

DataFlex Reports in the real world

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SYNERGY 2019
CRUISING TO NEW HORIZONS

Presentation outline

- Designer & Wizards are maturing
- How to use DataFlex reports affordably & create great looking reports.

Affordable reports

- Quick to build
- Easy to debug & repair
- Quick to copy and amend
- RDS is the key here
 - No hassle with DAT Paths, SQL environments
 - Use existing functions in DD or your DF library for formatting values
 - In control of data retrieval incl update while printing
 - Simple coded dump of data in JSON, can assist in debugging client's issues.

Great looking reports

- WYSIWYG, especially when tuning layout, beats coded reports every time
- Simple drag and drop, just ensure you use the settings in options panel:
 - Grid size & Snap to grid
 - Show Guidelines and learn Alt keys for guidelines
 - Turn Insert Detail Field Headings off (If applicable)
 - Default fonts
- Images, both static linked and Passed in via RDS (Binary Column, fill with Base64 data)
- Lines; guidelines & anchors
- Charts, one dimension at this stage, but simple to insert chart images.

Runtime data source

- Retrieve data the way you like
 - DD find, FB find, for_all, SQL statement (ExecuteSqlV) or Stored procedure
 - Using index that fits the selections
 - DR will sort internally on sort fields (perhaps uppercased sort values)
 - Pass formatted data into reports, reducing the effort in coding DR functions
- Steps
 - Use wizard to create DR and code
 - Code the record selections, compile/Run & export data set (JSON)
 - Import the JSON data
 - Style the report in DR.

Productivity

- Setting the right options
- Cheat sheet
- Subclass cDRReports_28.pkg
- CreateDrDocsTable.src

DataFlex Reports 7.0 Cheat Sheet

Settings

File (Alt+F) Options
Set Grid size from 0.06cm to 0.2cm
Set Snap to Grid
Set Default Barcode to Code 128 (Sub B)
Set Insert Detail Field Headings to off.

Data RDS Structure

Import /Export as "DR RDS Table Structure file". This is a json file in the format

```
{
  "sName": "JobNo",
  "iType": 4,
  "iLength": 11,
  "iPrecision": 0,
  "iIndex": 0
}, [ ... ]
```

Note, the table name itself is NOT in the file.

Suggested filename
"<Tablename>_Structure.json"

Field types

String type	1
Number type	2
Integer type	4
Floating point type	8
Date/Time type	9
Memo type	12
Date type	91
Time type	92
Double Integer type	-5

Num 4.2 = SQL Num(5,2) Max: 9999.99
change structure:
Menu: Database / Check Database

Date functions

CDate("April 10 2010")
Now() CurrentDate/Time()
date() Sysdate
DateDiff, **DateAdd**, **DatePart**
DateSerial(yyyy,mm,dd)
TimeSerial(hh,mm,ss)

Database functions

Previous{(cust.name)}
Next{(cust.name)}
Sum(drSum, [drReport|drGroupX],
{(cust.balance)})

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Suppress functions

Define global variable in main report function
`dim iOrder as global`
`let iOrder = (Tbl.Col)`
`return iOrder`
Place the function in the main report, e/g hidden section
Add Filter function in subreport
`dim iOrder as global`
`return`
`{(Tbl.Col = iOrder)}`

RDS Sample data

Menu: Database: Edit RDS Sample data
Import /Export as "DR RDS Test Data File". This is a json file in the format of a tDataSourceRow

```
{
  "rIID": "",
  "bNewRow": false,
  "vTag": "",
  "sValue": { "", "1",
    "Creating Presentation for Synergy 2019",
    "13/03/2019",
    "Marco", "12", "", "" }
}, [ ... ]
```

Suggested filename
"<Tables>_SampleData.json"

Data of your coded RDS report can be exported inside your code with
`Get.ConvertTableDataToJsonSampleData of rReport`

String functions

CStr(nTest) String(nTest)
Instr Pos
LCase Lowercase
Space Pad
String(n,'\$') Repeat('*',5)
UCase Uppercase
Len, **Trim**, **Replace**, **Right**
PropCase
FormatCurrency(file.field),
drCustomCurrencyMask,
"0.00;\$1.1;\$1.1-;...\$1"
FormatDate(file.field),
drCustomDateMask,
"MMMM, d, yyyy"
FormatNumber(file.field)*0.1,
drWindowsNumber
FormatTime(file.field),
drCustomTime, "HH:mm")

Report format

Section New page after formula:
`return {&Record Number} <`
`{&Total Record Count}`

Subreport

Define global variable in main report function
`dim iOrder as global`
`let iOrder = (Tbl.Col)`
`return iOrder`
Place the function in the main report, e/g hidden section
Add Filter function in subreport
`dim iOrder as global`
`return`
`{(Tbl.Col = iOrder)}`

Dynamic layout

Create parameters for layout
Use parameter values in field setting functions like
`return {HidingFax}=1 or {HidingPhone}=0`
Set parameter values in DataFlex code
`Get.ParameterIdByName ; sReportId "HidingPhone"; to iParameter`
`Set.psParameterValue; sReportId iParameter; to True`
Set location/Position in twips;
convert with:
`return UnitCn(2.5)`

Line draw

Use report explorer to select
Ensure Grid & Guidelines are set
Size to section height
Anchor to Top & Bottom (Auto grow/shrink)

Useful keys

Ctrl+F	Find text
F5	Refresh data
Arrow	move Grid size
Ctrl+Shift+Arrow	Move 0.2cm
Shift+Arrow	Resize (Grid size)
Alt+Arrow	Move to guideline
Alt+Shift+Arrow	Resize to guideline
Ctrl+S	save
F2	Edit

DataFlex RDS data Wizard

- Great starting point
 - Basic DR is created
 - Select & Result pages are created
- One or two pages
 - One is good and clean
 - Two has advantages of selection criteria can be queried from Named values
 - Ensure results page has statemode off (deep link risk)
- My changes
 - Change use and class to `_28`
 - Remove redundant code (`OnInitializeReport`, `SetFilters`, `LoadRDSData`).

Business needs for reporting

- Direct to printer
- Production or test data
- Report time stamp & user
- PDF report within page - also on iPhone
- No redundant code
- Report outputs stored and indexed
- Store report JSON data for debugging layout
- Cleanup cache.

Document Store / Archive

- Keep cache directory clean
- No need for paper copies
- When a non-reprintable report is shown to screen and the user forgot to print, it is in the archive
- Ability to email the report as attachment (Demo email an invoice).

Demo

- Customer's in house ERP system
- Modernised from 3.1d to 19.0 Drilldown
- SelectViews: 55
- ZoomViews: 110
- Reports: 29 + 50

Other Tips & Tricks

- Icon refs, add to menu
- Deploy.bat
- MD5 Hash for caching
- Login from Domain
- PDF on iPad & iPhone
- Info button
- Dynamic Menu
- Load previous PDF with Key
- Navigation log
- Dymo printer Active X

Questions?



Thanks for Listening

- As Synergy attendee, feel free to email me for details and code marco@28it.com.au
- Next, Harm Wibier:
“Building Powerful Web Applications”