RPGM, an example of use with IBNR

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11 July 2016

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Outline

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Outline

Motivation

Consider:

- A practical problem solvable with R,
- Several end-users with **different knowledges**,
- Inputs and options which may differ at each run,
- The desire to get pdf reports and/or excel spreadsheets as output.

RPGM

RPGM is splitted in two parts:

- **RPGM Editor** on which a developper will create R programs with,
    - R script!
    - Graphical User Interfaces (Communication with the End-User),
    - Reports (pdf),
    - Excels (Input/Output),
    - In most cases, no extra code knowledge required.
- **RPGM Client** on which an End-User can use the RPGM program,
    - No R knowledge required,
    - All communications through the GUIs.

Outline

Example

The following problem: we want to estimate how many claims might be above a fixed threshold $T > 0$. However those large claims have a significant IBNER effect and the current estimated cost of the claim may go above the threshold from below (New) or go below the threshold from above (Decrease). We can apply **Schnieper**'s framework:

- New: proportionnal to the exposure,
- Decrease: proportionnal to the number of claims above the threshold at the previous date.

If we have to repeat the study from several Lines of Business and years, **RPGM** is a good way.

Example

> We need:
>
> - To get the Inputs: GUIs,
> - Make the estimations: R scripts,
> - Display results and getting last parameters,
> - Final results in a pdf Report and an Excel spreadsheet.

To link each **step** of the program, RPGM has a **chartflow** system.

Note that each interface of RPGM can be **dynamic** and changing through the events.

Video demo!