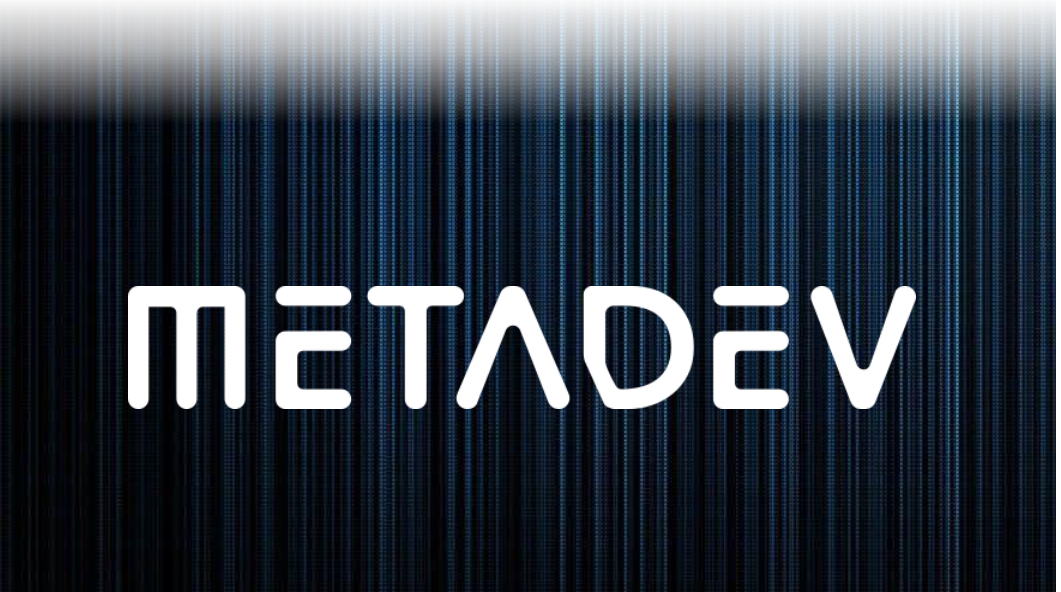
ESSENTIAL

Metamodeling on the Web



2022.09.26 Aachen, ***LangDev2022***

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Founder at Metadev
https://metadev.pro

Context

METADEV

https://metadev.pro

Full remote company, **HQ** in Seville, Spain.

Focus on tools for:

- Conceptual Models,
- DSLs on the Web, &
- code generation for different domains.

Problems found

- Lack of pure **Web modeling environments**
- Lack of tools & tooling modeling on the cloud.

Essential is the 2nd version of a metamodeling tool able to describe:

- Metamodels
- Models

Provides JIT interpretation of models to provide:

- Editors
- Validators

METADEV

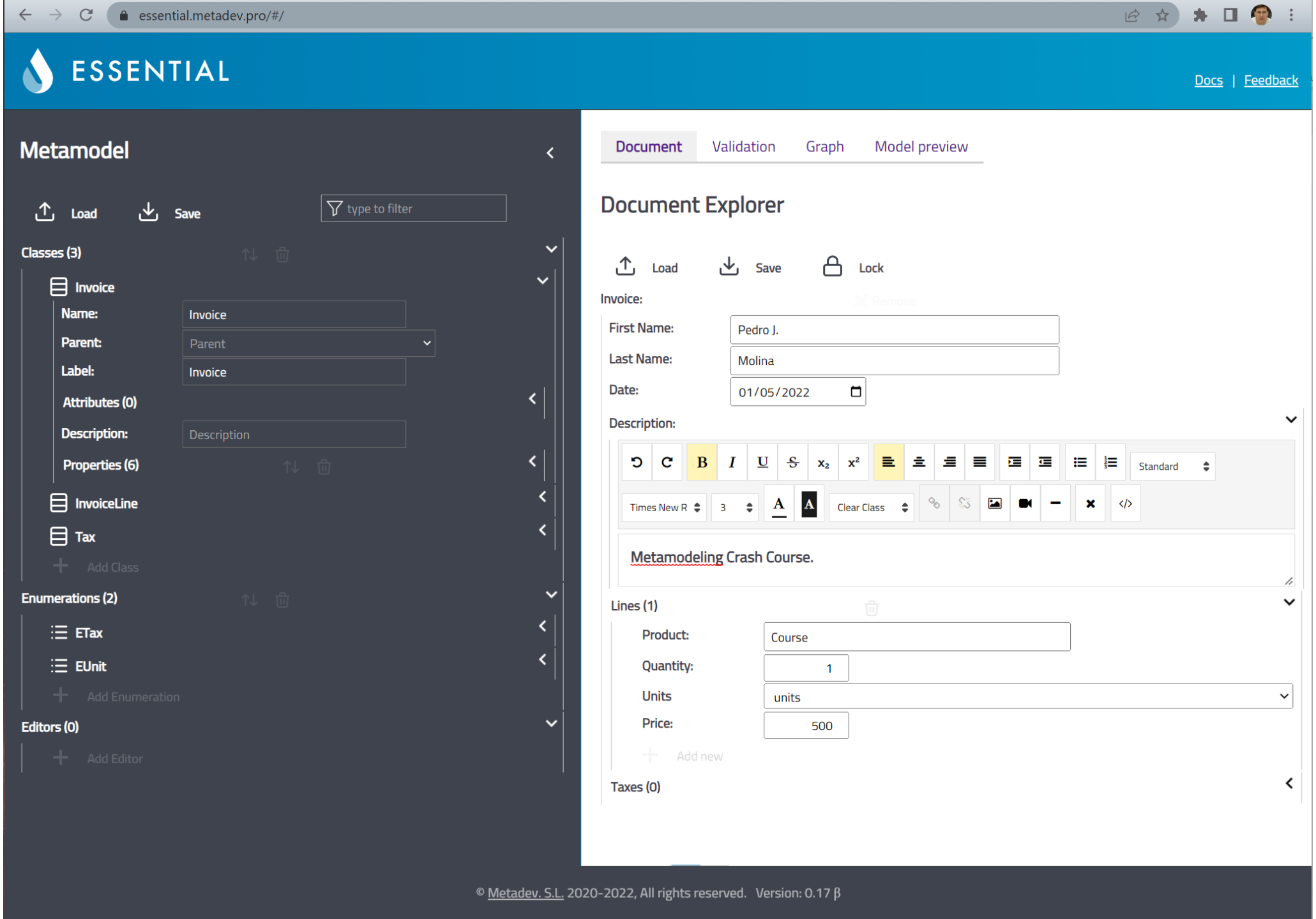
Main features:

- Import & Export to: Essential / EMF-ECore / JSON Schema
- On the fly editors / forms
- On the fly model validation

ESSENTIAL

Demo Time

https://essential.metadev.pro


essential.metadev.pro/#/
ESSENTIAL
Docs | Feedback
Metamodel
Load
Save
type to filter
Classes (3)
Invoice
Name:
Invoice
Parent:
Parent
Label:
Invoice
Attributes (0)
Description:
Description
Properties (6)
InvoiceLine
Tax
Add Class
Enumerations (2)
ETax
EUnit
Add Enumeration
Editors (0)
Add Editor
Document
Validation
Graph
Model preview
Document Explorer
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First Name:
Pedro J.
Last Name:
Molina
Date:
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3
Clear Class
Metamodeling Crash Course.
Lines (1)
Product:
Course
Quantity:
1
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500
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Taxes (0)
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METADEV

https://est40-editor.metadev.pro

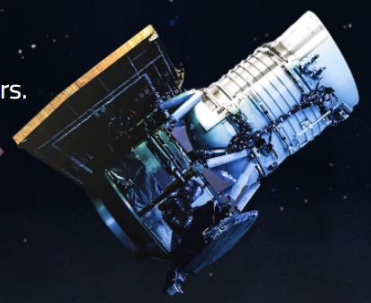
EST40 EDITOR

by METADEV

Welcome.

This web app allows to edit Software Flight Specifications based on European Space Standards.

More info +



START

est40-editor.metadev.pro/#/editor

Load | Save | Lock | false

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ECCS Specification

Name:	EID-A
Id:	SOL-EST-RCD-0050
Issue:	5
Revision:	0
Date:	dd/mm/aaaa

Applicable Documents (2)

Name	Title	Id	Date
NR-27	Solar Orbiter Operations	SO-ESC-RS-05001	dd/mm/aaaa
NR-28	Solar Orbiter TM/T- and	SOL-S-ASTR-TN-0079	dd/mm/aaaa

Add new Reorder Delete

Reference Documents (1)

Name	Title	Id	Date
IR-06	Solar Orbiter Science Req	SOL-EST-RS-1858	dd/mm/aaaa

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Abbreviations (15)

Name	Term
EPD	Energetic Particle Detector
EPT	Electron and Proton Telescope
FFT	Full Functional Test
FM	Flight Model
GSE	Ground Support Equipment
HET	High Energy Telescope
LISN	Line Impedance Stabilization Network
QM	Qualification Model
S/C	Spacecraft
SpW	Space Wire
STEP	SupraThermal Electrons and Protons
TBC	To Be Confirmed

Technical Overview

- Core technology able to create specific DSLs in a fast & cheap way
- Fully implemented in **TypeScript & Angular**
- Able to transform models & generate code either browser or server-side
- Zero install required. SaaS model. Working in all major evergreen browsers

Use Cases

1. Define Metamodels
2. Explore editors for models
3. Validate documents
4. Import/Export to Essential, eCore an EMF
5. Editors for Structured Documents (Example EST40)

Industrial Usage

- **Metadev** builds DSLs for his customers using Essential as the base stack.
- No extra accidental complexity: Non-technical users working with **the abstraction level they expect**.
- Form Interpreter for Workflow engines
- Data/Structure modeling tool (JSON-Schema)
- Building blocks for Lowcode/Nocode tools
- Environments with heavy modeling can benefit from:
  - Cloud transformed models
  - Custom projections on user's browsers
  - Zero local install (no more update hell with Eclipse or Visual Studio for modeling plugins)
- Quid: https://quid.metadev.pro DSL for WebComponents

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