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# **IBM ILOG JRules at IAG Direct Insurance or Use and Abuse of Business Rules Management in a large General Insurer**

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# Agenda

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2 What problem were we solving?

3 Previous State: Where were we then?

4 Automated Underwriting (AUW) Project: What we did

5 Interim State: Where are we today?

Target State: Where do we want to be tomorrow?

# Background

- In early 2004 senior executives from IAG went on a study tour in the United States.
- Upon their return they commenced a project to introduce automated business rules to IAG Personal Insurances.
- IMA manufacture and underwrite insurance for the four main distributor brands in IAG Personal Insurances (NRMA Insurance, NRMA QLD, SGIO (WA) and SGIC (SA)) and for RACV.
- Each of these had legacy variations in business rules carried over from their previous systems.
- A project was already underway within another IAG subsidiary, CGU, to introduce ILOG JRules .

# What problem were we solving?



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- Each of the distributors had legacy variations in business rules carried over from prior to their inclusion in the IMA stable.
- As the business wanted to nationalise the brands and standardise rules a central repository for underwriting and acceptability rules became more crucial.
- There was no single source of business rules
  - Rules were scattered across multiple applications
  - Changes to rules required development effort in each affected application
  - Traceability of rules was compromised

# Previous State

## Where were we then?

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- NRMA Insurance had introduced a C++ based rules application in the mid 90s (ACE).
- NRMA Insurance had introduced The HUON Solution as the main policy administration system in preparation for Y2K in 1998.
- The cost of change had restricted the business to no more than a couple of changes over the 3 or 4 years leading up to the project.

# Solution Description

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- Introduction of a consistent and supported business rules engine to enable:
  - **Centralisation of rules**
  - **Management of the rules by business users**
  - **Faster development of rules**
  - **Isolation of existing applications from rule changes**
- Giving a flexible solution across multiple insurance products and distributors
- Delivery of a rules definition and modification workflow process i.e. idea to implementation

# AUW Project

## What we did – Product evaluation

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- Automated Underwriting (AUW) project was initiated to identify a suitable rules engine for implementation.
- Multiple contenders were considered with a short list emerging of JRules, CA Aeon and RAE (Rating and Acceptance Engine) an in-house product built in CGU by our own Russian rocket scientist.
- After an exhaustive assessment process JRules was selected, despite CA offering a day on the harbour for Australia Day 2005.

# AUW Project

## What we did – approach & architecture

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- Over the next 15 months the project documented, authored and implemented the existing HUON and ACE Underwriting and Acceptability rules for Australian Motor products, Estimate, New Business, Amendment and Renewal processes.
- The Underwriting Rules Service (UWRS) was
  - **Implemented into a JVM within the mainframe,**
  - **connecting from CICS and batch via MQ,**
  - **allowing the rules to be invoked from all existing policy processes:**
    - **New Business**
    - **Estimate**
    - **Renewal**
    - **Amendments**

# AUW Project

## What we did – performance and benefits

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- Despite implementation of additional rules not previously in ACE the UWRS had a response time, end-to-end, averaging under 30 ms which was an improvement over the system being replaced.
- Subsequently UWRS rule sets were implemented for Australian Home products and NZ Motor and Home products when they were converted onto our base platform.
- A MIPS reduction on the host was delivered from Day 1. This was improved with introduction of a z-AAP processor to the mainframe.
- An existing DB2 table used for storing variations in potential excess values, for Motor, across distributor, state, level of cover and several other factors was rationalised from over 11,000 rows to around 100 using a decision table.

# Interim State

## Where are we today?

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- **Australian business maintain their own rules for Motor and Home products with one person carrying out idea assessments, changes to the rules and rule unit testing.**
  - Motor UW Rules: approx 400
  - Home UW Rules: approx 150
- **Changed rule-sets are then passed to Business Technology Services (BTS) for implementation through Integration and Business Acceptance testing to Production.**
- **Rule changes for Australia are carried out regularly with minimum impact and no code development required.**
- **A BTS BA maintains the rules for NZ State Motor and Home business using the same platform as for Australia but with independent rule-sets.**
  - Motor UW Rules: approx 400
  - Home UW Rules: approx 280

# Interim State

## Where are we today?

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- **Data Validation services, using JRules 6.7, for Australian Motor and NSW CTP products were implemented in the last code release (mid-March 2010) to support a completely redesigned Internet presence.**
- **These rules duplicate host legacy COBOL rules currently present in the 3270 screen code and 'API' code that clones those screens.**
- **The intention is to remove that code from all the current source that needs to be maintained and replace it with a single rule-set.**
- **Cross-sell/up-sell rules for the internet offering have been recognised as a future opportunity with plans for an instance of JRules 7 constructed to be embedded in the internet application.**

# Target State

Where do we want to be tomorrow?

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- **As IAG Direct Insurance upgrade our existing Sales platforms it is expected that the importance of consistent business rules across channels will only increase. JRules gives us the flexibility and capability to meet that demand.**
- **Additional opportunities for JRules management of new business rules are presenting themselves with increasing regularity:**
  - **Cross-sell suitability between CTP and Motor on internet**
  - **Best choice Motor offering to select default product on internet**
  - **Renewal up-sell offering selection on existing Home policies**
  - **Introduction of Data Validation services for Home products**
  - **Extension to Claims application redesign**
  - **Determination of segmentation profiles to improve risk pricing**
- **Upgrade/Conversion of the existing V5 Underwriting rules to V7.0.**