12/02/2018 TMW

With the Pragma CAD 6.5 upgrade, the project manager and team decided to upgrade the reports that were contained in 3 different software tools and convert them to Oracle BI Publisher for 12c.

The three tools were:

1. Oracle Report Builder
2. In house Visual Basic application, known as Report Generator.
3. In House C# / XML application, known as Custom Report Application.

**Oracle Report builder** required that the SQL be extracted from the report module. Customized application tables were changed as part of the upgrade. One customized table became multiple and the table joins were added to the SQL to accommodate those changes. Some report modules were more heavily impacted than others.

The examples provided are the end result of conversion. Once the SQL was complete, it became the Data Model in BI Publisher. A report template was built using the MS Word add-on which allowed the report to have the same look as pre-upgrade report.

CUFOR144, CUFOR144RCT, Meter Report

**Report Generator** required that the sql be extracted from the Visual basic program. The VB program had an initial work query with several smaller queries to gather job data. The work query had to be re-worked and combined with the smaller queries from the VB program to create the single data model query. Some of the program logic handled aggregating columns, and the writing to several spreadsheets. The data model with BI Pub was created with grouping for aggregating while some logic was placed in the BI Publisher report template to further format the data.

Once this was working with the old database, the query was updated with the customized table changes.

**Custom Report Application** required that the query be extracted from the XML doc. Similar to the Oracle Report Builder, customized table changes required new joins added to SQL.

**User Defined Fields**:

The customized tables contained UDF (User Defined Fields) columns. These UDF fields were mapped to a user configured screen in the CAD application. A query was developed that would obtain the mapping between the Screen field label and the table UDF. Based on that query, a function that a given set of parameters would retrieve the needed report data for a specific field.

A script was created to set this function up for report processing. Once complete the function could be called from the report query without requiring all the joins.

J\_isr\_udf\_val\_f.sql

J\_filter1\_initial creation script.sql

A procedure was developed using the same premise, but was used to obtain all job data from the UDF fields with the associated label mapping inside a C# ASP FMS Web Site.