



# SYNERGY 2015

SEATTLE, WA, USA

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## Data Dictionaries 2.0

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# Creating Data Dictionaries

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- The DD Class and object layers

DataDictionary

    cYourDataDictionary Class

        TableDictionary Class

            oDataDictionary Object

# Data Dictionary Usage

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- View Based DEO Usage
  - Windows
  - Web
  
- Batch Processes

# Data Dictionaries and Web Applications

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- Should you create custom web and windows DD
- What to do with existing “sinful” DD classes

# Finding Records

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- Types of Finds
  - DD Finds
    - Request\_Find, FindByRowId
  - DD Reads
    - Request\_Read, ReadByRowId
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  - Command based finds
    - Find / Relate commands

# Controlling Relates in DDs

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- Controlling relates in Finds and Reads
  - No\_Relate\_State
  - DDOConstraintNeedsRelate

Get No\_Relate\_State of hoServer to bOldRelate

Get DDOConstraintNeedsRelate of hoServer iIndex to bNeedsRelate

Set No\_Relate\_State of hoServer to (not(bNeedsRelate))

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Set No\_Relate\_State of hoServer to bOldRelate

# Optimizing Constraints

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- Using DD\_Debug.dg
- Constraint Inheritance
  - pbInheritConstraints



# SQL Filters

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- Global
  - DF\_FILE\_SQL\_FILTER\_ACTIVE
  - DF\_FILE\_SQL\_FILTER
- DD Local
  - pbUseSQLFilters
  - psSQLFilter
  - pbApplyGlobalSQLFilters

# More about handling deleted records

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- How this was implemented:
  - Two new DD functions have been introduced that refind records:
    - FindByRowIdEx
    - ReadByRowIdEx
  - A new error DFERR\_CANNOT\_REFIND\_RECORD has been introduced. This is a handled error.
  - When a find fails, the condition is analyzed and handled appropriately
    - Changing views – no error is raised
    - Save and Deletes – The handled DFERR\_CANNOT\_REFIND\_RECORD error is raised
    - Changing grid rows – The grid will attempt to refresh itself with more current records. A handled error may be optionally raised. By default no error is reported.
  - This is all done automatically. No programming changes are required.

# More about handling deleted records

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- If you use FindByRowId and ReadbyRowId in your code, you can change over to the newer functions and take advantage of this as needed.

Get FindByRowIdEx of hoInvokingServer iFile rRowId to bSuccess

If not bSuccess Begin

    Error DFERR\_CANT\_REFIND\_RECORD

End

# Working with “Extended” Text & Binary

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- Extended DD buffers
  - Windows
    - pbBypassDDFieldBuffer
  - Web
- Performance / memory implications
- Binary vs. Text considerations
- SQL variable length data considerations

# Cascade Delete

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- Main DDO: `Cascade_Delete_State`
- Child DDOs: `CascadeDeleteAllowed`
- Every Child Record: `Validate_Cascade_Delete`

# Null Parents

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- ParentNullAllowed
- Autofind considerations
- Request\_ClearBindingTable (DEO)
  
- CascadeDeleteParentNull

# Working with Related Tables

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- Relates set at three levels
  - Table Definition
    - Defined in table editor
  - Application Level
    - Get | Set DF\_Field\_Related\_File / DF\_Field\_Related\_Field
  - DD Class/Object level
    - pbUseDDRelates
    - Set Field\_Related\_FileField
    - Get Field\_Related\_File / Field\_Related\_Field
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# Committed Record Support

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- What is a Committed record
- Field Commit
  - DD\_Commit field option
- Parent Change Commit
  - ParentNoSwitchIfCommitted
- DisplayOnly vs NoPut Commit
  - Field\_CommitNoEnterOnIndex



# Useful DD Events

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- OnNewCurrentRecord
- OnPreFind / OnPostFind
- OnSaveRecord

# DEO Refresh Event

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- What Refresh does
- How you can use it
- Web considerations

# WebApp DEO Changes

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- Prompt Lists vs Select views
- Dynamic enabling / disabling
- Finds
- Autofinds

# WebApp View/DD Changes

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- Dynamic Constraints
- Change in Save / Delete & Clear
  - Confirmations
  - Post Save, Clear, Delete View events
    - OnViewSaved
    - OnViewDeleted
    - OnViewCleared

# Thank you

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