Fully automated accounting

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Motivation

- At Akretion :
  - no accountant
  - no secretary

=> we do the accounting ourselves with Odoo

- But :
  - we don't have time
  - we don't like to do it

=> we try to automate it as much as possible

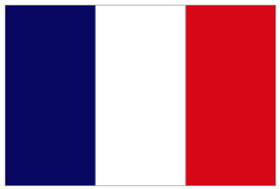
Importing regular PDF invoices

- September 2015 : the idea and the first script
- October 2015 : found the Python lib **invoice2data** to parse regular PDF invoices
  github.com/m3nu/invoice2data
- 25 December 2015 : Akretion's Christmas present to the Odoo Community
  - Odoo module account_invoice_import (generic)
  - import of regular PDF invoices : account_invoice_import_invoice2data
  - Get it from github.com/OCA/edi for v8, v9 and v10
- Demo
- Limitations of invoice2data
  - Breaks when the supplier changes the layout of invoice
  - Template specific to a language
  - Blocks first time you receive an invoice > 1000 €
  - Problem on refunds

XML invoice formats

- 2 competing XML invoice standards :
  - Universal Business Language (UBL) by OASIS
    - UBL 2.1 became ISO/IEC 19845 in December 2015
    - Adopted by countries of Northern Europe, Belgium (e-fff), Turkey (UBLTR), Australia (DBC), ...
  - Cross Industry Invoice (CII) by the UN/CEFACT
    - UN/CEFACT is the author of EDIFACT
    - Adopted by France & Germany (ZUGFeRD/Factur-X)
- Both use UNECE nomenclature : unit of measures, taxes, payment modes
- How do I send this XML invoice ?
  - send an XML file... and also the PDF file -> send 2 files
    - XML with PDF inside in base64 (e-fff standard, Belgium)
  - embed the XML inside the PDF -> send 1 PDF file (Factur-X/ZUGFeRD)

Facture electronique



Factur-X / ZUGFeRD

Forum National de la Facture Electronique et des Marchés Publics Electroniques

FeRD Forum elektronische Rechnung Deutschland

- 2014 : **ZUGFeRD 1.0** by FeRD (DE)
  - adopt Cross Industry Invoice by UN/CEFACT
  - embed XML in PDF/A-3 document
- 2016 : start join work FNFE-MPE (FR) and FeRD (DE)
  - want to adopt a common standard
  - want to comply with new EU XML invoice standard by CEN (European Committee for Standardization)
  - decide a new name : **Factur-X**
- 2017
  - June 28th 2017 : CEN (European Committee for Standardization) published final version of its new XML invoice standard (CEN, TC-434)
  - July 10th 2017 : Beta version of Factur-X published on fnfe-mpe.org/factur-x/
  - July 21st 2017 : **First Factur-X invoice generated by Odoo**. First real-life Factur-X invoice generated in the world !
  - September 10th 2017 : AFNOR (FR) published the EU standard of CEN in French (NF EN 16931-1, get it on afnor.org)
  - September 13th 2017 : FeRD (DE) officially adopted Factur-X as **ZUGFeRD 2.0** ; specification freeze
  - Coming weeks : publish the final version of Factur-X specification documents
- 2018
  - Factur-X will be supported by Chorus, the e-invoicing platform of the French administration

Electronic invoices in Odoo

ZUGFeRD Forum elektronische Rechnung Deutschland

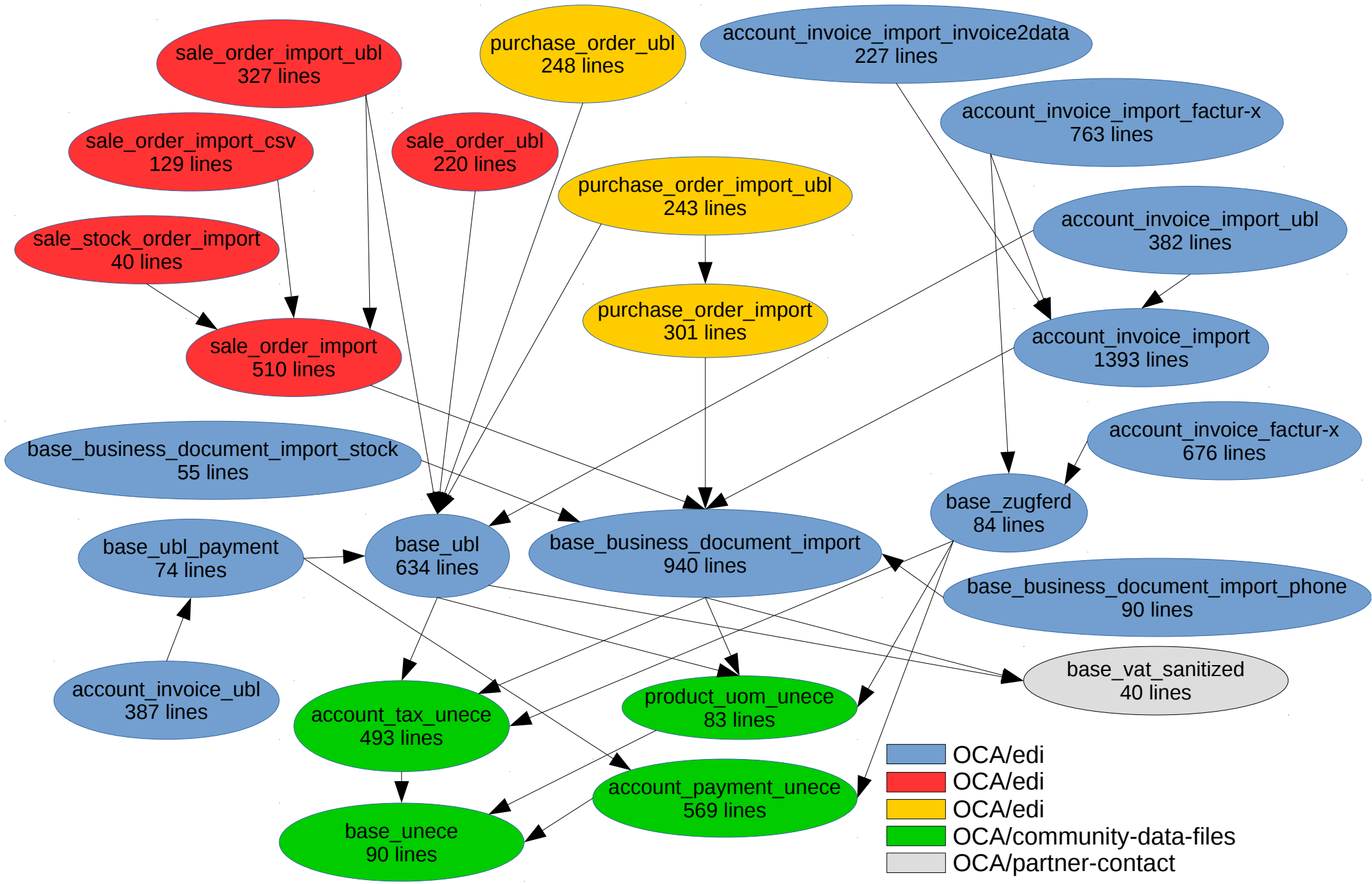
- March 2016 : Full ZUGFeRD 1.0 stack
  - generate and import ZUGFeRD 1.0 invoices
  - 1st opensource implementation of ZUGFeRD 1.0 in Python
    - alternative to the proprietary module itis_account_invoice_zugferd that use a Java lib
- April 2016 : All customer invoices generated by Akretion are ZUGFeRD 1.0 invoices
- May 2016 : add support for e-fff (Belgium)
  - github.com/OCA/l10n-belgium/pull/35
- October 2016 : OCA generate e-invoices for membership fee (UBL XML embedded in PDF invoice)
- July 2017 : add support for Factur-X / ZUGFeRD 2.0 in Odoo v10
  - generate and import Factur-X invoices
  - Odoo became the first accounting software in the world to support Factur-X !
  - github.com/OCA/edi/pull/22
  - supported reporting engines : qweb & py3o
- September 2017 : factur-x Python library
  - pypi.python.org/pypi/factur-x
  - to help our competitors !
- Demo

Chorus

- Chorus : e-invoicing plateform of the French administration
  - launched on September 2016 : chorus-pro.gouv.fr
  - January 1st 2017 : all French administration must accept invoices sent through Chorus
  - January 1st 2017 : 5000+ employees companies must use Chorus
  - January 1st 2018 : 250+ employees companies must use Chorus
  - January 1st 2019 : 10+ employees companies must use Chorus
  - January 1st 2020 : all companies must use Chorus
- Chorus supports :
  - UBL XML invoice
  - Cross Industry Invoice XML invoice
  - PDF invoices with OCR + manual encoding by supplier
  - Factur-X PDF invoices in 2018
  - transmission via web portal, API or EDI
- Chorus support in Odoo :
  - v8 : github.com/OCA/l10n-france/pull/103
  - v10 : github.com/OCA/l10n-france/pull/110
- Demo : send a real-life UBL XML invoice through Chorus web portal

25 AGPL OCA modules for e-procurement and e-billing

written by Alexis de Lattre (Akretion)



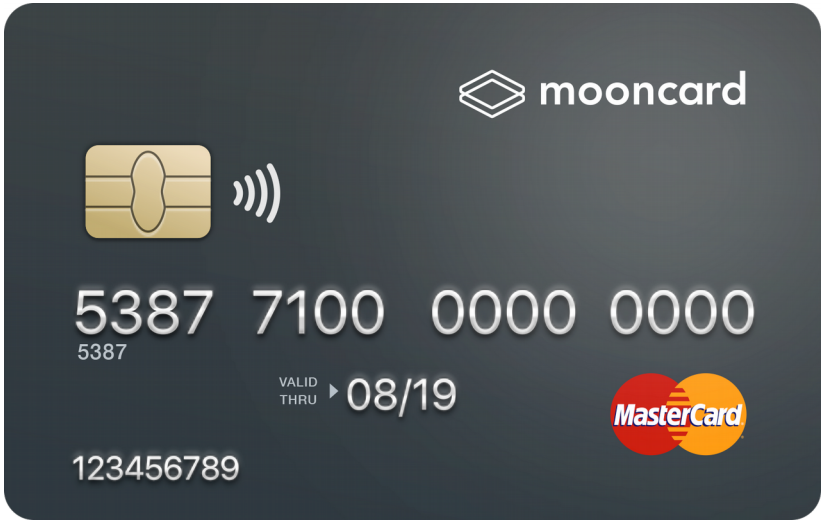
Auto-download PDF invoices

- Large phone / electricity / gas companies:
  - don't send bills by email
  - bills can be downloaded from customer online center
- Every month:
  - login to customer online center
  - download PDF invoice
  - inject PDF in Odoo
- Weboob opensource lib weboob.org
  - Python library dedicaed to webscrapping
  - API to list and download invoices
  - Project started by French developers -> mainly French websites
- Odoo modules for v10
  - account_invoice_download (generic)
  - account_invoice_download_weboob
  - github.com/OCA/edi/pull/30
- 2 usage scenario
  - download via wizard => passwords not stored in Odoo
  - download started via scheduled action (ir.cron) => password stored in Odoo
- Demo

Physical card payments : 3 solutions

	OCR-based	Bank-statement based	Card based
Process			
	1. Take picture with	1. Pay by	1. Pay by
		2. Wait to appear on bank statement (1~2 days)	2. Realtime push on smartphone
		3. Push on smartphone	3. Take picture with
		4. Take picture with	
Data			
Date	OCR or current dare	Bank statement	Bank transaction
Vendor	OCR	Bank statement ?	Bank transaction
Currency	OCR or geoloc	Bank statement	Bank transaction
Total Amount	OCR	Bank statement	Bank transaction
VAT amount	OCR	OCR and/or label analysis	Guess from vendor (or OCR)
Kind of expense	OCR	OCR and/or label analysis	Guess from vendor (or OCR)
Amount in company currency	Estimate w/ exchange rate	Bank statement	Bank transaction
Usage			
Lock on real expenses / reimbursement	no	yes	yes
Realtime	no	no	yes
Expense control	no	no	yes
Cash payments	yes	no	no
Solutions	Expensify, Certify		Mooncard

Mooncard



- French start-up « fin-tech »
- Provide Mastercard card with pre-authorisation on every payment
  - real time smartphone notification
  - accurate expense control
    - by date/time
    - by country
    - by channel (cash machine, Internet payment)
    - by amount (per card per week per month)
    - by kind of expense
- Linked to a dedicated bank account that needs to be pre-loaded
- Pay an expense with your Mooncard
  - Realtime smartphone notification
  - Take picture with your smartphone
  - Check the « guessed » VAT amount, change it if needed
  - Check the « guessed » expense category, change it if needed
  - enter a description of the expense (can be copied from Google or Microsoft agenda)
- Available in €uro zone, in French only for the moment
- 10 € / month / card

Odoo-Mooncard connector

- Connector for Odoo v8 and v10
- Import Mooncard bank statements
- Demo
- For each payment :
  - supplier invoice with picture as attachment
  - Mooncard bank journal move
  - reconcile
- For each load :
  - bank move from inter-bank transfer account
- Get it : github.com/akretion/odoo-mooncard-connector for v8 and v10

Cut-off modules

- OCA modules github.com/OCA/account-closing
- Prepaid expense & prepaid revenue
  - module account_cutoff_prepaid
  - Start date and End date on invoice line
  - copied on account move line
  - Generate a move in misc journal
  - demo
- Compute accruals from picking
  - module account_cutoff_accrual_picking
- account_reversal to reverse a cut-off move
  - github.com/OCA/account-financial-tools

Conclusion : Fully automated ?

- Sale journal : invoices generated from sale orders
- Purchase journal
  - draft vendor bills generated from PO, updated via PDF/XML import of the real invoice
  - import regular PDF supplier invoices
  - import electronic invoices (XML, PDF with embedded XML)
  - automatic download of vendor bills from customer online center
  - Mooncard connector
- Bank journal
  - bank statement import : OFX, QIF, SEPA Camt, country specific formats (CFONB, Coda, ...)
  - github.com/OCA/bank-statement-import
  - auto-import bank statements : EBICS conf by Luc de Meyer (Noviat) today 5 p.m. Lauzelle (-1)
- Misc journal
  - cut-off modules
  - account_reversal

Make accounting great again !

- Merge pending OCA PR
- Mail gateway for invoice reception & injection in Odoo
- Auto-create suppliers from VAT number & VIES
  - with partner_create_by_vat
- Support several invoice import configuration per supplier
- Add support for Factur-X PDF signature
- Add support for Chorus API
- Finalise account_invoice_download
- Develop account_invoice_download_ovh v10 that use OVH API for invoices
- Order-X : PDF order with embedded UN/CEFACT XML
  - generate purchase order
  - import sale order

The end

- Come and join the fun
  - https://github.com/OCA/edi
- Start to generate e-invoices in your company
- Deploy the OCA/EDI modules and make your customer generate e-invoices
- Stay up-to-date with my latest contributions on e-invoices :
  - Akretion's blog: http://www.akretion.com/blog
  - Follow-me on Twitter: twitter.com/alexisdlattre
- Questions ?