



4-5 MARCH 2010 IN SEEFELD, AUSTRIA

Visual DataFlex 2010 version 16.0 Grids

John Tuohy



Grid Specifications & Requirements – High Level

- **Provide a better looking grid**
- **Provide a grid with more features**
- **Solve the non-standard vertical scroll bar appearance and behavior issue**
 - This s an issue with dynamic non-batch grids (i.e., most of our grids)
- **Create a better programming interface**
 - Our out of the box grids work Ok but extending them can be difficult
- **We will be creating new grid classes**
 - The existing grid classes (Grid, dbGrid, dbList) will remain unchanged and will work as they always have
 - Must be able to mix new and old grids within a program



Grid Specifications & Requirements – Details

- **Good performance with large sets of data**
- **Clean, attractive and contemporary appearance**
- **Skin-able**
- **Strong Text editing capabilities**
- **Masked display and input support using our *current* mask strings**
- **Flexible justifications modes for display and input**
- **Move / Hide columns**
- **Lock left column from scrolling**



Grid Specifications & Requirements – Details

- **Custom appearance (colors, fonts) at the grid, row, column and cell level**
- **Enable / Disable grid, row, column and cell**
- **Headers should support**
 - **Single and Multi-Column Headers**
 - **Images and Text**
- **Cells should support**
 - **Text with input and edit masking**
 - **Multi Line Text**
 - **Combos**
 - **Checkboxes**
 - **Prompt buttons**
 - **Images**
 - **Hyperlink text**



4-5 MARCH 2010 IN SEEFELD, AUSTRIA

Grid Specifications & Requirements – Details

- **Good Event interface**
- **Must be compatible with Data Dictionary interfaces and protocols.**
 - This includes field events (entry, exit, prompt, etc.) and our DD masking interface.
- **Tooltip support – headers and cells**
 - dynamic “infotip” capability



4-5 MARCH 2010 IN SEEFELD, AUSTRIA

The Grid Solution

- **The new grid class will be based on the Codejock Report Control**
- **The Codejock Report Control will be added to the product in the same way the Command-bars and skinning framework**
- **Will be available with Visual DataFlex 2010**



4-5 MARCH 2010 IN SEEFELD, AUSTRIA

Grid versus Reporting class

- While there are many overlapping features they serve very different purposes
- Our main focus will be on a Grid class
- If you are looking for a *great* reporting control class check out the “VDF SIG Codejock Library”



Some of our Challenges

- **Loading Database Data**
 - Must be able to load partial and cached data
 - Scrollbar behavior
 - Codejock control expects all data to be loaded at once
- **Edit Requirements**
 - Input and display masking must act like our other controls
 - Entering and exiting edit modes must be seamless
 - Codejock control has different and limited editing capabilities



Some of our Challenges

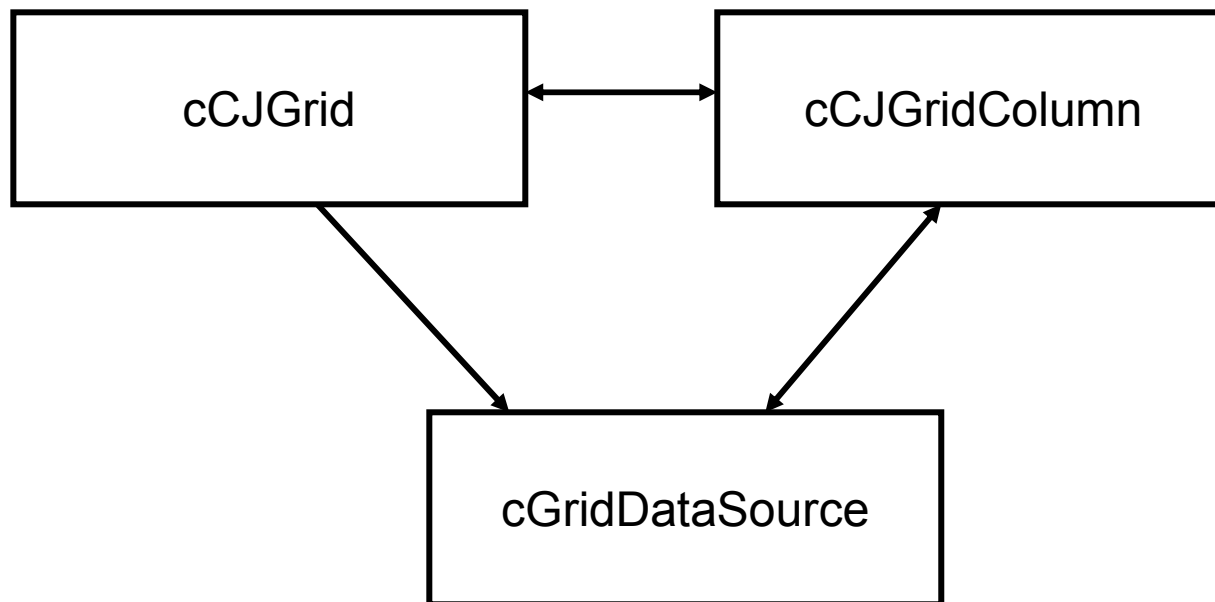
- **Navigation**
 - Must respond to navigation changes in a VDF-like way
 - Entering, Exiting, Validate, SkipFound, AutoFind, etc.
 - Must support verifications and validation errors
 - Requires Next / Previous Navigation
 - Codejock has a different, more basic navigation model
- **Must be a DEO Object**
 - Must understand all DD <-> DEO interactions

Some of our Challenges

- **Studio Visual Modeling**
 - We want to be able to visually model the grid
- **Must be even better than our existing grids**
 - Our current dbGrids and dbLists have some pretty sophisticated features

Regular Grids

Grid Composite Object Structure





Grid Composite Object Structure

cCJGrid

(cGridDataSource)

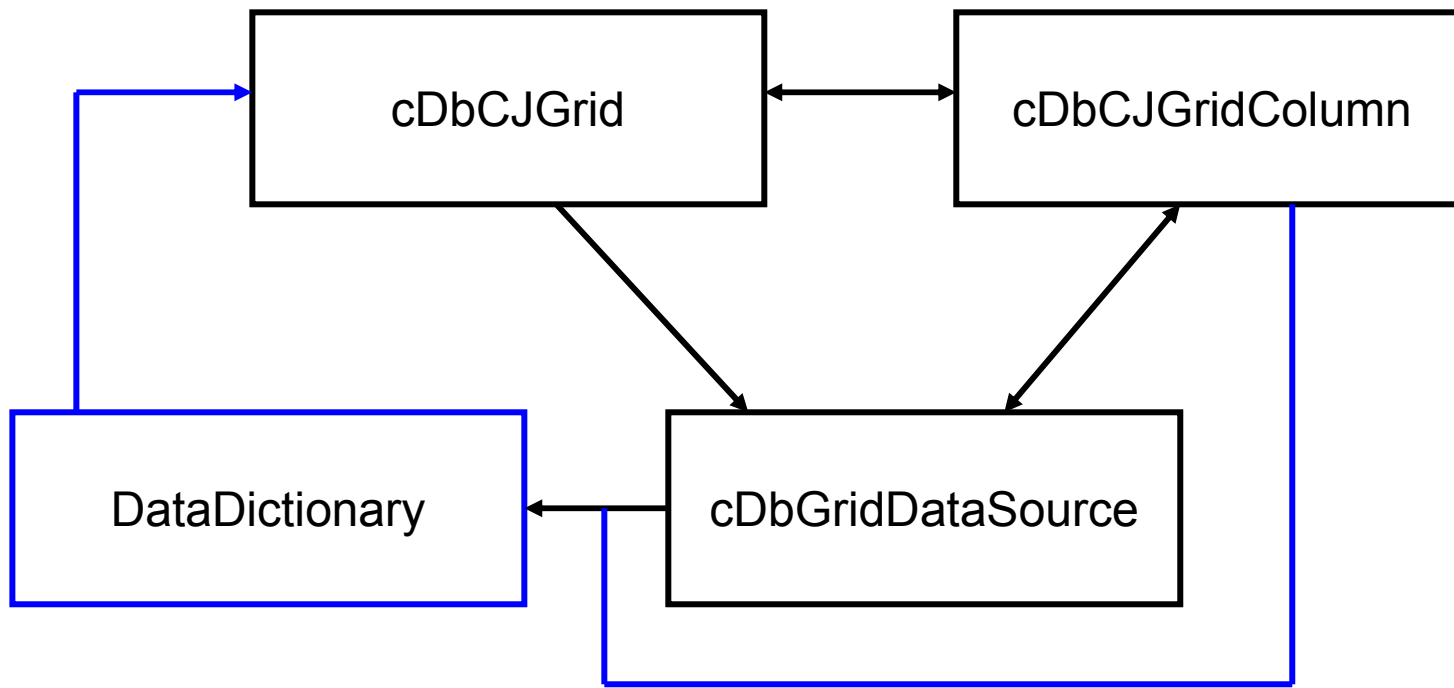
cCJGridColumnObject.1

:

cCJGridColumnObject.n

DD aware Db-Grids

Db-Grid Object Structure





Db-Grid Composite Object Structure

cDbCJGrid

(cDbGridDataSource)

cDbCJGridColumnObject.1

:

cDbCJGridColumnObject.n



Our Current Old Grid Class Structure

DfBaseList

---DfBaseForm

-----DfBaseEntry

-----DfBaseEntryList

-----EntryList

-----WideList_

-----WideList

-----DataList_

-----DataList

-----dbGrid_

-----dbGridDS

-----dbGridDD

-----dbGrid



Our New Grid Class Structure

cCJComReportControl

--- cCJGrid

----- cDBCJGrid

cCJComReportColumn

--- cCJGridReportColumn

----- cDBCJGridReportColumn

cObject

--- cGridDataSource

----- cDbGridDataSource



A cCJGrid Object

```
Object oGrid is a cCJGrid
```

```
  Set Size to 230 408
```

```
  Set Location to 7 9
```

```
  Object oName is a cCJGridColumn
```

```
    Set psCaption to "Name"
```

```
    Set piWidth to 95
```

```
  End_Object
```

```
  Object oType is a cCJGridColumn
```

```
    Set psCaption to "Type"
```

```
    Set piWidth to 55
```

```
  End_Object
```

```
  Object oSize is a cCJGridColumn
```

```
    Set psCaption to "Size"
```

```
    Set piWidth to 50
```

```
  End_Object
```

```
End_Object
```



A cDbCJGrid Object

```
Object oCustGrid is a cDbCJGrid
```

```
    Set Size to 180 281
```

```
    Set Location to 6 6
```

```
    Set Ordering to 1
```

```
    Set Server to Customer_DD
```

```
Object oNumCol is a cDbCJGridColumn
```

```
    Set piWidth to 38
```

```
    Set psCaption to "Number"
```

```
    Entry_Item Customer.Customer_Number
```

```
End_Object
```

```
Object oNameCol is a cDbCJGridColumn
```

```
    Set piWidth to 183
```

```
    Set psCaption to "Customer Name"
```

```
    Entry_Item Customer.Name
```

```
End_Object
```

```
Object oEmail is a cDbCJGridColumn
```

```
    Set piWidth to 50
```

```
    Set psCaption to "email"
```

```
    Entry_Item Customer.EMail_Address
```

```
End_Object
```

```
End_Object
```