceptions	Quickly identify Exceptions to investigate and correct
Business Processes / Uses:	Dealmaker	Backlog	Revenue Crawl
	Monster Forecasting	Shipments	Monster Heatmap
	XCFM	Expedites Details	Expedite Escalations / Budget
	Revenue Forecasting	ECD	
	MTV		
	Expedite System		
	POET / NPI POR		
Customer Scorecards			
	KPI's		



Improvements in Process

Applications and Reporting / IT Queues	Cust Ops Analysts Enhancements	IT Bugs	IT Enhancements
Deal Maker		1	
Design Wins		1	
Dev Sys		1	1
ECD		2	
ECB		3	
Orders/Order Change		23	4
Monster		3	
POS		3	
Expedite		7	
Revenue Forecast		1	2
Revenue		2	
Disti Inventory			1
COAM Hierarchy			1
OMFE Orders			5
OMFE Orders Pricing			4
B2B - EDI Order			2
OPSYS Expedite/Order			1
OPSYS Monster			1
Total In Prioritized / Working		47	18
			24

Latest Update – September 2018

- IT has heard the business groups
 - OBIEE will be supported but other options are open too
 - BI Publisher will still be supported but will not be emphasized as a preferred solution
- Multiple BI and Analytics POC's in process
 - Finance
 - Operations
 - Human Resources
 - Sales and Marketing
- Within Customer Operations
 - Customer Operations Discoverer reports retired in August 2018
 - Work continues to focus on
 - Enhancements for existing OBIEE reports / dashboards
 - New APEX Applications

Key Learnings

- Evaluate all options and explain the differences between each option to management
- Pick the right platform based on user needs
- Treat all users as individuals but don't let a single user bog down the discussion of requirements
- Don't assume any single technology will satisfy user requirements
- Be willing to try new technologies and revisit previous design decisions
- Don't short cut the requirements gathering process
- Make sure to include users in the design and testing process

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Questions?

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