Using Eclipse BIRT for Financial Regulatory Reporting

Leslie Jarrett 12/02/09
Incorporated in Hong Kong in 1918, The Bank of East Asia ("BEA") is dedicated to providing comprehensive retail and commercial banking services to its customers in Hong Kong, Greater China, and overseas.

BEA is the largest independent local bank in Hong Kong, with total consolidated assets of HK$396.6 billion (US$50.85 billion) as at 30th June, 2008.

The Bank is listed on the Stock Exchange of Hong Kong and is one of the constituent stocks of the Hang Seng Index.

BEA operates one of the largest banking networks in Hong Kong, with over 130 branches and SupremeGold Centres around town.

BEA also operates over 60 outlets in Mainland China, one of the largest networks of any foreign bank.

BEA also operates outlets in the United States, Canada, the United Kingdom, the British Virgin Islands, and Southeast Asia.
Leslie Jarrett – Applications Analyst  Bank Of East Asia
30 years experience in the Information Technology industry
Of which last 16 are in Retail Banking sector.
BIRT user for last 8 months.
Previous experience in similar products such as Brio.

Yes there is life after work for me, as much as possible
I am a keen photographer with about 40 years experience
I enjoy travel and aviation photography as main genre.
My wife however still thinks I spend too much time with computers. (I disagree of course)
Mission Statements

1. The Bank of East Asia is evaluating the use of BIRT and MySQL to deliver regulatory reporting for both the Bank of England and HMRC(inland Revenue) reports.

2. By using BIRT models the Bank has so far been able to show the ability of the software to automate many of the reporting requirements that previously required manual steps.

3. The Bank of East Asia has identified a number of key benefits to the business from the potentials of further deployment of reports developed by using BIRT.
The partners in our project

- Temenos (T24)
- MySQL
- Actuate (BIRT)
- Bank of England (BOE)
- HMRC (INLAND REVENUE)
The process of reporting information to the Bank of England is a continuing process determined by the frequency the Bank of England sets for each report.

The process starts at the T24 stage and ends at the BOE stage.
In the T24 Banking System we define the data that is to be downloaded to the Data-warehouse from each of the tables that are required.

We can set up the parameters so that we only need to download data that is required by the BOE report.

For example in the customer file we may download the customers residence country, but not their street address.
Because there are numerous tables to download, we have created a batch record in the T24 system to download these files in one operation.
The data is then loaded into MYSQL database for the period.

We build a database for each reporting period.
Once all the data has been loaded into the MYSQL tables the data is processed by MySQL into tables for the BIRT reports.

By using MYSQL scripts and procedures we can use the same data as a base for each of the reports required by BOE.
To make the BIRT process easier to report the data coming from numerous tables, we built the BIRT reporting tables Summary and Data for each report.

This made the construction of the reports easier.

Audit Data shown in this example.
Life Cycle Model

- And the summary data ready for the report.
- Showing that from one set of raw data tables we can produce two parts of the report data.
By using a different database for each period.

This will give a number of periods to report on.

And we can build the list for user selection as we have a suffix of “BOE”.

For example BOE-200811, BOE-200812
The resulting use of the data in the BIRT parameter component.

The parameter list is a Dynamic Type which means that when a new period is produced i.e. BOE200902 the period will be in the list of selections.
You also connect the period parameter to the data-source connection properties.
- The choice of data tables for the report is made.
- As long as the database tables exist in any of the period databases any period can be used as a model for the report.
This just an example of the raw data that is going to be turned into the Birt Report.
Although there are powerful tools in Birt for creating totals etc. We found that in our case totals were best handled outside of the report.

The Birt Report was then a simple matter of using the data in a table.
- This is the report running in Developer using the Web-Browser.
- As you can see we have the database selection parameter to enable a choice of period.
Life Cycle Model

AFTER TURNING ALL THE COGS IN THE PROCESS

T24
MySQL
BIRT
The report also shows the period chosen by the parameter selection.
Likewise an audit-trail report can be produced

- Again parameter driven by period and other selections
- In this example by report line and currency.
All the reports have been published to our ACTUATE I-SERVER.
The reports are then used by the departments at the bank to verify the data.
They have all the selection parameters available as well as drill-down connections.
They can print or save reports in various formats such as PDF XLS.
INLAND REVENUE S17 Process
Life Cycle Model

AFTER TURNING ALL THE COGS IN ONE PROCESS
The final data, internal reports and external reporting will be different the “RAW” source data will be the same.

The steps used in the BOE process are basically the same for the Inland Revenue process.
The process of reporting information to the HMRC is a continuing process determined by the frequency the HMRC sets for each report.

This is commonly known as the “Tax Year”

The process starts at the T24 stage and ends at the HMRC stage.
Summary of BIRT at the Bank of East Asia
BENEFITS OF USING BIRT

Less time
- Speed and ease of deployment equates to cost saving.
- "Drag and Drop", built-in functions such as tables, totals instantly available.
- "You see the finished report before it's finished" preview
- No need to wait for compilations to see changes to the report
- Co-opted development with end users avoids many misunderstandings

More Flexible
- Parameter driven reports, allowing one data set to be filtered
- Can be deployed over many types and scenarios of data
- Exporting of reports and data in many industry standard formats
- Can be used in a 'PUSH' or 'PULL' environment.
- Allows scripting to further enhance functions.

Transparency
- The whole process is visible and can easily be verified by internal and external managers and auditors.
- The process from source data to report delivery can be fully automated without any intervention.
- Connected Drill-downs that can be used to verify data between reports.
THE FUTURE FOR US

INTERNAL REPORTING

- Branches
- Head Office

Banking Reports

- Implement final model for BOE and HMRC
- Replace many T24 reports with reports built from Birt
- New Reports

Delivery

- Different formats such as PDF and EXCEL
- Scheduled production and delivery.
And Finally

Thank You
For sharing our experience with you
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