Tryton: A Framework for Health Organizations

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What are we looking for in an IT system?

Some common requirements when shoping for a business IT system:

▶ It brings sound business practices
▶ It should be easily extendible
▶ It should be affordable

And a not so common requirement:

▶ It should be based on a strong ethic

I will try to demonstrate how Tryton meet those requirements.

Business

Lots of modules are already available

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- Tryton is made of 142 modules
- They cover miscellaneous functional areas
    - Accounting
    - Payment processing
    - Sales
    - Purchases
    - Stock management
    - Project management
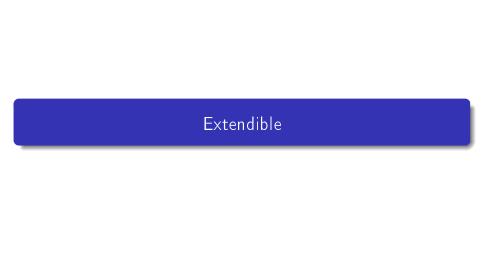   - Technical modules (Authentication through SMS, URL Shortening, . . .)

Business use cases (I)

- ▶ Lot tracking
- ▶ Back Orders
- ▶ Sell-by date of item in the stock
- ▶ Restocking of missing products
- ▶ Stock consignment
- ▶ Stock forecast
- ▶ Grouping of invoices / shipments
- ▶ Accounting charts
- ▶ Importation of statements in numerous format

Business use cases (II)

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- ▶ Price lists of products
- ▶ Sale advanced payments
- ▶ Commission computation on sales
- ▶ Management of complaints
- ▶ Management of promotions
- ▶ Production of items
- ▶ Handling of routing of productions
- ▶ Project management
- ▶ Project invoicing (different methods)
- ▶ . . .

Some deployments (. . . that I know of)

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- One of the biggest berry exporter in Europe (GRUFESA) uses Tryton.
- Do you know that 80% of the billiard balls in the world are made in Belgium? The company producing them (SALUC) is also using Tryton.
- A webshop selling fresh fruits which uses almost all the Tryton features http://www.jurassicfruit.com/.
- More on https://www.tryton.org/success-stories

Extendible

A powerful framework

- Tryton is written in python (most wanted and 2nd most loved language in the recent StackOverflow survey).
  - Lots of resource to learn python
  - Expressiveness of language is tremendous
  - Dynamic nature of the language enable us to have evolving data models by activating modules
- Rely on 3-Tier architecture to ensure a good segmentation of the concepts
- Tryton is built on top of an ORM layer. It makes the learning curve more gradual and allows to use different databases.
- Special care is given to make the code of the published modules modular to allow for easy overriding in custom or specific modules.

Verticalizations already exist

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Tryton has been specialized for numerous activities:

GNU Health Health & Hospital Information System

Occhiolino Laboratory Information Management System

Kalenis Laboratory Information Management System

coog Insurances management

Koolvet Veterinary clinics

GotSHO Laboratory Information Management System

The degree of "openness" varies:

▶ GNU Health's code is two clicks away

▶ Kalenis' code is available on pypi + bitbucket

▶ coog's code is hosted in a private github repository

▶ Koolvet's and GotSHO's code might not even be Free

GNU Health

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GNU Health provides the functionalities of:

- ▶ Electronic Medical Record
- ▶ Hospital Management
- ▶ Health Information System

to health practitioners and institutions

GNU Health is just a part of a bigger picture which include a LIMS and a federation system (Thalamus).

Some GNU Health Implementations

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Some of the biggest Tryton implementations are in fact GNU Health implementations:

India
: All India Institute of Medicine in New Delhi

Laos
: Center of Medical Rehabilitation, Mahosot Hospital in Vientiane

Jamaica
: Implementation of the ePAS (electronic Patient Administration System).

Other
: Dominican Republic, Cameroon, Haïti, ... You should ask Luis about those ;-).

Ethic

A bit of history: How it all started

▶ At first there was TinyERP (which became OpenERP then Odoo^{TM})
▶ But some of Tiny's developers were unhappy with
  ▶ The code quality
  ▶ The relationship with the community
  ▶ The overall design of the business modules
▶ On the 10th of December 2007, the first commit in the repository `trytond`.
  ▶ A more robust code base
  ▶ No company should be above the others
  ▶ No vendor lock-in

GPLv3+ Forever

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Contrary to its predecessor Tryton won't modify its license.
NEVER. A few reasons for that:

- Tiny SPRL still holds a sizeable part of the copyright (even if almost every line has been changed since 2007)
- There is no Contributor Licence Agreement.
  - Every contributor retains the © to his contributions
  - Changing the license means contacting everyone which would a be a difficult task
  - It's a burden but it's also a protection
- There is no reason to do so.

A foundation to bring them all

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Soon people coming from the OpenERP world joined the project.

The behaviour of Tiny was so harmful towards the community that they felt the need to create a super structure to protect Tryton.

On the 20th of November 2012, the Tryton Foundation was born. It aims to:

- ► Protect,
- ► Promote,
- ► and Develop Tryton as a Free Software

Why a Belgian Foundation?

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- ▶ In Belgium: because we're Belgians ;)
- ▶ The foundation must pursue a selfless goal
- ▶ Anybody in the world can sue the board in front of the Belgian courts if the board does not respect the goal.
- ▶ A foundation allows us to have a specific mode of governing the foundation: Supporters of the Tryton Foundation can revoke any administrator.
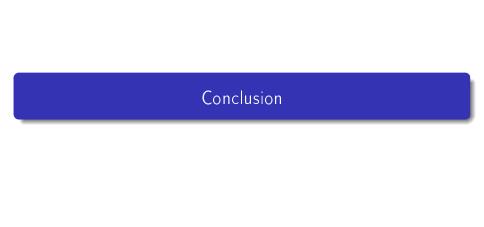
What the foundation is / is not

The foundation does not
- ▶ hold the copyright to Tryton
- ▶ provide consulting service on Tryton
- ▶ decide anything about the Tryton code

The foundation
- ▶ supports the organization of conferences
- ▶ holds and administers the `tryton.org` infrastructure
- ▶ manages and promotes the Tryton trademark

Conclusion

A review of Tryton's strength

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- ▶ a Free Software
  - ▶ GNU GPLv3
  - ▶ No Contributor Licence Agreement
  - ▶ It's free and it will stay free forever
- ▶ a Framework
  - ▶ Written in a cool language: python
  - ▶ Database agnostic (with a strong preference towards PostgreSQL for real world deployments)
  - ▶ Usable through the browser or on your computer
- ▶ a Business Software
  - ▶ Covers the main ERP functionalities
  - ▶ Extendible to suits your needs (the verticalization you're looking for might already exists!)

You can help too!

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- ▶ Donate to the foundation
- ▶ Join our forum to share your knowledge or ask questions
- ▶ Report bugs and issues you found
- ▶ Translate Tryton in your language
- ▶ Propose a large change and discuss it with the community
- ▶ Propose a patch

Q&A