Oracle PL/SQL Script to migrate from Oracle Forms to other interfaces

Current scenario:

* Oracle Forms FMB files are binaries that can be opened only by Oracle Forms itself.
* Migrate from Oracle Forms to Oracle APEX via FORMS2XML requires 1) upgrading current Oracle Forms objects to 10g and 2) Oracle Forms must be installed in English which adds extra time to migrating process.
* Manually migrating these objects is very time-consuming: developer needs to open every Oracle Forms PL/SQL block of code in forms triggers, block triggers, item triggers, procedures, functions, packages.
* For any reason, developers might want to retain Oracle Forms as their development environment.

This script aims to fit the need to modernize Oracle Forms in a fast, automated way. Some of its features:

* This script reads Object List Report files that are generated from either DOS command line or Oracle Forms menu.
* Every Object List Report file is imported into the database, and its contents are processed, generating text and CSV files.
* It currently reads Oracle Forms installed in American English, Latin American Spanish and Brazilian Portuguese – this script can easily incorporate other languages.
* Each Oracle Forms file is “recycled” and converted into a database package, one per form.
* This package exports every Oracle Forms PL/SQL code (triggers, functions, procedures), transforming triggers into Boolean functions, and recycling functions and procedures. A name is automatically generated for each exported Oracle Forms PL/SQL trigger, while functions and procedures retain their original names.
* Form, global and system parameters are transformed into function parameters. References to items are automatically converted from :ITEM to :BLOCK.item, and these :BLOCK.item references are also transformed into function parameters.
* A script based on the database data blocks is automatically generated, listing form tables, fields and relations between them, which shows how your Oracle Forms currently interprets each of your database tables and fields.
* Lists of items, record groups and items with static contents are reused in a way that allows them to be directly invoked from Oracle database with SQL SELECT instructions as pipelined functions.
* Automatically discards routines having only Oracle Forms PL/SQL instructions that won’t run in the database package – for example, those “previous\_item” and “list\_values” usually associated with LOV buttons in Oracle Forms triggers won’t work in the database, so the script automatically discards these routines. Discarding can be customized (for example, script can be configured to automatically discard every ON-ERROR trigger at data block level, but not at form level).
* Data manually informed in list items, record groups and static lists of values are also exported so they can be imported into a domain table.
* Contrary to FORMS2XML requirements, with this script there’s no need to upgrade current Oracle Forms objects from 4.5/6i/any to 10g, and no need for Oracle Forms to be installed in English language.
* Script currently supports migrations from Oracle Forms to Oracle APEX so it generates PL/SQL calls from Oracle APEX to generated package objects, but other programming languages can be easily added. Interface can be any (Java, Python, C#, etc) but they must access Oracle database because Oracle Forms contents will be recycled as an Oracle database package.
* Script has no need to connect to any other database.
* Script is easy to install and uninstall – there is a maximum of four SQL files to execute manually.
* Script reads and exports contents very fast (it usually takes some minutes).
* Programming conventions can be followed – for example, if your documentation requires that every function name begins with “FNC”.
* An interface for this script is written with Oracle APEX and is ready to use.
* Oracle APEX interface processes one form, Oracle PL/SQL can perform batch processing.
* Even old versions of Oracle Forms are “transformed” into content generators for other interfaces.
* Script is very flexible and can be easily adapted with new ideas.

Known issues:

* Oracle Forms packages are the only objects currently not changed by the script.
* Oracle APEX interface for the script is not ready for batch processing.
* Object List Report files must be encoded under UTF-8 text format only.