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In March 2010 there were over 400 Essbase customers still using a version prior to 7.0.

- What are they using it for?
- Why don't they upgrade?
- Do they know about the improvements that have been made in the past 8 years?
- What are those improvements?

# Today's Goals



- · What are people using Essbase for today.
- What new features are people taking advantage of since Essbase 7
- The newest features in 11 and 11.1.2
  - · This section will include examples
- · Ancillary Tools Notes and updates
  - Add-in
  - Smart View (I promise not to try and sell you on it)
- · What's upcoming

 $M \\ \\ IND \\ \\ S \\ \\ TREAM$ 

# Essbase - the Wikipedia version



**Essbase** is a multidimensional database management system (MDBMS) that provides a multidimensional database platform upon which to build analytic applications. Essbase, whose name derives from "Extended Spread Sheet dataBASE", began as a product of Arbor Software, which merged with Hyperion Software in 1998. Oracle Corporation acquired Hyperion Solutions Corporation in 2007, as of 2009 it markets Essbase as "Oracle Essbase". Until late 2005 IBM also marketed the product as DB2 OLAP Server.

**Oracle Essbase** 

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When my Mom asked what I did I gave her this example and she told me to stop being a smart ass.

# Essbase - my version



**Essbase** is an incredibly powerful analytic tool that relates data together via dimensions and allows you to perform in depth analysis by dragging, dropping, double right clicking and double left clicking inside Excel. Besides easy drag and drop it can do powerful calculations like this:

```
IF (@ISMBR ("Fin Class - Medicare - General"))

1.35*(@POVVER ((1+(NumIntRes/NumBeds)), .405)-1);

ELSEIF (@ISMBR ("Fin Class - Medicare - HMO"))

"Fin Class - Medicare - General"->"IME%";

ENDIF;
```

It's ease of use is what turned me into a computer geek.

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So I made up this version for my mom. (And gave her a demo)





That's nice but what are people using it for?

#### Some Essbase Uses



- Allocation model to perform Customer, Channel, Supplier profitability
- Inventory analysis and automated re-ordering
- · Project Staffing models
- Calculation of rebates based on volume contracts
- Analysis of Data Warehouse data
- Risk Analysis
- Insurance Reimbursement calculations
- Actuarial Calculations
- Driver based budget calculations (With Planning and Stand alone)

#### **Essbase Version 7.0 New Features**



- ASO
  - Increased Essbase capability to handle more data, but not best option because there was no incremental update capability
- Introduction of MDX
- · Administration Console
  - · New look to App Manager but same functionality
- Create Blocks in Calc Scripts
  - SET CREATEBLOCKONEQ and SET CREATEONMISSINGBLK
- Trigger Functionality
- Unicode Support
- Data Mining Added

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#### **MDX – MultiDimensional eXpressions**

# **System 9 New Features**



- ASO Restructuring
  - · Not Necessary to dump all data and reload
- Export 0-Level Data from ASO
- BSO Support for Duplicate Member Names
- Extended use of Substitution Variables
  - Abitlity to use in; Member Formulas, Security filters, MDX statements, Partition Definitions, certain Rules Files locations
- Data Mining Enhancements
- 64 Bit
  - · First on Itanium Chips then on all 64 bit chips

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Most Additions in System 9 were things that would be useful to other applications like Planning, Workforce Planning, Capex Module or Profitability Cost Management



#### Essbase 11.1.1.3 New Features

- · Lifecycle Manager Integration
- Typed Measures Text and Dates
- Format Strings
- Varying Attributes
  - · This was very big for retail customers tracking same store sales
- Backup & Restore Options
  - Introduced Transaction Logging which upgraded Essbase's IT readiness
- Clear Data from Specific Regions of ASO Databases
  - · Big in the evolution of ASO
- Environment Variables accessible to BSO Calcs
- · Batch insertion of data into Relational Databases from BSO
- Implied Share Override
  - · Big development for Future looking applications Planning applications
- · Parallel SQL loads to ASO databases

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Version 11 was the first Oracle release and you can see in the Oracle releases much more concentration on what I would call true database functionalities, such as, Transaction Logs, Clustering etc.

#### **Essbase 11.1.2 New Features**

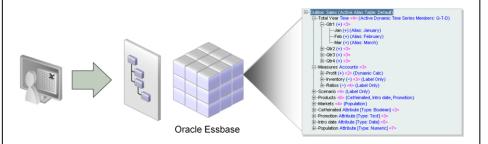


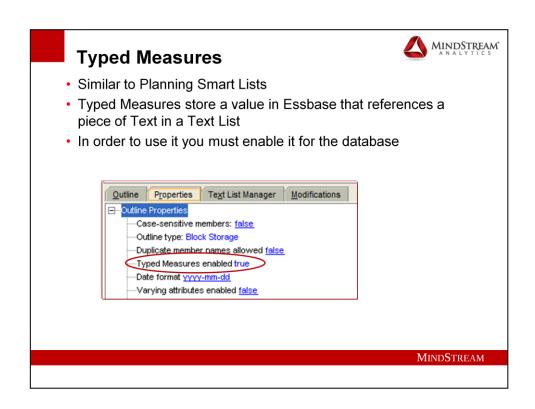
- HFM Analytic Link
- More Integrated Security
  - Good & Bad Easier to set up, less flexibility
- Allocations on Aggregate Storage
- Custom Calculations on Aggregate Storage
- @XWRITE
  - · Can be used to create blocks during calcs
  - Need Intelligent Calculator Off. (Update Calc Off)
- @RETURN
  - · Can exit a calc script upon logical conditions
- Export Metadata to XML
- Clustering



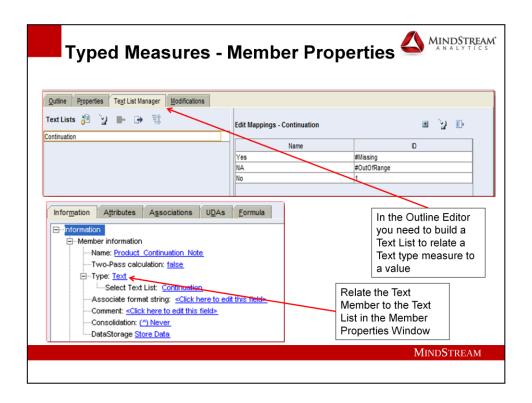
That's an impressive list of new features but wasn't there a mention of examples?

# Let's start with 11.1.1.3 examples

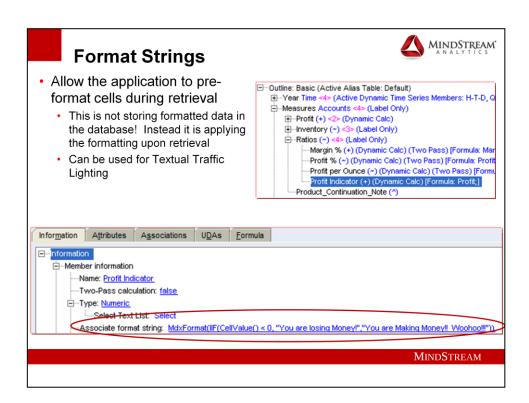




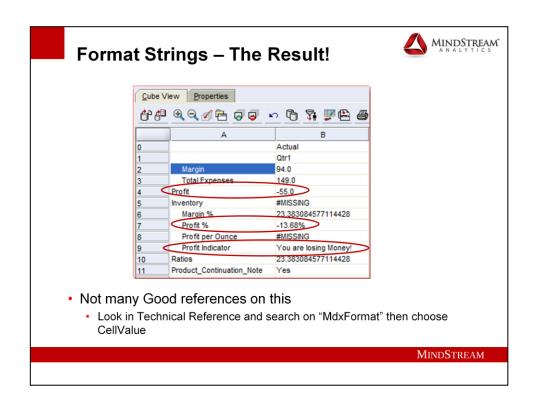
**Enable "Typed Measures enabled" in the Outline Editor.** 



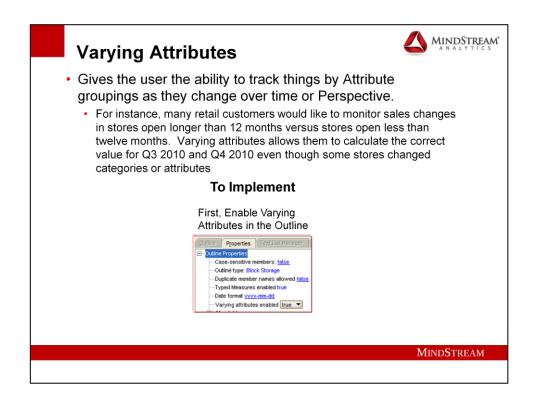
In this example I made a copy of Sample:Basic and changed the "Typed Measure" property of the Outline to "Enabled". Then I added a Text List with a value of "Yes" for #Missing and a value of "No" for the value 1. #Missing and #OutOfRange mandatory in Text Lists. Then I added a member called "Product\_Continuation\_Note" as a sibling of "Ratios" This will show that the Product is going to be produced during that time period within that Market for that Scenario unless someone loads a 1 to the database to "Shut Off Production".



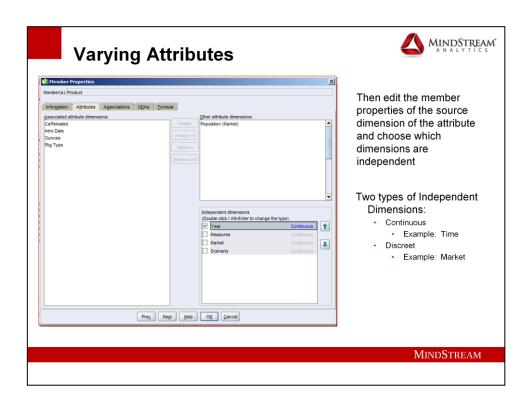
Added a dynamically calculated member to Sample:Basic called Profit Indicator and had a member formula to reference the amount of Profit. Then added: MdxFormat(IIF(CellValue() < 0), "You are losing Money!", "You are Making Money!! Woohoo!!!")) to format the cell with a message for the user.



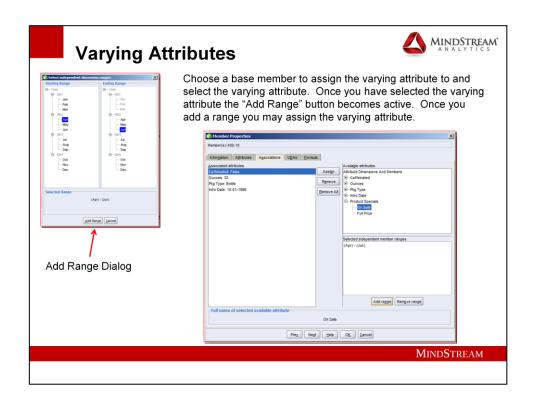
Profit % is another Format String member and it illustrates that you can utilize this functionality to format the data as well as create messaging. One word of caution about formatting data this way is that the data would be formatted at each member level within Essbase and that would make administration of all the members difficult.



This example would be perfect to analyze the effect sales or other promotions had on different products. Using Sample.Basic enable Varying attributes in the Properties section of the outline editor.



Then edit the member properties of the source dimension, in my example this is product. I set the Year as the independent dimension so different products can have promotions at different times of the year.



Then I added an Attribute dimension called "Product Specials" to Sample Basic and made it a vary attribute with the Independent dimension Year. Then I created two attributes and tagged them with different ranges on different products.





- Greatly enhances Essbase backup strategies and allows for roll forwards of transactions
- This is an example of Oracle making Hyperion software more "IT Ready"

## Step 1 – Enable Logging

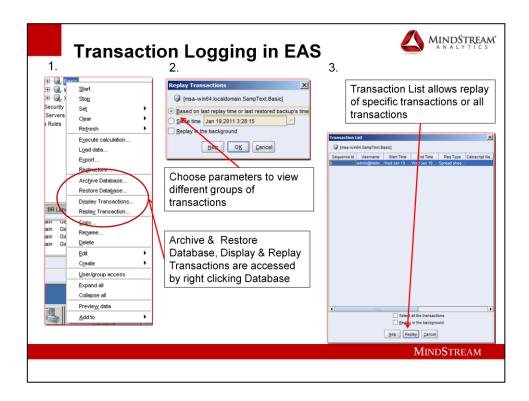
· Essbase.cfg setting:

TRANSACTIONLOGLOCATION [app name][db name] LogLocation NATIVE ENABLE|DISABLE

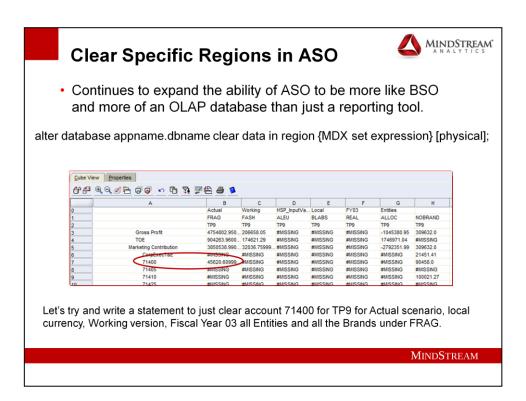
- My example
  - TRANSACTIONLOGLOCATION SampText D:\esbTransactions\Logs NATIVE ENABLE
    - If you leave out the App Name it will take effect for the server

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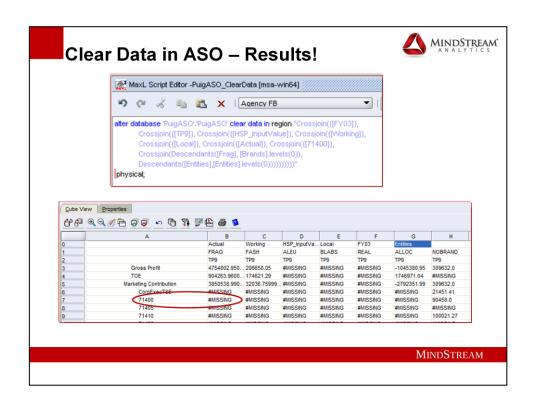
Transaction Logging is a great enhancement for applications that get a lot of read/write or have a lot of independent calculations that are user run. This way you can roll forward transactions after a given archive point.

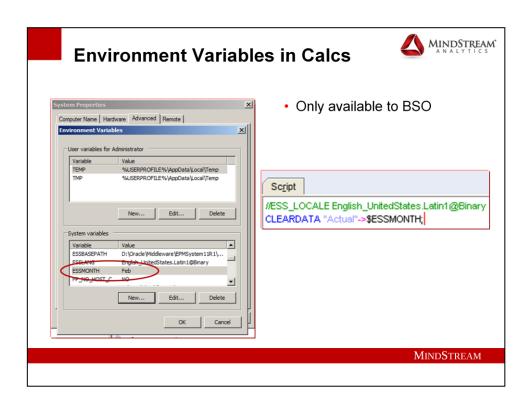


In order to utilize the transaction roll forwards, you right click on the database name in EAS and choose "Display Transactions". Then choose the parameters you'd like to filter the amount of transactions by. In my example I chose since the last replay time or last restored backup time. Then Essbase will show you all the transactions. You can replay them individually by clicking on each one or replay all.

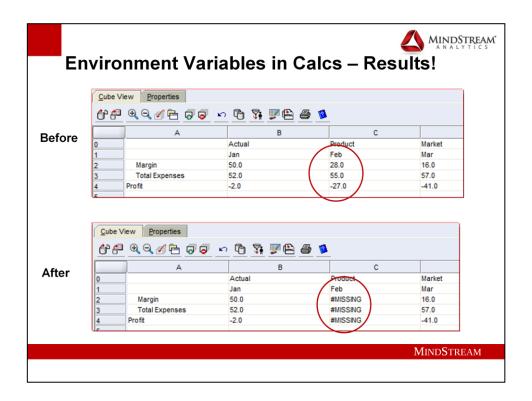


In this example we want to clear the data from the descendants of FRAG for all 0-level entities for Actual->Working->HSP\_InputValue->Local->FY03->TP9 for Account 71400.





For an example of the Envrionment Variable being used in a Calc script I created and Environment Variable called "ESSMONTH" on my server and gave it a value of "Feb".



## **Batch Insertion to Relational DBs**



- Essbase.cfg setting
  - DATAEXPORTENABLEBATCHINSERT
- Determines whether or not Essbase is able to utilize database 'batch insertion' instead of 'row by row' insertion.
  - Useful for Planning applications when the plan or forecast is being fed back into a data warehouse or GL system

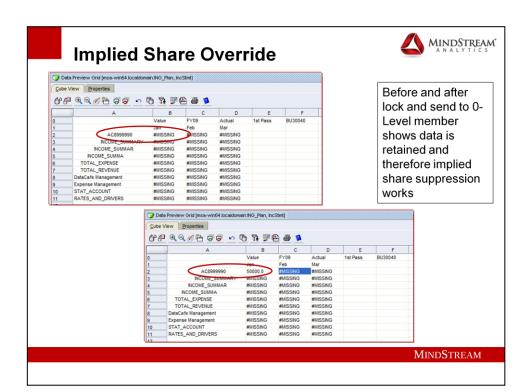


- · Essbase.cfg setting
  - IMPLIED\_SHARE [app name] TRUE|FALSE
- Two API Functions are available for this setting as well:
  - EssOtlGetImpliedShare and EssOtlSetImplied Share

```
Essbase config settings (essbase.cfg)

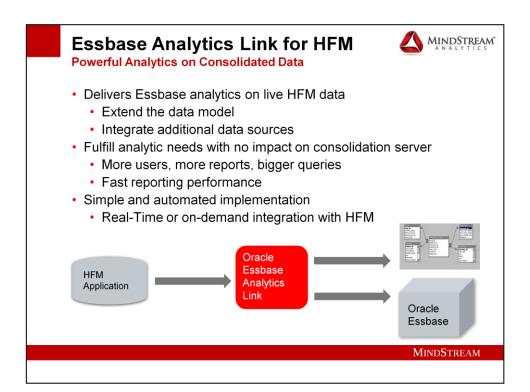
SERVERD-CRITERU 33760
AGENTIESC Kympervice

CLEARLOGFILE FALSE
NETRETRYCOUNT 1000
NETDELAY 800
NETDELAY 800
CALCCACHE TRUE
CALCCACHEDEFALLT 5000000
CALCCACHEDFOH 199999999
CALCLOCKBLOCKHOH 500
CALCCACHEDFOH 199999999
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CALCLOCKBLOCKHOH 500
CALCCACHEDFOH 500
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```





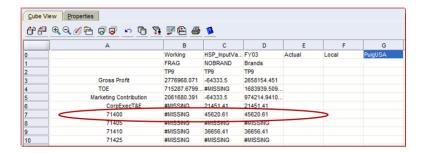
# On with the Really new stuff! 11.1.2 examples

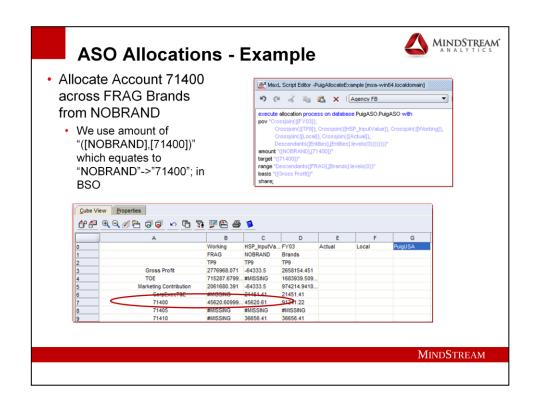






- · Two options to utilize this function
  - · Calc Manager
    - Calc Manager uses @MDALLOCATE
  - MaxL
    - Example Below



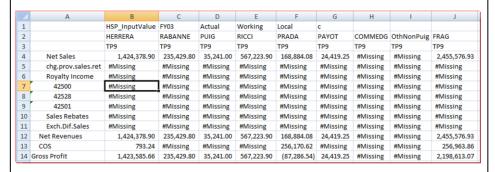


Drawback is that ASO needs a specific Target and functions like @ATTRIBUTE or @UDA are not supported.

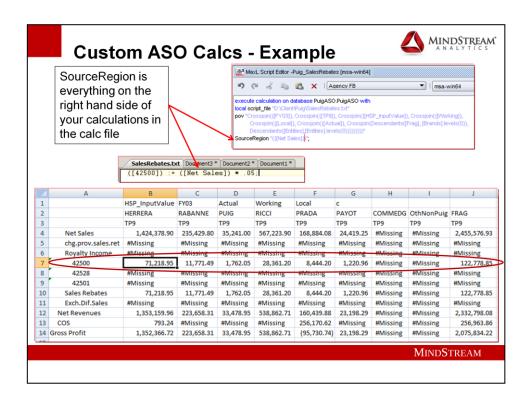


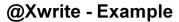
# **Custom ASO Calcs - Example**

· Done via MaxL with custom calculation file



Object is to calculate Sales Rebates in account 42500 of 5% of Net Sales Start with calculation file definition:







- Used to send data from one Essbase Database to another
  - Very useful for Planning applications that have workflows in multiple databases

#ESS\_LOCALE English\_UnitedStates Latin1@Binary
Name: Drivers

Purpose: To feed the IncStmt detabase the drivers it needs from this Volume database. It has been determined through testing
this method creates the least amount of extra blocks and performs the fastest while creating blocks for us.

Created: 09/14/2010
Author: Alex Ladd

\*/

\*\*BEWARE - The Intelligent Calculator
essentially shuts off this function

\*\*FIX ("Actual","Curr", "No Entity")
Fix("Channel", "PR\_EO")

\*\*Foress New EO Accounts Driver \*/
\*\*MTD Court Gross Deposit Accounts", \_RevCube\_, "Value", "Gross Account EO");
}





- 64 bit version of 11.1.2 Spread Sheet Add-in will not install if you have other Hyperion components installed.
  - Resolution is to download the 32 bit version of the Spread Sheet Add-in and install that.
- Smart View is going to Beta this year with the version Oracle claims will give complete parity with the Spread Sheet Add-in



# **Oracle Essbase Roadmap**

#### Oracle Essbase 11.1.3

- · Full integration with BI Foundation installation
- · Oracle Business Intelligence Essbase Integrator
- · Fusion Middleware Integration
- · Active-Active high availability clustering
- · User-defined objects
- · ASO calc extensions
- · Storage optimization
- Metadata integration
- Fast-restructure of ASO outline changes
- · BSO restructure performance improvements
- · Parallel-calc performance improvements
- · Enterprise Manager replace EAS admin functionality
- · Unify capabilities in Studio and EAS
- · Essbase as a Studio Source

