GEODE: a new database interface with APEX

A.-V. Naegely, I. Iliev, A. Bensahla Talet, CERN, Geneva, Switzerland

1985 Creation of the Survey Database and its first character mode interface with Oracle Forms

1995 Geode first graphical interface with Oracle Forms 4

2000 Geode migrated from Oracle Forms 5 to 6

2005 Geode on the web with Oracle Forms 9

2008 Geode migrated to Oracle Forms 10

2010 Start of the migration to APEX

2014 Remaining Oracle Forms migrated to Oracle Forms 11

2015 End of the migration to APEX 4.2

2017 Upcoming migration to APEX 5

EVOLUTION

Survey Database and its user interface: GEODE

Survey DB and its interface created more than 30 years ago

All maintenance and development done within the Survey section

Survey DB is a crucial part of the Survey activities workflow

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From Oracle® Forms to APEX: a long and difficult migration

Goal of the migration: suppress Oracle Forms (OF) and fully rebuild the interface, not the DB

Pushdown Business logic from Oracle Forms to DB: 71 new PL/SQL packages created!

Geode and DB tightly coupled: unavoidable changes

Non persistent connection to the DB with APEX: temporary tables are useless. New tables to create

Geode interacts with several software:

- OF: Webutil functionalities distributed and used with Oracle Forms
- APEX: four JAVA applets were developed to keep almost the same functionalities

The applets are causing more and more problems due to the increasing level of security in Java runtime environment

Geode deals with two Survey libraries: SurveyLib and EarthTides

- OF: Webutil functionalities distributed and used with Oracle Forms
- APEX: A web service created to communicate with SurveyLib

Another technology to master!

JavaScript: an essential tool to add responsivity to the new APEX application: more than 12600 lines of JavaScript to maintain!

From Oracle® Forms to APEX: on the bright side

Better development practices:

- JIRA, an issues tracking tool implemented: more than 1000 tickets already!
- Better documentation - inline and outside code within CONFLUENCE - a team collaboration software.
- Best practices rules defined for PL/SQL
- Code review
- New ongoing testing packages
- Ongoing code refactoring: improve code readability and reduce complexity

What's next?

- Permanent monitoring and alignment systems remain to be migrated from Oracle Forms to JAVA
- Ongoing refactoring
- Automatic testing process to be developed and implemented
- Impeding migration to APEX 5 in 2017
- Integration of the new version of LGC
- Implementation of new algorithms

Survey Database and its user interface: GEODE

- Geode created more than 20 years ago with Oracle Forms
- What a long life for an IT tool!
- It was necessary to move to a more evolving product: APEX

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